# Panasonic®

## Operating Instructions

## DVD Recorder
Model No. **DMR-EX83EB**

DIGA

## *Dear customer*

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

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

DVD VIDEO RAM    DVD RW/R    COMPACT disc DIGITAL VIDEO    RAM COMPATIBLE RECORDER    SDHC™    HDMI

gracenote    GUIDE Plus+ GEMSTAR    VIERA Link    Freeview®+

DIVX®

DVB Digital Video Broadcasting    **DVB and the DVB logos are trademarks of the DVB Project.**

**Notice for DVB functions**
**This DVD Recorder is for viewing and recording free to view channels only, not Pay TV or encrypted channels unless connected to an external source capable of receiving Pay TV or encrypted channels.**
**This unit does not have an analogue broadcast tuner.**

| Region number supported by this unit | |
| --- | --- |
| Region numbers are allocated to DVD Recorders and DVD-Video according to where they are sold.<br><br>● The region number of this unit is "**2**".<br>● The unit will play DVDs marked with labels containing "2" or "ALL". | **Example:**<br><br>② ALL ②³₅ |

**Web Site: http://www.panasonic-europe.com**

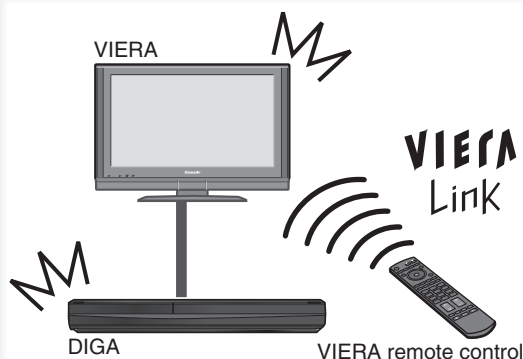Model number suffix "EB" denotes UK model.

EB

VQT2J27

# Features

## *Convenient Functions!*

### Linked operations with the TV

You can enjoy linked operations with the TV and receiver by using VIERA Link or Q Link.
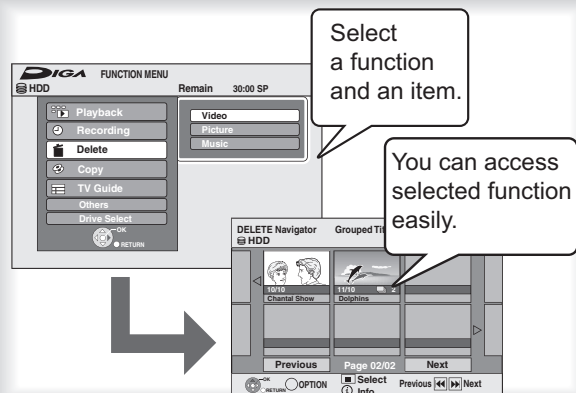● Linked Operations with the TV (VIERA Link "HDAVI Control™"/Q Link) (⇨ 44)

VIERA

VIE**Λ**A
Li**Λ**k

DIGA

VIERA remote control

### Pause the TV programme you are watching

● Pause Live TV (⇨ 43)

### Linked timer recordings with external equipment

You can set the Timer Recordings on Digital STB/Digital Satellite Receiver when it is connected to this unit with Scart cable.
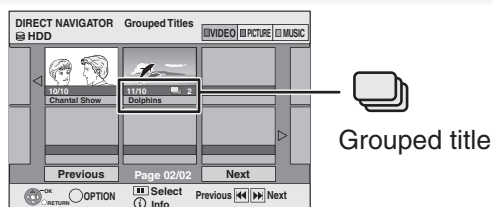● Ext Link (⇨ 28)

## *High Quality Picture*

### HDMI™ (V.1.3a with Deep Colour)

● Connection with HDMI terminal (⇨ 12)
● Deep Colour (⇨ 96)

### Easy access to various functions

You can access the main function quickly and easily from FUNCTION MENU.
● FUNCTION MENU Display (⇨ 43)

Select a function and an item.

You can access selected function easily.

### FREEVIEW+™ functions

● Guide Link (⇨ 22)
● Series recording (⇨ 34)
● Split Programme (⇨ 22)

## *Easy to Find and Select!*

### DIRECT NAVIGATOR Grouped Titles screen

Two or more titles recorded in the daily/weekly or series timer recording mode are bundled and displayed as one item.

Grouped title

## Digital Switchover

Starting in late 2007 and ending in 2012, TV services in the UK will go completely digital, TV region by TV region. If you are missing any channels, it may be that they are not available in your area, or that your aerial needs upgrading.
If you have any questions, please call Digital UK on **08456 50 50 50** or visit **www.digitaluk.co.uk**
Digital Switchover will cover a period of several weeks. When it starts some Digital TV programmes will be missing. You will need to retune your DVD Recorder each time this happens to recover your digital programmes.
**To retune your DVD Recorder →"DVB Auto Setup by Signal Quality" in the Setup menu (⇨ 71)**
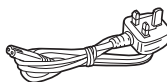
## Accessories

Please check and identify the supplied accessories. Use numbers indicated in parentheses when asking for replacement parts.
(Product numbers correct as of December 2009. These may be subject to change.)

☐ 1 Remote control (N2QAYB000462)

☐ 2 Batteries for remote control
   (R6 Size)

☐ 1 AC mains lead (K2CT2YY00003)
● For use with this unit only. Do not use it with other equipment. Also, do not use cords for other equipment with this unit.

☐ 1 RF coaxial cable (K1TWACC00003)

## Sales and Support Information

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

Direct Sales at Panasonic UK
● For customers: 0844 844 3856
● Order accessory and consumable items for your product with ease and confidence by phoning our Customer Care Centre Monday–Thursday 9.00 a.m.–5.30 p.m., Friday 9.30 a.m.–5.30 p.m. (Excluding public holidays).

● Or go on line through our Internet Accessory ordering application at www.pas-europe.com.
● Most major credit and debit cards accepted.
● All enquiries transactions and distribution facilities are provided directly by Panasonic UK Ltd.
● It couldn't be simpler!
● Also available through our Internet is direct shopping for a wide range of finished products, take a browse on our website for further details.

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

## Caution for AC Mains Lead

For your safety, please read the following text carefully.

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

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

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

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

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

**IMPORTANT**
The wires in this mains lead are coloured in accordance with the following code:
Blue: Neutral, Brown: Live.
As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.
The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

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

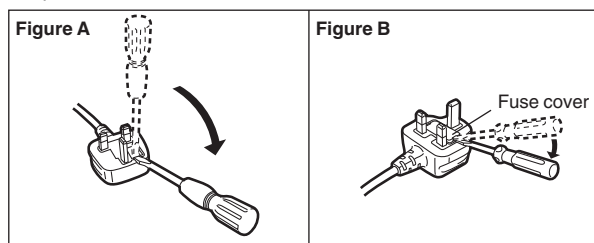**THIS PLUG IS NOT WATERPROOF—KEEP DRY.**

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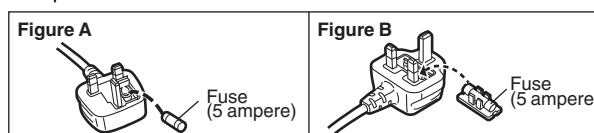
**How to replace the fuse**
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1.Open the fuse cover with a screwdriver.

| Figure A | Figure B |
|---|---|
| | Fuse cover |

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

| Figure A | Figure B |
|---|---|
| Fuse (5 ampere) | Fuse (5 ampere) |

VQT2J27

# Safety precautions

# Table of Contents

▲P8 – 14

Quick Start Guide

Basic Operations

Advanced Features

Advanced Editing

Setting Menus

Other Settings

Reference

● Pages to be referred to are indicated as "➪ ○○".

5

# HDD (Hard disk drive) handling care

The HDD is a high precision recording instrument and because of its long recording capability and high speed operation it is a very special device that is easily susceptible to damage.
As a basic rule, save important content to a disc as backup.

## ■ The HDD is a device that is not built to withstand vibration/shock or dust
Depending on the setup environment and handling of the HDD some content may become damaged and play and recording may no longer be possible. Especially during operation, do not subject the unit to any vibration, shock, or remove the AC mains lead from the household mains socket. In the event of a power failure during recording or play, the content may be damaged.

## ■ The HDD is a temporary storage device
The HDD is not an everlasting storage device for recorded content. Use the HDD as a temporary storage place for one-off viewing, editing, or copying. It is recommended to save the recorded content on a disc or to keep the original data or CDs that they were copied from.

## ■ Immediately save (backup) all content as soon as you feel there may be a problem with the HDD
If there is an irregularity within the HDD, repetitive strange sounds or problems with picture (block noise, etc.) may result. Using the HDD in this condition may worsen the problem and in the worst case the HDD may no longer be usable. As soon as you notice this type of problem, copy all content to disc and request service. Recorded content (data) on a HDD that has become unusable is unrecoverable.

●When the unit is turned on or off, there may be an unexpected sound. This does not indicate a problem with this unit.

## ■ Setup precautions
●Do not place in an enclosed area where the rear cooling fan and the cooling vents on the side are covered up.
●Place the unit on a surface that is flat and not subject to vibration or impact.
●Do not place on anything that generates heat like a video cassette recorder, etc.
●Do not place in an area often subject to temperature changes.
●Place in an area where condensation does not occur. Condensation is a phenomenon where moisture forms on a cold surface when there is an extreme change in temperature. Condensation may cause internal damage to the unit.

**DO NOT**

S  S  S

| This unit |
| VCR |

●Conditions where condensation may occur
– When there is an extreme change in temperature (moving from a very hot location to a very cold location, or vice versa, or when subjected to an air conditioner or when cooled air directly impacts the unit). When the HDD (warms during operation) is subjected to cold air, condensation may form on the inside of the HDD and may cause damage to the HDD heads, etc.
– When there is high humidity or a lot of steam in the room.
– During the rainy season.

In the above situation, **without turning the unit on**, let the unit adjust to the room temperature and wait 2–3 hours until condensation is gone.
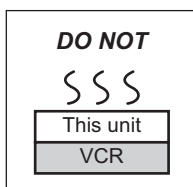
## ■ Cigarette smoke etc. causes malfunction or breakdown
Please be aware that the performance of the optical pick-up assemby may be adversely affected if the unit is exposed to nicotine smoke. If replacement is required due to this reason it will not be covered within the terms of warranty.

## ■ While operating
●Do not move the unit or subject to vibration or impact. (The HDD may become damaged.)
●Do not remove the AC mains lead from the household mains socket, or flip the power breaker switch.
While the unit is on, the HDD is rotating at high speed. Sound or movement due to rotation is normal.

## ■ When moving the unit
① Turn the unit off. (Wait until "BYE" disappears from the display.)
② Remove the AC mains lead from the household mains socket.
③ Move only after the unit has come to a complete stop (approx. 2 minutes) in order to avoid subjecting to vibration and shock. (Even after turning the unit off, the HDD continues operating for a short time.)

## ■ HDD recording time remaining
This unit records using a VBR (Variable bit rate) data compression system to vary recorded data segments to match video data segments which may cause differences in the displayed amount of time and space remaining for recording.
If the remaining amount of time is insufficient, delete any unwanted titles to create enough space before you start recording. (Deleting a Playlist (Video) will not increase the amount of time.)

## ■ Indemnity concerning recorded content
Panasonic does not accept any responsibility for damages directly or indirectly due to any type of problems that result in loss of recording or edited content (data), and does not guarantee any content if recording or editing does not work properly. Likewise, the above also applies in a case where any type of repair is made to the unit (including any other non-HDD related component).

# Remote Control Information/Unit Care

## Remote Control Information

### About batteries
● Insert so the poles (+ and −) match those in the remote control.
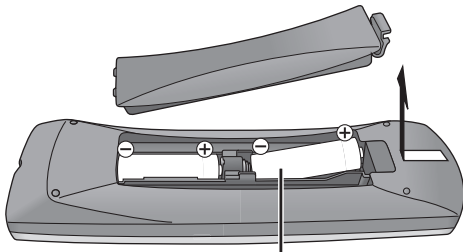
**R6/LR6, AA**

● Use alkaline or manganese batteries.
● Do not mix old and new batteries.
● Do not use different types at the same time.
● Do not heat or expose to flame.
● Do not leave the battery(ies) in an automobile exposed to direct sunlight for a long period of time with doors and windows closed.
● Do not take apart or short circuit.
● Do not attempt to recharge alkaline or manganese batteries.
● Do not 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.

### Using the remote control
Aim at the sensor, avoiding obstacles, up to a maximum range of 7m directly in front of the unit.

Remote control signal sensor

20°
30°
20°
30°
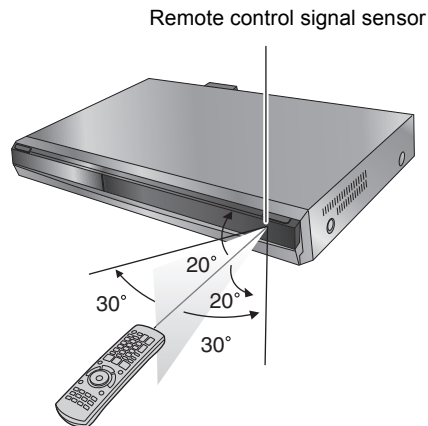
The distance and angles are an approximate.

## Unit Care

**The precision parts in this unit are readily affected by the environment, especially temperature, humidity, and dust. Cigarette smoke also can cause malfunction or breakdown.**

**To clean this unit, wipe with a soft, dry cloth.**
● Never use alcohol, paint thinner or benzine to clean this unit.
● Before using chemically treated cloth, carefully read the instructions that came with the cloth.
**Observe the following points to ensure continued listening and viewing with pleasure.**
Dust and dirt may adhere to the unit's lens over time, making it impossible to record or play discs.
Use the **DVD lens cleaner** (not included) about once every year, depending on frequency of use and the operating environment. Carefully read the lens cleaner's instructions before use.

DVD lens cleaner: RP-CL720E
● This lens cleaner may not be available for sale in all countries, e.g. not available in Germany, please consult your Panasonic dealer for advice.

**Do not place the unit on amplifiers or equipment that may become hot.**
The heat can damage the unit.
This unit
*DO NOT*
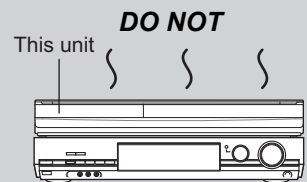
Select a position with good ventilation when installing the unit. Do not block the cooling fan on the rear of the unit.

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

**The manufacturer accepts no responsibility and offers no compensation for loss of recorded or edited material due to a problem with the unit or recordable media, and accepts no responsibility and offers no compensation for any subsequent damage caused by such loss.**
**Examples of causes of such losses are**
● A disc recorded and edited with this unit is played in a DVD Recorder or computer disc drive manufactured by another company.
● A disc used as described above and then played again in this unit.
● A disc recorded and edited with a DVD Recorder or computer disc drive manufactured by another company is played in this unit.

# Location of Parts/Controls

## Remote Control
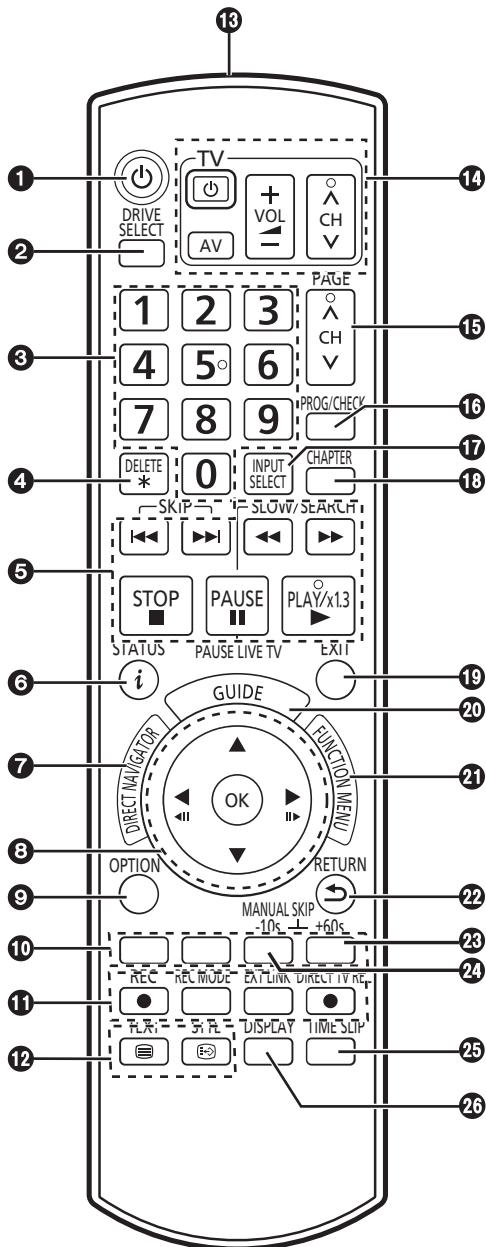


1. Turn the unit on or off .................................................. (⇨ 13)
2. Select drive [HDD, DVD or SD] ............................ (⇨ 20, 21)
3. Select channels and title numbers etc./
   Enter numbers.................................................... (⇨ 13)
4. To delete unwanted recorded titles,
   timer programmes, still pictures or music ............... (⇨ 23, 31, 55)
5. Basic operations for recording and play
   [PAUSE LIVE TV] Pause the TV programme you are watching (⇨ 43)
6. Show the digital channel information
   /Programme information within GUIDE Plus+ screen
   /Show status messages/Show Properties screen................(⇨ 33, 46, 47)
7. Show DIRECT NAVIGATOR ....................................... (⇨ 36, 38)
8. Selection/OK, Frame-by-frame....................................(⇨ 13, 37)
9. Show OPTION menu
   – for accessing Slideshow or Standby Settings, etc.
   – for playing or editing titles and still pictures, etc. (⇨ 36, 41, 48, 50)
   – for showing advertisements (⇨ 33)
   – for searching for programmes (⇨ 35)
   – for showing Audio Description screen (⇨ 46)
   – for Viewing the Top Menu of DVD-Video (⇨ 20)
10. Use Colour buttons (red, green, yellow, blue) according to on-
    screen instructions.
    – for switching the DIRECT NAVIGATOR screen (⇨ 36, 40, 42)
    – for switching VIDEO/Playlists (⇨ 61)
    – for switching PICTURE/Playlists (⇨ 64)
    – for GUIDE Plus+ operations (⇨ 33)
    – for deactivating timer programme (⇨ 31)
    – for showing the Series Information screen (⇨ 34)
    – for selecting programme category (⇨ 30, 34, 46)
    – for editing Favourites (⇨ 72)
11. Recording function
    [● REC]: Start recording ................................................. (⇨ 21)
    [REC MODE]: Change recording mode ....................................... (⇨ 21)
    [EXT LINK]: Linked timer recordings with external equipment.................... (⇨ 28)
    [● DIRECT TV REC]: Direct TV Recording ................................................ (⇨ 26)
12. DVB function
    [TEXT ▤]: Show Digital Teletext service.................................................... (⇨ 46)
    [STTL ▣]: Show subtitles.................................................................... (⇨ 46)
13. Transmission window
14. TV operations.......................................................... (⇨ 79)
15. Channel select/Change pages in the GUIDE Plus+ list ...(⇨ 19, 21, 33)
16. Show timer recording list.....................................................(⇨ 30)
17. Input select (Tuner, AV1, AV2, AV3, DV).................(⇨ 19, 28, 29)
18. Create chapters....................................................(⇨ 37)
19. Exit the menu screen
20. Show the GUIDE Plus+ screen ................................(⇨ 19, 22, 33)
21. Show FUNCTION MENU ............................................(⇨ 43)
    By using the FUNCTION MENU you may access the main
    functions (Playback, Recording, etc.) quickly and easily.
22. Return to previous screen
23. Skip approx. +60s ............................................................ (⇨ 37)
24. Skip approx. -10s ............................................................. (⇨ 37)
25. Skip the specified time ...........................................................(⇨ 37)
26. Show menu for disc playback etc./Change DVB multi audio........(⇨ 68)

## Main Unit



Pull to flip down the front panel.

Remote control signal sensor

1. **Standby/on switch (⏻/I)** ..................... (⇨ 13)
   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.
2. DV IN terminal (for a digital video camcorder).. (⇨ 29)
3. SD card slot............................................. (⇨ 82)
4. USB port ................................................. (⇨ 82)
5. AV3 input terminals .................................. (⇨ 29)
6. Disc tray open/close buttons..................... (⇨ 20)
7. Channel Select buttons........................ (⇨ 19, 21)
8. Start recording button................................ (⇨ 21)
9. Stop button.......................................... (⇨ 20, 21)
10. Play/×1.3 button ...................................... (⇨ 20)

8

## The Unit's Display



❶ **Disc indicator**
This indicator lights up when a disc is inserted.
❷ **Digital broadcast indicator**
Lights when the unit is receiving digital broadcast.
❸ **Copying indicator**
❹ **USB port indicator**
❺ **SD card slot indicator**
❻ **Linked timer recordings with external equipment indicator**......................................................(⇨ 28)

❼ **Timer recording indicator** .......................... (⇨ 22)
**On:**
When a Timer recording programme is registered
**Flashes:**
When the unit cannot go to Timer recording standby
❽ **Drive [HDD, DVD or SD] indicator**
❾ **Main display section**
Current time/playback counter, various messages
❿ **Remote control visual feedback**
This flashes when it is operated by the remote control.
⓫ **Recording/Playback indicator**

## Rear Panel



❶ **Aerial input terminal** ...................... (⇨ 10, 11, 80)
❷ **Aerial output terminal** .................... (⇨ 10, 11, 80)
❸ **AUDIO/VIDEO output terminals**.......... (⇨ 80, 81)
❹ **AV1 (TV) 21-pin Scart terminal** ..... (⇨ 10, 11, 80)
TV set connection

❺ **AV2 (EXT) 21-pin Scart terminal**.......... (⇨ 11, 80)
Connection of an external unit
❻ **HDMI AV OUT terminal**........................ (⇨ 12, 81)
Digital audio and video output terminal
❼ **Digital audio output terminal** ......................(⇨ 81)
❽ **Cooling fan**
❾ **Serial number**
❿ **AC IN~ = Power supply**
Connection for the AC mains lead

### 21-pin Scart terminal

The 21-pin Scart terminal transmits both input and output signals for picture and sound.
TVs equipped with the same type of terminal can be connected here.
This type of terminal is also called Peritel, Euro Connector and Euro AV.

● When the unit is connected to a Q Link-compatible TV with a fully wired 21-pin Scart cable, you can use convenient functions of Q Link.
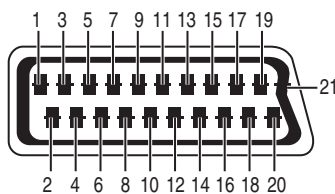


**AV1 Scart terminal (TV)**
1 Audio output CH2 (R)
2 Audio input CH2 (R)
3 Audio output CH1 (L)
4 Audio ground
5 Blue ground
6 Audio input CH1 (L)
7 Blue output
8 Switching voltage output
9 Green ground
10 Q Link control signal
11 Green output
12 Reserved
13 Red ground
14 Blanking ground
15 Red output/chrominance output
16 Blanking output
17 Video output ground
18 Video input ground
19 Video output/luminance output
20 Video input
21 Ground

**AV2 Scart terminal (EXT)**
1 Audio output CH2 (R)
2 Audio input CH2 (R)
3 Audio output CH1 (L)
4 Audio ground
5 Blue ground
6 Audio input CH1 (L)
7 Blue input
8 Switching voltage input
9 Green ground
10 Reserved
11 Green input
12 Reserved
13 Red ground
14 Blanking ground
15 Red input/chrominance input
16 Blanking input
17 Video output ground
18 Video input ground
19 Video output
20 Video input/luminance input
21 Ground

9

# Basic Connection

**Use of the RF coaxial cable**
- Keep the RF coaxial cables as far away as possible from other cables.
- Do not roll up the RF coaxial cables.

**Using a fully wired 21-pin Scart cable**
- You can use a variety of Q Link functions by connecting the unit to a Q Link compatible television (⇨ 44).
- You can enjoy high-quality viewing by connecting the unit to an RGB compatible television.
  Make "AV1 Output" in the Setup menu is set to "RGB 1" or "RGB 2" (⇨ 77)
  Make "AV2 Input" settings in the Setup menu (⇨ 77)

- **Before connection, turn off the mains for all connected equipment and read the appropriate operating instructions.**
  **BE SURE TO READ THE CAUTION FOR AC MAINS LEAD ON PAGE 3.**

## Connecting to a Television only

To the aerial

**TV**

RF IN

AV | HDMI IN

**This unit**

RF IN

RF OUT

AV1 (TV) | HDMI AV OUT

❶

❷

❸

The RF coaxial cable cannot be used for showing pictures from the unit. The unit must be connected using another method, e.g. 21-pin Scart cable to show pictures from the unit on the television set.

– – – – – – HDMI cable
You can enjoy high-quality picture by adding the HDMI cable connection ⇨ 12
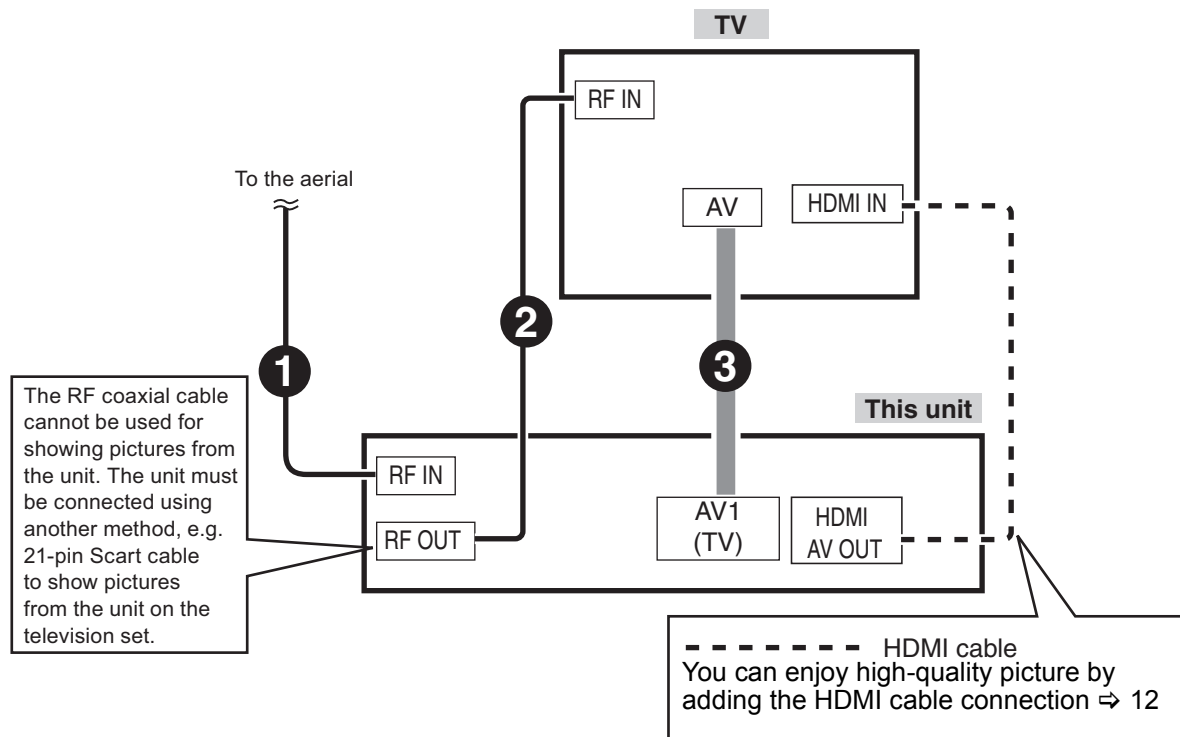
❶ Aerial cable to the "**RF IN**" on the unit.
❷ RF coaxial cable (included) from the "**RF OUT**" on the unit to the "**RF IN**" on the TV.
❸ 21-pin Scart cable from the "**AV1 (TV)**" on the unit to the "**AV**" on the TV.

VQT2J27

## Adding a Digital Satellite Receiver: Connecting to a Television and a Digital Satellite Receiver

To the aerial

Digital satellite antenna

**Digital satellite receiver**

**TV**

RF IN    HDMI OUT    HDMI IN    RF IN/AERIAL

DISH INPUT

AV/TV ❻ AV

RF OUT    AV/VCR    HDMI IN    AV

❷

**This unit**

❶

RF IN

The RF coaxial cable cannot be used for showing pictures from the unit. The unit must be connected using another method, e.g. 21-pin Scart cable to show pictures from the unit on the television set.

RF OUT    ❹    AV1(TV)    ❺

AV2 (EXT)    HDMI AV OUT

❸

– – – – – – HDMI cable
You can enjoy high-quality picture by adding the HDMI cable connection ⇨ 12

❶ Aerial cable to the "**RF IN**" on the digital satellite receiver.
❷ RF coaxial cable from the "**RF OUT**" on the digital satellite receiver to the "**RF IN**" on the unit.
❸ RF coaxial cable (included) from the "**RF OUT**" on the unit to the "**RF IN/AERIAL**" on the TV.
❹ 21-pin Scart cable from the "**AV/VCR**" on the digital satellite receiver to the "**AV2 (EXT)**" on the unit.
❺ 21-pin Scart cable from the "**AV1 (TV)**" on the unit to the "**AV**" on the TV.
❻ 21-pin Scart cable from the "**AV/TV**" on the digital satellite receiver to the "**AV**" on the TV.

**To view digital satellite programmes**
Refer to "Watching Digital Satellite Programmes" (⇨ 19)
**To record digital satellite programmes**
Refer to "Recording from a Digital Satellite Receiver" (⇨ 28)

## Connecting AC mains lead (included)

Connect only after all other connections are complete.

**This unit**

AC IN ∼

To household mains socket

**When the unit is not to be used for a long time**
To save power, unplug it from the household mains socket. This unit consumes a small amount of power, even when it is turned off.
**[approx. 0.3 W ("Power Save in Standby" is activated and "RF OUT ( Aerial Signal )" is set to "Off".)]**

After completing the above connections, proceed to the TV Tuning (⇨ 13).

Additional Connections ▶10, 80

# Basic Connection

● You can enjoy high-quality picture by adding the HDMI cable connection to the 21-pin Scart cable connection between this unit and your TV.

## Connecting to a TV with an HDMI (High Definition Multimedia Interface) Cable (not included)

When connected to an HDMI compatible unit, an uncompressed digital audio and video signal is transmitted, enabling you to enjoy high quality, digital video and audio with just one cable. When connecting to an HDMI-compatible HDTV (High Definition Television), the output can be switched to 1080p, 1080i or 720p HD video.

● **This unit incorporates HDMI™ (V.1.3a with Deep Colour) technology** that can reproduce greater colour gradation (4096 steps) when connected to a compatible TV.
A lower colour gradation (256 steps), without Deep Colour, will be reproduced if connected to a TV which does not support Deep Colour.
The unit will automatically set appropriate output to suit the connected TV.
● Video sources converted to 1920×1080 resolution, while of high quality, will exhibit somewhat lower subjective image resolution than true, native 1080p full-HD sources. See dealer for details.
● Please use High Speed HDMI Cables that have the HDMI logo (as shown on the cover).
● When setting video output to "1080p", please use the HDMI cables 5.0 meters or less.

### Regarding VIERA Link "HDAVI Control™" function

When connecting with a Panasonic TV (VIERA) or a receiver equipped with the "HDAVI Control" function, linked operations would be possible. [⇨ 44, Linked Operations with the TV (VIERA Link "HDAVI Control™"/Q Link)]
● It is recommended that you use Panasonic's HDMI cable.
 Recommended part number: RP-CDHS15 (1.5m), RP-CDHS30 (3.0 m), RP-CDHS50 (5.0 m), etc.
● Non-HDMI-compliant cables cannot be utilised.

**Digital Satellite receiver**

HDMI OUT

AV/VCR

**TV**

HDMI IN

HDMI IN     AV

AV1(TV)

AV2 (EXT)     HDMI AV OUT

**This unit**

**Connecting with a Panasonic TV (VIERA)**

If the 21-pin Scart cable is connected, the following functions are available.

● Direct TV Recording (⇨ 26)
● Watching Digital Satellite Programmes (⇨ 19)
**(In this case, make sure to switch the television input to "AV".)**

————— HDMI cable
━━━━━ 21-pin Scart cable
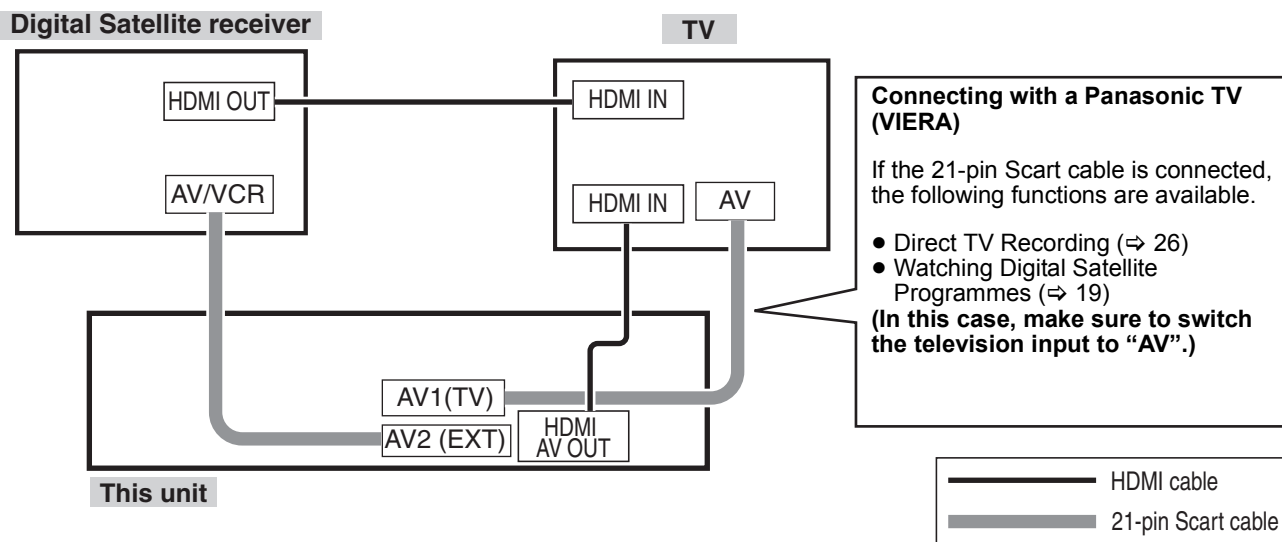
● Set "Digital Audio Output" to "HDMI and Optical" (⇨ 75).
 (The default setting is "HDMI and Optical".)
To enjoy High Quality Video up-converted to 1080p, you need to connect the unit to 1080p compatible HDTV and set "HDMI Video Format" in the Setup menu to "1080p" (⇨ 77).

## Notes

● If connecting to equipment that is only compatible with 2 channel audio output, audio with 3 channels or more will be down-mixed (⇨ 96) and output as 2 channels, even if connecting with an HDMI cable (some discs cannot be down-mixed).
● You cannot connect this unit to DVI devices that are incompatible with HDCP.
 For display units compatible with HDCP (High-Bandwidth Digital Content Protection) that are equipped with a digital DVI input terminal (PC monitors, etc.):
 Depending on the unit, picture may not be displayed properly or at all when connecting with a DVI/HDMI switching cable (audio cannot be output).

# Setting the Channels and Clock

**Preparation:**
- Turn on the mains for the television (and connected equipment) and select the appropriate AV input to suit the connections to this unit.
- These are the first settings you make upon buying the unit. You don't need to make these settings again.
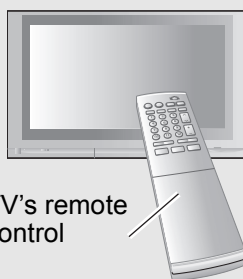
TV's remote control

**❶** ⏻ to turn the unit on.

DVB Auto Setup starts. The unit will search for the digital terrestrial channels. This takes about 5 minutes.

**DVB Auto Setup**

| Scan | CH 21 | | 68 |
|---|---|---|---|
| CH | Channel Name | Type | Quality |
| 27 | BBC ONE Wales | TV | 9 |
| 27 | BBC 2W | TV | 9 |
| 27 | BBC NEWS 24 | TV | 9 |
| 27 | BBC Radio Wales | Radio | 9 |

TV: 6      Radio: 4      Data: 0

Searching...

RETURN
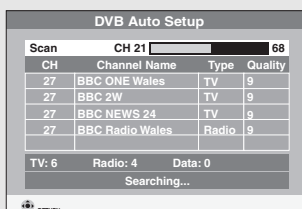
**❷** Power Save in Standby Function:

▲, ▼ to select "On", "On Timer" or "Off", then OK

**Power Save in Standby**

Power Save     On

From  0  :00     To  6  :00

Saves standby power consumption by disabling Quick Start function and AV2 loop-through in standby.

CHANGE
OK   RETURN
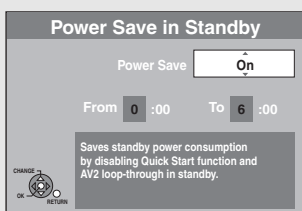
"On": It will go into the Power Save in Standby mode when the unit is in standby mode.

"On Timer": Press [▲, ▼, ◄, ►] to set the start and stop time and then press [OK].
- "Power Save in Standby" is set to activate during the setting time period.

"Off": It is possible to start quickly from the standby mode. (Quick Start mode)

The features of the "Power Save in Standby" function when the unit is in standby mode are as below.

| Power Save in Standby | Activated (On/On Timer) | Deactivated (Off) |
|---|---|---|
| Power consumption | Approx. 0.3W*² | Approx. 12W |
| Quick Start*¹ | Deactivated | Activated |
| Front display | Turns off (The clock display disappears.) | Stays lit |
| Watching the picture from the digital satellite receiver connected to the AV2 terminal | Cannot do | Can do |

※¹ The unit could take over 1 minute to switch ON from standby mode with Quick start deactivated. This time could be reduced to less than 10 seconds with Quick start activated.

※² When "RF OUT ( Aerial Signal )" is set to "Off" in the Setup menu (⇨ 78)

**❸** When setup has completed, the confirmation screen appears.

OK

## Tips

**To cancel Auto-Setup**
Press [RETURN ⤺].

**If the unit displays "No stations found!"**
Press [►] to select "No" and press [OK]. Go to step ❷.
After you have performed steps ❷–⓫, turn off the unit and confirm the cable or aerial input is connected to the RF IN terminal. Restart the Auto-Setup again (⇨ 73, DVB Auto Setup by Signal Quality).

**If the clock setting menu appears or the clock is not correct, set the clock manually (⇨ 14).**

**Restarting the Auto-Setup (⇨ 73, DVB Auto Setup by Signal Quality)**

**To set the channel list best suited to your region (⇨ 73, DVB Auto Setup by Region)**

**About the screen saver function**
When this unit is not operated for approximately 5 minutes while the screen is being displayed, the screen saver may be displayed. You can turn this function off (⇨ 76, Screen Saver).

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VQT2J27

# Setting the Channels and Clock

**4** The Owner ID settings screen appears.

**► and press the numbered buttons to enter your choice of a 4-digit PIN number.**

```
                    Owner ID

        PIN number    ****
        Name
        House No.
        Postcode

             RETURN : leave
```
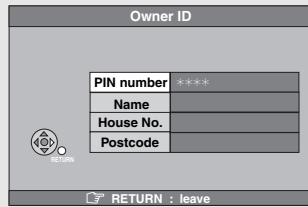
● Make a note of the PIN number (don't forget). Owner ID cannot be reset by "Shipping Condition" in the setup menu. (⇨ 78)

**5** OK **to store the PIN number.**

**6** ◄ **to select "Yes", then** OK

The cursor moves to "Name".

**7** ► **to enter the name.**

**8** ▲, ▼ **to select a letter, then ► to move to next character.**
Repeat this to enter the name.

**9** OK **to store the name.**

**10** ▼ **and ► and then repeat steps 8, 9 to enter and store "House No." and "Postcode".**

**11** RETURN

The Owner ID settings screen disappears.

– Auto-Setup for your unit is complete. You can now choose your favourite channels and store them in the required order in the Favourites. (⇨ 72)

## Tips
**To correct the PIN number**
1. Press [◄, ►] to select the digit.
2. Press the numbered buttons to enter the digit.

**To correct the character**
1. Press [◄, ►] to select the character.
2. Press [▲, ▼] to correct the character.

**To display the Owner ID information on TV**
Press and hold [■] on the main unit for more than 5 seconds.
The PIN number is not displayed.
After 30 seconds this menu automatically disappears.

## Clock Setting

This unit usually obtains time and date information from digital broadcasts and automatically corrects the time several times a day.
However, if the clock is not set correctly, you can set it manually as follows.

**1** With the unit stopped

FUNCTION MENU

**2** ▲, ▼ **to select "Others", then** OK

**3** ▲, ▼ **to select "Setup", then** OK

**4** ▲, ▼ **to select "Others", then ►**

**5** ▲, ▼ **to select "Clock", then** OK

**6** ▲, ▼ **to select Automatic "Off", then** OK

```
                    Clock

                            Automatic  Off

        Time                Date
        0 : 00 : 00        1 / 1 / 2010

        Please set clock manually.
        OK: store    RETURN: leave
```
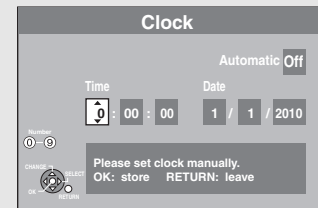
**7** ◄, ► **to select the item you want to change.**
The items change as follows:
Hour◄──►Minute◄──►Second◄──►Day◄──►Month◄──►Year

**8** ▲, ▼ **to change the setting.**
You can also use the numbered buttons for setting.

**9** OK **to confirm new date and time and to initiate the clock.**

**10** RETURN

## Tips
● If the clock is set manually, the clock does not automatically correct the time. We recommend you set "Automatic" in the Clock setting menu to "On" in step 6 (⇨ above).

**To return to the previous screen**
Press [RETURN ↵].
**To exit the screen**
Press [EXIT].

# HDD and Disc Handling

## Usable Discs for Recording and Playback

| Disc type | Logo | Data that can be recorded and played | Rewritable | Play on other players※1 | Recording 16:9 aspect picture※2 | Copy-once recording (CPRM) (⇨ 24) | Standard symbol |
|---|---|---|---|---|---|---|---|
| Hard disk drive (HDD) | | Video Still picture Music | ○ | – | ○ | ○ | HDD |
| DVD-RAM | DVD R A M RAM4.7 | Video Still picture | ○ | ○ | ○ | ○ CPRM (⇨ 96) compatible discs only. | RAM |
| DVD-R | DVD R4.7 | Video※3 or Still picture※3 | – | ○ | ○ | – | -R before finalisation DVD-V after finalisation (Video only) |
| DVD-R DL | DVD R DL | Video | – | ○ | ○ | – | -R DL before finalisation DVD-V after finalisation |
| DVD-RW | DVD R W | Video | ○ | ○ | ○ | – | -RW(V) before finalisation DVD-V after finalisation |
| +R | | Video | – | ○ | –(4:3 aspect) | – | +R before finalisation DVD-V after finalisation |
| +R DL | | Video | – | ○ | –(4:3 aspect) | – | +R DL before finalisation DVD-V after finalisation |
| +RW | | Video | ○ | ○ | –(4:3 aspect) | – | +RW |

○: Can do, –: Cannot do

※1 **-R** **-R DL** **-RW(V)** **+R** **+R DL**
Finalisation is needed for playback on other equipment (⇨ 71).
**RAM** can be played back on Panasonic DVD recorders and DVD-RAM compatible DVD players.
**-R DL**, **+R DL** or **+RW** can be played back only on equipment compatible with these discs.
※2 For further information (⇨ 24, Notes for Recording)
※3 **-R** Videos and still pictures cannot be mixed on one disc.

● **RAM** **-RW(V)** **+R** **+R DL** **+RW** To use a new disc, formatting is necessary (⇨ 70).
● **+RW** If the disc failed to play on other equipment, we recommend you create top menu (⇨ 71).
● Use of Panasonic discs is recommended.
For available recording times for different discs under different recording modes, see "Recording Modes and Durations" (⇨ 25).

● Formatting and/or recording/initializing constraints may prevent you from playing or recording certain discs.

● Please see specifications (⇨ 98) for compatible disc versions and recording speeds.

### Notes
● **RAM** will show an increase in available space whenever a title has been erased.
● **-RW(V)** and **+RW** discs will only show an increase in available space when their last title has been erased.
● **-R** **-R DL** **+R** **+R DL** The discs will show no increase in available space after deleting titles.
● You may not be able to record depending on the condition of the discs and you may not be able to play them due to the condition of the recording.

---

**You cannot directly record to a DVD-R DL and +R DL disc on this unit.**
Record to the HDD and then copy to the disc.

**When playing DVD-R DL (Dual Layer, single-sided) and +R DL (Double Layer, single-sided)**

DVD-R DL (Dual Layer, single-sided) and +R DL (Double Layer, single-sided) discs have two writable layers on one side. If there is not enough space on the first layer to record a programme, the remainder is recorded on the second layer. When playing a title recorded on both layers, the unit automatically switches between layers and plays the title in the same way as a normal programme.
However, video and audio may momentarily cut out when the unit is switching layers.

DVD-R DL +R DL

**When switching layers: Video and audio may momentarily cut**

**Second recordable layer**
The available space

**First recordable layer**
Title 1    Title 2

Playback direction

(Inner section of the disc)          (Outer section of the disc)
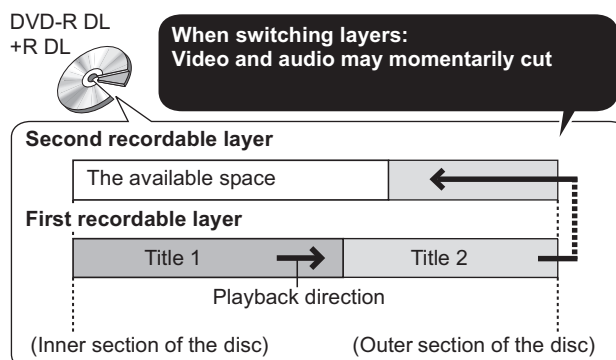
■**Recording Modes and Durations (⇨ 25)**

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# HDD and Disc Handling

## Play-only Discs

| Disc type | Logo | Standard symbol | Uses |
|---|---|---|---|
| DVD-Video | DVD VIDEO | **DVD-V** | High quality movie and music discs |
| DVD-RW (DVD Video Recording format) | DVD R W | **-RW(VR)** | DVD-RW※ video recorded on another DVD recorder<br>● You can play programmes that allow One time only recording if they have been recorded onto a CPRM compatible disc.<br>● By formatting (⇨ 70) the disc, you can record onto it in DVD-Video format.<br>● It may be necessary to finalise the disc on the equipment used for recording. |
| DVD-R | DVD R R4.7 | **DivX®, MP3, WMA, JPEG** | ● DVD-R※ and DVD-R DL※ with video recorded in DivX (⇨ 18)<br>● DVD-R※ and DVD-R DL※ with music recorded in MP3/WMA (⇨ 18)<br>● DVD-R※ and DVD-R DL※ with still pictures recorded in JPEG (⇨ 18) |
| DVD-R DL | DVD R R DL | | |
| CD | COMPACT disc DIGITAL AUDIO | **CD** | ● Recorded audio and music (including CD-R/RW※)<br>You can record tracks to this unit's HDD. |
| | | **DivX, MP3, WMA, JPEG** | ● CD-R※ and CD-RW※ with video recorded in DivX (⇨ 18)<br>● CD-R※ and CD-RW※ with music recorded in MP3/WMA (⇨ 18)<br>● CD-R※ and CD-RW※ with still pictures recorded in JPEG (⇨ 18)<br>● You can record tracks to this unit's HDD. |
| Video CD | COMPACT disc DIGITAL VIDEO | **VCD** | ● Recorded music and video (including CD-R/RW※) |
| SVCD | COMPACT disc SUPER VIDEO | | |

※ Play may be impossible on some DVD-RW (DVD Video Recording format), DVD-R, DVD-R DL, CD-R or CD-RW discs due to the condition of the recording.
● You can play still pictures (JPEG), MP3 and WMA format data recorded on DVD-R, DVD-R DL or CD-R/RW. You can also play CD-DA, Video CD and SVCD (conforming to IEC62107) format data recorded on CD-R/RW. Close the session or finalise the disc after recording.
● The producer of the disc can control how discs are played. So you may not always be able to control play as described in these operating instructions. Read the disc's instructions carefully.

## Discs that Cannot be Played

● 2.6/5.2 GB DVD-RAM, 12 cm
● 3.95/4.7 GB DVD-R for Authoring
● DVD-R, DVD-R DL, DVD-RW, +R, +R DL recorded on another unit and not finalised (⇨ 96).
● Discs recorded with AVCHD format
● DVD-Video with a region number other than "2" or "ALL"
● DVD-Audio
● Blu-ray, HD DVD
● DVD-ROM, +R 8 cm, CD-ROM, CDV, CD-G, Photo CD, CVD, SACD, MV-Disc, PD
● DVD-RAM with cartridge (TYPE1)

## Types of disc or title recorded on HDD for the type of connected TV

When you use the discs recorded either PAL or NTSC, or playback a title recorded on HDD using PAL or NTSC, refer to this table.
(○: Possible to view, –: Impossible to view)

| TV type | Disc/Titles recorded on HDD | Yes/No |
|---|---|---|
| Multi-system TV | PAL | ○ |
| | NTSC | ○ |
| PAL TV | PAL | ○ |
| | NTSC | ○※1 (PAL60) |
| NTSC TV | PAL | – |
| | NTSC | ○※2 |

※1 If your television is not equipped to handle PAL 525/60 signals the picture will not be shown correctly.
※2 Select "NTSC" in "TV System" (⇨ 76).
● When playing back a disc or title recorded on the HDD, ensure that you match the "TV System" setting to the disc or title (PAL or NTSC) (⇨ 76).

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# USB Memory and Card Handling

## USB memories you can use on this unit

| | |
|---|---|
| Compatible USB memories | **USB memories which are defined as USB mass storage class, and digital cameras that use PTP protocol:**<br>– USB memories that support USB 1.0/1.1 and USB 2.0 Full Speed/High Speed.<br>● USB memories of up to 128 GB can be used.<br>● USB memories that support bulk only transfer.CBI (Control/Bulk/Interrupt) is not supported.<br>● Digital Cameras which require additional programme installation when connected to a PC are not supported.<br>● MTP (Media Transport Protocol) device is not supported.<br>● A multi-port USB card reader is not supported. |
| Format | FAT16 and FAT32 file systems are supported.<br>● UDF/NTFS/exFAT file system is not supported.<br>● Depending on the sector size, some files may not work.<br>● Only the first partition on USB memories with multi-partition is supported. |
| Standard symbol | **USB** |

| Data that can be played or copied (⇨ 18) | | | (○: Possible, –: Impossible) |
|---|---|---|---|
| File format | DivX | MP3/WMA | Still pictures (JPEG) |
| Playing | ○※ | ○ | ○ |
| Copying to HDD | – | ○ | ○ |
| Instructions | You can play DivX files recorded with a computer onto the USB memory (⇨ 38). | You can play MP3/WMA files recorded with a computer onto the USB memory and copy them to HDD (⇨ 39, 66). | You can play still pictures recorded with a computer onto the USB memory and copy them to HDD, DVD-RAM or card (⇨ 40, 65). |

※ DivX VOD contents recorded on USB memories cannot be played back. (⇨ 39)
● Despite meeting the conditions mentioned above, there may be USB memories that cannot be used for this unit.
● This unit's USB port does not support bus-powered USB device.
● If a Panasonic digital video camera with HDD etc. is connected to this unit's USB port, you can copy the SD Video recorded with the camera to this unit's HDD or DVD-RAM.

## Cards Usable on this Unit

| | |
|---|---|
| Type | ● SD Memory Card※1 (from 8 MB to 2 GB)<br>● SDHC Memory Card※2 (from 4 GB to 32 GB)<br>● Multi Media Card<br>※1 Including miniSD Card and microSD Card<br>※2 Including miniSDHC Card and microSDHC Card<br>The card types mentioned above will be referred to as "SD card" in these operating instructions. |
| Standard symbol | **SD** |
| Data that can be recorded and played (⇨ 18) | Still pictures (JPEG)<br>Video (SD Video) |
| Instructions | **You can insert directly into the SD card slot.**<br>※1 A miniSD Card and a microSD Card must be used with the adaptor that comes with the card.<br>※2 A miniSDHC Card and a microSDHC Card must be used with the adaptor that comes with the card.<br>● You can play and copy still pictures taken on a digital camera etc. (⇨ 40, 64).<br>● SD Video shot with a Panasonic SD Video camera, etc. can be copied to the HDD or DVD-RAM (⇨ 63)<br>● SD Video cannot be played directly from the SD card. |

### Suitable SD cards

● When using SD cards 4 GB or larger, only SD cards that display the SDHC logo can be used.
● Usable memory is slightly less than the card capacity.
● Please confirm the latest information on the following website.
  **http://panasonic.jp/support/global/cs/** (This site is in English only.)
● If the SD card is formatted on other equipment, the time necessary for recording may be longer. Also, if the SD card is formatted on a PC, you may not be able to use it on this unit. In these cases, format the card on this unit (⇨ 70, 96). Formatting the card on this unit will erase all data on the card.
● This unit is compatible with SD Memory Cards that meet SD Card Specifications FAT12 and FAT16 formats, as well as SDHC Memory Cards in FAT32 format.
● SDHC Memory Cards used for recording with this unit can only be used with other SDHC Memory Card-compatible equipment. SDHC Memory Cards cannot be used with equipment that is only compatible with SD Memory Cards.
● This unit cannot play MOTION JPEG and AVCHD format pictures on an SD card.
● We recommend using a Panasonic SD card.
● Keep the Memory Card out of reach of children to prevent swallowing.
● **You cannot use SDXC Memory Card.**

Structure of folders

Card
**DCIM**
　※※※**XXXXX**
　　(Picture folder)
　　　XXXX※※※※.JPG
※※※: Numbers
**XXX**: Letters

001
　Any folder with JPEG files
　　P0000001.JPG
　　P0000002.JPG

SD_VIDEO
　PRG※※※
　　(MPEG2 folder)
　　　MOV※※※.MOD
　　　MOV※※※.MOI
　　　PRG※※※.PGI

MGR_INFO
　(MPEG2 information folder)

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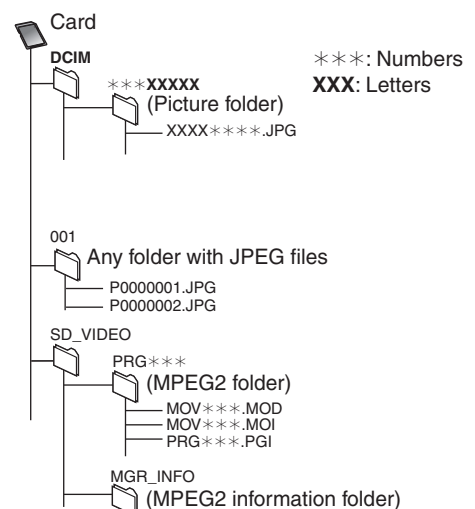
# DivX files, Music files and Still Pictures (JPEG)

## DivX File information

| | |
|---|---|
| Playable media | `-R` `-R DL` `CD` `USB` [※1] |
| File format | DivX<br>●Files must have the extension ".DIVX", ".divx", ".AVI" or ".avi". |
| Number of folders | Maximum number of folders recognizable: 300 folders<br>(including the root folder) |
| Number of files | Maximum number of files recognizable[※2]: 200 files |
| Support version | Certified to the DivX Home Theater Profile V3.0.<br>Video<br>– Number of stream: Up to 1<br>– Codec: DIV3, DIV4, DIVX, DX50<br>– 16 × 16 to 720 × 576 (25 fps)<br>  16 × 16 to 720 × 480 (30 fps)<br>– Aspect Ratio: 10:11, 40:33, 16:11, 12;11, 1:1<br>Audio<br>– Number of stream: Up to 8<br>– Format: MP3, MPEG, Dolby Digital<br>– Multi channel: Dolby Digital is possible. MPEG multi is 2 ch conversion.<br>– Bitrate: 16 kbps to 320 kbps (MP3/MPEG), 32 kbps to 448 kbps (Dolby Digital)<br>– Sampling frequency: 16 kHz/22.05 kHz/24 kHz/32 kHz/44.1 kHz/48 kHz (MP3/MPEG)/32 kHz/44.1 kHz/48 kHz (Dolby Digital) |

## MP3/WMA File Information

| | |
|---|---|
| Playable media | `HDD` `-R` `-R DL` `CD` `USB` |
| File format | MP3<br>●Files must have the extension ".mp3" or ".MP3".<br>WMA (Windows Media-formatted file)<br>●Files must have the extension ".wma" or ".WMA". |
| Number of folders (groups or albums) | Maximum number of folders (groups or albums) recognizable:<br>300 folders (groups or albums) (including the root folder) |
| Number of files (tracks) | Maximum number of files (tracks) recognizable[※2]: 3000 files (tracks) |
| Bit rates (MP3) | 32 kbps to 320 kbps |
| Sampling frequency (MP3) | 16 kHz/22.05 kHz/24 kHz/32 kHz/44.1 kHz/48 kHz |
| ID3 tags<br>WMA tags | compatible (`HDD` `USB`) |
| For WMA | This unit is compatible with Windows Media Audio 9 (WMA9). |

## Still Picture (JPEG[※3]) Information

| | |
|---|---|
| Playable media | `HDD` `RAM` `-R` `-R DL` `CD` `USB` `SD` |
| File format | JPEG<br>●Files must have the extension ".jpg" or ".JPG". |
| Compatible pixels | Between 34×34 and 6400×6400<br>(Sub sampling is 4:2:2 or 4:2:0) |
| Number of folders[※4] | `-R` `-R DL` `CD` `USB` Maximum number of folders recognizable: 300 folders<br>`HDD` `RAM` `SD` This unit can handle a maximum of 300 folders |
| Number of files[※4] | `-R` `-R DL` `CD` `USB` Maximum number of files recognizable[※2]: 3000 files<br>`HDD` `RAM` `SD` This unit can handle a maximum of 3000 files |
| MOTION JPEG PROGRESSIVE JPEG | Not supported |

●If there is a large amount of still picture data etc. within an MP3/WMA file, play may not be possible.
[※1] `USB` DivX VOD contents cannot be played back.
[※2] Total number of recognizable file including MP3, WMA, JPEG, DivX and other type of files is 4000.
[※3] It may take a few moments for still pictures to display.
[※4] When there are many files and/or folders, some files may not display or be playable.

## Notes

`HDD` `RAM` `SD`
●Compatible formats: DCF[※]compliant (Content recorded on a digital camera, etc.)
  ※  Design rule for Camera File system: unified standard established by Japan Electronics and Information Technology Industries Association (JEITA)

`-R` `-R DL` `CD`
●Compatible formats: ISO9660 level 1 or 2 (except for extended formats) and Joliet
●This unit is compatible with multi-session/border (except for DVD-R DL); however, reading or play of the disc may take time if there are a lot of sessions.
●Operation may take time to complete when there are many files (tracks) and/or folders (groups or albums); some files (tracks) may not display or be playable.
●Images recorded at a very high resolution may take a long time to display.
●English alphabetical characters and Arabic numerals are displayed correctly. Other characters may not display correctly.
●The display order on this unit may differ from how the order is displayed on a computer.
●Depending on how you create the disc (writing software), files (tracks) and folders (groups or albums) may not play in the order you number them.
●This unit is not compatible with packet-write format.
●Depending on the recording conditions, the disc may not be played.
●This unit is not compatible with copy-protected, Lossless, Professional, Voice and Multiple Bit Rate (MBR) for WMA.
●This unit is not compatible with WMA files protected with digital rights management (DRM).

## Tips

You can play music files (MP3/WMA) and still pictures (JPEG) on this unit by making folders as shown below. However depending on the method of writing data (writing software), play may not be in the order you number the folders.

**Structure of MP3/WMA folders**
`-R` `-R DL` `CD` `USB`
Prefix with 3-digit numbers in the order you want to play them.
●The file name extension of WMA files will be ".wma".

e.g. Structure of MP3 folders



Order of play
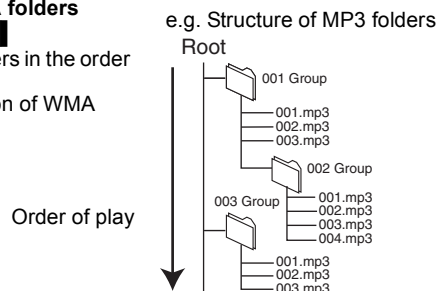
**Structure of still pictures (folders)**
`-R` `-R DL` `CD` `USB`
Files inside a folder are displayed in the order they were updated or taken.



Order of play
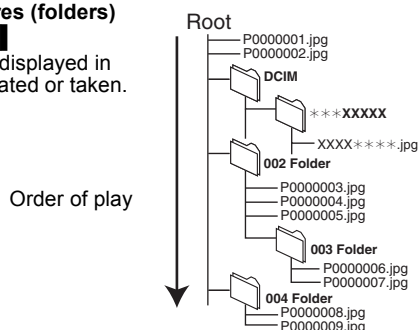
`RAM`
Folders can be created on other equipment.
  ※  These folders cannot be selected as a copying destination.
●If a folder name or file name has been input using other equipment, the name may not be displayed properly or you may not be able to play or edit the data.
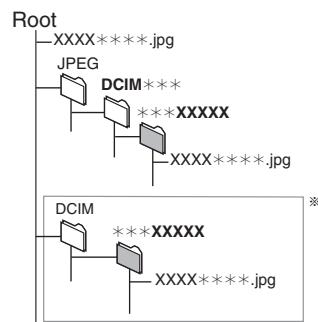
# Watching Television

Refer to "GUIDE Plus+ system" (⇨ 33) for detail information.

This DVD recorder has a tuner which allows it to directly receive and record digital terrestrial channels.

**Preparation:**
● Turn on the television and select the appropriate video input to suit the connections to this unit.

**Important:**
This unit does not have an analogue broadcast tuner.

❶ to turn the unit on.

❷ GUIDE

– The GUIDE Plus+ list appears.

| TV Guide: Landscape | | | | |
| --- | --- | --- | --- | --- |
| Sun 10/10/09 19:45 | Sun 10th | | All Types | All Channels |
| | 7   ITV 1 | | | |
| | 19:30-20:00 | Emmerdale : In today's show we will... | | |
| | Time: | 19:30 | 20:00 | 20:30 | 21:00 |
| BBC 1 | East... | D.I.Y. SOS | Red Cap | |
| BBC 2 | Hot Wars | | Holiday Programme | |
| ITV 1 | Emm... | Coronation Street | The Bill | |
| Channel 4 | Scrapheap Cha... | Pepsi Chart Show | | |
| Channel 5 | News | Sex and the City | Terminator 2 | |
| ITV 2 | Me out of here ! | | Pop Idol | |
| S4C | Rugby | 15 to 1 | Scrapheap C... | |
| +24 hours | | Prog. Type | | Category |

SELECT ○ OPTION: Select Advert, etc. Page + ∧
RETURN ⓘ info  Guide Change Display Mode  Page – ∨

❸ ▲, ▼ to select the current programme, then OK

❹ ▲, ▼ to select "View", then OK

---

**Selecting a Channel without the GUIDE Plus+ system**

---

## To select desired channel
Press [∧ ∨ CH].

## To directly enter Channels
You can also select channels with the numbered buttons.
e.g., "5": [0] ⇨ [0] ⇨ [5] or [5] ⇨ [OK]
 "15": [0] ⇨ [1] ⇨ [5] or [1] ⇨[5] ⇨ [OK]

### Tips
●**Regarding Digital Channel Information (⇨ 46)**
●**If New Channel Message appears (⇨ 47)**
●**To select Audio Description, Digital Teletext and subtitles (⇨ 46)**
●**To change DVB Multi Audio (⇨ 69, DVB Multi Audio)**

### Notes
●The GUIDE Plus+ list is not displayed immediately after initial tuning is done.

---

## Watching Digital Satellite Programmes

You can view the digital satellite programmes via this unit by the following method when "Power Save in Standby" is activated, and the digital satellite receiver is not connected to TV.

**Preparation:**
● Connect a digital satellite receiver to this unit's AV2 input terminals (⇨ 11).
● Turn on the digital satellite receiver.
● Turn on the television and select the appropriate video input to suit the connections to this unit.

❶ to turn the unit on.

❷ INPUT SELECT to select "AV2".

### Tips
●When "Power Save in Standby" is deactivated (⇨ 78), you can watch the digital satellite programme without turning the unit on.

### Notes
●You cannot watch digital satellite programmes during timer recording.

# Playback

**Preparation:**
● Turn on the television and select the appropriate video input to suit the connections to this unit.

## Playing recorded video contents/Playing play-only discs

Refer to "Advanced Playback" (⇨ 36–37) for detail information.
[HDD] [RAM] [-R] [-R DL] [-RW(V)] [+R] [+R DL] [+RW] [DVD-V] [-RW(VR)] [VCD] [CD]

**❶** ⌾ to turn the unit on.

**❷** DRIVE SELECT  to select the HDD or DVD drive.

**❸** If you selected the DVD drive
▲OPEN/CLOSE to open the tray (Button located on front of the unit).
– Insert a disc (⇨ 82) and press [▲ OPEN/CLOSE] again to close the tray.

**❹** PLAY/x1.3 ►

## Stopping Play
Press [■].
– The stopped position is memorized. **(Resume play function)**
– (Expect for [HDD]) The stopped position is cleared when you press [■] several times.

## Pausing Play
Press [❙❙].
– Press again to restart play.

**Menu Screens on the TV**

[DVD-V] [VCD]

Generally, menu screens that appear on the TV may be navigated as follows: e. g.,

**DVD TOP MENU**
Play
Subtitles
Chapter List
Trailer

[DVD-V]

▲, ▼, ◄, ► to select an item, then (OK)

You can sometimes use the numbered buttons to select an item.
[VCD]
Press the numbered buttons to select an item.

e.g., "5": [0] ⇨ [5] , "15": [1] ⇨ [5]

## Tips
**To return to the menu screen**
[DVD-V]
1.Press [OPTION].
2.Press [▲, ▼] to select "Top Menu" or "Menu" and press [OK].

[VCD]
Press [RETURN ↰].

## Notes
● [HDD] [RAM] [-R] [-R DL] [-RW(V)] [+R] [+R DL] [+RW] [-RW(VR)]
Playback starts from the most recent recording.
● [DVD-V] [VCD]
Playback starts from the point specified by the disc.
● [CD]
Playback starts from the beginning of the disc.
● Depending on the disc type, playing may automatically start without pressing [►] (PLAY).
● The unit takes some time to read the disc before play starts.
● DISCS CONTINUE TO ROTATE WHILE MENUS ARE DISPLAYED.
Press [■] when you finish to preserve the unit's motor and your television screen.
● If "◯" appears on the TV, the operation is prohibited by the unit or disc.

# Recording Television Programmes

Refer to "Notes for Recording" (⇨ 24) and "Advanced Recording" (⇨ 25–27) for detail information on recording.

**HDD** **RAM** **-R** **-RW(V)** **+R** **+RW**

**Preparation:**
- Turn on the television and select the appropriate video input to suit the connections to this unit.
- **RAM** If the disc is protected, release protection (⇨ 70).
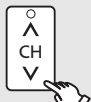
**❶** to turn the unit on.

**❷** DRIVE SELECT to select the HDD or DVD drive.

**❸** **RAM** **-R** **-RW(V)** **+R** **+RW** If you selected the DVD drive

▲OPEN/CLOSE to open the tray (Button located on front of the unit).

– Insert a disc with enough remaining blank space and press [▲ OPEN/CLOSE] again to close the tray.
– When the format confirmation screen is displayed (⇨ 26).

**❹** CH to select desired channel.

– To select with the numbered buttons (⇨ 19).
– When no channel setting is performed on the unit and broadcast is recorded directly from the digital satellite receiver, select a channel on the connected equipment, then press [INPUT SELECT] to select "AV2".

**❺** REC MODE to select the recording mode. (⇨ 25)

| Recording Mode | |
| --- | --- |
| Rec Mode | Remain |
| XP | 47:47 |
| SP | 95:34 |
| LP | 191:11 |
| EP | 381:16 |

**❻** REC to start recording.

Elapsed recording time

## Pausing Recording
**Press [❙❙].**
– Press again to restart recording.(The title is not divided.)

## Stopping Recording
Press [■].

## Tips
- If a programme to record has subtitles, Audio Description or multiple audio, you can record with these items. They cannot be switched after recording.
  - **To record with subtitles**
    Before starting the recording, show the subtitles (⇨ 46). If the programme has multiple subtitle, select the desired language (⇨ 73).
  - **To record with Audio Description**
    Before starting the recording, turn on the Audio Description and set the volume (⇨ 46).
  - **To record with the selected audio**
    Before starting the recording, select the desired audio channel or language, if the programme has multiple audio channel or language (⇨ 69, 73).
- To record sound using LPCM (XP mode only):
  Set the "Audio Mode for XP Recording" to "LPCM" in the Setup menu (⇨ 75)

## Notes
- **RAM** **-RW(V)** **-R** **+RW** To use a new disc, formatting is necessary. (⇨ 26, 70)
- **-R** **-RW(V)** **+R** **+RW** It takes about 30 seconds for the unit to complete recording management information after recording finishes.
- You cannot change the channel or recording mode during recording.
- This unit cannot record NTSC signals to discs that already have PAL signal recordings. (However, both types of programmes can be recorded onto the HDD.)
- **-R** Video cannot be recorded to DVD-R discs with JPEG images already recorded on them.
- Depending on the type of disc used for recording or the type of broadcast, there may be restrictions on the title you are trying to record. (⇨ 24)

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# Timer Recording

## What is FREEVIEW+™?

FREEVIEW+ is the functions that enable timer recordings to be controlled by the signal sent from the broadcaster. "Guide Link", "Series recording" (⇨ 34), and "Split Programme" are available.

"**Guide Link**" – If you set a timer recording from the TV Guide, the recording's start and stop times can be controlled by the broadcaster, e.g. delayed start.
This is indicated by "Guide Link" in the Timer Recording screen in step ❷ (⇨ below).

"**Split Programme**" – If a programme is separated into 2 or more parts by some other programmes e.g. news, this unit pauses recording during the gap.
This is indicated by "Split" in the Timer Recording screen in step ❷ (⇨ below).
When setting timer from the 1st split programme, other parts of the programme will be automatically set and indicated by the timer mark on the TV Guide, but not shown on the timer recording list.

**If you set a timer recording from the TV Guide, the recording's start and stop times are controlled by the signal sent from the broadcaster. If the signal is not sent correctly, the recording may lack the beginning or the ending part of the programmes.**
**In order to make the timer recording work successfully, we recommend you set the start time earlier and the end time later by some minutes, up to a maximum of 10 minutes for Guide Link to function.**
**e.g. When you set the timer recording for a programme that will start at 10:00 and end at 11:00, set "9:58" and "11:05" in step ❸ (⇨ below).**
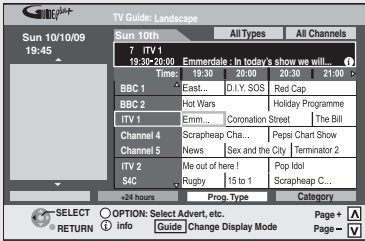
| HDD | RAM | -R | -RW(V) | +R | +RW |

**Preparation:**
- Turn on the television and select the appropriate video input to suit the connections to this unit.
- Turn on this unit.
- If recording to DVD, insert a disc that you use for recording (⇨ 15).
- RAM If the disc is protected, release protection (⇨ 70).
- Confirm that the clock on the unit's display is set to the correct time.

❶ **GUIDE**
– The GUIDE Plus+ list appears.

❷ ▲, ▼, ◄, ► to select the future programme, then **OK**
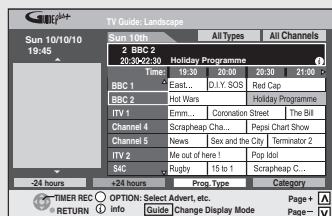


"Guide Link", "Split" and "Series" are displayed here.
– If "Selection Screen" appears, press [▲, ▼] to select "Single Timer Rec.", then press [OK]. Refer to "Series recording" (⇨ 34) for "Series Timer Rec.".

❸ Confirm the programme (start and end time) by TV magazine, etc. and correct if necessary using

Timer icon

▲, ▼, ◄, ► then **OK**

– The settings are stored and the timer programme is on.
– The timer icon is displayed.
– "⏲" lights on the unit's display to indicate timer recording standby has been activated.
– Repeat steps ❷–❸ to programme other recordings.
– Press [⏻] to turn the unit off.

- "Guide Link" will not be displayed and will not function under the following conditions.
  – Timer programmes set manually (⇨ 30).
  – Timer programmes set from the TV Guide are modified or start/stop time changed by more than 10 minutes from original time.
  **(Series)**: Series recording (⇨ 34) is set.
  **(Split)**: The programme is split in two or more parts by other programmes. This unit pauses recording during the gap between the parts of the programme.

## Tips
- **To check programmes (⇨ 31)**
- **To cancel a timer recording programming**
  1 Press [▲, ▼, ◄, ►] to select the programme (the timer icon is displayed) and press [OK].
  2 While "Delete" is selected, press [OK].
  3 Press [◄, ►] to select "Yes" and press [OK].
     – The timer icon disappears.
- To record sound using LPCM (XP mode only):
  Set the "Audio Mode for XP Recording" to "LPCM" in the Setup menu (⇨ 75)

## Notes
- RAM -RW(V) +R +RW To use a new disc, formatting is necessary.(⇨ 26, 70)
- The GUIDE Plus+ list is not displayed immediately after initial tuning is done.
- The GUIDE Plus+ system will not work if the clock is not set correctly.
- If "NTSC" has been selected for "TV System" (⇨ 76), the GUIDE Plus+ system cannot be used.
- "FR" recording mode is not available when the timer programme is controlled by "Guide Link".
- The receipt of the GUIDE Plus+ system data is only possible via the aerial input of this unit. The receipt of the TV Guide data via externally connected satellite receivers is not possible.
- If you set a timer recording that will overlap with other timer recordings, the "Overlapped Timer Recording" screen appears to help you resolve the overlapping.
  Follow the on-screen instructions.
- Simultanious recording to HDD and DVD is not possible.

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# Deleting Titles
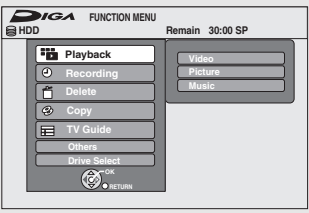
**Preparation:**
- Turn on the television and select the appropriate video input to suit the connections to this unit.
- **RAM** If the disc is protected, release protection (⇨ 70).
- If deleting titles from a disc, insert the disc containing the programme to be deleted.

**Important:**
Once deleted, contents cannot be recovered.

## DELETE Navigator

`HDD` `RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW`

① DRIVE SELECT    to select the HDD or DVD drive.

② With the unit stopped FUNCTION MENU

| DIGA FUNCTION MENU |
| HDD    Remain 30:00 SP |
| Playback |
| Recording |
| Delete |
| Copy |
| TV Guide |
| Others |
| Drive Select |

③ ▲, ▼ to select "Delete", then OK

④ ▲, ▼ to select "Video", then OK

⑤ ▲, ▼, ◄, ► to select the title, then PAUSE / PAUSE LIVE TV

A check mark is displayed. Repeat this step until you select all necessary items.
Press [❚❚] again to cancel.

⑥ OK

⑦ ◄ to select "Delete", then OK

## Tips
**To return to the previous screen**
Press [RETURN ⮌].

**To view other pages**
Press [▲, ▼, ◄, ►] to select "Previous" or "Next", then press [OK].
- You can also press [|◄◄, ►►|] to view other pages.

## Deleting Titles During Playback

`HDD` `RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW`

① During playback
DELETE ✳

② ◄ to select "Delete", then OK

## Notes
- You cannot delete while recording or copying.
- `+R` `+R DL` `+RW` Even if you have set protection on other equipment, such titles are deleted.
- `-R` `-R DL` `+R` `+R DL` `-RW(V)` It is not possible to delete contents from finalised discs.

## Tips
- `HDD` `RAM` Deleting an item increases the available disc space by the amount of space taken by the item deleted.
- `-R` `-R DL` `+R` `+R DL` Available disc space does not increase after deletion.
- `-RW(V)` `+RW` Available disc space increases when you delete the last title.
- `HDD` `RAM` `-RW(V)` `+RW` To recover total disc space, the disc needs to be formatted. (⇨ 70)
- `HDD` You can press [STATUS ⓘ] to display the "Properties" screen when a title with "ⓘ Info" on the bottom of the All Titles or Grouped Titles screen is selected. (⇨ 51)

VQT2J27

# Notes for Recording

## Selecting audio for recording

**Broadcast in multi-channel sound:**
You can select audio language when received audio in multi-channel broadcast ("Multi Audio" appears at the bottom of digital channel information display).
However, audio cannot be switched after recording.

Hello / Hola / Hallo

Select the audio that you want to record in "DVB Multi Audio" in the on-screen display (⇨ 69).

## About the aspect when recording a programme

`HDD` `RAM` (When "Recording Format" is set to "Video format")
`-R` `-RW(V)`
The original aspect used for the source programme will also be used with the recording.
However, in the following case, programme will be recorded in 4:3.
● `-R` `-RW(V)` Programme recorded using "EP" or "FR (recordings 5 hours or longer)" recording modes will be recorded in 4:3 aspect.

`HDD` `RAM` (When "Recording Format" is set to "VR format")
The programme will be recorded in the original aspect.

`+R` `+RW`
The programme will be recorded in 4:3 aspect.

## When you want to copy titles in high speed mode from the HDD to DVD-R, etc.

`-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW`
**Set "Recording Format" to "Video format" before recording to the HDD.**
**(The default setting is "Video format". ⇨ 74)**
You can copy titles in high speed mode (max. speed is 75X※); however, the audio and aspect settings (⇨ above) are necessary before recording to the HDD.
※  Depending on the disc, max. speed may vary.

**Record to the HDD** → **HDD** ⟹ **High speed copy to DVD-R, etc.**

In the following cases, high speed mode does not work.
● `+R` `+R DL` `+RW` Titles recorded in "EP" mode and "FR (recordings 5 hours or longer)" mode
● `+R` `+R DL` `+RW` Titles recorded in 16:9 aspect
● `-R` `-R DL` `-RW(V)` Titles recorded in 16:9 aspect using "EP" mode or "FR" (recordings 5 hours or longer) mode

## Copy-once recording

It is not possible to record the broadcasts that allow "One time only recording" onto DVD-R, DVD-RW, +R, +RW or 8 cm DVD-RAM discs. Use the HDD or CPRM (⇨ 96) compatible DVD-RAM.

`RAM` CPRM compatible discs only.

`-R` `-RW(V)` `+R` `+RW`

12 cm
HDD
○

―

(○: Can do, –: Cannot do)

● "One time only recording" titles can only be transferred from the HDD to CPRM compatible DVD-RAM (They are deleted from the HDD). They cannot be copied.
● Even when copying to videotape the title may not be copied correctly because of the copy guard.
● You cannot copy a Playlist (Video) created from "One time only recording" titles.

## Playing the disc on other DVD players

`-R` `-R DL` `-RW(V)` `+R` `+R DL`
**The disc must be finalised after recording or copying (⇨ 71).**
It is necessary to finalise DVD-R, etc. on this unit after recording or copying titles to them. You can then play them in the same way as a commercially sold DVD-Video. However, the discs become play-only and you can no longer record or copy.※
※  You can record and copy again if you format DVD-RW.

**Record to DVD-R, etc.** ⟹ **Finalise** → Play on other DVD equipment

`+RW`
If the disc failed to play on other equipment, we recommend you create top menu (⇨ 71). However, even with Top Menu, +RW may not play on other players.

## Recording to DVD-R DL and +R DL

**You cannot directly record to a DVD-R DL and +R DL disc on this unit.**
Record to the HDD and then copy to the disc.

● It is not possible to record to both HDD (Hard Disk Drive) and DVD drive simultaneously.

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# Advanced Recording

## Recording Modes and Durations

Depending on the content being recorded, the recording times may become shorter than indicated.
(The times provided on this table are an estimate.)

| Recording Mode | HDD (250 GB) | DVD-RAM | | DVD-R DVD-RW +R +RW (4.7 GB) | DVD-R DL※3 (8.5 GB) | +R DL※3 (8.5 GB) |
| --- | --- | --- | --- | --- | --- | --- |
| | | Single-sided (4.7 GB) | Double-sided※1 (9.4 GB) | | | |
| XP (High quality) | 55 hours | 1 hour | 2 hours | 1 hour | 1 hour 45 minutes | 1 hour 45 minutes |
| SP (Standard play) | 110 hours | 2 hours | 4 hours | 2 hours | 3 hours 35 minutes | 3 hours 35 minutes |
| LP (Long play) | 221 hours | 4 hours | 8 hours | 4 hours | 7 hours 10 mininutes | 7 hours 10 minutes |
| EP (Extra long play)※4 | 441 hours (331 hours※2) | 8 (6※2) hours | 16 (12※2) hours | 8 (6※2) hours | 14 hours 20 minutes (10 hours 45 minutes※2) | |
| FR (Flexible Recording)※4 | 441 hours maximum | 8 hours maximum | 16 hours maximum | 8 hours maximum | 14 hours 20 minutes | Approximately 9 hours with video quality equivalent to LP mode. |

※1 It is not possible to record or play continuously from one side of a double sided disc to the other.
※2 When "Recording time in EP mode" has been set to "EP ( 6hours )" in the Setup menu (⇨ 74).
The sound quality is better when using "EP ( 6hours )" than when using "EP ( 8hours )".
※3 You cannot record directly to DVD-R DL and +R DL discs with this unit. The table shows the recording time when copying.
**+R DL** You cannot copy in "EP" or "FR (recordings 5 hours or longer)" mode.
※4 When recording to the HDD in "EP" or "FR (recordings 5 hours or longer)" mode, you cannot perform high-speed copy to +R, +R DL or +RW discs.



Picture quality

XP
SP
LP
EP (6hours) *2
EP (8hours)
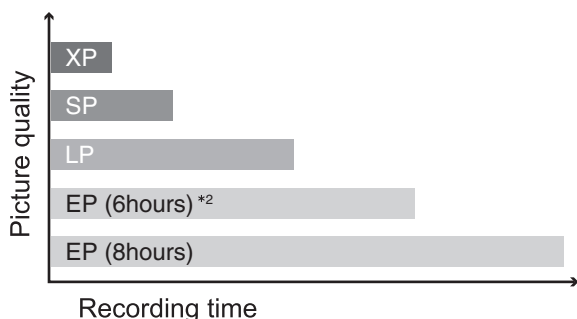
Recording time

### Notes
● This unit uses variable bit rate (VBR) recording which varies the amount of data recorded to suit the picture quality, so actual recording times and remaining recording times shown by the unit will be different. ( **-R DL** **+R DL** The difference will be especially noticeable.) Use a disc enough remaining blank space.
● When recording to DVD-RAM using EP ( 8hours ) mode, play may not be possible on DVD players, even if they are compatible with DVD-RAM. In this case use EP ( 6hours ) mode.

### Tips
● Maximum number of titles to a disc
**HDD** 499 titles on HDD
**RAM** **-R** **-RW(V)** 99 titles on a disc
**+R** **+RW** 49 titles on a disc

● **FR (Flexible recording mode)**
Using "Flexible Recording" is convenient in these kinds of situations:
**RAM** **-R** **-RW(V)** **+R** **+RW**
– When the amount of free space on the disc makes selecting an appropriate recording mode difficult
– When you want to record a long programme with the best picture quality possible
**HDD**
– When you want to record a title to HDD so that it can then be copied to fit one 4.7 GB disc perfectly
You do not need to edit the recorded title, or change the recording mode when copying, to fit the disc space

e.g., Recording a 90-minute programme to 4.7 GB DVD-RAM disc:
– If you select XP mode, the programme will not fit on one disc.



A second disc is necessary for 30-minutes of the programme.

– If you select SP mode, the programme will fit on one disc.



However there will be 30-minutes remaining disc space.

– If you select "Flexible Recording" the programme will fit on one disc perfectly.



You can set FR mode when programming timer recordings and flexible recording (⇨ 27).

Advanced Features

# Advanced Recording

## When the format confirmation screen is displayed

Formatting is the process of making media such as DVD-RAM recordable on recording equipment.

**Important:**
Formatting permanently deletes all disc contents (including the contents that have been recorded on a PC), regardless of protection status of disc.

`RAM` `-RW(V)` `+R` `+R DL` `+RW`

The following screen may appear when inserting a new disc or a disc that has been recorded on another equipment.
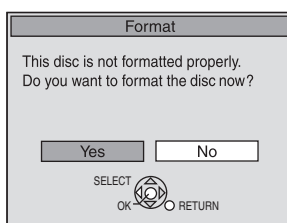
Only format the disc if you intend to use it for recording.

```
                Format
  This disc is not formatted properly.
  Do you want to format the disc now?

       Yes            No

           SELECT
       OK        RETURN
```

Do not format if you intend to view pre-recorded titles or contents from the disc.

◀ to select "Yes", then (OK)

### Tips
Refer to "Formatting Discs or Cards" (⇨ 70) for more detail of formatting.

## When removing a Recorded or Copied Disc

`-R` `-R DL` `-RW(V)` `+R` `+R DL`
After recording or copying, if you press [⏏ OPEN/CLOSE] to eject the disc, the following screen may appear.

```
              Finalise

  Finalise the disc so that it can be played
  on other DVD players.
  Note : Recording or Editing is not possible
  after finalising. This may take up to ○ min.
  ● Press the REC button to start finalise.
  ⏏ Press the OPEN/CLOSE button to exit.
    This disc cannot be played on other
    DVD players without finalising.
```
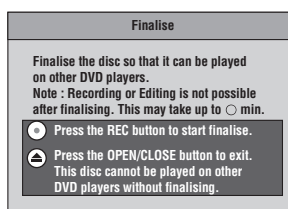
**Finalising**
DVD-R, etc. recorded or copied on this unit cannot be played on other players immediately after recording or copying. Using the Finalise feature allows you to play these discs on other players.
Once the disc is Finalised you will no longer be able to record onto the disc.
[However if you format the DVD-RW, you can record and copy onto the disc again. (⇨ 70)]

REC ● to start finalising.

or

⏏ OPEN/CLOSE to eject the disc without finalising.

### Notes
● You cannot stop finalising once you have started it.

### Tips
● If you want to provide the disc with a name or set play menu select, select "Disc Name" (⇨ 70), "Auto-Play Select" (⇨ 71) or "Top Menu" (⇨ 71) in "DVD Management" before finalising.
● Refer to "Finalising" (⇨ 71) for more detail of finalising.

## Specifying the Recording Time —One Touch Recording

`HDD` `RAM` `-R` `-RW(V)` `+R` `+RW`
This function allows specifying the length of recording time up to 4 hours.

During recording
On the main unit only

● ▢ repeatedly until the desired time is reached.

– The recording time and the unit's display changes as follows:

Counter (Cancel) ⟶ OFF0:30 ⟶ OFF1:00
↑                                              ↓
OFF4:00                                  OFF1:30
↑── OFF3:00 ← OFF2:00 ←┘

### Notes
● This function does not work during timer recording or Flexible Recording.
● Recording stops and the set time is cleared if you press [■].
● This unit is turned to standby mode when this unit is not operated for approximately 5 minutes after completing One Touch Recording, if "Auto Standby after OTR" is set to "On" in the Setup menu. (Default setting: "On") (⇨ 78)

## Direct TV Recording

`HDD`
This function allows you to immediately start recording the programme that you are viewing on the TV without having to change the channels on this unit.

You can use the function when you connect the unit to a Q Link compatible TV using a 21-pin Scart cable.

You can also use this function using VIERA Link. (⇨ 44)

DIRECT TV REC
● Press and hold for about 1 second.
– The titles are recorded to the HDD.

### Tips
**To stop recording**
Press [■].

### Notes
● When the Digital Teletext (⇨ 46) is displayed, Direct TV recording is unavailable.
● If you switch TV channels while using Direct TV recording, the Direct TV recording stops.
● When "EXT-L" lights on the unit's display (⇨ 28), Direct TV recording is unavailable.

## Flexible Recording

HDD RAM -R -RW(V) +R +RW
The unit sets the best possible picture quality that fits the programme within the remaining disc space.
The recording mode becomes FR mode. Refer to "FR (Flexible recording mode)" (⇨ 25).

**Preparation:**
● Select the channel or the external input to record.
● Press [DRIVE SELECT] to select the HDD or DVD drive.

❶ With the unit stopped

FUNCTION MENU

❷ ▲, ▼ to select "Others", then [OK]

❸ ▲, ▼ to select "Flexible Rec", then [OK]

**Flexible Rec**
Record in FR mode.

| Maximum rec. time | 8 hour 00 min. |
|---|---|
| Set rec. time | 8 hour 00 min. |

Start      Cancel

SELECT      ○ RETURN

❹ ◀, ▶ to select "hour" and "min." and ▲, ▼ to set the recording time.
– You can set "hour" and "min." using the numbered buttons.

❺ When you want to start recording ▲, ▼, ◀, ▶ to select "Start", then [OK]
– Recording starts.

### Notes
●You cannot record more than 8 hours.

### Tips
**To exit the screen**
Press [EXIT].

**To stop recording partway**
Press [■].

**To show the remaining recording time**
Press [STATUS ⓘ] to show the remaining recording time.

| HDD |
|---|
| REC 0:59 |
| 1 DVB |
| BBC ONE Wales |

Remaining time
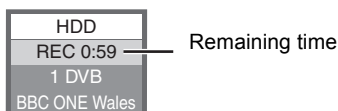
## Playing while you are recording

**Chasing Playback**

HDD RAM
Allows playback from the beginning of the title you are recording.

During recording

PLAY/x1.3
▶

### Tips
**To stop play**
Press [■] once.

**To stop recording**
2 seconds after play stops, press [■].

**To stop timer recording**
2 seconds after play stops,
1   Press [■].
2   Press [◀, ▶] to select "Stop Recording", then press [OK].

**Simultaneous Record and Playback**

HDD RAM
Allows playback of a previous title, while recording something else.

● You can also change the drive and play while recording. Press [DRIVE SELECT].

❶ During recording

DIRECT NAVIGATOR

❷ [▲, ▼, ◀, ▶] to select the title to play, then [OK]

### Tips
**To stop play**
Press [■].

**To exit the DIRECT NAVIGATOR screen**
Press [DIRECT NAVIGATOR].

**To stop recording**
After play stops
1   Press [DIRECT NAVIGATOR] to exit the screen.
2   Press [■].
3   If the recording stop confirmation screen is displayed, press [◀, ▶] to select "Yes" or "Stop Recording" and press [OK] to stop recording.

### Notes
●During playing while you are recording, you cannot edit or delete titles.

Advanced Features

# Recording from a Digital Satellite Receiver

HDD RAM -R -RW(V) +R +RW

## Manual Recording

**Preparation:**
- RAM If the disc is protected, release protection (⇨ 70).
- Connect a digital satellite receiver to this unit's AV2 input terminals (⇨ 11).
- Set the "AV2 Input" to match the connected equipment in the Setup menu (⇨ 77).
- When the output signal from the external equipment is NTSC, change the "TV System" to "NTSC" in the Setup menu (⇨ 76).

**①** With the unit stopped

[INPUT SELECT] to select "AV2" for the digital satellite receiver you have connected.

**②** [DRIVE SELECT] to select the HDD or DVD drive.
- If you selected the DVD drive, insert a disc (⇨ 82).

**③** [REC MODE] to select the recording mode.

**④** Select the channel on the digital satellite receiver.

**⑤** [REC ●] to start recording.

## Tips
**To skip unwanted parts**
Press [❚❚] to pause recording. (Press again to restart recording.)

**To stop recording**
Press [■].

## Notes
- This unit cannot record NTSC signals to discs that already have PAL signal recordings. (However, both types of programmes can be recorded onto the HDD).

## Linked timer recordings with external equipment (SKY Digital STB/digital satellite receiver) — EXT LINK

To record programmes from a SKY Digital STB/digital satellite receiver using timer programming

**Preparation:**
- RAM If the disc is protected, release protection (⇨ 70).
- Make sure you connect the AV2 terminal of this unit to "VCR Scart Terminal" of a SKY Digital STB/digital satellite receiver with a 21-pin scart cable (⇨ 11).
- Set the "AV2 Input" and "Ext Link" to match the connected equipment in the Setup menu (⇨ 77).

**①** Make timer programming on SKY Digital STB/digital satellite receiver.
- Refer to the equipment's operating instructions.

**②** [DRIVE SELECT] to select the HDD or DVD drive.
- If you selected the DVD drive, insert a disc (⇨ 82).

**③** [EXT LINK]
- The unit turns off and "EXT-L" lights on the unit's display to indicate timer recording standby has been activated.
- While the unit is in EXT LINK standby mode or recording, most operations on this unit are prohibited ([▲ OPEN/CLOSE], [⏻/I] etc.).

## Tips
**To cancel the external control**
Press [EXT LINK] to stop recording or to cancel linked timer recording standby (The unit turns on and "EXT-L" disappears.).

**Manual timer recordings (⇨ 30)**

## Notes
- In order to prevent accidental operation, press [EXT LINK] to cancel the setting after recording is finished.
- This function does not work when "TV System" is set to "NTSC" in the Setup menu (⇨ 76).
- This function does not work with some equipment. Refer to the equipment's operating instructions.
- The beginnings of recordings may not be recorded correctly in some cases.
- .When "Ext Link" is set to "Ext Link 2", this function does not work if the input signal is NTSC system.
- Programmes are recorded as one title on this unit when the end time of the earlier timer recording and the start time of the later timer recording are close to each other.
  HDD RAM To divide the titles, go to "Divide Title" (⇨ 49).
- When this unit is in EXT LINK standby ("EXT-L" is shown on the unit's display), the TV Guide cannot be downloaded.
- While the unit is in EXT LINK standby mode or recording, AV1 output terminal outputs the signal which is input from the AV2 input terminal irrespective of "AV1 Output" setting (⇨ 77).
- During EXT LINK standby mode or recording, playback is only available from the drive performing the recording.
- When "EXT-L" lights on the unit's display, Direct TV Recording is unavailable.

# Recording from an External Device

HDD RAM -R -RW(V) +R +RW
- Turn off the unit and other video equipment before connecting.
- Refer to "Adding a VCR: Connecting to a Television and a Video Cassette Recorder" when connecting to the AV2 input terminals on the rear panel. (⇨ 80)

This unit

DV IN

VIDEO L/MONO AUDIO-R AV3 IN

4-pin DV cable

Audio/video cable

Other video equipment

Connect to Audio/Video output terminals.
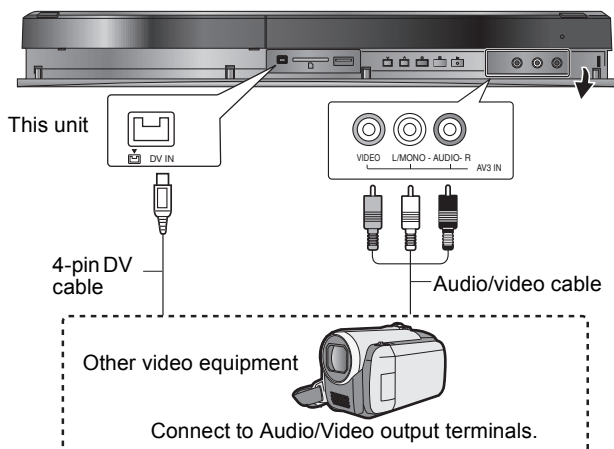
※ Connect to terminals of the same colour.
- If the audio output of the external device is monaural, connect to L/MONO on the AV3 input terminals at the front.

**Preparation:**
- When the output signal from the external device is NTSC, change the "TV System" to "NTSC" in the Setup menu (⇨ 76).
  This unit cannot record NTSC signals to discs that already have PAL signal recordings. (However, both types of programmes can be recorded onto the HDD.)

## Notes
- When timer recording starts while recording from an external device, timer recording takes priority and recording from the external device stops.
- If video is copied from another piece of equipment to this unit, then the video quality will be degraded.

### Recording from a VCR, etc.

**Preparation:**
- Press [DRIVE SELECT] to select the HDD or DVD drive.
- Press [REC MODE] to select the recording mode (⇨ 25).
- To reduce noise in input from a video cassette recorder, set "Input NR" to "On" in the on-screen display (⇨ 69).

❶ [INPUT SELECT] to select the input where your external device is connected.
– Front panel inputs are AV3.

❷ Start play on the external device.

❸ [REC] at the point you want to start recording.

## Tips
**To skip unwanted parts**
Press [❙❙] to pause recording. (Press again to restart recording.)

**To stop recording**
Press [■].

- Using Flexible Recording (⇨ 27), you can record the content of a video cassette (approx. 1–8 hours) to a 4.7 GB disc with the best possible quality of recording without wasting disc space.

## Notes
- Almost all videos and DVD-Video on sale have been treated to prevent illegal copying. Any software that has been so treated cannot be recorded using this unit.

### Recording from a DV Camcorder

HDD RAM Programmes are recorded as a single item; breaks in the images create chapters and playlists are created automatically.

**Preparation:**
1 Turn off the main unit and DV equipment, then connect the equipment with the unit's DV input terminal (⇨ left).
2 Turn on the main unit.

❶ Turn on the DV equipment, then pause play at the point you want to start recording.
"DV Auto Rec" screen may appear.

DV Auto Rec
DV unit is connected.
Record from the DV unit?

Rec to HDD   Rec to DVD   Cancel

SELECT
OK   RETURN

**When "DV Auto Rec" screen does not appear**
After performing step ❶ (⇨ above),
1. Press [DRIVE SELECT] to select the HDD or DVD drive.
2. Press [FUNCTION MENU].
3. Press [▲, ▼] to select "Others", then press [OK].
4. Press [▲, ▼] to select "DV Auto Rec", then press [OK].
You can proceed to step ❷.

❷ ◄, ► to select "Rec to HDD" or "Rec to DVD", then [OK]

❸ [REC MODE] to select the recording mode (⇨ 25).

❹ ◄ to select "Rec", then [OK]

## Notes
- Only one piece of DV equipment (e.g., digital video camcorder) can be connected to the unit via the DV input terminal.
- It is not possible to operate the unit from the connected DV equipment.
- The DV input on this unit is for use with DV equipment only. (It cannot be connected to a computer, etc.)
- The DV equipment name may not be shown correctly.
- Depending on the DV equipment, the images or audio may not be input properly.
- Date and time information is not recorded, even if displayed on the camcorder.
- You cannot record and play simultaneously.

## Tips
**When recording finishes**
The confirmation screen appears.
Press [OK] to finish DV camcorder recording.

**To stop recording**
Press [■].
The confirmation screen appears. Press [OK].

If the DV camcorder recording function does not work properly, check the connections and DV equipment settings, and turn the unit off and back on. If that does not work, follow the instructions for "Recording from a VCR, etc.". (⇨ left)

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# Advanced Timer Recording

## Manual timer recordings

`HDD` `RAM` `-R` `-RW(V)` `+R` `+RW`

**Preparation:**
- Turn on the television and select the appropriate video input to suit the connections to this unit.
- `RAM` If the disc is protected, release protection (⇨ 70).
- When recording to a disc, insert a disc with enough remaining blank space.
- Confirm that the clock on the unit's display is set to the correct time.
- If connected via a digital satellite receiver, please ensure before a timer recording starts the required channel is set on the digital satellite receiver.

**1** PROG/CHECK

| Timer Recording | Remain | HDD | 30:24 SP | DVD | 1:58 SP |
| | | | | SUN 10/10/10 12:53:00 | |

| No. | Channel | Date | Start | Stop | HDD DVD | Mode | STTL | AD | Drive space |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | | | New Timer Programme | | | | | |

Press OK to store new programme.
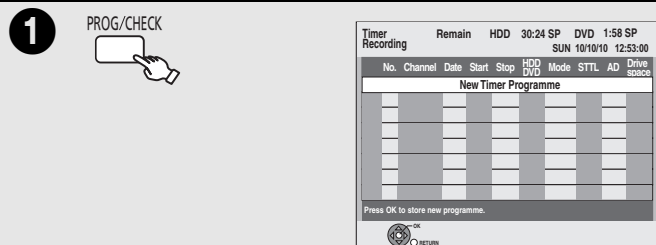
**2** ▲, ▼ to select "New Timer Programme", then (OK)
- If "New Timer Programme" is already selected, press [OK].

**3** ◄, ► to move through the items and ▲, ▼ to set the items.

| Timer Recording | Remain | HDD | 30:24 SP | DVD | 1:58 SP |
| | | | | SUN 10/10/10 12:54:00 | |

| Channel | Date | Start | Stop | HDD DVD | Mode | STTL | AD |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ↕ | --/-- | --:-- | --:-- | --- | SP | --- | --- ► |

All Channels : -----

Programme Name

Please set Channel.

Change Category      (0)~(9) Number

**Channel:**
- TV Station Name/External Input
  - When recording digital satellite programmes, select "AV2".
  - You can press the "Blue" button to change the category. [e.g., Free Channels, Radio, Registered Favourites (⇨ 72, Favourites Edit)]

**Date:**
- You can set a daily or weekly programme (⇨ right, Tips).

**Start (start time)/Stop (end time):**
- Hold button to change in 30-minute increments or decrements.

**Drive:**
- HDD or DVD
  When the recording drive is "DVD" and there is not enough remaining space, recording automatically switches to the "HDD" (⇨ 32).

**Mode:**
- Recording mode (⇨ 25)

**STTL [Subtitles (⇨ 46)]**[※1], [※2]:
- AUTO/OFF

**AD [Audio Description (⇨ 46)]**[※1], [※3]:
- AUTO/OFF

**RENEW (`HDD`):**
- Auto Renewal Recording (⇨ 32) ON/OFF

**Programme Name:**
Press [OK] (⇨ 47, Entering Text).

[※1] If "AUTO" is selected, and if the programme includes the information of subtitles or Audio Description, they are automatically recorded with the programme.

[※2] When there are multiple languages, select the subtitle language (⇨ 73, DVB Preferred Subtitles)

[※3] You can switch the Audio Description and change its volume during timer recording.

**4** (OK)

- The timer icon is displayed in the left column.
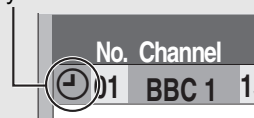
| | No. | Channel |
| --- | --- | --- |
| ⏱ | 01 | BBC 1    1! |

- "⏱" lights on the unit's display to indicate timer recording standby has been activated.
- Repeat steps **2**–**4** to programme other recordings.
- Press [⏻] to turn the unit off.

### Notes
- "⏱" on the unit's display flashes when the unit cannot go to timer recording standby.
- If two timer recording times overlap, the first recording always has priority. The second recording will start only after the first recording has finished.
- Recorded subtitles cannot be deleted later.
- A timer recording will not start while a disc is being formatted, deleted or finalised. The recording begins afterwards.
- When "Channel" is set in "AV1", "AV2" or "AV3", "STTL" and "AD" setting is unavailable.
- Recorded Audio Description cannot be deleted.

### Tips
**To exit the timer recording list**
Press [PROG/CHECK].

- "Date" Setting
  Each press of [▲] changes items in the order below.
  (Each press of [▼] changes items in the reverse order.)

  Current date → - - - → One month later
  ↑                        minus one day
                                  ↓

  SAT              SUN-SAT
  ↑                    ↓
  ┊                MON-SAT
  ┊                    ↓
  SUN  ←            MON-FRI
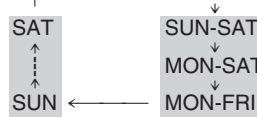
  Weekly timer      Daily timer

  Titles recorded using the same daily, weekly or series timer are bundled and displayed as a "group" in the DIRECT NAVIGATOR screen (⇨ 36) except when using Auto Renewal Recording.
- You can also use the numbered buttons to enter "Channel", "Date", "Start" and "Stop".
- You can also press [DRIVE SELECT] to switch the drive, [REC MODE] to switch "Mode" and press [STTL ⊡] to switch "STTL".

## Language for broadcast with multi-audio or multi-subtitle

In timer recording of broadcast with multi-audio or multi-subtitle, audio and subtitle language to be recorded will follow the setting of "DVB Preferred Multi Audio" and "DVB Preferred Subtitles" in the Setup menu (⇨ 73)

## To cancel a timer recording in progress

**Preparation:**
- Turn on the television and select the appropriate video input to suit the connections to this unit.

**1** While the unit is on

STOP ■

- Confirmation screen appears.

**2** ◄ to select "Stop Recording", then (OK)

### Notes
- Recording stops and the timer programme is deleted. (Daily, weekly and series timer programmes remain and timer recording will start from the next time the timer recording is set.)

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## If the "Overlapped Timer Recording" screen appears

If you set a timer recording that will overlap with other timer recordings using the GUIDE Plus+ system, the "Overlapped Timer Recording" screen appears to help you eliminate the overlapping.
Follow the on-screen instructions.

## Check, Change, Delete Programmes, or Resolve Overlapping

The timer recording list can be viewed even when the unit is off.

**❶** PROG/CHECK then ▲, ▼ to select the programme.



Ⓐ **Timer Recording screen icons**

| | |
|---|---|
| ⏱: | Timer programme is active. |
| ●: | Currently recording |
| ◔ : | Programmes are overlapped. Recording of the programme with the later start time starts when the earlier programme finishes recording. |
| ⊖: | You stopped a daily, weekly or series timer recording. The icon disappears the next time the timer recording starts recording. |
| ▮: | The disc was full. (not enough space) |
| ▨: | The TV programme may not be recorded due to copy-protect. |
| ⊗: | Recording stopped (Dirty disc, etc.) |
| ↻: | Timer programmes set to Auto Renewal Recording (⇒ 32). |
| ↱: | Titles that have been rerouted to the HDD (Displayed while recording.) |
| **HDD** | Recording drive is set to HDD |
| **DVD** | Recording drive is set to DVD |

Ⓑ **Drive space**

| | |
|---|---|
| **OK:** | Recordable |
| → **(Date):** | For daily or weekly timer recordings, the display will show until when recordings can be made (up to one month ahead from the present time) based on the time remaining on the disc. |
| **!:** | It may not be possible to record because: |
| | – the disc is write-protected. |
| | – there is no more space left. |
| | – the number of possible titles has reached its maximum. |
| | – programmes are overlapped. |
| | – the timer programme is deactivated. |
| **Relief:** | Timer programmes that will be relief recorded to the HDD. |

Ⓒ **Channel name, programme name and other information are displayed.**

**❷a** DELETE to delete.
– You cannot delete programmes that are currently recording.

**❷b** OK to modify the programme.
▲, ▼, ◀, ▶ to make changes, then OK

**❷c** **When a programme with ◔ is selected**
OK
– If the programme was set from the TV Guide, the available repeat programmes are displayed. Press [▲, ▼] to select, then press [OK].
– If the on-screen instructions do not appear, change or delete the overlapped programme.

### Tips
● You can enter up to 32 programmes a month in advance.

**You can also delete a programme with the following steps.**
1 Press [▲, ▼] to select the programme and press [OPTION].
2 Press [▲, ▼] to select "Delete" and press [OK].

**To exit the timer recording list**
Press [PROG/CHECK].

### Notes
● Recording may fail if there are changes to the station's programming.
● "⏱" disappears from the unit's display when no timer programme is set or when all timer programmes are deactivated.
● "-------" is displayed on a series recording item if there will be no episode of the series for the next 8 days. We recommend you delete the "-------" item after you confirm the last episode of the series is recorded.
● The "Guide Link" function may not work if you manually change the start/end time by over 10 minutes.
● Programmes that failed to record are deleted from the timer recording list at 4 a.m. two days later.

## To deactivate timer programme (e.g. to interrupt a daily or weekly timer programming)

After performing step ❶ (⇒ left)

**❷** (Red)
– "⏱" (⇒ left) disappears from the timer recording list.
– Press the "Red" button again to activate timer programme.

### Tips
**You can deactivate the timer programme in the following procedure as well.**
Perform step ❶ (⇒ left)
1 Press [OPTION]
2 Press [▲, ▼] to select "Timer Off", then press [OK].

# Advanced Timer Recording

## Relief Recording

RAM -R -RW(V) +R +RW

When the recording drive is "**DVD**" and there is not enough remaining blank space, recording automatically switches to the "**HDD**". If there is no disc in the tray or the disc cannot be recorded on or when timer recording starts while copying, the recording drive will be altered to the HDD.

- The DIRECT NAVIGATOR shows which programmes were relief-recorded (" ⤳ " is displayed.) (⇨ 36).
- If the time remaining on the HDD is insufficient, as much of the programme as possible will be recorded onto the HDD.

## Auto Renewal Recording

HDD

If you record a programme onto HDD repeatedly everyday or every week using timer recording, or if you record a programme of series onto HDD repeatedly using Series timer recording, the unit will record the new programme over the old one.

**This function can be used only when daily, weekly or series timer recording is selected.**

❶ PROG/CHECK

❷ ▲, ▼ to select the programme, then OK

❸ ◄, ► to select "RENEW" column.

❹ ▲, ▼ to select "ON", then OK

| Timer Recording | Remain | HDD 30:24 SP | DVD 1:58 SP |
| | | | SUN 10/10/10 12:54:00 |

| Channel | Date | Start | Stop | HDD DVD | Mode | STTL | AD | RENEW |
|---|---|---|---|---|---|---|---|---|
| 1 BBC 1 | SUN | 22:00 | 22:30 | HDD | SP | OFF | OF | ON |

All Channels : BBC 1

Programme Name

### Notes
- If a programme set for Auto Renewal Recording is protected or while play back is taking place from the HDD, or while copying, the programme will not be overwritten. Instead the programme set for recording will be saved as a separate programme, and this programme will be the one to be overwritten when the next Auto Renewal Recording takes place.
- Playlists (Video) made from programmes that were set for Auto Renewal Recording are deleted along with auto renewal.
- When there is not enough space on the HDD, the programme may not be recorded completely.

## Making timer recordings on the television

HDD

To make a timer recording with your television, connect to a television with a Q Link function (⇨ 44) that you can use for setting timer recordings using a fully wired 21-pin Scart cable (⇨ 10,11).

❶ Make timer programming on the TV.

❷ ⏻ to turn the unit off.

– The start and end of recording is controlled by TV.
– The titles are recorded to the HDD.

### Tips
**To stop recording**
Press [■].

### Notes
- When this unit is in EXT LINK standby ("EXT-L" on the unit's display lights), recording from TV does not start.
- Programmes are recorded as one title on this unit when the end time of the earlier timer recording and the start time of the later timer recording are close to each other.

  To divide the titles, go to "Divide Title" (⇨ 49).

## Notes on timer recording

- When a timer recording is set, DVDs that were recorded using a different TV system (PAL/NTSC) cannot be played unless the TV system is changed in the Setup menu (⇨ 76) or the timer recording has completed or has been cancelled.
- Timer recordings are activated regardless of whether the unit is turned on/off.
- Timer recordings begin when the set time is reached even when playing.
- Timer recordings do not begin while editing or copying in normal speed mode (⇨ 58).
- If the unit is turned on when timer recording begins, it remains turned on after recording finishes. It does not turn off automatically. You can turn the unit off during timer recording.
- When you programme successive timer recordings to start immediately one after the other, the unit cannot record the part at the beginning of the later programmes.

Programme | Programme

Not recorded

Recorded | Recorded
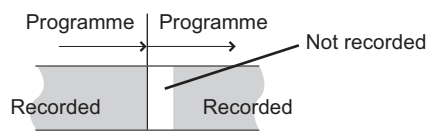
# GUIDE Plus+ system

## What is the GUIDE Plus+ system?

The GUIDE Plus+ system gives you an overview of digital television and radio programmes up to 7 days in advance. For many of these programmes, you can select additional information provided by the stations. You can search the programme preview according to various topics such as sport, films etc., according to categories such as TV or radio. Also, you can search for programmes using programme information such as programme names etc. You can easily find the desired programmes and set Timer recording.

**Landscape view**

Logo of the Gemstar branding partner

Broadcast date

Advertisement

Timer icon
(⇨ 22)

Selected programme

●The Gemstar branding partner will supply the rating information in the programme information and the recommended group in the Prog.Type list.

**Landscape view:**
The GUIDE Plus+ system offers detailed information as if you see a TV programme magazine.
This is convenient to check the status of Timer recording.

**Portrait view:**
This is convenient to narrow down channels to search for the programme you want to watch.

**To switch between Landscape view and Portrait view**
Press [GUIDE].

**Portrait view**

---

## Using the GUIDE Plus+ list

| To change channels | **Landscape view** Press [▲, ▼] to select a channel. **Portrait view** Press [◄, ►] to select a channel. The GUIDE Plus+ list appears for this channel. |
|---|---|
| To view a programme list for another day | ●Jump ahead 24 hours Press the "Green" button to jump ahead by one day. ●Jump back 24 hours Press the "Red" button. You can only jump back to the current date. Past information cannot be viewed. |
| To change the page of the GUIDE Plus+ list | Press [∧ ∨ CH]. |
| To see programme information (programme name, programme duration, broadcast time, description, etc.) (Programmes with the ⓘ symbol) | Press [STATUS ⓘ]. ●Press [▲] and [▼] to scroll up and down. **To show other pages** Press [CH ∧] (Previous) or [∨ CH] (Next). **To return to the GUIDE Plus+ list** Press [STATUS ⓘ]. |
| To return to the previous screen | Press [RETURN ⤴]. |
| To exit the screen | Press [EXIT]. |

### Notes
●The receipt of the GUIDE Plus+ system data is only possible via the aerial input of this unit. The receipt of the GUIDE Plus+ data via externally connected digital satellite receivers is not possible.
●The GUIDE Plus+ system setup will not work if the clock is not set correctly or the wrong postcode is selected.

---

## View advertisement

Enter your postcode when using this function for the first time (⇨ 78, Post Code) and leave the unit in standby over night to capture the information.
If you have already entered your postcode in Owner ID (⇨ 13), you do not have to enter again.
If you enter an incorrect postcode for your area, or no postcodes are entered, advertisement may not be displayed correctly.

**To display advertisement information**
1 Press [OPTION].※
2 Press [▲, ▼] to select "Select Advert", then press [OK].

※ While the advertisement information is not captured, "Enter Words" screen is displayed. (⇨ 35, Searching by entering words)
●To display the latest advertisement, you will need to update the information.
●To update the information continuously, this unit must be left in standby mode over night.

**To change advertisements**
Press [▲, ▼].

**To return to TV Guide**
Press [RETURN ⤴].

### Notes
●Some advertisements are for future programmes and you can set the timer recording of the programmes using the advertisement screen. Follow the on-screen instructions.
●The information from the GUIDE Plus+ system will not be lost even if the unit is turned off at the mains outlet.

### Tips
**When the unit displays "No Data" or the empty GUIDE Plus+ list:**

The "empty" field
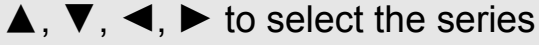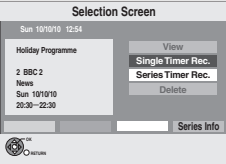
●Some digital broadcast may not send programme information. Set the timer recording manually (⇨ 30, Manual timer recordings).

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# GUIDE Plus+ system

## Series recording

`HDD` `RAM` `-R` `-RW(V)` `+R` `+RW`

You can record all the episodes of a series by setting just one timer recording using the GUIDE Plus+ system.

**❶** GUIDE
– The GUIDE Plus+ list appears.

**❷** ▲, ▼, ◄, ► to select the series programme, then OK

**❸** ▲, ▼ to select "Series Timer Rec.", then OK
– If the same episode has already been set for series timer recording at a different time or on another channel, "Series Timer Rec." will not be selectable.



**❹** OK
– You cannot change "Channel" and "Date".With "Start" and "Stop" automatically set by the "Guide Link" function, "Start" can be changed back by up to 10 minutes and "Stop"can be changed forward by up to 10 minutes.
– This unit automatically records the programmes that are identified to be of the same series by the GUIDE Plus+ data.
– Titles recorded using series recording are bundled and displayed as a "group" in the DIRECT NAVIGATOR screen (⇨ 36) except when using Auto Renewal Recording.



Series recording icon

## Tips
**To check the schedule of the series**
Press the "Blue" button after performing steps ❶ – ❷ (⇨ above).



`S`: The episode to be recorded
`R`: Repeat programme
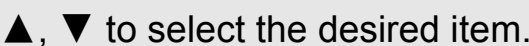
## Notes
● "Series Timer Rec." will only be available when broadcaster is sending series link information.
● If the unit cannot record the first run, the unit will record the repeat programme if it is available. However, this unit will not record the repeat programme, if any part of the first run is recorded.
● The series recording will be cancelled if there has been no episode of the series for 13 weeks.

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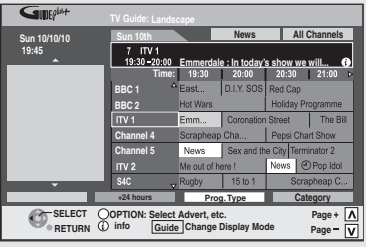
## Selecting the programme from the desired programme type or category

This function lets you display a GUIDE Plus+ list sorted by programme type (e.g. Movie, Sport) or category (e.g. Free Channels, Radio).

**❶** GUIDE
– The GUIDE Plus+ list appears.

**❷a** (Yellow) to display the list of programme type.

**❷b** (Blue) to display the list of categories.

| Type | Category |
|---|---|
| All Types | All Channels |
| All Types | All Channels |
| Movie | Free Channels |
| News | Radio |
| Entertainment | Data |
| Sport | Favourite 1 |
| Children's | Favourite 2 |
| Education | Favourite 3 |
| Lifestyle | Favourite 4 |
| Drama | |

**❸** ▲, ▼ to select the desired item.

**❹** OK
– A list appears with all programmes of the selected item.
– When you select the landscape view, the programmes that belong to the selected programme type are highlighted.



e. g., Programme type, "News" is selected in step ❸ of Landscape view.

**❺** ▲, ▼, ◄, ► to select the programme.
After searching ⇨ 35, Tips in "Searching using programme information of titles recorded to the HDD"

## Notes
● The broadcasters allocate individual programmes to topic areas. This function does not work properly unless the information which distinguishes the programme type and categories sent from broadcast stations is correct.
● The programme list is available immediately if this unit has found a digital station and loaded the information in the memory. This process can take a while depending on the particular station.
● The programme list data are continuously downloaded in the background when the unit is turned on. That means that the programme list can sometimes change while you are looking at it.

## Tips
**To return to the previous GUIDE Plus+ list before you have selected the programme type or categories**
Select "All Types" of the programme type and "All Channels" of the categories in step ❸. (⇨ above)
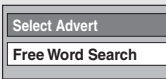
**To return to the previous screen**
Press [RETURN ⤺].
**To exit the screen**
Press [EXIT].

## Searching for the programme from the GUIDE Plus+ list

### Searching by entering words
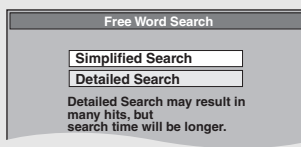
By entering words, you can search for programmes from the GUIDE Plus+ list using the programme information.

**1** GUIDE
– The GUIDE Plus+ list appears.

**2** OPTION

| Select Advert |
|---|
| **Free Word Search** |

**3** ▲, ▼ to select "Free Word Search", then OK

**4** Enter the word you would like to search for, then STOP
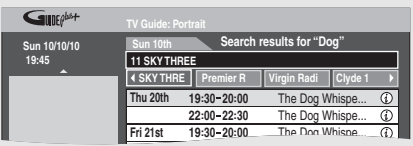
Entry method ⇨ 47, Entering Text

**5** ▲, ▼ to select "Simplified Search" or "Detailed Search", then OK

**Simplified Search:**
It searches the programme names only.
**Detailed Search:**
It searches all the information on the programmes. It might take more time to search the desired programme.

| Free Word Search |
|---|
| **Simplified Search** |
| Detailed Search |
| Detailed Search may result in many hits, but search time will be longer. |

| GUIDE plus+ | TV Guide: Portrait | | |
|---|---|---|---|
| Sun 10/10/10 19:45 | Sun 10th | Search results for "Dog" | |
| | 11 SKY THREE | | |
| | ◄ SKY THRE | Premier R | Virgin Radi | Clyde 1 | ► |
| | Thu 20th | 19:30~20:00 | The Dog Whispe... | ① |
| | | 22:00~22:30 | The Dog Whispe... | ① |
| | Fri 21st | 19:30~20:00 | The Dog Whispe... | ① |

Search results appear.

**6** ▲, ▼, ◄, ► to select the programme.
After searching ⇨ right, Tips in "Searching using programme information of titles recorded to the HDD"

### Tips
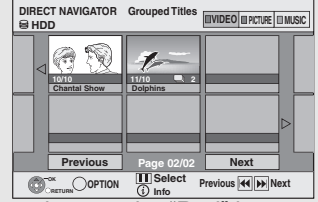
### Searching using programme information of titles recorded to the HDD

**HDD**

You can search for programmes using programme information of titles recorded to the HDD. Also, if you select "Series Timer Rec", you can easily search for the programme series and set series timer recordings.

**Preparation:**
Press [DRIVE SELECT] to select the HDD drive.

**1** During play or while stopped
DIRECT NAVIGATOR

| DIRECT NAVIGATOR Grouped Titles | VIDEO PICTURE MUSIC |
|---|---|
| HDD | |
| 10/10 Chantal Show | 11/10 Dolphins 2 |
| Previous | Page 02/02 | Next |
| OK RETURN OPTION | Select Info | Previous ◄◄ ►► Next |

When "VIDEO" is not selected, press the "Red" button to select "VIDEO".

**2** ▲, ▼, ◄, ► to select a title, then OPTION

**3** ▲, ▼ to select "TV Guide Explorer", then OK

**4** ▲, ▼ to select "Series Timer Rec" or "Find Titles", then OK

| Series Timer Rec |
|---|
| Find Titles |

– When "Series Timer Rec" is selected
  Go to step **4** of "Series recording" (⇨ 34)
– When "Find Titles" is selected
  Go to step **5** (⇨ below)

**5** STOP
– When searching using a word other than the title name, enter a different word. (⇨ 47, Entering Text)

**6** ▲, ▼ to select "Simplified Search" or "Detailed Search", then OK
– Refer to step **5** (⇨ left) for more information about "Simplified Search" and "Detailed Search".

**7** ▲, ▼, ◄, ► to select the programme.
After searching ⇨ below, Tips

### Notes
● Searching by "Series Timer Rec" only works with titles recorded via GUIDE Plus+.
● If you press [RETURN ⤺], the unit may return to the DIRECT NAVIGATOR screen.

### Tips
**After searching**
① Press [OK].
② If "Timer Recording" screen appears
  Go to step **3** of "Timer Recording" (⇨ 22)

  If "Selection Screen" appears
  Press [▲, ▼] to select the item.

  ● "View" ⇨ 19, Watching Television
  ● "Single Timer Rec." ⇨ 22, Timer Recording, step **3**
  ● "Series Timer Rec." ⇨ 34, Series recording, step **4**
  ● "Delete" ⇨ Timer recordings can be cancelled.
      Press [◄, ►] to select "Yes" and press [OK].
      – The timer icon disappears.

Advanced Features

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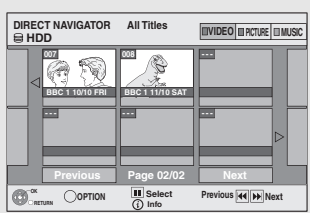
# Advanced Playback

## Selecting Titles to Play

`HDD` `RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `-RW(VR)`

You can easily select and play recorded programmes by using DIRECT NAVIGATOR.

**1**



`HDD` `RAM`
When "VIDEO" is not selected, press the "Red" button to select "VIDEO".

**2** ▲, ▼, ◄, ► to select the title you want to watch, then [OK]

## Tips

**To select the title with the numbered buttons**

e.g.,      `HDD`

5:    [0] ⇨ [0] ⇨ [5]      15:    [0] ⇨ [1] ⇨ [5]
115:    [1] ⇨ [1] ⇨ [5]

e.g.,    `RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `-RW(VR)`
5:    [0] ⇨ [5]      15:    [1] ⇨ [5]

**To view other pages**
Press [▲, ▼, ◄, ►] to select "Previous" or "Next", then press [OK].
– You can also press [◄◄, ►►] to view other pages.

**`HDD` To display the "Properties" screen**
Press [STATUS ⓘ] when a title with " ⓘ Info" on the bottom of the All Titles or Grouped Titles screen is selected. (⇨ 48)

**To exit the DIRECT NAVIGATOR screen**
Press [DIRECT NAVIGATOR].

**DIRECT NAVIGATOR screen icons**

| | |
|---|---|
| 🔒 | Protected. |
| ▨ | Not recorded due to recording protection (Digital broadcasts, etc.) |
| × | It cannot be played because data is damaged, etc. |
| ● | Currently recording. |
| ➴ | Titles that have been rerouted to the HDD (⇨ 32, Relief Recording) |
| ▨ | "One time only recording" restriction (⇨ 96, CPRM) |
| ▱ | Groups of titles (`HDD` only) |
| ► | Title that was recorded but has not yet been played (`HDD` only) |
| Ⓝ (NTSC) Ⓟ (PAL) | Title recorded using a different encoding system from that of the TV System currently selected on the unit. ●Alter the "TV System" setting on this unit to suit (⇨ 76). |

### Switching the DIRECT NAVIGATOR appearance

**"Grouped Titles"/"All Titles"** `HDD`
**"Table Display"/"Thumbnail Display"**
**1** While the DIRECT NAVIGATOR screen is displayed Press [OPTION].
**2** Press [▲, ▼] to select the item, then press [OK].
e.g.,

| Table Display | "Table Display" or "Thumbnail Display" |
| All Titles | "Grouped Titles" or "All Titles" `HDD` |
| PICTURE / MUSIC | |

**Grouped Titles screen**
Two or more titles recorded in the Daily/weekly or series timer recording mode are bundled and displayed as one item.
(in Thumbnail Display)
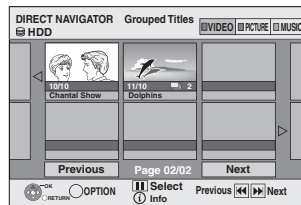


Select the item marked with ▱ and press [OK] to display the bundled titles.

**All Titles screen**
Displays all titles.
(in Thumbnail Display)
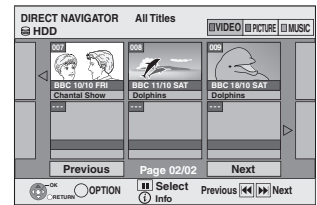


### To sort the titles for easy searching

`HDD` (All Titles screen in Table Display only)
This function is convenient when searching for one title to playback from many titles.
**1** Press [OPTION].
**2** Press [▲, ▼] to select "Sort", then press [OK].
**3** Press [▲, ▼] to select the item, then press [OK].
If you select an item other than "No."
●The DIRECT NAVIGATOR screen will reappear after playback of the selected title has finished. (You cannot play titles continuously.)
●Skip and Time Slip will only function with the title currently being played back.
●If you exit the DIRECT NAVIGATOR screen, or switch to another DIRECT NAVIGATOR screen, the sort will be cancelled.

### To play grouped titles `HDD`

**1** Press [▲, ▼, ◄, ►] to select the group, then press [OK].
**2** Press [▲, ▼, ◄, ►] to select the title, then press [OK].

### To edit the group of titles `HDD`

`HDD` (Grouped Titles screen only)
**1** Press [▲, ▼, ◄, ►] to select a title or a group, then press [❙❙].
A check mark is displayed. Repeat this step until you select all necessary titles.
●Press [❙❙] to cancel.
**2** Press [OPTION].
**3** Press [▲, ▼] to select the item, then press [OK].

**Create Group:**
Press [◄, ►] to select "Create", then press [OK].
Selected titles are bundled to form a group.

**Release Grouping**
Press [◄, ►] to select "Release", then press [OK].
●When a group of titles has been selected, all the titles in the group are released.
●When a title in a group has been selected, the title is released from the group.

**Regarding the group name**
The name of the first title in the group is used as the group name.
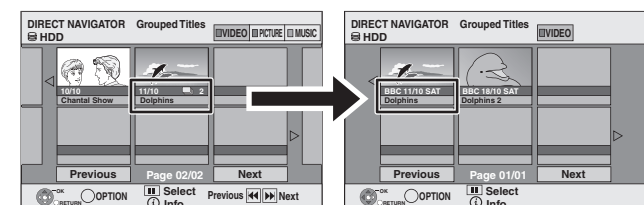


**To change the group name**
1 Press [▲, ▼, ◄, ►] to select the group and press [OPTION].
2 Press [▲, ▼] to select "Edit" and press [OK].
3 Press [▲, ▼] to select "Enter Title Name" and press [OK].
4 Enter the name. (⇨ 47, Entering Text)
●Even if the group name is changed, the title names in the group will not be changed.

## Notes

This function is only available for Videos and not available for music or still pictures.

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## Search [DVD-V] [VCD]

During playback [◀◀] or [▶▶]
– There are 5 search speeds. Each press increases the search speed. ([+R] [+R DL] [+RW] up to 3 speeds)
– Press [▶] (PLAY) to restart normal playback.

Tips
Depending on the disc, search may not be possible.

## Skip

You can skip to the beginning (or the end) of Title/Chapter. Skip is operated for each chapter.

During playback or while paused [◀◀] or [▶▶]
– Each press increases the number of skips.
– DivX: Press [◀◀] to return to the beginning of the title currently playing.

## Quick View (Play × 1.3)

[HDD] [RAM]
Allows you to increase the play speed slightly without distorting the audio.

During playback [PLAY/x1.3 ▶]   (Press and hold.)

– Press again to return to normal speed.

## Direct Play

During playback, you can access specific titles or scenes through direct entry of the numbered buttons.

[1] [2] [3]
[4] [5○] [6]
[7] [8] [9]
[DELETE *] [0] [INPUT SELECT]

● [HDD] and **DivX**
e.g.,
5:    [0] ⇒ [0] ⇒ [5]
15:   [0] ⇒ [1] ⇒ [5]
● **MP3/WMA**
e.g.,
5:    [0] ⇒ [0] ⇒ [0] ⇒ [5]
15:   [0] ⇒ [0] ⇒ [1] ⇒ [5]
● Other discs
Input a 2-digit number
e.g.,
5:    [0] ⇒ [5]
15:   [1] ⇒ [5]

## Slow-motion Play

[HDD] [RAM] [-R] [-R DL] [-RW(V)] [+R] [+R DL] [+RW] [DVD-V] [-RW(VR)] [VCD]

While paused [◀◀] or [▶▶]
– There are 5 slow-motion speeds. Each press increases the speed.
– Press [▶] (PLAY) to restart normal playback.

Notes
● If continued for approx. 5 minutes, slow-motion play pauses automatically (except [DVD-V] [VCD]).
● [VCD] allow slow-motion in the forward direction only.

## Frame-by-Frame Viewing

[HDD] [RAM] [-R] [-R DL] [-RW(V)] [+R] [+R DL] [+RW] [DVD-V] [-RW(VR)] [VCD]

While paused   [◀ (OK) ▶]   [◀II   II▶]

– Each press shows the next or previous frame.
– Press and hold to advance or reverse frame-by-frame in succession.
– Press [▶] (PLAY) to restart normal playback.

Notes
● [VCD] allow Frame-by-Frame in the forward direction only.

## Time Slip

[HDD] [RAM]
[-R] [-R DL] [-RW(V)] [+R] [+R DL] (This function does not work with finalised discs.)
[+RW] [-RW(VR)]

Use to skip in 1-minute or 10-minute increments.

❶ During playback [TIME SLIP]

❷ ▲, ▼ to select the time, then (OK)

– Each time you press [▲, ▼], the time increases [▲] or decreases [▼] by 1-minute intervals.
– Press and hold for 10-minute intervals.

## Manual Skip

[HDD] [RAM]
[-R] [-R DL] [-RW(V)] [+R] [+R DL] (This function does not work with finalised discs.)
[+RW] [-RW(VR)]

1-minute skip function:
Skips approx. 1 minute forward with each press.

During playback [+60s]

10-second skip back function:
Each time you press, play skips backward approximately 10 seconds.

During playback [-10s]

## Create Chapters

[HDD] [RAM]
After creating chapters in your favourite scenes, you can easily reach the head of scene using [◀◀, ▶▶] (SKIP) or play on Chapter View. (⇨ 50)

During playback [CHAPTER]

Tips
● Chapters cannot be created during EXT LINK standby (⇨ 28).

Advanced Features

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# Playing DivX, Music files and Still Pictures (JPEG)

## Showing the menu screen

**-R** **-R DL** **CD** **SD**

❶ Insert the disc or card.
❷ If the menu screen appears, press [▲, ▼] to select the item and press [OK].
e.g., **CD** **SD**

| Disc |
|---|
| Play Video ( DivX ) |
| View Pictures ( JPEG ) |
| Play Music ( MP3&WMA ) |
| Copy Music ( MP3&WMA ) |

| SD Card |
|---|
| Copy Video (MPEG2) |
| View Pictures (JPEG) |
| Start Slideshow |
| Copy New Pictures (JPEG) |

**USB**
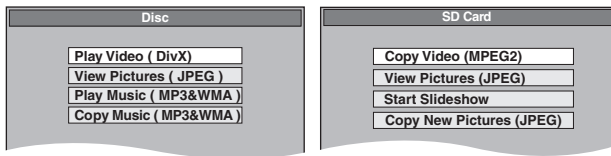
❶ Insert the USB memory.
❷ Press [▲, ▼] to select a file type and press [OK].
e.g.

| USB device |
|---|
| Video (DivX) |
| Picture ( JPEG ) |
| Music (MP3&WMA) |
| Update CD database on HDD |

❸ If the menu screen appears, press [▲, ▼] to select the item and press [OK].

| USB device |
|---|
| View Pictures ( JPEG ) |
| Start Slideshow |
| Copy New Pictures ( JPEG ) |
| Copy All Pictures ( JPEG ) |
| Copy Selected Pictures ( JPEG ) |
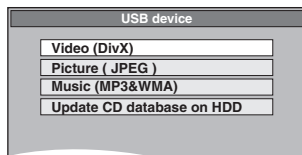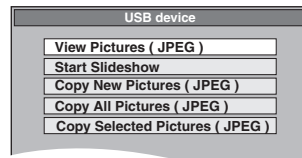
**Showing the menu with FUNCTION MENU Display**
e.g. selecting a file to play

❶ Press [RETURN ⤺] several times to exit the menu.
❷ Press [FUNCTION MENU].

| DIGA FUNCTION MENU |
| CD(DivX) |
|---|
| Playback — DivX / Picture / Music |
| Recording |
| Copy |
| TV Guide |
| Others |
| Drive Select |
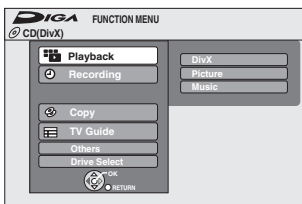
❸ **-R** **-R DL** **CD** **SD**
1 Press [▲, ▼] to select "Playback", then press [OK].
2 Press [▲, ▼] to select the file type, then press [OK].
**USB**
1 Press [▲, ▼] to select "Drive Select", then press [OK].
2 Press [▲, ▼] to select "USB", then press [OK].
3 Press [▲, ▼] to select the file type, then press [OK].
4 Press [▲, ▼] to select "Play Video ( DivX )", "View Pictures ( JPEG )" or "Play Music ( MP3&WMA )" then press [OK].

## Playing DivX video contents

**-R** **-R DL** **CD** **USB**

**ABOUT DIVX VIDEO:**
DivX® is a digital video format created by DivX, Inc. This is an official DivX Certified device that plays DivX video. Visit www.divx.com for more information and software tools to convert your files into DivX video.
You can play DivX video contents recorded with a computer onto DVD-R, DVD-R DL, CD-R/CD-RW and USB memory.(⇨ 18)

❶ **Show DivX Menu screen.**
(⇨ left, Showing the menu screen)

| DivX Menu    Folder1 : 00025 |
| CD (DivX) |
|---|
| No.    Title Name    Tree |
| 001    ABC.avi |
| Page  001/001    Total Title : 001 |
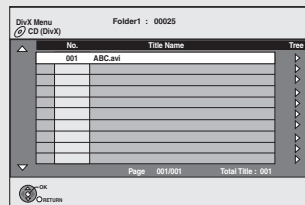
⤓ : Resume play function (⇨ 20)

● Files are treated as titles.
● Press [▶] (PLAY) if the DivX Menu screen is not displayed.

❷ **▲, ▼ to select the title, then** (OK)

Play starts on the selected title.

● You can also select the title with the numbered buttons.
e.g., 5:   [0] ⇨ [0] ⇨ [5]
     15:   [0] ⇨ [1] ⇨ [5]

### Tips
**To stop playing**
Press [■].
**To show other pages**
Press [I◀◀, ▶▶I].
**To exit the screen**
Press [DIRECT NAVIGATOR].

### Notes
● Picture sizes set at the recording time may prevent the unit from showing pictures in the adequate aspect. You may be able to adjust the aspect through the TV.
● Successive play is not possible.
● Playback is not possible if recording is performed on the HDD drive or the DVD drive.

---

**Using the tree screen to find a folder**

❶ While the file list is displayed
Press [▶] while a title is highlighted to display the tree screen.
F: Selected folder no./Total folder no. including DivX title.

| DivX Menu    Folder |
| CD (DivX) |
|---|
| F 1/21 |
| 12.02.2009 |
| Image001 |
| Image002 |
| Image003 |
| Image004 |
| Image005 |
| Image006 |
| Image007 |
| Image008 |
| Image009 |
| Image010 |
| DATA1 |
| DATA2 |
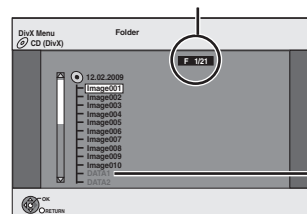
You cannot select folders that contain no compatible files.

❷ Press [▲, ▼] to select a folder, then press [OK].
The file list for the folder appears.

### Tips
**To return to the previous screen**
Press [RETURN ⤺].

## Regarding DivX VOD content

`-R` `-R DL` `CD`

**ABOUT DIVX VIDEO-ON-DEMAND:**
This DivX Certified® device must be registered in order to play DivX Video-on-Demand (VOD) content.
To generate the registration code, locate the DivX VOD section in the device setup menu.
Go to vod.divx.com with this code to complete the registration process and learn more about DivX VOD.

**Display the unit's registration code.**
(⇨ 78, DivX Registration in "Others" tab)

| Setup | DivX Registration |
|---|---|
| | You must register this unit to play protected DivX videos. The registration code is necessary to register this unit. |
| Tuning | |
| Disc | |
| Picture | Registration Code : XXXXXXXXXX |
| Sound | |
| Display | Please register at www.divx.com/vod/ |
| Connection | |
| Others | |
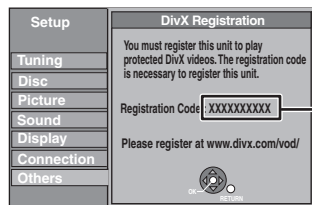
DivX Registration screen before registration

10 alphanumeric characters

- After playing DivX VOD content for first time, the registration code is not displayed.
- DivX VOD content purchased using a registration code different from this unit's code, you will not able to play on this content.

**Cancel the unit's registration**
(⇨ 78, DivX Registration)
Press [◄, ►] to select "Yes" in "DivX Registration".
Use the deregistration code to cancel the registration in www.divx.com.

**Regarding DivX content that can only be played a set number of times**
Some DivX VOD contents can only be played a set number of times. When you play this content, the number of times already played and initially playable number of times is displayed.

- The remaining number of plays decreases each time a programme is played. However, when playing from the point where play was previously stopped, the remaining number of plays does not decrease due to the resume play function.

## Playing music files

`-R` `-R DL` `CD` `USB`

You can play MP3/WMA files recorded with a computer onto a DVD-R, DVD-R DL, CD-R/CD-RW and USB memory.(⇨ 18)

- You cannot play MP3 or WMA files on the USB memory while recording or copying.

**❶ Show MP3&WMA Menu screen.**
(⇨ 38, Showing the menu screen)

Selected group
Ⓐ: Group No.
Ⓑ: Track No. in the group
Ⓒ: Track No./Total tracks in all groups

| No. | Group |
|---|---|
| 1 | : My favorite |
| Total | Track | Tree |
| 1 | 001 Both Ends Freezing | ▷ |
| 2 | 002 Lady Starfish | ▷ |
| 3 | 003 Life on Jupiter | ▷ |
| 4 | 004 Metal Glue | ▷ |
| 5 | 005 Paint It Yellow | ▷ |
| 6 | 006 Pyjamamama | ▷ |
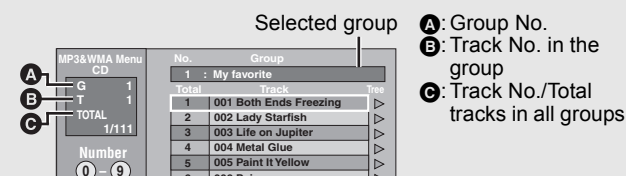
**❷ ▲, ▼ to select a track, then OK to play.**

### Tips

- "🠚" indicates the track currently playing.

**To stop playing**
Press [■].

**To exit the menu screens**
Press [DIRECT NAVIGATOR].

**To view other pages**
Press [◄◄, ►►].

**To select the track with the numbered buttons**

e.g.,  5: [0] ⇨ [0] ⇨ [0] ⇨ [5]
15: [0] ⇨ [0] ⇨ [1] ⇨ [5]

### Notes

- If the Power off link function (⇨ 44) is activated, this unit will automatically be set to standby mode and the music will stop as you set the TV to set to standby mode.

### Using the Tree Screen to Find a Group

**❶ From the track list**
**► while a track is highlighted to display the tree screen.**

MP3&WMA Menu CD
G 8
T 14
TOTAL 40/111
Number ⓪ — ⑨

| Tree | G 7/25 |
|---|---|
| ● MP3 music | |
| 001 My favorite | |
| 001 Brazilian pops | |
| 002 Chinese pops | |
| 003 Czech pops | |
| 004 Hungarian pops | |
| 005 Liner notes | |
| 006 Japanese pops | |
| 007 Mexican pops | |
| 008 Philippine pops | |
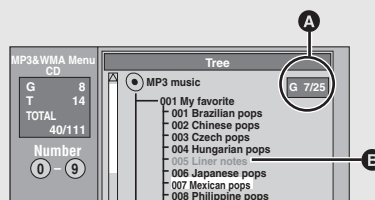
Ⓐ: Selected Group No./Total Group No.
If the group has no compatible track, "--" is displayed as the group number.
Ⓑ: You cannot select a group that contains no compatible track.

**❷ ▲, ▼ to select a group, then OK**

– The track list for the selected group appears.

### Tips

**To return to the track list**
Press [RETURN ⤴].

# Playing DivX, Music files and Still Pictures (JPEG)

## Playing still pictures

`HDD` `RAM` `SD`
`-R` `-R DL` `CD` `USB`
- For more information about still picture files that can be played on this unit (⇨ 18)
- Inserting, removing the SD card (⇨ 82)

**❶** Show Album View screen.
`-R` `-R DL` `CD` `USB` `SD`
(⇨ 38, Showing the menu screen)
`HDD` `RAM`
While stopped
1 Press [DRIVE SELECT] to select the drive.
2 Press [DIRECT NAVIGATOR].
When "PICTURE" is not selected, press the "Green" button to select "PICTURE".

DIRECT NAVIGATOR Album View [VIDEO][PICTURE][MUSIC] — Album View screen
📁 HDD

— Regarding Album View screen ⇨ right

— Sample pictures ⇨ right

Previous    Page 01/01    Next
OK/RETURN   OPTION   ▶ Slideshow   Select All / Playlist View

**❷** ▲, ▼, ◀, ▶ to select the album, then (OK)

DIRECT NAVIGATOR  Picture (JPEG) View [PICTURE] — e.g., HDD
📁 HDD
Album Name  103__DVD

Previous    Page 001/001    Next
OK/RETURN   OPTION   ▶ Slideshow
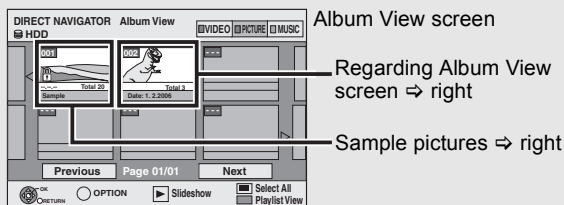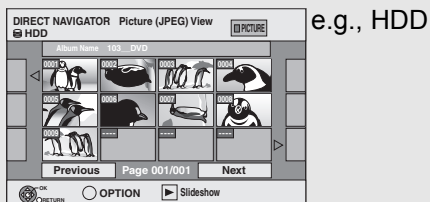
**❸** ▲, ▼, ◀, ▶ to select the still picture, then (OK)

### Tips
**DIRECT NAVIGATOR screen icons**

🔒 Picture and folder protected

▶ Album that has not yet been viewed (`HDD` `RAM`)

**To stop viewing a picture**
Press [■].

**To return to the Album View screen or Picture (JPEG) View screen**
Press [RETURN ⤴].

**To exit the menu screens**
Press [DIRECT NAVIGATOR].

**To view other pages**
Press [▲, ▼, ◀, ▶] to select "Previous" or "Next", then press [OK].
– You can also press [|◀◀, ▶▶|] to view other pages.

**To select the still picture or album with the numbered buttons**
Album

e.g.,   5:      [0] ⇨ [0] ⇨ [5]
        15:     [0] ⇨ [1] ⇨ [5]
        115:    [1] ⇨ [1] ⇨ [5]

Still picture

e.g.,   5:      [0] ⇨ [0] ⇨ [0] ⇨ [5]
        15:     [0] ⇨ [0] ⇨ [1] ⇨ [5]
        115:    [0] ⇨ [1] ⇨ [1] ⇨ [5]
        1115:   [1] ⇨ [1] ⇨ [1] ⇨ [5]

**Regarding Album View screen**
Still pictures copied from USB memories and SD cards are grouped by the shooting date in the HDD or DVD-RAM.
You can arrange these still pictures and create an album (⇨ 53).

40

`HDD` `RAM`
**Grouped by date**

002
Total 68
Date: 10/10/2010
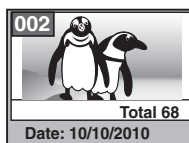
Number of pictures/Shooting date

`HDD` `RAM` `-R` `-R DL` `CD` `USB` `SD`
**Album**

002
10/10/10    Total 24
Zoological park
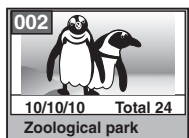
Shooting date/Number of pictures/Album name
- Depending on the digital camera, the editing software on the PC etc., the information about the recording date may not be displayed. In this case, the date will appear as [--/--/--].

### Notes
- Still pictures cannot be played during recording or copying.

**Sample Pictures**
- Sample JPEG pictures are pre-installed on HDD of this unit. You can play them back or start slideshow (⇨ below) with them.
If you want to delete sample pictures, perform "Cancel Protection" and then delete them. (⇨ 49)

## Start Slideshow
`HDD` `RAM` `-R` `-R DL` `CD` `USB` `SD`

You can display still pictures one by one at a constant interval with favourite music.

**❶** While the Album View (Playlist (Picture)) screen is displayed
▲, ▼, ◀, ▶ to select the album.

**❷** PLAY/x1.3 ▶

### Tips
You can also start Slideshow by pressing [OPTION] and press [▲, ▼] to select "Start Slideshow" and then press [OK].

**To select multiple albums for starting Slideshow:**
① Press [▲, ▼, ◀, ▶] to select the album.
② Press [❚❚].
A check mark appears.
- Press [❚❚] again to cancel the selection.
③ Repeat steps ①-② until you select all necessary albums.
④ Perform step ❷.

**To select all albums for starting Slideshow:**
① Press [■] in step ❶.
② Press [◀, ▶] to select "Yes" then press [OK].
③ Perform step ❷.

`USB` `SD`
**To start Slideshow on the menu screen:**
① Insert the USB memory or SD card.
The menu is automatically displayed. (⇨ 38)
② Press [▲, ▼] to select "Start Slideshow", then press [OK].

### Notes
Sample Music is selected for default Background Music, which is played with Slideshow. Refer to "Slideshow Settings" to turn off or change the Background Music. (⇨ 38)

## Slideshow Settings

❶ While the Album View (Playlist (Picture)) screen is displayed (⇨ 40)
OPTION

❷ ▲, ▼ to select "Slideshow Settings", then [OK]

❸ ▲, ▼ to select "Picture Settings" or "Background Music Settings", then [OK]

❹ ▲, ▼ to select the item, then ◄, ► to select the setting (⇨ below).

❺ After finishing settings
▲, ▼, ◄, ► to select "Set", then [OK]

### Picture Settings

| Picture Settings | |
| --- | --- |
| Please set the following functions. | |
| Display Interval ◄ | Normal ► |
| Repeat Play | On |
| Random | Off |
| Set | Cancel |

SELECT / RETURN
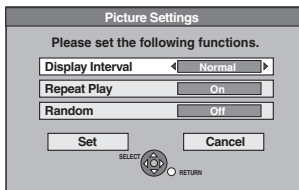
Display Interval: Select the desired interval. ("Normal", "Long" or "Short")
● The display interval may vary depending on the picture data size.
Repeat Play: Select "On" to play pictures in the selected album repeatedly.
Random: Select "On" to play pictures in the selected album at random.

### Background Music Settings

| Background Music Settings | |
| --- | --- |
| Please set the following functions. | |
| Background Music ◄ | On ► |
| Random | Off |
| Music Selection | Sample Music |
| Set | Cancel |

SELECT / RETURN
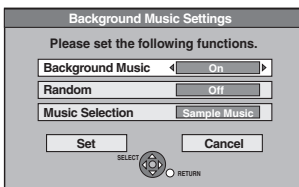
Background Music: Select "On" to play Slideshow with Background Music.
Select "Off" to play Slideshow without Background Music.
Random: Select "On" to play Background Music at random.
Music Selection:
① Press [▲, ▼] to select "Music Selection" and press [OK].
② Press [▲, ▼] to select the storage location of Background Music and press [OK].
● "Sample Music" is Background Music pre-installed on HDD.
③ Press [▲, ▼] to select an album for Background Music and press [OK] when selecting other than "Sample Music".

### Notes
● Music albums on HDD, a disc and a USB memory can be used as the Slideshow Background Music. However, when selecting still images on a disc or a USB memory for the slideshow, music albums on the same media cannot be used as the Background Music. (Even if a music album on the same media is selected, the music is not played.)
● "Sample Music" cannot be deleted or changed to other files.
● "Music Selection" setting turns back to "Sample Music" when removing media on which specified Background Music is recorded or deleting specified Background Music files.
● DTS-CD cannot be played back as Slideshow Background Music.

## Rotate Pictures

❶ While playing a picture
OPTION

❷ ▲, ▼ to select "Rotate RIGHT" or "Rotate LEFT", then [OK]

| Rotate RIGHT |
| --- |
| Rotate LEFT |

OK / RETURN

### Tips
**To return to the picture to its original position**
Press [▲, ▼] to select the opposite rotation in step ❷, then press [OK].
### Notes
● Rotation information will not be stored.
 – -R  -R DL  CD  USB  Still pictures
 – When disc, card or album is protected
 – When played on other equipment
 – When copying pictures
 – When changing date
● If you remove the SD card while the DIRECT NAVIGATOR screen is displayed, picture rotation information may not be properly stored. Remove the SD card after you exit the DIRECT NAVIGATOR screen.
● "Rotate RIGHT" and "Rotate LEFT" do not work during Slideshow.

## Zoom

❶ While playing a picture
OPTION

❷ To zoom in:
▲, ▼ to select "Zoom in", then [OK]

### Tips
**To return to the picture to its original size**
Press [▲, ▼] to select "Zoom out" in step❷, then press [OK].
### Notes
● When zooming in, the still picture may be cut off.
● "Zoom in" information is not stored.
● "Zoom in" and "Zoom out" do not work with images that have a resolution larger than 640×480 pixels.
● "Zoom in" and "Zoom out" do not work during Slideshow.

## Picture Properties

Picture information is shown (e.g., shooting date).

While playing a picture
STATUS
(i) **twice** to display picture properties.

18:53:50 11/10
Folder - Picture No.   103 - 0006
Date   1/ 1/ 2010          No.        3 / 9

Shooting Date
● Depending on the camera or editing software; shooting dates may not be displayed correctly.

Or

❶ From the Picture (JPEG) View screen
▲, ▼, ◄, ► to select the picture, then OPTION

❷ ▲, ▼ to select "Properties", then [OK]

Information (e.g., image size and file size) is shown.
– To exit the Properties screen, press [OK].

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# Playing music

## To play music CD

**Preparation:**
Press [DRIVE SELECT] to select the DVD drive.

**❶ Insert a music CD.**
The menu is automatically displayed.

```
              CD


        Play Music
        Copy Music


    SELECT
    OK·          ·RETURN
```
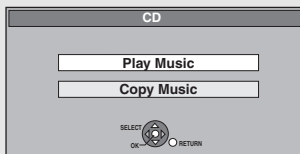
**❷ ▲, ▼ to select "Play Music", then**
[OK]

– The unit starts accessing the Gracenote®
database (⇨ 66) and searches for the title
information.
●If search results indicate that multiple titles were
found, press [▲, ▼] to select the appropriate title
and press [OK].
The music CD starts playing back.

**Press [▲, ▼] to select the track, then press
[OK]**
●You can also select the track with the numbered buttons.
e.g., 5: [0] ⇨ [5], 15: [1] ⇨ [5]

### Tips
**To exit the screen**
Press [DIRECT NAVIGATOR].
Playback continues.

## To play music recorded on HDD

**Copying music to HDD ⇨ 66**

**Preparation:**
Press [DRIVE SELECT] to select the HDD drive.

**❶** DIRECT NAVIGATOR

When "MUSIC" is not selected, press the "Yellow"
button to select "MUSIC".

**❷ ▲, ▼ to select the album, then** [OK]

●You can also select the album with the numbered buttons.
e.g.,
5: [0] ⇨ [0] ⇨ [5]
15: [0] ⇨ [1] ⇨ [5]
115: [1] ⇨ [1] ⇨ [5]

**❸ ▲, ▼ to select the track, then** [OK]

●You can also select the track with the numbered buttons.
e.g.,
5: [0] ⇨ [0] ⇨ [0] ⇨ [5]
15: [0] ⇨ [0] ⇨ [1] ⇨ [5]
115: [0] ⇨ [1] ⇨ [1] ⇨ [5]
1115: [1] ⇨ [1] ⇨ [1] ⇨ [5]

### Tips
**To return to the previous screen**
Press [RETURN ⇦].
**To exit the screen**
Press [DIRECT NAVIGATOR].

### Notes
●You cannot play music tracks on HDD while recording or copying.
●When this unit is not operated for approximately 5 minutes while the
screen is being displayed, the screen saver is displayed if "Screen
Saver" is set to "On" in the Setup menu (⇨ 76). To return to the
previous screen, press [OK].

## Useful functions during music play

**Operations during play**

| | |
|---|---|
| Stop | **Press [■].**<br>The stopped position is memorized.<br>Press [▶] (PLAY) to restart from this position.<br>● If [■] is pressed several times, the position is cleared. |
| Pause | Press [❚❚].<br>Press [❚❚] again or [▶] (PLAY) to restart play. |
| Search | **Press [◀◀] or [▶▶].**<br>The speed increases up to 5 steps.<br>Press [▶] (PLAY) to restart play. |
| Skip | **During play or while paused, press [◀◀ꟾ]<br>or [▶▶ꟾ].**<br>Skip to the track you want to play.<br>Each press increases the number of skips. |

| | |
|---|---|
| Repeat Play<br>HDD | You can select the item which you want to repeat.<br>While playing<br>① Press [OPTION].<br>② Press [▲, ▼] to select "Repeat Play Setting", then press [OK].<br>③ Press [▲, ▼] to select the item, then press [OK].<br>● Select "Off" to cancel repeat play. |
| Sort<br>HDD | You can change the order of the Album View alphabetically.<br>While Album View screen is displayed<br>① Press [OPTION].<br>② Press [▲, ▼] to select "Sort", then press [OK].<br>③ Press [▲, ▼] to select "Album Name", then press [OK].<br>**To cancel the sorted screen**<br>Press [▲, ▼] to select "No.", then press [OK]. |
| Properties<br>HDD CD | While Track View screen is displayed<br>① Press [OPTION].<br>② Press [▲, ▼] to select "Properties", then press [OK].<br>To exit the Properties screen, press [OK]. |

# Convenient Functions

## FUNCTION MENU Display

By using the FUNCTION MENU you may access the main functions quickly and easily.
● If "FUNCTION MENU Display" is set to "On" in the Setup menu, FUNCTION MENU automatically appears when you turn the power on. (⇨ 43)

**1** With the unit stopped

**2** ▲, ▼ to select a function, then [OK]

**3** ▲, ▼ to select an item, then [OK]

> Select a function and an item.

> You can access selected function easily.

**DIGA** FUNCTION MENU
HDD  Remain  30:00 SP
- Playback → Video / Picture / Music
- Recording
- Delete
- Copy
- TV Guide
- Others
- Drive Select

DELETE Navigator  Grouped Ti
HDD
10/10 Chantal Show  11/10 Dolphins
Previous  Page 02/02  Next

### Playback

Select when you wish to playback the contents. The DIRECT NAVIGATOR screen or menu screen etc. will be displayed.
● Video (⇨ 20, 36)  ● DivX (⇨ 38)
● Picture (⇨ 40)  ● Music (⇨ 39, 42)
● Top Menu (⇨ 20)  ● Menu (⇨ 20)

### Recording

Select when you wish to perform manual timer recording, or check the timer recording. The timer recording list will be displayed. (⇨ 30, 31)

### Delete

Select the title or file type you wish to delete. The DELETE Navigator screen will be displayed.
● Video (⇨ 23)  ● Picture (⇨ 55)  ● Music (⇨ 55)

### Copy

Select the copy method.
● Video (HDD to DVD) (⇨ 60)
● Advanced Copy (⇨ 61)  ● Copy Music (⇨ 66)
● Copy New Pictures (⇨ 65)

### TV Guide

Select when you wish to watch or record a programme. The TV Guide will be displayed. (⇨ 19, 22)

### Others

Select and execute a function other than those above, such as recording or setting.
● Playlists (⇨ 51, 56)  ● Flexible Rec (⇨ 27)
● DV Auto Rec (⇨ 29)  ● HDD Management (⇨ 70)
● DVD Management (⇨ 70)  ● Card Management (⇨ 70)
● Setup (⇨ 72)

### Drive Select

Change which drive is used.
● HDD  ● DVD  ● SD  ● USB

Tips
**To exit the FUNCTION MENU**
Press [FUNCTION MENU].

## To pause the TV programme you are watching —Pause Live TV

You can pause the TV programme you are watching using this unit's tuner and resume later by temporarily saving it on the HDD. This is useful when you have to briefly stop watching TV to run an errand.
If you stop Pause Live TV function, then the TV programme temporarily saved on the HDD will be deleted.

**1** **Turn on the television and select the appropriate AV input to suit the connections to this unit.**
**2** **Turn on this unit and press [∧ ∨ CH] to select the channel.**
**3** When you want to pause the TV programme
**Press [PAUSE LIVE TV].**

HDD
BBC
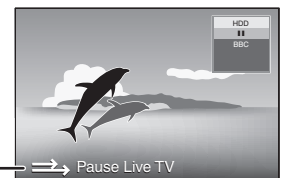
This icon indicates that the Pause Live TV is working.
⟹ Pause Live TV

**4** When you want to resume playback
**Press [▶] (PLAY).**
– The programme is saved on the HDD in SP recording mode (⇨ 25) regardless of the recording mode and the drive selected before starting saving.
– At least 1 hour up to 8 hours of TV programmes can be temporarily saved on the HDD. (This may vary depending on the HDD free space.)

**Operations during Pause Live TV**

| Search | **Press [◀◀, ▶▶].** |
|---|---|
| Pause | **Press [❙❙].** ● Press [▶] (PLAY) to restart. |
| Quick View | **Press and hold [▶] (PLAY/×1.3).** ● Press again to return to the normal speed. |
| Slow-motion | **While paused, press [◀◀] or [▶▶].** The speed increases up to 5 steps. ● Press [▶] (PLAY) to restart play. |
| Stop Pause Live TV | ① **Press [■].** ② **Press [◀, ▶] to select "Yes" and press [OK].** |

Notes
● The pause live TV function does not work for Digital Teletext. (⇨ 46)
● The Pause Live TV function automatically stops when a timer recording starts.
● The Pause Live TV function does not work
  – when the clock is not set
  – while recording
  – while timer recording
  – while EXT LINK recording, etc.
● You cannot change audio or subtitle during resume play.
● The first 30 minutes is deleted every 30 minutes after the HDD is full or the saving lasts 8 hours.
● The Pause Live TV function stops automatically 24 hours after started.
● "DVB Multi Audio" of on-screen menu cannot be switched during Pause Live TV.

Advanced Features

# Linked Operations with the TV (VIERA Link "HDAVI Control™"/Q Link)

You can enjoy linked operations with the TV and receiver by using "VIERA Link" or Q Link.

## What is VIERA Link "HDAVI Control"? `VIERA Link`

**VIERA Link "HDAVI Control" is a convenient function that offers linked operations of this unit, and a Panasonic TV (VIERA) or receiver under "HDAVI Control". You can use this function by connecting the equipment with the HDMI cable. See the operating instructions for connected equipment for operational details.**

- VIERA Link "HDAVI Control", based on the control functions provided by HDMI which is an industry standard known as HDMI CEC (Consumer Electronics Control), is a unique function that we have developed and added. As such, its operation with other manufacturers' equipment that supports HDMI CEC cannot be guaranteed.
- **This unit supports "HDAVI Control 5" function.**
- "HDAVI Control 5" is the newest standard (current as of December, 2009) for Panasonic's HDAVI Control compatible equipment.
- This standard is compatible with Panasonic's conventional HDAVI equipment.
- Please refer to individual manuals for other manufacturers' equipment supporting VIERA Link function.

## Preparation:
1 Connect this unit to your TV using an HDMI cable and a fully wired 21-pin Scart cable (⇨ 12), or to your receiver using an HDMI cable (⇨ 81).
2 Set "VIERA Link" to "On" (⇨ 77). (The default setting is "On".)
3 Set the "HDAVI Control" operations on the connected equipment (e.g., TV).
   - **Set the input channel on VIERA to suit the terminal to be used as "HDAVI Control".**
4 Turn on all "HDAVI Control" compatible equipment and select this unit's input channel on the connected TV so that the "HDAVI Control" function works properly.
   **Also when the connection or settings are changed, repeat this procedure.**

## What is Q Link? `Q Link`

Q Link is a convenient function that offers linked operations of this unit and a Panasonic TV. You can use this function by connecting the equipment with a fully wired 21-pin Scart cable.

## Preparation:
- Connect this unit to your TV with a fully wired 21-pin Scart cable (⇨ 10, 11).

## Notes
The following systems from other manufacturers have similar function to Q Link from Panasonic.
For details, refer to your television's operating instructions or consult your dealer.
- Q Link (registered trademark of Panasonic)
- DATA LOGIC (registered trademark of Metz)
- Easy Link (registered trademark of Philips)
- Megalogic (registered trademark of Grundig)
- SMARTLINK (registered trademark of Sony)

## Notes
- These functions may not work normally depending on the equipment condition.
- About "HDAVI Control" function, read the manual of the connected equipment (e.g., TV) too.

## (When the TV is on) Easy playback
`VIERA Link` `Q Link`

When the TV is on and the following operations are performed, the TV's input will automatically switch to HDMI input mode (`VIERA Link`) or AV input mode (`Q Link`) and the TV displays the corresponding action. (Picture or sound may not be available for the first few seconds.)
**Press [FUNCTION MENU]※1, [▶] (PLAY)※2, [DIRECT NAVIGATOR], [GUIDE], [PROG/CHECK] etc.**

## (When the TV is off) Power on link
`VIERA Link` `Q Link`

When the TV is off and the following operations are performed, the TV will automatically turn on and displays the corresponding action.
(Picture or sound may not be available for the first few seconds.)
**Press [FUNCTION MENU]※1, [▶] (PLAY)※2, [DIRECT NAVIGATOR], [GUIDE], [PROG/CHECK]] etc.**
- `DVD-V` `CD` `VCD` SVCD and MP3/WMA
  The TV is automatically turned on when you insert the discs.

## Power off link `VIERA Link` `Q Link`

When you set the TV to standby mode, the unit is also automatically set to standby mode. The unit is automatically set to standby mode even if the FUNCTION MENU etc. is displayed, during playback or when the unit is set to a timer recording.
Even if the TV is turned off, the unit will not be turned off at the same time when recording, copying, finalising etc.
- When this unit is connected to an "HDAVI Control" compatible Panasonic receiver with an HDMI cable, the receiver will also turn off.

## Direct TV Recording `VIERA Link` ※3 `Q Link`

This function allows you to immediately start recording the programme that you are viewing on the TV.
- Depending on the TV type connected with this unit, this function may not work.

**Press and hold [● DIRECT TV REC] for 1 second.**
Recording starts
**To stop recording**
Press [■].
- The titles are recorded to the HDD.
- If you switch TV channels while using Direct TV Recording, the Direct TV Recording may stops.
- When "EXT-L" lights on the unit's display (⇨ 28), Direct TV Recording is unavailable.

※1 This button is available only when this unit is on.
※2 When this button is pressed, the playback image is not immediately displayed on the screen and it may not be possible to watch the contents from where playback started.
In this case, press [|◀◀] or [◀◀] to go back to where playback started.
※3 This function is available with the TV that supports "**HDAVI Control 3**" or later.

## Easy control only with VIERA remote control

If you connect this unit to the TV that supports "HDAVI Control 2" or later with an HDMI cable, you can enjoy using more convenient functions.
You can operate this unit using buttons on the TV remote control.
The buttons that you can use for this unit vary depending on the TV. For details, refer to the operating instructions of the TV.
Use the remote control supplied with this unit if you cannot operate this unit using buttons on the TV remote control.

- The operation of this unit may be interrupted when you press incompatible buttons on the TV remote control.
- The TV displays the TV tuner's picture when the linked operation is finished.

### Using the FUNCTION MENU to operate this unit VIERA Link

This function is available with the TV that supports "**HDAVI Control 2**" or later.

❶ **Display this unit's "FUNCTION MENU" using the TV remote control.**
- If this unit is turned off, this unit will turn on automatically.
- About the FUNCTION MENU Display (⇨ 43, 76)

❷ **Select the item you want to operate with the TV remote control, then press [OK].**

### Pause Live TV programme VIERA Link

This function is available with the TV that supports "**HDAVI Control 3**" or later.
You can pause the TV programme you are watching and resume later by temporarily saving it on the HDD. This is useful when you have to briefly stop watching TV to run an errand.
If you stop the Pause Live TV function, then the TV programme temporarily saved on the HDD will be deleted.

❶ **When you want to pause the TV programme**
**Turn on the "Pause Live TV" function using the TV remote control.**
- This unit turns on automatically.

❷ **When you want to resume**
**Display the Control Panel (⇨ right), then press [OK].**
- The TV programme resumes.

Refer to "Notes" on page 43, "To pause the TV programme you are watching —Pause Live TV".

### Tips
**To stop Pause Live TV**
1  Press [▼] while the Control Panel is displayed.
2  Press [◄, ►] to select "Yes", then press [OK].

### Using the OPTION menu window to operate this unit
VIERA Link

This function is available with the TV that supports "**HDAVI Control 2**" or later.

By using the TV remote control, you can play discs using the "Control Panel" (⇨ below)and display the Top Menu for DVD-Video.

❶ **Display this unit's "FUNCTION MENU" using the TV remote control.** (⇨ left)

❷ **Press [OPTION].**
- You cannot use the OPTION menu while the Top Menu for DVD-Video is displayed or while DVD-Video is being copied.
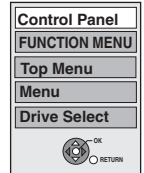
❸ **Select an item, then press [OK].**

| Switch to TV | Displayed when watching with the tuner of this unit. It will return to the TV picture. |
|---|---|
| Control Panel | Control Panel is displayed. (⇨ below) |
| FUNCTION MENU | FUNCTION MENU is displayed. |
| Top Menu DVD-V | Top Menu is displayed. (⇨ 20) |
| Menu DVD-V | Menu is displayed. (⇨ 20) |
| Standby Settings | "Standby Settings" screen is displayed (⇨ 78). |
| Drive Select | Select the HDD, DVD or SD drive. |
| Slideshow | "Album View" screen is displayed (⇨ 40). |
| Rotate RIGHT/Rotate LEFT (JPEG) | Rotate the still pictures. (⇨ 41) |
| Zoom in/Zoom out (JPEG) | Enlarge or shrink the still picture. (⇨ 41) |
| Audio Description | Audio Description screen is displayed. (⇨ 46) |

### Using the Control Panel

Using the "Control Panel", you can operate search backward, search forward, stop, etc. with the TV remote control.
Select "Control Panel", then press [OK] in step❸ (⇨ above).
The Control Panel is displayed (⇨ right)

- While playing a title or DVD-Video, etc.
  – [▲]: Pause, [▼]:Stop,
    [◄]: Search backward,
    [►]: Search forward, [OK]: Play,
    [EXIT]: Exit the Control Panel
- While playing still pictures
  – [▼]: Stop, [◄]:View previous picture,
    [►]: View next picture, [EXIT]: Exit the Control Panel

■ **When you want to leave the TV on and set only this unit to standby mode**
Press [⏻] on this unit's remote control, then set to standby mode.

■ **When not using "HDAVI Control**
Set "VIERA Link" in the Setup menu to "Off" (⇨ 77).

# Information Messages

## Digital Channel Information

You can display the information about programmes (programme name, broadcast time, etc.).

**With the unit stopped**

STATUS

ⓘ **to show the screen information.**

When the digital channel information is being displayed
– Press [STATUS ⓘ] again and detailed information will be displayed (only when "info ⓘ" is displayed).

Status message (⇨ 47)

HDD
1 : 07 SP
1 DVB
BBC ONE Wales

"info ⓘ"

1 BBC ONE Wales        17:11 All Channels
Wales today          Change Category ▢
17:00 – 17:15    ◄NOW►          info ⓘ
          Multi Audio   TXT   Subtitle

STATUS ⓘ

STATUS ⓘ

1 BBC ONE Wales        17:11 All Channels
Wales today
17:00 - 17:15    ◄NOW►          Exit info ⓘ
In the 1970's, John Belshi, working with National Lampoon, mol with Dan Aykucoyd, then a host of a children's tv program, and owner of a speakeasy called the "505 Club". Dan from Toronto, put on a record called Straight Up, by the Downchild Blues Band.
          Multi Audio   TXT   Subtitle

Digital channel information

Detailed information

---

Category (Favourite ⇨ 72)

Channel and Station Name

Signal Quality (⇨ 47)

1 BBC ONE Wales   No Signal  19:03  All Channels
BBC News            Change Category ▢
19:00 - 19:30    ◄NOW►          info ⓘ
Encrypted   AD   Multi Audio   TXT   Subtitle

Programme name and Broadcast time

↓

| **Encrypted** | During scrambled broadcasting (You cannot watch the broadcast). |
| **AD** | Audio Description service may be available. |
| **Multi Audio** | Programme is broadcast in multi-channel sound (⇨ 69, DVB Multi Audio). To select audio language (⇨ 73, DVB Preferred Multi Audio) |
| **TXT** | Digital Teletext may be available. |
| **Subtitle** | Subtitle may be available. |

Even with programmes with "AD", "Multi Audio", "TXT" and "Subtitle" indications, you may not be able to use these services. To confirm the availability of these services, refer to the indications in the detailed information too.※

e.g.,

1 BBC ONE Wales        17:11 All Channels
Wales today
17:00 - 17:15    ◄NOW►          Exit info ⓘ
          [AD,S]
          AD                    Subtitle

※ These indications are not displayed properly unless the information sent from broadcast stations is correct.

### Tips

**To switch information of the current programme and the next programme**
Press [◄, ►].

● NOW: current programme
● NEXT: next programme

**To select the information of another channel**
Press [▲, ▼].
● Press [OK] to watch the selected channel.

**To change the length of time digital channel information is displayed for**
(⇨ 76, On-Screen Messages)

### Notes

● Every time you change the channel, digital channel information appears automatically. They disappear again after a short time.
● If you record a digital radio broadcast or a digital broadcast that is not being received correctly, digital channel information is also recorded and will remain visible during playback.

---

### Listening to the Audio Description

This function can aid visually-impaired viewers by adding an audio track to describe events on-screen.

❶ When "AD" appears in digital channel information
OPTION **to show the OPTION menu.**

❷ ▲, ▼ to select "Audio Description", then OK
– Audio Description screen appears.

❸ ▲, ▼ to select "Audio Description".

❹ ◄, ► to select "Auto", then RETURN

### Notes

● Programmes are recorded with Audio Description when you record them with "Audio Description" set to "Auto".

### Tips

● **To turn off the Audio Description**
In the step ❹ (⇨ above), press [◄, ►] to select "Off", then press [RETURN ⤺].
● **To change the volume**
In the step ❸ (⇨ above), press [▲, ▼] to select "Volume" then press [◄, ►] to set the volume, then press [RETURN ⤺].
● You can switch the Audio Description and change its volume during recording and timer recording.

### Showing the Digital Teletext

When "TXT" appears in digital channel information
TEXT **to show the Digital Teletext.**
– Press again to hide.

### Notes

● During recording the Digital Teletext function is not possible.
● When subtitle is on or the digital channel information is displayed, the Digital Teletext function does not work.

### Tips

**To view another page of Digital Teletext**
Press [▲, ▼] to select another page, then press [OK].
● You can also use the numbered buttons to select another page.

**Quickly access to certain topic areas and navigation**
Use colour buttons according to on-screen instructions.

### Showing Subtitles

When "Subtitle" appears in digital channel information
STTL **to show subtitles.**
– Press again to hide.

### Notes

● Programmes are recorded with subtitles when you record them with the subtitles setting set to "Subtitles On".
● You cannot switch subtitles during timer recording.

### Tips

**To select subtitle language (⇨ 73, DVB Preferred Subtitles)**

### Changing the Category

You can select one of your favourite channels by changing the category [such as Free Channels, Radio and Registered Favourites (⇨ 72)].

When digital channel information is displayed
(Blue) **to change the category.**

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| Signal Quality | |
|---|---|
| No Signal: | The digital broadcast signal is not being received. |
| No Service: | No broadcasts are currently available. |

### Notes
● If "No Signal" is displayed, check that the current digital broadcast channel is correctly broadcasting.

## Status Messages

The following messages and displays appear to let you know what operations are being performed and the status of the unit.

During playback and/or recording

STATUS

**Several times to cycle through available displays.**

| HDD | — Current media |
|---|---|
| REC | — Shows current recording or play status. |
| 1 DVB | — Channel information |
| BBC ONE Wales | |

DVD REC ● — Recording drive/Copy progress indicator

Remaining recording time and recording mode
(e.g.: "13:50 XP" indicates 13 hour and 50 minutes in XP mode)
• Disc remaining time may slightly differ between different models.

The current date and time

| 18:53:50 11/10 | ■Remain | 13:50 XP |
| ■ T1 0:05.14 XP | ■ T2 0:00.10 XP |

| HDD |
| REC |
| 1 DVB |
| BBC ONE Wales |
| DVD REC ● |

Elapsed play time and recording mode

Elapsed recording time and recording mode

● When using Pause Live TV
The time when the picture currently displayed was broadcasted

Play 15:05:13

Live 15:10:46

Current time

No Display

## New Channel Message

When a new DVB channel is added this unit will be informed automatically. Then the confirmation message appears. If you select "Yes" on the display, Auto-Setup starts (all channel settings and Favourites are deleted and the timer recording programmes are also cancelled.). However recotdings on the HDD will not be deleted.

**New Channel**

A new DVB Channel has been found.
Start DVB Auto Setup?
Selecting DVB Auto Setup will delete all Timer Programmes.

| Yes | No |

OK RETURN

### Tips
**The display/hide setting can be changed (⇨ 47).**

# Entering Text

You can give names to recorded titles, etc.
Also, you can search for desired programmes on GUIDE Plus+ list by entering key words or the programme name. (Free Word Search, Find Titles) (⇨ 35)

**1** When viewing the "Enter Title Name" screen etc.

**Enter Title Name**

Top Menu Preview

❚❚ Delete
▶▶ Add to List
◀◀ Name List

■ Set
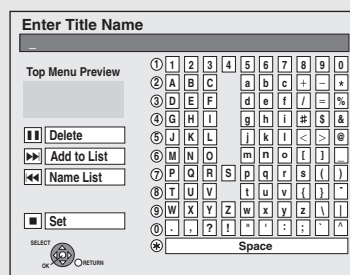
SELECT
OK RETURN

e.g., "Enter Title Name" screen

**▲, ▼, ◀, ▶ to select a character, then** OK

– Repeat this step to enter other characters.

**Using the numbered buttons to enter characters**
e.g.: entering the letter "R"
1 Press [7] to move to the 7th row.
2 Press [7] twice to highlight "R".
3 Press [OK].

**To enter a space**
Press [DELETE ✳], then press [OK].

**To delete a character**
Press [❚❚] on a character in the name field.

**To cancel in the middle**
Press [RETURN ⤺].
● Characters will not be saved.

**2** STOP ■ **when you've finished entering text.**

### Tips
■ **To add a name to the list**
You can add frequently used names and recall them later.
Maximum number of added names: 20
Maximum number of characters per name: 44
After entering the name (step **1**)
1. Press [▲, ▼, ◀, ▶] to select "Add to List", then press [OK].
   ● You can also press [▶▶] to select "Add to List".
2. Press [◀, ▶] to select "Add", then press [OK].
   ● Press [RETURN ⤺] to cancel.

■ **To recall an added name**
1. Press [▲, ▼, ◀, ▶] to select "Name List", then press [OK].
   ● You can also press [◀◀] to select "Name List".
2. Press [▲, ▼, ◀, ▶] to select the name to be recalled, then press [OK].

■ **To delete an added name**
1. Press [▲, ▼, ◀, ▶] to select "Name List", then press [OK].
   ● You can also press [◀◀] to select "Name List".
2. Press [▲, ▼, ◀, ▶] to select the name to be deleted.
3. Press [OPTION] to show "Delete Name", then press [OK].
4. Press [◀, ▶] to select "Delete", then press [OK].
5. Press [RETURN ⤺].

### Notes
● The number of characters that can be entered depends on what kind of things you name.
● If you enter a long name, only part of it is shown in the Top Menu after finalisation (⇨ 71). When entering a title name, the name that will appear in the Top Menu can be previewed in "Top Menu Preview" window.

**Enter Title Name**

Chapter 1

Top Menu Preview

Chapter 1

❚❚ Delete

Advanced Features

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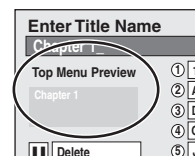
# Titles—Editing

HDD RAM
-R -R DL -RW(V) +R +R DL (You can not edit finalised discs.)
+RW -RW(VR)
You can edit titles on the DIRECT NAVIGATOR screen:
deleting unwanted parts of titles such as commercials, changing
Thumbnail, dividing and deleting titles, etc.

## Tips
● **Maximum numbers of titles on a disc**

| HDD | RAM -R -R DL -RW(V) | +R +R DL +RW |
|-----|----------------------|--------------|
| 499 | 99 | 49 |

## Accessing the Title View

**Preparation:**
● RAM Release protection ( ⇨ 70, Setting Protection).

❶ **Press [DRIVE SELECT] to select the drive.**
❷ **Press [DIRECT NAVIGATOR].**
 HDD RAM **When "VIDEO" is not selected, press the "Red" button to select "VIDEO".**
❸ **Press [▲, ▼, ◄, ►] to select a title.**
 – Multiple editing (⇨ below, Tips)
❹ **Press [OPTION] to display the menu list.**
 ● Items that cannot be selected are grey.

```
                        Enter Title Name
                        Set up Protection
                        Cancel Protection
  Delete                Partial Delete       Refer to "Title
  Properties            Change Thumbnail     Operations"
  Edit                  Divide Title         (⇨ right)

  TV Guide Explorer  →  Searching using programme
  Create Group          information of titles recorded to the
  Release Grouping      HDD (⇨ 35)
  Chapter View       →  To edit the group of titles HDD
  Table Display         (⇨ 36)
  All Titles         →  Switching the DIRECT NAVIGATOR
                        appearance (⇨ 36)
```
If you select "Chapter View" (⇨ 50)
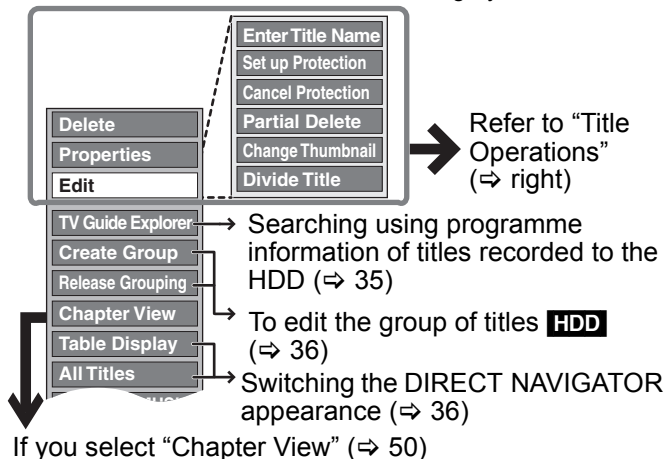
## Notes
● You cannot edit during recording or copying, etc.
● +R +R DL Management information is recorded in unused
 sections when you edit discs. The available space on these
 discs decreases each time you edit their contents.We
 recommend that you edit on the HDD and then copy to
 discs.

## Tips
**To exit the menu screens**
Press [DIRECT NAVIGATOR].

**To view other pages**
Press [▲, ▼, ◄, ►] to select "Previous" or "Next", then press
[OK].
– You can also press [|◄◄, ►►|] to view other pages.

**Multiple editing**
(Only Delete, Set up Protection, Cancel Protection)
Select with [▲, ▼, ◄, ►], then press [II]. (Repeat.)
– A check mark appears. Press [II] again to cancel.

## Title Operations

### Delete

HDD RAM -R -R DL -RW(V) +R +R DL +RW
Use to delete unneeded titles.
**Important:** Once deleted, contents cannot be recovered.

Perform steps ❶ – ❹ of "Accessing the Title View" (⇨ left).
 ❺ **Press [▲, ▼] to select "Delete", then press [OK].**
 ❻ **Press [◄] to select "Delete", then press [OK] to confirm.**

## Notes
● HDD RAM Deleting an item increases the available disc
 space by the amount of space taken by the item deleted.
● -R -R DL +R +R DL Available disc space does not
 increase after deletion.
● -RW(V) +RW Available disc space increases when you
 delete the last title (the recording space may increase
 slightly when other titles are deleted).
● Available disc space may not increase after deleting a short
 title.
● HDD RAM -RW(V) +RW To recover total disc space, the
 disc needs to be formatted. (⇨ 70)

### Properties

HDD RAM -R -R DL -RW(V) +R +R DL +RW -RW(VR)
To view title information (e.g., date, time)
Perform steps ❶ – ❹ of "Accessing the Title View" (⇨ left).
 ❺ **Press [▲, ▼] to select "Properties", then press [OK].**

```
  Delete                      Properties
  Properties          Football
  Edit
  TV Guide Explorer
  Create Group
  Release Grouping    No.      001          Time      18:07
  Chapter View        Date     12/11/2006 SUN Rec time 2:15(SP)
                      Channel  T5           Genre     Sport
       Display
                            OK        RETURN
```
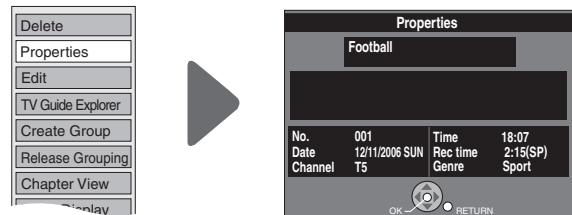
## Tips
● HDD You can also press [STATUS ⓘ] to display the
 "Properties" screen when a title with "ⓘ Info" on the bottom
 of the All Titles or Grouped Titles screen is selected.

### Enter Title Name

HDD RAM -R -R DL -RW(V) +R +R DL +RW
You can give a name for the title.

Perform steps ❶ – ❹ of "Accessing the Title View" (⇨ left).
 ❺ **Press [▲, ▼] to select "Edit", then press [OK].**
 ❻ **Press [▲, ▼] to select "Enter Title Name", then press [OK].**
 Entering Text (⇨ 47)
 – HDD Even if the group name is changed, the title
  names in the group will not be changed.

## Set up Protection/Cancel Protection

`HDD` `RAM` `+R` `+R DL` `+RW`
Use to prevent accidental erasure of titles.

Perform steps ❶ – ❹ of "Accessing the Title View" (⇨ 48).
  ❺ **Press [▲, ▼] to select "Edit", then press [OK].**
  ❻ **Press [▲, ▼] to select "Set up Protection" or "Cancel Protection", then press [OK].**
  ❼ **Press [◀] to select "Yes", then press [OK].**

The lock symbol appears when the title is protected.

---
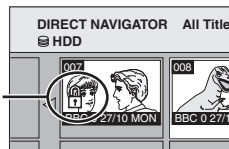
## Partial Delete

`HDD` `RAM`
Use to remove unwanted parts of titles, such as commercials.
**Important:** Once deleted, the parts cannot be recovered.

Perform steps ❶ – ❹ of "Accessing the Title View" (⇨ 48).
  ❺ **Press [▲, ▼] to select "Edit", then press [OK].**
  ❻ **Press [▲, ▼] to select "Partial Delete", then press [OK].**
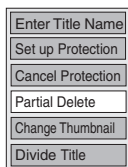
  ❼ **Press [OK] to set the "Start" point and then press [OK] again to set the "End" point of the section you want to erase.**
    – For quicker editing (⇨ below, Tips)
    – To delete multiple sections:
      Press [▲, ▼] to select "Next", and repeat this step.
  ❽ **Press [▲, ▼] to select "Finish", then press [OK].**
  ❾ **Press [◀] to select "Delete", then press [OK] to confirm.**

### Notes
● You may not be able to specify start and end points within 3 seconds of each other.
● Available disc space may not increase after erasing short parts of titles.

---

## Change Thumbnail

`HDD` `RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW`
Changes the thumbnail picture shown in the Title View screen.

Perform steps ❶ – ❹ of "Accessing the Title View" (⇨ 48).
  ❺ **Press [▲, ▼] to select "Edit", then press [OK].**
  ❻ **Press [▲, ▼] to select "Change Thumbnail", then press [OK].**
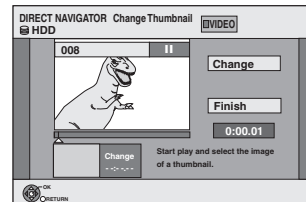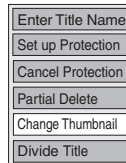
  ❼ **Press [▶] (PLAY) to start play.**
  ❽ **Press [OK] at the point you want to use as the thumbnail.**
    – For quicker editing (⇨ below, Tips)
    – To change the thumbnail:
      Restart play and press [▲, ▼] to select "Change", then press [OK] at the point you want to use as the thumbnail.
  ❾ **Press [▲, ▼] to select "Finish", then press [OK].**

---

## Divide Title

`HDD` `RAM`
You can divide a title into two.
Once divided, titles cannot be recombined.

Perform steps ❶ – ❹ of "Accessing the Title View" (⇨ 48).
  ❺ **Press [▲, ▼] to select "Edit", then press [OK].**
  ❻ **Press [▲, ▼] to select "Divide Title", then press [OK].**
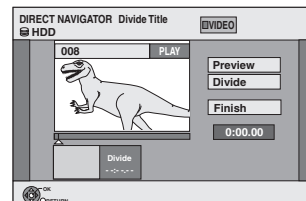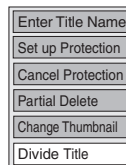
  ❼ **Press [OK] at the point you want to divide.**
    – For quicker editing (⇨ below, Tips)
    – Selecting "Preview", then pressing [OK] plays the title from 10 seconds prior, to 10 seconds after the division point.
    – To change the point to divide at:
      Press [▲, ▼] to select "Divide", then press [▶] (PLAY) to bring to the point where you want to divide, then press [OK].
  ❽ **Press [▲, ▼] to select "Finish", then press [OK].**
  ❾ **Press [◀] to select "Divide", then press [OK].**
    – The title is divided at that point.

### Notes
● Divided titles retain the name of the original.
● A short amount of video and audio just before and after the division point get cut out.
● You cannot divide a title when the resulting parts are too short or total number of titles exceeds 99.
● `HDD` Divided titles form a group of titles.

---

### Tips
**For quicker editing**
● Use Search (⇨ 37) or Time Slip (⇨ 37) to find the desired point.
● To skip to the start or end of a title/chapter press [|◀◀] (start) or [▶▶|] (end).
● For better precision, use Slow-motion (⇨ 37) and Frame-by-Frame (⇨ 37).

Advanced Editing

# Chapters—Creating and Editing

HDD RAM
When creating chapters in your favourite scenes, you can easily reach the head of scene using [|◀◀, ▶▶|] (SKIP) or play on Chapter View.

## Tips
● **Chapter**
  Each section between the division points becomes a chapter.

| Title | | | |
|---|---|---|---|
| Chapter | Chapter | Chapter | Chapter |
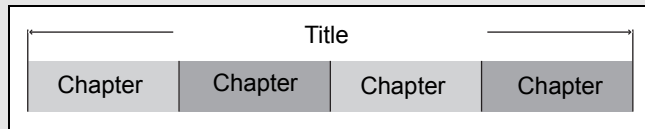
● HDD RAM: You can change the order of chapters and create a Playlist (Video) (⇨ 51).

**"Chapter Creation" in the Setup menu (⇨ 74)**
**"Automatic":**
Detects changes (special mute points like the start and the end of the programme) in the scene during recording and sets chapter start points on them automatically.
● Depending on the programme to be recorded or the Recording Mode, the chapter start points may not be created correctly.
**"5 minutes":**
Sets chapter start points automatically during recording at approximately 5-minute interval.

● **Maximum numbers of chapters on a disc**
HDD: Approx. 1000 per title
RAM -R -R DL -RW(V): Approx. 1000
+R +R DL +RW: Approx. 254

## Accessing the Chapter View

Allows viewing and editing chapters individually.
❶ **Press [DRIVE SELECT] to select the drive.**
❷ **Press [DIRECT NAVIGATOR].**
   HDD RAM When "VIDEO" is not selected, press the "Red" button to select "VIDEO".
❸ **Press [▲, ▼, ◀, ▶] to select a title.**
❹ **Press [OPTION] to display the OPTION menu.**
❺ **Press [▲, ▼] to select "Chapter View" then press [OK].**
❻ **Press [▲, ▼, ◀, ▶] to select a chapter.**
   – Multiple editing (⇨ right, Tips)
❼ⓐ **To play**
   **Press [OK].**
❼ⓑ **To edit**
   **Press [OPTION] to display the menu list.**

| Delete |
| Properties |
| Edit |
| TV Guide Explorer |
| Create Group |
| Release Grouping |
| Chapter View |
| Display |

| Delete Chapter |
| Create Chapter |
| Combine Chapters |
| Title View |
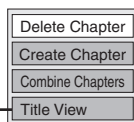
Refer to "Chapter Operations" (⇨ right).

You can go back to the Title View.

## Tips
**To exit the menu screens**
Press [DIRECT NAVIGATOR].

**To view other pages**
Press [▲, ▼, ◀, ▶] to select "Previous" or "Next", then press [OK].
– You can also press [|◀◀, ▶▶|] to view other pages.

**Multiple editing**
(Only Delete Chapter)
Select with [▲, ▼, ◀, ▶], then press [❙❙]. (Repeat.)
– A check mark appears. Press [❙❙] again to cancel.

## Chapter Operations

### Delete Chapter

You can delete the chapters for each title.
**Important:** Once deleted, recorded contents cannot be recovered.
Perform steps ❶ – ❼ⓑ of "Accessing the Chapter View" (⇨ left).
   ❽ **Press [▲, ▼] to select "Delete Chapter", then press [OK].**
   ❾ **Press [◀] to select "Delete", then press [OK].**

### Create Chapter

You can divide a title into multiple chapters.
Perform steps ❶ – ❼ⓑ of "Accessing the Chapter View" (⇨ left).
   ❽ **Press [▲, ▼] to select "Create Chapter", then press [OK].**

| Delete Chapter |
| Create Chapter |
| Combine Chapters |
| Title View |

DIRECT NAVIGATOR Create Chapter [VIDEO]
📀 HDD
008 PLAY
Create
Finish
0:43.21
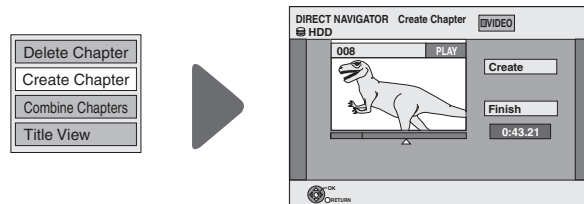
   ❾ **Press [OK] at the point you want to divide.**
      – For quicker editing (⇨ 49, Tips)
      – Repeat this step to create additional chapters.
   ❿ **Press [▲, ▼] to select "Finish", then press [OK].**

## Notes
● A short portion of the title just after the creation point may be lost.

### Combine Chapters

You can combine the divided chapters.
Perform steps ❶ – ❼ⓑ of "Accessing the Chapter View" (⇨ left).
   ❽ **Press [▲, ▼] to select "Combine Chapters", then press [OK].**
   ❾ **Press [◀] to select "Combine", then press [OK].**
      – The selected chapter gets combined with the next chapter.

# Creating, Editing and Playing Playlists (Video)

`HDD` `RAM`
`-RW(VR)` (play only)
You can create Playlists (Video) by grouping your favourite scenes (chapters) from the recorded titles and edit the created Playlists (Video).

## Tips
`HDD` `RAM`
A Playlist (Video) is a compilation of your favourite chapters as shown in the chart below.

| Title | | | Title | |
|---|---|---|---|---|
| Chapter | Chapter | Chapter | Chapter | Chapter |

Playlist (Video)  | Chapter | Chapter |
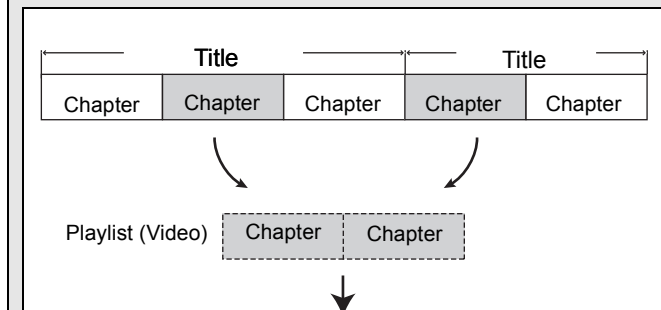
Copying (⇨ 58) a Playlist (Video) will create a title.
● Editing Playlists (Video) doesn't modify titles.
● Playlists (Video) are not recorded separately so this doesn't use much capacity.

## Accessing the Playlist (Video) View

**Preparation:**
● Press [DRIVE SELECT] to select the drive containing the recorded title to be edited.
● `RAM` Release protection ( ⇨ 70, Setting Protection).

With the unit stopped
❶ **Press [FUNCTION MENU].**
❷ **Press [▲, ▼] to select "Others", then press [OK].**
❸ **Press [▲, ▼] to select "Playlists", then press [OK].**
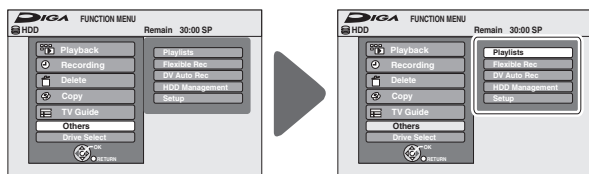
`HDD`
When "VIDEO" is not selected, press the "Red" button to select "VIDEO".

❹ₐ **To play**
Press [▲, ▼, ◄, ►] to select the Playlists (Video) to play, then press [OK].

❹ᵦ **To create**
Press [▲, ▼, ◄, ►] to select "Create", then press [OK] (⇨ right, Creating Playlists (Video)).

❹ᵥ **To edit**
Press [▲, ▼, ◄, ►] to select the Playlists (Video), then press [OPTION].
– Multiple editing (⇨ 52, Tips in "Edit")

`HDD`

| Create |
| Copy |
| Enter Name |
| Change Thumbnail |

| Delete |
| Properties |
| Edit |

| Chapter View |
| PICTURE |

Refer to "Editing Playlists (Video)/ Chapters" (⇨ right).
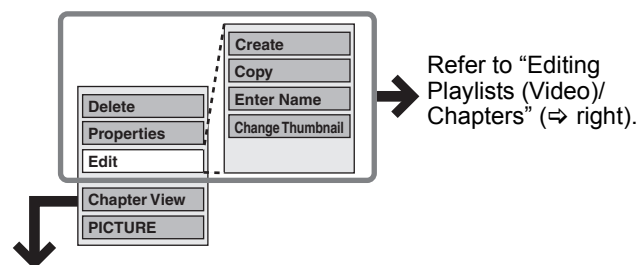
**If you select "Chapter View" (⇨ 52)**

## Creating Playlists (Video)

`HDD` `RAM`
Perform steps ❶ – ❹ᵦ of "Accessing the Playlist (Video) View". (⇨ left)
❺ **Press [◄, ►] to select the source title, then press [▼].**
– Press [OK] to select all the chapters in the title, then skip to step ❼.
❻ **Press [◄, ►] to select the source chapter you want to add to a Playlist (Video), then press [OK].**
– Press [▲] to cancel.
– Press [OPTION] to select "Create Chapter", then press [OK] if you want to create a new chapter in the source title (⇨ 50).
❼ **Press [◄, ►] to select the position to insert the chapter, then press [OK].**
– Press [▲] repeatedly to return to step ❺, if you want to add additional source titles.
Chapters are registered to the Playlist (Video). Repeat steps ❻ and ❼ to add other chapters.
❽ **Press [RETURN ⅁] to finish and exit the screen.**

## Notes
● Playlists (Video) cannot be created while recording or copying.
● You are allowed a maximum of 99 Playlists (Video), with approximately 1000 chapters per Playlist (Video).

## Editing Playlists (Video)/Chapters

### Delete

`HDD` `RAM`
Use to delete unneeded Playlists (Video).

**Important:** Once deleted, Playlists (Video) contents cannot be recovered (titles are not affected).

Perform steps ❶ – ❹ᵥ of "Accessing the Playlist (Video) View". (⇨ left)
❺ **Press [▲, ▼] to select "Delete", then press [OK].**
❻ **Press [◄] to select "Delete", then press [OK] to confirm.**

## Tips
**To delete during play**
1. Press [DELETE ✳]. A confirmation message displays.
2. Press [◄] to select "Delete", then press [OK] to confirm.

### Properties

`HDD` `RAM` `-RW(VR)`
Playlist (Video) information (e.g., length and date) is shown.

Perform steps ❶ – ❹ᵥ of "Accessing the Playlist (Video) View". (⇨ left)
❺ **Press [▲, ▼] to select "Properties", then press [OK].**

## Tips
**To exit the screen**
Press [OK].

Advanced Editing

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# Creating, Editing and Playing Playlists (Video)

### Edit

**HDD** **RAM**
You can create and copy Playlists (Video), and change the thumbnail.

Perform steps ❶ – ❹c of "Accessing the Playlist (Video) View" (⇨ 51).

❺ **Press [▲, ▼] to select "Edit", then press [OK].**
❻ **Press [▲, ▼] to select desired operation from the menu displayed location, then press [OK] (⇨ below).**

| Create | ① Press [▲, ▼] to select "Create", then press [OK]. (⇨ 51, Creating Playlists (Video)) |
|---|---|
| Copy | ① Press [▲, ▼] to select "Copy", then press [OK]. <br> ② Press [◀] to select "Copy", then press [OK]. |
| Enter Name | ① Press [▲, ▼] to select "Enter Name", then press [OK]. <br> ② Enter a name for the Playlists (Video). (⇨ 47, Entering Text). |
| Change Thumbnail | ① Press [▲, ▼] to select "Change Thumbnail", then press [OK]. <br> ② Press [▶] (PLAY). Use Time Slip (⇨ 37), Slow-motion (⇨ 37), Frame-by-Frame (⇨ 37), or Search (⇨ 37) to find the desired point. <br> ③ Press [OK] at the image you wish you use for your thumbnail. <br> ④ Press [▲, ▼] to select "Finish", then press [OK]. <br> – The thumbnail picture is now changed. |

### Tips
**To exit the menu screens**
Press [EXIT].

**To view other pages**
Press [▲, ▼, ◀, ▶] to select "Previous" or "Next", then press [OK].
– You can also press [|◀◀, ▶▶|] to view other pages.

**Multiple editing**
(Only Delete, Copy)
Select with [▲, ▼, ◀, ▶], then press [❙❙]. (Repeat.)
– A check mark appears. Press [❙❙] again to cancel.

### Chapter View

**HDD** **RAM**
You can add, move, divide, combine or delete chapters in the Playlists (Video).

Perform steps ❶ – ❹c of "Accessing the Playlist (Video) View" (⇨ 51).
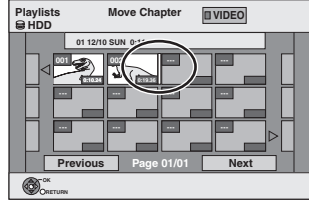
❺ **Press [▲, ▼] to select "Chapter View", then press [OK].**
❻ **Press [▲, ▼, ◀, ▶] to select a chapter.**
– Multiple editing (⇨ right, Tips)
❼a **To play**
   **Press [OK].**
❼b **To edit**
   **Press [OPTION] to display the menu list.**
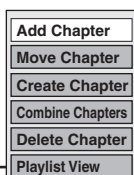
```
Add Chapter
Move Chapter
Create Chapter      Refer to "Chapter Operations"
Combine Chapters    (⇨ right)
Delete Chapter
Playlist View
```
You can go back to the Playlist View.

### Chapter Operations

| Add Chapter | ① Press [▲, ▼] to select "Add Chapter", then press [OK]. (⇨ 51, Creating Playlists (Video)) |
|---|---|
| Move Chapter | ① Press [▲, ▼] to select "Move Chapter", then press [OK]. <br> ② Press [▲, ▼, ◀, ▶] to select the position to insert the chapter, then press [OK]. <br><br>  |
| Create Chapter | ① Press [▲, ▼] to select "Create Chapter", then press [OK]. <br> ② Press [▶] (PLAY). Use Time Slip (⇨ 37), Slow-motion (⇨ 37), Frame-by-Frame (⇨ 37), or Search (⇨ 37) to find the desired point. <br> ③ Press [OK] at the point you want to divide. <br> ④ Press [▲, ▼] to select "Finish", then press [OK]. |
| Combine Chapters | ① Press [▲, ▼] to select "Combine Chapters", then press [OK]. <br> ② Press [◀] to select "Combine", then press [OK]. <br> – The selected chapter gets combined with the next chapter. |
| Delete Chapter | ① Press [▲, ▼] to select "Delete Chapter", then press [OK]. <br> ② Press [◀] to select "Delete", then press [OK]. |

### Tips
**To exit the menu screens**
Press [EXIT].

**To view other pages**
Press [▲, ▼, ◀, ▶] to select "Previous" or "Next", then press [OK].
– You can also press [|◀◀, ▶▶|] to view other pages.

**Multiple editing**
(Only Delete Chapter)
Select with [▲, ▼, ◀, ▶], then press [❙❙]. (Repeat.)
– A check mark appears. Press [❙❙] again to cancel.

# Still Pictures and Music—Editing

## Accessing the Album (still picture)/Picture View

`HDD` `RAM` `-R` (JPEG) `SD`
You can edit pictures and albums.

**Preparation:**
- Press [DRIVE SELECT] to select the HDD, DVD or SD drive.
- `RAM` `SD` Release protection ( ⇨ 70, Setting Protection)

**❶ Press [DIRECT NAVIGATOR].**
   `HDD` `RAM` When "PICTURE" is not selected, press the "Green" button to select "PICTURE".

Editing an album:
**❷ⓐ Press [▲, ▼, ◀, ▶] to select the album.**
   – Multiple editing (⇨ below, Tips)
   – When you want to create an album using "Create Album", press [OPTION] without selecting album.

Editing a still picture:
**❷ⓑ 1. Press [▲, ▼, ◀, ▶] to select the album which contains the still picture to edit, then press [OK].**
   **2. Press [▲, ▼, ◀, ▶] to select the still picture.**
   – Multiple editing (⇨ below, Tips)

**❸ Press [OPTION] to display the menu list.**
   - Items that cannot be selected are grey.
     e.g., `HDD` Editing an album

| Start Slideshow | → Refer to "Start Slideshow"/ |
| Slideshow Settings | "Slideshow Settings"(⇨ 40) |

| Add Pictures | Delete Album | → Refer to "Album (still picture)/ Picture Operations" (⇨ right) |
| Create Album | Change Date | |
| Edit Album | Set up Protection | |
| Copy to DVD | Cancel Protection | |

| Playlist View | → Switch to Playlists (Picture) (⇨ 40) |
| VIDEO/MUSIC | |

   e.g., `HDD` Editing a still picture

| Delete Pictures | → Refer to "Album (still picture)/ Picture Operations" (⇨ right). |
| Properties | |
| Change Date | |
| Set up Protection | |
| Cancel Protection | |
| Album View | → You can go back to the Album View. |

### Notes
- You cannot edit still pictures recorded on DVD-R DL, CD-R/CD-RW and USB memory.
- You cannot edit still pictures recorded on finalised DVD-R.

### Tips
**To view other pages**
Press [▲, ▼, ◀, ▶] to select "Previous" or "Next", then press [OK].
– You can also press [|◀◀, ▶▶|] to view other pages.

**Multiple editing**
[Only Delete Album, Delete Pictures, Change Date (Only when the "Picture (JPEG) View" screen is displayed), Set up Protection, Cancel Protection, Copy to DVD, Copy to HDD]
Select with [▲, ▼, ◀, ▶], then press [▐▐]. (Repeat.)
– A check mark appears. Press [▐▐] again to cancel.

**To select all albums**
Press [■]. After confirmation message appears, press [◀] to select "Yes".

**To return to the previous screen**
Press [RETURN ⤺].

**To exit the menu screens**
Press [DIRECT NAVIGATOR].

## Album (still picture)/Picture Operations

### Notes
- Timer recordings do not start when performing "Change Date", "Copy to DVD", "Copy to HDD", "Add Pictures" or "Create Album".

### Add Pictures/Create Album

`HDD` `RAM` `SD`
Perform steps ❶ – ❸ of "Accessing the Album (still picture)/Picture View" (⇨ left).
**❹ Press [▲, ▼] to select "Add Pictures" or "Create Album", then press [OK].**
**❺ Press [◀] to select "Start" or "Yes", then press [OK].**
**❻ Press [▲, ▼, ◀, ▶] to select the album containing picture to add, then press [OK].**
**❼ Press [▲, ▼] to select "Select pictures to copy" or "Copy all pictures", then press [OK].**
   - If "Select pictures to copy" is selected
     Press [▲, ▼, ◀, ▶] to select the picture, then press [OK].
   - If "Copy all pictures" is selected
     All the still pictures in the album will be copied.
**❽ Press [▶] to select "No" to finish copying, then press [OK].**
   – If you want to continue copying, select "Yes", then repeat steps ❻ – ❼.

Only when you select "Create Album"
**❾ Press [◀, ▶] to select "Yes" or "No", then press [OK].**
   - If "Yes" is selected
     You can give a name for the album (⇨ 47, Entering Text).
   - If "No" is selected
     The album name is automatically given.

### Notes
- `RAM` `SD` "Add Pictures" is available only for the folders conforming to DCF.

### Delete Album/Delete Pictures

`HDD` `RAM` `SD`
`-R` (JPEG)

**Important:** Once deleted, contents cannot be recovered.
- When deleting an album, non-picture files in the album will also be deleted. (This does not apply to subordinate folders in the album.)
- `-R` Available space does not increase even after pictures are deleted.

Perform steps ❶ – ❸ of "Accessing the Album (still picture)/Picture View" (⇨ left).
- When editing an album, press [▲, ▼] to select "Edit Album", then press [OK] after step ❸.
   **❹ Press [▲, ▼] to select "Delete Album" or "Delete Pictures", then press [OK].**
   **❺ Press [◀] to select "Delete", then press [OK].**

### Notes
- If you want to delete sample pictures, perform "Cancel Protection" and then delete them. (⇨ 49)

# Still Pictures and Music—Editing

## Enter Album Name

`HDD` `RAM` `SD`
Perform steps ➊ – ➌ of "Accessing the Album (still picture)/Picture View" (⇨ 53).
● When editing an album, press [▲, ▼] to select "Edit Album", then press [OK] after step ➌.
   ➍ **Press [▲, ▼] to select "Enter Album Name", then press [OK].**
      – You can give a name for the album (⇨ 47, Entering Text).

### Notes
● Album names entered using this unit may not be displayed on other equipment.

## Change Date

`HDD` `RAM`
You can change the date of this picture.
Perform steps ➊ – ➌ of "Accessing the Album (still picture)/Picture View" (⇨ 53).
● When editing an album, press [▲, ▼] to select "Edit Album", then press [OK] after step ➌.
   ➍ **Press [▲, ▼] to select "Change Date", then press [OK].**
   ➎ **Press [◄, ►] to select the item, then press [▲, ▼] to change.**
   ➏ **Press [OK].**

## Set up Protection/Cancel Protection

`HDD` `RAM` `SD`
Set protection to prevent pictures from being accidentally deleted.

Perform steps ➊ – ➌ of "Accessing the Album (still picture)/Picture View" (⇨ 53).
● When editing an album, press [▲, ▼] to select "Edit Album", then press [OK] after step ➌.
   ➍ **Press [▲, ▼] to select "Set up Protection" or "Cancel Protection", then press [OK].**
   ➎ **Press [◄] to select "Yes", then press [OK].**
      – The lock symbol "🔒" appears when the still picture or album is protected.

### Notes
● Even if you set protection using this unit, album may be deleted by other equipment.

## Copy to DVD/Copy to HDD

`HDD` `RAM`
Perform steps ➊ – ➌ of "Accessing the Album (still picture)/Picture View" (⇨ 53).
   ➍ **Press [▲, ▼] to select "Copy to DVD" or "Copy to HDD", then press [OK].**
   ➎ For copy to DVD-RAM or HDD
      **Press [◄, ►] to select "Start", then press [OK].**
      For copy to DVD-R
      **Press [◄, ►] to select "Copy & Finalise" or "Copy Only", then press [OK].**

### Notes
● When copying to DVD-R, use blank discs or unfinalised discs on which JPEG images are recorded with this unit.

## Properties

`HDD` `RAM` `-R` `-R DL` `CD` `USB` `SD`

Information (e.g., image size and file size) is shown.
Perform steps ➊ – ➌ of "Accessing the Album (still picture)/Picture View" (⇨ 53).
   ➍ **Press [▲, ▼] to select "Properties", then press [OK].**
      ● To exit the Properties screen, press [OK].

## Accessing the Album and Track View

`HDD`

**Preparation:**
● Press [DRIVE SELECT] to select the HDD drive.

❶ **Press [DIRECT NAVIGATOR].**
  – When "MUSIC" is not selected, press the "Yellow" button to select "MUSIC".

Editing an album

❷ⓐ **Press [▲, ▼] to select the album, then press [OPTION].**

Editing a track

❷ⓑ **1. Press [▲, ▼] to select the album, then press [OK].**
   **5  2. Press [▲, ▼] to select the track, then press [OPTION].**

❸ **Press [▲, ▼] to select the operation, then press [OK].**

**To edit the album (Music)**

| Delete Album | ⎫ |
|---|---|
| Enter Album Name | ⎬ Album and Track Operation (⇨ below) |
| Repeat Play Setting | ⎫ |
| Track View | ⎬ Useful functions during music play (⇨ 42) |
| Sort | ⎭ |
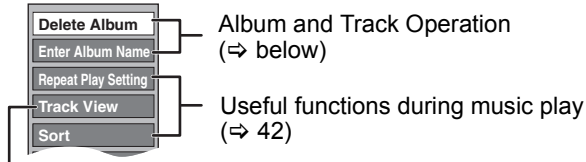
⇨ below

**To edit the track (Music)**

| Delete Track | ⎫ |
|---|---|
| Properties | ⎬ Album and Track Operation (⇨ below) |
| Enter Track Name | |
| Enter Artist Name | ⎭ |
| Repeat Play Setting | Useful functions during music play |
| Album View | You can go back to Album View |
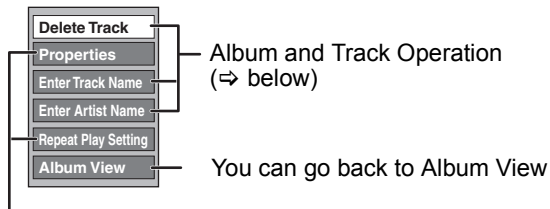
Useful functions during music play ⇨ 42

### Tips
**To return to the previous screen**
Press [RETURN ⤺].

**To exit the screen**
Press [DIRECT NAVIGATOR].

## Album and Track Operation

After performing steps ❶ – ❸ (⇨ above)

| Delete Album Delete Track | Press [◄, ►] to select "Delete", then press [OK]. ● Once deleted, the recorded contents are lost and cannot be restored. Make certain before proceeding. |
|---|---|
| Enter Album Name Enter Track Name | You can give names to albums and tracks. (⇨ 47, Entering Text) |
| Enter Artist Name | You can edit the artist name of the track. (⇨ 47, Entering Text) |

### Notes
● When the timer recording starts, "Delete Album" and "Delete Track" stops on the way.
● "Sample Music" is not displayed on the MUSIC screen.

## Deleting still pictures and music using DELETE Navigator

**Preparation:**
● `RAM` `SD` Release protection ( ⇨ 70, Setting Protection)

`HDD` `RAM` `SD`
`-R` (JPEG)
**Important:** Once deleted, contents cannot be recovered.

❶ **Press [DRIVE SELECT] to select the HDD, DVD or SD drive.**
❷ **Press FUNCTION MENU.**
❸ **Press [▲, ▼] to select "Delete", then press [OK].**
❹ **Press [▲, ▼] to select "Picture" or "Music", then press [OK].**
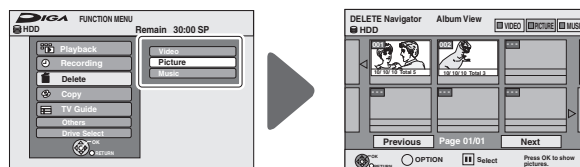


Deleting an album:
❺ⓐ **Press [▲, ▼, ◄, ►] to select the item, then press [DELETE ✱].**

Deleting a still picture or track:
❺ⓑ **1. Press [▲, ▼, ◄, ►] to select the album which contains the still picture or track to delete, then press [OK].**
   **2. Press [▲, ▼, ◄, ►] to select the still picture or track, then press [OK].**
❻ **Press [◄, ►] to select "Delete", then press [OK].**

### Notes
● You cannot delete while recording or copying.

### Tips
**To view other pages [Album (still picture) and still picture only]**
Press [▲, ▼, ◄, ►] to select "Previous" or "Next", then press [OK].
– You can also press [◄◄, ►►|] to view other pages.
**Multiple editing [Album (still picture) and still picture only]**
Select with [▲, ▼, ◄, ►], then press [❙❙]. (Repeat.)
– A check mark appears. Press [❙❙] again to cancel.
– `HDD` `RAM` `SD` Deleting an item increases the available space by the amount of space taken by the item deleted.

**To return to the previous screen**
Press [RETURN ⤺].

**To exit the screen**
Press [EXIT].

# Creating, Editing and Playing Playlists (Picture)

**HDD**
You can create Playlists (Picture) by grouping your favourite still pictures in albums stored on HDD and edit the Playlists (Picture).

## Tips
A Playlist (Picture) is a compilation of your favourite still pictures as shown in the chart below.

| Album 1 | | | Album 2 | |
|---|---|---|---|---|
| Still picture | Still picture | Still picture | Still picture | Still picture |

Playlist (Picture) | Still picture | Still picture | Still picture |
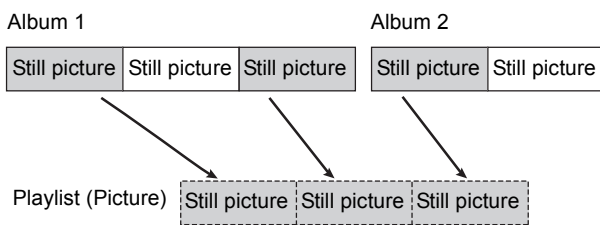
Copying (⇨ 58) a Playlist (Picture) will create an album. (Background Music cannot be copied.)
● Editing still pictures in a Playlist (Picture) doesn't modify source albums or source still pictures.
● Playlists (Picture) are not recorded separately so this doesn't use much capacity.

## Accessing the Playlist (Picture) View

**Preparation:**
● Press [DRIVE SELECT] to select the HDD drive.

With the unit stopped
**❶ Press [FUNCTION MENU].**
**❷ Press [▲, ▼] to select "Others", then press [OK].**
**❸ Press [▲, ▼] to select "Playlists", then press [OK].**
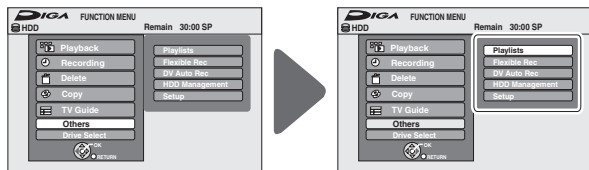
When "PICTURE" is not selected, press the "Green" button to select "PICTURE".

**❹ₐ To play**
Press [▲, ▼, ◄, ►] to select the Playlist (Picture) to play, then press [OK].

**❹ᵦ To create**
Press [▲, ▼, ◄, ►] to select "Create", then press [OK] (⇨ right, Creating Playlists (Picture)).

**❹c To edit a Playlist (Picture)**
Press [▲, ▼, ◄, ►] to select the Playlist (Picture), then press [OPTION].
– Multiple editing (⇨ 57, Tips in "Editing Playlists (Picture)")

| Start Slideshow | → (⇨ 57, Start Slideshow/Slideshow Settings) |
| Slideshow Settings | |
| Delete / Edit / Copy to DVD | Create / Copy / Enter Playlist Name → (⇨ 52, Edit) |
| Album View | → Album (still picture)/Picture Operations (⇨ 53) |
| VIDEO | |
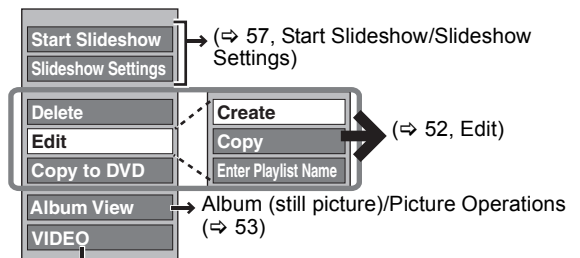
Creating, Editing and Playing Playlists (Video) (⇨ 51)

**❹d To edit a still picture**
① **Select the Playlist (Picture) which contains still pictures to edit, then press [OK].**
② **Select the still pictures to edit, then press [OPTION].**
– Multiple editing (⇨ 57, Tips in "Editing still pictures")

| Properties | → Editing still pictures (⇨ 57) |
| Add Pictures | |
| Move Pictures | |
| Delete Pictures | |
| Playlist View | → You can go back to Playlist View ( Picture ). |
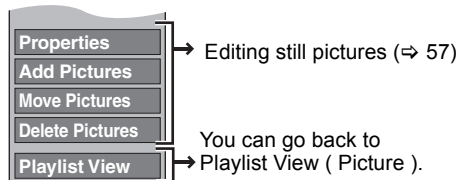
## Creating Playlists (Picture)

Perform steps ❶ – ❹ᵦ of "Accessing the Playlist (Picture) View". (⇨ left)

**❺ Press [◄, ►] to select an album (a folder) in "Source Albums", then press [▼].**
– Press [OK] to select all still pictures in the album, then skip to step ❽.
– Press [▲] to cancel.
**❻ Press [◄, ►] to select the still picture you want to add to a Playlist (Picture), then press [❙❙].**
– A check mark is displayed. Repeat this step until you select all necessary items.
– Press [❙❙] again to cancel.
**❼ Press [OK].**
**❽ Press [◄, ►] to select the position to insert the still picture, then press [OK].**
– Press [▲] to select other "Source Albums", then repeat steps ❺–❽ to add pictures in other albums.
**❾ Press [RETURN ⤺].**
**❿ Press [◄, ►] to select "Yes" if you want to name the Playlist (Picture).**
– Entering Text ⇨ 47
**⓫ Select the Background Music if you want to change Background Music.**
– If "No" is selected, Sample Music is set for Background Music.
① Press [◄, ►] to select "Yes", then press [OK].
② Press [▲, ▼] to select the storage location of Background Music, then press [OK].
● "Sample Music" is Background Music pre-installed on HDD.
③ Press [▲, ▼] to select an album for Background Music, then press [OK] when selecting other than "Sample Music".
● Background Music on Playlists (Picture) can be specified for each Playlist (Picture). (⇨ 57)

All the selected pictures become a Playlist (Picture).

## Tips
**To return to the previous screen**
Press [RETURN ⤺].

**To exit the screen**
Press [EXIT].

## Notes
● Playlists (Picture) cannot be created or edited while recording or copying.
● You are allowed a maximum of 99 Playlists (Picture), with approximately 3000 pictures per Playlist (Picture).

## Editing Playlists (Picture)

### Start Slideshow

Perform steps ❶ – ❹c of "Accessing the Playlist (Picture) View". (⇨ 56)

> ❺ **Press [▲, ▼] to select "Start Slideshow", then press [OK].**
> (⇨ 40, Start Slideshow, Steps ❶-❷)

#### Notes
- You cannot select multiple Playlists (Picture) or all Playlists (Picture).

### Slideshow Settings

Perform steps ❶ – ❹c of "Accessing the Playlist (Picture) View". (⇨ 56)

> ❺ **Press [▲, ▼] to select "Slideshow Settings", then press [OK].**
> (⇨ 41, Slideshow Settings)

#### Notes
- Slideshow Settings are retained only for the specified Playlist (Picture).
- Music CD (CD-DA) is used for Background Music when inserting Music CD.

### Delete

Use to delete unneeded Playlists (Picture).

**Important:** Once deleted, Playlist (Picture) contents cannot be recovered (still pictures are not affected).

Perform steps ❶ – ❹c of "Accessing the Playlist (Picture) View". (⇨ 56)

> ❺ **Press [▲, ▼] to select "Delete", then press [OK].**
> ❻ **Press [◄] to select "Delete", then press [OK] to confirm.**

#### Tips
**To delete during play**
1. Press [DELETE ✳]. A confirmation message displays.
2. Press [◄] to select "Delete", then press [OK] to confirm.

### Edit

You can create and copy Playlists (Picture).

Perform steps ❶ – ❹c of "Accessing the Playlist (Picture) View" (⇨ 56).

> ❺ **Press [▲, ▼] to select "Edit", then press [OK].**
> ❻ **Press [▲, ▼] to select desired operation from the menu displayed location, then press [OK] (⇨ below).**

| Create | ① Press [▲, ▼] to select "Create", then press [OK]. (⇨ 56, Creating Playlists (Picture)) |
|---|---|
| Copy | ① Press [▲, ▼] to select "Copy", then press [OK].<br>② Press [◄] to select "Copy", then press [OK]. |
| Enter Playlist Name | ① Press [▲, ▼] to select "Enter Playlist Name", then press [OK].<br>② Enter a name for the Playlist (Picture). (⇨ 47, Entering Text). |

---

### Copy to DVD

Perform steps ❶ – ❹c of "Accessing the Playlist (Picture) View" (⇨ 56).

> ❺ **Press [▲, ▼] to select "Copy to DVD", then press [OK].**
> ❻a **For copy to DVD-RAM**
> **Press [◄, ►] to select "Start", then press [OK].**
> ❻b **For copy to DVD-R**
> **Press [◄, ►] to select "Copy & Finalise" or "Copy Only", then press [OK].**

#### Notes
- When copying to DVD-R, use blank discs or unfinalised discs on which JPEG images are recorded with this unit.

#### Tips
**To exit the menu screens**
Press [EXIT].

**To view other pages**
Press [▲, ▼, ◄, ►] to select "Previous" or "Next", then press [OK].
– You can also press [|◄◄, ►►|] to view other pages.

**Multiple editing**
(Only Delete, Copy to DVD, Copy)
Select with [▲, ▼, ◄, ►], then press [❚❚]. (Repeat.)
– A check mark appears. Press [❚❚] again to cancel.
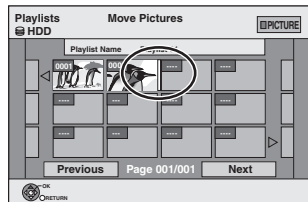
## Editing still pictures

You can add, move or delete still pictures in the Playlist (Picture).
Perform steps ❶ – ❹d of "Accessing the Playlist (Picture) View" (⇨ 56).

> ❺ **Press [▲, ▼] to select desired operation from the menu displayed location, then press [OK] (⇨ below).**

| Properties | ① Press [▲, ▼] to select "Properties", then press [OK]. (⇨ 53, Album (still picture)/Picture Operations) |
|---|---|
| Add Pictures | ① Press [▲, ▼] to select "Add Pictures", then press [OK]. (⇨ 56, Creating Playlists (Picture)) |
| Move Pictures | ① Press [▲, ▼] to select "Move Pictures", then press [OK].<br>② Press [▲, ▼, ◄, ►] to select the position to insert the still picture, then press [OK].<br> |
| Delete Pictures | ① Press [▲, ▼] to select "Delete Pictures", then press [OK].<br>② Press [◄] to select "Delete", then press [OK]. |

#### Tips
**To exit the menu screens**
Press [EXIT].

**To view other pages**
Press [▲, ▼, ◄, ►] to select "Previous" or "Next", then press [OK].
– You can also press [|◄◄, ►►|] to view other pages.

**Multiple editing**
(Only Delete Pictures)
Select with [▲, ▼, ◄, ►], then press [❚❚]. (Repeat.)
– A check mark appears. Press [❚❚] again to cancel.

# Copying titles or Playlists (Video)

With this unit, you can select a copy method from the two types listed below. (About copying still pictures ⇨ 65)

### Copy [Video (HDD to DVD)]

Easy copying from HDD to DVD with no difficult settings. (⇨ 60)

HDD ⟶ DVD
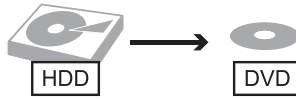
### Advanced Copy

Make a copy list and then copy. You can set the unit to copy titles or Playlists (Video) in the way you want. (⇨ 61)

HDD ⟷ DVD / SD
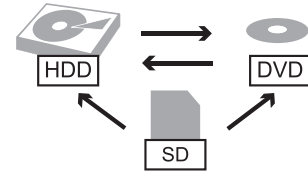
## Features

| | | Copy [Video (HDD to DVD)] | Advanced Copy |
|---|---|---|---|
| **Copy direction** | **HDD → DVD** | ◯ | ◯ |
| | **DVD → HDD** | – | ◯ <br> RAM -RW(VR) +RW <br> DVD-V (Only from a finalised disc) |
| **High speed mode copy**[1] <br> (⇨ below, Important) | | ◯ | ◯ <br> DVD-V You cannot perform high-speed copy with finalised discs. <br> +RW You cannot perform high-speed copy from +RW to HDD. |
| **Changing recording mode** | | – | ◯[2] |
| **Finalise**[3] | | -R -R DL -RW(V) +R +R DL <br> Automatically finalised | -R -R DL -RW(V) +R +R DL <br> Can be selected |

| | High speed mode | Normal speed mode | High speed mode | Normal speed mode |
|---|---|---|---|---|
| **Copying Video (MPEG2) from an SD Card (⇨ 63)** | – | – | ◯ <br> HDD RAM only | – |
| **Copying Playlists (Video)** [4] | – | – | ◯ | ◯ |
| **Are chapters maintained?** | ◯ | –[5] | ◯ | –[5] |
| **Are thumbnails maintained?** | ◯ | –[6] | ◯[7] | –[6] |
| **Recording or Playing while Copying** | – | – | ◯[8] | – |

◯: Can do, –: Cannot do

### Important

[1] To high speed copy titles (or Playlists (Video) created from those titles), set "Recording Format" to "Video format" before recording to the HDD (The default setting is "Video format". ⇨ 74).
However in the following cases, copying to DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL and +RW using the high speed mode does not work.
- Playlists (Video) created from titles using a variety of recording modes or multiple titles using FR recording mode.
- Playlists (Video) mixed with a variety of audio types (Dolby Digital and LPCM, etc.)
- Titles that contain many deleted segments
- Titles that have been copied to the HDD from an SD card or a Panasonic digital video camera with HDD (SD Video)
- When making a copy of multiple titles that were recorded with "Recording Format" set to "Video format" and "VR format"
- +R +R DL +RW Titles recorded in "EP" mode and "FR (recordings 5 hours or longer)" mode (Displayed ⏩! ⇨ 59)
- +R +R DL +RW Titles recorded in 16:9 aspect
- -R -R DL -RW(V) Titles recorded in 16:9 aspect using "EP" mode or "FR" (recordings 5 hours or longer) mode

[2] If you select a recording mode with better picture quality than the original, the picture quality does not improve. (However it does prevent against degradation of picture quality.)
+R DL You cannot copy in "EP" or "FR (recordings 5 hours or longer)" mode.

[3] You cannot select "Top Menu" or "Auto-Play Select".
If you want to set auto-play select or the background colour, select "Top Menu" or "Auto-Play Select" in "DVD Management" before copying (⇨ 70).

[4] You cannot copy Playlists (Video) with a play time more than 8 hours.
When you copy a Playlists (Video) it will become a title in the destination drive.

[5] RAM -R DL +R DL +RW: One title becomes one chapter.
-R -RW(V) +R: Chapters are created automatically (-R -RW(V) about 5-minute chapters +R about 8-minute chapters) when finalising after copying the disc.

[6] Thumbnails return to the default position.

[7] When copying Playlists (Video), the thumbnails may not reflect changes made to them.

[8] It is possible to record programmes to the HDD or playback the titles or Playlists(Video) on the HDD.
[However it is not possible when copying with automatic finalisation or when copying SD Video from an SD card.]
- You cannot perform chasing play or edit, etc. while copying.
- You cannot play a Playlists (Video) while copying titles with "One time only recording" restriction (⇨ 24).
- Still pictures or music cannot be played.

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■ **Approximate copying times** (Max. speed)
(excludes time required to write data management information)

| HDD | | 5X Speed DVD-RAM | | 12X Speed DVD-R[1] | | 4X Speed DVD-R DL[2] | | 4X Speed DVD-RW[3] | | 8X Speed +R[4] | | 4X Speed +R DL[2] | | 4X Speed +RW | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Recording Mode | Recorded | Required time | Speed | Required time | Speed | Required time | Speed | Required time | Speed | Required time | Speed | Required time | Speed | Required time | Speed |
| XP | 1 hour ▶ | 12 min. | 5x | 5 min. 46 s. | 10x | 15 min. | 4x | 15 min. | 4x | 8 min. 20 s. | 7x | 15 min. | 4x | 15 min. | 4x |
| SP | | 6 min. | 10x | 2 min. 30 s. | 24x | 7 min. 30 s. | 8x | 7 min. 30 s. | 8x | 3 min. 45 s. | 16x | 7 min. 30 s. | 8x | 7 min. 30 s. | 8x |
| LP | | 3 min. | 20x | 1 min. 21 s. | 44x | 3 min. 45 s. | 16x | 3 min. 45 s. | 16x | 1 min. 53 s. | 32x | 3 min. 45 s. | 16x | 3 min. 45 s. | 16x |
| EP (6 hours) | | 2 min. | 30x | 58 s. | 62x | 2 min. 30 s. | 24x | 2 min. 30 s. | 24x | | | | | | |
| EP (8 hours) | | 1 min. 30 s. | 40x | 48 s. | 75x | 1 min. 53 s. | 32x | 1 min. 57 s. | 31x | | | | | | |

● The above rated value indicates the fastest time and speed required for copying one-hour title from HDD to each disc in the above list supporting High-Speed copying. The amount of time and speed may vary depending on the conditions such as the area on where information is written or unique feature on the disc.

[1] In this unit, copying with a 16X Speed DVD-R disc will be performed at the same speed as with a 12X Speed DVD-R disc takes.

[2] In this unit, copying with 8X Speed discs, DVD-R DL and +R DL, will be performed at the same speed as with 4X Speed discs, DVD-R DL and +R DL take.

[3] In this unit, copying with a 6X Speed DVD-RW disc will be performed at the same speed as with a 4X Speed DVD-RW disc takes.

[4] In this unit, copying with a 16X Speed +R disc will be performed at the same speed as with a 8X Speed +R disc takes.

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Notes
● When recording or playing while copying, the unit may not use the maximum recording speed.
● Depending on the condition of the disc, the unit may not copy using the maximum speed.
● When copying titles in high speed mode to high speed recording compatible DVD-RAM 5X, DVD-R 8X, +R 8X or +RW 4X, the sound of the disc rotating becomes louder than normal. If you want copy to perform more quietly, select "Normal (Silent)" in "DVD Speed for High Speed Copy" in the Setup menu (⇨ 74).

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**Copy restrictions**

**Regarding copying to DVD-R DL (Dual Layer, single-sided) and +R DL (Double Layer, single-sided)**
When not copying in high speed mode, titles are temporarily copied at normal speed to the HDD and then copied at high speed to DVD-R DL and +R DL. The titles that were temporarily copied to the HDD are then deleted.
You cannot copy to DVD-R DL and +R DL in the following cases.
  – When there is not enough free space on the HDD. (When copying to a new blank disc, if you intend to fill a new disc when copying to it, the equivalent of up to 4 hours of free space in SP mode is needed on the HDD.)
  – When the number of titles recorded to the HDD and the number of titles to be copied to the DVD-R DL and +R DL is greater than 499 in total.
When playing a title recorded on both layers, video and audio may momentarily cut out when the unit is switching layers. (⇨ 15)

**Regarding copying of the broadcasts that allow "One time only recording"**
You can copy a recorded title to a CPRM (⇨ 96) compatible DVD-RAM, however, the title is deleted from the HDD.
● Titles or Playlists (Video) cannot be copied from DVD-RAM to the HDD.
● Titles will not be copied if they are protected (⇨ 49).
● You cannot copy Playlists (Video) created from "One time only recording" titles.
● Titles with recording limitations and Playlists (Video) cannot be registered on the same copying list.

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**COPY Navigator/Copying list icons and functions**

The following icons give more information about copy restrictions of the title.

▶▶◉ Titles and Playlists (Video) that can be copied in high speed mode to DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL, +RW

▶▶! Titles and Playlists (Video) that can be copied in high speed mode to DVD-R, DVD-R DL, DVD-RW (DVD-Video format) (However, titles and Playlists (Video) cannot be copied in high speed mode to +R or +RW)

+R DL ▶▶! is displayed, but copy cannot be performed, even in normal speed mode.

▦ Title with "One time only recording" restriction (⇨ 24, Copy-once recording)

↪ Titles deleted from the HDD by "One time only recording" restriction after copying. (⇨ 24, Copy-once recording)

(!) Title or Playlists (Video) contains still picture(s)
● Still picture(s) cannot be copied.

Ⓝ **(NTSC)**
Ⓟ **(PAL)**
Title or Playlists (Video) recorded using a different encoding system from that of the TV system currently selected on the unit.
● Titles and Playlists (Video) displaying these marks cannot be selected.

Advanced Editing

# Copying titles or Playlists (Video)

## Before copying

### Speed and recording mode when copying

`HDD` ↔ `RAM` : High speed
`HDD` → `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` : Refer to the following table.

| "Recording Format" setting (⇨ 74) | Copy speed |
|---|---|
| Only titles recorded with "Recording Format" set to "VR format."※ | High speed |
| Only titles recorded with "Recording Format" set to "Video format". | Normal speed |
| When making a copy of multiple titles that were recorded with "Recording Format" set to "Video format" and "VR format". | |

※ In the following cases, even if "Recording Format" is set to "Video format", copy will perform at normal speed.

- `+R` `+R DL` `+RW` When the copying source was recorded in "EP" or "FR (recordings 5 hours or longer)" mode.
- When the copy destination (disc) does not have enough space.
- When the title aspect for the copying source is 16:9:
  - `+R` `+R DL` `+RW`
  - `-R` `-R DL` `-RW(V)` copying source was recorded in "EP" or "FR (recordings 5 hours or longer)" mode.

**Preparation:**
- Insert a disc that you can use for copying (⇨ 15, 82).
- Confirm that there is enough remaining disc space.

- Titles and Playlists (Video) recorded using a different encoding system (PAL or NTSC) from the TV system currently selected on the unit cannot be copied.
- `-R` Video cannot be copied to a disc with still pictures (JPEG) already recorded on it.
- `-R` Still images cannot be copied to a DVD-R disc with video already recorded on it.

## Copy [Video (HDD to DVD)]

DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R and +R DL are automatically finalised (⇨ 96). After finalising, the discs become play-only and you can also play them on other DVD equipment. However, you can no longer record or edit.

`HDD` → `RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW`
(You cannot copy to finalised discs.)

❶ **Press [FUNCTION MENU].**
❷ **Press [▲, ▼] to select "Copy", then press [OK].**
❸ **Press [▲, ▼] to select "Video (HDD to DVD)", then press [OK].**

| COPY Navigator | All Titles | | | Disc Space: 4310MB |
|---|---|---|---|---|
| HDD | Total : 0 | | | Total Size: 0MB( 0%) |

| No. | Channel | Date | Day | Time | Title Name |
|---|---|---|---|---|---|
| 001 | BBC | 26/9 | FRI | 13:30 | |
| 002 | BBC1 | 27/9 | SAT | 12:15 | |
| 003 | AV2 | 3/10 | FRI | 20:00 | |
| 004 | BBC | 3/10 | FRI | 22:05 | |
| 005 | AV2 | 4/10 | SAT | 16:10 | |
| 006 | BBC2 | 10/10 | FRI | 9:25 | |
| 007 | BBC | 10/10 | FRI | 13:30 | |
| 008 | BBC | 11/10 | SAT | 21:00 | |
| --- | | | | | |

Rec time 0:52(SP)

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OK/RETURN   OPTION   ⏸ Select   ⓘ Info
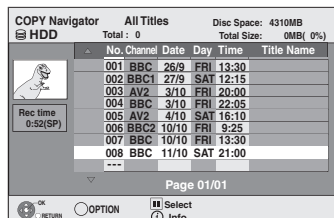
❹ **Press [▲, ▼] to select the title you want to copy, then press [❚❚].**
A check mark is displayed. Repeat this step until you select all necessary items.
- Press [❚❚] again to cancel.

❺ **Press [OK].**
❻ **Press [◄] to select "Start", then press [OK].**

---

### Notes
- When copying in normal speed, recording mode will be set to FR. (However, if there is still not enough space after setting to FR mode, copy will not be performed.)

### Check the properties of a title and sort COPY Navigator

Perform steps ❶–❸ of "Copy [Video (HDD to DVD)]".
❹ **Press [▲, ▼] to select the title, then press [OPTION].**

| COPY Navigator | All Titles | | | Disc Space: 4310MB |
|---|---|---|---|---|
| HDD | Total : 0 | | | Total Size: 0MB( 0%) |

| No. | Channel | Date | Day | Time | Title Name |
|---|---|---|---|---|---|
| 001 | BBC | 26/9 | FRI | 13:30 | |
| 002 | BBC1 | 27/9 | SAT | 12:15 | |
| 003 | AV2 | 3/10 | FRI | 20:00 | |
| 004 | BBC | 3/10 | FRI | 22:05 | |
| 005 | AV2 | 4/10 | SAT | 16:10 | |
| 006 | BBC2 | 10/10 | FRI | 9:25 | |
| 007 | BBC | 10/10 | FRI | 13:30 | |
| 008 | BBC | 11/10 | SAT | 21:00 | |
| --- | | | | | |

Rec time 0:52(SP)

Properties
Sort
Grouped Titles

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OK/RETURN
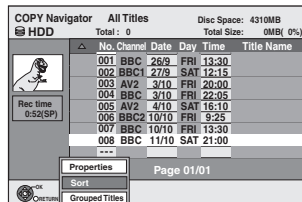
| Properties | Press [▲, ▼] to select "Properties", then press [OK]. The name, recording date, channel etc. of the selected title are shown. <br>• `HDD` You can also press [STATUS ⓘ] to display the "Properties" screen when a title with "ⓘ Info" on the bottom of the All Titles or Grouped Titles screen is selected. |
|---|---|
| Sort (All Titles screen only) | ① Press [▲, ▼] to select "Sort", then press [OK]. <br>② Press [▲, ▼] to select the item, then press [OK]. <br><br>This changes the way that titles are displayed. You can select to display titles by No., channel, recording date, day, recording start time and title name. (You cannot select this item if a title has a check mark.) If you close the COPY Navigator screen, the display order is cancelled. |

### Notes
- If you register multiple titles, they are copied in order from the title at the top of the screen and not in the order you registered them. To change the order that titles are copied, create a copying list and then copy the contents of the list (⇨ 61).

### Tips
**To return to the previous screen**
Press [RETURN ⏎].

**To stop copying (⇨ 62)**
**COPY Navigator/Copying list icons and functions (⇨ 59)**

## Copying using the copying list —Advanced Copy

HDD ↔ RAM +RW
-RW(VR) → HDD
HDD → -R -R DL -RW(V) +R +R DL
SD → HDD RAM

You can order titles and Playlists (Video) as desired for copy to disc.
**See also "Before copying" (⇨ 60).**

**1 Press [FUNCTION MENU].**

**2 Press [▲, ▼] to select "Copy", then press [OK].**

**3 Press [▲, ▼] to select "Advanced Copy", then press [OK].**

```
Copy
  Cancel All
1 Copy Direction          Source          HDD
  HDD → DVD
                          Destination     DVD
2 Copy Mode
  VIDEO   High Speed
3 Create List      0

  Start Copying           Select the copy direction.
OK  RETURN
```
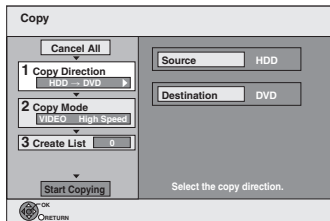
– If you are not going to change the registered list, press [▼] several times (⇨ step **7**).

**4 Set the copy direction.**
– If you are not going to change the copying direction, press [▼] (⇨ step **5**).

① Press [▲, ▼] to select "Copy Direction", then press [►].
② Press [▲, ▼] to select "Source", then press [OK].
③ Press [▲, ▼] to select the drive, then press [OK].
④ Press [▲, ▼] to select "Destination", then press [OK].
⑤ Press [▲, ▼] to select the drive, then press [OK].
⑥ Press [◄] to confirm.

**5 Set the recording mode.**
– If you are not going to change the recording mode, press [▼] (⇨ step **6**).

① Press [▲, ▼] to select "Copy Mode", then press [►].
② Press [▲, ▼] to select "Format", then press [OK].
③ Press [▲, ▼] to select "VIDEO", then press [OK].
④ Press [▲, ▼] to select "Recording Mode", then press [OK].
⑤ Press [▲, ▼] to select the mode, then press [OK].
⑥ Press [◄] to confirm.

**6 Register titles and Playlists (Video) for copy.**
– If you are going to copy a registered list without making any changes to it (⇨ step **7**).

① Press [▲, ▼] to select "Create List", then press [►].

```
Copy
  Cancel All               Destination Capacity: 4343MB
                                       Size:    0MB ( 0%)
1 Copy Direction          ▲  No.  Size   Name of item
  HDD → DVD                   New item (Total=0)
2 Copy Mode
  VIDEO   High Speed
3 Create List       ◄

  Start Copying        ▼   Page 01/01
OK  RETURN  OPTION          Create copy list.
```
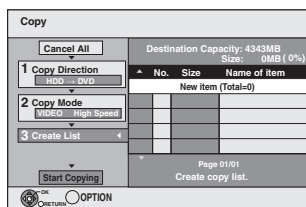
② Press [▲, ▼] to select "New item", then press [OK].
③ Press the "Red" button to select "VIDEO" or press the "Blue" button to select "Playlists".
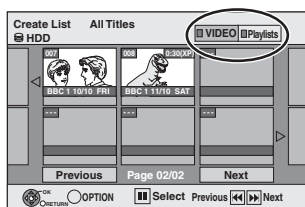
```
Create List    All Titles        VIDEO  Playlists
 HDD
   007                008  0:30XP
   BBC 1 10/10 FRI    BBC 1 11/10 SAT

   Previous    Page 02/02    Next
OK  RETURN  OPTION   Select  Previous ◄◄ ►► Next
```

④ Press [▲, ▼, ◄, ►] to select the title or Playlists (Video), then press [❚❚].
A check mark is displayed. Repeat this step until you select all necessary items.
– Press [❚❚] again to cancel.
– The items will be copied in the order of the copying list. If you want to specify the order, repeat selecting one item at a time.
– When you switch between the "VIDEO" and "Playlists" tab, the check mark is cancelled.
– When copying to a disc using high speed mode,

-R -R DL -RW(V): only items indicated with " ▶▶◎ " or " ▶▶! " can be registered.

+R +R DL +RW: only items indicated with " ▶▶◎ " can be registered.
– To view other pages (⇨ 58)

⑤ Press [OK] to confirm.
– To edit the copying list (⇨ below)
You cannot start copying when the value of the "Size" exceeds 100% ("Destination Capacity" is not sufficient) (⇨ 62, About the data size for copying).

⑥ Press [◄] to confirm.

**7 Press [▲, ▼] to select "Start Copying", then press [OK].**

**8 Press [◄] to select "Yes", then press [OK] to start copying.**

HDD → -R -R DL -RW(V) +R +R DL
**Press [◄, ►] to select "Copy & Finalise" or "Copy Only", then press [OK].**
**– If "Copy & Finalise" is selected**
After finalising, the discs become play-only and you can also play them on other DVD equipment. However, you can no longer record or edit.

### Notes
● It is not possible to copy to DVD-R that already contains JPEG files.

### Edit the copying list

Select the item in step **6**–⑤ (⇨ above)
**6**–⑥ Press [OPTION].

```
Delete All

Add
Delete
Move
```

| | |
|---|---|
| Delete All | Delete all items registered on the copying list. 1. Press [▲, ▼] to select "Delete All", then press [OK]. 2. Press [◄, ►] to select "Yes", then press [OK]. |
| Add | Add new items to the copying list. 1. Press [▲, ▼] to select "Add", then press [OK]. 2. Press [▲, ▼, ◄, ►] to select the title or Playlists (Video), then press [❚❚]. A check mark is displayed. Repeat this step until you select all necessary items. ●Press [❚❚] again to cancel. 3. Press [OK]. |
| Delete | Delete the selected items. 1. Press [▲, ▼] to select "Delete", then press [OK]. 2. Press [◄, ►] to select "Yes", then press [OK]. |
| Move | Move selected items or change the order of items on the copying list. 1. Press [▲, ▼] to select "Move", then press [OK]. 2. Press [▲, ▼] to select the destination, then press [OK]. |

Advanced Editing

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# Copying titles or Playlists (Video)

## Cancel all registered copying setting and lists

After performing steps ❶–❸ (⇨ 61)
   ❹ **Press [▲, ▼] to select "Cancel All", then press [OK].**
   ❺ **Press [◀, ▶] to select "Yes", then press [OK].**

- The settings and lists may be cancelled in the following situations.
  – When a title or playlist (Video), etc. has been recorded or deleted at the copy source
  – When steps have been taken, for instance, to turn off the unit, remove the card, open the tray, change the copy direction, etc.

## About the data size for copying

Data size of each registered item
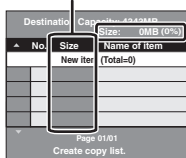


Data size recorded to the copy destination
- When copying at normal speed, the total data size will change according to the recording mode.
- The total data size shown may be larger than the sum of the data sizes for each registered item, because of data management information being written to the copy destination, etc.

## Tips

**To view other pages**
Press [▲, ▼, ◀, ▶] to select "Previous" or "Next", then press [OK].
– You can also press [|◀◀, ▶▶|] to show other pages.

**Multiple editing**
Select with [▲, ▼, ◀, ▶] and press [❙❙]. (Repeat.)
Press [OK] to register to the list.
– A check mark appears. Press [❙❙] again to cancel.

**To stop copying**
Press and hold [RETURN ⤺] for 3 seconds.
(You cannot stop while finalising)

**To return to the previous screen**
Press [RETURN ⤺].

**Recording and playing while copying**
You can record or play using the HDD while high speed copying. (Only when high speed copying without finalising)
– Still pictures and music recorded on the HDD cannot be played.
  Press [OK] to cancel the screen display.
– **To confirm the current progress**
  Press [STATUS ⓘ].

## Notes
**When you stop High-speed copying**
All titles that have completely copied at the point cancelled are copied.

**When you stop Normal Speed copying**
Copies until the point cancelled. However as for titles with "One time only recording" restriction, only titles that have completely copied at the point cancelled are copied to the disc. Titles that are cancelled before the copy is complete are not copied and remain on the HDD.
– **-R DL** **+R DL** If copy is cancelled during the step while temporarily copying to the HDD, then nothing will be copied. However, if copy is cancelled during the step while copying to disc from the HDD, then only titles completely copied at the point cancelled are copied.

Even if the title was not copied to the DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL or +RW, the amount of remaining writable disc space becomes less.

- Timer recordings executed while copying are recorded to the HDD regardless of the recording drive settings.
  (Only when high speed copying without finalising)
- To play DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R and +R DL on other players, it is necessary to finalise them after copy.

## Copying a finalised DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R and +R DL

**DVD-V** → **HDD**
You can copy the content of finalised DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, and +R DL to the HDD and re-edit.
While playing a disc, the content being played is copied to the HDD according to the set time
- **Operations and on-screen displays during copy are also recorded.**
- Almost all DVD-Video on sale have been treated to prevent illegal copying, and cannot be copied.

**Preparation:**
- Insert the finalised disc (⇨ 82).

After performing steps ❶–❺ ("Format" is automatically set to "DVD-Video") (⇨ 61, Copying using the copying list — Advanced Copy)

❻ **Set "Copy Time".**
   – If you are not going to change the setting (⇨ step ❼).
   ① Press [▲, ▼] to select "Copy Time", then press [▶].
   ② Press [▲, ▼] to select "Time Setting", then press [OK].
   – Setting the unit to copy all the content on the disc
     ③ Press [▲, ▼] to select "Off", then press [OK].
     ④ Press [◀] to confirm.
       Copy will continue until there is not enough available recording space on the HDD.

   – Setting the unit to copy according to the set time
     ③ Press [▲, ▼] to select "On", then press [OK].
     ④ Press [▲, ▼] to select "Copy Time", then press [OK].
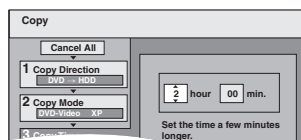


   ⑤ Press [◀, ▶] to select "hour" and "min.", then press [▲, ▼] to set the recording time.
   ⑥ Press [OK].

⑦ Press [◄] to confirm.
Copying to the HDD continues for the set time even after the content being played finishes.
– Set a few minutes longer than the source title, in order to include the operation time before play begins.
– You can also set the recording time with the numbered buttons.

⑦ **Press [▲, ▼] to select "Start Copying", then press [OK].**
Press [◄] to select "Yes", then press [OK] to start copying.
The disc top menu is displayed.
– Disc play automatically begins from title 1 when "Title 1" is selected from the "Auto-Play Select" menu when finalising the disc (⇨ 71).

⑧ **When the top menu is displayed
Press [▲, ▼, ◄, ►] to select the title you want to start copying, then press [OK].**

| My favourite | | 01/02 |
|---|---|---|
| 01 Chapter 1 | 02 Chapter 2 | |
| 03 Chapter 3 | 04 Chapter 4 | |
| | 06 | |
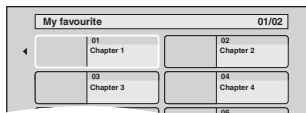
While playing in order, all the titles after the selected title are recorded until the set time. (After the last title on the disc has finished playing the top menu is recorded until the set time is reached.)

## Tips
**To return to the previous screen**
Press [RETURN ⍉].

**To stop copying**
Press [■].
You can also press and hold [RETURN ⍉] for 3 seconds to stop copying.
● If stopped partway, copying will be up to that point.

## Notes
● If you perform search, frame-by-frame or pause while copying, that portion of title is not recorded.
● The screen on the right is recorded at the beginning.
● The content is recorded as 1 title from the start of copy to the end.
● If play does not begin automatically or if the top menu does not display automatically, press [►] (PLAY) to start.
● Even if you copy a high quality video/audio DVD, the original picture and audio quality cannot be exactly replicated.
● If you want to copy a title from a finalised DVD-RW (DVD Video Recording format), create a copy list and then copy (⇨ 61, Copying using the copying list — Advanced Copy).

## Copying Video (MPEG2) from an SD Card

Motion pictures encoded in the MPEG2 format, which have been taken by a Panasonic SD Video Camera, digital video camera etc, can be stored on HDD or DVD-RAM.
(All the recordings on the same date become a title.)
● You cannot playback SD Video on an SD card with this unit. You must copy the files to the HDD or a DVD-RAM.
● You cannot playback or record while copying SD Video.
● This unit cannot copy MOTION JPEG format pictures or AVCHD format pictures from an SD card.

**Video (MPEG2)**    **VIDEO※**
HDD
DVD-RAM
※DVD Video Recording format
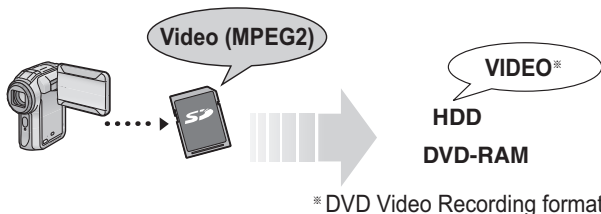
The display below automatically appears when you insert a card into the SD card slot while stopped.
**Press [▲, ▼] to select "Copy Video ( MPEG2 )", then press [OK].**
Then go to step ⑦ on page 61

| SD Card |
|---|
| Copy Video (MPEG2) |
| View Pictures (JPEG) |
| Start Slideshow |
| Copy New Pictures (JPEG) |
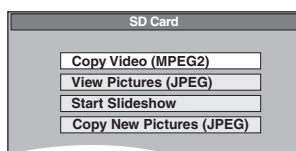
● SD Video on an SD card are automatically registered on the copying list.
● If there are no SD Video on an SD card, "Copy Video ( MPEG2 )" is not displayed.

## Copy Video ( MPEG2 ) from a video equipment

Motion pictures encoded in the MPEG2 format, which have been taken by a Panasonic digital video camera with HDD etc, can be copied from the camera's HDD to this unit's HDD or DVD-RAM.
(All the recordings on the same date become a title.)
● You cannot playback SD Video in the camera's HDD with this unit.
You must copy the files to the HDD or a DVD-RAM.
● You cannot playback or record while copying SD Video.

**Video (MPEG2)**    **VIDEO※**
HDD
DVD-RAM
USB cable
※DVD Video Recording format
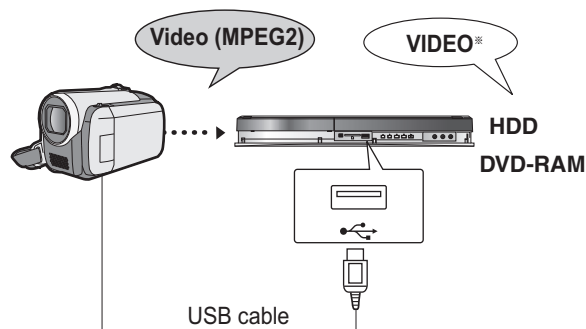
**Preparation:**
1. Turn on both this unit and the camera.
2. Connect the camera to this unit with USB cable.
3. Select the appropriate mode that makes the camera ready for data transfer (such as "PC CONNECT") on the camera.
● Refer to the camera's operating instructions for detail.

The display automatically appears when you connect the camera to this unit. (⇨ 38)
① **Press [▲, ▼] to select "Video (DivX & MPEG2)", then press [OK].**
② **Press [▲, ▼] to select "Copy Video ( MPEG2 )", then press [OK].**
Then go to step ⑦ on page 61.

| USB device |
|---|
| Play Video ( DivX ) |
| Copy Video ( MPEG2 ) |

● SD Video on the camera are automatically registered on the copy list.
● If there are no SD Video on the camera, "Copy Video ( MPEG2 )" is not displayed.

Advanced Editing

# Copying Still Pictures/Playlist (Picture)

- SDHC Memory Cards used for recording with this unit can only be used with other SDHC Memory Card-compatible equipment. SDHC Memory Cards cannot be used with equipment that is only compatible with SD Memory Cards.
- You cannot copy pictures recorded to DVD-R, DVD-R DL or CD-R/CD-RW.
- When you copy a Playlist (Picture), it will become an album in the destination drive.

## Copying using the copying list

[HDD] [RAM] [SD] ↔ [HDD] [RAM] [SD]
[HDD] [SD] → [-R] (JPEG)

❶ **While stopped**
   **Press [FUNCTION MENU].**
❷ **Press [▲, ▼] to select "Copy", then press [OK].**
❸ **Press [▲, ▼] to select "Advanced Copy", then press [OK].**

```
Copy
      Cancel All
                        Source        HDD
1 Copy Direction
   HDD → DVD
                        Destination   DVD
2 Copy Mode
   PICTURE  High Speed
3 Create List    0

      Start Copying        Select the copy direction.
  OK
  RETURN
```

  – If you are not going to change the registered list, press [▼] several times (⇨ step ❼).

❹ **Set the copy direction.**
   – If you are not going to change the copying direction, press [▼] (⇨ step ❺).
   ① Press [▲, ▼] to select "Copy Direction", then press [▶].
   ② Press [▲, ▼] to select "Source", then press [OK].
   ③ Press [▲, ▼] to select the drive, then press [OK].
   ④ Press [▲, ▼] to select "Destination", then press [OK].
   ⑤ Press [▲, ▼] to select the drive, then press [OK].
      The same drive as the copy source can be selected.
   ⑥ Press [◀] to confirm.
❺ **Set the copy mode.**
   – If you are not going to change the recording mode, press [▼] (⇨ step ❻).
   ① Press [▲, ▼] to select "Copy Mode", then press [▶].
   ② Press [▲, ▼] to select "Format", then press [OK].
   ③ Press [▲, ▼] to select "PICTURE", then press [OK].
      "Recording Mode" is automatically set to "High Speed".
   ④ Press [◀] to confirm.
❻ **Register still pictures and Playlists (Picture) for copy.**
   – If you are going to copy a registered list without making any changes to it (⇨ step ❼).
   You can register still pictures or still picture folders or Playlists (Picture).
   – Individual still pictures and folders/Playlists (Picture) cannot be registered on the same list.

```
Copy
      Cancel All        Destination Capacity: 4343MB
                        Picture/Folder    Picture
1 Copy Direction         No.  Size   Name of item
   HDD → DVD                   New item (Total=0)
2 Copy Mode
   PICTURE  High Speed
```
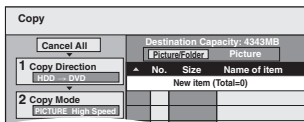
**To register individual still pictures**
① Press [▲, ▼] to select "Create List", then press [▶].
② Press [▲, ▼] to select "New item", then press [OK].
③ [HDD] → [HDD] [-R] (JPEG) [RAM] [SD]
   Press the "Green" button to select "PICTURE".
   Press the "Blue" button to select "Playlists".
④ Press [▲, ▼, ◀, ▶] to select the still picture, then press [❙❙].
   A check mark is displayed. Repeat this step until you select all necessary items.
   ●Press [❙❙] again to cancel.
   ●When you switch between the "PICTURE" and "Playlists" tab, the check mark is cancelled.
   ●The items will be copied in the order of the copying list. If you want to specify the order, repeat selecting one item at a time.
   – To view other pages (⇨ 65)
   – To select another folder or Playlists (Picture) (⇨ 65)
⑤ Press [OK] to confirm.
      – To edit the copying list (⇨ right)
   ⑥ Press [◀] to confirm.

**To register on a folder by folder basis (To register Playlists (Picture))**
① Press [▲, ▼] to select "Create List", then press [▶].
② Press [▲, ▼] to select "Picture/Folder", then press [OK].

```
Copy
      Cancel All        Destination Capacity: 4343MB
                        Picture/Folder    Picture
1 Copy Direction              Size   Name of item
   HDD → DVD                   New item (Total=0)
```
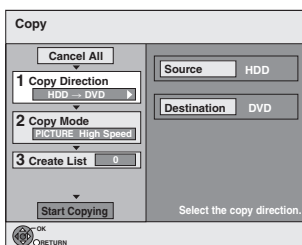
③ Press [▲, ▼] to select "Folder", then press [OK].
④ Press [▲, ▼] to select "New item", then press [OK].
⑤ [HDD] → [HDD] [-R] (JPEG) [RAM] [SD]
   Press the "Green" button to select "PICTURE"
   Press the "Blue" button to select "Playlists".
⑥ Press [▲, ▼] to select the folder or Playlists (Picture), then press [❙❙].
   A check mark is displayed. Repeat this step until you select all necessary items.
   ●Press [❙❙] again to cancel.
   ●The items will be copied in the order of the copying list. If you want to specify the order, repeat selecting one item at a time.
   – To view other pages (⇨ 65)
⑦ Press [OK] to confirm.
   – To edit the copying list (⇨ below)
⑧ Repeat steps ④–⑦ until you select all necessary folders (Playlists (Picture)).
⑨ Press [◀] to confirm.

❼ **Press [▲, ▼] to select "Start Copying", then press [OK].**
   ●Only when copying individual still pictures
   Except for [SD] → [HDD] [RAM]
   When specifying another folder as the copying destination, select "Folder".

```
   Folder   New folder              001  100  DVD
                                     002  101  DVD
                                     003  102  DVD
                                     ---  New folder
```

❽ **Press [◀] to select "Yes", then press [OK] to start copying.**
❾ For copy to DVD-R
   **Press [◀, ▶] to select "Copy & Finalise" or "Copy Only", then press [OK] to start copying.**

---

### Edit the copying list

Select the item in step ❻–⑤ (for a still picture) (⇨ left) or ❻–⑦ (for a folder or Playlist (Picture)) (⇨ above)

❻–⑥ Press [OPTION].
or
❻–⑧ Press [OPTION].

```
Delete All
Add
Delete
```

| | |
|---|---|
| Delete All | Delete all items registered on the copying list.<br>1. Press [▲, ▼] to select "Delete All", then press [OK].<br>2. Press [◀] to select "Yes", then press [OK]. |
| Add | Add new items to the copying list.<br>1. Press [▲, ▼] to select "Add", then press [OK].<br>2. Press [▲, ▼, ◀, ▶] to select the still picture or folder to be added, then press [❙❙].<br>A check mark is displayed. Repeat this step until you select all necessary items.<br>●Press [❙❙] again to cancel.<br>3. Press [OK]. |
| Delete | Delete the selected items.<br>1. Press [▲, ▼] to select "Delete", then press [OK].<br>2. Press [◀] to select "Yes", then press [OK]. |

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**Cancel all registered copying setting and lists**

After performing steps ❶–❸ (⇨ 64)
❹ **Press [▲, ▼] to select "Cancel All", then press [OK].**
❺ **Press [◀, ▶] to select "Yes", then press [OK].**
●The settings and lists may be cancelled in the following situations.
– When a title, Playlist (Picture), still picture, etc. has been recorded or deleted at the copy source
– When steps have been taken, for instance, to turn off the unit, remove the card, open the tray, change the copy direction, etc.

## Tips
**To stop copying**
Press and hold [RETURN ⮐] for 3 seconds.

**To return to the previous screen**
Press [RETURN ⮐].

**To view other pages or Playlist (Picture)**
Press [▲, ▼, ◀, ▶] to select "Previous" or "Next", then press [OK].
– You can also press [|◀◀, ▶▶|] to view other pages.

**To select another folder or Playlist (Picture)**
After performing step ❻–② (⇨ 64, To register individual still pictures)
① HDD →HDD -R (JPEG) RAM SD
Press the "Green" button to select "PICTURE".
Press the "Blue" button to select "Playlists".
② Press [▲, ▼, ◀, ▶] to select the "Folder", then press [OK].
③ Press [▲, ▼] to select the folder or Playlists (Picture), then press [OK].
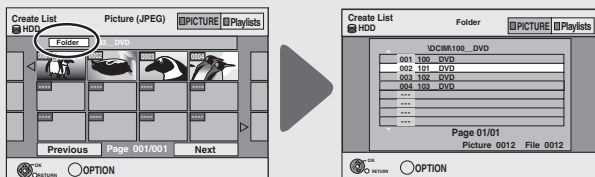


You can also select folders with the numbered buttons.

● Individual still pictures of different folders (Playlists (Picture)) cannot be registered on the same list.
● It is convenient to create a Playlist (Picture) (⇨ 56) if you want to register still pictures of different folders on HDD in the same list.

## Notes
● The sequence in which the still pictures are registered on the copy list may not be the same at the copy destination.
● Still pictures copied from SD cards are grouped by the shooting date in the HDD or DVD-RAM.
● If the space on the destination drive runs out or the number of files/folders to be copied exceeds the maximum (⇨ 18), copying will stop partway through.
● You cannot copy the information about the picture rotation.
● -R Video cannot be copied to a disc with still pictures (JPEG) already recorded on it.
● -R Still images cannot be copied to a DVD-R disc with video already recorded on it.

## Copying new still pictures on the SD card or USB memory—Copy New Pictures

USB SD → HDD
This unit saves information about imported still pictures. Therefore, if still pictures are imported from the same SD card, or USB memory then only new still pictures will be imported.
❶ **While stopped**
**Insert the USB memory/SD card. (⇨ 82).**
The menu is automatically displayed. (⇨ 38)
❷ USB
**Press [▲, ▼] to select "Picture ( JPEG )", then press [OK].**
❸ **Press [▲, ▼] to select "Copy New Pictures ( JPEG )", then press [OK].**
❹ **Press [◀, ▶] to select "Copy", then press [OK].**

## Tips
**To stop copying**
Press and hold [RETURN ⮐] for 3 seconds.
**To return to the previous screen**
Press [RETURN ⮐].

## Notes
● This unit saves the information on up to 12,000 still pictures and 30 SD cards for SD media and up to 12,000 still pictures and all USB memories for USB device. If additional still pictures are imported, then the older information will be deleted.
● If the space on the destination drive runs out or the number of files/folders to be copied exceeds the maximum (⇨ 18), copying will stop partway through.
● You cannot copy the information about the picture rotation.
● Only DCF-compliant USB media can be used for this function.
● Still pictures copied from USB memories or SD cards are grouped by the shooting date in the HDD .

## Copying still pictures on the USB memory

**Copying all the still pictures**

USB → HDD
❶ **While stopped**
**Insert the USB memory (⇨ 82).**
The menu is automatically displayed. (⇨ 38)
❷ **Press [▲, ▼] to select "Picture ( JPEG )", then press [OK].**
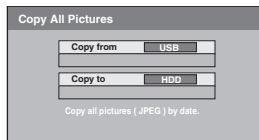


❸ **Press [▲, ▼] to select "Copy All Pictures ( JPEG )", then press [OK].**
❹ **Press [◀, ▶] to select "Copy", then press [OK].**

**Copying using the copying list**

USB → HDD RAM SD
❶ **While stopped**
**Insert the USB memory (⇨ 82).**
The menu is automatically displayed. (⇨ 38)
❷ **Press [▲, ▼] to select "Picture ( JPEG )", then press [OK].**
❸ **Press [▲, ▼] to select "Copy Selected Pictures ( JPEG )", then press [OK].**
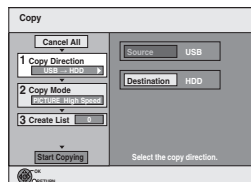


❹ **Perform steps ❹–❽ on "Copying using the copying list". (⇨ 64)**
● Another folder cannot be selected as the copying destination on step ❼.

## Tips
**To stop copying**
Press and hold [RETURN ⮐] for 3 seconds.

## Notes
● Copy Mode is fixed at "PICTURE High Speed".
● The structure of folders on the USB memory may not be the same at the copy destination.
● If the space on the destination drive runs out or the number of files/folders to be copied exceeds the maximum (⇨ 18), copying will stop partway through.
● You cannot copy the information about the picture rotation.
● Still pictures copied from USB memories are grouped by the shooting date in the HDD or DVD-RAM.

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# Copying music to HDD

You can store the following formats of music data in this unit's HDD.

**Music CD (CD-DA)**
When copying music CDs, this unit makes access to the internal Gracenote® Database to obtain title information.
The album name, track name and artist name are assigned automatically allowing you find the track easily when playing back.

**MP3/WMA**
You can copy MP3 or WMA files from the USB memory or CD-R/CD-RW/DVD-R/DVD-R DL.

## About the Gracenote® Database

The Gracenote® Database is a database used to search and retrieve CD title information.
When a CD is inserted or recording from a CD begins, the unit will automatically search for and obtain information about the inserted CD.
The Gracenote® Database comes pre-installed on this unit, so titles and artist information can be obtained. Please note however that the newest CD titles, etc. may not be registered yet to the internal database. This unit has an internal database containing information for approximately 350,000 album titles. You can update the internal database (⇨ 67).

If there are CDs with very similar title information, then the incorrect title information may be obtained. If no title suggestions are found, then track name, and artist name will be blank.
In these cases, enter the CD title information manually, after recording to the HDD has completed.

## Copying music from a CD

CD → HDD
All tracks on the music CD (CD-DA) are recorded on the HDD. (Cannot record track-by-track.)
- **One CD is recorded on the HDD as one album.**
- **Audio quality: LPCM**
- **The maximum number of albums on HDD: 300 (Depends on the remaining capacity.) If titles or pictures are recorded, then the number of albums that can be recorded will be reduced.**

**Preparation:**
Press [DRIVE SELECT] to select the DVD drive.

❶ **Insert a music CD.**
The menu is automatically displayed.
❷ **Press [▲, ▼] to select "Copy Music", then press [OK].**
The unit starts accessing the Gracenote® Database and searches for the title information.
– If search results indicate that multiple titles were found
Press [▲, ▼] to select the appropriate title, then press [OK].
❸ **Press [◄, ►] to select "Copy", then press [OK].**
Recording starts.

### Tips
**To stop recording**
Press and hold [RETURN ⍉] for 3 seconds.
- The recording is cancelled, then no tracks on the CD will be recorded.

**To return to the previous screen**
Press [RETURN ⍉].

### Notes
- While copying, no other operations can be performed. Timer recordings will not proceed.
- Tracks recorded on the HDD cannot be transferred to a disc, USB memory or SD card.
- CDs which have SCMS (Serial Copy Management System) restrictions cannot be recorded to the HDD.

## Copying music from a USB memory or CD-R/CD-RW/DVD-R/DVD-R DL

-R  -R DL  CD  USB  (MP3/WMA) → HDD
You can copy MP3 or WMA files recorded on USB memory or CD-R/CD-RW/DVD-R/DVD-R DL to the HDD by file or folder.
- One folder is recorded on the HDD as one group.
- The maximum number of albums※ on HDD: 300
The maximum number of tracks on HDD: 3000 (Depends on the remaining capacity.)
- If titles or pictures are recorded, then the number of albums※ that can be recorded will be reduced.
※ Folders with music files (groups) copied to the HDD will be treated as albums.

❶ **While stopped**
**Insert the USB memory or CD-R/CD-RW/DVD-R/DVD-R DL (⇨ 82).**
The menu is automatically displayed. (⇨ 38)
❷ **Press [▲, ▼] to select "Copy Music ( MP3&WMA )", then press [OK].**
"Copy Direction" and "Copy Mode" are automatically set to "USB→HDD", "DVD→HDD" or "CD→HDD" and "MUSIC High Speed", respectively.
❸ **Register MP3 or WMA files for copy.**
You can register MP3/WMA files or file folders.
– MP3/WMA files and folders cannot be registered on the same list.

**To register individual MP3/WMA files**
① Press [▲, ▼] to select "Create List", then press [►].
② Press [▲, ▼] to select "New item", then press [OK].
③ Press [▲, ▼] to select the folder, then press [OK].
④ Press [▲, ▼] to select the MP3/WMA file, then press [❚❚].
A check mark is displayed. Repeat this step until you select all necessary items.
- Press [❚❚] again to cancel.
- The items will be copied in the order of the copying list. If you want to specify the order, repeat selecting one item at a time.
⑤ Press [OK].
- To edit the copying list (⇨ 67)
⑥ Press [◄] to confirm.

**To register on a folder by folder basis**
① Press [▲, ▼] to select "Create List", then press [►].
② Press [▲, ▼] to select "Track / Folder", then press [OK].
③ Press [▲, ▼] to select "Folder", then press [OK].
④ Press [▲, ▼] to select "New item", then press [OK].
⑤ Press [▲, ▼] to select the folder, then press [❚❚].
A check mark is displayed. Repeat this step until you select all necessary items.
- Press [❚❚] again to cancel.
- The items will be copied in the order of the copying list. If you want to specify the order, repeat selecting one item at a time.
⑥ Press [OK].
- To edit the copying list (⇨ 67)
⑦ Press [◄] to confirm.

④ **Press [▲, ▼] to select "Start Copying", then press [OK].**

**For individual files only**
- ≥When specifying an existing folder as the copying destination
  ① Press [▲, ▼] to select "Folder", then press [OK].
  ② Press [▲, ▼] to select the folder, then press [OK].

- ≥When creating a new folder as the copying destination
  ① Press [◄, ►] to select "Yes", then press [OK].
  ② Enter the folder name (⇨ 47, Entering Text).

⑤ **Press [◄, ►] to select "Yes", then press [OK].**

---

## Tips
**To stop copying**
Press and hold [RETURN ⅁] for 3 seconds.
**To return to the previous screen**
Press [RETURN ⅁].

---

## Notes
- ● The sequence in which the MP3/WMA files are registered on the copy list may not be the same at the copy destination.
- ● If MP3/WMA files are already contained inside the copy destination folder, the new MP3/WMA files are recorded following the existing MP3/WMA files.
- ● If the space on the destination drive runs out or the number of files/folders to be copied exceeds the maximum (⇨ 18), copying will stop partway through.

---

### To edit the copying list

Select the item in step ❸ – ⑤ (for a MP3/WMA file) or ❸ – ⑥ (for a folder). (⇨ 66, Copying music from a USB memory or CD-R/CD-RW/DVD-R/DVD-R DL)
① Press [OPTION].
② Press [▲, ▼] to select the operation, then press [OK].

**Delete All:**
Delete all items registered on the copying list.
Press [◄, ►] to select "Yes", then press [OK].

**Add:**
Add new items to the copying list.
① Press [▲, ▼] to select the MP3/WMA file or folder, then press [❙❙].
  A check mark is displayed. Repeat this step until you select all necessary items.
  ●Press [❙❙] again to cancel selection.
② Press [OK].

**Delete:**
Delete the selected items.
Press [◄, ►] to select "Yes", then press [OK].

**To cancel all registered copying settings and lists**
After performing steps ❶ – ❷ (⇨ 66, Copying music from a USB memory or CD-R/CD-RW/DVD-R/DVD-R DL)
① Press [▲, ▼] to select "Cancel All", then press [OK].
② Press [◄, ►] to select "Yes", then press [OK].
  ●The settings and lists may be cancelled in the following situations.
  – When a file has been recorded or deleted at the copy source
  – When steps have been taken, for instance, to turn off the unit, remove the USB memory, open the tray, change the copy direction, etc.

---

## To update Gracenote® Database

To update the database with information on CDs that were recently released, follow the instructions below.

### Preparing the update data

❶ **Visit the following website.**
  **http://panasonic.net/avc/support/gn/**
❷ **Download the data to your USB memory.**
  ● USB memory 1 GB or larger is required.
  ● Refer to the instruction on the website for more information.

### Updating the database on this unit

❸ **Turn on this unit.**
❹ **Insert the USB memory (⇨ 82).**
  **The menu is automatically displayed.**
❺ **Press [▲, ▼] to select "Update CD database on HDD", then press [OK].**
❻ **Press [◄, ►] to select "Update", then press [OK].**
  ● Updating takes up to 20 minutes.
  ● Do not disconnect the USB memory and the AC mains lead while updating.
  ● Once started, you cannot cancel updating. A message appears when updating is finished.
❼ **Press [OK].**

---

## Notes
- ● Timer recordings do not start while updating.
- ● Updating overwrites the internal database forcibly regardless of whether the data in the USB memory is the latest or not. Make sure you download the latest version from the website.
- ● Some of the CD title information in the database may be deleted after updating the database.
- ● No name will be assigned after copying a CD to HDD if the CD title information of the CD is not registered in the database. Even if the CD title information of that CD is added to the database by updating later, the information will not be assigned to the track/album already copied on the HDD. (The names will be still blank.)
- ● Depending on the situation of Panasonic or Gracenote, upgrading the Gracenote® Database and providing it through the Web may be discontinued without notice.

# Setting On-Screen Display

## Accessing the On-Screen Display

When playing discs (except for JPEG discs), you can display and set the options including disc audio, subtitle, image quality, sound effect, Repeat Play, etc. In addition, when receiving the multi-audio broadcast, you can change the audio settings. Menu options will differ based on disc type and contents.

**❶ Press [DISPLAY].**

| Disc | | |
|---|---|---|
| **Play** | Soundtrack | 1 | ◻️ Digital 2/0ch |
| **Picture** | Subtitles | | Off |
| **Sound** | Audio channel | | L R |
| **Other** | | | |

Menu　　　　Item　　　　Setting
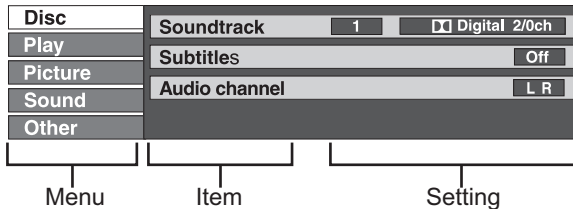
**❷ Press [▲, ▼] to select a menu, then press [▶].**
**❸ Press [▲, ▼] to select an item, then press [▶].**
**❹ Press [▲, ▼] to select a setting.**
Follow the on-screen prompts to change individual settings.

### Notes
● Some settings may not be changeable, based on the unit's current activity (playing, stopped, etc.) and disc contents.

### Tips
**To exit the on-screen display**
Press [DISPLAY].

---

### Disc Menu

`HDD` `RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `DVD-V` `-RW(VR)` `VCD` and **DivX**
You can change the settings of disc audio, subtitle, etc.

**Soundtrack**
`HDD` `RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `-RW(VR)`
The disc's audio attributes appear (⇨ below, Audio attributes).
`DVD-V`
Select the audio and language (⇨ below, Audio attributes, Soundtrack/Subtitle language).
`VCD` (SVCD) and **DivX**
Select the soundtrack number.
● Soundtrack numbers are displayed even when there is only one audio type.

**Subtitles**
`HDD` `RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `-RW(VR)`
(Only discs that contain subtitle on/off information)
Turn the subtitle on/off.
● Subtitle on/off information cannot be recorded using this unit.
`DVD-V`
Turn the subtitle on/off and select the language (⇨ below, Soundtrack/Subtitle language).
`VCD` (SVCD) and **DivX**
Turn the subtitle on/off and select "Text" or the subtitle number.
● "Text" or subtitle numbers are displayed even if there are not multiple subtitles.

**Audio channel**
`HDD` `RAM` `-RW(VR)` `VCD` and **DivX**
Change audio during playback.
LR / L / R

**Source Select (DivX)**
● **Automatic:** The constructing method of the DivX contents is automatically distinguished and output.
● **Interlace:** Select when the disc contents were recorded using interlace.
● **Progressive:** Select when the disc contents were recorded using progressive.

**Angle**
`DVD-V`
Change the number to select an angle.

**PBC (Playback control ⇨ 96)** `VCD`
Indicates whether menu play (playback control) is on or off.

---

#### Soundtrack/Subtitle language

| | | | | | |
|---|---|---|---|---|---|
| ENG: | English | DAN: | Danish | THA: | Thai |
| FRA: | French | POR: | Portuguese | POL: | Polish |
| DEU: | German | RUS: | Russian | CES: | Czech |
| ITA: | Italian | JPN: | Japanese | SLK: | Slovak |
| ESP: | Spanish | CHI: | Chinese | HUN: | Hungarian |
| NLD: | Dutch | KOR: | Korean | FIN: | Finnish |
| SVE: | Swedish | MAL: | Malay | ✳: | Others |
| NOR: | Norwegian | VIE: | Vietnamese | | |

---

#### Audio attributes

| | |
|---|---|
| LPCM/◻️Digital/DTS/MPEG: | Signal type |
| k (kHz): | Sampling frequency |
| b (bit): | Number of bits |
| ch (channel): | Number of channels |

---

### Notes
● You cannot make a change when there is no recording.
● Some discs allow changes to soundtracks, subtitles, and angles only by using the disc's menus (⇨ 20).

### Play Menu

`HDD` `RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `DVD-V` `-RW(VR)` `CD` `VCD`

**Repeat Play**
This function works only when the elapsed play time is displayed.
Select the item for repeat play. Depending on the disc, the items that can be selected will differ.
Select "Off" to cancel.

### Picture Menu

`HDD` `RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `DVD-V` `-RW(VR)`

You can change the noise reduction setting when playing discs or of images from the connected device.

**Playback NR**
Reduces noise and picture degradation while playing.

- On:          Reduces noise and picture degradation.
- Off:         Video is played back as it is.

**Input NR**
Reduces the noise while recording.
- Automatic:   Noise reduction only works on picture input from a video tape.
- On:          Noise reduction works for any video input.
- Off:         Noise reduction is off. Select when you want to record input as is.

### Sound Menu

You can change the settings of audio when receiving the multi-audio broadcast, and also change the settings of sound effect when playing discs.

**DVB Multi Audio**
[MPEG Audio only]
If more than one audio channel is output, you can set the desired channel before recording.
- DVB Multi Audio cannot be selected during playback or recording.
- Depending on the broadcast, the items that can be selected will differ.

English 1/ English 2

**Dialogue Enhancer**
`HDD` `RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `DVD-V` `-RW(VR)`
and **DivX**
(Dolby Digital, 3-channel or over only, including a centre channel)
When "On", the volume of the centre channel is raised to make dialogue easier to hear.

### Other Menu

**Position**
Change where this menu screen appears on your TV.

# HDD, DVD and Card Management

You can manage discs or cards through formatting, finalising and other operations.
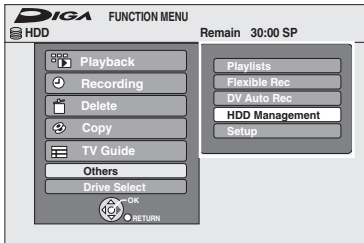
## Accessing the Management Menus

**Preparation:**
- **RAM SD** Release protection ( ⇨ below, "Setting Protection").
- Insert a disc or card.

With the unit stopped

1 **Press [DRIVE SELECT] to select the HDD, DVD or SD drive.**
2 **Press [FUNCTION MENU].**
3 **Press [▲, ▼] to select "Others", then press [OK].**

```
DIGA          FUNCTION MENU
HDD                          Remain  30:00 SP

    Playback            Playlists
    Recording           Flexible Rec
    Delete              DV Auto Rec
    Copy                HDD Management
    TV Guide            Setup
    Others
    Drive Select
              OK
              RETURN
```

4 **Press [▲, ▼] to select "HDD Management", "DVD Management" or "Card Management", then press [OK].**

### Tips
**To return to the previous screen**
Press [RETURN ⤺].

**To exit the screen**
Press [EXIT].

### Naming Discs

**RAM -R -R DL -RW(V) +R +R DL +RW**
You can give a name for the disc.
- **-R** Once a name is provided to a disc, it is not possible to record still images to that disc.

Perform preparation steps 1–4 of "Accessing the Management Menus" (⇨ above).

5 **Press [▲, ▼] to select "Disc Name", then press [OK].**
Entering Text (⇨ 47).

### Tips
- **-R -R DL -RW(V) +R +R DL** With a finalised disc, the name is displayed on the Top Menu.
- **+RW** The disc name is displayed only if you play the disc on other equipment after creating top menu.

### Setting Protection

**RAM**
Use to prevent accidental erasure of disc.
Perform preparation steps 1–4 of "Accessing the Management Menus" (⇨ above).

5 **Press [▲, ▼] to select "Disc Protection", then press [OK].**
6 **Press [◄] to select "Yes", then press [OK].**

**SD**
Switch the write-protect switch to the "LOCK" position.

### Deleting All Titles

You can delete all titles on HDD or the single-sided DVD-RAM at once.

**Important:** Once deleted, contents cannot be recovered.

**HDD RAM**
Perform preparation steps 1–4 of "Accessing the Management Menus" (⇨ left).

5 **Press [▲, ▼] to select "Delete all titles", then press [OK].**
6 **Press [◄] to select "Yes", then press [OK].**
7 **Press [◄] to select "Start", then press [OK].**
   – A message appears when deleting is finished.
8 **Press [OK] to complete.**

### Notes
- Deleting does not work if one or more titles are protected.
- Still picture data (JPEG), Playlists (Picture), music data or computer data cannot be deleted.

### Formatting Discs or Cards

**HDD RAM -RW(V) +RW -RW(VR) +R +R DL** (New disc only) **SD**
Formatting is the process of making media such as DVD-RAM recordable on recording equipment.

You can record or edit after formatting the finalised DVD-RW.
**Important:** Once formatted, contents cannot be recovered.
Perform preparation steps 1–4 of "Accessing the Management Menus" (⇨ left).

5 **Press [▲, ▼] to select "Format HDD", "Format Disc" or "Format Card", then press [OK].**
6 **Press [◄] to select "Yes", then press [OK].**
7 **Press [◄] to select "Start", then press [OK].**
   – Formatting starts (**RAM** may take up to a maximum of 70 minutes).
   – A message appears when formatting is finished.
8 **Press [OK] to complete.**

### Notes
- Do not disconnect the AC mains lead while formatting. This can render the disc or the card unusable.
- When a disc or card has been formatted using this unit, it may not be possible to use it on any other equipment.
- **-R -R DL CD** Formatting cannot be performed.
- **-RW(V) -RW(VR)** You can format only as DVD-Video format on this unit.
- **SD** The card cannot be formatted if the write protect switch (⇨ left) is switched to "LOCK". Release the protection to continue.
- The message "Unable to format" appears when trying to format discs the unit cannot use.
- Sample pictures are restored when formatting HDD even if they have been deleted.

## Selecting the background style—Top Menu

`-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW`

You can select the background that will be displayed as the DVD-Video top menu after finalising or creating Top Menu (`+RW`).

Perform preparation steps ❶–❹ of "Accessing the Management Menus" (⇨ 70).

⑤ **Press [▲, ▼] to select "Top Menu", then press [OK].**
⑥ **Press [▲, ▼, ◄, ►] to select the background, then press [OK].**

**Top Menu List**

**Display after finalising**
Thumbnail (Still picture)
Title Name
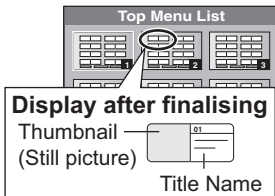
● You can change thumbnails displayed in the top menu. (⇨ 49, Change Thumbnail)
● `-R` This function cannot be used for discs with still images recorded on them.

---

## Selecting Whether to Show the Top Menu First —Auto-Play Select

`-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW`

Before finalising a disc, select whether the top menu shows after finalising.

Perform preparation steps ❶–❹ of "Accessing the Management Menus" (⇨ 70).

⑤ **Press [▲, ▼] to select "Auto-Play Select", then press [OK].**
⑥ **Press [▲, ▼] to select "Top Menu" or "Title 1", then press [OK].**
  ● Top Menu:
   The Top Menu appears first.
  ● Title 1:
   The disc content is played without displaying the Top Menu.
● `-R` This function cannot be used for discs with still images recorded on them.

---

## Finalising

`-R` `-R DL` `-RW(V)` `+R` `+R DL`

You can play these discs on compatible DVD players by finalising it on the unit, effectively making it into DVD-Video that complies with DVD-Video standards. The menu you create with the unit can also be used on most DVD players.

Perform preparation steps ❶–❹ of "Accessing the Management Menus" (⇨ 70).

⑤ **Press [▲, ▼] to select "Finalise", then press [OK].**
⑥ **Press [◄] to select "Yes", then press [OK].**
⑦ **Press [◄] to select "Start", then press [OK].**
  – Finalising starts and cannot be cancelled (may take up to 15 minutes) (`-R DL` `+R DL` up to 60 minutes)
  – A message appears when finalising is finished.
⑧ **Press [OK] to complete.**

---

### Notes
● Do not disconnect the AC mains lead while finalising. This can render the disc unusable.
● When finalising a high-speed recording compatible disc, it may take longer than displayed on the confirmation screen (approximately 4 times longer).
● After finalising
  – `-R` `-R DL` `+R` `+R DL` The disc becomes play-only and you can no longer record or edit it.
  – `-RW(V)` You can record and edit the disc after formatting although it becomes play-only after finalising.
  – When copying in high speed, chapters will be replicated.
  – The disc finalised on the unit may not be playable on other players depending on the condition of the recording.
  – There is a pause of several seconds between titles and chapters during playback.
  – Chapters are created automatically (`-R` `-RW(V)` about 5-minute chapters※ `+R` about 8-minute chapters※), if
    – the titles were directly recorded to the disc.
    – the titles were copied using any mode other than the high speed mode.
  ※ This time varies greatly depending on the condition and mode of recording.

---

### Tips
● After you have finished recording or copying and try to eject the disc, a screen asking if you want to finalise the disc appears (⇨ 26).

---

## Create Top Menu

`+RW`

+RW discs contain no Top Menu data. Top Menu is a convenient function. We recommend you create the menu before playing a +RW disc on other equipment.

Perform preparation steps ❶–❹ of "Accessing the Management Menus" (⇨ 70).

⑤ **Press [▲, ▼] to select "Create Top Menu", then press [OK].**
⑥ **Press [◄] to select "Yes", then press [OK].**
⑦ **Press [◄] to select "Start", then press [OK].**
  – "Create Top Menu" cannot be cancelled once started.
  – "Create Top Menu" takes a few minutes.
⑧ **Press [OK] to complete.**

---

### Notes
● Recording or editing on the disc may delete the Top Menu. In that case, create the Top Menu again.
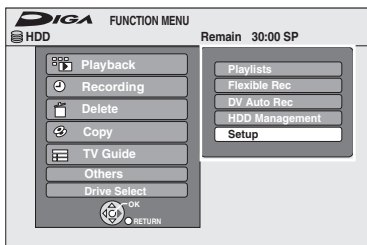● You cannot use the Top Menu for playing on this unit.

# Setup Menu

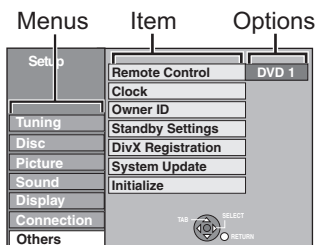You can change the unit's settings using Setup menu.

## Accessing the Setup Menu

With the unit stopped

1. **Press [FUNCTION MENU].**
2. **Press [▲, ▼] to select "Others" and press [OK].**

```
DIGA  FUNCTION MENU
HDD                    Remain  30:00 SP

    Playback              Playlists
    Recording             Flexible Rec
    Delete                DV Auto Rec
    Copy                  HDD Management
    TV Guide              Setup
    Others
    Drive Select
              OK
           RETURN
```

3. **Press [▲, ▼] to select "Setup", then press [OK].**
4. **Press [▲, ▼] to select a menu, then press [►] to go to the item list.**

Menus    Item    Options

```
Setup
              Remote Control    DVD 1
              Clock
Tuning        Owner ID
Disc          Standby Settings
Picture       DivX Registration
Sound         System Update
Display       Initialize
Connection
Others
              TAB        SELECT
                   RETURN
```

5. **Press [▲, ▼] to select an item to change, then press [OK].**
6. **Press [▲, ▼] to select the option, then press [OK].**

### Notes
● Changed settings remain intact even when switching the unit to standby mode.
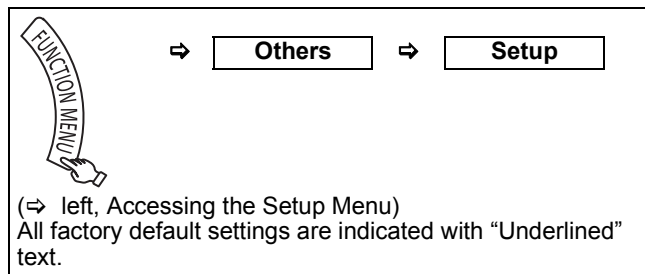
### Tips
**To return to the previous screen**

Press [RETURN ⊃]. Even if you have changed an option, the change is not activated until you press [OK].
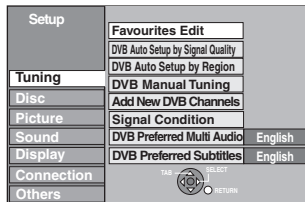
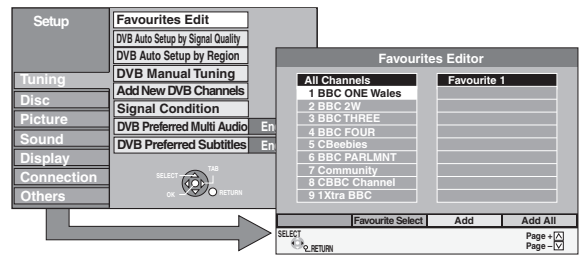**To exit the screen**
Press [EXIT].

---

# Channel Settings

```
FUNCTION MENU  ⇨  [ Others ]  ⇨  [ Setup ]
```

(⇨ left, Accessing the Setup Menu)
All factory default settings are indicated with "Underlined" text.

## Tuning

▲, ▼ select "Tuning" ⇨ ► ⇨ ▲, ▼ select item ⇨ (OK)

```
Setup         Favourites Edit
              DVB Auto Setup by Signal Quality
Tuning        DVB Auto Setup by Region
Disc          DVB Manual Tuning
Picture       Add New DVB Channels
Sound         Signal Condition
Display       DVB Preferred Multi Audio    English
Connection    DVB Preferred Subtitles      English
Others
                   RETURN
```

### Favourites Edit
You can create four Favourites of channels for making viewing and recording easier. Editing these Favourites does not affect the channel setting itself.
● Timer recording may not work correctly if you edit the Favourites during timer recording standby.
● Channel numbers cannot be changed, due to broadcast restrictions.

```
Setup         Favourites Edit
              DVB Auto Setup by Signal Quality
              DVB Auto Setup by Region
Tuning        DVB Manual Tuning            Favourites Editor
Disc          Add New DVB Channels
Picture       Signal Condition      All Channels      Favourite 1
Sound         DVB Preferred Multi Audio  En  1 BBC ONE Wales
Display       DVB Preferred Subtitles    En  2 BBC 2W
Connection                                   3 BBC THREE
Others                                       4 BBC FOUR
              SELECT    TAB                   5 CBeebies
              OK    RETURN                    6 BBC PARLMNT
                                             7 Community
                                             8 CBBC Channel
                                             9 1Xtra BBC

                               Favourite Select   Add      Add All
              SELECT                                       Page + △
                 RETURN                                    Page – ▽
```

**To select the Favourite**
Press the "Green" button.

**To add channels to a Favourite**
1. Press [▲, ▼] to select the channel in the "All Channels" column to add, then press the "Yellow" button.
   ● Repeat this step to add other channels.
   ● Press the "Blue" button to add all the available channels to the Favourite. (Only when no channels have been added to the Favourite.)
2. Press [OK] to save the Favourite.

**To change the order of channels of a Favourite**
1. Press [►]※.
2. Press [▲, ▼] to select the channel in the "Favourite" column to move, then press the "Green" button.
3. Press [▲, ▼] to select the new position of the channel, then press the "Green" button.
   ● Repeat the steps 2–3 to move other channels.
4. Press [OK] to save the Favourite.

**To delete channels on a Favourite**
1. Press [►]※.
2. Press [▲, ▼] to select the channel in the "Favourite" column, then press the "Yellow" button.
   ● Repeat this step to delete other channels.
   ● Press the "Blue" button to delete all the channels from the Favourite.
3. Press [OK] to save the Favourite.
   Deleting a channel from a Favourite does not affect the channel itself.
   You can still select the channel from the "All Channels" column.

**To change the name of a Favourite in the "Favourite" column**
1. Press [►]※.
2. Press the "Red" button. (⇨ 47, Entering Text)
※ When the station name of the "All Channels" column is highlighted

## DVB Auto Setup by Signal Quality
## DVB Auto Setup by Region

You can restart auto channel setting for digital terrestrial channels if the setup (⇨ 13) fails for some reason.

If you want to set the channel list best suited to your region, select "DVB Auto Setup by Region". Follow the on-screen instructions to select the region you live in.

However, if you perform "DVB Auto Setup by Signal Quality" or "DVB Auto Setup by Region", all channel settings, Favourites and all the timer recording programmes are deleted. (All the settings except for the ratings level, ratings PIN, Owner ID, Clock and remote control code, etc. return to the factory preset.) Recordings on the HDD will not be deleted.

When the confirmation screen appears
**Press [◄] to select "Yes", then press [OK].**

### Tips
● You can also use the following method to restart DVB Auto Setup by Signal Quality.

When the unit is turned on and stopped, press and hold [CH ∧] and [∨ CH] on the main unit simultaneously for about 5 seconds.
– Auto-Setup screen appears.

## DVB Manual Tuning

You can set channels manually if the "DVB Auto Setup by Signal Quality" or "DVB Auto Setup by Region" could not be completed successfully.
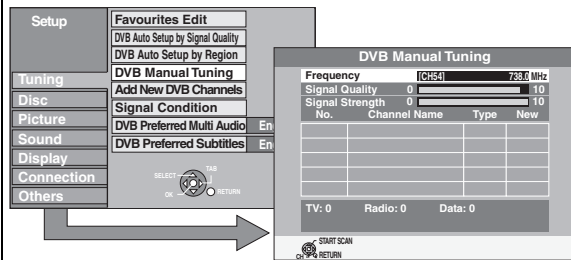


**1  Press [▲, ▼] to select the channel you want to set.**
– Select the channel by checking the signal strength and signal quality displays. [Refer to "Signal Condition" (⇨ right) for signal strength and signal quality.]
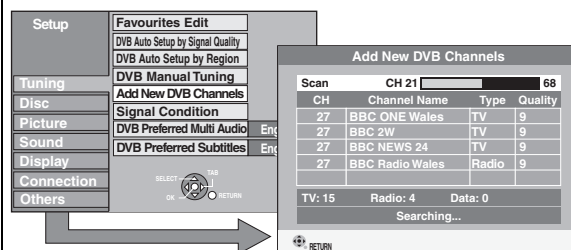
**2  Press [OK] to start scan.**
The set channel is displayed in the table.
● Repeat steps 1–2 to tune other channels.



**3  Press [EXIT], then press [∧ ∨ CH] to check that applicable channels have been selected.**

## Add New DVB Channels

You can search for newly added digital terrestrial channels to receive.



– The unit starts searching for newly available digital terrestrial channels. This takes about 5 minutes.
– The bar over the table shows you the search progress. At the end of the search, the number of found new digital stations appears.
– "No new DVB channels found.", is displayed when no new channels can be found.

**Press [OK] to save the newly found channels.**

### Tips
**To cancel in middle**
Press [RETURN ⏎].
The channels found before stopping are not saved.

## Signal Condition

You can check the quality and strength of digital broadcast signals.

**When "Signal Condition" is displayed in grey and cannot be selected:**
1  Press [EXIT] to exit the screen.
2  Press [∧ ∨ CH] to select a digital channel. "D" appears on the unit's display.
3  Display the Setup menu again.
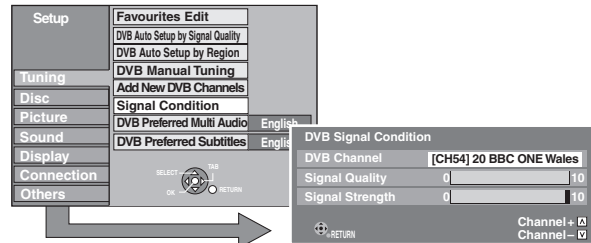


The quality and strength of the signal are shown.
Press [∧ ∨ CH] to select the channel.

### Signal Quality

| Below 2 (display red) | The signal quality is so poor that there may be interference in the pictures and sound. |
|---|---|
| 2–5 (display orange) | The signal quality is basically adequate, but brief interference in the pictures and sound is possible in isolated case. |
| Over 5 (display green) | Optimum picture and sound quality. |

### Signal Strength

The display for signal strength is grey. "0" means signal strength 0%, "10" means signal strength 100%.
● If the signal is too strong, the display will change from grey to red. Reduce the signal amplification at your aerial.
● **When the signal is weak:**
– check that the aerial is correctly positioned.
– adjust the aerial reception with "DVB Manual Tuning" in the Setup menu (⇨ left).
– check that the current digital broadcast channel is correctly broadcasting.
– check that your aerial is capable of receiving DVB broadcasts.

## DVB Preferred Multi Audio

Choose the audio language for digital broadcast.
If the selected language is not available, then the original language will be selected.

[English]    [Welsh]    [Gaelic]

## DVB Preferred Subtitles

Choose the subtitle language for digital broadcast.
If the selected language is not available, then the original language will be selected.

[English]    [Welsh]    [Gaelic]

[English for hearing impaired]
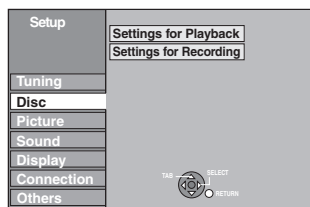
[Welsh for hearing impaired]

[Gaelic for hearing impaired]

# Playback/Recording Settings

FUNCTION MENU ⇨ | Others | ⇨ | Setup |

(⇨ 72, Accessing the Setup Menu)
All factory default settings are indicated with "Underlined" text.

## Disc

▲, ▼ select "Disc" ⇨ ▶ ⇨ ▲, ▼ select item

⇨ OK

```
Setup            Settings for Playback
                 Settings for Recording
Tuning
Disc
Picture
Sound
Display
Connection
Others
```

### Settings for Playback
Press [OK] to show the following settings.

#### Ratings
Set a ratings level to limit DVD-Video play.
Follow the on-screen instructions. Enter a 4-digit PIN with the numbered buttons when the PIN screen is shown.
Do not forget your PIN.
● Setting ratings (When level 8 is selected)

| | |
|---|---|
| [8 No Limit] | All DVD-Video can be played. |
| [1] to [7] | Prohibits play of DVD-Video with corresponding ratings recorded on them. |
| [0 Lock All] | Prohibits play of all DVD-Video. |

● Changing settings (When level 0 to 7 is selected)

| | |
|---|---|
| [Unlock Recorder] | [Change PIN] |
| [Change Level] | [Temporary Unlock] |

#### Soundtrack

| | | | |
|---|---|---|---|
| [English] | [German] | [French] | [Italian] |
| [Spanish] | [Original] | [Other✳✳✳✳] | |

#### Subtitles

| | | | |
|---|---|---|---|
| [Automatic] | [English] | [German] | [French] |
| [Italian] | [Spanish] | [Other✳✳✳✳] | |

#### Menus

| | | | |
|---|---|---|---|
| [English] | [German] | [French] | [Italian] |
| [Spanish] | [Other✳✳✳✳] | | |

### Notes
**DVD-V** Choose the language for audio, subtitles and disc menus. If a language which is not recorded is selected, or if languages are already fixed on the disc, the language set as the default on the disc will be played instead.

| | |
|---|---|
| [Original] | The original language of each disc will be selected. |
| [Other✳✳✳✳] | This is the language code setting. Input a code number with the numbered buttons (⇨ 87, Language code list). |
| [Automatic] | If the language selected for "Soundtrack" is not available, subtitles of that language will automatically appear if available on the disc. |

### Settings for Recording
● Press [OK] to show the following settings.

#### Recording time in EP mode
Select the maximum number of hours for recording in EP mode.

| | |
|---|---|
| [EP ( 6hours )] | You can record for 6 hours on an unused 4.7GB disc. |
| [EP ( 8hours )] | You can record for 8 hours on an unused 4.7GB disc. |

#### Chapter Creation
Set the automatic Chapter Creation method. (⇨ 50)

| | |
|---|---|
| [Automatic] | [5 minutes] |
| [Off] | No chapter start points are set. |

#### Recording Format
Titles recorded to the HDD with "Recording Format" set to "Video format" can be copied to DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL and +RW using high speed mode.
However, aspect, etc. is restricted. (⇨ 58, Important)
We recommend turning the setting "VR format" if high speed copy to DVD-R, etc. is not necessary when recording a programme. This setting is effective when recording from a television programme or external equipment (including DV equipment), or when copying from a finalised DVD-Video disc.

| | |
|---|---|
| [VR format] | High speed copy from HDD is possible only to DVD-RAM. |
| [Video format] | You can high-speed copy to DVD-R, etc. Press [◄, ►] to select "Yes", then press [OK].<br>● You are no longer able to switch the audio when watching a programme on an input channel on the TV connected to this unit (e.g., AV1, etc).<br>● In some cases, copying to DVD-R, etc. using the high speed mode does not work (⇨ 58, Important) |

#### DVD Speed for High Speed Copy
Select the speed of high-speed copying (When using high-speed copy compatible DVD-RAM 5X, DVD-R, +R 8X or +RW 4X discs).

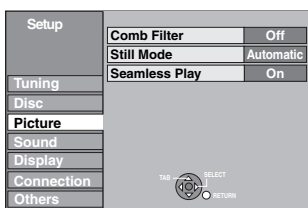| | |
|---|---|
| [Maximum] | |
| [Normal ( Silent )] | Selecting "Normal ( Silent )" means the noise generated by this unit is less than "Maximum", however the time required for copying will double (approximately). |

# Picture and Sound Settings

FUNCTION MENU ⇨ | Others | ⇨ | Setup |

(⇨ 72, Accessing the Setup Menu)
All factory default settings are indicated with "Underlined" text.

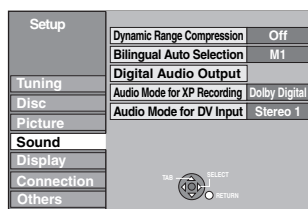## Picture

▲, ▼ select "Picture" ⇨ ► ⇨ ▲, ▼ select item
⇨ OK

| Setup | Comb Filter | Off |
| | Still Mode | Automatic |
| | Seamless Play | On |

Tuning
Disc
Picture
Sound
Display
Connection
Others

### Comb Filter
Select the picture sharpness when recording.
The setting is fixed with "On" if you set "TV System" to "NTSC" (⇨ 76)

[On]  Select it to record clear picture if the picture is noisy when "Off" is selected.

[Off]  Normally, use this setting.

### Still Mode
Select the type of picture shown when you pause play (⇨ 96, Frame and Field).

[Automatic]

[Field]  Select if jittering occurs when "Automatic" is selected.

[Frame]  Select if you cannot see small text or fine patterns clearly when "Automatic" is selected.

### Seamless Play
Select the play mode between Playlists (Video)chapter segments and partially deleted titles.

[On]  The chapters in Playlists (Video) are played seamlessly. This does not work when there are several audio types included on the Playlists (Video) and when using Quick View (Play ×1.3). Additionally, the positioning of chapter segments may change slightly.

[Off]  The points where chapters in Playlists (Video) change are played accurately, but the picture may freeze for a moment.

## Sound

▲, ▼ select "Sound" ⇨ ► ⇨ ▲, ▼ select item
⇨ OK

| Setup | Dynamic Range Compression | Off |
| | Bilingual Auto Selection | M1 |
| | Digital Audio Output | |
| | Audio Mode for XP Recording | Dolby Digital |
| | Audio Mode for DV Input | Stereo 1 |

Tuning
Disc
Picture
Sound
Display
Connection
Others

### Dynamic Range Compression
**DVD-V** (Dolby Digital only)
Change the dynamic range (⇨ 96) for easier listening in low volume.
[On]                    [Off]

### Bilingual Audio Selection
When recording bilingual programmes from equipment connected to the DV IN terminal of this unit, select whether to record the main or secondary audio type.
[M 1]                    [M 2]

### Digital Audio Output
Change the settings when you have connected equipment through the unit's Digital Audio Output terminal (⇨ 81).
Press [OK] to show the following settings.

#### PCM Down Conversion
Select how to output audio with a sampling frequency of 96kHz.
Signals are converted to 48 kHz despite the above settings if the signals have a sampling frequency of over 96 kHz, or the disc has copy protection.

[On]  Signals are converted to 48 kHz. (Choose when the connected equipment cannot process signals with sampling frequency of 96 kHz.)

[Off]  Signals are output as 96 kHz. (Choose when the connected equipment can process signals with sampling frequency of 96 kHz.)

#### Dolby Digital※
Choose whether to output by "Bitstream", which processes Dolby Digital signals on other connected equipment, or to convert the signals to "PCM" (2ch) on the unit before output.

[Bitstream]  When connected to equipment with a built-in Dolby Digital decoder.

[PCM]  When connected to equipment without a built-in Dolby Digital decoder.

#### DTS※
Choose whether to output by "Bitstream", which processes DTS signals on other connected equipment or to convert the signals to "PCM" (2ch) on the unit before output.

[Bitstream]  When connected to equipment with a built-in DTS decoder.

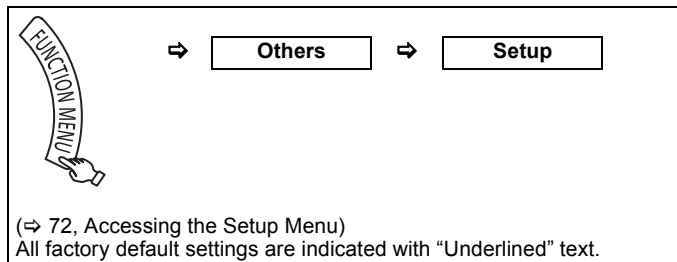[PCM]  When connected to equipment without a built-in DTS decoder.

#### MPEG※
Choose whether to output by "Bitstream", which processes MPEG audio signals on other connected equipment or to convert the signals to "PCM" (2ch) on the unit before output.

[Bitstream]  When connected to equipment with a built-in MPEG decoder.

[PCM]  When connected to equipment without a built-in MPEG decoder.

### Audio Mode for XP Recording
Choose the audio type when recording or copying with XP mode.
[Dolby Digital] (⇨ 96)    [LPCM] (⇨ 96)

● The picture quality of LPCM recordings may be lower than that of normal XP mode recordings.
● The audio recording becomes Dolby Digital even if you selected LPCM when using a recording mode other than XP.

### Audio Mode for DV Input
You can select the kind of audio when recording from the unit's DV IN terminal (⇨ 29).

[Stereo 1]  Records audio (L1, R1)

[Stereo 2]  Records added audio such as narration (L2, R2) subsequent to original recording.

[Mix]  Records both Stereo 1 and Stereo 2.

When recording bilingual broadcast, select the type of audio in advance from "Bilingual Audio Selection" (⇨ left).

※  Incorrect settings can cause noise to be output which can be harmful to your ears and speakers, and audio will not be recorded properly on media such as mini discs.
Refer to the operating instructions for connected devices to verify whether or not they can decode each of the audio formats.

Setting Menus

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# Display and Connection Settings/System Settings

FUNCTION MENU ⇨ **Others** ⇨ **Setup**

(⇨ 72, Accessing the Setup Menu)
All factory default settings are indicated with "Underlined" text.

## Display

▲, ▼ select "Display" ⇨ ► ⇨ ▲, ▼ select item
⇨ OK

| Setup | | |
|---|---|---|
| | On-Screen Messages | 5 sec. |
| | Unit's Display | Bright |
| Tuning | New Channel Message | Automatic |
| Disc | Screen Saver | On |
| Picture | FUNCTION MENU Display | Off |
| Sound | | |
| Display | | |
| Connection | | |
| Others | | |

### On-Screen Messages
Choose the approximate time until the digital channel information screen (⇨ 46) disappears automatically.
The length of time the Control Panel (⇨ 45) is displayed can also be changed, but "Off" does not work.

[Off]          The digital channel information is not displayed.

[3 sec.]          [5 sec.]          [7 sec.]          [10 sec.]

### Unit's Display
Changes the brightness of the unit's display.
Regardless of the setting, when "Power Save in Standby" (⇨ 78) is activated and this unit is turned off, the unit's display is turned off.

[Bright]          [Dim]

### New Channel Message
Set whether to display the confirmation message when a DVB channel is added.

[Automatic]     When a new DVB channel is added this unit will be informed automatically.

[Off]          The Channel Messages are not shown.

### Screen Saver
[On]     When this unit is not operated for approximately 5 minutes while the screen is being displayed, the screen saver is displayed. To return to the previous screen, press [OK].

[Off]

### FUNCTION MENU Display
[On]     When the unit is turned on, the FUNCTION MENU will be displayed. (⇨ 43)

[Off]

## Connection

▲, ▼ select "Connection" ⇨ ► ⇨ ▲, ▼ select item
⇨ OK

| Setup | | |
|---|---|---|
| | TV Aspect | 16:9 |
| | TV System | PAL |
| Tuning | HDMI Settings | |
| Disc | AV 1 Output | Video |
| Picture | AV 2 Settings | |
| Sound | | |
| Display | | |
| Connection | | |
| Others | | |

### TV Aspect
This setting needs to be changed when connected to a 4:3 standard aspect TV.

[16:9]          [4:3]          [Letterbox]

#### Notes
**Aspect 4:3/16:9**

| 4:3 | 16:9 |
|---|---|
| 4:3 standard aspect television | 16:9 widescreen television |

● [16:9]:     When connected to a 16:9 widescreen television.

● [4:3]:     When connected to a 4:3 aspect television, side picture is trimmed for 16:9 picture (⇨ 96, Pan & Scan).

● [Letterbox]:     When connected to a 4:3 aspect television, widescreen picture is shown in the letterbox style (⇨ 96).

### TV System
Change this setting if you connect an NTSC television or to record NTSC video from another source.

**1. Press [▲, ▼] to select the TV System, then press [OK].**

[PAL]
– Select when connecting to a PAL or Multi-system television. Programmes recorded using NTSC are played as PAL 60.
– Select to record television programmes and PAL input from other equipment.
– **HDD** Select when playing a PAL input title recorded on the HDD.

[NTSC]
– Select when connecting to an NTSC television. Television programmes cannot be recorded properly.
– Select to record NTSC input from other equipment.
– **HDD** Select when playing an NTSC input title recorded on the HDD.

The confirmation screen appears.

**2. Press [◄] to select "Yes", then press [OK].**

#### Tips
**To change the setting all at once (PAL/NTSC)**
While stopped, press and hold [■] and [▲ OPEN/CLOSE] on the main unit simultaneously for about 5 seconds.

#### Notes
● This unit cannot record NTSC signals to discs that already have PAL signal recordings. (However, both types of programmes can be recorded onto the HDD.)
● If "NTSC" has been selected, the TV Guide system cannot be used.
● During recording, timer recording standby or EXT LINK standby, this unit cannot play discs that do not match the "TV System" (PAL/NTSC) setting. Set "TV System" to match the discs before playing them. Change back the setting after playback of disc, otherwise recording may not record propery.

## HDMI Settings[*1]
● Press [OK] to show the following settings.

### HDMI Video Format[*2]
You can only select items compatible with the connected equipment. If you are concerned about output picture quality, it may be improved by changing the setting.
– To enjoy High Quality Video up-converted to 1080p, you need to connect the unit directly to 1080p compatible HDTV. If this unit is connected to an HDTV through other equipment, the other equipment must also be 1080p compatible.

[576i/480i]    [576p/480p]    [720p]    [1080i]

[1080p]    When setting video output to "1080p", we recommend using High Speed HDMI Cables that have the HDMI logo (as shown on the cover) and are less than 5 meters to prevent video distortion etc.

[Automatic]    Automatically selects the output resolution best suited to the connected television (1080p, 1080i, 720p, 576p/480p or 576i/480i).

### Aspect for 4:3 Video
To play a 4:3 title when connected with an HDMI cable, set how to show pictures on a 16:9 widescreen television. 4:3 picture from HDMI output will be slightly smaller than that from the other outputs, e.g. Scart, this is not a malfunction of the unit.

[4:3]    Picture output expands left or right.

[16:9]    Picture is output as original aspect with side panels.

## Digital Audio Output

[HDMI and Optical]

[Optical Only]    Select when this unit is connected to an amplifier with an optical digital audio cable (⇨ 81) and connected to a TV with an HDMI cable (⇨ 81) and you want to enjoy the highest quality of audio from discs.

## VIERA Link

[On]

[Off]    Select when you do not want to use "HDAVI Control".

## AV1 Output

Set according to the terminal of the connected TV.

[Video]
Select when a TV that can receive a composite signal is connected.

[S Video]
Select when a TV is connected that can receive an S Video signal.

[RGB 1]
Select when a TV that can receive an RGB signal is connected. If you always would like to view the picture from the unit in RGB signal, select this mode. The TV screen will automatically switch to display the picture from the unit when the unit is turned on.

[RGB 2]
Select when a TV that can receive an RGB signal is connected. If you would like to switch to display the picture from the unit only when playback or viewing menus, select this mode.

● If this unit is connected with an HDMI cable, you cannot select "RGB 1" or "RGB 2".

## AV2 Settings

Set to match the connected equipment.
● Press [OK] to show the following settings.

## AV2 Input
Set to "RGB / Video" or "RGB" when receiving or recording RGB output from external equipment.

[RGB / Video]    The unit automatically detects whether the input signal from the AV2 terminal is an RGB signal or other signals and makes settings.
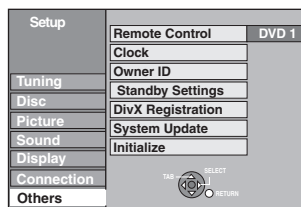
[RGB]

[Video]

[S Video]

## Ext Link

[Ext Link 1]    When this unit is connected to a digital satellite receiver with a 21-spin Scart cable and this unit receives a control signal.
Start and stop timings of recording are controlled by the control signal.

[Ext Link 2]    When external equipment with a timer function is connected.
Recording is continued while the image signal is being sent to the unit from the external equipment. Recording is stopped when the image signal is halted by turning the external equipment off.

[*1] Depending on the connected equipment, some items may be shaded in grey on the display and cannot be selected, or you may not be able to change the settings.

[*2] Choose the setting to suit your TV and preference.

## Others

▲, ▼ select "Others" ⇨ ► ⇨ ▲, ▼ select item

⇨ [OK]

| Setup | | |
|---|---|---|
| | Remote Control | DVD 1 |
| | Clock | |
| | Owner ID | |
| Tuning | Standby Settings | |
| Disc | DivX Registration | |
| Picture | System Update | |
| Sound | Initialize | |
| Display | | |
| Connection | | |
| Others | | |

### Remote Control (⇨ 87)

[DVD 1]    [DVD 2]    [DVD 3]

### Clock (⇨ 14)

### Owner ID (⇨ 13)
In order to prevent another person from using this unit if it is stolen, you can set a PIN number and input your personal information.
Once the PIN number has been set, you cannot return to the factory preset. Make sure not to forget this.
● PIN number    ● Name    ● House No.    ● Postcode

# System Settings

## Standby Settings
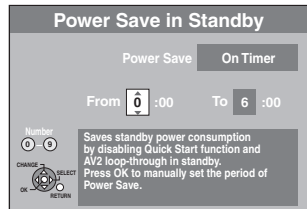● Press [[OK]] to show the following settings.

### Power Save in Standby

[On]   It will go into the Power Save in Standby mode when the unit is in standby mode.

[On Timer]   "Power Save in Standby" is set to activate during the set time period.(⇨ below)

[Off]   It is possible to start quickly from the standby mode. (Quick Start mode)

① **Press [▲, ▼] to select "On Timer" and press [OK].**

```
         Power Save in Standby

    Power Save      On Timer

    From  0 :00      To  6 :00

Number
(0) – (9)      Saves standby power consumption
               by disabling Quick Start function and
CHANGE         AV2 loop-through in standby.
               Press OK to manually set the period of
OK             SELECT   Power Save.
               RETURN
```

② **Press [▲, ▼] to set the start time (hour).**
③ **Press [◄, ►] to select the stop time and press [▲, ▼] to set the stop time (hour).**
④ **Press [OK] when you have finished the settings.**

● You can also use the numbered buttons for setting.
● You can set start and stop time by the hour.
● If the clock has not been set, "Power Save in Standby" is activated at all hours.

### Auto Standby
Set the time to automatically turn the unit off.
After the unit has finished operating, the unit will be turned off once the set time has passed.

[30 minutes]   [1 hour]

[2 hours]   [4 hours]   [6 hours]

[Off]   The unit will not automatically turn off.

### Auto Standby after OTR

[On]   This unit is turned to standby mode when this unit is not operated for approximately 5 minutes after completing One Touch Recording (⇨ 26).

[Off]

### Auto Standby after Copy

[On]   This unit is turned to standby mode when this unit is not operated for approximately 5 minutes after completing copy.

[Off]

### RF OUT ( Aerial Signal )

[On]   Broadcast signals are output from this unit.
TV can receives broadcast signals even if this unit is in standby mode when connecting TV with this unit using the RF cable (⇨ 80) .

[Off]   Press [◄, ►] to select "Yes" when the confirmation message is displayed.
Broadcast signals are not output from this unit to reduce standby power consumption.
● Power consumption is lowered additionally when "Power Save in Standby" is activated.
● If this unit turns into standby mode when connecting TV with this unit using the RF cable, proper broadcast images do not appear on TV.

## DivX Registration
You need this registration code to purchase and play DivX Video-on-Demand (VOD) content (⇨ 39).

## System Update
In order to update this unit, the TV Guide download, and support system changes made by broadcasts, this unit periodically performs software updates.
● Press [OK] to show the following settings.
● Update data and TV Guide download information are sent by an unscheduled digital broadcast. In order to receive these updates, you must be able to receive digital broadcasts.
● An update will take approximately 60 minutes. While the update is in progress, "SW-DL" appears on the unit's display.
You cannot operate the unit until the update is complete.
Removing the AC mains lead while the update is in progress may damage the unit.
● TV Guide download will take approximately 30 minutes.
While the TV Guide download is in progress, "GUIDE" appears on the unit's display. The TV Guide download can be interrupted by switching on the unit.
● To avoid hearing the startup sound of System Update for the unit, perform the following steps.
  – Select the time for Software Update (⇨ below, TV Guide/Software search period).
  – Set "TV Guide Download in Standby" and "Software Update in Standby" (⇨ below) to "Off", and update manually (⇨ below, Software Update Search Now).

### TV Guide Download in Standby

[On]   When the unit is turned off, TV Guide data is downloaded automatically.

[Off]

### Software Update in Standby

[On]   You can perform the unit updates automatically when the unit is turned off.

[Off]

### TV Guide/Software search period

Selects the time to automatically perform TV Guide download and updates when the unit is turned off. This can only be set when "TV Guide Download in Standby" or "Software Update in Standby" is set to "On".
● If there is a programmed recording set for the time you have selected, the programmed recording will be given priority.

**When the GUIDE Plus+ system is not available**

[Automatic]   The unit will give priority to searching for update data at midnight.

[02:00–06:00]   [06:00–10:00]   [10:00–14:00]
[14:00–18:00]   [18:00–22:00]   [22:00–02:00]

**When the GUIDE Plus+ system is available**

[Automatic]

[Daytime]   Updating is executed during daytime (06:00–22:00).

### Software Update Search Now
Start the search for new software manually.
A new software version is announced by a message. Do not turn this unit off during the update. This could result in the loss of data. A message shows that the update has finished.
● If applicable update data is found, press [◄, ►] to select "Yes", then press [OK].

### GUIDE Plus+ System Information
You can check the condition of GUIDE Plus+ system of this unit.

### Post Code
You can input the postal code which is necessary to download area specific information of GUIDE Plus+ system.

## Initialize
● Press [OK] to show the following settings.

### Shipping Condition
This returns Setup menus to default settings, except for the ratings level, ratings PIN, Slideshow Settings, Owner ID and clock settings, etc.

[Yes]   [No]

● The timer recording programmes are also cancelled.
● Recordings on the HDD will not be deleted.

### Default Settings
This returns Setup menus to default settings, except for the tuning settings, clock settings, disc language settings, ratings level, ratings PIN, Owner ID and remote control code, etc.

[Yes]   [No]

● The timer recording programmes are also cancelled.
● Recordings on the HDD will not be deleted.

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# Other Settings

## Child Lock

The Child Lock deactivates all buttons on the unit and remote control. Use it to prevent other people from operating the unit.

**Press and hold [OK] and [RETURN ⅁] at the same time until "X HOLD" appears on the unit's display.**



If you press a button while the Child Lock is on, "X HOLD" appears on the unit's display and operation is impossible.

### Tips
**To cancel the Child Lock**
Press and hold [OK] and [RETURN ⅁] at the same time until "X HOLD" disappears.

## Using the Unit's Remote Control to Operate the TV

You can configure the remote control TV operation buttons to turn the television on/off, change the television input mode, select the television channel and change the television volume.



❶ **Point the remote control at the TV.**
❷ **While pressing and holding [⏻ TV], enter the code from the table below using the numbered buttons.**
e.g., 01: press [0] ⇨ [1]
❸ **Test the TV functions of the remote control for operability.**
  – If the functions do not work, repeat steps ❶ to ❸ using different codes, if available. Some TVs may not be compatible with the unit's remote control.

**Remote Control Codes for the TV**

| Manufacturer | Code No. |
|---|---|
| Panasonic | 01/02/03/04 |
| AIWA | 35 |
| AKAI | 27/30 |
| BEJING | 33 |
| BEKO | 05/71/72/73/74 |
| BENQ | 58/59 |
| BP | 09 |
| BRANDT | 10/15 |
| BUSH | 05 |
| CENTREX | 66 |
| CHANGHONG | 69 |
| CURTIS | 05 |
| DAEWOO | 64/65 |
| DESMET | 05 |
| DUAL | 05 |
| ELEMIS | 05 |
| FERGUSON | 10/34 |
| FINLUX | 61 |
| FISHER | 21 |

| Manufacturer | Code No. |
|---|---|
| FUJITSU | 53 |
| FUNAI | 63/67 |
| GOLDSTAR | 05/50/51 |
| GOODMANS | 05 |
| GRADIENTE | 36 |
| GRUNDIG | 09 |
| HIKONA | 52 |
| HITACHI | 05/22/23/40/41 |
| INNO HIT | 05 |
| IRRADIO | 30 |
| ITT | 25 |
| JINGXING | 49 |
| JVC | 17/30/39/70 |
| KDS | 52 |
| KOLIN | 45 |
| KONKA | 62 |
| LG | 05/50/51 |
| LOEWE | 07/46 |
| MAG | 52 |
| METZ | 05/28 |
| MITSUBISHI | 05/19/20/47 |
| MIVAR | 24 |
| NEC | 36 |
| NOBLEX | 33 |
| NOKIA | 25/26/27/60/61 |
| NORDMENDE | 10 |
| OLEVIA | 45 |
| ONWA | 30/39/70 |
| ORION | 05 |
| PEONY | 49/69 |
| PHILCO | 41/48/64 |
| PHILIPS | 05/06/46 |
| PHONOLA | 05 |
| PIONEER | 37/38 |
| PROVIEW | 52 |
| PYE | 05 |
| RADIOLA | 05 |
| SABA | 10 |
| SALORA | 26 |
| SAMSUNG | 32/42/43/65/68 |
| SANSUI | 05 |
| SANYO | 21/54/55/56 |
| SCHNEIDER | 05/29/30 |
| SEG | 05/69/75/76/77/78 |
| SELECO | 05/25 |
| SHARP | 18 |
| SIEMENS | 09 |
| SINUDYNE | 05 |
| SONY | 08 |
| TCL | 31/33/66/67/69 |
| TELEFUNKEN | 10/11/12/13/14 |
| TEVION | 52 |
| TEX ONDA | 52 |
| THOMSON | 10/15/44 |
| TOSHIBA | 16/57 |
| WHITE WESTINGHOUSE | 05 |
| YAMAHA | 18/41 |

# Additional Connections

<table>
<tr><td>

**Using a fully wired 21-pin Scart cable**
– You can use a variety of Q Link functions by connecting the unit to a Q Link compatible television (⇨ 44).
– You can enjoy high-quality viewing by connecting the unit to an RGB compatible television.
   "AV1 Output" in the Setup menu is set to "RGB 1" or "RGB 2" (⇨ 77).
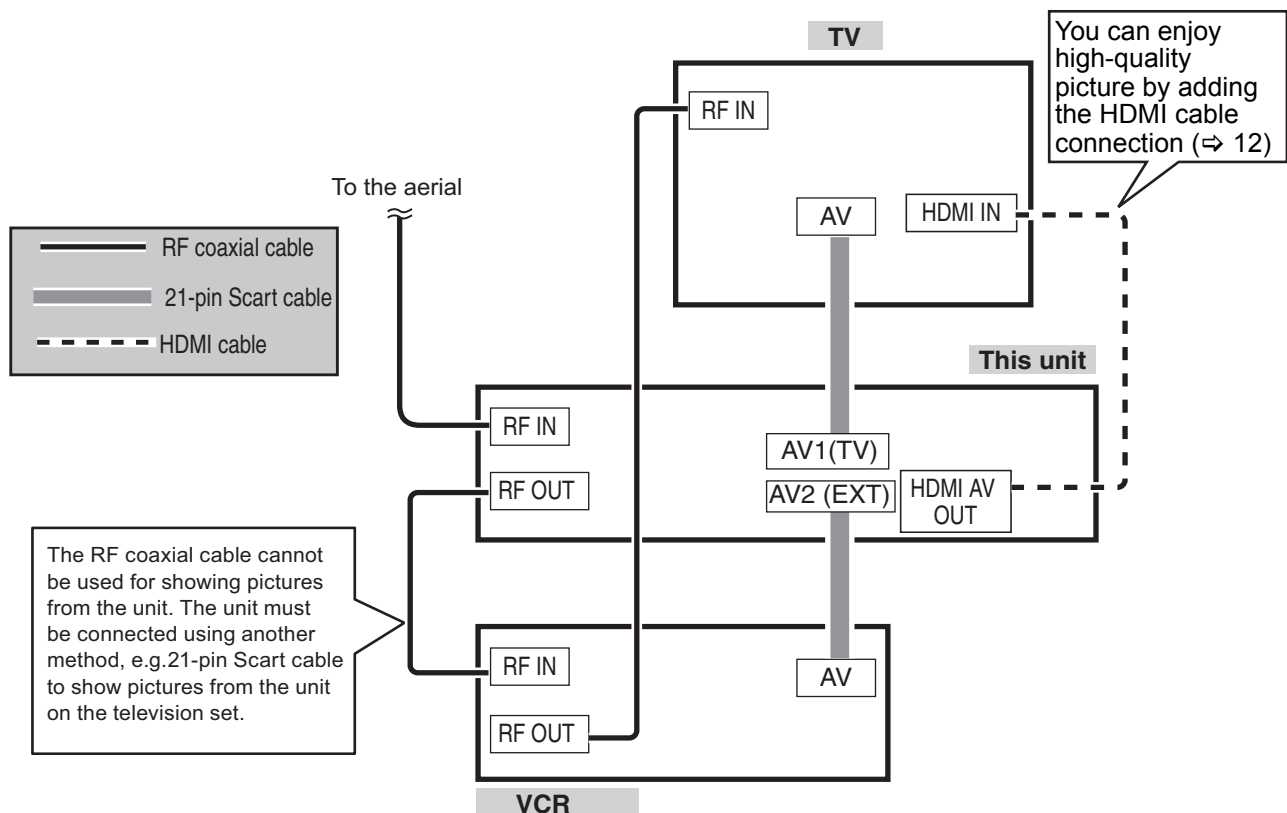   Make "AV2 Input" settings in the Setup menu (⇨ 77).

**Use of the RF coaxial cable**
● Keep the RF coaxial cables as far away as possible from other cables.
● Do not roll up the RF coaxial cables.

</td></tr>
</table>

● **Before connection, turn off the mains for all connected equipment and read the appropriate operating instructions.**
   **Connect AC mains lead only after all other connections are complete.**
   **BE SURE TO READ THE CAUTION FOR AC MAINS LEAD ON PAGE 3.**

## Adding a VCR: Connecting to a Television and a Video Cassette Recorder

You can enjoy high-quality picture by adding the HDMI cable connection (⇨ 12)

**TV**

RF IN

AV     HDMI IN

To the aerial

RF coaxial cable

21-pin Scart cable

HDMI cable

**This unit**

RF IN

RF OUT

AV1(TV)

AV2 (EXT)     HDMI AV OUT

The RF coaxial cable cannot be used for showing pictures from the unit. The unit must be connected using another method, e.g.21-pin Scart cable to show pictures from the unit on the television set.

RF IN

AV

RF OUT

**VCR**

**To record from a VCR**
Refer to "Recording from an External Device" (⇨ 29).

## Connecting to a Television with Audio/Video Cable (not included)

● You can connect this unit to a TV using the audio/video (AV) cable instead of the HDMI cable or the 21-pin Scart cable (⇨ 10, 11, 80).
● Using a Scart or HDMI cable gives a higher quality picture than this connction.
● Connect to terminals of the same colour.

AUDIO IN     VIDEO IN
R        L

VIDEO

L

R
AUDIO
OUT

**TV**

Audio/Video cable

**This unit**
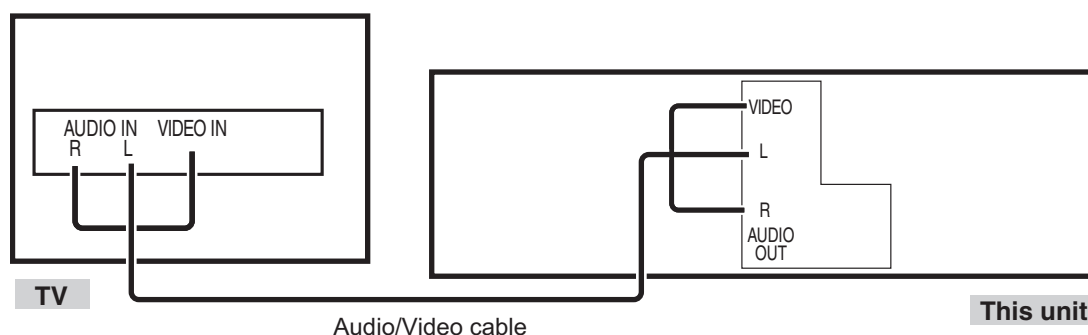
## Adding an Amplifer or Receiver

Use these connections to play sound through speakers connected to an amplifier or system component.

### Using an Audio Cable (not included)

It is possible to output 2-channel stereo sound.
● Connect to terminals of the same colour.

**Amplifier or System Component**

AUDIO IN
R    L

**This unit**
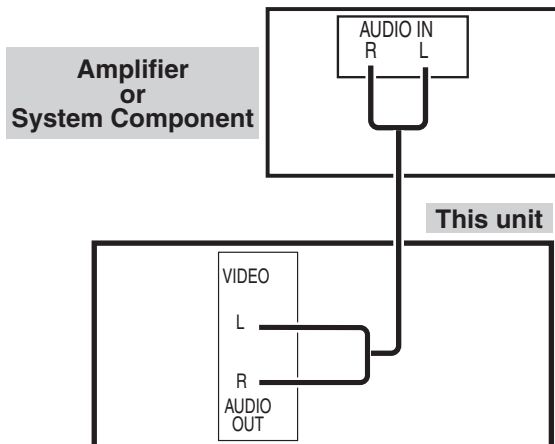
VIDEO
L
R
AUDIO OUT

### Using an Optical Digital Audio Cable (not included)

It is possible to output multi-channel surround sound on DVD-Video.

**Amplifier or System Component**

OPTICAL IN

Insert fully with this side up.
Do not bend cable sharply.

**This unit**

OPTICAL
DIGITAL AUDIO OUT
(PCM/BITSTREAM)
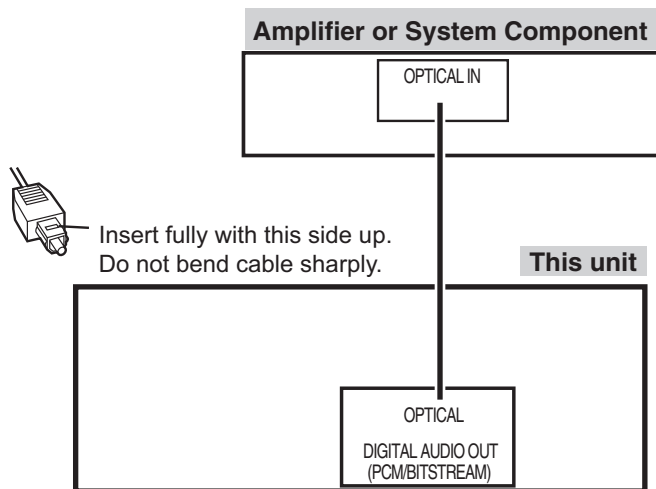
● Connect an amplifier or system component with a built-in Dolby Digital, DTS or MPEG decoder.
● Adjust settings in "Digital Audio Output" as needed, depending on other connections and the amplifer receiver (⇨ 75).

#### Notes
●When this unit is connected to an amplifier with an optical digital audio cable and connected to a television with an HDMI cable, you can enjoy the highest quality of audio from the disc by setting "Digital Audio Output" to "Optical Only" in the Setup menu (⇨ 77). In this case audio is only output from the amplifier not the television.
●You cannot use DTS Digital Surround decoders not meant for DVD.
●Before purchasing an optical digital audio cable, check the terminal shape of the equipment to be connected.

### Using an HDMI (High Definition Multimedia Interface) Cable (not included)

When connected to an HDMI compatible unit, an uncompressed digital audio and video signal is transmitted, enabling you to enjoy high quality, digital video and audio with just one cable. When connecting to an HDMI-compatible HDTV (High Definition Television), the output can be switched to 1080p, 1080i or 720p HD video.
● Please use High Speed HDMI Cables that have the HDMI logo (as shown on the cover).
● When setting video output to "1080p", please use the HDMI cables 5.0 meters or less.

#### Regarding VIERA Link "HDAVI Control™" function

When connecting with a Panasonic TV (VIERA) or a receiver equipped with the "HDAVI Control" function, linked operations would be possible. [⇨ 44, Linked Operations with the TV (VIERA Link "HDAVI Control™"/Q Link)]
● It is recommended that you use Panasonic's HDMI cable.
   Recommended part number: RP-CDHS15 (1.5m), RP-CDHS30 (3.0 m), RP-CDHS50 (5.0 m), etc.
● Non-HDMI-compliant cables cannot be utilised.

**Receiver**

AV    HDMI IN    HDMI OUT    HDMI IN

**TV**

**This unit**

AV1(TV)    HDMI AV OUT

**Connecting with a Panasonic TV (VIERA)**
If the 21-pin Scart cable is connected, the following functions are available.
● Direct TV Recording (⇨ 26)

● Set "Digital Audio Output" to "HDMI and Optical" (⇨ 77). (The default setting is "HDMI and Optical".)

#### Notes
●If connecting to equipment that is only compatible with 2 channel audio output, audio with 3 channels or more will be down-mixed (⇨ 96) and output as 2 channels, even if connecting with an HDMI cable (some discs cannot be down-mixed).
●You cannot connect this unit to DVI devices that are incompatible with HDCP.
For display units compatible with HDCP (High-Bandwidth Digital Content Protection) that are equipped with a digital DVI input terminal (PC monitors, etc.):
Depending on the unit, picture may not be displayed properly or at all when connecting with a DVI/HDMI switching cable (audio cannot be output).

# Media Handling

## Inserting Discs

❶ **Press [⏏ OPEN/CLOSE] to open the tray.**
  – Insert a disc.

Insert label-up.
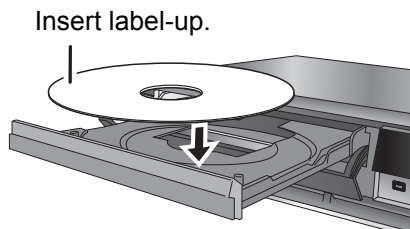
❷ **Press [⏏ OPEN/CLOSE] to close tray.**

### Notes
- Ensure the disc is flat in the tray
- When using DVD-RAM or DVD-R, remove the disc from the cartridge. Cartridge discs cannot be used.
- **RAM** It is not possible to record or play continuously from one side of a double sided disc to the other. You will need to eject the disc and turn it over.
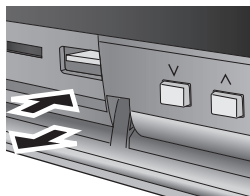
**Automatic drive select function**
**DVD-V** **VCD**
- If the unit is recording to the HDD or stopped, it automatically switches to the DVD drive when a disc is inserted.
- If you eject a disc and close the disc tray, the HDD drive is automatically selected.

## Inserting/Removing the USB memory

**Inserting the USB memory**

- Before inserting any USB memory to this unit, ensure that the data stored therein has been backed up.
- Check the orientation of the USB connector and insert it straight in.
- Insert an USB device while the unit is stopped, so the "USB device" screen is displayed. Select an item, then press [OK] to switch to the USB-related operations (⇨ 38, 65).

**Removing the USB memory**
- Complete all USB-related operations and pull the USB memory straight out.
- If a USB memory being accessed is pulled out, then the data may be damaged.

## Inserting/Removing the SD Card

When the SD card slot indicator ("SD") on the unit's display is flashing, the card is being read from or written to. Do not turn off the unit or remove the card.
Such action may result in malfunction or loss of the card's contents.
- **Inserting foreign objects can cause a malfunction.**

**Inserting the card**

Press on the centre of the card until it clicks into place.

If you are using a miniSD card, a miniSDHC card, a microSD card or a microSDHC card, insert it into the adaptor that comes with the card. Insert and remove this adaptor from the unit.

e.g., miniSD

Insert the card label up with the cut-off corner on the right.

**Removing the card**
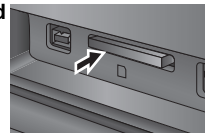
❶ Press on the centre of the card.

❷ Pull it straight out.

## Disc and Card Care

When using DVD-RAM or DVD-R, remove the disc from the cartridge. Cartridge discs cannot be used.

### Holding a disc or card
Handle discs by the edges to avoid inadvertently scratching or getting oil from your fingers on the disc. Do not touch the signal surface of discs (the shiny side) or the terminal surface (the metal part) of SD cards.

### Cleaning discs or cards
Discs are not indestructible and occasionally dirt or condensation may appear. Clean by gently wiping with a soft, dry lint-free cloth in a straight line from the centre of the disc to the edge of the disc.
Return discs and SD cards to their cases when not in use; this helps to protect against scratches and dirt.

### Storing discs and cards
- Do not place or store discs and cards in the following locations:
  – Direct sunlight
  – Very dusty or humid areas
  – Near a heat source
  – Places that undergo extreme shifts in temperature (condensation can occur)
  – Where static electricity or electromagnetic waves occur
- Keep the Memory Card out of reach of children to prevent swallowing.

### Discs to avoid
- Discs that are not perfectly circular in shape
- Warped discs, which may not balance properly in your unit, causing improper operation or damage to the unit
- Cracked discs
- Discs with exposed adhesive (from removed stickers or labels, such as may occur with rental discs or improperly cared-for discs that were previously labeled or re-labeled)

# Frequently Asked Questions

## Set up

### How can I enjoy High Quality Video up-converted to 1080p?

➤ Connect the unit to 1080p compatible HDTV using an HDMI cable.
Set "HDMI Video Format" in the Setup menu to "1080p". (⇨ 12, 77)

### What equipment is necessary to play multi-channel surround sound?

➤ You cannot playback multi-channel sound on this unit without other equipment. You must connect this unit with an HDMI cable or an optical digital cable to an amplifier with a built-in (Dolby Digital, DTS or MPEG) decoder and multi-channel speakers. (⇨ 81)

### Can the headphones and speakers be directly connected to the unit?

➤ You cannot directly connect to the unit. Connect through the amplifier, TV, etc. (⇨ 81)

### Is my TV compatible with progressive output ?

➤ All Panasonic televisions that have 625 (576)/50i · 50p, 525 (480)/60i · 60p input terminals are compatible. Consult the manufacturer if you have another brand of TV.

## Discs

### Can I play DVD-Video, and Video CDs bought in another country?

➤ You cannot play DVD-Video if their region number does not include "2" or "ALL". Refer to the disc's jacket for more information. (⇨ Cover)

### Can a DVD-Video that does not have a region number be played?

➤ Discs either without region encoding or region code 2 will not play on this unit.

## Please tell me about disc compatibility with this unit.

➤ This unit records and plays DVD-RAM, DVD-R, DVD-RW (DVD-Video format), +R, and +RW, and plays DVD-RW (DVD Video Recording format). However you cannot directly record to a DVD-R DL or +R DL disc on this unit (playback and copy are possible). (⇨ 15, 16)
➤ This unit also records and plays high speed recording compatible discs. (⇨ 98)
➤ After recording but before finalising DVD-R, DVD-R DL, DVD-RW, +R, +R DL.
  – You may not be able to play and record discs on this unit after recording them on other Panasonic products or other manufacturers' equipment.
  – You may not be able to play and record discs on other equipment after recording them on this unit.
After finalising the disc, however, you will be able to play it on any DVD-Video compatible player.

## Please tell me about CD-R and CD-RW compatibility with this unit.

➤ This unit plays CD-R/CD-RW discs which have been recorded in one of the following standards:
CD-DA, Video CD, SVCD (conforming to IEC62107), DivX, MP3, WMA and still pictures (JPEG). Close the session or finalise the disc after recording. This unit can recognize up to 300 folders (groups or albums) and 3000 files (tracks) on a disc with MP3/WMA or still pictures (JPEG). (⇨ 16, 18)
➤ You cannot write to a CD-R or CD-RW with the unit.

## DVB-T

### Which aerial is suitable for receiving digital terrestrial broadcasts?

➤ Any (terrestrial) roof aerial can be used. However, depending on the area where you live, a new aerial may be necessary. Consult your local TV aerial installer.

### Can this unit receive or record High Definition (HD) broadcasts?

➤ No, this unit cannot receive or record High Definition (HD) broadcasts.

Reference

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# Frequently Asked Questions

## GUIDE Plus+

**Is it possible to programme a recording, with a start and end time that are different from the GUIDE Plus+ system?**

➢ You can manually change the start and end time of programmes in the Timer Recording menu.
But if timings are altered by more than 10 minutes, "Guide Link" will not be able to function. (⇨ 22)

**Can I receive GUIDE Plus+ system data via a connected digital satellite receiver or a Set Top Box?**

➢ No, only via the built-in tuner. To perform timer recordings with digital satellite receivers or Set Top Boxes, please use the External Link feature or your unit's manual timer programming. (⇨ 28, 30)

**How can I cancel a timer programming?**

➢ Press [PROG/CHECK] and select the desired entry and then press [DELETE ✳]. (⇨ 31)

**What happens when I unplug my unit from the household mains socket?**

➢ The GUIDE Plus+ system data will not be updated. If the unit is disconnected from the AC mains for a longer period of time, then the GUIDE Plus+ data is lost.
Display the GUIDE Plus+ screen. (⇨ 19, steps ❶–❷) The GUIDE Plus+ system data will then be automatically updated.

## Recording

**Can I record from a commercially purchased video cassette or DVD?**

➢ Most commercially sold video cassettes and DVDs are copy protected; therefore, recording is usually not possible.

**Can DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL, and +RW recorded on the unit be played on other equipment?**

➢ You can play these discs on compatible equipment such as DVD players after finalising the disc on this unit.
**+RW** It is not necessary to finalise +RW. To enable play on other DVD players, please use "Create Top Menu" in the DVD Management menu. (⇨ 71)
➢ In any case, ability to play a disc depends on the condition of the recording, the quality of the disc, and the capability and format constraints of the DVD player.
➢ If you play a DVD-R DL, +R DL or +RW, use compatible equipment. Not all equipment will play these discs.

**Can a digital audio signal from the unit be recorded to other equipment?**

➢ You can record if using the PCM signal. When recording DVD, change the "Digital Audio Output" settings to the following via the Setup menu:
– PCM Down Conversion: "On"
– Dolby Digital: "PCM"
– DTS: "PCM"
– MPEG: "PCM"
However, only
– As long as digital recording from the disc is permitted.
– As long as the recording equipment is compatible with 48 kHz sampling frequency. (⇨ 75)
➢ You cannot record MP3 or WMA signals.

## USB

**What can or cannot be done using the USB port on this unit?**

➢ You can play DivX (except for DivX VOD contents), MP3, WMA or still picture (JPEG) files on a USB memory. (⇨ 38)
➢ You can copy still pictures (JPEG) files on a USB memory to the HDD, DVD-RAM or SD card. (⇨ 65)
➢ You can copy MP3 or WMA files on a USB memory to the HDD. (⇨ 66)
➢ You can connect a video equipment and copy SD Video to the HDD or DVD-RAM. (⇨ 63)
➢ Data on the HDD or a disc cannot be transferred to a USB memory.
➢ Data on a USB memory cannot be edited or a USB memory cannot be formatted on this unit.
➢ Some USB memories cannot be used with this unit. (⇨ 17)
➢ This unit cannot be connected to a computer and it cannot record to an external device. i.e. an external hard drive via the USB port.

## Music

**What will happen if I try to record the same CD multiple times?**

➢ You can record the CD, but new album will be made following the existing album.

**Can I transfer the music tracks from HDD to the disc or USB memory?**

➢ No, you cannot.

# Messages

## On the Unit's Display

| | |
|---|---|
| **H□□, F□□**<br>("□" stands for a service number.) | ● An error has occurred. The number following "H" or "F" depends on the status of the unit. Check the items below and in the Troubleshooting Guide. If the service number still does not disappear after the check, reset the unit (⇨ 87, To restore the unit if it freezes).<br>● If the service numbers fail to clear, note the service numbers and contact a qualified service person. |
| **DVD**<br>("□" stands for a number.) | ● The remote control and the main unit are using different codes. Change the code on the remote control. (⇨ 87) |
| **GUIDE** | ● GUIDE Plus+ data is being downloaded. (⇨ 78) |
| **HARD ERR**※ | ● If there is no change after turning the unit on and off, consult the dealer where the unit was purchased. |
| **NoERAS** | ● You cannot delete items on this disc.<br>● The disc may be damaged. Use a new disc. |
| **NoREAD** | ● The disc is dirty or badly scratched. The unit cannot record, play, or edit. (⇨ 82)<br>● The disc may be incompatible or of poor quality. (⇨ 15, 16)<br>● You have used a lens cleaner and it has finished operation. Press [▲ OPEN/CLOSE] on the main unit to eject the disc. (⇨ 7) |
| **NoWRIT** | ● You cannot write to this disc.<br>The disc may be damaged. Use a new disc. |
| **FINAL** | ● When the screen asking if you want to finalise the disc appears, the message is displayed. (⇨ 26) |
| **PLEASE WAIT**※ | ● Displayed when the unit is started. This is not a malfunction.<br>● The unit is carrying out its recovery process. You cannot operate the unit while the message is displayed. |
| **PROG FULL**※ | ● There are already 32 timer recording programmes. Delete unnecessary timer recording programmes. (⇨ 31) |
| **REMOVE** | ● The USB device is drawing too much power. Remove the USB device and turn the unit off. |
| **SW-DL** | ● The unit is performing a software update. (⇨ 78) |
| **SP 35:50, LP 151h**<br>"SP", "LP" and the numbers are examples. | ● Available space on the HDD or disc. The example "SP 35:50" is displayed when less than 100 hours are available and the example "LP 151h" is displayed when over 100 hours are available.<br>"SP" and "LP" are recording modes, "35:50" means "35 hours 50 minutes" and "151h" means "151 hours". |
| **UNSUPPORT**※ | ● You have inserted a disc the unit cannot play or record onto. (⇨ 15, 16)<br>● You tried to operate with a non-compatible USB memory. (⇨ 17) |
| **UNFORMAT**※ | ● You inserted an unformatted DVD-RAM, DVD-RW, +RW, an unused +R, +R DL or DVD-RW (DVD-Video format) that has been recorded on other equipment. Format the disc to use it.<br>However all the recorded contents on the disc are deleted. (⇨ 26) |
| **EXT-L** | ● This unit is in EXT LINK standby. EXT LINK has been turned on and will stop operation on the unit until the recording has completed.<br>Press [EXT LINK] to stop recording or cancel linked timer. (⇨ 28) |
| **F74** | ● The HDMI connection could not be authenticated due to a transfer malfunction. If you have another HDMI cable, try to use it. If it remains displayed, consult the dealer where the unit was purchased. |
| **F75** | ● The HDMI connection could not be authenticated due to an internal data malfunction. If you have another HDMI cable, try to use it. If it remains displayed, consult the dealer where the unit was purchased. |
| **U59** | ● The unit is hot.<br>The unit switches to standby for safety reasons. Wait for about 30 minutes until the message disappears.<br>Select a position with good ventilation when installing the unit. Do not block the cooling fan on the rear of the unit. |
| **U61** | ● (When a disc is not inserted) Displays when a malfunction has occurred. This is displayed when the unit is in the recovery process to return to normal operation. Once the display disappears you can use the unit again.<br>If it remains displayed, consult the dealer where the unit was purchased. |
| **U76** | ● HDMI cannot be output because this unit is connected to a model that does not support copyright protection. |

※ The message are alternately displayed.

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# Messages

## On the Unit's Display (Continued)

| | |
|---|---|
| **U80, U81, U99** | ● The unit fails to operate properly. Press [Φ/I] on the main unit to switch the unit to standby mode. Press [Φ/I] on the main unit again to turn the unit on. If the message persists, perform "DVB Auto Setup by Signal Quality" in the Setup menu. (⇨ 73) or "Shipping Condition" (⇨ 78). If it remains displayed, consult the dealer where the unit was purchased. |
| **U88** | ● There was something unusual detected with the disc while recording, playing or copying; there was a power failure or the AC mains lead was disconnected while the unit was on. The unit is carrying out its recovery process. This process restores the unit to normal operation. Wait until the message disappears.<br>● If it remains displayed, consult the dealer where the unit was purchased. |
| **X HOLD** | ● The Child Lock function is activated.<br>Press and hold [OK] and [RETURN ⇦] at the same time until "X HOLD" disappears. (⇨ 79) |

## On the TV

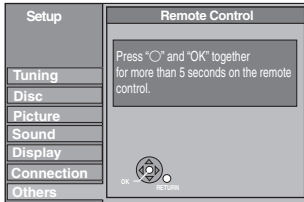| | |
|---|---|
| **This unit is not authorised to play this protected DivX video.** | ● You are trying to play the DivX VOD content that was purchased with a different registration code. You cannot play the content on this unit. (DivX) (⇨ 39) |
| **Cannot finish recording completely. Copy-protect signal was detected.** | ● The programme was copy-protected. |
| **Disc is full, or maximum number of titles are recorded. Cannot finish recording completely.**<br><br>**Cannot record. Maximum number of titles exceeded.** | ● The HDD or disc may be full.<br>● The maximum number of title has been exceeded. (⇨ 25)<br>● **HDD RAM -RW(V) +RW** Create space by erasing unwanted titles. Even if you erase recorded content from the DVD-R, DVD-R DL, +R or +R DL there is no increase in disc space. Available recording space on a DVD-RW (DVD-Video format) or +RW disc increases when the last title is deleted (space may increase slightly when you delete other titles). (⇨ 23, 48, 70)<br>● Use a new disc. |
| **Cannot playback. TV system is different from the setting. To playback, please change the TV System in Setup.** | ● You tried to play a title recorded using a different encoding system from that of the TV system currently selected on the unit.<br>Alter the "TV System" setting on this unit to suit. (⇨ 76) |
| **Cannot play on this unit.** | ● You tried to play a non-compatible image. (⇨ 18)<br>● Turn the unit off and re-insert the card. (⇨ 82) |
| **No Disc** | ● The disc is upside down. If it is a single-sided disc, insert it so the label is facing up.<br>● Ensure the disc is flat in the tray |
| **No folders.** | ● There is no compatible folder on the media. (⇨ 18) |
| **No SD CARD This card is incompatible.** | ● The card is not inserted. If this message is displayed with a compatible card already inserted, turn off the unit, remove and then re-insert the card. (⇨ 17, 82)<br>● The format of the card inserted is incomplete. (⇨ 17) |
| **Not enough space in the copy destination.** | ● Create space by deleting any unnecessary items. (⇨ 23, 48, 55, 70)<br>● Delete one or more items registered on the copy list to ensure that the "Destination Capacity" is not exceeded. (⇨ 61, 64, 67) |
| **This is a non-recordable disc.**<br><br>**Unable to format.**<br><br>**This disc is not formatted properly. Format it using DVD Management in FUNCTION MENU.** | ● The disc may be dirty or scratched. (⇨ 82)<br>● The unit cannot record on the disc you inserted. Insert a DVD-RAM or unfinalised DVD-R, DVD-RW (DVD-Video format), +R, or +RW disc. (⇨ 15)<br>● You inserted an unformatted DVD-RAM, DVD-RW, +R, +R DL or +RW disc. Format the disc with the unit. (⇨ 70)<br>● You cannot directly record to a DVD-R DL and +R DL disc on this unit. Record to the HDD and then copy to the disc. |
| **Not enough space on HDD. Space of 4 hours ( in SP mode ) is necessary.**<br><br>**Maximum number of titles is recorded on HDD. Please delete unwanted titles.** | ● **-R DL +R DL** It is not possible to copy when there is not enough free space on the HDD or when the total number of the recorded titles on the HDD and the titles to be copied are greater than 499.<br>Delete unwanted titles from the HDD. (⇨ 23, 48, 70) |
| **Rental Expired.** | ● The DivX VOD content has zero remaining plays. You cannot play it. (DivX) (⇨ 39) |
| ⊘ | ● The operation is prohibited by the unit or disc. |

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# Troubleshooting Guide

## When Other Panasonic Products Respond to this Remote Control

Use this function to synchronize the codes for the remote control and the main unit when there are other Panasonic products close to your unit.

With the unit stopped
❶ **Press [FUNCTION MENU].**
❷ **Press [▲, ▼] to select "Others", then press [OK].**
❸ **Press [▲, ▼] to select "Setup", then press [OK].**
❹ **Press [▲, ▼] to select "Others", then press [►].**
❺ **Press [▲, ▼] to select "Remote Control", then press [OK].**
❻ **Press [▲, ▼] to select the code ("DVD 1", "DVD 2" or "DVD 3") and press [OK].**

| Setup | Remote Control |
|---|---|
| | Press "○" and "OK" together for more than 5 seconds on the remote control. |
| Tuning | |
| Disc | |
| Picture | |
| Sound | |
| Display | |
| Connection | OK RETURN |
| Others | |

❼ **While pressing and holding [OK], press and hold the numbered button [1], [2] or [3] corresponding to the code set in step ❻ for more than 5 seconds to set.**
❽ **Press [OK] to complete.**

When the following indicator appears on the unit's display

– Change the code on the remote control to match the code displayed for the main unit (⇨ step ❼).

Tips
**To return to the previous screen**
Press [RETURN ⇆].

**To exit the screen**
Press [EXIT].

## To Reset This Unit

### To reset the unit's settings

All the settings except for the ratings level, ratings PIN, Owner ID, Clock and remote control code, etc. return to the factory preset. The timer recording programmes and Favourites are also cancelled.

When this unit is turned on and stopped.
**Press and hold [∨ CH] and [CH ∧] on the main unit for about 5 seconds .**
– The Auto-Setup starts automatically. (⇨ 13)

### To reset the ratings level settings

When this unit is turned on and stopped.
❶ **Press [⏏ OPEN/CLOSE] to open the disc tray.**
❷ **Press [DRIVE SELECT] to select the DVD drive.**
❸ **Press and hold [● REC] and [►] (PLAY/×1.3) on the main unit for about 5 seconds.**

### To restore the unit if it freezes

On the main unit
**Press and hold [⏻/I] for more than 3 seconds.**
– The unit is turned off.

### Language code list
Enter the code with the numbered buttons.

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

Reference

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# Troubleshooting Guide

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

**The following does not indicate a problem with the unit:**
- Regular disc rotating sound.
- Poor reception due to atmospheric conditions.
- Image disturbance during search.
- Periodic interruptions to the reception due to digital satellite broadcasting breaks.
- Operations are slow to respond when "Power Save in Standby" is activated.
- Operations are not working due to a poor-quality disc. (Try again using a Panasonic disc.)
- The unit freezing due to the activation of one of its safety devices (⇨ 87, To restore the unit if it freezes).
- When the unit is turned on or off, there may be an unexpected sound.

## General Issues — Power

### No power.
### The unit does not turn on pressing [⏻].

➢ Insert the AC mains lead securely into a known active household mains socket. (⇨ 11)
➢ Linked timer recordings with external equipment is in recording standby ("EXT-L" on the unit's display blinks when [⏻] is pressed). Press [EXT LINK] to cancel the recording standby. (⇨ 28)
➢ Check the fuse in the plug.

### The unit switches to standby mode.
### The unit is turned off automatically.

➢ One of the unit's safety devices is activated. Press [⏻/I] on the main unit to turn the unit on.
➢ If you connected this unit to an "HDAVI Control" compatible TV with an HDMI cable, or connected this unit to a Q Link-compatible TV with a fully wired 21-pin Scart cable, this unit will be automatically set to standby mode when the TV is set to standby mode. (⇨ 44)

### This unit turns off when the TV input is switched.

➢ This is a normal phenomenon when using VIERA Link (HDAVI Control 4 or later). For details please read the operating instructions for the TV.

## General Issues — Displays

### The display is dim.

➢ Change "Unit's Display" in the Setup menu. (⇨ 76)

### "0:00" is flashing on the unit's display.

➢ Set the clock. (⇨ 14)

### The time recorded on the disc and the available time shown do not add up.
### The displayed time of this unit is different from the actual recording time or MP3/WMA recording time.

➢ Times shown may disagree with actual times.
➢ **-R** **-R DL** **+R** **+R DL** The remaining capacity does not increase even if titles are deleted.
➢ Available space on a DVD-RW (DVD-Video format) or +RW disc increases when you delete the last title (space may increase slightly when you delete other titles).
➢ If you record or edit about 200 times or more, the remaining capacity of DVD-R, DVD-R DL, +R, and +R DL is reduced and then recording or editing may be disabled (for the second layer on DVD-R DL and +R DL, this happens after about 60 times).
➢ The time during searching may not be displayed accurately.

### The clock is not correct.

➢ Under adverse reception conditions, etc., the automatic time correction function may not work. In this case, "Automatic" is automatically turned to "Off". If re-setting the Auto Clock Setting does not work, set the time manually. (⇨ 14)

### Compared to the actual recorded time, the elapsed time displayed is less.
### (Only when recording in NTSC)

➢ The displayed recording/play time is converted from the number of frames at 29.97 frames (equal to 0.999 seconds) to one second. There will be a slight difference between the time displayed and the actual elapsed time (e.g., actual one-hour elapsed time may display as approximately 59 minutes 56 seconds). This does not affect the recording.

### The clock does not display on the unit when switched to standby.

➢ Ensure "Power Save in Standby" is deactivated. (⇨ 78)

## General Issues    Operation

### Cannot operate the TV with unit's remote control.
➢ Change the manufacturer code on the remote control. (⇨ 79)
➢ It may be necessary to set the code on the remote control again after changing the batteries. (⇨ 87)

### The remote control doesn't work.
➢ The remote control code is wrong. Change to the correct code. (⇨ 87)
➢ The batteries are depleted. Replace them with new ones. (⇨ 7)
➢ Point the remote control at the remote control sensor on the main unit. (⇨ 7)
➢ Remove obstacles between the remote control and the main unit.
➢ Remove dust from the transmission window and the unit's sensor.
➢ Coloured glass may obstruct the signal reception/ transmission.
➢ Don't place the signal sensor in direct sunlight or in areas that may be subject to sun exposure.
➢ It may be necessary to set the manufacturer code again after changing the batteries. (⇨ 79)
➢ If the "X HOLD" is displayed on the unit's front display, the Child Lock function is activated. (⇨ 79)
➢ If the "EXT-L" is displayed on the unit's front display, Linked timer recordings with external equipment is in recording standby. (⇨ 28)

### The unit is on but cannot be operated.
➢ Recording drive or playback drive has not been selected properly. (⇨ 20, 21)
➢ Some operations may be prohibited by the disc.
➢ The unit is warm ("U59" appears on the unit's display). Wait until "U59" disappears. (⇨ 85)
➢ One of the unit's safety devices may have been activated. Reset the unit as follows:
Press [⏻/I] on the main unit to switch to standby mode.
If the unit doesn't switch to standby mode, reset the unit (⇨ 87, To restore the unit if it freezes).
➢ The unit cannot be operated while performing an update. "SW-DL" appears on the unit's display while it is updating. Please wait until the "SW-DL" disappears. (⇨ 78)

### "U88" is displayed and the disc cannot be ejected.
➢ The unit is carrying out the recovery process. The disc may be defective. Do the following to eject the disc. Try another disc.
  1 Press [⏻/I] on the main unit to switch to standby mode. If the unit doesn't switch to standby mode, reset the unit (⇨ 87, To restore the unit if it freezes).
  2 While the unit is turned off, press and hold [■] and [CH ∧] on the main unit at the same time for about 5 seconds. (Ejection may take extra time depending on discs.)

### Cannot eject a disc.
➢ The unit is recording.
➢ The unit may have a problem. Eject the disc as in 2 above.
➢ Linked timer recordings with external equipment is in recording standby ("EXT-L" on the unit's display blinks when [⏻] is pressed.) Press [EXT LINK] to cancel the recording standby.
If the Child Lock function is activated, above operation does not work. Cancel the Child Lock function. (⇨ 28, 79)

### Startup is slow.
➢ Startup takes time in the following situations:
  – A disc other than a DVD-RAM is inserted.
  – The clock is not set.
  – Immediately after a power failure or the AC mains lead is connected.
  – When the unit is connected with an HDMI cable.
➢ Deactivate "Power Save in Standby" in the Setup menu. (⇨ 78)

## General Issues    GUIDE Plus+

### The GUIDE Plus+ system does not receive any data.
➢ Check whether the clock is properly set. (⇨ 14)
➢ If signal quality is bad (ghost images or limited reception), the GUIDE Plus+ system may not be able to receive any data.
➢ Perform "DVB Auto Setup by Signal Quality" in the Setup menu. (⇨ 73)

### "No Data" is displayed for some or all stations.
➢ Some stations are not supported by the GUIDE Plus+ system.
➢ Programme the timer recording manually. (⇨ 30)
➢ Perform "DVB Auto Setup by Signal Quality" in the Setup menu. (⇨ 73)

### The GUIDE Plus+ information is not displayed properly.
➢ There was a programme change or GUIDE Plus+ information from a broadcast station was possibly not correctly transmitted.
Check the current programme, e.g. on the Web site for the GUIDE Plus+ system provider or station provider.

### The GUIDE Plus+ data is not updated.
➢ The unit must be in standby mode in order to update the data. If the unit is in EXT LINK mode ("EXT-L" lights up in the unit's display), then the data update may also not work.
➢ Make sure that the time is set correctly. (⇨ 14)
➢ Make sure that "TV Guide Download in Standby" is set to "On" in the Setup menu. (⇨ 78)

## General Issues    DVB-T

### Digital broadcasts cannot be received.
➢ Check the connections. (⇨ 10, 11, 80)
➢ Digital broadcast may not have started in your region yet.
➢ The aerial may not be pointing in the direction of the TV station, or the direction of the aerial may have changed due to strong winds or vibration. If problem persists consult your local TV aerial installer.
➢ Perform "DVB Auto Setup by Signal Quality" in the Setup menu. (⇨ 73)

### TV reception worsens after connecting the unit.
➢ This can occur because the signals are being divided between the unit and other equipment. It can be solved by using a signal booster, available from electronics retailers.

# Troubleshooting Guide

## General Issues — DVB-T (Continue)

**After "DVB Auto Setup by Signal Quality" or "DVB Auto Setup by Region" only some or no DVB channels are found.**

➢ Check to ensure your area is covered by DVB transmissions.
➢ Check that the aerial and antenna cable are designed for DVB.
➢ Perform "DVB Auto Setup by Signal Quality" in the Setup menu. (⇨ 73)

**Picture regularly breaks up on some channels, "No Signal" message is displayed.**

➢ Check "Signal Condition". If "Signal Quality" or "Signal Strength" are displayed in red or constantly changing, check aerial. If problem persists consult your local TV aerial installer. (⇨ 73)
➢ Check that the aerial and antenna cable are designed for DVB.
➢ Interference (known as impulse noise) from household appliances such as light switches, fridges, etc. may cause picture break up and/or audio distortion. Use a high quality quad shielded coaxial cable fly lead between this unit and antenna wall socket to minimise impulse noise pickup. If problem persists consult your local TV aerial installer.
➢ Check aerial connection.
➢ Adjust the aerial reception with "DVB Manual Tuning". (⇨ 73)
➢ Perform "DVB Auto Setup by Signal Quality" in the Setup menu. (⇨ 73)

**Picture very infrequently breaks up on some or all channels.**

➢ Electrical atmospheric interference caused by local or distant lightning storms or heavy rain with wind in "leafy" locations may cause pictures to break up and audio to mute or distort momentarily.
➢ Impulse noise interference from an infrequently used electrical appliance, or a passing vehicle or lawn mower with a "noisy" ignition system.
➢ Perform "DVB Auto Setup by Signal Quality" in the Setup menu. (⇨ 73)

**Unusual station sorting.**

➢ The station sorting of this unit is pre-defined. Use Favourites to sort the stations as you want them. (⇨ 72)

**The digital channel information does not appear.**

➢ Select the length of time (3–10 sec.) in the "On-Screen Messages" in the Setup menu. (⇨ 76)
➢ The digital channel information will not appear during playback or recording.
➢ Perform "DVB Auto Setup by Signal Quality" in the Setup menu. (⇨ 73)

**No Digital Teletext**

➢ Not all functions of Digital Teletext work on this unit.
➢ When subtitle is on or additional information in the digital channel information is displayed, Digital Teletext does not work.
➢ Perform "DVB Auto Setup by Signal Quality" in the Setup menu. (⇨ 73)

**After the Auto-Setup, there aren't any stations in the station list although found stations were displayed during Auto-Setup.**

➢ "Shipping Condition" was performed or the unit was in the delivery status. The Auto-Setup was then started and interrupted.
Do an Auto-Setup again and let it continue right through to the end. The data is only saved after this has been completed.

**The Signal Strength is over 100% (> 10)**

➢ Reduce the signal amplification at your aerial. (⇨ 73)

**After performing an software update, you can no longer receive broadcasts.**

➢ Depending on the content of the software update, some settings may have returned to the preset values. Perform "Shipping Condition" in the Setup menu and then set the channel.(⇨ 13, 78)

## General Issues — VIERA Link

**VIERA Link doesn't work.**

➢ Check the HDMI cable connection. Check that "HDMI" is displayed on the front display when the unit is powerng on.
➢ Make sure that "VIERA Link" is set to "On". (⇨ 77)
➢ Check the "HDAVI Control" settings on the connected device.
➢ Some functions may not work depending on the version of "HDAVI Control" of the connected equipment. This unit supports "HDAVI Control 5" function.
➢ If the connection for the equipment connected with an HDMI cable was changed, or if there was a power failure or the plug was removed from the household mains socket, "HDAVI Control" may not work. In this case, perform the following operations.
  1 When the HDMI cable is connected to all equipment with the power on, turn the TV (VIERA) on again.
  2 Change the TV (VIERA) settings for the "HDAVI Control" function to off, and then set to on again. (For more information, see the VIERA operating instructions.)
  3 Switch the VIERA input to HDMI connection with this unit, and after this unit's screen is displayed, check that "HDAVI Control" is working.

**The Control Panel does not appear.**

➢ The control panel is only displayed when connected to a TV with "HDAVI Control 2" or later function. (⇨ 45)

**The operation on this unit (music playback etc.) is interrupted.**

➢ The operation on this unit may be interrupted when you press buttons on the TV remote control that do not work for VIERA Link functions.

## General Issues USB

### The contents of the USB memory cannot be read.

➤ Remove the USB memory from the USB port and then insert again. If this does not solve the problem, turn off and turn on the unit again.
➤ Check that the USB memory is inserted correctly. (⇨ 82)
➤ The format of the USB memory or of its contents is not compatible with the unit. (The contents on the USB memory may be damaged.) (⇨ 17, 18)
➤ The USB memory contains a folder structure and/or file extensions that are not compatible with this unit. (⇨ 18)
➤ Turn off and then turn on the unit again.
➤ USB memories connected using a USB extension cable or a USB hub may not be recognized by this unit.
➤ Some USB memories cannot be used with this unit. (⇨ 17)
➤ If inserted during playback, recording or copying etc., the USB memory may not be recognized by this unit.

## Playback Issues Picture

### The images from this unit do not appear on the TV. Picture is distorted.

➤ Make sure the connections are pushed in firmly. (⇨ 10, 11, 12, 80, 81)
➤ Try connecting an alternative cable.
➤ Make sure recorder is connected to an appropriate AV input of the TV. (⇨ 10, 11, 12, 80, 81)
➤ Make sure the TV's input setting (e.g., AV1) is correct.
➤ The TV isn't compatible with RGB signals.
  Set "AV1 Output" in the Setup menu to "Video". (⇨ 77)
➤ The unit's "TV System" setting differs from the TV system used by the disc now playing. While stopped, keep pressing [■] and [▲ OPEN/CLOSE] on the main unit for 5 or more seconds.
  The system switches from PAL to NTSC or vice versa. (⇨ 76)
➤ When this unit is connected with an HDMI cable, use a disc that matches with this unit's TV system.
➤ Picture may not be seen when more than 4 devices are connected with HDMI cables.
  Reduce the number of connected devices.

### TV reception worsens or becomes impossible after connecting the unit.

➤ This can occur because the signals are being divided between the unit and other equipment. It can be solved by using a signal booster, available from electronics retailers.
➤ Broadcast signals may not be output from this unit's RF OUT terminal. Select "On" in "RF OUT ( Aerial Signal )" in the Setup menu.(⇨ 78)

### Picture does not appear during timer recording.

➤ Timer recordings work regardless of whether the unit is on or off. To confirm the timer recording is going to work properly, turn the unit on.

### The screen changes automatically.

➤ When "Screen Saver" in the Setup menu is set to "On", the display may turn to the screen saver mode automatically if there is no operation for 5 minutes or more. Press [OK] to return to the previous screen.
➤ Set "Screen Saver" in the Setup menu to "Off" to turn off the screen saver function. (⇨ 76)

### The 4:3 aspect ratio picture expands left and right. Screen size is wrong.

➤ If you connect an HDMI cable, set "Aspect for 4:3 Video" in the Setup menu to "16:9". (⇨ 77)
➤ Check the settings for "TV Aspect" in the Setup menu. (⇨ 76)
  It may be possible to adjust the display mode on the TV. Refer to your television's operating instructions.

### Titles recorded with 16:9 aspect are stretched vertically.

➤ 16:9 aspect programmes are recorded in 4:3 aspect in the following cases.
  – **-R** **-R DL** **-RW(V)** If you recorded or copied using "EP" or "FR (recordings 5 hours or longer)" recording mode.
  – If you recorded or copied to a +R, +R DL or +RW.
  It may be possible to adjust the display mode on the TV. Refer to your television's operating instructions.

### There is a lot of after-image when playing video.

➤ Set "Playback NR" in the Picture menu to "Off". (⇨ 69)

### There is no apparent change in picture quality when making adjustments in the Picture menu using the on-screen display.

➤ The effect cannot be seen with certain types of video.

### Cannot see the beginning of the title played.

➤ (If connecting to a TV that supports VIERA Link with an HDMI cable)
  When [▶] (PLAY) is pressed on this unit's remote control, but you may not be able to see the beginning of the title played until the picture is displayed on the TV. Using [|◀◀], return to the beginning of the title.

### The picture is distorted during play, or video will not play correctly.

➤ You may be playing a TV programme recorded with poor reception or unfavourable weather conditions.
➤ The picture may be distorted or a black screen may appear briefly between recorded titles in the following situations:
  – between titles recorded with different recording modes.
  – between scenes recorded with different aspect ratios.
  – between scenes recorded with different resolutions.
  – between playlist chapters.
➤ Make sure the connections are pushed in firmly. (⇨ 10, 11, 12, 80, 81)
➤ Try connecting an alternative cable.

## Playback Issues Sound

### No sound.
### Low volume.
### Distorted sound.
### Cannot hear the desired audio type.

➤ Check the connections and the "Digital Audio Output" settings. Check the input mode on the amplifier if you have connected one. (⇨ 10, 11, 12, 75, 77, 81)
➤ Check if TV is muted.
➤ Check if amplifier is muted.
➤ Sound is not output while fast-forwarding during chasing playback and simultaneous record and playback.
➤ Audio may not be output due to how files were created. (DivX)
➤ The sound effects will not work when the bitstream signal is output from the HDMI AV OUT terminal or the DIGITAL AUDIO OUT terminal.
➤ Audio may not be heard when more than 4 devices are connected with HDMI cables. Reduce the number of connected devices.
➤ To output audio from a device connected with an HDMI cable, set "Digital Audio Output" to "HDMI and Optical" in the Setup menu. (⇨ 77)
➤ Depending on the connected equipment, the sound may be distorted if this unit is connected with an HDMI cable.
➤ Make sure the connections are pushed in firmly. (⇨ 10, 11, 12, 80, 81)
➤ Try connecting an alternative cable.

Reference

VQT2J27

# Troubleshooting Guide

## Playback Issues — Sound (Continued)

### Cannot switch audio.

➢ You cannot switch the audio in the following cases.
  – When a DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL or +RW disc is in the disc tray while DVD drive is selected.
  – When the recording mode is XP and "Audio Mode for XP Recording" is set to "LPCM". (⇨ 75)
➢ When recording a digital broadcast with multiple audio channels, this unit will record only the audio channel selected in "DVB Multi Audio" in the on-screen display. The audio channel cannot be switched during playback. (⇨ 69)
➢ You have used a digital connection. Set "Dolby Digital" to "PCM" or connect using audio cables (analogue connection). (⇨ 75, 81)
➢ There are discs whose audio cannot be changed due to how the disc was created.

## Playback Issues — Operation

### Play fails to start even when [►] (PLAY) is pressed. Play starts but then stops immediately.

➢ Insert the disc correctly with the label facing up. (⇨ 82)
➢ The disc is dirty, scratched or marked. (⇨ 82)
➢ You tried to play a blank disc or a disc that is unplayable on the unit. (⇨ 15, 16, 18)
➢ You tried to play a +RW that needs to be finalised on the equipment used for recording.
➢ You may be able to copy a "One time only recording" title that was recorded to DVD-RAM using a different Panasonic DVD Recorder to this unit's HDD, but play is not possible due to copyright protection.
➢ When recording to DVD-RAM using EP ( 8 hours ) mode, play may not be possible on DVD players that are compatible with DVD-RAM. In this case use EP ( 6 hours ) mode. (⇨ 74)
➢ You cannot play discs during DV automatic recording.
➢ If playing DivX VOD content, refer to the homepage where you purchased it. (DivX) (⇨ 39)
➢ Make sure that the TV is turned on. If the menu or messages are displayed, follow the on-screen instructions.

### Audio and video momentarily pause.

➢ This occurs between playlist chapters.
➢ This occurs between chapters and with partially deleted titles on finalised DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL and +RW that have been copied using the high speed mode.
➢ This occurs as scenes change during Quick View (Play ×1.3).
➢ **-R DL** **+R DL** When playing a title recorded on both layers, the unit automatically switches between layers and plays the title in the same way as a normal programme. However, video and audio may momentarily cut out when the unit is switching layers. (⇨ 15)

### DVD-Video is not played.

➢ Ensure the DVD-Video region number for the disc is correct, and the disc is not defective. (⇨ Cover)
➢ You have set a ratings level to limit DVD-Video play. Change this setting. (⇨ 74)

### Alternative soundtrack and subtitles cannot be selected.

➢ The languages are not recorded on the disc.
➢ You may not be able to use the on-screen menus to change the soundtrack and subtitles on some discs. Use the disc's menus to make changes. (⇨ 20)

### No subtitles.

➢ Subtitles are not recorded on the disc.
➢ Turn the subtitles on and select "Text" or the subtitle number. (⇨ 68)

### Angle cannot be changed.

➢ This function depends on software availability. Angles can only be changed during scenes where different angles are recorded.

### You have forgotten your ratings PIN.

➢ With the tray open, press [DRIVE SELECT] to select the DVD drive, then press and hold [● REC] and [►] (PLAY/ ×1.3) on the main unit simultaneously for about 5 or more seconds.

### Quick View (Play ×1.3) does not work.

➢ This does not work when audio is other than Dolby Digital.
➢ This does not work while recording in XP or FR mode.

### The resume play function does not work.

➢ Memorized positions are cancelled when
  – press [■] several times.
  – open the disc tray.
  – **CD** **VCD** **USB** turn off the unit.
  – execute a recording or timer recording.

## Playback Issues — Operation (Continued)

### The Video CD picture does not display properly.

- When connecting to Multi-system TV, select "NTSC" in "TV System" in the Setup menu. (⇨ 76)
- When connecting to PAL TV, the lower part of the picture cannot be displayed correctly during search.

### Time Slip, Manual Skip, etc. does not work.

- These functions do not work with finalised discs.
- Time Slip does not work when the unit's "TV System" settings are different from the title recorded on the disc. (⇨ 76)

### It takes time before play starts.

- This is normal on DivX video. (DivX)

### Picture stops.

- Picture may stop if the DivX files are greater than 4 GB. (DivX)

### Cannot see the beginning of the title played.

- (If connecting to a TV that supports VIERA Link with an HDMI cable)
  When [►] (PLAY) is pressed on this unit's remote control, you may not be able to see the beginning of the title played until the picture is displayed on the TV. Using [◄◄], return to the beginning of the title.

## Playback Issues — Music

### ID3 tag of a MP3 file or WMA tag of a WMA file is not completely displayed.

- Only the track name (**HDD** **USB**) and artist name (**HDD**) can be displayed with this unit.

## Playback Issues — Still Pictures

### Cannot display DIRECT NAVIGATOR screen.

- This screen cannot be displayed during recording or copy or while the unit is standing by for linked timer recording with external equipment.

### Still pictures (JPEG) do not playback normally.

- The images that were edited on the PC, such as Progressive JPEG etc., may not playback. (⇨ 18)

## Recording Issues — Recording/Timer Recording/Copying/External input

### Cannot record.
### Cannot copy.

- You haven't inserted a disc or the disc you inserted cannot be recorded on. Insert a disc the unit can record onto. (⇨ 15)
- **RAM** **-RW(V)** **+R** **+R DL** **+RW** The disc is unformatted. Format the disc. (⇨ 70)
- Some programmes have limitations on the number of times they can be recorded (CPRM). (⇨ 24, 96)
- The disc is protected with the "DVD Management" settings.(⇨ 70)
- The disc is full or nearly full. Delete unneeded titles (**HDD** **RAM** **-RW(V)** **+RW**) or use another disc. (⇨ 23, 48, 70)
- You cannot directly record to a DVD-R DL or +R DL disc on this unit. Record to the HDD and then copy to the disc.
- Video cannot be recorded onto a DVD-R with still images recorded on it.
- **-R DL** **+R DL** In the following situations, you cannot copy. Delete unnecessary titles from the HDD and then copy.
  - If there is not enough space available on the HDD (If you will copy titles from the HDD to a blank disc and fill the entire disc, HDD disc space equivalent to 4 hours of SP mode recording is necessary).
  - If the number of recorded titles and the number of titles to be copied has exceeded 499. (⇨ 23, 48, 70)
- You cannot record and copy on finalised DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL discs. However, you can record and copy again if you format DVD-RW.
- If you repeatedly insert discs or turn the unit on and off about 50 times or more, the recording or editing of DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL, and +RW discs may be disabled.
- DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL and +RW discs recorded on this unit may not be recordable on other Panasonic DVD Recorders.
- This unit cannot record NTSC signals to discs that already have PAL signal recordings.
  (However, both types of programmes can be recorded onto the HDD.)
  Play of discs recorded with both PAL and NTSC on another unit is not guaranteed. (⇨ 76)
- Some broadcasts are copyright protected. (⇨ 15, 24, 96)

### Timer recording does not work properly.

- The timer programme is incorrect or different timer programme times overlap. Correct the programme. (⇨ 31)
- The programme is not in timer recording standby. ("⏱" in the timer recording list is not on.) (⇨ 31)
  1. Press [PROG/CHECK].
  2. Press [▲, ▼] to select the programme and press the "Red" button.
- The clock is not correct. Set the clock. (⇨ 14)
- The programme information in the GUIDE Plus+ system may not be correct. It is recommended to modify the start and end times to allow a margin of a few minutes. (⇨ 22)

# Troubleshooting Guide

| | Recording/Timer Recording/Copying/ External input (Continued) |
|---|---|
| **Recording Issues** | |

### Timer recording does not stop even when [■] is pressed.

➢ When using the linked timer recording with external equipment, press [EXTLINK]. ("EXT-L" on the unit's display disappears.) (⇨ 28)
➢ If you start recording immediately after turning on the unit while "Power Save in Standby" is not activated (Quick Start mode), you cannot then stop recording for a few seconds.
➢ Make sure that the recording drive is selected. Press [DRIVE SELECT] to select the recording drive. (⇨ 21)

### The timer programme remains even after recording finishes.

➢ The timer programme remains if set to daily, weekly or series timer recording. (⇨ 30, 31, 34)

### Part or all of a recorded title has been lost.

➢ If the power shuts down or the AC mains lead is disconnected from the household mains socket while recording or editing, the title may be lost or the HDD/disc may become unusable. We cannot offer any guarantee regarding lost titles or discs. You will have to format the disc (HDD RAM -RW(V) +RW) or use a new disc. (⇨ 70)

### Stripe-shaped black noise is recorded.

➢ An external playback device is interfering with the TV because the device is too close to the TV. Move the device away from the TV.

### The programme name and the recorded title do not match.

➢ There was a programme change after timer recording was set but the recorded title still has the old programme name.

### Cannot copy to a DVD-R, etc, disc using the high speed mode.

➢ When recording to the HDD, set "Recording Format" to "Video format" in the Setup menu. (The default setting is "Video format"). (⇨ 74)
➢ In the following cases, high speed mode does not work, even if the titles were recorded with "Recording Format" set to "Video format". (⇨ 58)
  – +R +R DL +RW If recorded in "EP" or "FR (recordings 5 hours or longer)" mode
  – +R +R DL +RW If recorded in 16:9 aspect
  – -R -R DL -RW(V) If recorded in 16:9 aspect using "EP" mode or "FR" (recordings 5 hours or longer) mode
➢ +R +R DL +RW Titles recorded on other Panasonic DVD Recorders with "Recording Format" ("Rec for High Speed Copy") set to "Video format" ("On"), and then copied to the HDD on this unit may not copy to +R, +R DL or +RW discs with high-speed copy.

### When copying, it takes a long time even in high speed mode.

➢ Use a disc that is compatible with high speed recording. Even if the disc is high speed recording compatible, the maximum speed may not be possible due to the condition of the disc.
➢ It takes longer than normal to copy many titles.
➢ You cannot high speed copy to DVD-R titles longer than 6 hours when using other Panasonic DVD Recorders that are not compatible with EP (8 Hours) mode recording.

### An unusually loud sound is coming from the rotating DVD-R, etc.

➢ When recording or high speed copying to a DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL and +RW the sound of the disc rotating may be louder than normal, however, this is not a problem.

### Cannot record video or sound from the external device.

➢ The external device is not correctly connected. (⇨ 11, 12, 29, 80, 81)
➢ The proper external input channel (AV2, AV3, or DV) is not selected. Press [INPUT SELECT] to change.

### The DV auto recording function does not work.

➢ If images cannot be recorded or if the recording is aborted, check the connections and the DV equipment settings. (⇨ 29)
➢ You cannot start recording until the images from the DV equipment appear on the television.
➢ Recording may not be performed as desired if the time codes on the tape in the DV equipment are not successive.
➢ Depending on the equipment, the DV automatic recording may not operate properly.
➢ You can only record audio/video images on a DV tape.

## Recording Issues　Music

### Tracks could not be copied to the HDD.
➢ If there are copyright protected tracks such as SCMS restrictions, they will not be copied.
➢ Recording from CDs that do not conform to CD-DA specifications (copy control CDs, etc.) cannot be guaranteed.
➢ Bonus tracks may not be copied.

## Editing Issues　HDD & DVD

### Cannot edit.
➢ You may not be able to edit on the HDD if there is no available space.
Delete any unwanted titles to create empty space. (⇨ 23, 48, 70)

### Cannot format.
➢ The disc is dirty. Wipe with a damp cloth and then wipe dry. (⇨ 82)
➢ Disc may be defective or of poor quality.
➢ You tried formatting a disc that is not compatible with the unit. (⇨ 15, 16, 70)

### Cannot create chapters.
### Cannot mark the start point or the end point during "Partial Delete" operation.
➢ The unit writes the chapter division information to the disc when you turn it off or remove the disc.
The information is not written if there is an interruption in the power.
➢ These operations are not possible with still pictures.
➢ You cannot set points if they are too close to each other. You cannot set an end point before a start point.

### Cannot delete chapters.
➢ HDD RAM When the chapter is too short to delete, use "Combine Chapters" to make the chapter longer. (⇨ 50)

### The available recording time doesn't increase even after deleting titles on the disc.
➢ Available space on DVD-R, DVD-R DL, +R, or +R DL does not increase even after deleting previous titles.
➢ Available space on DVD-RW (DVD-Video format) or +RW increases when you delete the last title.

### Cannot create a Playlist (Video).
➢ You cannot select all the chapters at once in a title if the title also includes still pictures. Select them individually.

## Editing Issues　Still Pictures

### Cannot edit or format a card.
➢ Release the card's protection setting. (With some cards, the "Write Protection Off" message sometimes appears on the screen even when protection has been set.) (⇨ 70)

### The contents of the card cannot be read.
➢ Remove the card from the slot and then insert again. If this does not solve the problem, turn off and turn on the unit again.
➢ The card format is not compatible with the unit. (The contents on the card may be damaged.)
This unit is compatible with SD Memory Cards that meet SD Card Specifications FAT12 and FAT16 formats, as well as SDHC Memory Cards in FAT32 format. (⇨ 17)
➢ The card contains a folder structure and/or file extensions that are not compatible with this unit. (⇨ 17, 18)
➢ You can use SD Memory Cards with capacities from 8 MB to 2 GB and SDHC Memory Cards with capacities from 4 GB to 32 GB.
➢ This unit cannot play AVCHD format motion pictures or MPEG4 on an SD card.

### Copying, deleting, and setting protection takes a long time.
➢ When there are a lot of folders and files, it may sometimes take a few hours.
➢ When repeating copying or deleting, it may sometimes take a long time. Format the disc or card. (⇨ 70)

### Can not copy JPEG files to disc.
➢ You can copy JPEG files from HDD or SD to DVD-RAM or DVD-R or from USB memory to DVD-RAM. (⇨ 64)

# Glossary

**Bitstream**
This is a signal compressed and converted into digital form. It is converted back to a multi-channel audio signal, e.g., 5.1-channel, by a decoder.

**CPRM (Content Protection for Recordable Media)**
CPRM is technology used to protect broadcasts that are allowed to be recorded only once. Such broadcasts can be recorded only with CPRM-compatible recorders and discs.

**Decoder**
A decoder restores the coded audio signals on DVDs to normal. This is called decoding.

**Deep Colour**
This unit incorporates HDMI (V.1.3a with Deep Colour) technology that can reproduce greater colour gradation (4096 steps) when connected to a compatible TV.
You can enjoy exceptionally rich, natural-looking colours, with smooth, detailed gradation and minimal colour banding.
[A lower colour gradation (256 steps), without Deep Colour, will be reproduced if connected to a TV which does not support Deep Colour. The unit will automatically set appropriate output to suit the connected TV.]

**DivX**
DivX is a popular media technology created by DivX, Inc. DivX media files contain highly compressed video with high visual quality that maintains a relatively small file size.

**Dolby Digital**
This is a method of coding digital signals developed by Dolby Laboratories. Apart from stereo (2 channel) audio, these signals can also be multi-channel audio. A large amount of audio information can be recorded on one disc using this method.
When recording on this unit Dolby Digital (2 channel) is the default audio.

**Down-mixing**
This is the process of remixing the multi-channel audio found on some discs into two channels. It is useful when you want to listen to the 5.1-channel audio recorded on DVDs through your TV's speakers. Some discs prohibit down-mixing. If this is the case, this unit can only output the front two channels.

**Drive**
In the instance of this unit, this refers to the hard disk (HDD), disc (DVD) and SD card (SD). These perform the reading and writing of data.

**DTS (Digital Theater Systems)**
This surround system is used in many movie theaters. There is good separation between the channels, so realistic sound effects are possible.

**Dynamic range**
Dynamic range is the difference between the lowest level of sound that can be heard above the noise of the equipment and the highest level of sound before distortion occurs. Dynamic range compression means reducing the gap between the loudest and softest sounds. This means you can hear dialogue clearly at low volume.

**Film and Video**
DVD-Video are recorded using either film or video. The unit can determine which type has been used, then uses the most suitable method of progressive output.

| | |
|---|---|
| Film: | Recorded at 25 frames per second (PAL discs) or 24 frames per second (NTSC discs). (NTSC discs recorded at 30 frames per second as well.) Generally appropriate for motion picture films. |
| Video: | Recorded at 25 frames/50 fields per second. (PAL discs) or 30 frames/60 fields per second (NTSC discs). Generally appropriate for TV drama programmes or animation. |

**Finalise**
A process that makes play of a recorded CD-R, CD-RW, DVD-R, etc. possible on equipment that can play such media. You can finalise DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, and +R DL on the unit. After finalising, the disc becomes play-only and you can no longer record or edit. However, finalised DVD-RW can be formatted to become recordable.

**Folder**
This is a place on the hard disk, disc or SD card where groups of data are stored together. In the case of this unit, it refers to the place where still pictures (JPEG) and MPEG2 are stored.

**Formatting**
Formatting is the process of making media such as DVD-RAM recordable on recording equipment.
You can format DVD-RAM, DVD-RW (only as DVD-Video format), SD card, +RW, and the HDD or unused +R and +R DL on this unit. Formatting irrevocably erases all contents.

**Frame and Field**
Frame refers to the single images that constitute the video you see on your TV. Each frame consists of 2 fields.



**Frame**     **Field**     **Field**
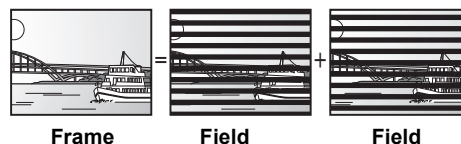
● A frame still shows 2 fields, so there may be some blurring between them, but picture quality is generally better.
● A field still shows less picture information so it may be rougher, but there is no blurring.

**HDD (Hard disk drive)**
This is a mass data storage device used in computers, etc. A disk with a surface that has been treated with magnetic fluid is spun and a magnetic head is brought in close proximity to facilitate the reading and writing of large amounts of data at high speed.

**HDMI (High-Definition Multimedia Interface)**
Unlike conventional connections, it transmits uncompressed digital video and audio signals on a single cable. This unit supports high-definition video output [720p (750p), 1080i (1125i) and 1080p (1125p)] from HDMI AV OUT terminal. To enjoy high-definition video a high definition compatible television is required.

**JPEG (Joint Photographic Experts Group)**
This is a system used for compressing/decoding colour still pictures. If you select JPEG as the storage system on digital cameras, etc., the data will be compressed to 1/101/100 of its original size. The benefit of JPEG is less deterioration in picture quality considering the degree of compression.

**LPCM (Linear PCM)**
These are uncompressed digital signals, similar to those found on CDs.

**MPEG2 (Moving Picture Experts Group)**
A standard for efficiently compressing and expanding colour video. MPEG2 is a compression standard used for DVD and satellite based digital broadcasting. This unit records programmes using MPEG2. SD Video files shot with a Panasonic SD video camera, etc. can be copied to the HDD or a DVD-RAM disc.

**MP3 (MPEG Audio Layer 3)**
An audio compression method that compresses audio to approximately 1/10 of its size without any significant loss of audio quality.

**Pan & Scan/Letterbox**
In general, DVD-Video are produced with the intention that they will be viewed on a widescreen TV (16:9 aspect ratio), so images often don't fit regular TVs (4:3 aspect ratio). 2 styles of picture, "Pan & Scan" and "Letterbox", deal with this problem.

| | | |
|---|---|---|
| Pan & Scan: | The sides are cut off so the picture fills the screen. |  |
| Letterbox: | Black bands appear at the top and bottom of the picture so the picture itself appears in an aspect ratio of 16:9. |  |

**Playback control (PBC)**
If a Video CD has playback control, you can select scenes and information with menus on the screen.
(This unit is compatible with version 2.0 and 1.1.)

## Protection
You can prevent accidental erasure by setting writing protection or erasure protection.

## RGB
This refers to the three primary colours of light, red (R), green (G), and blue (B) and also the method of producing video that uses them. By dividing the video signal into the three colours for transmission, noise is reduced for even higher quality images.

## Sampling frequency
Sampling is the process of converting the heights of sound wave (analogue 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.

## Signal Quality
This is the guide for checking the aerial direction. The numbered values displayed do not indicate the strength of the signal, but the quality of the signal (the signal to noise ratio, or "S/N"). The channels you can receive are affected by weather conditions, seasons, time (day/night), region, length of the cable that is connected to the aerial, etc.

## Thumbnail
This refers to a miniature representation of a picture used to display multiple pictures in the form of a matrix.

## WMA
WMA is a compression format developed by Microsoft Corporation. It achieves the same sound quality as MP3 with a file size that is smaller than that of MP3.

## 1080i
In one high-definition image, 1080 (1125) alternating scan lines pass every 1/50th of a second to create an interlace image. Because 1080i (1125i) more than doubles current television broadcasts of 480i (525i), the detail is much clearer and creates a more realistic and rich image.

## 1080p
In one high-definition image, 1080 (1125) scan lines pass at the same time every 1/50th of a second to create a progressive image. Since progressive video does not alternate scan lines like interlace, there is a minimal amount of screen flicker.

## 720p
In one high-definition image, 720 (750) scan lines pass at the same time every 1/50th of a second to create a progressive image. Since progressive video does not alternate scan lines like interlace, there is a minimal amount of screen flicker.

# Specifications

| | |
|---|---|
| Power supply: | AC 220 V to 240 V, 50 Hz |
| Power consumption: | Approx. 32 W |
| Standby mode: ("Power Save in Standby" is activated and "RF OUT ( Aerial Signal )" is set to "Off".) | Approx. 0.3 W |
| ("Power Save in Standby" is not activated.) | Approx. 12 W |

**Recordable discs:**

DVD-RAM: 2X SPEED (Ver. 2.0), 2–3X SPEED (Ver. 2.1)
2–5X SPEED (Ver. 2.2)
DVD-R (SL): 1X SPEED (Ver. 2.0), 1–4X SPEED (Ver. 2.0)
1–8X SPEED (Ver. 2.0), 1–16X SPEED (Ver. 2.1)
DVD-R (DL): 2–4X SPEED (Ver. 3.0), 2–8X SPEED (Ver. 3.0)
DVD-RW: 1X SPEED (Ver. 1.1), 1–2X SPEED (Ver. 1.1)
2–4X SPEED (Ver. 1.2), 2–6X SPEED (Ver. 1.2)
+R (SL): 2.4X SPEED (Ver. 1.0), 2.4–4X SPEED (Ver. 1.1)
2.4–8X SPEED (Ver. 1.2)
2.4–16X SPEED (Ver. 1.3)
+R (DL): 2.4X SPEED (Ver. 1.0), 2.4–8X SPEED (Ver. 1.1)
+RW: 2.4X SPEED (Ver. 1.1), 2.4–4X SPEED (Ver. 1.2)

**Recording system:**

| | |
|---|---|
| DVD-RAM: | DVD Video Recording format |
| DVD-R: | DVD-Video format |
| DVD-R DL (Dual Layer): | DVD-Video format |
| DVD-RW: | DVD-Video format |
| +R | |
| +R DL (Double Layer) | |
| +RW | |

**Recording time:**

Max. 8 hours (using 4.7 GB disc)
XP: Approx. 1 hour    SP: Approx. 2 hours
LP: Approx. 4 hours    EP: Approx. 6 hours or 8 hours
Maximum Approx. 441 hours with 250 GB HDD (EP 8 hours mode)
XP: Approx. 55 hours    SP: Approx. 110 hours
LP: Approx. 221 hours    EP: Approx. 331 hours/441 hours

**Playable discs:**

| | |
|---|---|
| DVD-RAM: | DVD Video Recording format JPEG |
| DVD-R: | DVD-Video format, MP3[1], WMA[1], JPEG[1], DivX[1] |
| DVD-R DL (Dual Layer): | DVD-Video format, MP3[1], WMA[1], JPEG[1], DivX[1] |
| DVD-RW: | DVD Video Recording format, DVD-Video format |
| +R | |
| +R DL (Double Layer) | |
| +RW | |
| DVD-Video, CD-Audio (CD-DA), Video CD, SVCD[2] | |
| CD-R/CD-RW: | CD-DA[1], Video CD[1], SVCD[1], [2], MP3[1], WMA[1], JPEG[1], DivX[1] |

| | |
|---|---|
| Internal HDD capacity: | 250 GB |

**Optical pick-up:**

System with 1 lens, 2 integration units
(662 nm wavelength for DVDs, 780 nm wavelength for CDs)

**LASER Specification**

Class 1 LASER Product
Wave Length: 780 nm (CDs)
662 nm (DVDs)
Laser Power: No hazardous radiation is emitted with the safety protection

**Television system**

| | |
|---|---|
| Tuner System: | DVB-T |
| Channel Coverage: | UK |
| UHF: | 21 to 68 ch |
| RF converter output: | Not provided |

**Video**

| | |
|---|---|
| Video system: | PAL colour signal, 625 lines, 50 fields NTSC colour signal, 525 lines, 60 fields |
| Recording system: | MPEG2 (Hybrid VBR) |

## Notes

● Specifications are subject to change without notice.
● Usable capacity will be less (SD Card).

| | |
|---|---|
| Video In (PAL/NTSC): | AV1/AV2 (21 pin), AV3 (pin jack) 1 Vp-p 75 Ω, termination |
| S-Video In (PAL/NTSC): | AV2 (21 pin) 1 Vp-p 75 Ω, termination |
| RGB In (PAL): | AV2 (21pin) 0.7 Vp-p (PAL) 75 Ω, termination |
| Video Out (PAL/NTSC): | AV1/AV2 (21 pin), Video Out (pin jack) 1 Vp-p 75 Ω, termination |
| S-Video Out (PAL/NTSC): | AV1 (21 pin), 1 Vp-p 75 Ω, termination |
| RGB Out (PAL/NTSC): | AV1 (21 pin), 0.7 Vp-p (PAL) 75 Ω, termination |

**Audio**

| | |
|---|---|
| Recording system: | Dolby Digital 2 ch, Linear PCM (XP mode) |
| Audio In: | AV1/AV2 (21 pin), AV3 (pin jack) |
| Input Level: | Standard: 0.5 Vrms, Full scale: 2.0 Vrms at 1 kHz |
| Input Impedance: | More than 10 kΩ |
| Audio Out: | AV1/AV2 (21 pin), Audio Out (pin jack) |
| Output Level: | Standard: 0.5 Vrms, Full scale: 2.0 Vrms at 1 kHz |
| Output Impedance: | Less than 1 kΩ |
| Digital Audio Out: | Optical terminal (PCM, Dolby Digital, DTS, MPEG) |

| | |
|---|---|
| DV Input: | IEEE 1394 Standard, 4 Pin :1pc |

**USB**

| | |
|---|---|
| USB port: | Type A: 1 pc |
| USB standard: | USB 2.0 High Speed |
| Format: | FAT16, FAT32 |
| Video (SD-Video)[3] Codec: | MPEG2 (SD-Video Entertainment Video Profile) |
| File Format: | SD-Video format conforming |
| HDMI Output: | 19 pin type A: 1pc HDMI™ (V.1.3a with Deep Colour) |

This unit supports "HDAVI Control 5" function.

**SD Card**

| | |
|---|---|
| Slot: | SD Memory Card Slot: 1pc |
| Compatible media: | SD Memory Card[4], SDHC Memory Card[4], MultiMediaCard |
| Format: | FAT12, FAT16[5] (In case of SD Memory Card, MultiMediaCard) FAT32[5] (In case of SDHC Memory Card) |

Still Picture (JPEG)
Image File Format: JPEG conforming DCF (Design rule for Camera File system)
Number of pixels: Between 34×34 and 6400×6400
Sub sampling: 4:2:2, 4:2:0

Video (SD-Video)[6]
Codec: MPEG2 (SD-Video Entertainment Video Profile)
File Format: SD-Video format conforming

**Others**

| | |
|---|---|
| Regional Code: | # 2 |
| Operating temperature range: | 5 °C to 40 °C |
| Operating humidity range: | 10 % to 80 % RH (no condensation) |
| Dimensions (W×H×D): | 430 mm×59 mm×286 mm |
| Mass: | Approx. 3.5 kg |

[1] Finalising is necessary for compatible playback.
[2] Conforming to IEC62107
This unit is not compatible with "Chaoji Video CD" available on the market including CVD, DVCD and SVCD that do not conform to IEC62107.
[3] Video Recording conversion and transfer is possible from Panasonic digital video camera with HDD etc, to HDD or DVD-RAM disc. After Video Recording conversion and transfer to HDD or DVD-RAM disc, the playback is possible.
[4] Includes miniSD or miniSDHC Cards. (A miniSD or miniSDHC adaptor needs to be inserted.) Includes microSD or microSDHC Cards. (A microSD or microSDHC adaptor needs to be inserted.)
[5] Long file name is unsupported.
[6] Video Recording conversion and transfer is possible from card to HDD or DVD-RAM disc. After Video Recording conversion and transfer to HDD or DVD-RAM disc, the playback is possible.

# 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.

# 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.

# WARNING:

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

# CAUTION

Danger of explosion if battery is incorrectly replaced. Replace
only with the same or equivalent type recommended by the
manufacturer. Dispose of used batteries according to the
manufacturer's instructions.

THIS UNIT IS INTENDED FOR USE IN MODERATE CLIMATES.

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.
The mains plug of the power supply cord shall remain readily
operable.
To completely disconnect this apparatus from the AC Mains,
disconnect the power supply cord plug from AC receptacle.

## Information for Users on Collection and Disposal of Old Equipment and used Batteries

These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste.
For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC and 2006/66/EC.
By disposing of these products and batteries correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.
For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.
Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

### For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

### [Information on Disposal in other Countries outside the European Union]

These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

### Note for the battery symbol (bottom two symbol examples):

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

Cd

CLASS 1
LASER PRODUCT

(Back of product)

| DANGER | VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.  FDA 21 CFR/Class IIIb |
|---|---|
| CAUTION | CLASS 3B VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO THE BEAM.  IEC60825-I +A2/Class 3B |
| ATTENTION | RAYONNEMENT LASER VISIBLE ET INVISIBLE. CLASSE 3B, EN CAS D'OUVERTURE. EVITER UNE EXPOSITION AU FAISCEAU. |
| FORSIGTIG | SYNLIG OG USYNLIG LASERSTRÅLING KLASSE 3B, NÅR LÅGET ER ÅBENT. UNDGÅ AT BLIVE UDSAT FOR STRÅLEN. |
| VARO | AVATTAESSA OLET ALTTIINA LUOKAN 3B NÄKYVÄÄ JA NÄKYMÄTÖNTÄ LASERSÄTEILYÄ. VARO ALTISTUMISTA SÄTEELLE. |
| VARNING | KLASS 3B SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. UNDVIK EXPONERING FÖR STRÅLEN. |
| VORSICHT | SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG KLASSE 3B, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN. |
| 注意 | 打开时有可见及不可见激光辐射。避免光束照射。 |
| 注意 | ここを開くと可視及び不可視レーザ光が出ます。ビームを見たり、触れたりしないでください。 VQL1J70 |

(Inside of product)

- For your safety, be sure not to connect or handle the equipment with
  wet hands.

# Index

EU

Environment friendly printed on chlorine free bleached paper.

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*VQT2J27*