Operating Instructions

DVD Recorder

Model No. **DMR-EZ48V**

Panasonic®

DVD VIDEO RAM

DVD RW/R

COMPACT disc DIGITAL VIDEO

VHS PAL NTSC

RAM COMPATIBLE RECORDER

HDMI™ HIGH-DEFINITION MULTIMEDIA INTERFACE

G-CODE®

DVB Digital Video Broadcasting

VIERA Link

Region number supported by this unit

Region numbers are allocated to DVD Recorders and DVD-Video according to where they are sold.

● The region number of this unit is "**4**".
● The unit will play DVD-Video marked with labels containing "**4**" or "**ALL**".

Example:

4   ALL   234

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.

This DVD Recorder is for viewing and recording free to view channels only, not pay TV or encrypted channels.
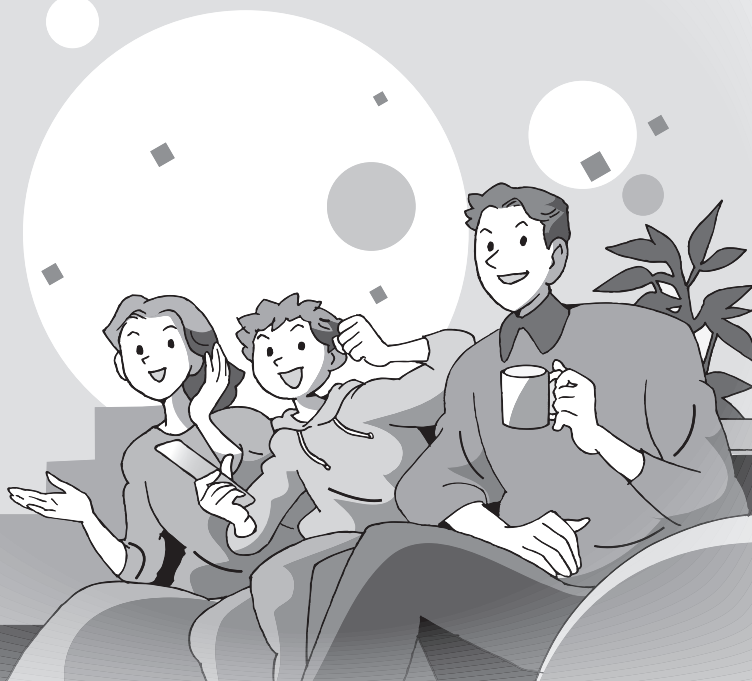
Trademark of the DVB Digital Video Broadcasting Project (1991 to 1996)

Declaration of Conformity No. 5155, 16th November 2007

Notice for DVB functions
● **Any function related to DVB (Digital Video Broadcasting) will work in areas where DVB-T (MPEG2) digital terrestrial broadcasting is received. Consult your local Panasonic dealer with coverage areas.**
● **This unit has the capability for DVB specifications. But future DVB services cannot be guaranteed.**
● **This unit does not support MHP (Multimedia Home Platform).**

Table of contents

About descriptions in these operating instructions
●Pages to be referred to are indicated as "➜ ○○".

Getting started

Quick Start
Guide

Basic
operations

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operations

Editing

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Setting menus

Reference

Included accessories

Please check and identify the supplied accessories.
(Product numbers correct as of April 2008. These may be subject to change.)

(N2QAYB000136)

1 Remote control
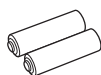
2 Batteries
for remote control

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

2 RF coaxial cable

1 Audio/video cable

The remote control information

■ Batteries
● Insert so the poles (+ and −) match those in the remote control.
● Do not use rechargeable type batteries.
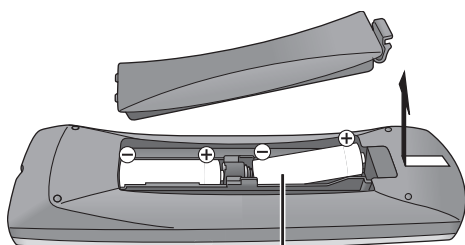
R6/LR6, AA

● 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.

Remote control operations (➡ 6)

■ Use
Remote control signal sensor

20°
30°
20°
30°

7 m directly in front of the unit

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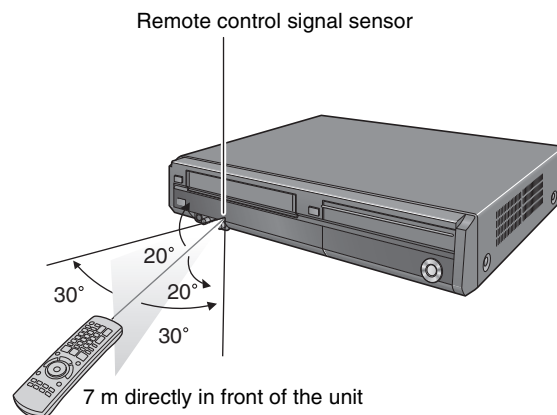
The precision parts in this unit are readily affected by the environment, especially temperature, humidity, and dust. Cigarette smoke also can cause malfunction or breakdown.

● Do not place the unit on amplifiers or equipment that may become hot.
The heat can damage the unit.
● The unit should not be installed or operated near large magnets or electromagnetic devices. Such devices can damage pre-recorded VHS recordings.
● Before moving the unit, ensure the disc tray and cassette compartment are empty. Failure to do so will risk severely damaging the disc and the unit.
● Do not place any heavy objects on top of the unit.
● The unit should not be mounted in a vertical position. It's designed to operate in the horizontal position.

DO NOT
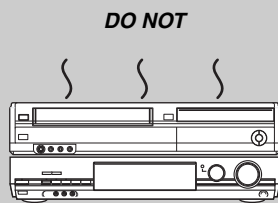
Cautions about condensation
Condensation can cause unreliable playback of VHS recordings.
Condensation may form in the following cases,
● The unit is brought from cold surroundings into a well-heated room.
● The unit is suddenly brought from cool surroundings, such as an airconditioned room or car, to a place which is hot and humid.
● During rainy seasons.
In any of the above-mentioned conditions, do not operate the unit for at least 2 hours. The unit is not equipped with a moisture sensor.

∎ Maintenance
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.

Cleaning the DVD lens
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** 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 for sale depending on the region.

Cleaning the video heads
Dirt on the video heads can cause poor recording and play.
● If the picture does not improve, use a head-cleaning cassette. If the problem persists seek advice from a qualified service personnel.

Select a position with good ventilation when installing the unit. Do not block the cooling fan on the rear of the unit

Included accessories/The remote control information/Unit care

RQT9127

5

Control reference guide

Remote control

Instructions for operations are generally described using the remote control.
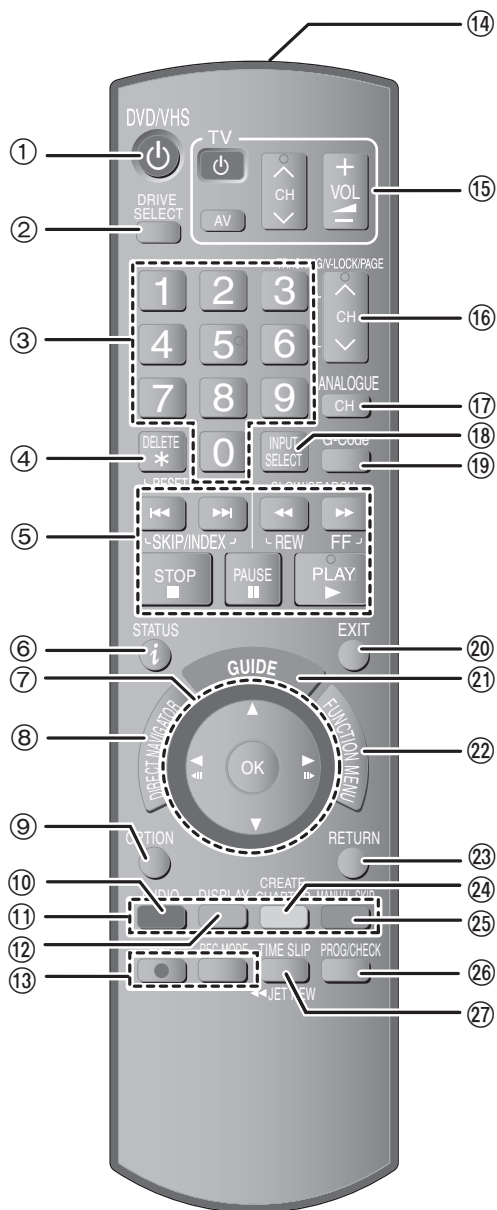
① Turn the unit on (➡ 10)
② Select drive (DVD or VHS) (➡ 16, 18, 38)
  Drive changes each time you press [DRIVE SELECT].
③ Select channels and title numbers, etc./Enter numbers
④ To delete unnecessary recorded titles (➡ 22)
  Reset the tape counter (➡ 35)
⑤ Basic operations for recording and play
⑥ Show digital channel information (➡ 15)/Programme information
  within TV Guide screen (➡ 31)/Show status messages (➡ 54)
⑦ Selection/OK, Frame-by-frame (➡ 32)
⑧ Show DIRECT NAVIGATOR (➡ 33, 42)
⑨ Show OPTION menu (➡ 41)
  This menu is used when playing or editing titles, etc.
⑩ Select audio (Analogue broadcast only) (➡ 33)
⑪ Colour buttons
  – for TV Guide operations (➡ 31)
  – for switching Video/Playlists (➡ 50)
  – for tuning settings (➡ 59)
⑫ Show on-screen menu (➡ 53)
  Menu for disc playback and changing DVB multi audio etc.
⑬ Recording functions
  ●[● REC] Start recording (➡ 18)
  ●[REC MODE] Change recording mode (➡ 18)
⑭ Transmit the remote control signal
⑮ Television operations (➡ 66)
⑯ Channel select/Change pages in the TV Guide system
  (➡ 18, 31)
  TRACKING/V-LOCK(➡ 35)
⑰ Select analogue channel (➡ 15)
⑱ Input select (AV1, AV2 or DV) (➡ 27)
⑲ Show G-CODE screen (➡ 29)
⑳ Exit the menu screen
㉑ Show the TV Guide screen (➡ 19)
㉒ Show FUNCTION MENU window (➡ 39)
  By using the FUNCTION MENU window you may access the main
  functions (Playback, Recording, etc.) quickly and easily.
㉓ Return to previous screen
㉔ Create chapter (➡ 32)
㉕ Skip approx. 1 minute forward (➡ 32)
㉖ Show Timer Recording screen (➡ 29)
㉗ Skip the specified time (➡ 32)
  Jet rewind (➡ 34)

Main unit

Remote Control signal sensor

Cassette compartment

Disc tray

The unit's display
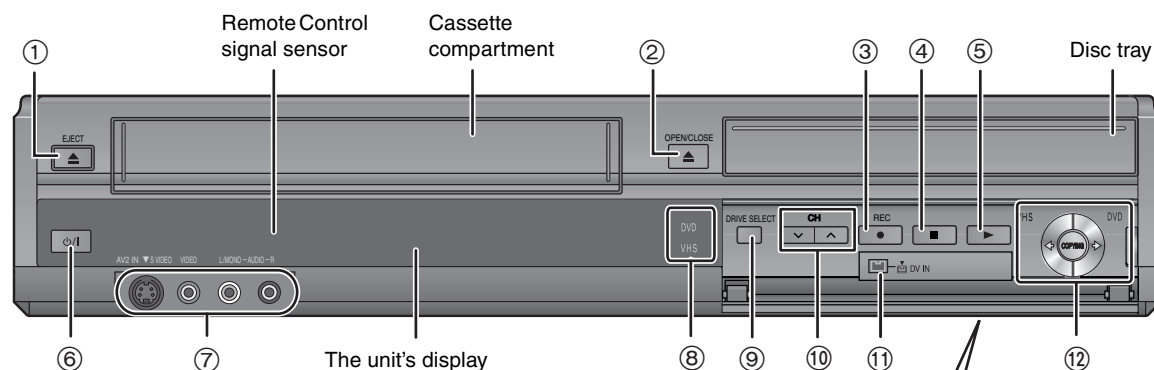
Opening the front panel
Press down on the ____ part with your finger.
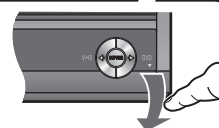
① Cassette eject button (➡ 14)
② Disc tray open/close button (➡ 14, 16)
③ Start recording button (➡ 18)
④ Stop button (➡ 16, 17, 18, 32)
⑤ Play/x1.3 button (➡ 17, 32)
⑥ **Standby/on switch (⏻/l) (➡ 10)**
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
⑦ AV2 input terminals (➡ 27)
⑧ DVD/VHS drive indicator (➡ 16,18)
● Lights when the DVD or VHS drive is selected.

⑨ DRIVE SELECT button (➡ 16, 18, 38)
● Drive changes each time you press [DRIVE SELECT].
⑩ Channel Select button (➡ 15, 18)
⑪ DV IN terminal (for a digital video camcorder) (➡ 28)
⑫ One Touch Copying operation button
● From VHS to DVD (➡ 20)
● From DVD to VHS (➡ 21)

The unit's display

① (for VHS)   ④   ⑤   ⑥   ⑦   ① (for DVD)

② ③ (for VHS)   ③ (for DVD) ⑧
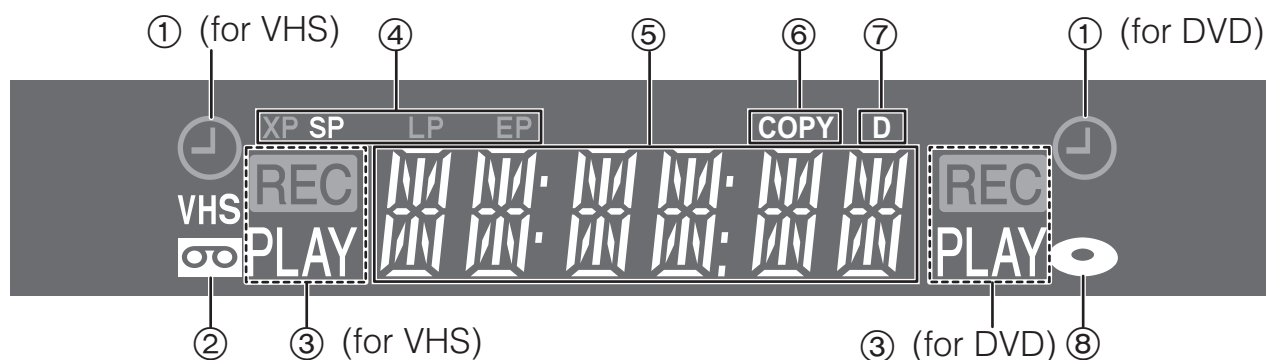
① Timer recording indicator (⏱) (➡ 19. 29)
On:
When a timer recording programme is registered and a recordable disc or video cassette is inserted.
Flashes:
When the unit cannot record a timer recording programme (e.g., there is no disc or video cassette, etc.).
② Tape indicator
③ Operation status
④ Recording mode indicator (➡ 18, 24)

⑤ Main display
⑥ Copying indicator
⑦ Digital broadcast indicator
Lights when the unit is receiving digital broadcast or TV Guide data.
⑧ Disc indicator

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STEP 1 Connection

Make sure to use the pair of supplied RF coaxial cables
Use the pair of supplied RF coaxial cables only when you make connections to the unit through its RF IN and RF OUT terminals. Striping may appear and disrupt images on the TV if you use different cables for connection.

●Before connection, turn off all equipment and read the appropriate operating instructions.
●**Confirm connections not listed below with your dealer.**

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. 4.3 W (Power Save mode)]

When "Power Save" is set to "On", the "Quick Start" function does not work.

DVD output and DVD/VHS output

The unit has DVD/VHS COMMON OUT terminals and DVD priority out terminals.

This unit's rear panel

DVD/VHS COMMON OUT
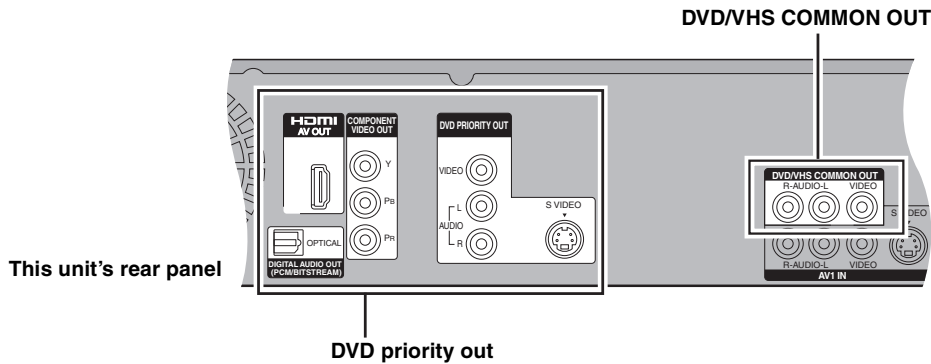
DVD priority out

DVD/VHS COMMON OUT
●For DVD/VHS COMMON OUT terminals, both DVD and VHS signals can be output.

DVD priority out
●This is the dedicated terminal to enjoy pictures played on DVD in higher picture quality. (➡ 9, 67)
●The DVD priority out terminals can also output the VHS signal. However this is not possible during DVD recording or DVD timer recording.

Connecting a television

To household mains socket
(AC 220 to 240 V, 50 Hz)

To the aerial

Aerial cable

Television's rear panel

Red White Yellow

4

AC mains lead
(included)
Connect only after all other connections are complete.

Other connections
(➡ 9, 67)

3

2   **1**

RF coaxial cable
(included)

Audio/Video cable
(included)

Cooling fan

Red White Yellow

This unit's rear panel

RF coaxial cable
(included)
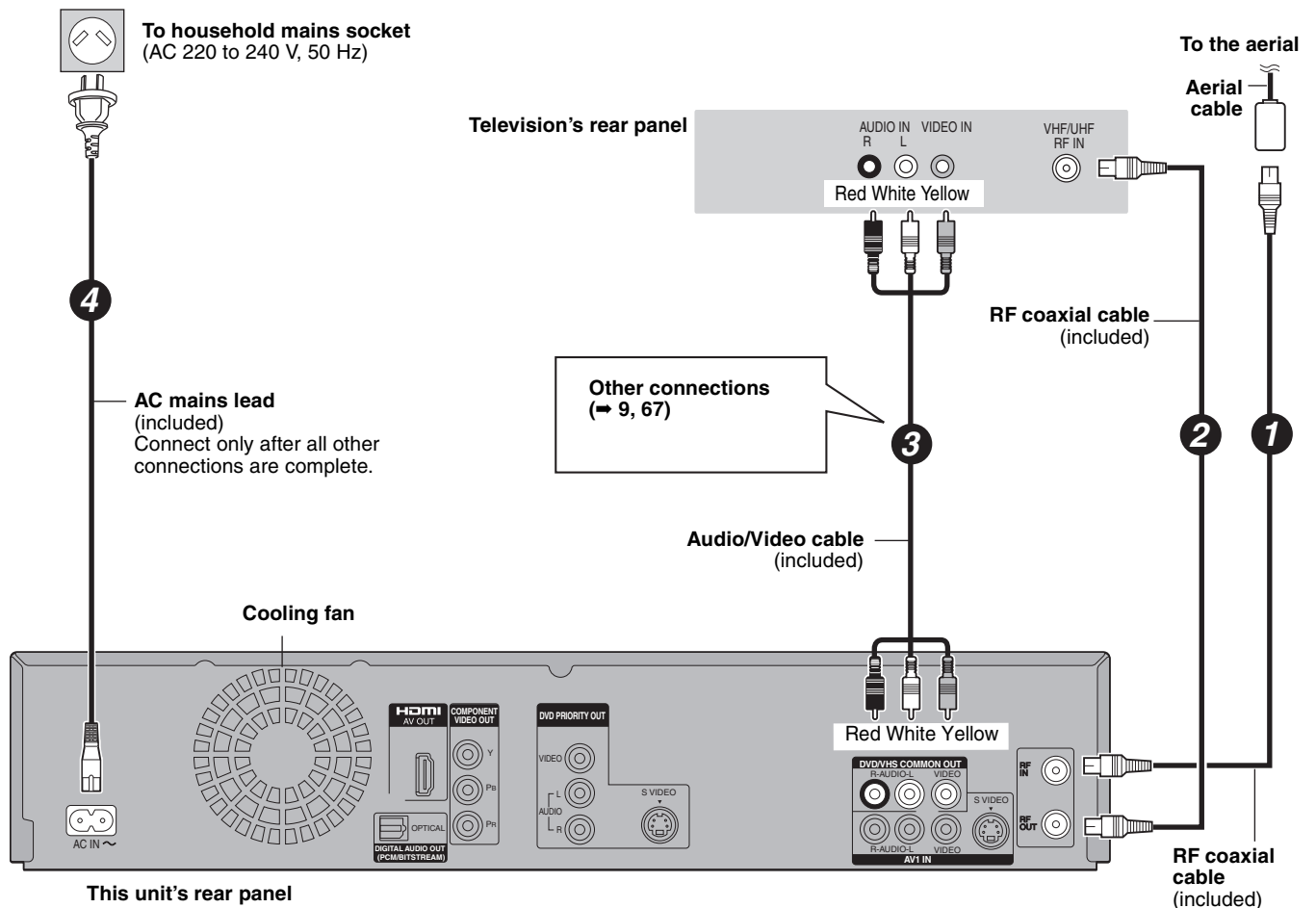
When a digital TV and another piece of equipment such as a VCR are connected to this unit:
If the broadcast signal is input into a TV through another piece of external equipment, then the signal will be attenuated and even digital broadcasts cannot be received. Split the broadcast signal from the antenna using a splitter so that the broadcast signal can be directly fed to the TV.

You can enjoy high-quality picture by changing the connection between this unit and your TV as follows.

Connecting to a TV with an HDMI (High Definition Multimedia Interface) cable

When connected to an HDMI compatible unit, an uncompressed digital audio and video signal is transmitted. You can 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.1.3 with Deep Colour) technology.
● 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 outputting 1080p signal, 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. [➡ 40, Linked operations with the TV (VIERA Link "HDAVI Control™")]
● **Non-HDMI-compliant cables cannot be utilised.**
● **It is recommended that you use Panasonic's HDMI cable.**
  Recommended part number:
  RP-CDHG10 (1.0 m), RP-CDHG15 (1.5 m), RP-CDHG20 (2.0 m), RP-CDHG30 (3.0 m), RP-CDHG50 (5.0 m), etc.

Television's rear panel

HDMI IN

AV IN
AUDIO IN VIDEO IN
R   L
Red White Yellow

HDMI cable

Audio/Video cable
(included)

HDMI AV OUT

HDMI AV OUT   COMPONENT VIDEO OUT   Y Pb Pr

DVD PRIORITY OUT
VIDEO
AUDIO L R   S VIDEO

Red White Yellow

DVD/VHS COMMON OUT
R-AUDIO-L   VIDEO   S VIDEO   RF IN

AC IN ~

OPTICAL
DIGITAL AUDIO OUT (PCM/BITSTREAM)

R-AUDIO-L   VIDEO   S VIDEO   RF OUT
AV1 IN

This unit's rear panel

Required setting
Set "Digital Audio Output" to "HDMI and Optical" (➡ 63). (The default setting is "HDMI and Optical".)

Note
● If you are connecting to a TV that is only compatible with 2 channel audio output, audio with 3 channels or more will be down mixed (➡ 81) 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 units compatible with HDCP (High-Bandwidth Digital Content Protection) copyright protection that are equipped with a digital DVI input terminal (PC monitors, etc.):
  Depending on the unit, images may not display properly or at all when connecting with a DVI/HDMI switching cable. (Audio cannot be output.)
● Usually you can watch video from HDMI input on TV. When you want to playback VHS while recording on DVD, switch to an appropriate AV input on TV.

2

DVD/VHS — **2**

TV

Numbered buttons — 1 2 3 / 4 5 6 / 7 8 9 / 0

3,4,5 — OK

RETURN — **RETURN**

1 Turn on the television and select the appropriate AV input to suit the connections to this unit.

2 Press [⏻ DVD/VHS] to turn the unit on.

DVB Auto-Setup starts. The unit will search for the terrestrial digital channels.
This takes about 5 minutes.
- ≥Terrestrial digital channels are stored into logical channels numbers.
- ≥Analogue channels are preset at the time of shipping. If you would like to add new TV channels, set them manually (➡ 59).
- ≥When the Download from TV screen appears (➡ right)

DVB Auto-Setup

Please wait!	Ch 6				69
Prog.	Channel	Service Name	Net ID	TS ID	Quality
1	352	ABC	12302	12289	9
2	354	ABC 2	12302	12289	9

RETURN: to cancel

🔘 RETURN
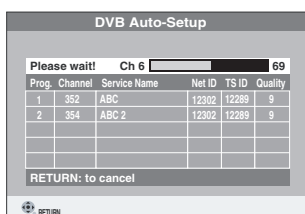
DVB Auto-Setup is complete when Region Selection setting screen appears.
The time information for your region can be obtained.

Region Selection

NSW / ACT
Victoria
Queensland
South Australia
Western Australia
Northern Territory
Tasmania
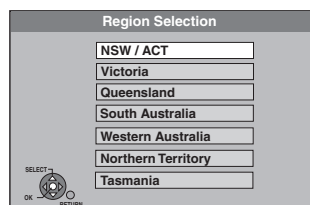
SELECT
OK RETURN

- ≥**If the clock setting screen is displayed, set the clock manually.**

  1 Press [◄, ►] to select the item you want to change and press [▲, ▼] to change the setting.
  The items change as follows:
  Hour←→Minute←→Second←→Day←→Month←→Year

  - ≥You can also use the numbered buttons for setting.
  2 Press [OK] when you have finished the settings.
  (➡ Go to step 4)

3 Press [▲, ▼] to select your region and press [OK].
Quick Start setting screen appears.

Quick Start (➡ 64)
If you select "On",
  –the unit starts recording in about 1 second※ after you press [● REC] while the unit is turned on.
  –the unit displays the TV Guide screen in less than 1 second after you press [GUIDE] while the unit is turned off.
  ※ Only when recording to DVD-RAM.

4 Press [▲, ▼] to select "On" or "Off" and press [OK].
TV aspect setting screen appears.

TV Aspect

16:9 WIDE TV
  16:9

4:3 TV
  Pan & Scan
  Letterbox
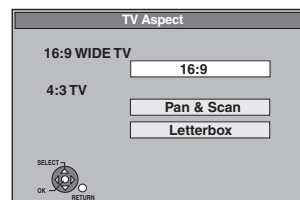
SELECT
OK RETURN

5 Press [▲, ▼] to select the TV aspect and press [OK].

- ≥**16:9**:
  When connected to a 16:9 widescreen television

- ≥**Pan & Scan**:
  When connected to a 4:3 aspect television, side picture is trimmed for 16:9 picture (➡ 81).

- ≥**Letterbox**:
  When connected to a 4:3 aspect television. 16:9 picture is shown in the letterbox style (➡ 81).

To stop partway
Press [RETURN].

■ **To confirm that stations have been tuned correctly (➡ 59)**

■ **To restart set up (➡ 58)**

■ **Download from the TV**
If this unit is connected to a Panasonic TV (VIERA) supporting HDAVI Control 3 via an HDMI cable, then the setting information on the TV is acquired by this unit when the unit is turned on for the first time. Please proceed to the following steps.

Download from TV

Download in progress. Please wait.
RETURN : to cancel
  ► ▷ ▷

🔘 RETURN

After Download from TV is complete, Quick Start setting or screen appears.
- ≥If the clock setting screen is displayed, set the clock manually. (➡ left)

Press [▲, ▼] to select "On" or "Off" and press [OK].

When television picture appears, set up is complete.

To stop partway
Press [RETURN].

Note
- ≥Acquisition of the setting information is not supported by all Panasonic TVs (VIERA).
- ≥The acquisition may take some time depending on the VIERA setting information.

Disc information

Discs you can use for recording and play

(◯: Possible, −: Impossible)

Disc type / Standard symbol	Logo	Data that can be recorded and played	Rewritable	Play on other players[1]	Recording 16:9 aspect picture[2]	Recording both M 1 and M 2 for bilingual broadcasts[2]	Copy-once recording (CPRM)
DVD-RAM `RAM`	DVD RAM RAM4.7	Video	◯	◯	◯	◯	◯ CPRM (➡ 81) compatible discs only.
DVD-R `-R` before finalisation `DVD-V` after finalisation	DVD R4.7	Video	−	◯	◯	−[3] (Either one)	−
DVD-R DL `-R DL` before finalisation `DVD-V` after finalisation	DVD R DL	Video	−	◯	◯	−[3] (Either one)	−
DVD-RW `-RW(V)` before finalisation `DVD-V` after finalisation	DVD R W	Video	◯	◯	◯	−[3] (Either one)	−
+R `+R` before finalisation `DVD-V` after finalisation	−	Video	−	◯	− (4:3 aspect)	−[3] (Either one)	−
+R DL `+R DL` before finalisation `DVD-V` after finalisation	−	Video	−	◯	− (4:3 aspect)	−[3] (Either one)	−
+RW `+RW`	−	Video	◯	◯	− (4:3 aspect)	−[3] (Either one)	−

[1] `-R` `-R DL` `-RW(V)` `+R` `+R DL`
Finalisation needed for playback on other equipment (➡ 56).
`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 (➡ 23, Important notes for recording)

[3] The audio selected in "Bilingual Audio Selection" (➡ 61) is recorded.

- `RAM` `-RW(V)` `+R` `+R DL` `+RW` To use a new disc, formatting is necessary (➡ 56).
- `+RW` If the disc failed to play on other equipment, we recommend you create top menu (➡ 57).
- Use of Panasonic discs is recommended.
  For available recording times for different discs under different recording modes, see "Recording modes and approximate recording times" (➡ 24).
- Formatting and/or recording/initializing constraints may prevent you from playing or recording certain discs.
- Please see specifications (➡ 80) for compatible disc versions and recording speeds.

STEP 2 Channel reception settings and TV aspect settings/Disc information

∎ Recording format

This unit records video in the following formats.

DVD Video Recording format `RAM`

This is a recording method which allows you to record and edit television broadcasts and so on.
● You can delete unwanted parts of a title, create playlists, etc.
● The broadcasts that allow "One time only recording" can be recorded to a CPRM compatible disc.

DVD-Video format `-R` `-R DL` `-RW(V)`

This recording method is the same as commercially available DVD-Video.
● The broadcasts that allow "One time only recording" cannot be recorded even if using a CPRM compatible disc.
● After finalising the disc, you can play the disc on DVD players and other equipment.

+VR (+R/+RW Video Recording) format `+R` `+R DL` `+RW`

This is a method for recording moving pictures to +R/+RW discs. You can playback such discs recorded in this method in a similar way as contents recorded in the DVD-Video format.
● The broadcasts that allow "One time only recording" cannot be recorded.
● After finalising the disc or creating the top menu, you can play the disc on DVD players and other equipment.

Note
● +R discs recorded with this unit and +R discs recorded with another Panasonic DVD Recorder may be incompatible. However, discs that are finalised are compatible and can be played.
● This unit cannot record NTSC signals to discs that already have PAL signal recordings.
● You may not be able to record depending on the condition of the discs and you may not be able to play due to the condition of the recording.
● The explanations concerning discs are indicated by `DVD` and those concerning video cassettes are indicated by `VHS`.

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 RW	`-RW(VR)`	DVD-RW recorded on another DVD recorder ● You can play programmes that allow One time only recording if they have been recorded onto a CPRM compatible disc. ● By formatting (➡ 56) the disc, you can record onto it in DVD-Video format. ● It may be necessary to finalise the disc on the equipment used for recording.
DVD-R DVD-R DL	DVD R R4.7 / DVD R R DL	DivX	● DVD-R※ and DVD-R DL※ with video recorded in DivX
CD	COMPACT disc DIGITAL AUDIO	`CD`	Recorded audio and music (including CD-R/RW※)
	–	DivX, MP3, JPEG	● CD-R and CD-RW※ with video recorded in DivX ● CD-R and CD-RW※ with music recorded in MP3 ● CD-R and CD-RW※ with still pictures recorded in JPEG
Video CD	COMPACT disc DIGITAL VIDEO	`VCD`	● Recorded music and video (including CD-R/RW※)

※ Close the session after recording. Play may be impossible on some discs due to the condition of the 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.
● Operation and sound quality of CDs that do not conform to CD-DA specifications (copy control CDs, etc.) cannot be guaranteed.

Discs that cannot be played

● 2.6 and 5.2 GB DVD-RAM, 12 cm
● 3.95 and 4.7 GB DVD-R for Authoring
● DVD-R, DVD-R DL, DVD-RW, +R, +R DL recorded on another unit and not finalised (➡ 81).
● Discs recorded with AVCHD format.
● DVD-Video with a region number other than "4" or "ALL"
● DVD-Audio
● Blu-ray, HD DVD
● DVD-ROM, +R (8 cm), CD-ROM, CDV, CD-G, Photo CD, CVD, SVCD, SACD, MV-Disc, PD, etc.

Which Disc Types is Playable on What TV

When you use a discs recorded in either PAL or NTSC, refer to this table.

TV type	Disc	Playable※1
Multi-system TV	PAL	○
	NTSC	○
PAL TV	PAL	○
	NTSC	○※2 (PAL60)
NTSC TV	PAL	–
	NTSC	○※3

※1 Playable (○: Possible, –: Impossible)
※2 If your TV is not equipped to handle PAL 525/60 signals the picture will not be displayed correctly.
※3 Select "NTSC" in "TV System" (➡ 62).

Regarding DivX files, MP3 files and still pictures (JPEG)

DivX

Playable media	**-R** **-R DL** **CD**
File format	DivX ●Files must have the extension ".DIVX", ".divx", ".AVI" or ".avi".
Number of folders	Maximum number of folders recognizable: 300 folders (including the root folder)
Number of files	Maximum number of files recognizable[*1]: 200 files
Support version	Plays all versions of DivX video (including DivX 6) with standard playback of DivX media files. Certified to the DivX Home Theater Profile. Video –Number of stream: Up to 1 –Codec: DIV3, DIV4, DIVX, DV50 –Picture size: 32 x 32 to 720 x 576 –FPS (Frame Per Second): Up to 30 fps Audio –Number of stream: Up to 8 –Format: MP3, MPEG, AC3 –Multi channel: AC3 is possible. MPEG multi is 2 ch conversion. GMC (Global Motion Compensation) is not supported.

MP3

Playable media	**CD**
File format	MP3 ●Files must have the extension ".mp3" or ".MP3".
Number of folders (groups)	Maximum number of folders (groups) recognizable: 300 folders (groups) (including the root folder)
Number of files (tracks)	Maximum number of files (tracks) recognizable[*1]: 3000 files (tracks)
Bit rates	32 kbps to 320 kbps
Sampling frequency	16 kHz/22.05 kHz/24 kHz/32 kHz/44.1 kHz/48 kHz
ID3 tags	not compatible

●If there is a large amount of still picture data etc. within a MP3 file, play may not be possible.

Still pictures (JPEG[*2])

Playable disc	**CD**
File format	File format: JPEG ●Files must have the extension ".jpg" or ".JPG".
Number of pixels	Between 34×34 and 6144×4096 (Sub sampling is 4:2:2 or 4:2:0)
Number of folders[*3]	Maximum number of folders recognizable: 300 folders (including the root folder)
Number of files[*3]	Maximum number of files recognizable[*1]: 3000 files
MOTION JPEG	not supported

[*1] Total number of recognizable file including MP3, JPEG, DivX and other types of files is 4000.

[*2] It may take a few moments for still pictures to display.

[*3] When there are many files and/or folders, some files may not display or be playable.

-R **-R DL** **CD**
●**CD** Compatible formats: ISO9660 level 1 or 2 (except for extended formats) and Joliet
●This unit is compatible with multi-session but 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) and some files (tracks) may not display or be playable.
●English alphabet and Arabic numerals are displayed correctly. Other characters may not be displayed 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) may not play in the order you numbered them.
●This unit is not compatible with packet-write format.
●Depending on the recording conditions, the disc may not play.

■ Structure of folders displayed by this unit

You can play MP3 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 numbered the folders.

Structure of MP3 folders
CD
Prefix with 3-digit numbers in the order you want to play them.

Root
001 (folder=group)
— 001track.mp3 (file=track)
— 002track.mp3
— 003track.mp3
002 group
— 001track.mp3
— 002track.mp3
— 003track.mp3
— 004track.mp3
003 group
— 001track.mp3
— 002track.mp3
— 003track.mp3
Order of play
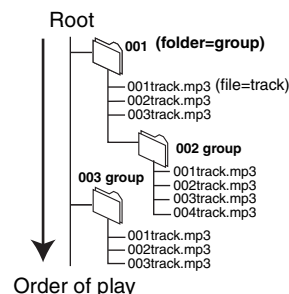
Structures of still picture folders
CD
Files inside a folder are displayed in the order they were updated or taken.

Root
— P0000001.jpg
— P0000002.jpg
002 Folder
— P0000003.jpg
— P0000004.jpg
— P0000005.jpg
003 Folder
— P0000006.jpg
— P0000007.jpg
— P0000008.jpg
— P0000009.jpg
004 Folder
— P0000010.jpg
Order of play
— P0000011.jpg
— P0000012.jpg
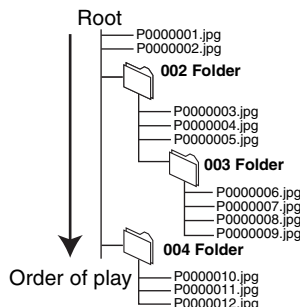
Inserting discs

1 Press [▲ OPEN/CLOSE] on the main unit to open the tray.
≥You can insert a cartridge or non-cartridge disc.

2 Press [▲ OPEN/CLOSE] on the main unit to close the tray.
≥If you insert a DVD-RAM with the write-protect tab set to "PROTECT" (➡ 55), play starts automatically.

Note
≥A double-sided disc should be loaded with the side you want to record/play facing down.
≥It is not possible to record continuously from one side of a double-sided disc to the other. You will need to eject the disc and turn it over.
≥When using 8 cm DVD-RAM or 8 cm DVD-R, remove the disc from the cartridge.

Insert label-up.

Insert label-up with the arrow facing in.
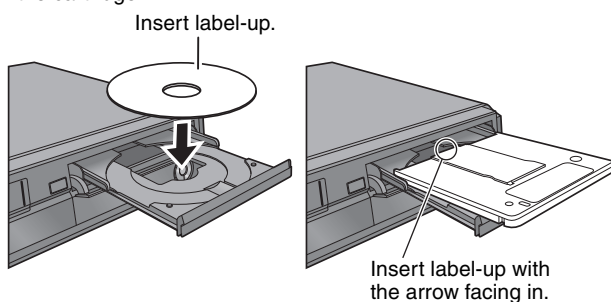
Automatic drive select function
RAM [Only for discs with the write-protect tab on the cartridge set to "PROTECT" (➡ 55, Cartridge-protection)]
DVD-V VCD CD
≥It automatically switches to the DVD drive when a disc is inserted.

Inserting a video cassette

The surface on which you can see a roll of tape should face up.

Insert a video cassette.
≥The unit is automatically turned on.
≥If you insert a video cassette without the accidental erasure prevention tab, play starts automatically.
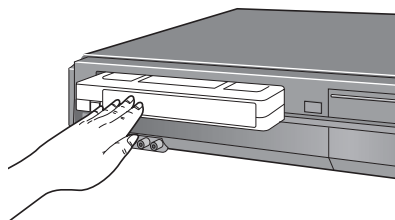
■ To eject a video cassette
≥You can eject a video cassette even when the unit is in standby mode. It switches back to standby once it ejects the video cassette.

For main unit
≥Press [▲ EJECT] on the main unit.

For remote control
≥Press [DRIVE SELECT] to select the VHS and then press and hold [■] for about 3 seconds or more.

Video Cassette information

≥Poor quality or damaged video cassettes can cause the heads to become dirty and malfunction. Store your video cassettes carefully and discard them when they become dirty or damaged.
≥Never use video cassettes on which juice has been spilled or those that are extremely damaged since this will not only cause the heads to become dirty, but will also make the unit malfunction.
≥Break off the video cassette's tab to prevent accidental erasure. Cover the hole with a double layer of adhesive tape when you want to use the video cassette for recording again.

Tab

≥You can use video cassettes with the VHS and S-VHS marks, but the unit is unable to make full use of the characteristics of S-VHS video cassettes.
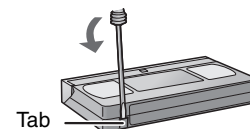
Disc care

■ How to hold a disc
Do not touch the recorded surface.

DO	DO NOT
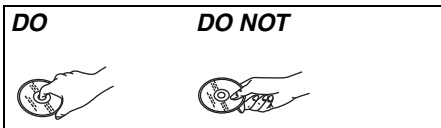
■ Concerning non-cartridge discs
Be careful about scratches and dirt.

■ If there is dirt or condensation on the disc
Wipe with a damp cloth and then wipe dry.

DO	DO NOT
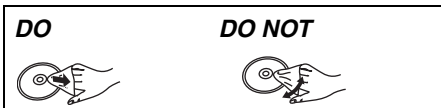
■ Handling precautions
≥Do not attach labels or stickers to discs. (This may cause disc warping and un-balanced rotation, rendering it unusable.)
≥Write on the label side of the disc only with a soft, oil-based felt pen. Do not use ballpoint pens or other hard writing implements.
≥Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.
≥Do not use scratch-proof protectors or covers.
≥Do not drop stack, or impact discs. Do not place objects on them.
≥Do not use the following discs:
– Discs with exposed adhesive from removed stickers or labels (rental discs, etc.).
– Discs that are badly warped or cracked.
– Irregularly shaped discs, such as heart shapes.

DO NOT
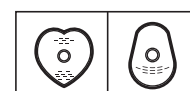
≥Do not place in the following areas:
– In direct sunlight.
– In very dusty or humid areas.
– Near a heater.
– Locations susceptible to significant difference in temperature (condensation can occur).
– Where static electricity or electromagnetic waves occur.
≥To protect discs from scratches and dirt, return them to their cases or cartridges when you are not using them.

Numbered buttons

ANALOGUE CH

STATUS ⓘ

▲, ▼, ◄, ►
OK
"Red"
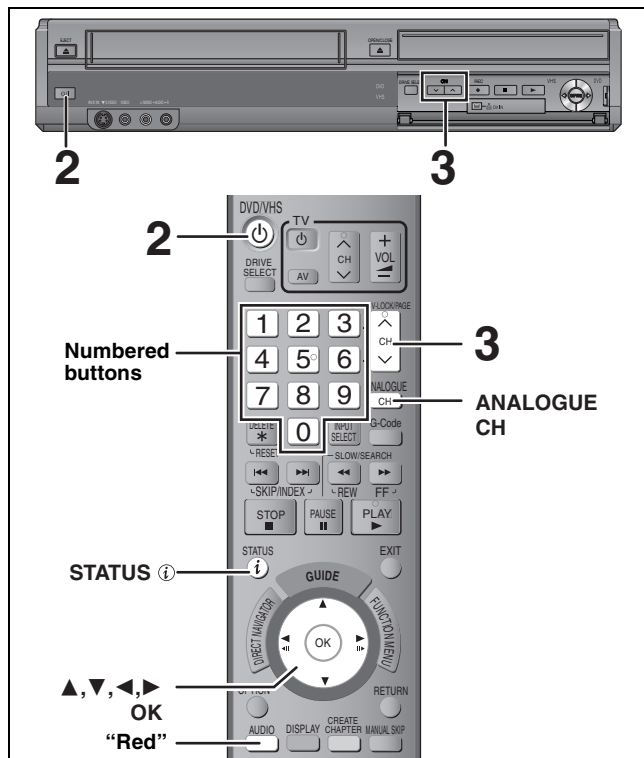
Select the channel

1 **Turn on the television and select the appropriate AV input to suit the connections to this unit.**

2 **Press [⏻ DVD/VHS] to turn the unit on.**

3 **Press [∧ ∨ CH] to select the channel.**

Everytime you change the station, digital channel information appears automatically (terrestrial digital channels only). Channels are displayed in the order of digital channels first, and then followed by analogue channels.

≥**Digital channel**

```
XP              D
  452
         ●
```

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

≥**Analogue channel**

```
XP
  41 A
         ●
```

You can also select the channel with the following steps.
1 Press [ANALOGUE CH].
2 Press the numbered buttons to select the channel.

e.g., 5: [0] ➡ [5]
15: [1] ➡ [5]

Note (Digital broadcast only)
≥This unit can receive Standard Definition (SD) broadcasts, but is unable to receive High Definition (HD) broadcasts.
When High Definition (HD) programmes are broadcast, "Unable to decode HD" is displayed in the digital channel information (➡ right).
≥This unit can receive free cable television but it cannot receive paid services.

Digital channel information

While stopped
Press [STATUS ⓘ] to show the information screen.

Programme name
Channel
Station Name
Progress of the current programme
Signal Quality (➡ below)
Current time
Group

```
352 ABC2        No Signal  18:53 All Services
ABC News                    Change Favourite ▭
19:00 - 19:30 ▭▬ ◄NOW►            info ⓘ
Encrypted   PG   Multi Audio
```

Change the group (➡ 58).

Programme is broadcast in multi-channel sound (➡ 54, DVB Multi Audio)

The parental ratings level is displayed.

During scrambled broadcasting
(Cannot be viewed with this unit.)

Broadcast time

To switch information of the current programme and the next programme
Press [◄, ►].
To show detailed information about the programme
Press [STATUS ⓘ] again (only when "infoⓘ" is displayed).
To hide the information screen
Press [STATUS ⓘ] once or twice.

Signal Quality

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

If "No Signal" is displayed:
≥Adjust the position and direction of the aerial.
≥Check that the current digital broadcast channel is correctly broadcasting.

Note
You can also select the other channel when the information screen is displayed by pressing [▲, ▼] and [OK].

∎ If a software update is available, a notification is displayed on the digital channel information

```
352 ABC2        No Signal  18:53 All Services
ABC News                    Change Favourite ▭
19:00 - 19:30 ▭▬ ◄NOW► Software update ▭
Encrypted   PG   Multi Audio
```
Software update
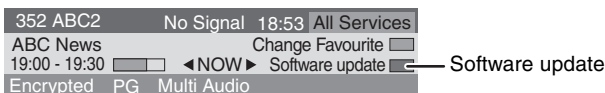
Press the "Red" button to launch software update screen.

∎ If New service message appears

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 all created groups are deleted. The timer recording programmes are also cancelled.)

```
          New Service
A new DVB Service has been found.
Start DVB Auto-Setup?
Selecting DVB Auto-Setup will delete
the current Favourite settings
and all Timer Programmes.
      Yes          No

        OK ○ RETURN
```
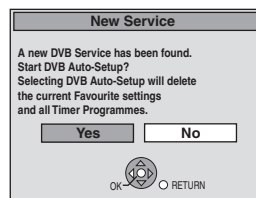
The display/hide setting can be changed (➡ 62, New Service Message).

Refer to "Advanced disc playback" (➡ 32) for detail information.
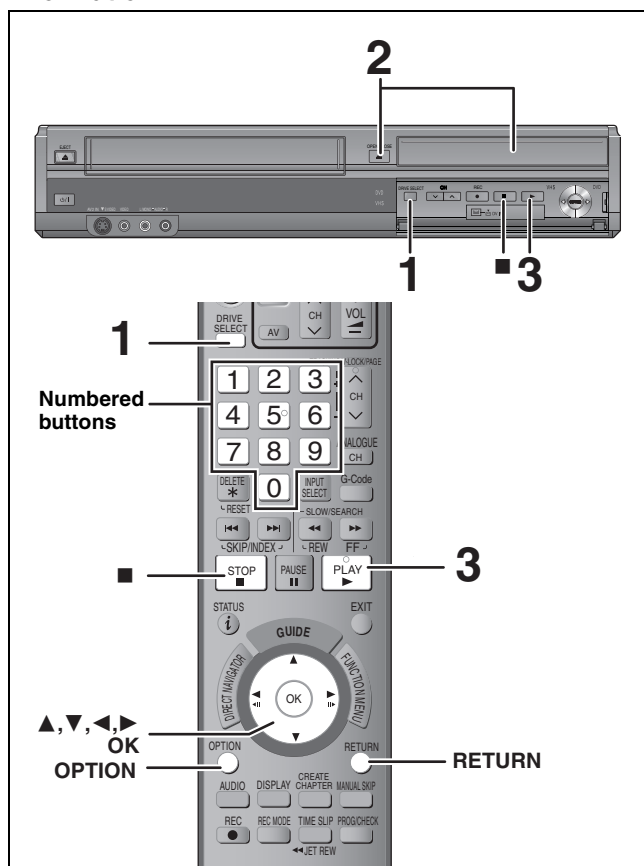
Numbered buttons

▲,▼,◄,►
OK
OPTION

RETURN

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

1 Press [DRIVE SELECT] to select the DVD drive.
DVD indicator lights up on the unit's display.

2 Press [▲ OPEN/CLOSE] on the main unit to open the tray and insert a disc.
≥Press the button again to close the tray.

3 Press [►] (PLAY).
RAM -R -R DL -RW(V) +R +R DL +RW -RW(VR)
Play starts from the most recently recorded title.
DVD-V VCD
Play starts from the point specified by the disc.
CD
Play starts from the beginning of the disc.

Menu operation for other type of contents
≥DivX (➡ 36)
≥MP3 (➡ 37)
≥Still pictures (JPEG) (➡ 38)

Note
≥A disc or title with different "TV System" (➡ 62) may not be able to playback while recording or on standby for the timer recording. You will be able to playback by changing the "TV System" settings in that case, but to prevent failure of the timer recording, change back the settings before the recording starts.
≥Depending on the disc, it may take time for the menu screen, pictures, sound, etc. to start.
≥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.

∎ **When a menu screen appears on the television**
DVD-V
Press [▲, ▼, ◄, ►] to select the item and press [OK].
≥Some items can also be selected using the numbered buttons.
≥If you are instructed to press the "ENTER" button by the menu screen or the disc's instruction document, press [OK].

VCD
Press the numbered buttons to select the item.
e.g.,   5:   [0] ➡ [5]   15:   [1] ➡ [5]

≥**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].

Note
Discs continue to rotate while menus are displayed. Press [∎] when you have finished playback to protect the unit's motor, your television screen and so on.

Playing a video cassette

Refer to "Advanced video cassette playback" (➡ 34) for detail information.
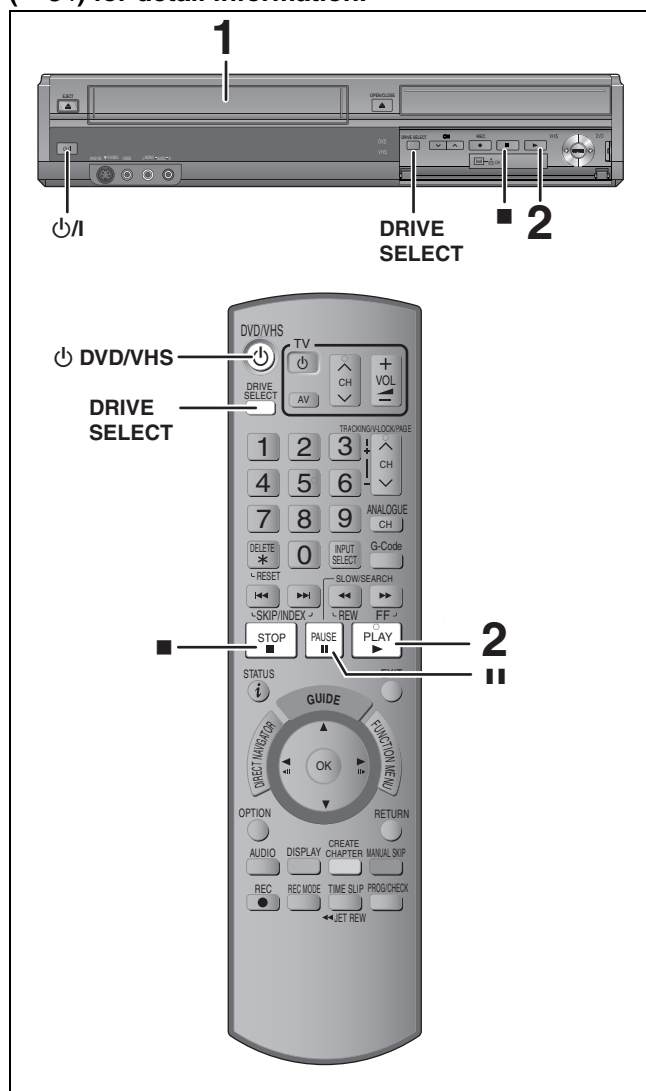
Preparation
- Turn on the television and select the appropriate video input to suit the connections to this unit.
- Press [⏻ DVD/VHS] to turn the unit on.
- Press [DRIVE SELECT] to select the VHS drive.

1 Insert a recorded video cassette. (➡ 14)
- Play starts automatically if you insert a video cassette without the accidental erasure prevention tab.

2 Press [▶] (PLAY).

■ To pause play
Press [❚❚]. (Press again, to restart play.)

■ To stop play
Press [■].

Note
- If the unit is on standby with the VHS selected, an inserted video cassette can be played back by pressing [▶] (PLAY).
- When the tape reaches its end, the unit automatically rewinds it to the beginning. This function does not work during timer recording and fast-forwarding.
- Jet Search, cue, review or slow-motion play will be automatically cancelled after 10 minutes and pause will be automatically cancelled after 5 minutes
- During playback functions other than normal playback, horizontal noise bars may appear on the picture, the colour of the picture may be unstable or the picture may be otherwise distorted.
- When playing back a video cassette which was recorded on another VCR, it may be necessary to adjust the tracking (➡ 35). In some cases the picture quality may still be inferior. This is due to format constraints.

Refer to "Important notes for recording" (➡ 23) and "Advanced recording" (➡ 24) for detail information.
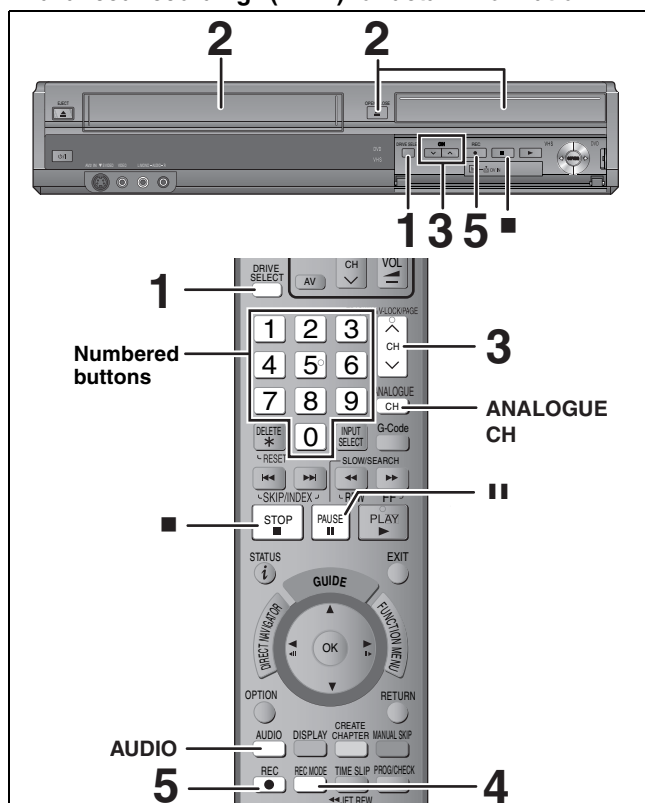
| RAM | -R | -R DL | -RW(V) | +R | +R DL | +RW | VHS |

| RAM | -RW(V) | +R | +R DL | +RW |
●To use a new disc, formatting is necessary.

●When recording a digital radio broadcast or a digital broadcast that is not being received correctly, the digital channel information (➡ 15) is also recorded and remains visible during playback.

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

1 Press [DRIVE SELECT] to select the DVD or VHS drive.
The DVD or VHS indicator lights up on the unit's display.

2 Insert a disc. (➡ 14)
●If the "Format" screen appears (➡ 25, When the format confirmation screen is displayed).
or
Insert a video cassette. (➡ 14)

3 Press [∧ ∨ CH] to select the channel.
Channels are displayed in the order of digital channels first, and then followed by analogue channels.
●**Digital channel**

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

●**Analogue channel**

You can also select the channel with the following steps.
1 Press [ANALOGUE CH].
2 Press the numbered buttons to select the channel.
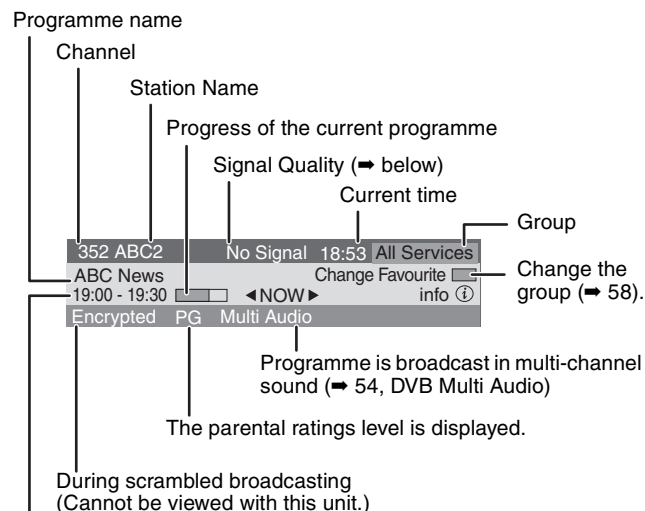
e.g., 5:   [0] ➡ [5]
    15:   [1] ➡ [5]

4 Press [REC MODE] to select the recording mode.
●Recording modes and approximate recording times (➡ 24)

Remaining time on the disc

DVD
XP→SP→LP→EP

VHS
SP→LP→EP
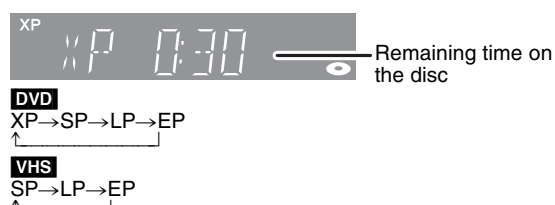
●To record sound using LPCM (XP mode only): Set the "Audio Mode for XP Recording" to "LPCM" in the Setup menu (➡ 61).

5 Press [● REC] to start recording.

Recording will take place on open space on disc. Data will not be overwritten.
●You cannot change the channel or recording mode during recording.
●You can record while the unit is in standby for timer recording. However, once the time for the timer recording to begin is reached, any recording taking place will stop and the timer recording will begin.
●RAM VHS (Analogue broadcast only) You can change the audio being received by pressing [AUDIO] during recording. (Does not affect the recording of audio.)

■ To pause recording
Press [❙❙].
Press again to restart recording.
You can also press [● REC] to restart.
(Title is not split into separate titles.)

■ To stop recording
Press [■].
●From the start to the end of the recording is called one title.
●-R -R DL -RW(V) +R +R DL +RW It takes about 30 seconds for the unit to complete recording management information after recording finishes.
In order to play DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R and +R DL (recorded with this unit) on other DVD players, it is necessary to finalise them (➡ 56).

Note
VHS
●**Even if the video cassette is labelled "S-VHS", it is not possible to record in the S-VHS system with this unit. This unit records in the normal VHS system.**
●When recording is paused for 5 minutes or more, the unit returns to stop.

To specify a time to stop recording— One Touch Recording
RAM -R -R DL -RW(V) +R +R DL +RW VHS
During recording
Press [● REC] on the main unit to select the recording time.
●You can specify up to 4 hours later.
●The unit display changes as shown below.
OFF 0:30 ⟶ OFF 1:00 ⟶ OFF 1:30 ⟶ OFF 2:00
↰ Counter (cancel) ⟵ OFF 4:00 ⟵ OFF 3:00 ↵

●This does not work during timer recordings (➡ 19, 29) or while using Flexible Recording (➡ 26).
●The unit turns off automatically after the time to stop recording is reached.

To cancel
Press [● REC] on the main unit several times until the counter appears.
●The time to stop recording is cancelled; however, recording continues.
To stop recording
Press [■].

Timer recording

Refer to "Advanced timer recording" (➡ 29–31) for detail information.

⏻/❙
⏻ DVD/VHS
GUIDE
▲,▼,◄,►
OK
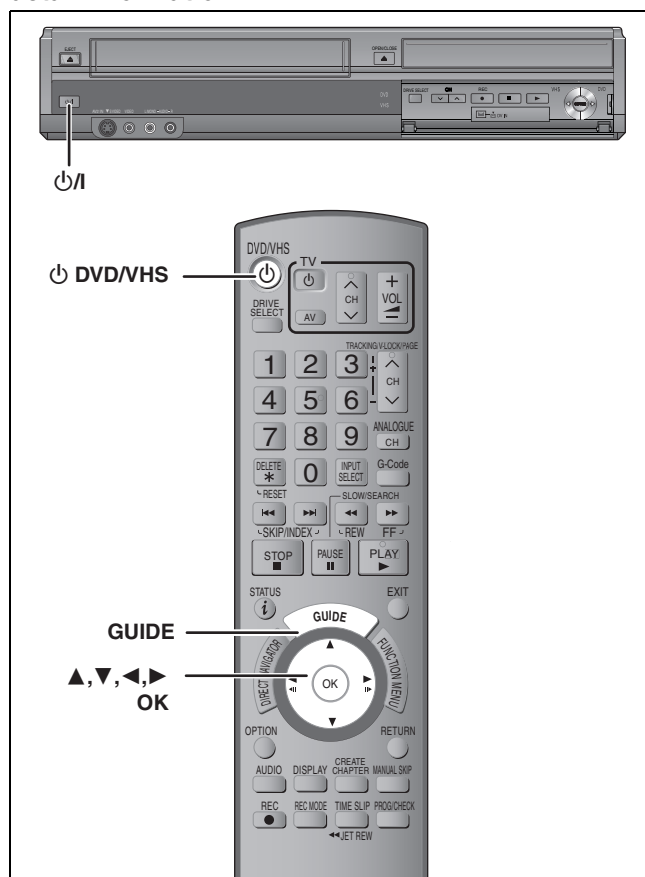
See also "Important notes for recording" (➡ 23).
Depending on the type of disc used for recording or the type of broadcast, there may be restrictions on the title you are trying to record.

Timer recording cannot be executed on both DVD and VHS at the same time.
[RAM] [-R] [-R DL] [-RW(V)] [+R] [+R DL] [+RW] [VHS]

≥You can enter up to 16 programmes up to a month in advance.
(Each daily or weekly programme is counted as one programme.)

[RAM] [-RW(V)] [+R] [+R DL] [+RW]
≥To use a new disc, formatting is necessary.

Preparation
≥Turn on the television and select the appropriate video input to suit the connections to this unit.
≥Insert a disc or video cassette with enough remaining blank space (➡ 14).
≥Make sure that the clock settings are correct (➡ 64).

Using the TV Guide system to make timer recordings (Digital broadcast only)

TV Guide system provides programme information only from the digital broadcasts station displayed on the television like a TV programme magazine.

This unit receives the programme information differently according to where you live.

| Note |

≥TV Guide does not work if the clock is not set correctly.
≥If the unit is disconnected from the AC mains, all programme data are not updated.
≥TV Guide system of this unit does not support analogue broadcasts.
Analogue broadcasts can be recorded manually or with the G-CODE system (➡ 29).

1 Press [GUIDE].
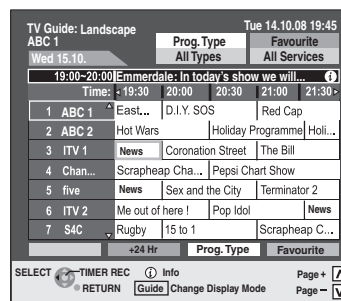
2 Press [▲, ▼, ◄, ►] to select the future programme and press [OK].
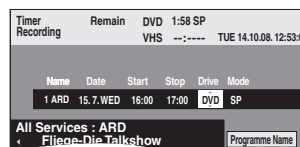
≥Confirm the programme (start and end time) by using a TV magazine, etc. and make corrections if necessary using [▲, ▼, ◄, ►] (➡ 29, right column, step 3).

3 Press [OK].

The timer programme is stored and the timer icon is displayed.

Timer icon

"⏲" lights on the unit's display to indicate timer recording standby has been activated.
Repeat steps 2–3 to programme other recordings.
Press [⏻ DVD/VHS] to turn the unit off.

| Note |
If "NTSC" has been selected for "TV System" (➡ 62), the TV Guide system cannot be used.

■ To cancel a timer recording on the TV Guide screen
① Press [▲, ▼, ◄, ►] to select the programme in the TV Guide and press [OK].
(Confirmation screen appears.)
② Press [◄] to select "Yes" and press [OK]. ("⏲" in the TV Guide disappears.)

| Note |
≥The receipt of the TV Guide 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.

■ To cancel recording when recording has already begun (➡ 30)
■ To release the unit from recording standby (➡ 30)
■ Notes on timer recording (➡ 30)

DRIVE SELECT ◆ DVD

● REC ■ ▶

COPYING indicator

DRIVE SELECT

■

▶

RETURN

AUDIO

● REC
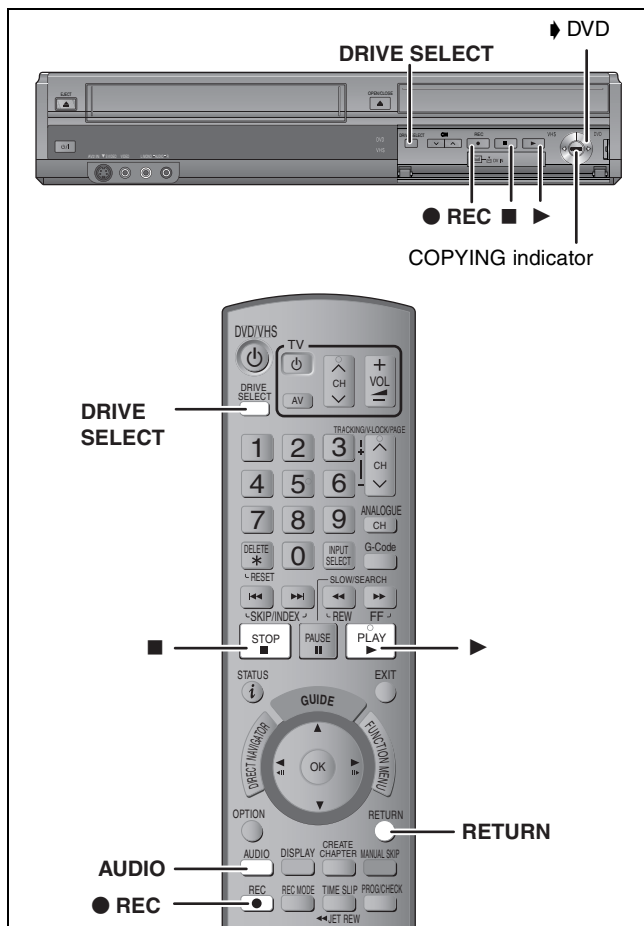
One Touch copying (VHS → DVD)

RAM -R -R DL -RW(V) +R +R DL +RW
You can copy programmes recorded on a video cassette onto a disc with one stroke of the button.
In One Touch Copying, programmes are automatically copied onto the disc from the location of playback at the time when the copying of the tape starts.

Preparation
≥Turn on the television and select the appropriate video input to suit the connection to this unit.
≥When copying an NTSC tape to a DVD, change the "TV System" to "NTSC" in the Setup menu (➡ 62). This unit cannot record NTSC signals to discs that already have PAL signal recordings.

VHS (Recording source)
≥Press [DRIVE SELECT] to select the VHS drive.
≥Insert the video cassette containing the programme to be copied. (➡ 14)
≥Press [▶] (PLAY) to play the video cassette and then press [AUDIO] to select the audio type you wish to record.
≥Stop the tape at the position where you wish to start recording.

DVD (Recording target)
≥Press [DRIVE SELECT] to select the DVD drive.
≥RAM Release protection. (➡ 55)
≥Insert a disc and confirm there is sufficient empty space for recording on it. (➡ 14, 54)
≥Select the recording mode. (➡ 24)

1

While both DVD and VHS are stopped

Press and hold [◆ DVD, COPYING] on the main unit for about 3 seconds or more (until "START" on the unit's display stops flashing).
≥Check if copying starts properly.

e.g.; RAM

≥Copying is automatically stopped when the tape reaches its end or the disc becomes full.

-R -R DL -RW(V) +R +R DL
When the screen on the right appears before recording starts, press [● REC] or [▶] (PLAY) to copy the disc with or without finalising.

Copy

Do you want to finalise the disc
after copying completes?

Finalising is to allow the disc to be played on
other DVD players. The disc becomes play-only.

● Press REC to start finalising after copying completes.
▶ Press PLAY to start copying only.
■ Press STOP to cancel copying.
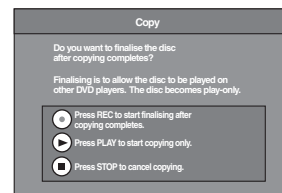
≥If you press [● REC], the disc will automatically be finalised after copying completes.
After finalising, the discs become play-only and you can play them on other DVD equipment.
However, you can no longer record or edit.
≥If you press [▶] (PLAY), you can start copying without finalising.
≥If you press [■], you can cancel the copy.

≥**Finalising will not start if copying is not completed (e.g., due to shortage of remaining disc space).**

■ To stop copying in the middle
Press [■] or press and hold [RETURN] for about 3 seconds or more.
≥However you cannot stop finalise after it has started.

Note
≥While One Touch Copying is activated, a timer recording cannot be started.
≥When the copying is not started or not executed, the "COPYING" indicator blinks for about 7 seconds. Check if the unit is properly prepared.

■ Dividing a title to be copied
When copying from VHS to DVD, the title is divided by index signal (➡ 35) detected and then recorded. You can search desired titles with the Direct Navigator (➡ 33) after copy to DVD.
≥Titles that are too short may not be divided correctly.
≥The recording time may become longer than the original title depending on the number of index signals.

If you want to copy without dividing the contents into titles, follow the method below.
≥Set "Time Setting" to "On" on the GUI Copy (➡ 48).

VHS ◀

DRIVE SELECT   ■   ▶

COPYING indicator

DRIVE
SELECT

|◀◀ , ▶▶|

■

AUDIO

II

▶

RETURN
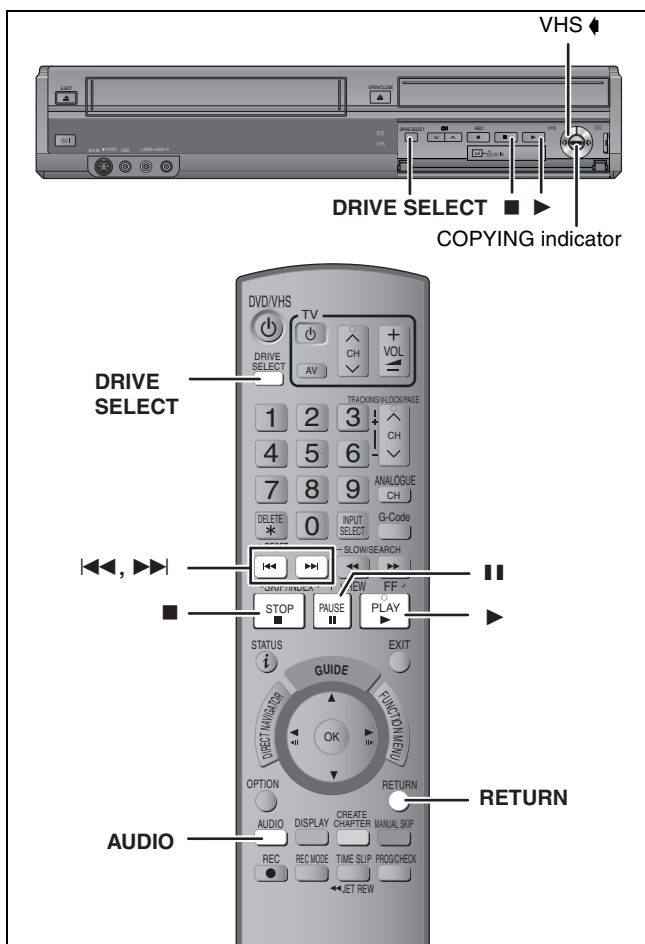
■ When you copy a whole disc
Make sure that the DVD is stopped.
●If you start copying when the resume function is activated, the DVD is copied from the beginning of the title you stopped play at.
To copy a whole disc, press [■] to deactivate it before copying (➡ 32).

■ When you copy a title from the beginning of the selected title to the end of the disc
■ When you copy a playlist from the beginning of the selected playlist to the last playlist
Press [▶] (PLAY) to play back the desired title (➡ 16) or playlist (➡ 45).
●You can copy (a title or playlist) while playback is paused by pressing [II].
●You cannot copy a playlist which is longer than 8 hours. (When you copy multiple playlists, the playlist which is longer than 8 hours is omitted.)

Copying

One Touch copying (DVD ➜ VHS)

`RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `-RW(VR)`
You can copy titles recorded on a disc onto a video cassette with one stroke of the button.
In One Touch Copying, all contents on the disc are automatically copied onto the video cassette.

Preparation
●Turn on the television and select the appropriate video input to suit the connection to this unit.
●When copying an NTSC disc to a video cassette, change the "TV System" to "NTSC" in the Setup menu (➡ 62).

DVD (Recording source)
●Press [DRIVE SELECT] to select the DVD drive.
●Insert the disc containing the title to be copied. (➡ 14)
●`RAM` `-RW(VR)` Press [▶] (PLAY) to play the disc and then press [AUDIO] to select the audio type you wish to record.

VHS (Recording target)
●Press [DRIVE SELECT] to select the VHS drive.
●Insert a video cassette with an intact accidental erasure prevention tab. (➡ 14) Stop the tape at the point where you want to start copying to.
●Confirm that the remaining tape time is sufficient for recording. (➡ 54)
●Select the recording mode. (➡ 24)

1 Press and hold [VHS ◀, COPYING] on the main unit for about 3 seconds or more (until "START" on the unit's display stops flashing).
●Check if copying starts properly.
●Copying is automatically completed when playback of the disc is finished or the tape reaches its end.

Remaining time

■ To stop copying in the middle
Press [■] or press and hold [RETURN] for about 3 seconds or more.

Note
●While One Touch Copying is activated, a timer recording cannot be started.

■ About Recording VISS (➡ 35)
When copying from DVD to VHS, the index signal is automatically recorded for each title. You can search desired titles with [|◀◀] or [▶▶|].

RQT9127

21

Deleting titles

DRIVE SELECT

DELETE ✳

|◄◄, ►►|

3

2,3,4,5

EXIT

FUNCTION MENU

RETURN
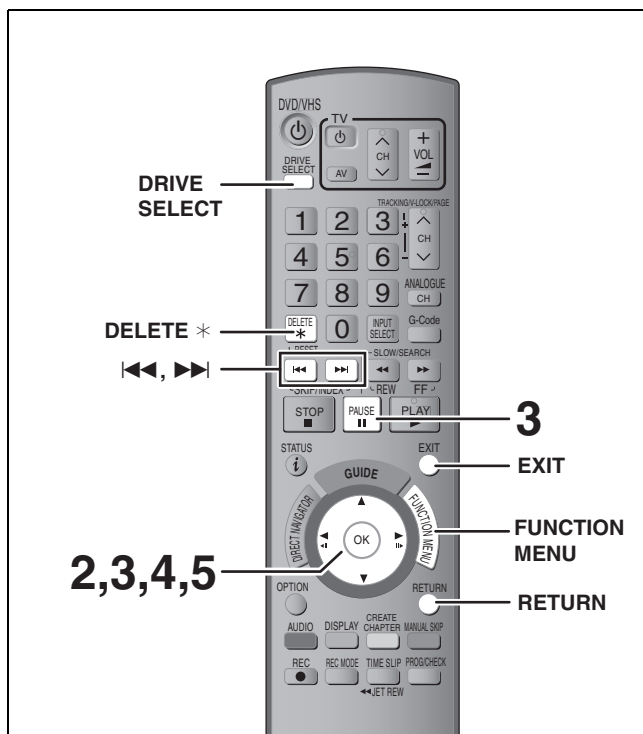
[RAM] [-R] [-R DL] [-RW(V)] [+R] [+R DL] [+RW]
(You cannot delete items on finalised discs.)

● **A title cannot be restored once it is deleted.** Make certain before proceeding.
● You cannot delete while recording or copying.

Preparation
● Press [DRIVE SELECT] to select DVD drive.
● [RAM] Release protection (➡ 55, Setting the protection).

■ Available disc space after deleting

● [RAM] The space deleted becomes available for recording.

Available disc space increases after deleting any of these titles
←   →

| Title | Title | ...... | Last title recorded | Available disc space |
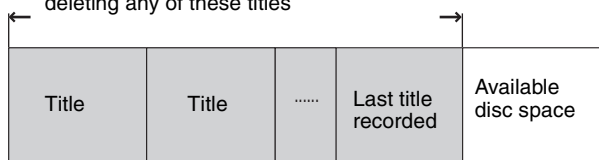
● [-RW(V)] [+RW] Available recording space increases only when the last recorded title is deleted.

Available disc space does not increase even after deleting
←   →

Available disc space increases after deleting
┌

| Title | Title | ...... | Last title recorded | Available disc space |

Later recorded titles
←   →

| Title | Deleted | ...... | Last title recorded | Available disc space |
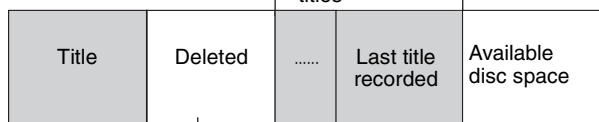
This space become available for recording after all the later recorded titles are deleted.

● [-R] [-R DL] [+R] [+R DL] Available space does not increase even after the contents are deleted.

Using the DELETE Navigator to delete

1 While stopped
Press [FUNCTION MENU].

2 **Press [▲, ▼] to select "Delete" and press [OK].**
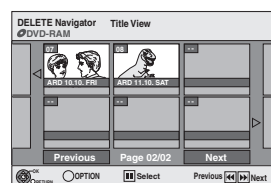
3 **Press [▲, ▼, ◄, ►] to select the title and press [❚❚].**
A check mark is displayed. Repeat this step until you select all necessary items.
● Press [❚❚] again to cancel.

To show other pages
Press [|◄◄, ►►|] to show other pages.

You can confirm the titles, that you have selected using the option menu.
● Refer to option menu operations for the "Title View" (➡ 42, step 4).

4 **Press [OK].**

5 **Press [◄, ►] to select "Delete" and press [OK].**
The title is deleted.
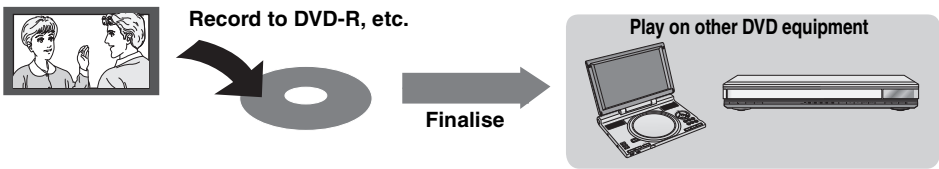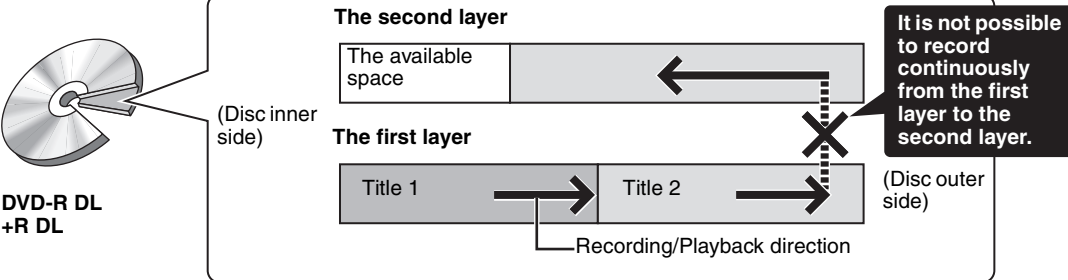
To return to the previous screen
Press [RETURN].
To exit the screen
Press [EXIT].

Deleting during play

1 While playing
Press [✳ DELETE].

2 **Press [◄, ►] to select "Delete" and press [OK].**
The title is deleted.

Important notes for recording

Selecting Audio for Recording	**Broadcast in multi-channel sound (Digital broadcast only):** You can select the audio language when receiving audio in multi channel broadcast ["Multi Audio" appears at the bottom of digital channel information display (➡ 15)]. 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 menu (➡ 54).
	Bilingual broadcasts (Analogue broadcast only): `RAM` `VHS` **Both main and secondary audio can be recorded.** You can change the audio during playback. (➡ 33, Changing audio during play) However in the following cases, select whether to record the main or secondary audio: **M 1** **M 2** −Recording sound in LPCM (➡ 61, Audio Mode for XP Recording) Hello Hallo	`-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` **Select the main or secondary audio before recording** (➡ 61, Bilingual Audio Selection) **M 1** Hello **The selected audio only is recorded.**
	If you record from external equipment −Select "M 1" or "M 2" on the external equipment.	

About the aspect when recording a programme	`RAM`
	`-R` `-R DL` `-RW(V)`
	If "Aspect for Recording" in the Setup menu is set to "Automatic" (The default setting is "Automatic" ➡ 60), the programme will be recorded in the original aspect used when recording started (including when recording started at a commercial, etc.). If recorded with a different aspect, select the correct aspect ("16:9" or "4:3").
	
	However, in the following cases, programme will be recorded in 4:3.
	● `-R` `-R DL` `-RW(V)` Programme recorded using "EP" or "FR (recordings 5 hours or longer)" recording modes will be recorded in 4:3 aspect.
		`VHS`
		The original aspect used for the source programme will also be used with the recording.
		
		`+R` `+R DL` `+RW`
		The programme will be recorded in 4:3 aspect.

When recording the "One time only recording" broadcasts	It is not possible to record the broadcasts that allow "One time only recording" onto DVD-R, DVD-R DL, DVD-RW, +R, +R DL, +RW or 8 cm DVD-RAM discs. Use CPRM (➡ 81) compatible DVD-RAM. `RAM` CPRM compatible discs only. `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` ○ ● — (○: Can do, −: Cannot do) ● Even when copying to videotape the title may not be copied correctly because of the copy guard.	
Playing the disc on other DVD players	`-R` `-R DL` `-RW(V)` `+R` `+R DL` **The disc must be finalised after recording or copying (➡ 56).** It is necessary to finalise DVD-R, etc. on this unit after recording or copying titles to them. You can then play them 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 (➡ 57).	
Recording to DVD-R DL and +R DL	DVD-R DL and +R DL discs have two layers of recording surface on one side. ● **It is not possible to record continuously from the first layer to the second layer.** Recording stops when space on the first layer becomes full. You must close the first layer to start recording on the second layer (➡ 57). Closing makes the first layer unavailable for recording (editing is still available). You cannot cancel closing. Make certain before proceeding. **The second layer** The available space **The first layer** Title 1 Title 2 (Disc inner side) (Disc outer side) **DVD-R DL +R DL** Recording/Playback direction **It is not possible to record continuously from the first layer to the second layer.**	

● It is not possible to record to both the DVD and the VHS drive simultaneously.

Advanced recording

Recording modes and approximate recording times

DVD Recording Modes and Durations

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

Recording Mode	DVD-RAM		DVD-R DVD-RW +R +RW (4.7 GB)	DVD-R DL[3], +R DL[3] (8.5 GB)	
	Single-sided (4.7 GB)	Double-sided[1] (9.4 GB)		First layer	Second layer
XP (High picture quality recording mode)	1 hour	2 hours	1 hour	55 min	50 min
SP (Standard recording mode)	2 hours	4 hours	2 hours	1 hour 50 min	1 hour 40 min
LP (Long recording mode)	4 hours	8 hours	4 hours	3 hours 40 min	3 hours 20 min
EP (Extra long recording mode)	8 hours (6 hours[2])	16 hours (12 hours[2])	8 hours (6 hours[2])	7 hours 25 min (5 hours 30 min[2])	6 hours 50 min (5 hours 15 min[2])
FR (Flexible Recording Mode)	8 hours maximum	8 hours maximum for one side	8 hours maximum	7 hours 25 min maximum	6 hours 50 min maximum

[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" is set to "EP (6 Hours)" in the Setup menu (➡ 60).
    The sound quality is better when using "EP (6 Hours)" than when using "EP (8 Hours)".
[3] Refer to "Recording to DVD-R DL and +R DL" (➡ 23).

- **RAM** When recording to DVD-RAM using "EP (8 Hours)" mode, play may not be possible on DVD players that are compatible with DVD-RAM. Use "EP (6 Hours)" mode if playback may be on other equipment.

- **RAM** **-R** **-R DL** **-RW(V)** You can record up to 99 titles on one disc.
- **+R** **+R DL** **+RW** You can record up to 49 titles on one disc.

FR (Flexible Recording Mode)
You can set FR (Flexible Recording) mode when copying or programming timer recordings.
The unit automatically selects a recording rate between XP and EP (8 Hours) that will enable the recordings to fit in the remaining disc space with the best possible recording quality.
For example with a 90 minute recording to an unused DVD-RAM, the picture quality is adjusted to between "XP" and "SP".
- All the recording modes from XP to EP appear in the display.

VHS Recording Modes and Durations

Recording Mode	Durations
SP	You can record the length shown on the tape.
LP	2 times the length of SP mode. LP cannot be selected when recording NTSC signals.
EP	3 times the length of SP mode.
AUTO	Automatically switches the recording mode to LP (NTSC to EP) mode during a timer recording if there is not enough tape left to record the programme in SP mode.

- **To prevent recording errors:**
  Set a timer recording period slightly longer than the actual programme (to make sure the programme is recorded in full).
- If the image quality is important to you or if you wish to store the tape for a long period, select SP.
- The unit can play tapes recorded in LP mode on other equipment.

- **AUTO Mode**
Timer recording

1st programme (30 min)	2nd programme (45 min)

30 min at SP	15 min at SP	30 min at LP
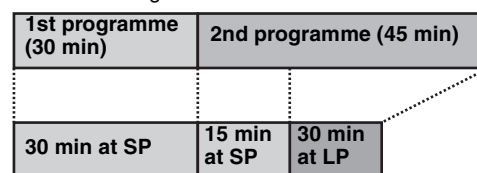
Video tape (e.g.: 60-minute cassette)

- The tape length must be set correctly (➡ 63).
- Picture distortion may occur when the recording mode switches.
- This may not work correctly with some video cassettes.
- It may not work correctly when NTSC is set as the "TV System" (➡ 62).

When the format confirmation screen is displayed

`RAM` `-RW(V)` `+R` `+R DL` `+RW`
When you insert a new disc or a disc recorded on a computer or other equipment, a format confirmation screen is displayed. Format the disc to use it. However, all the recorded contents are deleted.

```
                    Format

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


          Yes              No

              SELECT

         OK          ○ RETURN
```
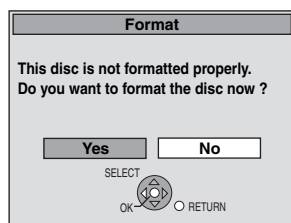
Press [◄, ►] to select "Yes" and press [OK].

To format a disc
"Deleting all the contents of a disc—Format" (➡ 56)

When removing a recorded disc

`-R` `-R DL` `-RW(V)` `+R` `+R DL`
The following screen appears when you have not processed the disc for play on other equipment.

```
                   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.
         The disc cannot be played on other
         DVD players without finalising.
```
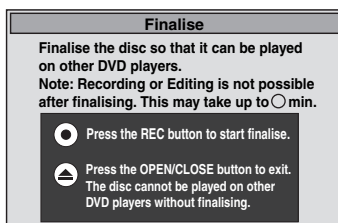
∎ To finalise the disc
Press [◉ REC] on the main unit.
≥You cannot stop this process once you have started it.
≥If you want to set play menu select or provide a disc name, select "Auto-Play Select" (➡ 56) or "Disc Name" (➡ 55) in "DVD Management" before finalising.

∎ To open the tray without disc finalisation
Press [⏏ OPEN/CLOSE] on the main unit.

Playing while you are recording

≥You can play DVD or VHS while recording to the other drive. The recording will not be affected
–DVD playback (➡ 16)
–VHS playback (➡ 17)

Note
You cannot watch images on a tape from the DVD priority out terminals while recording on a disc (➡ 8).

Playing from the beginning of the title you are recording—Chasing playback

`RAM`
Press [►] (PLAY) during recording.
There is no sound output while searching forward or backward.

To stop play
Press [∎].

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" and press [OK].

Playing a title previously recorded while recording—Simultaneous rec and play

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

1 Press [DIRECT NAVIGATOR] during recording.
2 Press [▲, ▼, ◄, ►] to select a title and press [OK].
≥There is no sound output while searching forward or backward.

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 screen.
2 If the recording is on the other drive
   Press [DRIVE SELECT] to select the recording drive.
3 Press [∎].

To stop timer recording
After play stops
1 Press [DIRECT NAVIGATOR] to exit screen.
2 If the recording is on the other drive
   Press [DRIVE SELECT] to select the recording drive.
3 Press [∎].
4 Press [◄, ►] to select "Stop Recording" and press [OK].

Note
"Chasing playback" and "Simultaneous rec and play" can only be used with programmes of the same encoding system (PAL/NTSC).

Flexible Recording
(Recording that fits the remaining disc space)

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

The unit sets the best possible picture quality that fits the recording within the remaining disc space. The recording mode becomes FR mode.

∎ Using "Flexible Rec" is convenient in these kinds of situations.

●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

e.g., Recording a 90 minute programme to disc

If you select XP mode, the programme will not fit one disc.

4.7GB DVD-RAM **4.7GB DVD-RAM**

If you try to record a 90 minute programme in XP mode, only the first 60 minutes will fit on the disc and the 30 minute balance will not get recorded.
●Another disc is necessary.

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

However there will be 30 minutes remaining disc space.

4.7GB DVD-RAM

If you select "Flexible Rec" the programme will fit one disc perfectly.

4.7GB DVD-RAM

▊ Necessary space for recording

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

1 While stopped
Press [FUNCTION MENU].

2 ## Press [▲, ▼] to select "To Others" and press [OK].

3 ## Press [▲, ▼] to select "Flexible Rec" and press [OK].

Flexible Rec
Record in FR mode.
Maximum rec. time   8 Hour 00 Min.
Set rec. time   8 Hour 00 Min.
Start   Cancel
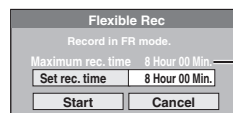
Maximum recording time
This is the maximum recording time in EP (8 Hours) mode.

4 ## Press [◄, ►] to select "Hour" and "Min." and press [▲, ▼] to set the recording time.
●You can also set the recording time with the numbered buttons.
●You cannot record more than 8 hours.

5 When you want to start recording
Press [▲, ▼, ◄, ►] to select "Start" and press [OK].
●Recording starts.
●All the recording modes from XP to EP appear in the display.

To exit the screen without recording
Press [RETURN].

To stop recording partway
Press [∎].

To show the remaining time
Press [STATUS ⓘ].

e.g., DVD-RAM

Remaining time of recording

DVD-RAM
REC 0:59
1 DVB
ABC1
L R

Copying from an external device
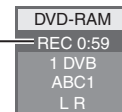
Manual recording

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

e.g., Connecting to the AV2 terminal on the front
You can also connect to the AV1 input terminals on the rear.

≥Turn off the unit and other video equipment before connecting.

This unit

AV2 IN ▼S VIDEO   VIDEO   L/MONO - AUDIO- R

Yellow White Red

S Video cable※

Audio/Video cable

Other video equipment

Connect to Audio/Video output terminals.
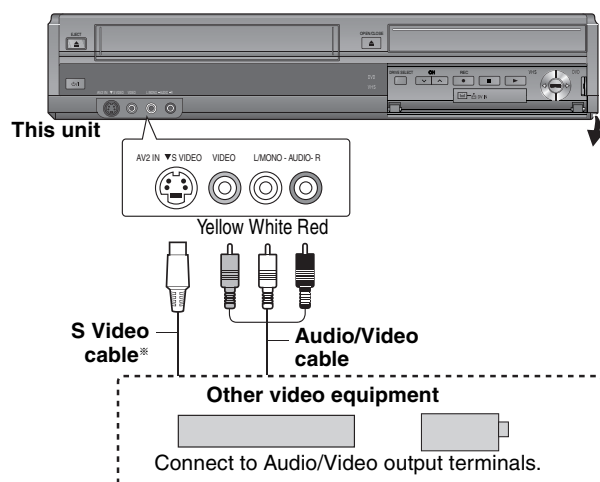
If the audio output of the other equipment is monaural
Connect to L/MONO on the AV2 input terminals at the front.
※ The S VIDEO terminal achieves a more vivid picture than the VIDEO terminal.

About the aspect when recording a programme (➡ 23)

Preparation
≥Press [DRIVE SELECT] to select the DVD or VHS drive.
≥Insert a disc or video cassette with enough remaining blank space (➡ 14).
≥Press [REC MODE] to select the recording mode.
≥To reduce noise in input from a video cassette recorder, set "Copy NR" to "On" in the on-screen menu (➡ 54).
≥When recording bilingual programmes (➡ 23, Selecting Audio for Recording)
≥When the output signal from the external device is NTSC, change the "TV System" to "NTSC" in the Setup menu (➡ 62).

`RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW`
≥`RAM` Release protection (➡ 55).
≥This unit cannot record NTSC signals to discs that already have PAL signal recordings.

1 While stopped
Press [INPUT SELECT] to select the input channel for the equipment you have connected.
e.g., If you have connected to AV2 input terminals, select "A2".

Recording to DVD

Follow the above step 1.

2 Start play on the other equipment.

3 When you want to start recording
Press [● REC].
Recording starts.
≥Using Flexible Recording (➡ 26), 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.

Recording to VHS

Follow the above step 1.

2 Press [▶] (PLAY).
≥Start playing the video cassette and find the recording start point.

3 Press [❙❙] and then press [● REC].
≥Put the unit in recording standby mode.

4 Start play on the external device.

5 Press [❙❙] at the point where you want to start recording.

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

To stop recording
Press [■].

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.

Note
≥If it becomes time for a timer recording to start while copying, the recording will start and the copying will stop.
≥If video is copied from another piece of equipment to this unit, then the video quality will be degraded.

Advanced recording/Copying from an external device

DV automatic recording (DV Auto Rec)

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

RAM When the "DV Auto Rec" function is used, programmes are recorded as a title while at the same time chapters are created at each break in the images and the playlist is created automatically.

≥Turn off the unit and DV equipment before connecting.

This unit

DV IN

**DV cable
(IEEE 1394,
4-pin)**
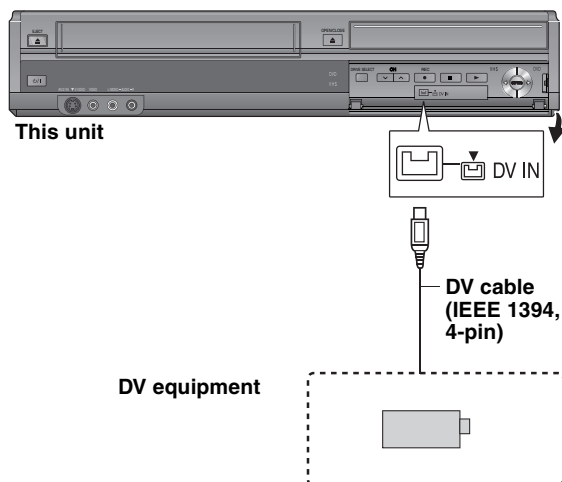
DV equipment

≥Select the type of audio recording from "Audio Mode for DV Input" in the Setup menu (➜ 61).
≥When recording from DV equipment (e.g., digital video camcorder), you can record audio/video recordings from DV tape only.

Preparation
1 Turn off the main unit and DV equipment, then connect the equipment with the unit's DV input terminal (➜ above).
2 Turn on the main unit.
≥When the output signal from the external equipment is NTSC, change the "TV System" to "NTSC" in the Setup menu (➜ 62).

1 **Turn on the DV equipment, and pause play at the point you want recording to start.**
The following screen appears.

> **DV Auto Rec**
>
> **DV unit is connected.
> Record from the DV unit?**
>
> **Rec to DVD**   **Cancel**
>
> SELECT
> OK   RETURN

≥**When the screen is not displayed**
After performing step 1
1 Press [DRIVE SELECT] to select the DVD drive.
2 Press [FUNCTION MENU].
3 Press [▲, ▼] to select "To Others" and press [OK].
4 Press [▲, ▼] to select "DV Auto Rec" and press [OK].
➜ Go to step 3 (➜below)

2 **Press [◄, ►] to select "Rec to DVD" and press [OK].**

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

4 **Press [◄, ►] to select "Rec" and press [OK].**
Recording starts.

When recording finishes
The confirmation screen appears. Press [OK] to finish DV automatic recording.

To stop recording
Press [■].

Note
≥If it becomes time for a timer recording to start while copying, the recording will start and the copying will stop.
≥If video is copied from another piece of equipment to this unit, then the video quality will be degraded.
≥External DV cannot be recorded to VHS.
≥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.
≥The date and time information on the tape of the DV equipment will not be recorded.
≥You cannot record and play simultaneously.

> If the DV automatic 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 manual recording (➜ 27).**

Advanced timer recording

`RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `VHS`
≥You can enter up to 16 programmes up to a month in advance.
(Each daily or weekly programme is counted as one programme.)

`RAM` `-RW(V)` `+R` `+R DL` `+RW`
≥To use a new disc, formatting is necessary.

Preparation
≥Turn on the television and select the appropriate video input to suit
the connections to this unit.
≥Insert a disc or video cassette with enough remaining blank space
(➡ 14).
≥Make sure that the clock settings are correct (➡ 64).

Using G-CODE system to make timer recordings (Analogue broadcast only)

G-CODE ® G-CODE is a registered trademark of
Gemstar Development Corporation. The
G-CODE system is manufactured under
license from Gemstar Development
Corporation.

Entering G-CODE numbers is an easy way of timer recording. You can
find these numbers in TV listings in newspapers and magazines.

1 Press [G-Code].

| G-Code | Remain | DVD | 1:58 SP |
| Record | | VHS | --:---- TUE 14.10.08. 12:54:00 |

⬍ ▬ ▬ ▬ ▬ ▬ ▬ ▬ ▬

Input G-Code Number 0-9, and press OK.
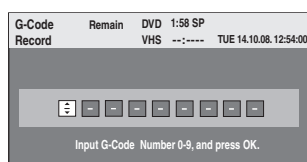
2 Press the numbered buttons to enter the G-CODE number.
Press [◄] to move back to correct a digit.

3 Press [OK].
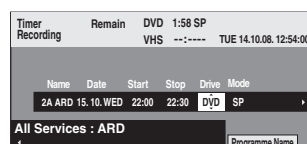
| Timer | Remain | DVD | 1:58 SP |
| Recording | | VHS | --:---- TUE 14.10.08. 12:54:00 |

| Name | Date | Start | Stop | Drive | Mode |
| 2A ARD | 15.10. WED | 22:00 | 22:30 | DVD | SP | ▶ |

All Services : ARD
◀   Programme Name

≥Confirm the programme (start and end time) by using a TV
magazine, etc. and make corrections if necessary using
[▲, ▼, ◄, ▶] (➡ right, step 3).
≥When "-- ---" appears in the "Name" column, you cannot set
timer recording. Press [▲, ▼] to select desired programme
position. After you have entered the information of a TV
station, it is kept in the unit's memory.

4 Press [OK].
The timer programme is stored and the timer icon is
displayed.
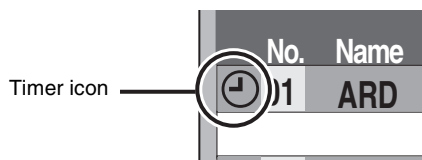
No. Name
Timer icon ———— 🕐)1 ARD

"🕐" lights on the unit's display to indicate timer recording
standby has been activated.

TUE 14.10.08 12:56:00

| Stop | Drive | Mode | Drive space |
| 20:00 | DVD | SP | OK |
Programme
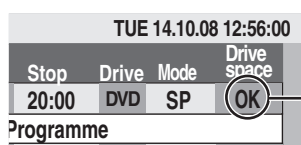
Check to make sure "OK"
is displayed (➡ 30).

Repeat steps 1–4 to programme other recordings.
Press [⏻ DVD/VHS] to turn the unit off.

Manually programming timer recordings

1 Press [PROG/CHECK].

2 Press [▲, ▼] to select "New Timer Programme" and press [OK].

3 Press [▶] to move through the items and change the items with [▲, ▼].
≥When "Name" is selected, you can press the "Blue" button to
change the group [e.g., TV, Radio, Edit Favourites screen
(➡ 58)] and then press [▲, ▼] to select the channel you
want to record.
≥Press and hold [▲, ▼] to alter the Start (Start time) and
Stop (Finish time) in 30-minute increments.
≥You can also set Name (Programme position/TV Station
Name), Date, Start (Start time), and Stop (Finish time) with
the numbered buttons.
≥**Date**
→ **Date:**   Current date up to one month later minus
  ↓ ↑   one day
   Daily timer: SUN-SAT→MON-SAT→MON-FRI
  ↓ ↑
↳ **Weekly timer:** SUN→---→SAT
≥You can also press [DRIVE SELECT] to select the recording
drive.
≥You can also press [REC MODE] to change the recording
mode.
≥**Programme Name**
Press [◄, ▶] to select "Programme Name" and press [OK].
(➡ 46, Entering text)

4 Press [OK].
The timer programme is stored and the timer icon is
displayed.

No. Name
Timer icon ———— 🕐)1 ARD

"🕐" lights on the unit's display to indicate timer recording
standby has been activated.

Repeat steps 2–4 to programme other recordings.
Press [⏻ DVD/VHS] to turn the unit off.

To cancel recording when recording has already begun

1 **While the unit is on**

Press [DRIVE SELECT] to select the recording drive and press [■].

Stop Recording

Timer recording in progress.
Stop this timer recording?
It will be cancelled if you stop.

| Stop Recording | Cancel |

SELECT
OK / RETURN

2 ### Press [◄, ►] to select "Stop Recording" and press [OK].

If you stop a timer recording, it will be cancelled. However, if you have set a weekly, daily timer recording, the recording will start from the next time the timer recording is set.

To release the unit from recording standby

Even when the unit is turned off, you can display the timer recording list by pressing [PROG/CHECK].

1 ### Press [PROG/CHECK].

2 ### Press [▲, ▼] to select the programme and press the "Red" button.
- The timer icon "☉" (➡ right) disappears from the timer recording list.
- You cannot cancel timer recording standby mode as long as even one timer icon "☉" (➡ right) remains in the timer recording list.
- Press the "Red" button again to activate timer recording standby.

Notes on timer recording

- When a timer recording is set, DVDs that were recorded using a different TV system cannot be played unless the TV system is changed in the Setup menu (➡ 62) 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.
- 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.
- If the unit is not put in the timer recording standby mode at the last 10 minutes before the programmed timer recording starting time, the "☉" flashes on the unit's display.
- 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
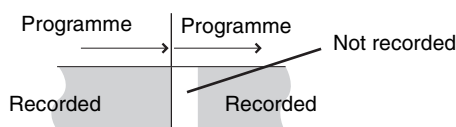
Recorded | Recorded

Check, change or delete a programme

- Even when the unit is turned off, you can display the timer recording list by pressing [PROG/CHECK].

Press [PROG/CHECK].

Timer Remain DVD 1:58 SP
Recording VHS --:---- TUE 14.10.08. 12:54:00

No. Name Date Start Stop Drive Mode Drive space
New Timer Programme

Ⓐ

Ⓑ

Ⓒ Press OK to store new programme.

OK
RETURN
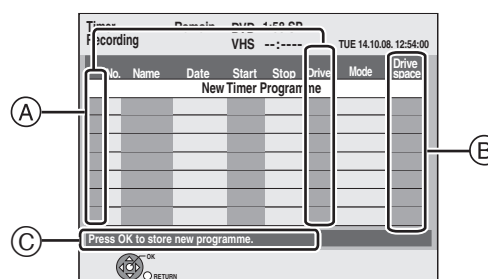
Ⓐ **Icons**

☉	Timer recording standby is activated.
●	This programme is currently recording.
🕐	Programmes are overlapped. Recording of the programme with the later start time starts when the earlier programme finishes recording.
⊖	You stopped a weekly or daily timer recording. The icon disappears the next time the timer programme starts recording.
🗑	The disc was full so the programme failed to record.
▨	The programme was copy-protected so it was not recorded.
✖	The programme did not complete recording because the disc is dirty or some other reason.

Drive: Recording drive is set to DVD or VHS.

Ⓑ **Message displayed in the "Drive space" line**

OK: Displayed if the recording can fit in the remaining space. **DVD**

→ **(Date):** For recordings made daily or weekly, the display will show until when recordings can be made (up to a maximum of one month 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. **DVD**
- There is no more space left. **DVD**
- The number of possible titles has reached its maximum. **DVD**
- The new timer recording will completely or partially record over this timer recording.

– – : All other recordable cases. **VHS**

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

■ To change a programme
Press [▲, ▼] to select the programme and press [OK]. (➡ 29, right column, step 3)

■ To delete a programme
Press [▲, ▼] to select the programme and press [✳ DELETE].

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].

Note
- Programmes that failed to record are deleted from the timer recording list at 4 a.m. two days later.

Operations in the TV Guide system

Basic operations

Press [GUIDE] to switch between Landscape view and Portrait view.

Landscape view

TV Guide: Landscape		Sat 13.01.07 19:45
ABC 1	Prog. Type	Favourite
Sat 13.01.	All Types	All Services

```
        19:00~20:00 Emmerdale: In today's show we will...   ⓘ
        Time:  ◂ 19:30   20:00    20:30    21:00    21:30 ▸
   1  ABC 1    East...   D.I.Y. SOS          Red Cap
   2  ABC 2    Hot Wars         Holiday Programme   Holi...
   3  ITV 1    News    Coronation Street    The Bill
   4  Chan...   Scrapheap Cha...   Pepsi Chart Show
   5  five    News    Sex and the City    Terminator 2
   6  ITV 2    Me out of here !   Pop Idol          News
   7  S4C     Rugby    15 to 1             Scrapheap C...

        +24 Hr            Prog. Type        Favourite

SELECT        TIMER REC   ⓘ Info                    Page + ∧
        RETURN   Guide   Change Display Mode         Page – ∨
```

Portrait view

TV Guide: Portrait		Sat 13.01.07 19:45
ABC 1	Prog. Type	Favourite
Sat 13.01.	All Types	All Services

```
◂ 1  ABC 1    2  ABC 2    3    ITV 1    4    Chan... ▸

19:30~20:00  Emmerdale                              ⓘ
20:00~21:00  Coronation Street                      ⓘ
21:00~22:00  The Bill                               ⓘ
22:00~22:30  Action News on BBC1                    ⓘ
22:30~23:30  Magnum P.I.                            ⓘ
23:30~00:30  Miami Vice                             ⓘ
00:30~01:30  Late Night News                        ⓘ
01:30~01:45  Preview - The Cinema Magazine          ⓘ

  -24 Hr      +24 Hr        Prog. Type     Favourite

SELECT        TIMER REC   ⓘ Info                    Page + ∧
        RETURN   Guide   Change Display Mode         Page – ∨
```

To change channels	**Landscape view** Press [▲, ▼] to select a channel. **Portrait view** Press [◀, ▶] to select a channel. The TV Guide 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 browse through the TV Guide list	Press [∧ ∨ CH].
To see programme information (Programmes with the ⓘ symbol)	Press [STATUS ⓘ]. Additional information (programme name, programme duration, broadcast time, description) is available for these programmes.

```
TV Guide                             Tue 14.10.08 19:45

 Wed 15.10.
 Spending Other People's Money
 ABC ONE, Lifestyle
 19:30-20:00, 30min.

 A flashy car salesman loses his cool when stingy friend
 takes over his wallet. He's forced to sell his possessions
 at a car boot sale to pay for food.




     TIMER REC   ⓘ Return to List
     RETURN
```

Press [▲, ▼] to scroll up and down.
To show other pages
Press [CH ∧] (Previous) or [∨ CH] (Next).

Press [STATUS ⓘ] again to return to the programme list.

■ When the TV Guide displays "No info for analogue services" or the empty TV Guide list

TV Guide: Landscape		Sat 13.01.07 19:45
ABC 1	Prog. Type	Favourite
Sat 13.01.	News	All Services

```
        19:00~20:00 Emmerdale: In today's show we will...   ⓘ
        Time:  ◂ 19:30   20:00    20:30    21:00    21:30 ▸
   1  ABC 1    ▲ ─────────────────── The "empty" field
   2  ABC 2    Hot Wars         Holiday Programme   Holi...
   3  ITV 1    News    Coronation Street    The Bill
```

● Some digital broadcast may not send programme information. Set the timer recording manually or with the G-CODE system (➡ 29).

Selecting the programme from the desired programme type or group

This function lets you display a TV Guide list sorted by programme type (e.g. Movies, Sport) or group (e.g. Free TV, Radio).

1 From the desired programme type
Press the "Yellow" button to display the list of programme type.
From the desired group
Press the "Blue" button to display the list of groups.

2 **Press [▲, ▼] to select the desired item.**

All Types	All Services
All Types	**All Services**
Movie	Free TV
News	Radio
Entertainment	Favourite 1
Sport	Favourite 2
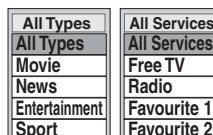
3 **Press [OK].**

● A list appears with all programmes of the selected item.
● When you select the Landscape view, the unit displays programmes in grey that do not belong to the selected programme type.

```
TV Guide: Landscape                  Sat 13.01.07 19:45
ABC 1            Prog. Type      Favourite
Sat 13.01.        News           All Services

        19:00~20:00 Emmerdale: In today's show we will...   ⓘ
        Time:  ◂ 19:30   20:00    20:30    21:00    21:30 ▸
   1  ABC 1    East...   D.I.Y. SOS          Red Cap
   2  ABC 2    Hot Wars         Holiday Programme   Holi...
   3  ITV 1    News    Coronation Street    The Bill
   4  Chan...   Scrapheap Cha...   Pepsi Chart Show
   5  five    News    Sex and the City    Terminator 2
   6  ITV 2    Me out of here !   Pop Idol          News
   7  S4C     Rugby    15 to 1             Scrapheap C...

        +24 Hr            Prog. Type        Favourite

SELECT        TIMER REC   ⓘ Info                    Page + ∧
        RETURN   Guide   Change Display Mode         Page – ∨
```

e.g.,
Programme type, "News" is selected in step 2 of Landscape view.

Note
The broadcasters allocate individual programmes to topic areas. This function does not work properly unless the information which distinguishes the programme type and groups sent from broadcast stations is correct.

4 **Press [▲, ▼, ◀, ▶] to select the programme.**

To return to the previous TV Guide list before you have selected the programme type or groups
Select "All Types" of the programme type and "All Services" of the groups in step 2 above.

To return to the previous screen
Press [RETURN].

To exit the screen
Press [EXIT].

Advanced timer recording

Operation during play

●Depending on the media, some operations may not be possible.

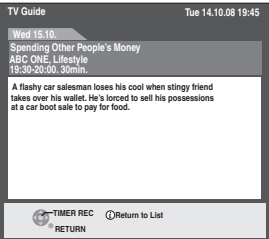|	
Stop	**Press [■].** The stopped position is memorized. **Resume play function** Press [▶] (PLAY) to restart from this position. **Stopped position** ●If [■] is pressed several times, the position is cleared in some cases. ●The position is cleared if the tray is opened. ●**CD** **VCD** and **MP3/DivX** : The position is cleared if the unit is turned off.
Pause	**Press [❙❙].** Press [❙❙] again or [▶] (PLAY) to restart play.
Search	**Press [◀◀] or [▶▶].** ●The speed increases up to 5 steps. (**+R** **+R DL** **+RW** up to 3 steps) ●Press [▶] (PLAY) to restart play. ●Audio is heard during first level search forward. **CD** and **MP3** : Audio is heard during all levels of search. **DivX** : Audio is not heard during all levels of search.
Skip	**During play or while paused, press [❙◀◀] or [▶▶❙].** Skip to the title, chapter or track you want to play. ●Each press increases the number of skips. ●**DivX** : Press [❙◀◀] to return to the beginning of the title currently playing.
Starting from a selected title	**Press the numbered buttons.** Play starts from the selected title, chapter or track. ●**MP3** and **JPEG** 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] ●This works only when stopped (the screen on the right is displayed on the television) with some discs. ●**VCD** (with playback control) If you press the numbered buttons while stopped (the above screen is displayed on the television) you can cancel PBC. (Elapsed play time appears on the unit's display.)
Quick View **RAM**	**Press and hold [▶] (PLAY/✕1.3).** Play speed is quicker than normal. ●Press again to return to normal speed.
Slow-motion **RAM** **-R** **-R DL** **-RW(V)** **+R** **+R DL** **+RW** **DVD-V** **-RW(VR)** **VCD**	**While paused, press [◀◀] or [▶▶].** The speed increases up to 5 steps. ●Press [▶] (PLAY) to restart play. ●**VCD** Forward direction [▶▶] only. ●The unit will pause if slow-motion play is continued for approximately 5 minutes (excluding **DVD-V** **VCD**).
Frame-by-frame **RAM** **-R** **-R DL** **-RW(V)** **+R** **+R DL** **+RW** **DVD-V** **-RW(VR)** **VCD**	**While paused, press [◀] (◀❙❙) or [▶] (❙❙▶).** Each press shows the next frame. ●Press and hold to change in succession forward or backward. ●Press [▶] (PLAY) to restart play. ●**VCD** Forward direction [▶] (❙❙▶) only.

Skipping the specified time (Time Slip) **RAM** **-R** **-R DL** **-RW(V)** **+R** **+R DL** **+RW** **-RW(VR)** (This function does not work with finalised discs.)	**1 Press [TIME SLIP].** **2 Press [▲, ▼] to select the time and press [OK].** Play skips the specified time. ●Each time you press [▲, ▼], the time increases [▲] or decreases [▼] by 1 minute intervals. (Press and hold for 10-minute intervals.) This automatically disappears after approximately 5 seconds. To show the screen again press [TIME SLIP] again. ![–5 min illustration]
Manual Skip **RAM** **-R** **-R DL** **-RW(V)** **+R** **+R DL** **+RW** **-RW(VR)** (This function does not work with finalised discs.)	**Press [MANUAL SKIP].** Each time you press, play restarts approximately 1 minute later.
Create Chapter (➡ 42, Title/Chapter) **RAM**	**Press [CREATE CHAPTER].** Chapters are divided at the point pressed. ●Press [❙◀◀, ▶▶❙] to skip to the start of a chapter.

Changing audio during play

Press [AUDIO].

[RAM] [-RW(VR)] [VCD], **DivX** and analogue broadcast
LR→L→R
↑_____|

```
DVD-RAM
  PLAY



  L R
```

e.g., "L R" is selected

[DVD-V]
You can change the audio channel number each time you press the button. This allows you to change things like the soundtrack language (➡ 60, Soundtrack).

| Soundtrack | ↕ 1 ENG | DD Digital 3/2.1ch |

e.g., English is selected.

[Note]
You cannot change the audio type 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" (➡ 61).

Selecting recorded programmes (titles) to play—Direct Navigator

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

1 Press [DIRECT NAVIGATOR].

```
DIRECT NAVIGATOR   Title View
  DVD-RAM
  07          08          09

  ARD 10.10. FRI  ARD 11.10. SAT
  10          11          12
                                     ▷
  Previous    Page 02/02   Next
  RETURN  OPTION  Select  Previous Next
```
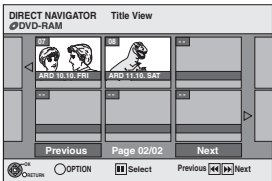
2 Press [▲, ▼, ◄, ►] to select the title and press [OK].

You can also select titles with the numbered buttons.
e.g.,   5:   [0] ➡ [5]
       15:   [1] ➡ [5]

To show other pages
Press [▲, ▼, ◄, ►] to select "Previous" or "Next" and press [OK].
≥You can also press [|◄◄, ►►|] to show other pages.

To exit the screen
Press [DIRECT NAVIGATOR].

Direct Navigator screen icons

●	Currently recording.
🔒	Title protected.
⬚	Title that was not recorded due to recording protection (Digital broadcasts etc.)
✕	Title cannot be played When data is damaged etc.
🔲	Title with "One time only recording" restriction (➡ 81, CPRM)
Ⓝ **(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 (➡ 62).

Advanced video cassette playback

Depending on the video cassettes, this function may not work.

Fast-forward/Rewind	**While stopped** **Press [◀◀] (backward)/[▶▶] (forward).** ≥Press [■] to stop fast-forward/Rewind.
Cue/Review	**During play** **Press or press and hold** **[◀◀] (backward)/[▶▶] (forward).** If you press and hold these buttons, normal playback restarts by releasing them.
Jet Search	You can high speed search a video in the forward or the reverse direction. **During play** **Press [◀◀] (backward)/[▶▶] (forward) twice.** The picture may not be in colour or the picture may be distorted depending on the TV.
Slow-motion play	**During play** **Press and hold [❙❙] for about 2 seconds or more.**
Jet Rewind	To perform a higher speed rewind **Press [◀◀ JET REW].** The "◀◀" indication appears on the TV screen and "JETREW" appears on the unit's display. ≥Depending on the video cassette or the operating condition, the rewind speed may change somewhat. ≥The tape counter is reset to "0:00.00" when the tape is rewound to the beginning. ≥Depending on the video cassettes, this function may not work.
S-VHS Quasi Playback (SQPB)	It is also possible to play back video cassettes recorded in the S-VHS system. ≥Some picture noise may occur depending on the type of video cassette used. ≥It is not possible to fully obtain the high resolution that S-VHS is capable of. It is not possible to record in the S-VHS system with the unit.
Repeat Playback	**During play or while stopped** **Press and hold [▶] (PLAY) for about 5 seconds or more.** ≥At the end of the programme the tape automatically rewinds to the beginning of the programme and play starts again (it only works if there is at least 5 seconds of blank space at the end of the programme). The "R ▷" indication appears on screen. This continues until you cancel it. ≥Depending on the video cassette, this function may not work.

To restart normal playback
Press [▶] (PLAY).

To stop play
Press [■].

Adjusting the playback picture

Manual tracking

The unit usually makes tracking adjustments automatically, but you may need to adjust it manually if noise appears on a video cassette recorded on other equipment.

During play
Press and hold [TRACKING/V-LOCK, +] or [TRACKING/V-LOCK, −] until the noise bars disappear.

Vertical locking adjustment

If the still picture shakes, perform the following operation.

While paused
Press and hold [TRACKING/V-LOCK, +] or [TRACKING/V-LOCK, −] until the picture stops shaking.

∎ To return to auto tracking
Press both [TRACKING/V-LOCK, +] and [TRACKING/V-LOCK, −] simultaneously.

∎ To remove the noise from a paused picture
Start Slow-motion play, then adjust the tracking.

Note
- This function may not work with some TVs and video cassettes.
- You can also adjust the tracking and vertical synchronization with [∨ CH] and [CH ∧] on the main unit.

VHS Index Search System (VISS)

The unit automatically records special index signals onto the tape every time a recording is started. The index search function makes use of these index signals to let you find the beginning of a desired programme quickly and easily.

Index signals are recorded in the following cases.
- When a recording is started by pressing [● REC].
- When timer recording is started.

While stopped or during normal play
Press [|◄◄] or [►►|].
- The unit automatically starts playback after the index signal is found.
- Each press increases the number of skips.

∎ To cancel the index search
Press [■].

Note
- Up to 20 index signals can be searched for in both directions.
- When you press either of the buttons too much, you can correct the number of skips by pressing the opposite button.
- The figure on the display decreases by 1 each time an index signal is located.
- This feature may not work correctly if the index signals are too close together. Make recordings of at least 5 minutes.

Changing audio during play

Press [AUDIO] to select the audio type.
The audio changes as follows:
L R (Stereo) → L → R → − − (Normal audio track)

Various indications in on-screen display

When playing back VHS, the on-screen displays that are illustrated below can be displayed.

Press [STATUS ⓘ].
The following displays appear.

①	VHS drive indicator
②	L and R indicators The Left (L) and Right (R) indicators show which sound mode is selected as follows: L R (Stereo): Hi-Fi stereo audio L −: Mono L audio of the Hi-Fi stereo audio − R: Mono R audio of the Hi-Fi stereo audio − − (Normal): Normal audio
③	Recording mode (➡ 24)
④	Operation status
⑤	Shows the tape counter and remaining tape time Pressing [STATUS ⓘ] to cycle the display as follows: No display ─→ Tape counter └── Remaining tape time ←┘ - Press [✳ DELETE] to reset the tape counter (elapsed time) to 0:00.00. The tape counter is automatically reset when inserting a video cassette.

Note
- The on-screen display may be distorted depending on the video cassette being played back.

Selecting file type to play

`CD`

You can play CD-R/CD-RW discs which contain MP3 files, DivX video contents or still pictures that have been recorded on a computer.

The screen shown below is displayed when you insert a disc containing DivX video contents, MP3 files and still pictures (JPEG).

e.g.,

> Play mode is set to DivX.
> To play another type of file,
> select the file type
> from "Playback" in FUNCTION MENU.

≥When playing the file displayed on the screen
Press [OK].

≥When you want to play files other than the one displayed on the screen
Follow the steps below.

To select file type

1 Press [RETURN].

2 Press [FUNCTION MENU].
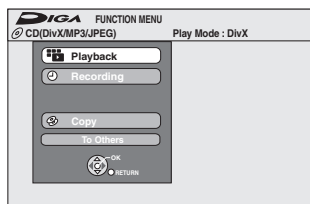
3 Press [▲, ▼] to select "Playback" and press [OK].
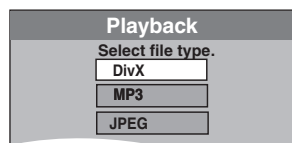
4 Press [▲, ▼] to select playback mode and press [OK].

If "DivX" is selected: Go to "Playing DivX video contents" step 2 in the right column.
If "MP3" is selected: Go to "Playing MP3 files" step 2 on page 37.
If "JPEG" is selected: Go to "Playing still pictures" step 3 on page 38.

Playing DivX video contents

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

You can play DivX video contents recorded with a computer onto DVD-R, DVD-R DL, CD-R/CD-RW.

Preparation
Press [DRIVE SELECT] to select the DVD drive

1 Press [DIRECT NAVIGATOR]
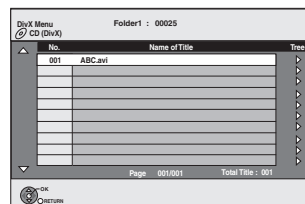
≥Files are treated as titles.
≥When the MP3 or JPEG Menu is displayed, perform steps 1–4 in "To select file type" on the left column selecting "DivX" in step 4 to change the playback mode.

2 Press [▲, ▼] to select the title and press [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]

To stop playing
Press [∎].

To show other pages
Press [|◄◄, ►►|].

To exit the screen
Press [DIRECT NAVIGATOR].

Note
≥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 VHS drive.

Using the tree screen to find a folder

1 **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.
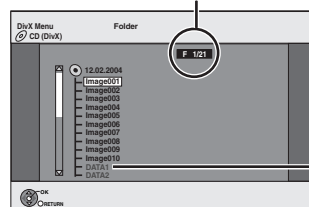
You cannot select folders that contain no compatible files.

2 **Press [▲, ▼] to select a folder and press [OK].**
The file list for the folder appears.

To return to the previous screen
Press [RETURN].

Regarding DivX VOD content

DivX Video-on-Demand (VOD) content is encrypted for copyright protection. In order to play DivX VOD content on this unit, you first need to register the unit.
Follow the on line instructions for purchasing DivX VOD content to enter the unit's registration code and register the unit. For more information about DivX VOD, visit www.divx.com/vod

Display the unit's registration code.
(➡ 64, "DivX Registration" in "Others" tab)

Setup	DivX Registration
Tuning	
Disc	DivX (R) Video On Demand
Picture	Your registration code is : XXXXXXXX
Sound	To learn more visit www.divx.com/vod
Display	
Connection	
VHS	OK RETURN
Others	

8 alphanumeric characters

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

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

When playing this content
≥The number of remaining plays is reduced by one if
– you press [⏻ DVD/VHS].
– you press [■].
– you press [DIRECT NAVIGATOR].
– you press [|◄◄] or [◄◄, ►►] etc. and arrive at another content or the start of the content being played.
– you press [DRIVE SELECT] to change the drive.
≥Resume functions do not work.

Playing MP3 files

CD
You can play MP3 files recorded with a computer onto a CD-R/CD-RW.

Preparation
Press [DRIVE SELECT] to select the DVD drive

1 Press [DIRECT NAVIGATOR]

Selected group

G: Group No.
T: Track No. in the group
TOTAL:
Track No./Total tracks in all groups

MP3 Menu	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	▷
7	007 Shrimps from Mars	▷
8	008 Starperson	▷
9	009 Velvet Cuppermine	▷
10	010 Ziggy Starfish	▷
	Page 001/024	

G 1 **T** 1 **TOTAL** 1/111

Number 0 – 9 ◄◄ Prev. ►►| Next

SELECT OK RETURN
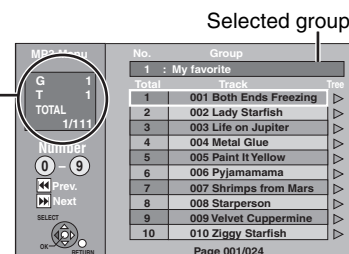
≥Files are treated as tracks and folders are treated as groups.
≥When the DivX or JPEG Menu is displayed, perform steps 1–4 in "To select file type" on page 36 selecting "MP3" in step 4 to change the playback mode.

2 Press [▲, ▼] to select the track and press [OK].

Play starts on the selected track.
≥"☞" indicates the track currently playing.
≥You can also select the track with the numbered buttons.
  e.g., 5: [0] ➡ [0] ➡ [0] ➡ [5]
         15: [0] ➡ [0] ➡ [1] ➡ [5]

To stop playing
Press [■].

To show other pages
Press [|◄◄, ►►|].

To exit the screen
Press [DIRECT NAVIGATOR].

Using the tree screen to find a group

1 While the file list is displayed
Press [►] while a track is highlighted to display the tree screen.

Selected group No. /Total groups
If the group has no track, "– –" is displayed as group number.

MP3 Menu	Tree
	⦿ MP3 music **G 7/25**

G 8 **T** 14 **TOTAL** 40/111

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
  009 Swedish pops
    001 Momoko
002 Standard number
  001 Piano solo
  002 Vocal

Number 0 – 9

SELECT OK RETURN
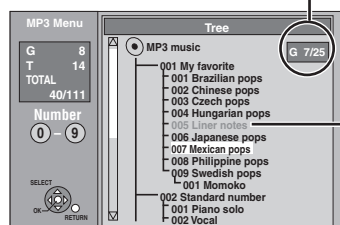
You cannot select groups that contain no compatible files.

2 Press [▲, ▼, ◄, ►] to select a group and press [OK].
The file list for the group appears.

To return to the previous screen
Press [RETURN].

Playing DivX, MP3 and still pictures

Playing still pictures

[CD]

- You can playback still pictures recorded onto a CD-R/CD-RW on a PC.
- Playback is not possible if recording is performed on the VHS drive.

1 Press [DRIVE SELECT] to select the DVD drive.

The DVD indicator lights up on the unit's display.

2 Press [DIRECT NAVIGATOR].
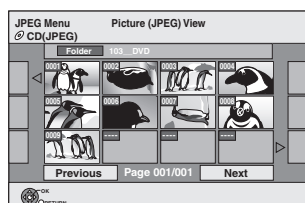
Picture (JPEG) View screen

When the DivX or MP3 Menu is displayed, perform steps 1–4 in "To select file type" on page 36 selecting "JPEG" in step 4 to change the playback mode.

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

To select the still pictures in another folder (➡ right)

3 Press [▲, ▼, ◄, ►] to select the still picture and press [OK].

You can also select still pictures with the numbered buttons.
e.g.,

5:	[0] ➡ [0] ➡ [0] ➡ [5]	115: [0] ➡ [1] ➡ [1] ➡ [5]
15:	[0] ➡ [0] ➡ [1] ➡ [5]	1115: [1] ➡ [1] ➡ [1] ➡ [5]

- Press [◄, ►] to display the previous or next still picture.
- Useful functions during still picture play (➡ right)

To return to the Picture (JPEG) View screen
Press [RETURN].

To exit the screen
Press [DIRECT NAVIGATOR].

| Useful functions during still picture play |

Start Slide Show
Slide Interval

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

1 While the Picture (JPEG) View screen is displayed
Press [▲, ▼, ◄, ►] to select "Folder" and press [OPTION].

Start Slide Show
Slide Interval

2 Press [▲, ▼] to select "Start Slide Show" and press [OK].

- **To change the display interval**
1 Press [▲, ▼] to select "Slide Interval" in step 2 and press [OK].
2 Press [▲, ▼] to select "Display interval".
3 Press [◄, ►] to select the desired interval (0–30 seconds) and press [OK].

Rotate

While playing
1 Press [OPTION].
2 Press [▲, ▼] to select "Rotate RIGHT" or "Rotate LEFT" and press [OK].

Rotate RIGHT
Rotate LEFT

- Rotation information will not be stored.

Zoom in
Zoom out

While playing
1 Press [OPTION].
2 Press [▲, ▼] to select "Zoom in" and press [OK].

Rotate RIGHT
Rotate LEFT
Zoom in
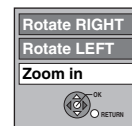
- To return the picture to its original size, press [▲, ▼] to select "Zoom out" in step 2 and press [OK].
- When zooming in, the picture may be cut off.
- The enlargement information will not be stored.
- The "Zoom in/Zoom out" function is only available for still pictures smaller than 640 × 480 pixels.

Properties

While playing
Press [STATUS ⓘ] twice.

18:53:50 11.10.

| Date | 1. 1. 2005 | No. | 3 / 9 |

Shooting date

To exit the picture properties screen
Press [STATUS ⓘ].

■ To select the still pictures in another folder

① While the Picture (JPEG) View screen is displayed
Press [▲, ▼, ◄, ►] to select "Folder" and press [OK].
② **Press [▲, ▼] to select the folder and press [OK].**

Convenient functions
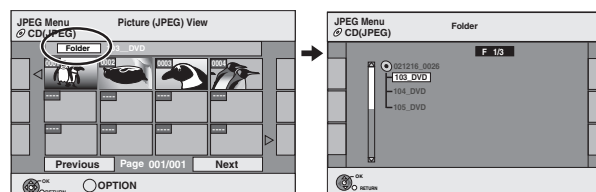
FUNCTION MENU window

By using the FUNCTION MENU window you may access the main functions quickly and easily.

1 Press [FUNCTION MENU].

Functions displayed depend on the selected drive or type of disc.
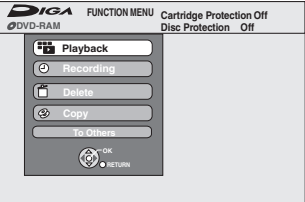
2 Press [▲, ▼] to select an item and press [OK].

● If you select "To Others" and press [OK], the following screen appears. Press [▲, ▼] to select an item and press [OK].
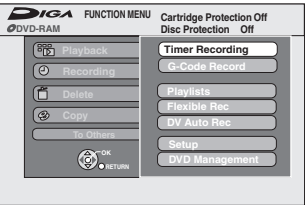
● If you press [RETURN], you can return to the previous screen.

Playback	You can select and play recorded programmes (➡ 16, 33), change the Play Mode (DivX, JPEG, MP3) (➡ 36), etc.
Recording	You can easily find programmes you want to watch and set them for timer recording (➡ 19).
Delete	You can delete items using DELETE Navigator (➡ 22).
Copy	You can copy recorded titles using COPY Navigator (➡ 48).
Timer Recording	You can start programming timer recording (➡ 29).
G-Code Record	You can make timer recording setting by entering G-CODE numbers (➡ 29).
Playlists	You can create playlists by grouping your favourite chapters (➡ 44).
Flexible Rec	The unit sets the best possible picture quality that fits the recording within the remaining disc space (➡ 26).
DV Auto Rec	DV automatic recording function (➡ 28)
Setup	You can change the unit's settings using Setup menu (➡ 58).
DVD Management	You can manage discs through formatting, finalising and other operations (➡ 55).

To exit the FUNCTION MENU window
Press [FUNCTION MENU].

Linked operations with the TV (VIERA Link "HDAVI Control™")

You can enjoy linked operations with the TV and receiver by using "HDAVI Control".

What is VIERA Link "HDAVI Control"?

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 3" function.**
  "HDAVI Control 3" is the newest standard (current as of December, 2007) 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 (➡ 9) or to your receiver using an HDMI cable (➡ 69).
2 Set "VIERA Link" to "On" (➡ 63). (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 you can do with "HDAVI Control"

Download from the TV※3	When you connect the unit to a TV for the first time, the station list data is automatically copied from the TV to the unit and the TV stations are assigned to the programme positions on the unit in the same order as on the TV (➡ 10).
(When the TV is on) Easy playback	When the TV is on and the following operations are performed, the TV's input will automatically switch to HDMI input mode 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], [G-Code] etc.**
(When the TV is off) Power on 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], [G-Code] etc.** - DVD-V CD VCD and MP3 The TV is automatically turned on when you insert the discs.
Power off 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 screen etc. is displayed during playback or when the unit set to a timer recording. Even if the TV is set to standby mode, the unit will not be set to standby mode 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※3	This function allows you to immediately start recording the programme that you are viewing on the TV. Refer to the TV oprating instructions for operation. - The titles are recorded to the DVD disc. To stop recording Press [■]

※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 which has "HDAVI Control 3" function.

Note
- 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.

Easy control only with VIERA remote control

If you connect this unit to the TV that has "HDAVI Control 2" or "HDAVI Control 3" function with an HDMI cable, you can enjoy using more convenient functions.
You can operate this unit using the following buttons on the TV remote control.
[▲, ▼, ◄, ►], [OK], [RETURN], [EXIT], [OPTION] and the coloured buttons.
Use the remote control for this unit to operate any other buttons (numbered buttons, etc.) that are not listed above.
● The operation of this unit may be interrupted when you press buttons on the TV remote control other than those listed above.
● The TV displays the TV tuner's picture when the linked operation is finished.

Using the FUNCTION MENU window to operate this unit

● This function is available with the TV which has "**HDAVI Control 2**" or "**HDAVI Control 3**" function.

Refer to the TV operating instructions for operating the TV.

1 Display this unit's "FUNCTION MENU" window using the TV remote control.
● If this unit is set to standby mode, it will automatically turn on.

2 Select the item you want to operate with the TV remote control, and press [OK].

| DIGA | FUNCTION MENU | Cartridge Protection Off |
| DVD-RAM | | Disc Protection   Off |

- Playback
- Recording
- Delete
- Copy
- To Others
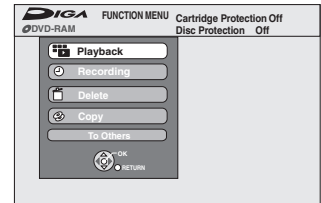
About the FUNCTION MENU window (➡ 39).

Using the OPTION menu window to operate this unit

● This function is available with the TV which has "**HDAVI Control 2**" or "**HDAVI Control 3**" function.

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

1 Press [OPTION].

e,g.,

- Control Panel
- FUNCTION MENU
- Top Menu
- Menu
- Drive Select

OK / RETURN

[Note]
You cannot use the OPTION menu while the Top Menu for DVD-Video is displayed and while DVD-Video is copying.

2 Select an item then press [OK].

Control Panel	Control Panel is displayed (➡ below).
FUNCTION MENU	FUNCTION MENU window is displayed (➡ above).
Top Menu DVD-V	Top menu is displayed (➡ 16).
Menu DVD-V	Menu is displayed (➡ 16).
Rotate RIGHT (JPEG)	Rotate the still picture (➡ 38).
Rotate LEFT (JPEG)	
Zoom in (JPEG)	Enlarge or shrink the still picture (➡ 38).
Zoom out (JPEG)	

Using the Control Panel

Using the Control Panel, you can operate search backward, search forward, stop, etc, with the TV remote control.
Perform steps 1 and 2 of "Using the OPTION menu window to operate this unit" (➡ above).

The Control Panel is displayed (➡ right).
● When playing a title or DVD-Video, etc.
– [▲]: Pause, [▼]: Stop, [◄]: Search backward, [►]: Search forward, [OK]: Play, [EXIT]: Exit the screen.
● While playing still pictures
– [▼]: Stop, [◄]: View previous picture, [►]: View next picture, [EXIT]: Exit the screen.

Control Panel

Pause   ◯ Exit

Search ◄◆► Search

Play

Stop
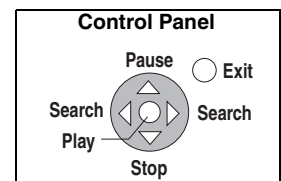
■ When you want to leave the TV on and set only this unit to standby mode

Press [⏻ DVD/VHS] on this unit's remote control and set to standby mode.

■ When not using "HDAVI Control"

Set "VIERA Link" in the Setup menu to "Off" (➡ 63).

Editing titles/chapters

[RAM]
[-R] [-R DL] [-RW(V)] [+R] [+R DL] (You cannot edit finalized discs.)
[+RW] [-RW(VR)]

Title/Chapter
Programmes are recorded as a single title consisting of one chapter.

Title
Chapter

Start   End
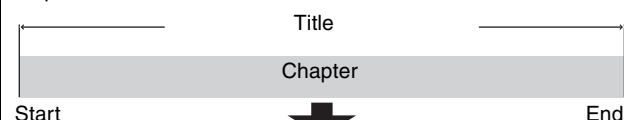
[RAM] You can divide a title into multiple chapters. Each section between the division points becomes a chapter. (➡ 32, 43, Create Chapter)

Title			
Chapter	Chapter	Chapter	Chapter
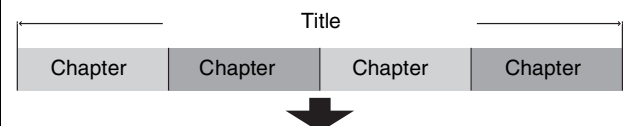
[RAM] You can change the order of chapters and create a playlist (➡ 44).

●The maximum number of items on a disc:
[RAM] [-R] [-R DL] [-RW(V)] [+R] [+R DL] [+RW]
– Titles: 99 ([+R] [+R DL] [+RW] 49 titles)
– Chapters: Approx. 1000 ([+R] [+R DL] [+RW] Approx. 254)
(Depends on the state of recording.)

Note
●Once deleted, divided or partially deleted, recorded content cannot be restored to its original state. Make certain before proceeding.
●You cannot edit during recording or copying, etc.
●Restricted recording information remains even after editing (e.g. dividing a title etc).
●[+R] [+R DL] Each time you edit a title the information is saved to the free space on the disc. If you do this numerous times, the amount of free space decreases.

Editing titles/chapters and playing chapters

You can modify (remove unnecessary parts, divide, etc.) recorded programmes.

Preparation
●Turn on the television and select the appropriate video input to suit the connection to this unit.
●Turn the unit on.
●Press [DRIVE SELECT] to select the DVD drive.
●[RAM] Release protection (➡ 55, Setting the protection).

---

1 During play or while stopped
Press [DIRECT NAVIGATOR].

2 **Press [▲, ▼, ◄, ►] to select the title.**

DIRECT NAVIGATOR Title View
DVD-RAM
07
ARD 10.10. FRI   RD 11.10. SAT
Previous   Page 02/02   Next
OK/RETURN   OPTION   ∎∎ Select   Previous ◄◄ ►► Next
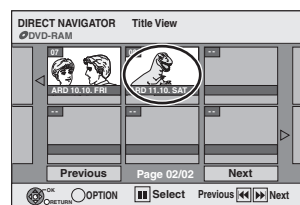
Title View screen

To show other pages
Press [▲, ▼, ◄, ►] to select "Previous" or "Next" and press [OK].
●You can also press [◄◄, ►►] to show other pages.
Multiple editing
Select with [▲, ▼, ◄, ►] and press [∎∎]. (Repeat.)
A check mark appears. Press [∎∎] again to cancel.

3 **Press [OPTION].**

4 **Press [▲, ▼] to select the operation and press [OK].**
●If you select "Edit", press [▲, ▼] to select the operation and press [OK].

| Delete |
| Properties |
| Edit |
| Chapter View |

Enter Name
Set up Protection
Cancel Protection
Partial Delete
Change Thumbnail
Divide Title
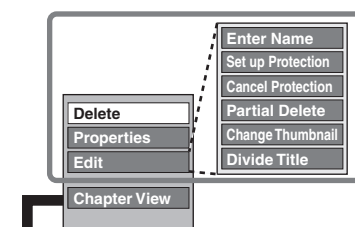
➡ Refer to "Title operations" (➡ 43).

■ **If you select "Chapter View"**

5 **Press [▲, ▼, ◄, ►] to select the chapter.**
To start play ➡ Press [OK].
To edit ➡ Step 6.

DIRECT NAVIGATOR Chapter View
DVD-RAM
ARD 11.10. SAT
001 0:31:38
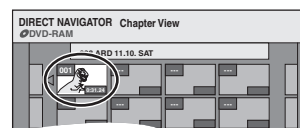
Chapter View screen

●To show other pages/Multiple editing (➡ above)

6 **Press [OPTION], then [▲, ▼] to select the operation and press [OK].**

| Delete Chapter |
| Create Chapter |
| Combine Chapters |
| Title View |
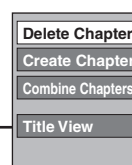
➡ Refer to "Chapter operations" (➡ 43).

●You can go back to Title View.

To return to the previous screen
Press [RETURN].

To exit the screen
Press [DIRECT NAVIGATOR].

Title operations

After performing steps 1–4 (➡ 42)

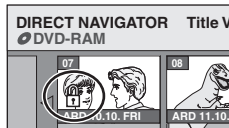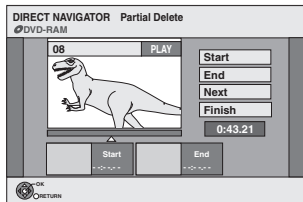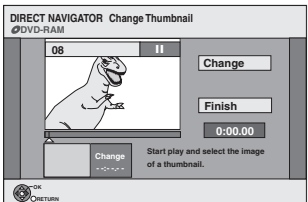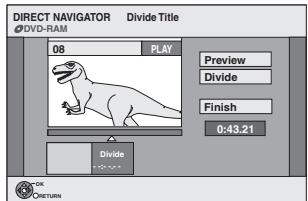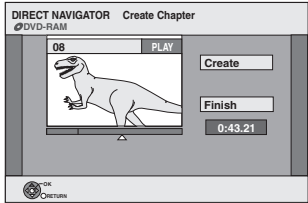|	

Delete※
`RAM` `-R` `-R DL` `-RW(V)` `+R`
`+R DL` `+RW`
	Press [◄, ►] to select "Delete" and press [OK].
	● **Once deleted, the recorded contents are lost and cannot be restored.** Make certain before proceeding.
	● The available recording space on DVD-R, DVD-R DL, +R or +R DL does not increase when you delete titles.
	● Available recording space on DVD-RW (DVD-Video format) and +RW increases only when the last recorded title is deleted. It does not increase if other titles are deleted (➡ 22).

Properties
`RAM` `-R` `-R DL` `-RW(V)` `+R`
`+R DL` `+RW` `-RW(VR)`
	Information (e.g., time and date) is shown.
	● Press [OK] to exit the screen.
	
	Properties
	Dinosaur
	No. 26 — Time 12:19
	Date 11.10.2006 MON — Rec time 0:30 (SP)
	Name ARD

Enter Name
`RAM` `-R` `-R DL` `-RW(V)` `+R`
`+R DL` `+RW`
	You can give names to recorded titles.
	(➡ 46, Entering text)

Set up Protection※ Cancel Protection※ `RAM` `+R` `+R DL` `+RW`	If set, this will protect the title from accidental deletion. **Press [◄, ►] to select "Yes" and press [OK].** The lock symbol appears when the title is protected. **DIRECT NAVIGATOR Title V** ⊘DVD-RAM 07 / 08 ARD 10.10. FRI / ARD 11.10.
Partial Delete `RAM` (➡ below, For your reference)	You can remove unnecessary part of the recording. ① **Press [OK] at the start point and end point of the section you want to delete.** ② **Press [▲, ▼] to select "Finish" and press [OK].** ● Select "Next" and press [OK] to delete other sections. ③ **Press [◄, ►] to select "Delete" and press [OK].** **DIRECT NAVIGATOR Partial Delete** ⊘DVD-RAM 08 — PLAY Start / End / Next / Finish 0:43.21 Start — End

Change Thumbnail
`RAM` `-R` `-R DL` `-RW(V)` `+R`
`+R DL` `+RW`
(➡ below, For your reference)
	You can change an image to be shown as the thumbnail picture in the Title View.
	① **Press [►] (PLAY) to start play.**
	② **Press [OK] when the image you want to use as a thumbnail is shown.**
	To change the thumbnail
	Restart play and press [▲, ▼] to select "Change", then press [OK] at the point you want to change.
	③ **Press [▲, ▼] to select "Finish" and press [OK].**
	
	DIRECT NAVIGATOR Change Thumbnail
	⊘DVD-RAM
	08 — II
	Change / Finish
	0:00.00
	Change — Start play and select the image of a thumbnail.

Divide Title `RAM` (➡ below, For your reference)	You can divide a title into two. ① **Press [OK] at the point you want to divide the title.** ② **Press [▲, ▼] to select "Finish" and press [OK].** ③ **Press [◄, ►] to select "Divide" and press [OK].** **To confirm the division point** Press [▲, ▼] to select "Preview" and press [OK]. (The unit plays 10 seconds before and after the division point.) **To change the division point** Restart play and press [▲, ▼] to select "Divide", then press [OK] at the point where you want to divide the title. **DIRECT NAVIGATOR Divide Title** ⊘DVD-RAM 08 — PLAY Preview / Divide / Finish 0:43.21 Divide Note ● The divided titles retain the title name and CPRM property (➡ 81) of the original title. ● Video and audio just before and after the dividing point may momentarily cut out.

※ Multiple editing is possible.

Chapter operations

After performing steps 1–6 (➡ 42)

Delete Chapter※ `RAM`	**Press [◄, ►] to select "Delete" and press [OK].** ● **Once deleted, the recorded contents are lost and cannot be restored.** Make certain before proceeding. ● Select "Combine Chapters" (➡ below) when you only want to delete the division point between chapters. (The recorded contents will not be deleted.)
Create Chapter `RAM` (➡ below, For your reference)	Select the point where you want to start a new chapter while viewing the title. ① **Press [OK] at the point you want to divide.** ● Repeat this step to divide at other points. ② **Press [▲, ▼] to select "Finish" and press [OK].** **DIRECT NAVIGATOR Create Chapter** ⊘DVD-RAM 08 — PLAY Create / Finish 0:43.21
Combine Chapters `RAM`	**Press [◄, ►] to select "Combine" and press [OK].** ● The selected chapter and following chapter are combined.

※ Multiple editing is possible.

For your reference
● Use Search (➡ 32), Time Slip (➡ 32) to find the desired point.
● To find the desired point correctly, use Slow-motion (➡ 32) and Frame-by-frame (➡ 32).
● To skip to the start or end of a title, press [|◄◄] (start) or [►►|] (end).

RQT9127

You can arrange the chapters (➡ 42) to create a playlist.

Title		Title	
Chapter	Chapter	Chapter	Chapter	Chapter

Playlist	Chapter	Chapter
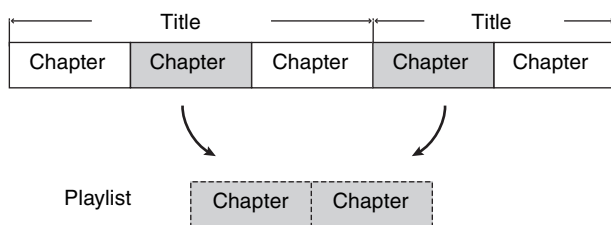
≥Playlists are not recorded separately so this doesn't use much capacity.
≥Editing chapters in a playlist does not modify the source titles and source chapters.
≥You cannot create or edit playlists while recording or copying.

[RAM]
≥The maximum number of items on a disc:
  – Playlists: 99
  – Chapters in playlists: Approx. 1000
      (Depends on the state of recording.)
≥If you exceed the maximum numbers of items for a disc, all the items entered will not be recorded.

Creating playlists

[RAM]
Preparation
≥Turn on the television and select the appropriate video input to suit the connection to this unit.
≥Turn the unit on.
≥Press [DRIVE SELECT] to select the DVD drive.
≥[RAM] Release protection (➡ 55, Setting the protection).
≥You cannot create or edit a playlist while recording or while copying.
≥Playlists must be made in accordance with the encoding system currently selected in "TV System" (➡ 62).

1 **While stopped**
Press [FUNCTION MENU].

2 **Press [▲, ▼] to select "To Others" and press [OK].**
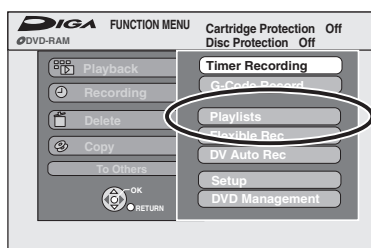
3 **Press [▲, ▼] to select "Playlists" and press [OK].**

4 **Press [▲, ▼, ◄, ►] to select "Create" and press [OK].**
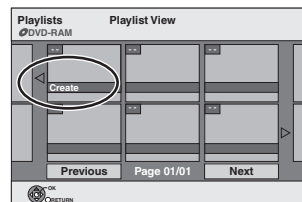
5 **Press [◄, ►] to select the source title and press [▼].**
≥Press [OK] to select all the chapters in the title, then skip to step 7.
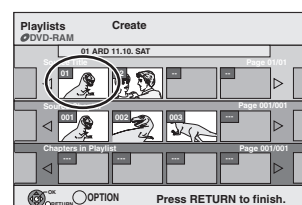
6 **Press [◄, ►] to select the chapter you want to add to a playlist and press [OK].**
Press [▲] to cancel.
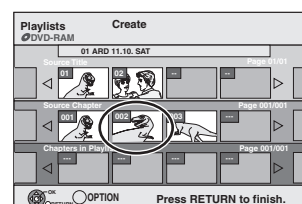
≥You can also create a new chapter from the source title. Press [OPTION] to select "Create Chapter" and press [OK] (➡ 43, Create Chapter).

7 **Press [◄, ►] to select the position to insert the chapter and press [OK].**
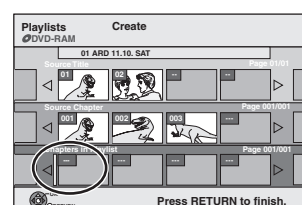
≥Press [▲] to select other source titles.
≥Repeat steps 6–7 to add other chapters.

8 **Press [RETURN].**
All the selected scenes become the playlist.

To return to the previous screen
Press [RETURN].

To exit the screen
Press [EXIT].

Editing and playing playlists/chapters

`RAM`
`-RW(VR)` (Play only)

1 While stopped
Press [FUNCTION MENU].

2 **Press [▲, ▼] to select "To Others" and press [OK].**

3 **Press [▲, ▼] to select "Playlists" and press [OK].**

4 **Press [▲, ▼, ◄, ►] to select the playlist.**
To start play ➡ Press [OK].
To edit ➡ Step 5.

Playlist View screen

```
Playlists      Playlist View
⊘DVD-RAM
                    ---        ---
12.10. SUN 0:30   Create
   ---        ---
                                    ▷
   Previous    Page 01/01    Next
⊙OK⊙RETURN ◯OPTION  ▐▐ Select
```
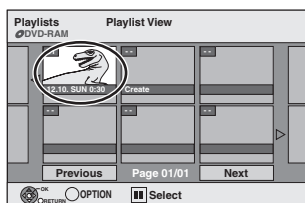
● To show other pages/Multiple editing (➡ 42)

5 **Press [OPTION], then [▲, ▼] to select the operation and press [OK].**
● If you select "Edit", press [▲, ▼] to select the operation and press [OK].

```
                    Create
                    Copy
          Enter Name       Refer to "Playlist
    Delete  Change Thumbnail  operations".
    Properties
    Edit
    Chapter View
```
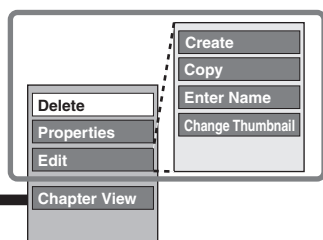
■ **If you select "Chapter View"**

6 **Press [▲, ▼, ◄, ►] to select the chapter.**
To start play ➡ Press [OK].
To edit ➡ Step 7.

Chapter View screen

```
Playlists      Chapter View
⊘DVD-RAM
         ALL BD 12.10. SUN 0:30
   001      ---        ---
   ---      ---        ---
                                    ▷
   Previous    Page 01/01    Next
⊙OK⊙RETURN ◯ OPTION  ▐▐ Select
```
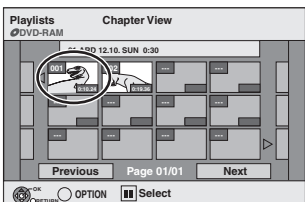
● To show other pages/Multiple editing (➡ 42)

7 **Press [OPTION], then [▲, ▼] to select the operation and press [OK].**

```
    Add Chapter
    Move Chapter        Refer to "Chapter
    Create Chapter      operations".
    Combine Chapters
    Delete Chapter
    Playlist View
```
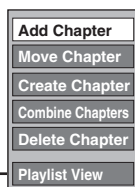
● You can go back to Playlist View.
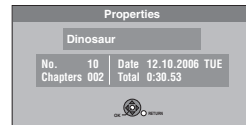
To return to the previous screen
Press [RETURN].
To exit the screen
Press [EXIT].

Playlist operations

After performing steps 1–5 (➡ left)

Delete※ `RAM`	**Press [◄, ►] to select "Delete" and press [OK].** **Once deleted, the playlists are lost and cannot be restored.** Make certain before proceeding.
Properties `RAM` `-RW(VR)`	Playlist information (e.g., total time and date) is shown. ● Press [OK] to exit the screen. ![Properties screen: Dinosaur, No. 10, Chapters 002, Date 12.10.2006 TUE, Total 0:30.53]
Create `RAM`	(➡ 44, Creating playlists, Step 5–8)
Copy※ `RAM`	**Press [◄, ►] to select "Copy" and press [OK].** ● The copied playlist becomes the newest one in the playlist view screen.
Enter Name `RAM`	You can give names to playlists. (➡ 46, Entering text)
Change Thumbnail `RAM`	(➡ 43, Change Thumbnail)
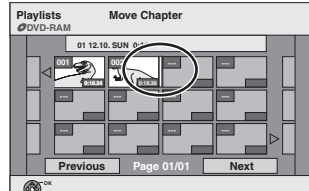
※ Multiple editing is possible.

Chapter operations

`RAM`
After performing steps 1–7 (➡ left)
● Editing chapters in a playlist does not modify the source titles and source chapters.

Add Chapter	(➡ 44, Creating playlists, Step 5–7)
Move Chapter	**Press [▲, ▼, ◄, ►] to select the position to insert the chapter and press [OK].** ```Playlists Move Chapter ⊘DVD-RAM 01 12.10. SUN 0:1 001 002 --- --- --- --- --- --- Previous Page 01/01 Next```
Create Chapter	(➡ 43, Create Chapter)
Combine Chapters	(➡ 43, Combine Chapters)
Delete Chapter※	(➡ 43, Delete Chapter) The playlist itself is deleted if you delete all the chapters in it.

※ Multiple editing is possible.

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

You can give names to recorded titles, etc.

The maximum number of characters:

`RAM`	Characters
Title	64 (44※)
Playlist	64
Disc	64

※Title name for timer recording

`-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW`	Characters
Title	44
Disc	40

Broadcast	Characters
Favourite group 1-4	14

Note
If a name is long, parts of it may not be shown in some screens.

1 Show Enter Name screen.

Title (timer recording)
Select "Programme Name" in step 3 on page 29, right column.

Title
Select "Enter Name" in step 4 on page 42.

Playlist
Select "Enter Name" in step 5 on page 45.

Disc
Select "Disc Name" in step 1 of "Providing a name for a disc" on page 55.

Favourite group 1–4
Press the "Red" button in step ② of the right column on page 58, "To change the name of a group in the "Favourite" column".

Name field: shows the text you have entered
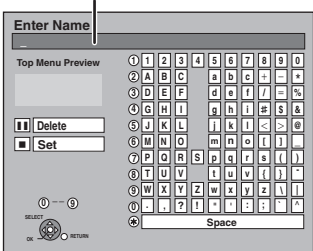
2 Press [▲, ▼, ◀, ▶] to select a character and press [OK].
Repeat this step to enter other characters.

● **To delete a character**
Press [▲, ▼, ◀, ▶] to select the character in the name field and press [❙❙]. (The selected characters are deleted.)

● **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] and press [OK].
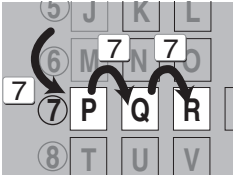
3 Press [■] (Set).
"Writing..." appears then the screen returns to the Title view screen and so on.

To end partway
Press [RETURN].
Text is not added.

For your reference
If you enter a long name, only part of it is shown in the Top Menu after finalisation (➡ 56). When entering a title name, the name that will appear in the Top Menu can be previewed in "Top Menu Preview" window.
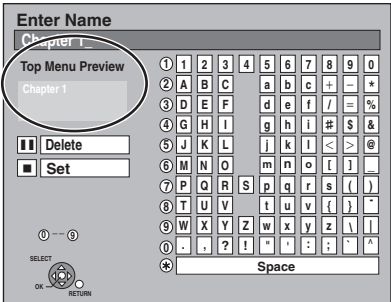
Before copying

You can select from a variety of methods to copy on this unit.

Direction		Type of copying you want	Suitable methods
From	**To**		
VHS	DVD-RAM, DVD-R, DVD-R DL, DVD-RW(DVD-Video format), +R, +R DL or +RW	**Easy copying with one button** ≥When you want to copy from a selected start point to the end of the tape	One Touch Copy (➡ 20)
		Copying with detailed settings ≥When you want to copy from a selected start point to the end of the tape ≥When you want to copy to fit in the remaining capacity of the disc ≥When you want to copy for a limited amount of time	GUI Copy (➡ 48)
DVD-RAM, +RW or DVD-RW (DVD Video Recording format)	VHS	**Easy copying with one button** ≥When you want to copy a whole disc ≥When you want to copy from the beginning of a selected title or playlist to the end of the disc※	One Touch Copy (➡ 21)
		Copying with detailed settings ≥When you want to copy multiple titles and playlists※	GUI Copy (➡ 50)
DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R or +R DL	VHS	**Easy copying with one button** ≥When you want to copy a whole disc ≥When you want to copy from the beginning of the selected title to the end of the disc	One Touch Copy (➡ 21)
		Copying with detailed settings	Cannot copy
Finalised DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL or DVD-Video on sale that are not copy-protected, etc.	VHS	**Easy copying with one button**	Cannot copy
		Copying with detailed settings ≥When you want to copy a whole disc ≥When you want to copy only for a limited amount of time	DVD-Video Copy (➡ 52)

※ **+RW** Since you cannot create playlists on +RW, you cannot copy them either.

∎ Caution for copying from VHS to DVD
≥Copy-protected video cassettes cannot be copied.
  Most of the commercially sold/purchased video cassettes are copy-protected to prevent illegal reproduction and they cannot be copied.
≥When a copy-protected cassette is inserted, a message appears on the display and the recording stops.
≥If a video is copied from a video cassette to a DVD, then the video quality will be degraded.

In order to play a DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R or +R DL recorded using this unit on another playback source, the disc must be finalised (➡ 56).

∎ Caution for copying from DVD to VHS
≥Copy-protected discs cannot be copied. Most DVD-Videos are copy-protected to prevent illegal reproduction and they cannot be copied.

When the playback location of the disc is memorised by the resume play function (➡ 32) and you start copying, the copying is executed from the top of the title which contains the starting position of playback to the end of the disc.

Entering text/Copying titles or playlists

GUI (Graphical User Interface) Copying (VHS ➔ DVD)

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

You can copy programmes recorded on a video cassette onto a disc from the location※ of playback as of the copying start of the tape.
※When you set the recording mode to "FR" (➡ 49) and "Time Setting" to "Off" (➡ 49), you can copy the whole tape from the beginning to the end.

Preparation
- Turn on the television and select the appropriate video input to suit the connection to this unit.
- When copying an NTSC tape to a DVD, change the "TV System" to "NTSC" in the Setup menu (➡ 62). This unit cannot record NTSC signals to discs that already have PAL signal recordings.

VHS (Recording source)
- Press [DRIVE SELECT] to select the VHS drive.
- Insert the video cassette containing the programme to be copied. (➡ 14)
- Press [▶] (PLAY) to play the video cassette and then press [AUDIO] to select the audio type you wish to record.
- Stop the tape at the position where you wish to start recording.

DVD (Recording target)
- Press [DRIVE SELECT] to select the DVD drive.
- RAM Release protection. (➡ 55)
- Insert a disc and confirm there is sufficient empty space for recording on it. (➡ 14, 54)

---

1 While both DVD and VHS are stopped
Press [FUNCTION MENU].

2 **Press [▲, ▼] to select "Copy" and then press [OK].**

3 **Set the copying direction.**
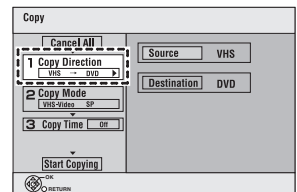
- Set "Source" to "VHS".
- If you are not going to change the copy direction, press [▼] and skip to step 4.

■**To change the setting**
① Make sure "Copy Direction" is selected and press [▶].
② Make sure "Source" is selected and press [OK].
③ Press [▲, ▼] to select "VHS" and then press [OK].
  - When you set "Source" to "VHS", "DVD" is automatically selected in "Destination".
④ Press [◀].
⑤ Press [▼].

4 **Set the recording mode.**
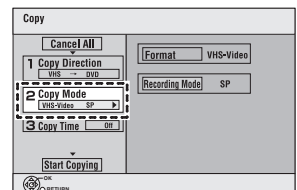
- If you are not going to change the recording mode, press [▼] and skip to step 5.

■**To change the setting**
① Make sure "Copy Mode" is selected and press [▶].
  - "Format" is automatically set to "VHS-Video".
② Make sure "Recording Mode" is selected and press [OK].
③ Press [▲, ▼] to select the recording mode (XP, SP, LP, EP or FR) and then press [OK].
  - About FR mode (➡ 49)
④ Press [◀].
⑤ Press [▼].

5 Set the time limit.

```
Copy
  ┌─Cancel All─┐          ┌─────────────┐
  ┌1 Copy Direction┐      │Time Setting  Off│
  │  VHS  →  DVD  │      └─────────────┘
  ┌2 Copy Mode──┐
  │ VHS-Video   SP│       Destination Capacity:  2:00
  ┌3 Copy Time   Off ►┐
                          Set the time to finish copying
  ┌─Start Copying─┐
  ◎ OK
  ◎ RETURN
```

● If you are not going to change the recording time, press [▼]
and skip to step 6.

■To change the setting
① Make sure "Copy Time" is selected and press [►].
② Make sure "Time Setting" is selected and press [OK].
● Setting the unit to copy all the content on the video cassette
  ③ Press [▲, ▼] to select "Off" and press [OK].
  ④ Press [◄].
  ⑤ Press [▼].

● Setting the copying time
  ③ Press [▲, ▼] to select "On" and press [OK].
  ④ Press [▼] to select "Copy Time" and press [OK].
  ⑤ Press [◄, ►] to select "Hour" and "Min." and press
    [▲, ▼] to set the recording time and then press [OK].
  ● You can also set the time with the numbered buttons.
  ● Maximum recording time is 8 hours.
  ⑥ Press [◄].
  ⑦ Press [▼].

6 Make sure "Start Copying" is selected and press [OK].

```
Copy
  ┌─Cancel All─┐
  ┌1 Copy Direction┐
  │  VHS  →  DVD  │
  ┌2 Copy Mode──┐
  │ VHS-Video   SP│       Press OK to start copying.
  ┌3 Copy Time  1:15┐
  ┌─Start Copying─┐
  ◎ OK
  ◎ RETURN
```

● The confirmation screen appears.

7 Press [◄, ►] to select "Yes" and then press [OK].

[-R] [-R DL] [-RW(V)] [+R] [+R DL]
Press [◄, ►] to select "Copy & Finalise" or "Copy Only" and then press [OK].

```
  Start copying only.
  Cannot play the disc on other DVD players.


  ┌ Copy & Finalise ┐   ┌ Copy Only ┐

  Finalising is to enable the disc to be played on
  other DVD players.
```
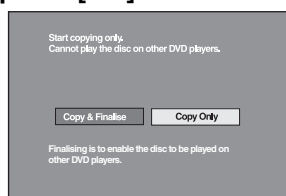
● Copying starts.
● Copying is automatically stopped when the tape reaches the
end, the remaining capacity of the disc is filled.
● **If "Copy & Finalise" is selected;**
After finalising, the disc becomes play-only and you can play them on other DVD equipment.
However, you can no longer record or edit.
● **Finalising will not start if copying is not completed (e.g., due to shortage of remaining disc space).**

■ To stop copying in the middle (process)
Press and hold [RETURN] for about 3 seconds or more.
● However you cannot stop finalise after it has started.

To return to the previous screen
Press [RETURN].

■ About FR mode
When "Time Setting" is set to "Off" in step 5 above:
● The recording mode is automatically selected by estimating the
remaining capacity of the disc for copying of only the recorded
parts in the video cassette (unrecorded parts will not be
recorded).
● When you press [OK] to start copy, the tape is automatically
fast-forwarded to the end and then fast-rewound to the
beginning before the copying is actually started. It may take
time to start copy. If the remaining capacity of the disc is
insufficient, the copying will be stopped in the middle.
● The recording is divided into titles every time the tape index
signals are detected.

When "Time Setting" is set to "On" in step 5 above:
● The recording mode is automatically determined by estimating
the remaining capacity of the disc for copying of the contents
equivalent to the recording time set from the start point of the
copying on the video cassette (unrecorded parts will also be
recorded).
● The recording is not divided into titles.

Copying titles or playlists

GUI (Graphical User Interface) Copying (DVD ➜ VHS)

`RAM` `+RW` `-RW(VR)`

You can copy multiple titles and playlists that are recorded on a disc onto a video cassette.

Preparation
- Turn on the television and select the appropriate video input to suit the connection to this unit.
- When copying an NTSC disc to a video cassette, change the "TV System" to "NTSC" in the Setup menu (➡ 62).

DVD (Recording source)
- Press [DRIVE SELECT] to select the DVD drive.
- Insert the disc containing the programme to be copied. (➡ 14)
- `RAM` `-RW(VR)` Press [▶] (PLAY) to play the disc and then press [AUDIO] to select the audio type you wish to record.

VHS (Recording target)
- Press [DRIVE SELECT] to select the VHS drive.
- Insert a video cassette with a secure accidental erasure prevention tab. (➡ 14) Stop the tape at the point where you want to start copying to.
- Confirm that the remaining tape time is sufficient for recording. (➡ 54)

---

1 While both DVD and VHS are stopped
Press [FUNCTION MENU].

2 Select "Copy" with [▲, ▼] and press [OK].

3 Set "Copy Direction".

- Set "Source" to "DVD".
- If you are not going to change the copy direction, press [▼], then skip to step 4.

■To change the setting
① Make sure "Copy Direction" is selected and press [▶].
② Make sure "Source" is selected and press [OK].
③ Press [▲, ▼] to select "DVD" and press [OK].
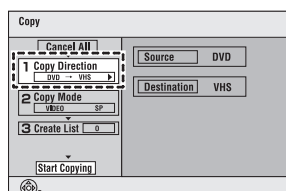
- When you set "Source" to "DVD", "VHS" is automatically selected in "Destination".
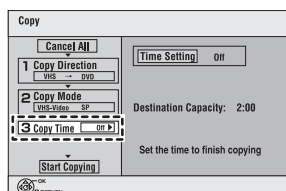④ Press [◀].
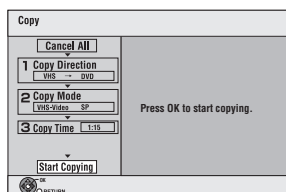⑤ Press [▼].

4 Set the recording mode.
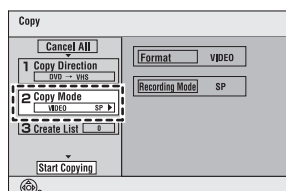
- If you are not going to change the recording mode, press [▼], then skip to step 5.

■To change the setting
① Make sure "Copy Mode" is selected and press [▶].
  - "Format" is automatically set to "VIDEO".
② Make sure "Recording Mode" is selected and press [OK].
③ Select recording mode with [▲, ▼] and press [OK].
④ Press [◀].
⑤ Press [▼].

5 Register titles and playlists for copying.

- If you are going to copy a registered list without making any changes to it, press [▼], then skip to step 6.

■To set for the registration
① Make sure "Create List" is selected and press [▶].
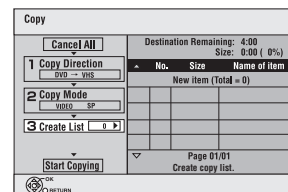
② Make sure "New item" is selected and press [OK].
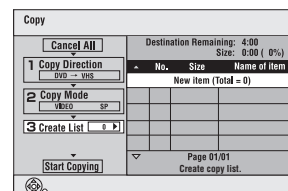
③ `RAM` `-RW(VR)` Press the "Red" button to select "VIDEO" or press "Green" button to select "Playlists".
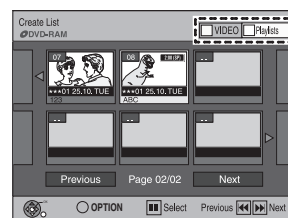
- You can also select the view by selecting "Other View" from the OPTION MENU.
  1 Press [OPTION].
  2 Make sure "Other View" is selected and press [OK].
  3 The confirmation screen appears.
    Press [OK].
④ Press [▲, ▼, ◀, ▶] to select the title or playlist and press [❙❙].
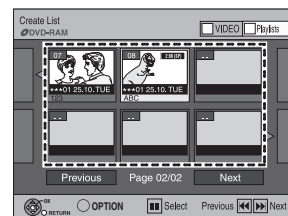
- A check mark appears. Press [❙❙] again to cancel.Repeat this step to until you select all necessary items.
- When you switch between the "VIDEO" and "Playlists" tab, the check mark is cancelled.
- The items will be copied in the order of the copying list If you want to specify the order, repeat selecting one item at a time.
- To show other pages (➡ 51)
⑤ Press [OK].
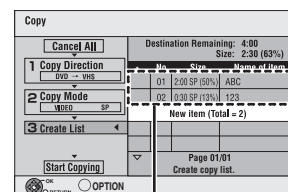
Registered titles

- To edit the copying list(➡ 51)
⑥ Press [◀].
  - Make sure that the value on "Size" is smaller than the value in "Destination Remaining".
⑦ Press [▼].

6
When you finish creating the copying list,
Make sure to select "Start Copying" and press [OK].

```
Copy
 ┌─────────────┐
 │ Cancel All  │
 └─────────────┘
 ┌──────────────┐
1│Copy Direction│
 │ DVD → VHS    │      Press OK to start copying.
 ┌──────────────┐
2│ Copy Mode    │
 │ VIDEO    SP  │
 ┌──────────────┐
3│ Create List ☐ 2│
 └──────────────┘
 ┌─────────────┐
 │Start Copying│
 └─────────────┘
 ◉ OK
  ↺ RETURN
```

●The confirmation screen appears.
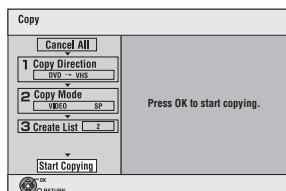
7 Select "Yes" with [◄] and press [OK].
●Copying is started.

■ To stop copying in the middle
Press and hold [RETURN] for about 3 seconds or more.

To return to the previous screen
Press [RETURN].

Various operations
To show other pages
Press [|◄◄] or [►►|].
●Press [▲, ▼, ◄, ►] to select "Previous" or "Next" and press [OK] to show other pages.

Copying list display and convenient functions
■ Copying list icons
🖾:Title with "One time only recording" restriction (➡ 81, CPRM)
①:Title or playlist contains still picture(s)
   ●Titles and playlists that contain only still pictures cannot be copied.

Titles and playlists displaying the following marks cannot be selected.
✕:Unable to play
🅝: NTSC/🅟: PAL
   ●Titles or playlists recorded using a different encoding system from that of the TV system currently selected on the unit.

■ To edit the copying list
In step 5 (➡ 50)
① Select a desired item in the copying list with
   [▲, ▼] and press [OPTION].   e.g., **RAM**
② Press [▲, ▼] to select the operation and press
   [OK].
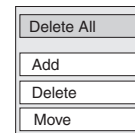
Delete All:
Delete all items registered on the copying list.
●Press [◄] to select "Yes" and press [OK].

```
┌─────────────┐
│ Delete All  │
├─────────────┤
│ Add         │
├─────────────┤
│ Delete      │
├─────────────┤
│ Move        │
└─────────────┘
```

Add:
Add new items to the copying list.
●Press [▲, ▼, ◄, ►] to select the titles or playlists to be added and press [OK].

Delete:
Delete the selected item.
●Press [◄] to select "Yes" and press [OK].

Move:
Move selected items or change the order of items on the copying list.
●Press [▲, ▼] to select the destination and press [OK].

To cancel all registered copying settings and lists
After performing steps 1 to 2 of "GUI (Graphical User Interface) Copying (DVD ➡ VHS)" (➡ 50),
① Press [▲] to select "Cancel All" and press [OK].
② Press [◄] to select "Yes" and press [OK].
●The settings and lists may be cancelled in the following situations.
  – When a title or a playlist has been recorded or deleted at the copying source.

```
Copy
 ┌─────────────┐
 │ Cancel All  │
 └─────────────┘
 ┌──────────────┐
1│Copy Direction│
 │ VHS → DVD    │    Cancel all settings.
 ┌──────────────┐    Press OK.
2│ Copy Mode    │
 │ VHS-Video  SP│
 ┌──────────────┐
3│ Copy Time  OFF ►│
 └──────────────┘
 ┌─────────────┐
 │Start Copying│
 └─────────────┘
 ◉
```

  – When steps have been taken, for instance, to turn off the unit or open the tray.
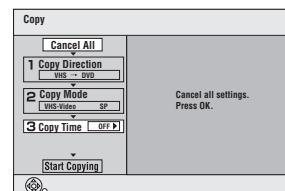
Copying a finalised DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL or DVD-Video

You can copy the contents of a disc being played onto a video cassette for the set time while playing the disc.

- ≥**Operations and on screen displays during copying are also recorded.**
- ≥Almost all DVD-Video on sale have been treated to prevent illegal copying and cannot be copied.
- ≥The following cannot be copied: Video CD, Audio CD and so on.

After performing steps 1 to 4 of "GUI (Graphical User Interface) Copying (DVD ➜ VHS)" (➜ 50),

5 Set "Copy Time".

≥If you are not going to change the setting, press [▼], then skip to step 6.

```
Copy
  Cancel All
1 Copy Direction          Time Setting    Off
  DVD → VHS
2 Copy Mode
  DVD-Video    SP          Destination Capacity:  2:00
3 Copy Time      Off ▶
  Start Copying            Set the time to finish copying.
  OK
  RETURN
```
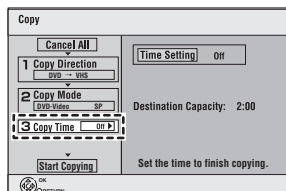
∎ Setting the unit to copy according to the set time

① Make sure "Copy Time" is selected and press [▶].
② Make sure "Time Setting" is selected and press [OK].

≥Setting the unit to copy all the content on the disc
③ Press [▲, ▼] to select "Off" and press [OK].
④ Press [◀].
⑤ Press [▼].

≥Setting the copying time
③ Press [▲, ▼] to select "On" and press [OK].
④ Press [▼] to select "Copy Time" and press [OK].
⑤ Press [◀, ▶] to select "Hour" and "Min." and press [▲, ▼] to set the recording time and then press [OK].
≥You can also set the time with the numbered buttons.
≥Maximum recording time is 8 hours.
⑥ Press [◀].
⑦ Press [▼].

6 Make sure "Start Copying" is selected and press [OK].

Press [◀] to select "Yes" and press [OK] to start copy. The disc top menu is displayed.

```
Copy
  Cancel All
1 Copy Direction
  DVD → VHS
2 Copy Mode
  DVD-Video    SP          Press OK to start copying.
3 Copy Time      2:00
  Start Copying
  OK
  RETURN
```

≥Disc play automatically begins from title 1 when "Title 1" is selected from the "Auto-Play Select" menu when finalising the disc (➜ 56).
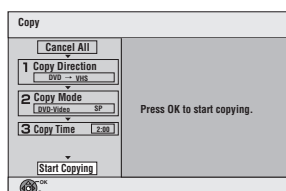
7 When the top menu is displayed

Press [▲, ▼, ◀, ▶] to select the title you want to start copying and press [OK].

```
My favorite                           01/02
   01               02
   Chapter 1        Chapter 2
   03               04
   Chapter 3        Chapter 4
   05               06
   Chapter 5        Chapter 6
   07               08
   Chapter 7        Chapter 8
  Prev.        PLAY        Next
```

≥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.

∎ To stop copying in the middle

Press [∎] or press and hold [RETURN] for about 3 seconds or more.

To return to the previous screen
Press [RETURN].
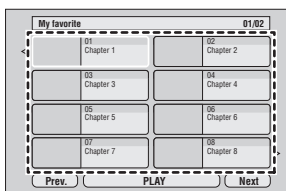
Note

- ≥The screen saver on the right is recorded at the beginning.
- ≥If play does not begin automatically or if the top menu is not displayed automatically, press [▶] (PLAY) to start.
- ≥The contents is recorded as 1 title from the beginning of copy to the end (even if there are multiple programmes).
- ≥"REC" only appears on the unit's display when copying from DVD-Video.
- ≥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 [➜ 50, GUI (Graphical User Interface) Copying (DVD ➜ VHS)].

Using on-screen menus

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

Common procedures

1 Press [DISPLAY].

Disc		
Play	Soundtrack	1 DD Digital 2/0 ch
Picture	Subtitle	Off
Sound	Audio channel	L R
Other		

| Menu | Item | Setting |

- Depending on the condition of the unit (playing, stopped, etc.) and disc contents, there are some items that you cannot select or change.
- When the VHS drive is selected, you can only set "DVB Multi Audio" and "Position".

2 Press [▲, ▼] to select the menu and press [▶].

3 Press [▲, ▼] to select the item and press [▶].

4 Press [▲, ▼] to select the setting.

- Some items can be changed by pressing [OK].

To clear the on-screen menus
Press [DISPLAY].

Disc menu—Setting the disc content

Soundtrack∗
`RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `-RW(VR)`
The disc's audio attributes appear.
`DVD-V`
Select the audio and language (➡ right, Audio attribute, Language).
DivX
Select the soundtrack number.
- Soundtrack numbers are displayed even when there is only one audio type.

Subtitle∗
`DVD-V`
Turn the subtitle on/off and select the language (➡ right, Language).
`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.
DivX
Turn the subtitle on/off and select the subtitle number.
- Subtitle numbers are displayed even if there are not multiple subtitles.

Angle∗ `DVD-V`
Change the number to select an angle.

Audio channel `RAM` `-RW(VR)` `VCD` and **DivX**
(➡ 33, Changing audio during play)

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.

PBC (Playback control) (➡ 81) `VCD`
Indicates whether menu play (playback control) is on or off.

∗ With some discs, you may only be able to make changes using the menus (➡ 16) on the disc.

- The display changes according to the disc content. You cannot change when there is no recording.

Audio attribute
LPCM/DDDigital/DTS/MPEG:	Signal type
k (kHz):	Sampling frequency
b (bit):	Number of bits
ch (channel):	Number of channels

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	

Play menu—Change the play sequence

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.

Repeat Play
- All — `CD` `VCD`
- Chapter — `RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `DVD-V` `-RW(VR)`
- Group — MP3
- PL (Playlist) — `RAM` `-RW(VR)`
- Title — `RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `DVD-V` `-RW(VR)`
- Track — `CD` `VCD` and **MP3**

Select "Off" to cancel.

Picture menu—Change the picture quality

Playback NR

Reduces noise and picture degradation.

Progressive∗ **(➡ 81)**

Select "On" to enable progressive output.
Select "Off" if the picture is stretched horizontally.

Transfer∗ [When "Progressive" (➡ above) is set to "On".]

Select the method of conversion for progressive output to suit the type of title being played (➡ 81, Film and video).

When the output signal is PAL
(When the tray is opened, the setting will return to "Auto".)

- **Auto:** Automatically detects the film and video content, and appropriately converts it.
- **Video:** Select when using "Auto", and the content is distorted.
- **Film:** Select this if the edges of the film content appear jagged or rough when "Auto" is selected. However, if the video content is distorted as shown in the illustration to the right, then select "Auto".
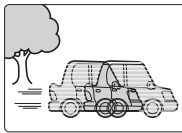
When the output signal is NTSC

- **Auto1** Automatically detects the film and video
  (normal)**:** content, and appropriately converts it.
- **Auto2:** In addition to "Auto1", automatically detects film contents with different frame rates and appropriately converts it.
- **Video:** Select when using "Auto1" and "Auto2", and the content is distorted.

Copy NR (Only when AV1, AV2 or DV is selected)

Reduces video tape noise while copying.

- **Automatic:** Noise reduction only works on picture input from a video tape.
- **On:** Noise reduction works for input video.
- **Off:** Noise reduction is off. You can record the input signal as it is.

∗Only when you have set "Progressive" to "On" in the Setup menu (➡ 62).

Sound menu—Change the sound effect

DVB Multi Audio
[Digital channel 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   - German   - Italian   - French
  - Spanish   - Original∗

∗ "Original" is displayed when a broadcast is only available in the original language.

V.S.S.
RAM -R -R DL -RW(V) +R +R DL +RW DVD-V -RW(VR)
(Dolby Digital, MPEG, 2-channel or over only)

Enjoy a surround-like effect if you are using two front speakers only.
- Turn V.S.S. off if it causes distortion. (Check the surround function on the connected equipment.)
- V.S.S. does not work for bilingual recordings.

Dialog Enhancer
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)

The volume of the centre channel is raised to make dialogue easier to hear.

Other menu—Change the display position

Position

1–5: The higher the setting the lower the on-screen menu moves.

Status messages

During playback or recording
Press [STATUS ⓘ].
The display changes each time you press the button.

DVD-RAM — Selected drive status/type of disc
REC — The remaining time appears here while
PLAY — Recording or play status/input channel
ABC — Channel (Analogue broadcast)
     The name of the station (Digital broadcast).
L R — Selected audio type
VHS REC ● — Status of the other drive

Title number and elapsed time during play/
Recording mode
                    Available recording time and
                    recording mode
Date and time

18:53:50 11.10.   ■Remain   0:43 XP
■ T1   0:05.14 XP   ■ T2   0:00.10 XP

Title number and elapsed time during recording/Recording mode

No display

Disc management

|RAM| |-R| |-R DL| |-RW(V)| |+R| |+R DL| |+RW| |-RW(VR)|

Preparation
- Press [DRIVE SELECT] to select the DVD drive.
- |RAM| Release protection (➡ right).

Common procedures

1 While stopped

Press [FUNCTION MENU].

2 **Press [▲, ▼] to select "To Others" and press [OK].**

DIGA FUNCTION MENU Cartridge Protection Off
DVD-RAM Disc Protection Off
Playback Timer Recording
Recording G-Code Record
Delete Playlists
Copy Flexible Rec
To Others DV Auto Rec
OK Setup
RETURN DVD Management
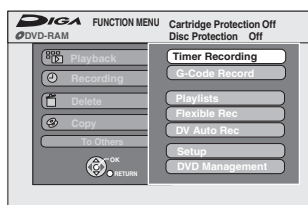
3 **Press [▲, ▼] to select "DVD Management" and press [OK].**

DVD Management
DVD-RAM Titles Used 11 0 : 22 Remain 5:38 (EP)
Disc Name
Disc Protection 🔓 Off
Delete all titles
SELECT
OK RETURN Format Disc
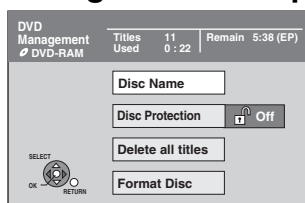
Setting the protection

|RAM|

After performing steps 1–3 (➡ left)

4 **Press [▲, ▼] to select "Disc Protection" and press [OK].**

5 **Press [◀, ▶] to select "Yes" and press [OK].**

DVD Management
DVD-RAM Titles Used 11 0 : 22 Remain 5:38 (EP)
Disc Name
Disc Protection 🔒 On
Delete all titles
SELECT
OK RETURN Format Disc

The lock symbol appears closed when the disc is write-protected.

To return to the previous screen
Press [RETURN].

To exit the screen
Press [EXIT].

Cartridge-protection

For a DVD-RAM with a cartridge
- With the write-protect tab in the protect position, play automatically starts when inserted in the unit.
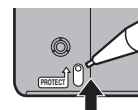
Providing a name for a disc

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

You can provide a name for each disc.

After performing steps 1–3 (➡ left)

4 **Press [▲, ▼] to select "Disc Name" and press [OK].**

(➡ 46, Entering text)

- The disc name is displayed in the DVD Management window.
- |-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.

DVD Management Documentary
DVD-RAM Titles Used 11 0 : 22 Remain 5:38 (

My favorite 01/02
01 Chapter 1 02 Chapter 2

To return to the previous screen
Press [RETURN].

To exit the screen
Press [EXIT].

Deleting all titles and playlists—Delete all titles

`RAM`

After performing steps 1–3 (➡ 55)

4 Press [▲, ▼] to select "Delete all titles" and press [OK].

5 Press [◀, ▶] to select "Yes" and press [OK].

6 Press [◀, ▶] to select "Start" and press [OK].
A message appears when finished.

7 Press [OK].

Note
- **Once deleted, the recorded contents are lost and cannot be restored.** Make certain before proceeding.
- Deleting all video titles will result in all playlists also being deleted.
- Delete does not work if one or more titles are protected.

To return to the previous screen
Press [RETURN].

To exit the screen
Press [EXIT].

Deleting all the contents of a disc—Format

`RAM` `-RW(V)` `+RW` `-RW(VR)`
`+R` `+R DL` (New disc only)

Note

Formatting deletes all contents (including computer data), and they cannot be restored. Check carefully before proceeding. The contents are deleted when you format a disc even if you have set protection.

After performing steps 1–3 (➡ 55)

4 Press [▲, ▼] to select "Format Disc" and press [OK].

5 Press [◀, ▶] to select "Yes" and press [OK].

6 Press [◀, ▶] to select "Start" and press [OK].
A message appears when formatting is finished.
Note
- Formatting normally takes a few minutes; however, it may take up to a maximum of 70 minutes (`RAM`).
- **Do not disconnect the AC mains lead while formatting.** This can render the disc unusable.

7 Press [OK].

Note
- When a disc 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 on the disc.
- You can format DVD-RW only as DVD-Video format on this unit.

To stop formatting `RAM`
Press [RETURN].
- You can cancel formatting if it takes more than 2 minutes. The disc must be reformatted if you do this.

To return to the previous screen
Press [RETURN].

To exit the screen
Press [EXIT].

Selecting whether to show the Top Menu first—Auto-Play Select

`-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW`
You can select whether to show the top menu after finalising.

After performing steps 1–3 (➡ 55)

4 Press [▲, ▼] to select "Auto-Play Select" and press [OK].

5 Press [▲, ▼] to select "Top Menu" or "Title 1" and press [OK].
Top Menu: The top menu appears first.
Title 1: The disc content is played without displaying the top menu.

To return to the previous screen
Press [RETURN].

To exit the screen
Press [EXIT].

Enabling discs to be played on other equipment—Finalise

`-R` `-R DL` `-RW(V)` `+R` `+R DL`
Make selections from "Auto-Play Select" (➡ above) before finalising the disc.

After performing steps 1–3 (➡ 55)

4 Press [▲, ▼] to select "Finalise" and press [OK].

5 Press [◀, ▶] to select "Yes" and press [OK].

6 Press [◀, ▶] to select "Start" and press [OK].
A message appears when finalising is finished.

Note
- You cannot cancel finalising.
- Finalising takes up to 15 minutes.
  (`-R DL` `+R DL` Finalising takes up to 60 minutes.)
- **Do not disconnect the AC mains lead while finalising.** This will render the disc unusable.

7 Press [OK].

Note
When finalising a high-speed recording compatible disc, it may take longer than displayed on the confirmation screen (approximately four times).

After finalising
- `-R` `-R DL` `+R` `+R DL` The disc becomes play-only and you can no longer record or edit.
- `-RW(V)` You can record and edit the disc after formatting (➡ left) although it becomes play-only after finalising.
- Titles are divided into about 5-minute (`+R` `+R DL` 8-minute)* chapters.
  * This time varies greatly depending on the condition and mode of recording.
- There is a pause of several seconds between titles and chapters during play.

	Before finalising	After finalising
Recording/Editing/Entering name	◯	–
Play on other players	–	◯

- You cannot finalise discs recorded on other manufacturer's equipment.
- Discs finalised on this unit may not be playable on other players due to the condition of the recording.

To return to the previous screen
Press [RETURN].

To exit the screen
Press [EXIT].

Creating Top Menu—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.
You cannot use the Top Menu for playing on this unit.

Make selections from "Auto-Play Select" (➡ 56) before creating top menu.

After performing steps 1–3 (➡ 55)

4 Press [▲, ▼] to select "Create Top Menu" and press [OK].

5 Press [◄, ►] to select "Yes" and press [OK].

6 Press [◄, ►] to select "Start" and press [OK].
Creating Top Menu starts. You cannot cancel creating. Creating Top Menu can take a few minutes.

7 Press [OK].

To return to the previous screen
Press [RETURN].

To exit the screen
Press [EXIT].

Note
≥You can record or edit discs after creating the Top Menu. But the created menu is deleted when you record or edit disc. In such cases, create the Top Menu again by using "Create Top Menu".

Close First Layer

`-R DL` `+R DL`
DVD-R DL and +R DL discs have two layers of recordable surfaces on one side. This unit does not offer seamless recording between the two layers. Recording stops when space on the first layer is full. The first layer must be closed to start recording on the second layer. Closing the first layer makes it unavailable for recording (editing is still possible). You cannot cancel closing. Make certain before proceeding.

After performing steps 1–3 (➡ 55)

4 Press [▲, ▼] to select "Close First Layer" and press [OK].

5 Press [◄, ►] to select "Yes" and press [OK].

6 Press [◄, ►] to select "Start" and press [OK].
≥Closing the layer starts. You cannot cancel closing.
≥Closing a layer can take a few minutes or up to a maximum of 30 minutes, depending on the remaining space on the disc.

Note
≥**Do not disconnect the AC mains lead while closing.**
This can render the disc unusable.

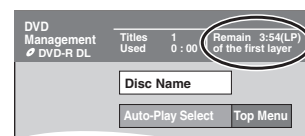**7 Press [OK].**

To return to the previous screen
Press [RETURN].

To exit the screen
Press [EXIT].

■ **To confirm the remaining recording time on the layer**

Note
≥You cannot close the first layer when there are no recordings on it.

Changing the unit's settings

You can change the unit's settings using Setup menu.
≥The settings remain intact even if you switch the unit to standby.

Common procedures

1 While stopped
Press [FUNCTION MENU].

2 **Press [▲, ▼] to select "To Others" and press [OK].**

3 **Press [▲, ▼] to select "Setup" and press [OK].**

Tabs   Menus   Options

Setup		
	Comb Filter	On
Tuning	Still Mode	Automatic
Disc	Seamless Play	On
Picture		
Sound		
Display		
Connection		
VHS		
Others		

SELECT   TAB
OK   RETURN

4 **Press [▲, ▼] to select the tab and press [▶].**

5 **Press [▲, ▼] to select the menu and press [OK].**

6 **Press [▲, ▼] to select the option and press [OK].**
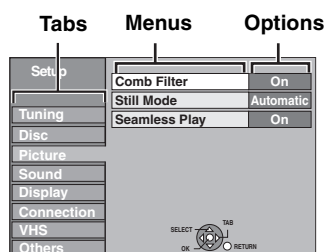
To return to the previous screen
Press [RETURN].

To exit the screen
Press [EXIT].

Tuning

∎ Edit Favourites
You can create four groups of channels for making viewing and recording easier. Editing these groups does not affect the channel setting itself.
≥Timer recording may not work correctly if you edit the groups during timer recording standby.

Press the "Green" button to select the groups.

Edit Favourites	
All Services	**Favourites 1**
2A ABC	
20A ABC HDTV	
Favourite Select Add Add All	
SELECT	Page + △
RETURN	Page - ▽
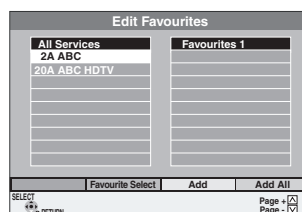
To add channels to a group
① Press [▲, ▼] to select the channel in the "All Services" column and press the "Yellow" button.
≥Repeat this step to add other channels.
≥Press the "Blue" button to add all the available channels to the group. (This function is available only when no channels have been added to the group.)
② Press [OK] to save the group.

To change the order of channels of a group
① Press [▶]※.
② Press [▲, ▼] to select the channel in the "Favourite" column to move and press the "Green" button.
③ Press [▲, ▼] to select the new position of the channel and press the "Green" button.
≥Repeat the steps ② – ③ to move other channels.
④ Press [OK] to save the group.

To delete channels on a group
① Press [▶]※.
② Press [▲, ▼] to select the channel in the "Favourite" column and press the "Yellow" button.
≥Repeat this step to delete other channels.
≥Press the "Blue" button to delete all the channels from the group.
③ Press [OK] to save the group.
Deleting a channel from a group does not affect the channel itself. You can still select the channel from the "All Services" group.

To change the name of a group in the "Favourite" column
① Press [▶]※.
② Press the "Red" button.
(➡ 46, Entering text)

※ When the station name of the "All Services" column is highlighted

∎ Auto-Setup Restart
Download from TV
You can restart auto channel setting if set up (➡ 10) fails for some reason.
However, if you perform "Auto-Setup Restart", the order of analogue channels will change.

Select "Download from TV" when you connect the unit to a VIERA Link (HDAVI Control 3) compatible TV with an HDMI cable.

When the confirmation screen appears
Press [◄, ►] to select "Yes" and press [OK].

You can also use the following method to restart Auto-Setup.
When the unit is on and stopped
Press and hold [∨ CH] and [CH ∧] on the main unit until the Auto-Setup screen appears.
All the settings except for the ratings level, ratings password and clock settings return to the factory preset. The timer recording programmes are also cancelled.

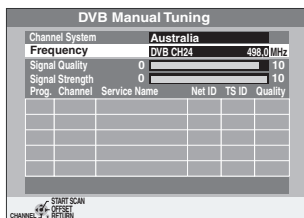## ■ Settings for Digital Services

Press [OK] to show the following settings.

DVB Manual Tuning

You can set channels manually that the DVB Auto-Setup could not complete successfully.

① Press [▲, ▼] to select "DVB Manual Tuning" and press [OK].

```
                DVB Manual Tuning
Channel System       Australia
Frequency            DVB CH24        498.0 MHz
Signal Quality       0                         10
Signal Strength      0                         10
Prog.  Channel  Service Name    Net ID  TS ID  Quality




                    START SCAN
                    OFFSET
CHANNEL             RETURN
```

② Press [▲, ▼] to select the channel you want to set.
③ Press [◄, ►] to adjust the frequency.
  ● The frequency rises and falls in steps of 0.5 MHz.
  ● Adjust the frequency by checking the signal strength and signal quality displays.
    [Refer to "Signal Condition" (➡below) for signal quality and signal strength.]
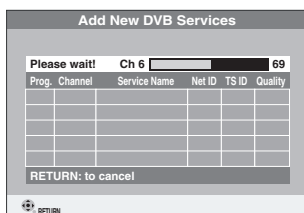④ Press [OK] to start scan.
  The set channel is displayed in the table.
⑤ Press [EXIT] and press [∧ ∨ CH] to check that applicable channels have been selected.

Add New DVB Services

You can search for newly added terrestrial digital channels to receive.

① Press [▲, ▼] to select "Add New DVB Services" and press [OK].
  The unit starts searching for newly available terrestrial digital channels. This takes about 5 minutes.

```
               Add New DVB Services

Please wait!    Ch 6                          69
Prog.  Channel  Service Name    Net ID  TS ID  Quality




RETURN: to cancel

      RETURN
```

A message is displayed when the search is finished.
"No new services found." is displayed when no new services can be found.
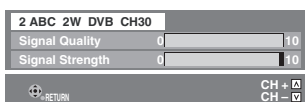② Press [OK] to save the newly found channels.

Signal Condition

You can check the quality and strength of digital broadcast signals. Realign the aerial if you are receiving a poor signal.

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 (➡ 58).

Press [▲, ▼] to select "Signal Condition" and press [OK].
The quality and strength of the signal are shown.
Press [∧ ∨ CH] to select the channel.

```
2 ABC  2W  DVB  CH30
Signal Quality      0                         10
Signal Strength     0                         10
                                        CH + ▲
   RETURN                               CH − ▼
```

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:
  – adjust the position and direction of the aerial.
  – adjust the aerial reception with "DVB Manual Tuning" in the Setup menu (➡ above).
  – check that the current digital broadcast channel is correctly broadcasting.
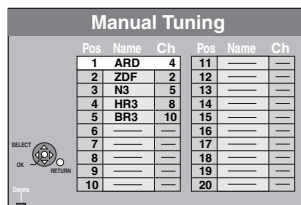
■ Settings for Analogue Services

Press [OK] to show the following setting.

Manual Tuning

You can delete analogue channels and set the analogue channel details.
Press [OK] to show Manual Tuning screen.

```
                Manual Tuning
         Pos  Name  Ch    Pos  Name  Ch
          1   ARD    4     11   ───   ─
          2   ZDF    2     12   ───   ─
          3   N3     5     13   ───   ─
          4   HR3    8     14   ───   ─
          5   BR3   10     15   ───   ─
          6   ───    ─     16   ───   ─
SELECT    7   ───    ─     17   ───   ─
 OK       8   ───    ─     18   ───   ─
RETURN    9   ───    ─     19   ───   ─
         10   ───    ─     20   ───   ─
Delete
```

To delete a programme position
Press [▲, ▼, ◄, ►] to select a programme position and press the "Red" button.

To change the tuning settings for individual programme position
① Press [▲, ▼, ◄, ►] to select a programme position and press [OK].

```
              Pos          1
 Manual       Name        ARD
 Tuning       Channel      4
              Fine Tuning  Auto
              Mono         Off

SELECT

    RETURN

       RETURN :  leave
```

② Press [▲, ▼] to select an item and press [►].

Pos	**Programme position in the table** (You cannot change the programme position.)
Name	**To enter or change the name of a TV station** Press [▲, ▼, ◄, ►] to enter station name and press [OK]. If the station name needs a blank space, select the blank between "Z" and "✳".
Channel	**To enter newly available TV stations or change the channel number of an already tuned TV station** Press [▲, ▼] or the numbered buttons to enter the channel number of the desired TV station. Wait a few moments until the desired TV station has been tuned. After the desired TV station is tuned, press [OK].
Fine Tuning	**To obtain the best tuning condition** Press [▲, ▼] to adjust the best tuning condition and press [OK]. ● Press [►] to return to "Auto".
Mono	**To select the type of sound to be recorded** Press [▲, ▼] to select "On" if the stereo sound is distorted due to inferior reception conditions, or if you want to record the normal (mono) sound during a stereo, bilingual broadcast, and press [OK].

Disc

(All factory default settings are indicated with underlined text.)

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 password with the numbered buttons when the password screen is shown.
Do not forget your password.
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 Password]
[Change Level]	[Temporary Unlock]

Soundtrack

[English]	[German]	[French]	[Italian]
[Spanish]			
[Original]	The original language of each disc will be selected.		
[Other ✴✴✴✴]✴			

Subtitle

[Automatic]	If the language selected for "Soundtrack" is not available, subtitles of that language will automatically appear if available on that disc.		
[English]	[German]	[French]	[Italian]
[Spanish]			
[Other ✴✴✴✴]✴			

Menus

[English]	[German]	[French]	[Italian]
[Spanish]			
[Other ✴✴✴✴]✴			

✴ [Other ✴✴✴✴]
Enter a code (➡ 79) with the numbered buttons.
When the selected language is not available on the disc, the default language is played. There are discs where you can only switch the language from the menu screen (➡ 16).
[DVD-V]
Choose the language for audio, subtitle and disc menus.
≥Some discs start in a certain language despite any changes you make here.

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 (➡ 24, Recording modes and approximate recording times).

[EP (6 Hours)]	You can record for 6 hours on an unused 4.7 GB disc.
[EP (8 Hours)]	You can record for 8 hours on an unused 4.7 GB disc.

≥The sound quality is better when using "EP (6 Hours)" than when using "EP (8 Hours)".

Aspect for Recording
Sets the aspect ratio when recording or copying.

[Automatic]	The programme will be recorded in the original aspect used when recording started (including when recording started at a commercial, etc.).
[16:9]	[4:3]

≥In the following cases, even when set to "Automatic" or "16:9", recordings will be made or copied in 4:3.
– [-R] [-R DL] [-RW(V)] When the recording mode is set to "EP" or "FR (recordings 5 hours or longer)" mode.
– When recording or copying to a +R, +R DL and +RW.

Picture

(All factory default settings are indicated with underlined text.)

Comb Filter
Select the picture sharpness when recording.
The setting is fixed with "On" if you set "TV System" to "NTSC" (➡ 62).

[On]	Pictures become clear and vivid. Normally, use this setting.
[Off]	Select it when recording noisy pictures.

Still Mode
Select the type of picture shown when you pause play (➡ 81, Frames and fields).

[Automatic]	
[Field]	Select if jittering occurs when "Automatic" is selected. (The picture is coarser.)
[Frame]	Select if small text or fine patterns cannot be seen clearly when "Automatic" is selected. (The picture is clearer and finer.)

Seamless Play
Select the play mode between playlist chapter segments and partially deleted titles.

[On]	The chapters in playlists are played seamlessly. This does not work when there are several audio types included on the playlist and when using Quick View (PLAY×1.3). Additionally, the positioning of chapter segments may change slightly.
[Off]	The points where chapters in playlists change are played accurately, but the picture may freeze for a moment.

Sound

(All factory default settings are indicated with underlined text.)

Dynamic Range Compression
`DVD-V` (Dolby Digital only)
Change the dynamic range for late night viewing.

[On]   [Off]

Bilingual Audio Selection
(Analogue broadcast only)
Select whether to record the main or secondary audio type when:
● Recording or copying to a DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL and +RW.
● Recording or copying sound in LPCM (➡ right, "Audio Mode for XP Recording").

[M 1]   [M 2]

● You cannot select the audio on this unit when recording from an external source, such as when copying from a video cassette recorder (except from DV equipment connected to this unit's DV input terminal). Select the audio on the other equipment.
● When recording from the unit's DV terminal, select the type of audio recording from "Audio Mode for DV Input" (➡ right).

Digital Audio Output
Change the settings when you have connected equipment through this unit's DIGITAL AUDIO OUT terminal (➡ 68).
● Press [OK] to show the following settings.

PCM Down Conversion
Select how to output audio with a sampling frequency of 96 kHz.
● Signals are converted to 48 kHz despite the settings below 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 a sampling frequency of 96 kHz.)

[Off]   Signals are output as 96 kHz. (Choose when the connected equipment can process signals with a sampling frequency of 96 kHz.)

Dolby Digital
Select how to output the signal.
Select "Bitstream" if the connected equipment decodes the signal.
Select "PCM" if this unit decodes the signal and outputs it as 2 channels.
● Not making the proper settings may result in noise.

[Bitstream]   When connecting to equipment displaying the Dolby Digital logo.

[PCM]   When connecting to equipment not displaying the Dolby Digital logo.

DTS
Select how to output the signal.
Select "Bitstream" if the connected equipment decodes the signal.
Select "PCM" if this unit decodes the signal and outputs it as 2 channels.
● Not making the proper settings may result in noise.

[Bitstream]   When connecting to equipment displaying the DTS logo.

[PCM]   When connecting to equipment not displaying the DTS logo.

MPEG
Select how to output the signal.
Select "Bitstream" if the connected equipment decodes the signal.
Select "PCM" if this unit decodes the signal and outputs it as 2 channels.
● Not making the proper settings may result in noise.

[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] (➡ 81)   [LPCM] (➡ 81)

● 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.
● When recording a bilingual broadcast, select the type of audio in advance from "Bilingual Audio Selection" (➡ left).

Audio Mode for DV Input
You can select the kind of audio when recording from the unit's DV input terminal (➡ 28).

[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).

Changing the unit's settings

Display

(All factory default settings are indicated with underlined text.)

On-Screen Messages
Choose the approximate time until the digital channel information screen (➡ 15) disappears automatically.
The length of time the control panel (➡ 41) 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.]

Grey Background
Select "Off" if you do not want to have the unit show the grey background when tuner reception is weak.

[On]   [Off]

FL Display
Changes the brightness of the unit's display.
This setting is fixed with "Automatic" if you set "Power Save" (➡ 64) to "On".

[Bright]	[Dim]
[Automatic]	The display turns dark during play and disappears when the unit is turned off. It reappears momentarily if a button is pressed. While using this mode, the standby power consumption can be reduced.

New Service Message (➡ 15)
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 all created categories are deleted. The timer recording programmes are also cancelled.).

[Automatic]

[Off]   The service messages are not shown.

Connection

(All factory default settings are indicated with underlined text.)
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.

TV Aspect
Set to match the type of television connected.

[16:9]	When connected to a 16:9 widescreen television.
[Pan & Scan]	When connected to a 4:3 aspect television, side picture is trimmed for 16:9 picture.
[Letterbox]	When connected to a 4:3 aspect television. 16:9 picture is shown in the letterbox style.

Progressive
You can enjoy progressive video by connecting this unit's COMPONENT VIDEO OUT terminals to an LCD/plasma television or LCD projector compatible with progressive scan.

[On]   [Off]

Note
- When connected to a regular television (CRT: Cathode ray tube) or a multi system television using PAL mode, even if it is progressive compatible, progressive output can cause some flickering. Turn off "Progressive" if you are concerned about it .
- Picture will not be displayed correctly if connected to an incompatible television.

TV System
Change the setting to match the equipment you are connecting with.

[PAL]   ● Select when connecting to a PAL or Multi-system television. Titles recorded using NTSC are played as PAL 60.
           ● Select to record television programmes and PAL input from other equipment.

[NTSC]   ● Select when connecting to a NTSC television. Television programmes cannot be recorded properly.
           ● Select to record NTSC input from other equipment.

Note
- This unit cannot record NTSC signals to discs that already have PAL signal recordings.
- If "NTSC" has been selected, the TV Guide system cannot be used.
- A disc or title with different "TV System" may not be able to playback while recording or on standby for the timer recording. You will be able to playback by changing the "TV System" settings in that case, but to prevent failure of the timer recording, change back the settings before the recording starts.

To change the setting all at once (PAL⟷NTSC)
While stopped, keep pressing [■] and [▲ OPEN/CLOSE] on the main unit at the same time for 5 or more seconds.

HDMI Settings
● Press [OK] to show the following settings.

HDMI Video Format
You can only select items compatible with the connected equipment. This setting normally does not need to be changed. However 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, it 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 5.0 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 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 and connected to a TV with an HDMI cable and you want to enjoy the highest quality of audio from discs (➡ 69).

VIERA Link
Set to use "HDAVI Control" function when connected with an HDMI cable to a device that supports "HDAVI Control".

[On]

[Off]   Select when you do not want to use "HDAVI Control".

VHS
(All factory default settings are indicated with underlined text.)

Tape Length
Set the length of the tape you are using so the unit can show the correct remaining time.

[Auto (E-240)]   The VHS automatically distinguishes E30, -60, -90, -120, -180, and -240 tapes.

[E-195]   For E195 tape

[E-260]   For E260 tape

[E-300]   For E300 tape

SQPB
To play back video cassettes recorded in S-VHS format (SQPB; S-VHS Quasi Playback)

[Automatic]   This unit automatically detects the format in which the recording was made and selects the same format for playback. However, picture distortion may appear.

[On]   Use this setting when playing back a cassette tape recorded in the S-VHS format.

[Off]   Use this setting when playing back a cassette tape recorded in the VHS format only.

Changing the unit's settings

Others

(All factory default settings are indicated with underlined text.)
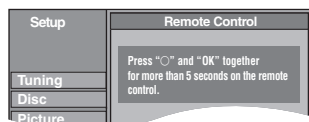
Remote Control
Change the remote control code on the main unit and the remote control (the two must match) if you place other Panasonic products close together.

[DVD 1]   [DVD 2]   [DVD 3]

Use "DVD 1", the factory set code, under normal circumstances.

① **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	

To change the code on the remote control
② **While pressing [OK], press and hold the numbered button ([1], [2] or [3]) for more than 5 seconds.**
③ **Press [OK].**

∎ When the following indicator appears on the unit's display

The unit's remote control code

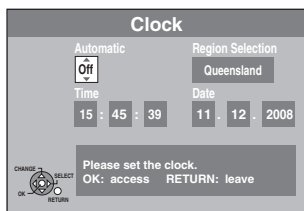Change the code on the remote control to match the main unit's (➡ step 2).

Note
Executing "Shipping Condition" in the Setup menu returns the main unit code to "DVD 1". Change the remote control code to 1 (➡ step 2).

Clock
This unit usually obtains time and date information from digital broadcasts and automatically corrects the time several times a day. However, if the time is not set correctly use the settings listed in the method below.
● In the case of a power failure, the clock setting remains in memory for approximately 60 minutes.

Clock	
Automatic	Region Selection
Off	Queensland
Time	Date
15 : 45 : 39	11 . 12 . 2008
CHANGE SELECT OK RETURN	Please set the clock. OK: access RETURN: leave

e.g.,
This screen appears while receiving a digital broadcast.

① **Press [▲, ▼] to select "Off" of "Automatic" and press [OK].**
② **Press [◄, ►] to select the item you want to change.**
The items change as follows:
Hour⟷Minute⟷Second⟷Day⟷Month⟷Year

Reset the clock regularly to maintain accuracy.
(Monthly accuracy +/− 15 seconds.)
③ **Press [▲, ▼] to change the setting.**
You can also use the numbered buttons for setting.
④ **Press [OK] when you have finished the settings.**
The clock starts.

Note
If a TV station transmits a time setting signal, and when "Automatic" in the Clock setting menu is set to "On", the automatic time correction function checks the time and if necessary it is adjusted several times every day.

∎ To change the Region
1 Press [▲, ▼] to set "Automatic" to "On" and press [OK] in step ①.
2 Press [▲, ▼] to select the correct region and press [OK].
Auto clock setting starts. This takes a few minutes.
"Automatic clock setting completed." screen is displayed.
3 Press [RETURN] to exit the screen.

Power Save
[On]   Power consumption is minimized when the unit is turned to standby (➡ 80).

[Off]

(If "Quick Start" is set to "On", "Power Save" is automatically turned to "Off".)
● Refer to the following when "Power Save" is set to "On".
  – "FL Display" is automatically set to "Automatic" (➡ 62).
  – The "Quick Start" function does not work. (It is automatically turned to "Off".)

Quick Start
1 Sec. Quick Start for Recording & EPG Display
(When connecting to TV using COMPONENT VIDEO, VIDEO or S VIDEO terminals)
From the power on, recording on DVD-RAM starts in about 1 second after the REC button is pressed. (If the GUIDE button is pressed while the unit is off, the Electronic Program Guide (EPG) displays in less than 1 second.) (Quick Start Mode)

[On]

[Off]   Standby power consumption is less than when this is set to "On".

(If this is set to "On", "Power Save" is automatically turned to "Off".)
● Startup takes up to a minute when:
  – You play a disc or start recording to discs other than DVD-RAM.
  – You want to make other operations.
  – The clock has not been set.
● Depending on the type of TV or the connected terminal, it may take time to display the screen.

DivX Registration
You need this registration code to purchase and play DivX Video-on-Demand (VOD) content (➡ 37).

System Update
In order to update this unit's software, the TV Guide download, and to 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 is 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 60 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.

TV Guide Download in Standby

[On] When you set this unit to standby mode, TV Guide data is downloaded automatically.

[Off]

Software Update in Standby

[On] When you set this unit to standby mode, software updates are downloaded automatically.

[Off]

TV Guide/Software search period
Selects the time to automatically perform TV Guide download and updates when the unit is set to standby mode. This can only be set when "TV Guide Download in Standby" and "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.

[Automatic] The unit will give priority to searching for TV Guide download and 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]

Software Update Search Now
Start the search for new software manually.
A new software version is announced by a message. Do not turn your unit off during the update. This could result in the loss of data. A message shows that the update has finished.
If a new software version is not going to be broadcast for the next few days, a corresponding message also appears.
≥If applicable update data is found, press [◄, ►] to select "Yes" and press [OK].

Initialize
≥Press [OK] to show the following settings.

Shipping Condition
All the settings except for the ratings level, ratings password and clock settings return to the factory preset. The timer recording programmes are also cancelled.

[Yes]   [No]

Default Settings
All the settings other than the tuning settings, clock settings, region settings, disc language settings, ratings level, ratings password, remote control code, return to the factory presets.

[Yes]   [No]

List of TV Reception Channels

Tuner System	Channel Coverage	VHF	UHF	CATV
PAL–B	Australia Analogue	0–12	28–69	45 MHz to 470 MHz
DVB–T	Australia Digital	6–12	27–69	–

Other Settings

Television operation

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.

Turn TV on/off ___
Input select ___
Volume
Channel Select
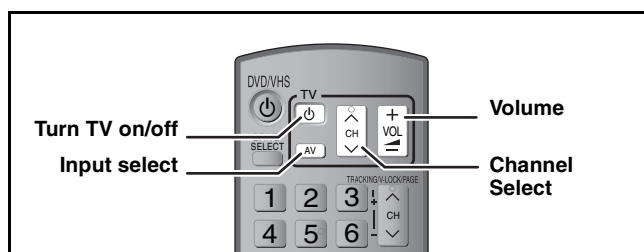
1 Point the remote control at the television
While pressing [⏻ TV], enter the code with the numbered buttons.

e.g.,   01:   [0] ➡ [1]   10:   [1] ➡ [0]

Manufacturer and Code No.

Brand	Code	Brand	Code
Panasonic	01/02/03/04	METZ	05/28
AIWA	35	MITSUBISHI	05/19/20/47
AKAI	27/30	MIVAR	24
BEJING	33	NEC	36
BEKO	05/71/72/73/74	NOBLEX	33
BENQ	58/59	NOKIA	25/26/27/60/61
BP	09	NORDMENDE	10
BRANDT	10/15	OLEVIA	45
BUSH	05	ONWA	30/39/70
CENTREX	66	ORION	05
CHANGHONG	69	PEONY	49/69
CURTIS	05	PHILCO	41/48/64
DAEWOO	64/65	PHILIPS	05/06/46
DESMET	05	PHONOLA	05
DUAL	05	PIONEER	37/38
ELEMIS	05	PROVIEW	52
FERGUSON	10/34	PYE	05
FINLUX	61	RADIOLA	05
FISHER	21	SABA	10
FUJITSU	53	SALORA	26
FUNAI	63/67	SAMSUNG	32/42/43/65/68
GOLDSTAR	05/50/51	SANSUI	05
GOODMANS	05	SANYO	21/54/55/56
GRADIENTE	36	SCHNEIDER	05/29/30
GRUNDIG	09	SEG	05/69/75/76/77/78
HIKONA	52	SELECO	05/25
HITACHI	05/22/23/40/41	SHARP	18
INNO HIT	05	SIEMENS	09
IRRADIO	30	SINUDYNE	05
ITT	25	SONY	08
JINGXING	49	TCL	31/33/66/67/69
JVC	17/30/39/70	TELEFUNKEN	10/11/12/13/14
KDS	52	TEVION	52
KOLIN	45	TEX ONDA	52
KONKA	62	THOMSON	10/15/44
LG	05/50/51	TOSHIBA	16/57
LOEWE	07/46	WHITE WESTINGHOUSE	05
MAG	52	YAMAHA	18/41

2 Test by turning on the television and changing channels.

- Repeat the procedure until you find the code that allows correct operation.
- If your television brand is not listed or if the code listed for your television does not allow control of your television, this remote control is not compatible with your television.

Note
- If your television brand has more than one code listed, select the one that allows correct operation.

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] simultaneously 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.

To cancel the Child Lock
Press and hold [OK] and [RETURN] simultaneously until "X HOLD" disappears.
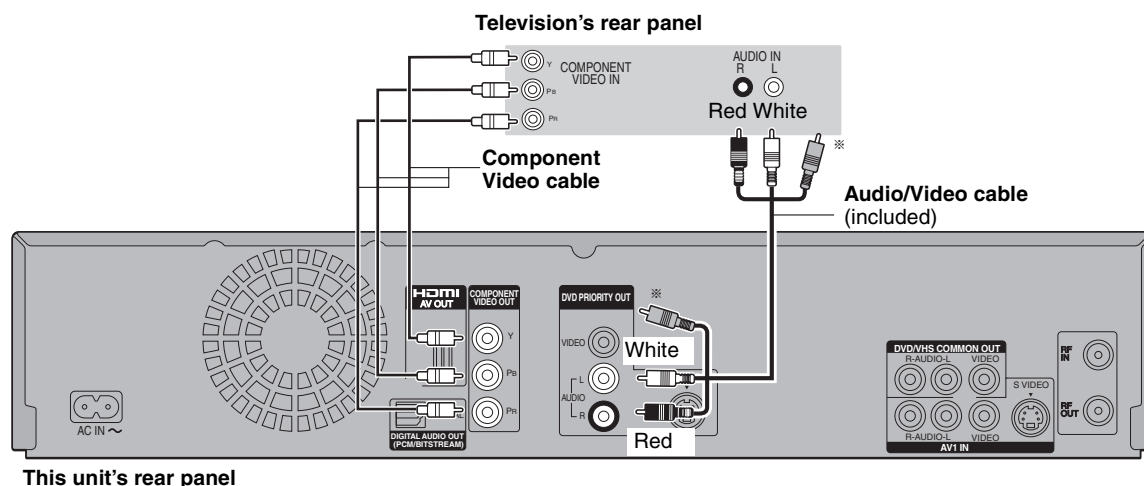
Additional connections

※ Leave "Yellow" unconnected.

Connecting a television with S VIDEO terminals

The S VIDEO OUT terminal achieves a more vivid picture than the VIDEO OUT terminal. (Actual results depend on the television.)
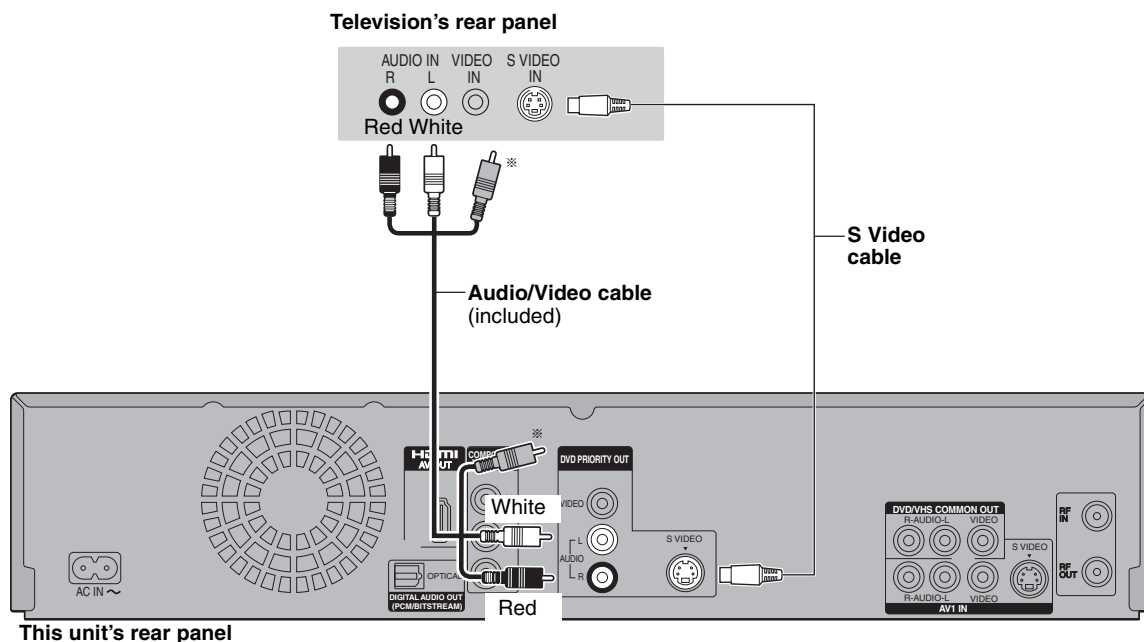
Connecting a television with COMPONENT VIDEO terminals

COMPONENT VIDEO terminals can be used for either interlace or progressive output (➡ 81) and provide a purer picture than the S VIDEO OUT terminal.
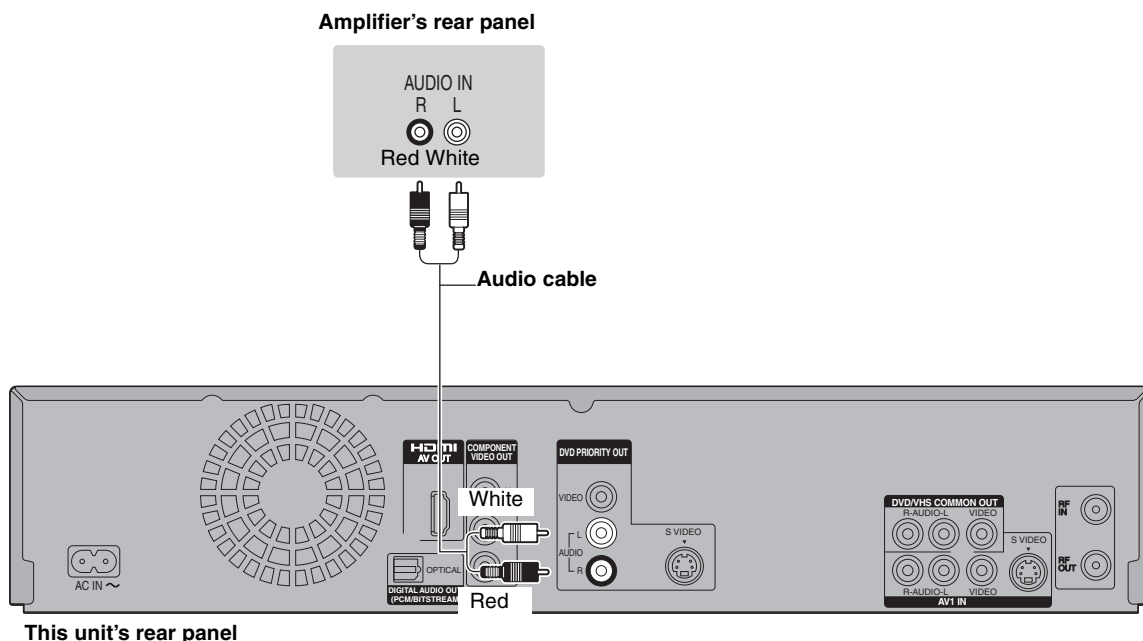●Connect to terminals of the same colour.

Required setting
"Progressive" setting in the Setup menu (➡ 62)

If you have a regular television (CRT: cathode ray tube)
Progressive output may cause some flickering, even if it is progressive compatible. Turn off "Progressive" if you are concerned about it (➡ 62). This is the same for multi system televisions using PAL mode.

Other Settings/*Additional connections*

RQT9127

67
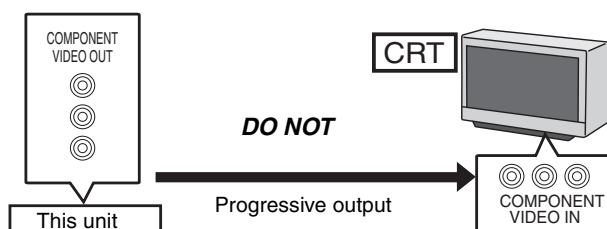
Connecting a stereo amplifier

Amplifier's rear panel

AUDIO IN
R   L
Red White

Audio cable

White
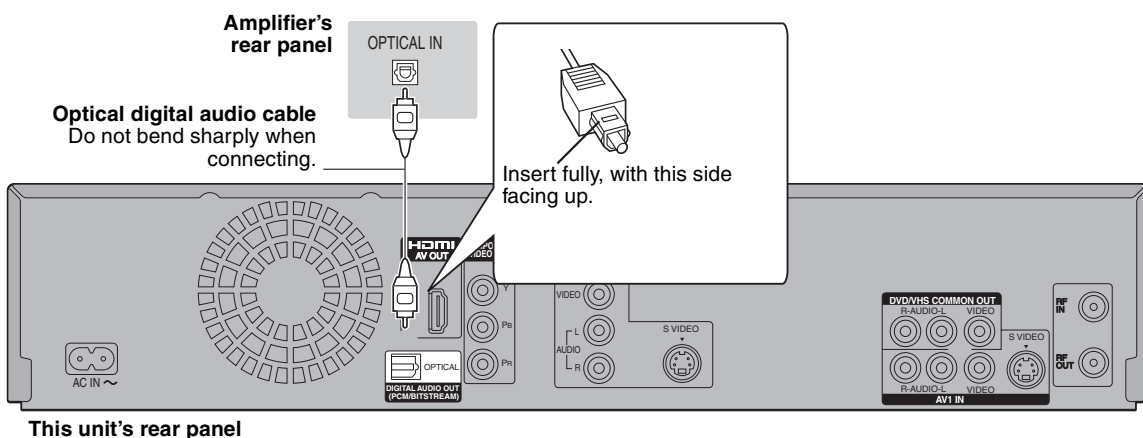
Red

This unit's rear panel

Connecting an amplifier with a digital input terminal

- To enjoy multi-channel surround sound DVD-Video, connect an amplifier with Dolby Digital, DTS and MPEG decoders.
  Required setting
  "Digital Audio Output" in the Setup menu (➡ 61)
- 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 (➡ 63). In this case audio is only output from the amplifier not the television.
- Before purchasing an optical digital audio cable (not included), check the terminal shape of the connected equipment.
- You cannot use DTS Digital Surround decoders not suited to DVD.

Amplifier's rear panel

OPTICAL IN

Optical digital audio cable
Do not bend sharply when connecting.

Insert fully, with this side facing up.

This unit's rear panel

Connecting with an HDMI compatible television and receiver

When connected to an HDMI compatible unit, an uncompressed digital audio and video signal is transmitted. You can 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.
- 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).
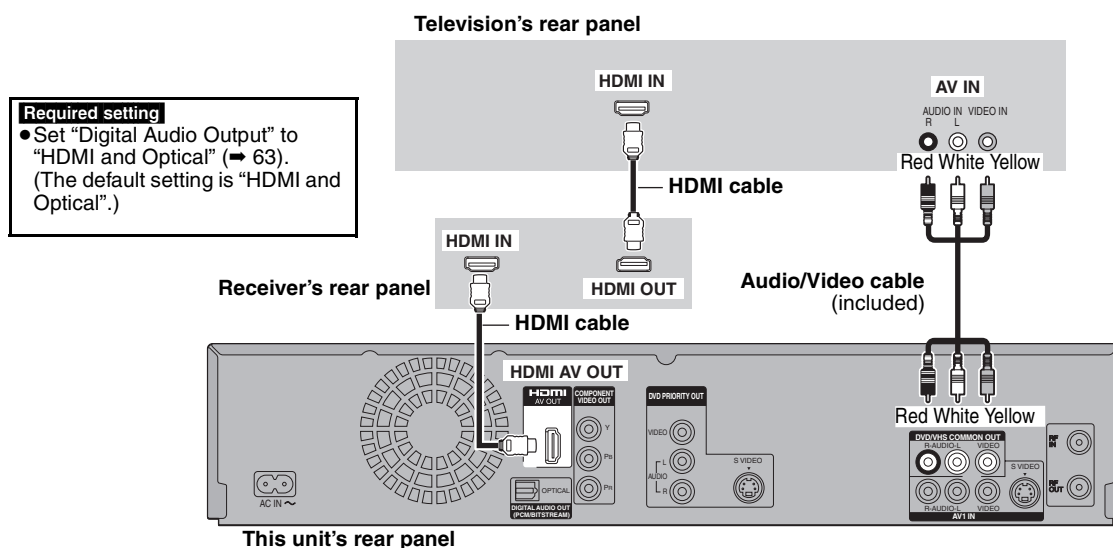- When outputting 1080p signal, please use the HDMI cables 5.0 meters or less.

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. [➡ 40, Linked operations with the TV (VIERA Link "HDAVI Control™")]
- **Non-HDMI-compliant cables cannot be utilised.**
- **It is recommended that you use Panasonic's HDMI cable.**
  Recommended part number:
  RP-CDHG10 (1.0 m), RP-CDHG15 (1.5 m), RP-CDHG20 (2.0 m), RP-CDHG30 (3.0 m), RP-CDHG50 (5.0 m), etc.

Television's rear panel

Required setting
- Set "Digital Audio Output" to "HDMI and Optical" (➡ 63). (The default setting is "HDMI and Optical".)

HDMI IN

AV IN
AUDIO IN   VIDEO IN
R   L
Red White Yellow

— **HDMI cable**

HDMI IN

Receiver's rear panel

HDMI OUT

Audio/Video cable
(included)

— **HDMI cable**

HDMI AV OUT

Red White Yellow

This unit's rear panel

Note
- If you are connecting to a TV that is only compatible with 2 channel audio output, audio with 3 channels or more will be down mixed (➡ 81) 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 units compatible with HDCP (High-Bandwidth Digital Content Protection) copyright protection that are equipped with a digital DVI input terminal (PC monitors, etc.):
  Depending on the unit, images may not display properly or at all when connecting with a DVI/HDMI switching cable. (Audio cannot be output.)
- Usually you can watch video from HDMI input on TV. When you want to playback VHS while recording on DVD, switch to an appropriate AV input on TV.

Frequently asked questions

Refer to the following items if you have any doubts about unit operations.

Set up

		Page
Which aerial is suitable for receiving digital terrestrial broadcasts?	●You can use your current aerial. 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.	—
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.	68, 69
Are the headphones and speakers directly connected to the unit?	●You cannot directly connect them to the unit. Connect through the amplifier etc.	68, 69
The television has both S VIDEO IN terminal and COMPONENT VIDEO IN terminals. Which terminal should I connect with?	●Connecting with the component video out terminal provides a more vivid picture compared to connecting with the S Video out terminal. If you have an LCD/plasma television or LCD projector compatible with progressive scan, connect through the component video terminals for high-quality progressive video. If you have a CRT television or a multi system television using PAL mode that is compatible with progressive scan, we cannot recommend progressive output as some flickering can occur.	67
Is my television progressive output compatible?	●All Panasonic televisions that have 576 (625)/50i · 50p, 480 (525)/60i · 60p input terminals are compatible. Consult the manufacturer if you have another brand of television.	—

Disc

Can I play DVD-Video and Video CDs bought in another country?	●You cannot play DVD-Video if their region number does not include "4" 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?	●The DVD-Video region number indicates the disc conforms to a standard. You cannot play discs that do not have a region number. You also cannot play discs that do not conform to a standard.	—
Please tell me about disc compatibility with this unit.	●This unit records and plays 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).	11–12
	●This unit also records and plays high speed recording compatible DVD-R, DVD-R DL, DVD-RW, +R, +R DL, +RW discs.	—
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, DivX, MP3 and still pictures (JPEG).	12, 13
	●You cannot write to a CD-R or CD-RW with this unit.	—

Recording

Can I record from a commercially purchased video cassette or DVD?	●Most commercially sold video cassettes and DVD 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 this unit be played on other equipment?	●You can play on compatible equipment such as DVD players after finalising the disc on this unit. However, depending on the condition of the recording, the quality of the disc and capabilities of the DVD player, play may not be possible.	—
	●If you play a DVD-R DL, +R DL or +RW, use compatible equipment.	—
Can I record digital audio signals using this unit?	●You cannot record digital signals from other equipment. The digital audio terminals on this unit are for output only. (The audio recorded using the unit's DV input terminal from a digital video camcorder, for example, is recorded digitally.)	—
Can a digital audio signal from this 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 in the Setup menu. – PCM Down Conversion: On – Dolby Digital/DTS/MPEG: PCM However, only as long as digital recording from the disc is permitted and the recording equipment is compatible with a sampling frequency of 48 kHz.	61
	●You cannot record MP3 signals.	—
(Analogue broadcast only) Can I switch to bilingual broadcast during recording?	●With DVD-RAM, video cassettes, you can. Just press [AUDIO].	33
	●With DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL, +RW you cannot. Change before recording with "Bilingual Audio Selection" in the Setup menu.	61

TV Guide

Is it possible to programme a recording, with a start and end time that are different from the TV Guide system?	●You can manually change the start and end time of programmes in the Timer Recording menu.	29
Can I receive TV Guide system data via a connected satellite receiver or a Set Top Box?	●No, only via the built-in tuner. To perform timer recordings with satellite receivers or Set Top Boxes, please use your unit's manual timer programming.	29
How can I cancel a TIMER programming?	●Press [PROG/CHECK] and select the desired entry and then press [DELETE ✳].	30
What happens when I unplug the unit from the household mains socket?	●The TV Guide data will not be updated.	—
	●If the unit is disconnected from the household mains socket for a longer period of time, the TV Guide data will be lost.	—
	●Clock setting will be erased and timer recording will not work.	—

Messages

Authorisation Error.	● 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)	**37**
Cannot finish recording completely.	● The programme was copy-protected. ● The disc may be full. ● The maximum number of programme has been exceeded.	— — **24**
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. Alter the "TV System" setting on this unit to suit.	**62**
Cannot record to the disc.	● The disc may be dirty or scratched.	**14**
Unable to format.		
Cannot record. Disc is full.	● **RAM** **-RW(V)** **+RW** Create space by deleting any unnecessary titles. [Even if you delete recorded content from the DVD-R, DVD-R DL, +R or +R DL there is no increase in disc space. Available space on DVD-RW (DVD-Video format) and +RW increases only when the last recorded title is deleted.]	**22, 43, 56**
Cannot record. Maximum number of titles exceeded.	● Use a new disc.	—
No Disc	● The disc may be upside down.	—
No cassette.	● A video cassette is not inserted when playing or recording TV programmes. Insert a video cassette.	**14**
Now recording on DVD. **To watch pictures on VHS, use DVD/VHS COMMON OUT, and switch to an appropriate AV channel on your TV.**	● The VHS plays back while recording on DVD. You can watch the VHS playback by connecting to the DVD/VHS COMMON OUT terminals.	**8**
The cassette is write-protected.	● A video cassette without a secure accidental erasure prevention tab is inserted when recording programmes. Use a video cassette with a secure accidental erasure prevention tab.	**14**
This is a non-recordable disc.	● The unit cannot record on the disc you inserted. Insert a DVD-RAM or unfinalised DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL or +RW.	**11**
This disc is not formatted properly. Format it using DVD Management in FUNCTION MENU.	● You inserted an unformatted DVD-RAM, DVD-RW, +R, +R DL or +RW.	**56**
To watch pictures on VHS, use DVD/VHS COMMON OUT, and switch to an appropriate AV channel on your TV.	● The TV system set on the unit and the signal of the video contents of the video cassette being played is different. Connect the unit to the TV with the DVD/VHS COMMON terminals.	**8**
Rental Expired.	● The DivX VOD content has zero remaining plays. You cannot play it. (DivX)	**37**
⊘	● The operation is prohibited by the unit or disc.	—

Frequently asked questions / Messages

On the unit's display

The following messages or service numbers appear on the unit's display when something unusual is detected during startup and use.

Page

DVD □ ("□" stands for a number.)	●The remote control and main unit are using different codes. Change the code on the remote control. Press and hold [OK] and the indicated number button at the same time for more than 5 seconds.	**64**
GUIDE	●TV Guide data is being downloaded.	—
FINAL	●When the screen asking if you want to finalise the disc appears, the message is displayed.	**25**
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. The disc may be damaged. Use a new disc.	—
NoREAD	●The disc is dirty or badly scratched. The unit cannot record, play, or edit. ●This message may appear when the DVD lens cleaner has finished cleaning. Press [▲ OPEN/CLOSE] on the main unit to eject the disc.	**14** **14**
NoWRIT	●You cannot write to this disc. The disc may be damaged. Use a new disc.	—
NoCASSETTE※	●You have not inserted a video cassette for the recording.	**14**
PROTECT※	●You have inserted a video cassette without the accidental erasure prevention tab. Use a video cassette with an accidental erasure prevention tab.	**14**
PLEASE WAIT※	●There was a power failure or the AC plug was disconnected while the unit was on. The unit is carrying out its recovery process. This process restores the unit to normal operation. The unit is not broken. Wait until the message disappears.	—
PROG FULL※	●There are already 16 timer programmes. Delete unnecessary timer programmes.	**30**
SW-DL	●The unit is performing a software update.	**65**
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. However all the recorded contents on the disc are deleted.	**56**
UNSUPPORT※	●You have inserted a disc the unit cannot play or record on.	**11–12**
F74	●The HDMI connection could not be authenticated due to a transfer malfunction. Consult the dealer where the unit was purchased.	—
F75	●The HDMI connection could not be authenticated due to an internal data malfunction. Consult the dealer where the unit was purchased.	—
U59	●The unit is hot. The unit switches to standby for safety reasons. Wait for about 30 minutes until the message disappears. 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 during recording, playback or copy. This is displayed when the unit is in the recovery process to return to normal operation; it is not broken. Once the display clears you can use the unit again.	—
U76	●HDMI cannot be output because you are connected to a model that does not support copyright protection.	—
U80 **U81** **U99**	●The unit fails to operate properly. Press [⏻/I] on the main unit to switch the unit to standby mode. Now press [⏻/I] on the main unit again to turn the unit on.	—
U88	●(When a disc is inserted) Displays when there was something unusual detected with the disc while recording, playback or copy. This is displayed when the unit is in the recovery process to return to normal operation; it is not broken. Once the display clears you can use the unit again.	**73**
H□□ or F□□	●There is something unusual. (The service number displayed after H and F depends on the unit's condition.) ●Check the unit using the troubleshooting guide. If the service number does not disappear, do the following. 1. Disconnect the plug from the household mains socket, wait a few seconds, then reconnect it. 2. Press [⏻/I] to turn the power on. (The unit may be fixed.) If the service number does not disappear despite after doing the above, request service from the dealer. Inform the dealer of the service number when requesting service.	— **73–79**
X HOLD	●The Child Lock function is activated. Press and hold [OK] and [RETURN] at the same time until "X HOLD" disappears.	**66**

※ The message are alternately displayed.

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 do not indicate a problem with this unit:

- Regular disc/video rotating sounds.
- Poor reception due to atmospheric conditions.
- Image disturbance during search.
- Interruptions in reception due to periodic satellite broadcasting breaks.
- Operations are slow to respond in power save mode.
- Operations do not work due to a poor-quality disc. (Try again using a Panasonic disc.)

- **The unit freezes due to one of its safety devices being activated. (Press and hold [⏻/I] on the main unit for 10 seconds.)**

Power

		Page
No power. **The unit does not turn on pressing [⏻ DVD/VHS].**	●Insert the AC mains lead securely into a known active household mains socket.	**8**
The unit switches to standby mode.	●One of the unit's safety devices is activated. Press [⏻/I] on the main unit to turn the unit on.	—
The power is turned off automatically.	●If you connected this unit to a "HDAVI Control" compatible TV with an HDMI cable, this unit will be automatically set to standby mode when the TV is set to standby mode.	**40**

Displays

The display is dim.	●Change "FL Display" in the Setup menu.	**62**
"0:00" is flashing on the unit's display.	●Set the clock.	**64**
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 recording time.**	●Times shown may disagree with actual times. ●Available recording space on DVD-RW (DVD-Video format) or +RW increases only when the last recorded title is deleted. It does not increase if other titles are deleted. ●Even if you delete recorded content from the DVD-R, DVD-R DL, +R or +R DL, there is no increase in disc space. ●More disc space than the actual recording time is used after recording or editing the DVD-R, DVD-R DL, +R or +R DL 200 times or more. ●While searching, the elapsed time may not display correctly.	— — — — —
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.	**64**
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 tape counter is not changing.	●The tape counter does not change while playing unrecorded parts. The "second" display changes as follows: (e.g., Blank after 1 h 36 min) ●The unit's display also appears like this if the tape is dirty or damaged. Consult your dealer if this is the case.	— —
"U88" is displayed and the disc cannot be ejected.	●The unit is carrying out the recovery process. Do the following to eject the disc. 1 Press [⏻/I] on the main unit to switch the unit to standby. If the unit doesn't switch to standby, press and hold [⏻/I] on the main unit for about 10 seconds. The unit is forcibly switched to standby. 2 While the unit is off, press and hold [■] and [CH ∧] on the main unit at the same time for about 5 seconds. Remove the disc.	—

TV screen and video

Television 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 audio-visual suppliers. If it is not solved by using a signal booster, consult the dealer.	—
The digital channel information or control panel does not appear.	●Select the length of time (3–10 sec.) in "On-Screen Messages" in the Setup menu. ●The digital channel information will not appear during playback or recording. ●Analogue broadcasts do not support the digital channel information. ●The control panel is only displayed when connected to a TV with "HDAVI Control 2" or "HDAVI Control 3" function.	**62** — — **41**
The grey background does not appear.	●Select "On" in "Grey Background" in the Setup menu.	**62**
Picture does not appear during timer recording.	●Timer recordings work regardless whether the unit is on or off. To confirm the timer recording is going to work properly, turn the unit on.	—
The 4:3 aspect ratio picture expands left and right. **Screen size is wrong.**	●Use the television to change the aspect. If your television does not have that function, set "Progressive" in the Picture menu to "Off". ●Check the settings for "TV Aspect" in the Setup menu. ●If you connect an HDMI cable, set "Aspect for 4:3 Video" to "16:9" in the Setup menu. ● **DVD** By setting "Aspect for Recording" to "Automatic", there is a chance that the recording will be made using the wrong aspect. Match the aspect settings to the broadcast when recording. It may be possible to adjust the display mode on the TV. Refer to your television's operating instructions.	**54** **62** **63** **60** —

TV screen and video (continued) **Page**

The recorded title is stretched vertically.	●[DVD] 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. – If you recorded with the "Aspect for Recording" set to "4:3" in the Setup menu. When you want to record 16:9 programme in the same aspect, set the "Aspect for Recording" to "16:9". – By setting "Aspect for Recording" to "Automatic", there is a chance that the recording will be made using the wrong aspect. Match the aspect settings to the broadcast when recording. It may be possible to adjust the display mode on the TV. Refer to your television's operating instructions.	— — 60 60
There is a lot of after-image when playing video.	●Set "Playback NR" in the Picture menu to "Off".	54
When playing DVD-Video using progressive output, one part of the picture momentarily appears to be doubled up.	●Set "Progressive" in the Picture menu to "Off". This problem is caused by the editing method or material used on DVD-Video, but should be corrected if you use interlace output.	54
There is no apparent change in picture quality when adjusted with the Picture menu in the on-screen menus.	●The effect is less perceivable with some types of video.	—
The images from this unit do not appear on the television. **Picture is distorted.**	●Make sure that the television is connected to the VIDEO OUT terminal, S VIDEO OUT terminal, COMPONENT VIDEO OUT terminals or HDMI terminal on this unit. ●Make sure that the television's input setting (e.g., AV 1) is correct. ●Progressive output is set to on but the connected television is not progressive compatible. Press and hold [■] and [▶ DVD, COPYING] on the main unit at the same time for more than 5 seconds to cancel this setting. The setting will change to interlace. ●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. ●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.	8, 9, 67 — — 62 — —
The picture is distorted during play, or video will not play correctly.	●You may be playing a TV programme recorded with poor reception or unfavorable 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.	— —

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. ●Press [AUDIO] to select the audio. ●Turn off V.S.S. in the following cases. – When using discs that do not have surround sound effects such as Karaoke discs. – When playing bilingual broadcast programmes. ●Audio may not be output due to how files were created. (DivX) ●Audio may not be heard when more than 4 devices are connected with HDMI cables. Reduce the number of connected devices. ●The sound effects will not work when the bitstream signal is output from the HDMI AV OUT terminal or the OPTICAL DIGITAL AUDIO OUT terminal. ●To output audio from a device connected with an HDMI cable, set "Digital Audio Output" to "HDMI and Optical" in the Setup menu. ●Depending on the connected equipment, the sound may be distorted if this unit is connected with an HDMI cable.	61 33 54 — — — 63 —
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". ●The amplifier is connected using an optical digital cable or an HDMI cable. You cannot switch the audio if "Dolby Digital" is set to "Bitstream". Set "Dolby Digital" to "PCM" or connect using audio cables. ●There are discs for which audio cannot be changed because of how the disc was created.	— 61 61, 68, 69 —

Operation		Page
Cannot operate the television. The remote control doesn't work.	●Change the manufacturer code. Some televisions cannot be operated even if you change the code.	66
	●The remote control and main unit are using different codes. Change the code on the remote control.	64
	Press and hold [OK] and the indicated number button at the same time for more than 5 seconds.	
	●The batteries are depleted. Replace them with new ones.	4
	●You are not pointing the remote control at the main unit's remote control signal sensor during operation.	4
	●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 sunlight exposure.	—
	●It may be necessary to set the code on the remote control again after changing the batteries.	64
	●It may be necessary to set the manufacturer code again after changing the batteries.	66
	●The child lock function is activated.	66
Cannot operate the DVD.	●Press [DRIVE SELECT] to select the DVD drive when operating DVDs or CDs.	16
Cannot operate the VHS.	●Press [DRIVE SELECT] to select the VHS drive when operating video cassettes.	17
The unit is on but cannot be operated.	●Recording drive or playback drive has not been selected properly.	16, 17
	●Some operations may be prohibited by the disc.	—
	●The unit is hot ("U59" appears on the display). Wait for "U59" to disappear.	—
	●One of the unit's safety devices may have been activated. Reset the unit as follows: 1 Press [⏻/I] on the main unit to switch the unit to standby. If the unit doesn't switch to standby, press and hold [⏻/I] on the main unit for about 10 seconds. The unit is forcibly switched to standby. Alternatively, disconnect the AC mains lead, wait one minute, then reconnect it. 2 Press [⏻/I] on the main unit to switch it on. If the unit still cannot be operated, consult the dealer.	—
Cannot eject disc.	●The unit is recording.	—
	●The unit may have a problem. While the unit is off, press and hold [■] and [CH ∧] on the main unit at the same time for about 5 seconds. Remove the disc and consult the dealer. If the Child Lock function is activated, above operation does not work. Cancel the Child Lock function.	66
Cannot tune channels. **Cannot download channel presets from the television.**	●Check the connections.	8
	●You must connect to a VIERA Link (HDAVI Control 3) compatible TV with a HDMI cable to download channel presets.	—
Startup is slow.	●Make sure that "Quick Start" is set to "On".	64
	●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.	—

VHS Picture

On-screen display indicators do not appear.	●Select a setting other than "Off" in "On-Screen Messages" in the Setup Menu. −Press [STATUS ⓘ] to show the on-screen display indicators.	35, 62
The grey background appears during play.	●You are playing a blank or poor quality part of the video cassette.	—
	●You can damage the unit if you play dirty or damaged video cassettes and this can cause the grey background to appear. Consult your dealer.	—

VHS Sound

Cannot hear the desired audio type.	●Press [AUDIO] to select the audio.	35
There is noise when playing a video cassette.	●Adjust the tracking.	35
	●The tape is old or damaged.	—

VHS Recording, Timer Recording

"◠◠" flashes when I try to start recording. **Cannot record.**	●A video cassette is not inserted. Insert a video cassette with an intact accidental erasure prevention tab.	14
	●The erasure prevention tab has been removed. Cover the hole with adhesive tape.	14
Cannot record TV programme.	●The desired channel is not selected. Select the desired TV programme.	—

VHS Play

Playback does not work properly.	●The video head is dirty.	5
	●The tape is too old or damaged.	—
	●Check the "SQPB" setting.	34
	●The video heads are clogged or worn: consult your dealer.	—

Recording, timer recording and copying Page

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.	**11–12**
	● The disc is unformatted. Format the disc. `RAM` `-RW(V)` `+R` `+R DL` `+RW`	**56**
	● The write-protect tab on the cartridge is set to PROTECT, or the disc is protected with DVD Management.	**55**
	● Some programmes have limitations on the number of times they can be recorded (CPRM).	**81**
	● You cannot record when there is not enough space or when the number of titles has reached its limit. Delete unwanted titles or use a new disc.	**22, 43, 56**
	● You cannot record and copy on finalised discs. However, you can record and copy again if you format DVD-RW.	**—**
	● Due to peculiarities of DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL and +RW you may be unable to record onto them if you either insert and remove the disc or switch the unit on and off while a disc is loaded, a total of fifty times.	**—**
	● DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL and +RW 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. Play of discs recorded with both PAL and NTSC on another unit is not guaranteed.	**—**
	● Some broadcasts are copyright protected.	**—**
Cannot record from external equipment.	● Check that the connection is correct.	**27, 28**
	● Select the input channel for the equipment you have connected.	**—**
Timer recording does not work properly.	● The timer programme is incorrect or different timer programme times overlap. Correct the programme.	**30**
	● The programme is not in timer recording standby. (The timer icon "⊙" in the timer recording list is not on.)	**30**
	● Set the clock.	**64**
	● The programme information in the TV Guide system may not be correct. It is recommended to modify the start and end times to allow a margin of a few minutes.	**29**
Timer recording does not stop even when [■] is pressed.	● Make sure that the recording drive is selected. Press [DRIVE SELECT] to select the recording drive.	**18**
	● If you start recording immediately after turning on the unit while "Quick Start" is set to "On", you cannot then stop recording for a few seconds.	**—**
A part or whole of a recorded title has been lost.	● If there is a power failure or the plug is disconnected from the household mains socket while recording or editing, the title may be lost or the disc may become unusable.	**—**
	● You will have to format the disc (`RAM` `-RW(V)` `+RW`) or use a new disc. We cannot offer any guarantee regarding lost programmes or discs.	**56**
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 VHS to DVD.	● The write-protect tab on the cartridge is set to "PROTECT" or the disc is protected with "DVD Management". Release protection.	**55**
	● Some video cassettes on the market (including rental videos) are copy-protected to prevent illegal reproductions. Copy-protected video cassettes cannot be properly recorded.	**—**
	● You cannot copy using the One Touch Copying operation button while the FUNCTION MENU window, the Timer Recording List screen, etc. are displayed.	**—**
Cannot copy DVD to VHS.	● A video cassette without the accidental erasure prevention tab is inserted. Use a video cassette with an accidental erasure prevention tab.	**14**
	● Some DVDs on the market (including rental DVD) are copy-protected to prevent illegal reproductions. Copy-protected DVDs cannot be properly recorded.	**—**
	● You cannot copy using the One Touch Copying operation button while the FUNCTION MENU window, the Timer Recording List screen, etc. are displayed.	**—**
The sound level after copying is not equal on DVD and on VHS.	● The sound level on DVD and VHS may not match depending on the disc. When the sound level in a particular part of the sound source is soft or loud, the sound may be recorded softly or loudly on a video cassette.	**—**
An unusually loud sound is coming from the rotating DVD-R, etc.	● When recording 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.	**—**
The DV automatic recording function does not work.	● If images cannot be recorded or if the recording is aborted, check the connections and DV equipment settings.	**28**
	● 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.	**—**
	● The audio/video recordings are recorded on other than a DV tape.	**28**

Play

Page

Play fails to start even when [▶] (PLAY) is pressed. Play starts but then stops immediately.	●Insert the disc correctly with the label facing up. ●The disc is dirty. ●You tried to play a blank disc or disc unplayable on this unit. ●You tried to play a +RW that needs to be finalised on the equipment used for recording. ●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. ●You cannot play discs during DV automatic recording. ●If playing DivX VOD content, refer to the homepage where you purchased it. (DivX) ●Make sure that the TV is turned on. If the menu or messages are displayed, follow the on-screen instructions.	**14** **14** **11–12** — **60** — **37** —
Audio and video momentarily pause.	●This occurs between playlist chapters. ●This occurs as scenes change during Quick View. ● -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.	— — **23**
DVD-Video is not played.	●You have set a ratings level to limit DVD-Video play. Change this setting. ●Ensure disc is for the correct DVD-Video region number, and is not defective.	**60** **Cover**
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.	— **16**
No subtitles.	●Subtitles are not recorded on the disc. ●Turn the subtitles on. Set "Subtitle" on the on-screen menu to "On".	— **60**
Angle cannot be changed.	●Angles can only be changed during scenes where different angles are recorded.	—
You have forgotten your ratings password. You want to cancel the ratings level.	●The ratings level returns to the factory preset. While the disc tray is open, press [DRIVE SELECT] to select the DVD drive, then press and hold [● REC] and [▶] (PLAY) on the main unit at the same time for 5 or more seconds ("INIT" will appear on the unit's display).	—
Quick View does not work.	●This does not work when audio is other than Dolby Digital. ●This does not work when recording is 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 turn off the power. – if a recording or timer recording was executed.	—
The Video CD picture does not display properly.	●When connecting to Multi-system TV, select "NTSC" in "TV System" in the Setup menu. ●When connecting to PAL TV, the lower part of the picture cannot be displayed correctly during search.	**62** —
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.	— **62**
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 2 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 [|◄◄] or [◄◄], return to the beginning of the title.	—

Edit

Available disc space does not increase even after deleting a title.	●Available disc space does not increase after deleting on DVD-R, DVD-R DL, +R or +R DL. ●Disc space increases only when the last recorded title is deleted on DVD-RW (DVD-Video format) and +RW. The disc space does not increase when any other titles are deleted.	**22** —
Cannot format.	●The disc is dirty. Wipe with a damp cloth and then wipe dry. ●You tried formatting a disc that you may not be able to use in this unit.	**14** **11–12**
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 to the power before this. ●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.	●When the chapter is too short to delete, use "Combine Chapters" to make the chapter longer.	**43**
Cannot create a playlist.	●You cannot select all the chapters at once in a title if the title also includes still pictures. Select them individually.	—

Still pictures

Cannot display Direct Navigator screen.	●This screen cannot be displayed during recording or copy.	—

TV Guide   **Page**

The TV Guide System does not receive any data.	● Check whether the clock is properly set. ● If signal quality is bad (ghost images or limited reception), the TV Guide system may not be able to receive any data.	**64** —
"No Data" is displayed for some or all stations.	● Some stations are not supported by the TV Guide system. ● Analogue broadcasts are not supported by the TV Guide system. ● Programme the Timer recording manually or via G-CODE.	— — **29**
The TV Guide information is not displayed properly.	● There was a programme change. Check the current programme, e.g. on the Web site for the TV Guide system provider or station provider. ● Programme information about analogue broadcasts is not displayed.	— —
The TV Guide data transfer was interrupted.	● The TV Guide system shows the data that was received up to the interruption. ● The programme information may be incomplete.	— —
The TV Guide data is not updated.	● Make sure that the time is set correctly. ● Check whether "Off" is set under "TV Guide Download in Standby" and change the setting in the Setup menu.	— **65**

Digital broadcast

Digital broadcasts cannot be received.	● 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.	— —
After DVB Auto-Setup 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. Use the included RF coaxial cable as shown in STEP 1. For your safety, the aerial and cable should be inspected/installed by a licenced installer that should comply with Australian Standard AS1417.1. If you live within 5-10 km of DVB transmission towers, a combined VHF/UHF aerial should be adequate. Outside this area, separate VHF and UHF aerials provide superior reception performance. ● If you live in a unit or apartment, check to ensure the Master Antenna TV (MATV) system is designed for analogue and DVB-T reception. Please consult your body corporate.	— — **8** —
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. ● Check that the aerial and antenna cable are designed for DVB. Use the included RF coaxial cable as shown in STEP 1. For your safety, the aerial and cable should be inspected/installed by a licenced installer that should comply with Australian Standard AS1417.1. ● 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" in the Setup menu.	**59** — **8** — — **59**
Picture very infrequently breaks up on some or all channels.	● Electrical atmospheric interference caused by local or distant lighting 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.	— —

VIERA Link

		Page
VIERA Link doesn't work.	● Check the HDMI cable connection. Check that "HDMI" is displayed on the front display when the power for the main unit is set to On. ● Make sure that "VIERA Link" is set to "On". ● Check the "HDAVI Control" settings on the connected device. ● Some functions may not work if depending on the version of "HDAVI Control" of the connected equipment. This unit supports "HDAVI Control 3" functions. ● If the connection for the equipment connected with HDMI 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.	— 63 — — —

To reset this unit

To return all the settings other than the main ones to the factory preset	● Select "Yes" in "Shipping Condition" in the Setup menu. All the settings except for the ratings level, ratings password and clock settings return to the factory preset. The timer recording programmes are also cancelled. ● Select "Yes" in "Default Settings" in the Setup menu. All the settings other than the tuning settings, clock settings, region settings, disc language settings, ratings level, ratings password, remote control code, return to the factory presets. ● Press and hold [∨ CH] and [CH ∧] on the main unit until the Auto-Setup screen appears. All the settings except for the ratings level, ratings password and clock settings return to the factory preset. The timer recording programmes are also cancelled.	65 65 —
To reset the ratings level settings	● While the disc tray is open, press [DRIVE SELECT] to select the DVD drive, then press and hold [● REC] and [▶] (PLAY) on the main unit at the same time for 5 or more seconds.	—
To restore the unit if it freezes due to one of the safety devices being activated	● Press and hold [⏻/I] on the main unit for 10 seconds. (The settings remain.)	—

Other

After performing an update, you can no longer receive broadcasts.	● Depending on the content of the update, some settings may have returned to the preset values. Fix the settings again.	—

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

RQT9127

Specifications

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

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 time
Maximum 8 hours (using 4.7 GB disc)
XP: Approx. 1 hour, SP: Approx. 2 hours
LP: Approx. 4 hours, EP: Approx. 6 hours/8 hours

Playable discs
DVD-RAM : DVD Video Recording format
DVD-R : DVD-Video format, DivX※
DVD-R DL (Dual Layer) : DVD-Video format, DivX※
DVD-RW : DVD-Video format, DVD Video Recording format
+R, +R DL (Double Layer), +RW
DVD-Video, CD-Audio (CD-DA), Video CD,
CD-R/CD-RW (CD-DA※, Video CD※, MP3※, JPEG※, DivX※)

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 (Pickup)
Wave length: 780 nm (CDs), 662 nm (DVDs)
Laser power:
No hazardous radiation is emitted with the safety protection

Audio
Recording system: Dolby Digital 2ch, Linear PCM (XP mode)
Audio in: AV1/AV2 (pin jack)
Input level: Standard: 0.5 Vrms, Full scale: 2.0 Vrms at 1 kHz
Input impedance: More than 10 kΩ
Audio out (COMMON/DVD PRIORITY): 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 (DVD PRIORITY):
Optical terminal (PCM, Dolby Digital, DTS, MPEG)

Video
Video system: PAL colour signal, 625 lines, 50 fields
NTSC colour signal, 525 lines, 60 fields
Recording system: MPEG2 (Hybrid VBR)

Video in (PAL/NTSC): AV1/AV2 (pin jack) 1 Vp-p 75 Ω, termination

S-Video in (PAL/NTSC): AV2 (S terminal) 1 Vp-p 75 Ω, termination

Video out (PAL/NTSC) (COMMON/DVD PRIORITY):
Video Out (pin jack) 1 Vp-p 75 Ω, termination
S-Video out (PAL/NTSC) (DVD PRIORITY):
S-Video Out (S terminal) 1 Vp-p 75 Ω, termination
Component video output (NTSC 480p/480i, PAL 576p/576i) (DVD
PRIORITY)
Y: 1.0 Vp-p 75 Ω, termination
P_B: 0.7 Vp-p 75 Ω, termination
P_R: 0.7 Vp-p 75 Ω, termination

DV input IEEE 1394 Standard, 4 pin : 1 pc

HDMI Output (DVD PRIORITY) 19 pin type A: 1 pc
HDMI™ (V.1.3 with Deep Colour)
●This unit supports "HDAVI Control 3" function.

Television system

Tuner system	Channel coverage
PAL-B Australia	VHF: 0 to 12 UHF: 28 to 69 CATV: 45 MHz to 470 MHz
DVB-T Australia	VHF: 6 to 12 UHF: 27 to 69

RF converter output: Not provided

VHS
Recording format:
VHS Video Cassette System Standard with FM audio
Heads: 4 Helical Scan Heads for Video
2 Helical Scan Heads for FM audio
1 Fixed Head for Normal audio

Tape speed/Recording time (with E-240 tape):
PAL SP: 23.39 mm/s, 240 min
LP: 11.7 mm/s, 480 min
EP: 7.8 mm/s, 720 min
NTSC SP: 33.35 mm/s, 168 min
EP: 11.12 mm/s, 505 min

Others
Region code: #4
Operating temperature: 5 °C to 40 °C
Operating humidity range: 10 % to 80 % RH (no condensation)
Power supply: AC 220 to 240 V, 50 Hz
Power consumption: Approx. 32 W
Dimensions (W×D×H): 430 mm×345 mm×84 mm
Mass: Approx. 5.4 kg

Power consumption:
Approx. 4.3 W (Power Save mode)
Approx. 14.5 W (Quick Start mode)

Note
Specifications are subject to change without notice.

※ Finalising is necessary for compatible playback.

Glossary

Bitstream
This is the digital form of multi-channel audio data (e.g., 5.1 channel) before it is decoded into its various channels.

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.

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 television's speakers. Some discs prohibit down-mixing and this unit can then only output the front two channels.

Drive
In the instance of this unit, this refers to disc (DVD) and video cassette (VHS). 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 listen at low volumes but still hear dialogue clearly.

Film and video
DVD-Videos are recorded using either film or video. This unit can determine which type has been used, then uses the most suitable method of progressive output.

Film: Recorded at 25 frames per second (PAL discs) or 24 frames per second (NTSC discs). (NTSC discs recorded at 30 frames per second as well.) Generally appropriate for motion picture films.
Video: Recorded at 25 frames/50 fields per second. (PAL discs) or 30 frames/60 fields per second (NTSC discs). Generally appropriate for TV drama 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, +R DL on this unit.
After finalising, the disc becomes play-only and you can no longer record or edit. However, finalised DVD-RW can be formatted for recording again.

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), +RW or unused +R and +R DL on this unit. Formatting permanently deletes all contents.

Frames and fields
Frames refer to the single images that constitute the video you see on your television. Each frame consists of two fields.

Frame   Field   Field
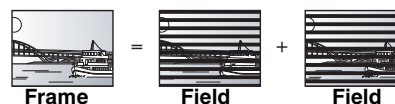
- A frame still shows two fields, so there may be some blurring, but picture quality is generally better.
- A field still shows less picture information so it may be rougher, but there is no blurring.

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), 1080p (1125p)] from HDMI AV OUT terminals. 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 1/10–1/100 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.

MP3 (MPEG Audio Layer 3)
An audio compression method that compresses audio to approximately one tenth of its size without any considerable loss of audio quality. You can play MP3 you have recorded onto CD-R and CD-RW (Close the session after recording.).

Pan&Scan/Letterbox
In general, DVD-Video are produced with the intention that they be viewed on a widescreen television (16:9 aspect ratio), so images often don't fit regular (4:3 aspect ratio) televisions. Two 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.
(This unit is compatible with version 2.0 and 1.1.)

Progressive/Interlace
The PAL video signal standard has 576 (or 625) interlaced (i) scan lines, whereas progressive scanning, called 576p (or 625p), uses twice the number of scan lines. For the NTSC standard, these are called 480i (or 525i) and 480p (or 525p) respectively.
Using progressive output, you can enjoy the high-resolution video recorded on media such as DVD-Video.
Your television must be compatible to enjoy progressive video. Panasonic televisions with 576 (625)/50i · 50p, 480 (525)/60i · 60p input terminals are progressive compatible.

Protection
You can prevent accidental deletion by setting writing protection or deletion 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 (analog signal) samples taken at set periods into digits (digital encoding). Sampling frequency is the number of samples taken per second, so larger numbers mean more faithful reproduction of the original sound.

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 list.

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.

Safety precautions

Placement

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

Do not place heavy items on the unit.

Voltage

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

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

AC mains lead protection

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

Grasp the plug firmly when unplugging the lead. Pulling the AC mains lead can cause electric shock.

Do not handle the plug with wet hands. This can cause electric shock.

Foreign matter

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

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

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

Service

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

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

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