Introduction

Precautions

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The important note is located on the rear of the cabinet.

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

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

Laser Safety

This unit employs a laser. Only a qualified service personnel should remove the cover or attempt to service this unit, due to the possibility of eye injury.

CAUTION: USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
CAUTION: VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK DEFEATED. DO NOT STARE INTO BEAM.
LOCATION: INSIDE, NEAR THE DECK MECHANISM.

Power Supply

The power supply is connected and the unit is live when the mains cable is plugged into a 220–240 V∼, 50 Hz AC outlet. To operate the unit, press **[I/⏻ ON / STANDBY]**.

WARNING: LIVE PARTS INSIDE.
DO NOT REMOVE ANY SCREWS.

Caution

1. Do not attempt to open the cabinet. There are no parts inside you can service. Refer all servicing to qualified service personnel.
2. Slots and openings in the cabinet at the sides and underneath are provided for ventilation. To ensure reliable operation and to protect the unit from overheating, these openings must not be blocked or covered.
   Avoid installation in enclosed spaces such as bookcases unless suitable ventilation is provided.
3. Keep the unit away from radiators and other heat sources.
4. Avoid use near strong magnetic fields.
5. Do not push objects of any kind into the unit through the cabinet slots or openings as they could touch electrically live parts or short circuit parts resulting in a fire or electric shock.
6. Do not spill liquid on the unit. If liquid is spilled and enters the unit, consult qualified service personnel.
7. Do not stand the unit vertically. Use the unit in a horizontal (flat) position only.
8. This product is in Stand-by mode when turned off while the mains cable is connected.
9. Do not place any combustible objects on the device (candles, etc.).
10. Before moving the unit, be sure to remove any discs and unplug the mains cable from the AC outlet.
11. Disconnect the mains plug to shut off when find troubles or not in use.
12. The mains plug shall remain readily operable.
13. Read both manual instructions to ensure correct and safe installation and interconnection of the unit in multimedia systems.
14. Keep the distances 20 cm around apparatus of ventilation openings.

Declaration of Conformity

This product complies with the requirement of the directives
EMC-Directive: 89 / 336 / EEC
Low Voltage Directive: 73 / 23 / EEC
CE Marking: 93 / 68 / EEC

We declare that the following product:
    HDD & DVD / Video Cassette Recorder
    Model RD-XV45KB
    Trade Name: TOSHIBA
is in compliance with following Regulations.

EN55013: 2001+A1:2003, EN55020: 2002+A1:2003, EN61000-3-2: 2000, EN61000-3-3: 1995 + A1: 2001
EN60065: 2002
EN60825-1 Edition 1.2: 2001

A NOTE ABOUT RECYCLING
This product's packaging materials are recyclable and can be reused. Please dispose of any materials in accordance with your local recycling regulations.

This product consists of materials which can be recycled and reused if disassembled by a specialised company.
Batteries should never be thrown away or incinerated but disposed of in accordance with your local regulations concerning chemical wastes.

Make your contribution to the environment!!!
• Exhausted batteries do not belong in the dustbin.
• You can dispose of them at a collection point for exhausted batteries or special waste.
• Contact your council for details.

For Customer Use:
Carefully read the Model No. and Serial No. located at the back of the unit and enter the information below. Retain this information for future reference.
Model No. _____
Serial No. _____

Connection to Power

Before Switching on make sure that the voltage of your electricity supply is the same as that indicated on the rating plate.

Mains Cord
This appliance may be fitted with a non-rewireable plug. If it is necessary to change the fuse in a nonrewireable plug the fuse cover must be refitted. If the fuse cover is lost or damaged, the plug must not be used until a replacement available from the appliance manufacturer is obtained.

It is important that the colour of the replacement fuse cover corresponds with the rating marking on the base of the plug.
If the plug has to be changed because it is not suitable for your socket, or becomes damaged, it should be cut off and an appropriate plug fitted following the wiring instructions below. The plug removed must be disposed of safely as insertion into a 13A socket is likely to cause an electrical hazard.
For your own safety read the following instructions carefully before attempting to connect this unit to mains.
The wires in this mains lead are coloured in accordance with the following code:

BLUE=NEUTRAL, BROWN=LIVE

Important
As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:-
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.
No connection is to be made to the earth terminal of the plug.
If a 13 Amp (BS 1363) Plug is used, a 3 Amp Fuse must be fitted, or if any other type of Plug is used a 3 or 5 Amp Fuse must be fitted, either in the Plug or Adaptor, or on the Distribution Board.

Mains Supply: 220 - 240V ∼ 50 Hz - AC only

Do not make any connection to the larger pin marked with the letter "E" or by the symbol ⏚ or coloured green or green and yellow.

FUSE
BROWN (Live)
BLUE (Neutral)
CORD GRIP
OUTER SHEATH OF THE WIRE
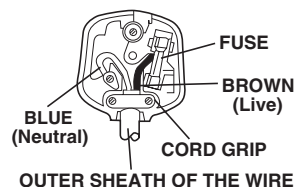
Installation Location

For safety and optimum performance of this unit:
• Install the unit in a horizontal and stable position.
• Do not place anything directly on top of the unit.
• Do not place the unit directly on top of the TV.
• Shield the unit from direct sunlight and keep away from sources of intense heat. Avoid dusty or humid locations. Avoid locations with insufficient ventilation for suitable heat dissipation. Do not block the ventilation holes on the sides of the unit. Avoid locations subject to strong vibration or strong magnetic fields.

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Avoid the Hazards of Electrical Shock and Fire

• Do not handle the mains cable with wet hands.
• Do not pull on the mains cable to disconnect it from AC outlet. Grasp it by the plug.
• If the water is spilled onto the unit accidentally, unplug the mains cable immediately and take the unit to an Authorized Service Centre for servicing.

Moisture Condensation Warning

Moisture condensation may occur inside the unit when it is moved from a cold place to a warm place, after heating a cold room, or under conditions of high humidity. Do not use the unit for at least 2 hours to allow the inside to dry.

About Copyright

Unauthorized copying, broadcasting, public performance and lending of discs are prohibited. This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.

"Dolby® Digital Stereo Creator enables consumers to create stereo DVD-Videos with stunning Dolby Digital sound tracks at home. The technology, when utilized instead of PCM recording, also saves recordable disc space, allowing for higher video resolution or extended recording time on each DVD. DVDs mastered using Dolby Digital Stereo Creator will play back on all DVD-Video players."
Note: This is true when the players are compatible with actual recordable DVD discs.

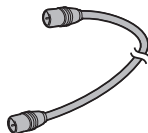"DTS" and "DTS Digital Out" are trademarks of Digital Theater Systems, Inc.

DivX, DivX Certified, and associated logos are trademarks of DivX, Inc. and are used under license.
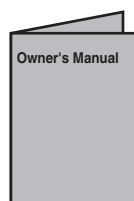
Accessories Supplied

• Remote control with two R6 (AA) batteries

• RF cable

• Owner's Manual

Owner's Manual

• Quick Guide

• Registration card

Maintenance

SERVICING
• Please refer to relevant topics on the "Troubleshooting" on pages 92 to 96 before returning the product.
• If this unit becomes inoperative, do not try to correct the problem by yourself. There are no user-serviceable parts inside. Turn the unit off, unplug the mains cable, and consult your dealer or an Authorized Service Centre.

CLEANING THE CABINET
• Use a soft cloth slightly moistened with a mild detergent solution. Do not use a solution containing alcohol, spirits, ammonia or abrasive.

HDD	HDD HANDLING

• HDD is a precision apparatus that is susceptible to vibration, strong impact or dirt.
Depending on the installation environment or handling, the unit may become partially damaged or in the worst case, recording or replaying may not be available. Especially while the HDD is in motion, do not subject it to vibration or strong impact or pull out the power plug. And if a power failure occurs, the content of the recording / replaying programme may be lost.

HDD	MOVING THE UNIT

• HDD rotates at high speed when in operation. Be sure that rotation has stopped and then move the unit without subjecting it to strong impact or vibration.

DVD	CLEANING DISCS

• When a disc becomes dirty, clean it with a cleaning cloth. Wipe the disc from the centre out. Do not wipe in a circular motion.
• Do not use solvents such as benzine, thinner, commercially available cleaners, detergent, abrasive cleaning agents or antistatic spray intended for analogue records.

DVD	CLEANING THE DISC LENS

• If this unit still does not perform properly although you refer to the relevant sections and to "Troubleshooting" in this Owner's Manual, the laser optical pickup unit may be dirty. Consult your dealer or an Authorized Service Centre for inspection and cleaning of the laser optical pickup unit.

DVD	DISC HANDLING

• Handle the discs so that fingerprints and dust do not adhere to the surfaces of the discs.
• Always store the disc in its protective case when it is not used.

VCR	AUTO HEAD CLEANING

• Automatically cleans video heads as you insert or remove a videotape, so that you can see a clear picture.
• Playback picture may become blurred or interrupted while the TV programme reception is clear. Dirt accumulated on the video heads after a long extended period of use, or the usage of rental or worn tapes can cause this problem. If a streaky or snowy picture appears during playback, the video heads in the unit may need to be cleaned.
1. Please visit your local Audio / Video store and purchase a good quality VHS Video Head Cleaner.
2. If a Video Head Cleaner does not solve the problem, please consult your dealer or an Authorized Service Centre.

Note

• Remember to read the instructions along with the video head cleaner before use.
• Clean video heads only when problems occur.

Table of contents

Features

The following features are available with this unit.

Recording

This unit allows you to record on the HDD, a DVD-RW disc (rewritable) and a DVD-R disc (one-time write) as well as a videotape. You can choose any one for your convenience.

HDD	DVD	VCR

One-touch Timer Recording (OTR)
[➡ Page 35 (HDD / DVD) or ➡ Page 90 (VCR)]
This feature allows you to start the recording right away with just one-touch. And each press of **[REC / OTR ●]** (HDD / DVD / VCR) increases the recording time by 30 minutes.

Left channel stereo recording
The unit can record monaural sound from the Left channel as pseudo stereo sound (same Left and Right channels) automatically. (AV3 only)

HDD	DVD

Timer Programming up to 32 programmes
[➡ Pages 36-38]
You can programme the unit to record up to 32 programmes within a one-month period. Daily or weekly repeating programmes can also be programmed.

Recording Monitor [➡ Page 32]
You can check how the actual recording picture and the sound will be in the selected Rec Mode before attempting to record.

Automatic Chapter Marker [➡ Page 32]
Each recorded title is automatically marked with chapter marks.

**Automatic Playlist Making
(VR mode discs and HDD only)**
[➡ Page 70]
Playlists are automatically copied from the Original List, so that you can edit titles.

HDD

160 GB Hard Disc [➡ Pages 28-30]
This unit is equipped with a 160 GB hard disc which allows you to record up to 340 hours (with SEP mode). The HDD operates just like a VR mode DVD-RW disc.
Most of the functions which are available with a VR mode DVD-RW disc can be performed on the HDD too.

PDC [➡ Page 37]
This system assures that the TV programme you wish to record using timer recording will be recorded exactly from beginning to end even if the actual broadcasting time differs.

DVD

Automatic DVD Menu Making (Video mode only)
[➡ Page 50]
DVD Menus are made automatically when a Video mode disc is finalised.

Automatic Finalise (Video mode only)
[➡ Page 50]
You can set the disc to be finalised automatically when a dubbing or One Touch Dubbing is completed.
Relay Recording [➡ Page 36]
During Timer Recording to a DVD, if the disc runs out of the space, or if there is no recordable disc in the unit, it automatically changes the recording media to the HDD.

Dubbing

With this unit, you can enjoy bi-directional dubbing with HDD, DVD or VCR.

HDD	DVD

Maximum of x 20 HDD to VR mode DVD-RW disc dubbing speed (High Speed Dubbing)
[➡ Pages 44-46]
Up to 20 times high speed dubbing from HDD to VR mode DVD-RW disc is possible if you use the compatible disc.

Just Dubbing [➡ Page 44]
When dubbing from HDD to DVD, if you set the Rec Mode to "Auto", this unit will automatically select the most suitable Rec Mode for the dubbing.

Playback

HDD	DVD	VCR

Simultaneous Playback and Recording
[➡ Page 61]
You can play back a title while recording.

HDD	DVD

Theatre-quality Sound at Home [➡ Page 23]
When connecting the unit to an amplifier or a decoder that is compatible with Dolby Digital, you can experience a theatre-quality sound environment.

Variable Skip [➡ Page 62]
You can skip forward a certain time, which is specified in the Setup Menu in advance, with one-touch while playback.

Variable Replay [➡ Page 62]
You can skip back a certain time, which is specified in the Setup Menu in advance, with one-touch while playback.

HDD

Time Shift Playback [➡ Page 61]
You can play back a title being recorded from the beginning while recording continues.

Series Search [➡ Page 66]
You can search for the group of titles made with the same Periodical Timer Recordings.

Editing

HDD		DVD

Deleting Titles [➠ Pages 70-71]
You can delete titles which you do not need anymore.

Making Playlists [➠ Pages 70-80]
While the Original List remains as it is, you can edit titles in the Playlist.
　　Putting Names on Titles
　　Setting / Clearing Chapter Marks
　　Dividing / Combining Titles
　　Deleting Parts of Titles
　　Moving Titles

Protecting Titles [➠ Page 72]
You can prevent accidental editing or title erasing.

Compatibility

DVD

Playing back discs recorded in Video mode on any regular DVD player:
Discs recorded in Video mode can be played back on regular DVD players, including computer DVD drives compatible with DVD-Video playback. You will need to finalise the discs recorded in Video mode to play back in other DVD players.

- DVD-Video Format (Video mode) is a new format for recording on DVD-RW / R discs that was approved by the DVD Forum in 2000. Adoption of this format is optional for manufactures of DVD playback devices and there are DVD-Video players, DVD-ROM drives and other DVD playback devices available that cannot play back DVD-RW / R discs recorded in the DVD-Video Format.

Choosing a disc

When you want to play DVD or CD software or copy programmes from the HDD to a recordable DVD, load an appropriate disc into the recorder. There are many types and formats of discs. Please use the following information to select an appropriate disc.

• Handle the disc according to the disc instruction manual.
• Toshiba cannot guarantee that all discs bearing the DVD or CD logos will operate as expected. Additionally, Toshiba cannot guarantee those discs recorded in this device will operate properly in other DVD players, recorders and/or personal computer drives.

For recording / playback

Disc	Mark	Specification	Remarks
DVD-R		• 4.7 GB for General Ver. 2.0 (8 cm (3 1/4 in.)) (12 cm (4 3/4 in.))	Read carefully the section "On DVD-R discs" (Page 11). Depending on the disc status or the recording equipment, playback of the disc may not be possible on this recorder.
DVD-RW		• 4.7 GB for Ver. 1.1 and 1.2 (8 cm (3 1/4 in.)) (12 cm (4 3/4 in.))	Read carefully the section "On DVD-RW discs" (Page 11). Depending on the disc status or the recording equipment, playback of the disc may not be possible on this recorder.

Using different disc types for different purposes

DVD-RW / R discs when creating your own original discs for distribution
DVD-R discs are designed to comply with the global standard DVD-Video format, and can be recorded only once. DVD-R discs are convenient when you edit your original content (recorded personal events such as a wedding party) with this recorder, transfer them to the recorder and make copies to send to your friends or relatives. The discs can be played on other compatible DVD players. DVD-RW discs, which are rewritable, can be used as well.

We cannot guarantee that DVD-RW / R discs recorded on this recorder will be playable on all DVD recorders/ players. Similarly, there is no guarantee that all DVD-RW / R discs recorded on other recorders will be playable on this recorder.

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For playback only

Disc	Mark	Specification	Remarks
DVD video		• 8 cm (3 1/4 in.) 12 cm (4 3/4 in.) • Region number **2** or **ALL**	The region number of this DVD recorder is 2. The region number marked on the rear panel must correspond to a specific playable area, that is printed on your DVD video disc. If you do not find Region 2 or ALL regions, or the disc is encoded to permit playback only in regions other than Region 2, disc playback will not be allowed by the recorder.
Audio CD (CD-DA)		• 8 cm (3 1/4 in.) 12 cm (4 3/4 in.)	
CD-R CD-RW		• 12 cm (4 3/4 in.) • CD-DA (audio CD) format, MP3, JPEG, DivX® files	Depending on the disc status, playback may not be possible.
VCD (VIDEO CD)		• 12 cm (4 3/4 in.) • Version 1.1 and 2.0	

is a trademark of DVD Format/Logo Licensing Corporation.

- You cannot play discs other than those listed above.
- You cannot play non-standardized discs even if they may be labelled as above.
- You cannot play discs with specialized encoding (such as SACD discs) or the DVD audio portions of DVD Audio discs.
- Toshiba cannot guarantee that all discs bearing the DVD or CD logos will operate as expected.

RW COMPATIBLE This label indicates playback compatibility with DVD-RW discs recorded in VR mode (Video Recording Format).

Note

- This unit cannot play the DVD-R discs recorded in VR mode (Video Recording Format).

- Toshiba is not liable for any damage or loss caused directly or indirectly by the malfunction of this recorder, including, without limitation, any one of the following:
  - Failure to record contents intended to be recorded by the consumer.
  - Failure to edit contents as intended by the consumer.
  - When a DVD-RW / R disc created on this recorder is used (e.g., insertion, playback, recording or editing) in another DVD player, recorder or personal computer drive.
  - When a DVD-RW / R disc that is used in the manner described in the immediately preceding bullet point is used again in this recorder.
  - When a DVD-RW / R disc that was recorded in another DVD recorder, or in a personal computer drive is used in this recorder.
- Some functions may not work with personal computer discs.
- Discs recorded in this recorder may not operate as expected on other DVD players, recorders or personal computer drives.

Because of problems and errors that can occur during the creation of DVD and CD software and/or the manufacture of DVD and CD discs, Toshiba cannot guarantee that product will play every feature of every DVD bearing the DVD logo and/or every CD bearing the CD logo. As one of the creators of DVD technology, Toshiba DVD players are manufactured using the highest standards of quality, and as a result, such incompatibilities are rare.

On DVD-R discs

Standards
- DVD-R for General Ver. 2.0 discs can be used for recording and playback.
- Discs compatible with the following recording mode speed can also be used:
  Ver. 2.0/2x
  Ver. 2.0/4x
  Ver. 2.0/8x
  Ver. 2.0/16x
- Select discs labelled "for video", "for recording", "120 min." etc.

Recording conditions
- Images for which copying is prohibited or restricted (copy once or copy prohibited) cannot be recorded.
- We strongly recommend using any DVD-R 2x or 8x to assure good recording quality.

Discs that have been tested and are proven to be compatible with this recorder:
Verbatim DVD-R 8x
Maxell DVD-R

On DVD-RW discs

Standards
- Discs labelled DVD-RW Ver. 1.1 or 1.2 can be used.
- Discs compatible with the following recording mode speeds can also be used:
  Ver. 1.1/2x
  Ver. 1.2/4x
- Select discs labelled "for video", "for recording", "120 min." etc.

Recording conditions
- Images for which copying is prohibited (copy prohibited) cannot be recorded. If the disc is labelled as CPRM compatible, images for which copying is restricted (copy once) can be recorded in VR mode.
- We strongly recommend using any DVD-RW 4x disc to assure good recording quality.

Discs that have been tested and are proven to be compatible with this recorder:
TDK DVD-RW 2x
JVC DVD-RW 4x

Marks on DVD video discs

The following are examples of marks and the meanings.

Mark	Meanings
2)))	Number of audio streams recorded in the disc. (2 streams such as English and Japanese in this example.)
.2.	Number of subtitle languages recorded in the disc. (2 subtitle languages are recorded in this example.)
3	Number of camera angles recorded in the disc. (3 camera angles are recorded in this example.)
4:3	Pictures are recorded in the standard picture shape (4:3 aspect ratio).
LB	Pictures are recorded in the letter box picture shape (4:3 aspect ratio with horizontal black bars in the top and bottom of pictures).
16:9 LB	Pictures are recorded in the 16:9 wide picture shape. TVs with 4:3 aspect ratio will display them in the letter box style.
16:9 PS	Pictures are recorded in the 16:9 wide picture shape. TVs with 4:3 aspect ratio will display them in the pan scan style (one or both sides of pictures are cut). Actual picture shape may vary depending on the aspect ratio or mode selection of the TV.

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Structure of disc contents

Normally, DVD video discs are divided into titles, and the titles are subdivided into chapters.
Video CDs/Audio CDs are divided into tracks.

DVD video disc

Title 1 | Title 2
Chapter 1 | Chapter 2 | Chapter 1 | Chapter 2 | Chapter 3

Video CD/Audio CD

Track 1 | Track 2 | Track 3 | Track 4 | Track 5

MP3, JPEG, DivX®

Group 1 | Group 2
Track 1 | Track 2 | Track 3 | Track 4 | Track 5
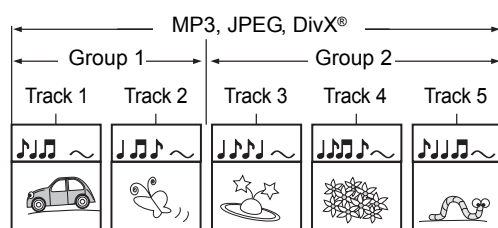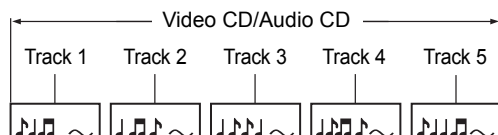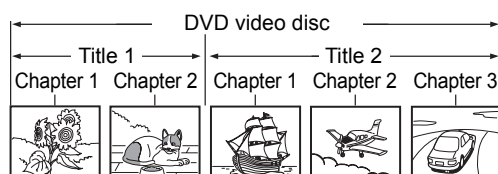
Title: Divided contents of a DVD video disc. Roughly corresponds to a story title in short stories.
Chapter: Divided contents of a title. This corresponds to a chapter in a story.
Track: Divided contents of a Video CD or an Audio CD.
Group: Divided contents of a MP3, JPEG or DivX® data disc. Consists of number of tracks.

Each title, chapter, or track is assigned a number, which is called "title number", "chapter number" or "track number" respectively.
Some discs may not have these numbers.

When you record on the HDD, one recording will always equal one title. You can divide a title into several chapters by marking borders in it to facilitate scene search.

On handling discs

• Do not touch the playback side of the disc.

Yes
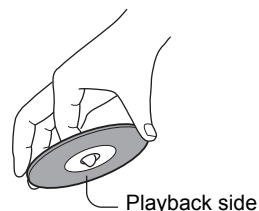
Playback side
• Do not stick paper or tape to discs.

No

On cleaning discs

• Fingerprints and dust on the disc cause picture and sound deterioration. Wipe the disc from the centre outwards with a soft cloth. Always keep the disc clean.

Yes   **No**

• Do not use any type of solvent such as thinners, benzine, commercially available cleaners or antistatic spray for vinyl LPs. It may damage the disc.

On storing discs

• Do not store discs in a place subject to direct sunlight or near heat sources.
• Do not store discs in places subject to moisture and dust such as a bathroom or near a humidifier.
• Store discs vertically in a case. Stacking or placing objects on discs outside of their case may cause warping.

Discs and purposes

The table shows main functions which are available on this recorder per disc category.
This will help you choose discs.

	DVD-RW disc Video mode	DVD-RW disc VR mode	DVD-R disc Video mode
Characteristics on this recorder	Suitable for saving data in Video mode format to play on compatible devices. You can erase recorded contents to use the disc repeatedly.	Suitable for saving data in VR mode format to play on compatible devices. You can erase recorded contents to use the disc repeatedly.	Suitable for saving data in Video mode format to play on compatible devices. Once you execute Video mode finalising process on a recorded disc so that it can be played on other players. You cannot make additions, corrections and deletions of contents on the disc.
For the first use	Initialise the disc.	Initialise the disc.	No preparatory steps required.
Recording a TV programme	Yes	Yes	Yes
Erasing recorded contents	Yes If the disc has been executed Video mode finalising process, first cancel the process then delete contents.	Yes You can erase recorded contents without cancelling the finalising process.	Yes Deleting contents cannot restore the disc space. After you execute Video mode finalising process on a recorded disc, you cannot delete contents of the disc.
Indexing recorded contents	Yes	Yes	Yes
Naming a title	Yes	Yes	Yes
Creating a thumbnail	Yes After you execute Video mode finalising process on a recorded disc, you cannot name a title or create a thumbnail.	Yes After you execute VR mode finalising process on a recorded disc, you can name a title or create a thumbnail.	Yes After you execute Video mode finalising process on a recorded disc, you cannot name a title or create a thumbnail.
Collecting favourite scenes (Playlist Editing)	No	Yes	No
Making a new title from a Playlist containing favourite scenes (Copy within the same disc)	No	Yes	No
Playing contents recorded on this recorder, on other devices	Execute Video mode finalising process on this recorder. This process makes the disc playable on other compatible devices. (Some models excepted.)	Execute VR mode finalising process on this recorder. This process makes the disc playable on other compatible devices. (Some models excepted.)	Execute Video mode finalising process on this recorder. This process makes the disc playable on other compatible devices. (Some models excepted.)
When a message appears and the loaded disc cannot be used:	Initialise the disc.	Initialise the disc.	–

Guide to the Owner's Manual

Symbols used in the Owner's Manual

To show what recording mode or disc type applies to each function, the following symbols appear at the beginning of each operating item.

Symbol	Description
HDD	Available to (internal) HDD
DVD-V	Available to DVD-Videos
Video DVD-RW	Available to DVD-RW discs in Video mode
VR DVD-RW	Available to DVD-RW discs in VR mode
DVD-R	Available to DVD-R discs in Video mode
CD	Available to Audio CDs
VCD	Available to Video CDs
MP3	Available to CD-RW / R discs with MP3 files
JPEG	Available to CD-RW / R discs with JPEG files
DivX®	Available to DVD-RW / R and CD-RW / R discs with DivX® files
VCR	Available to VHS tapes Use only cassettes marked VHS (VHS).

Functional Overview

Front Panel
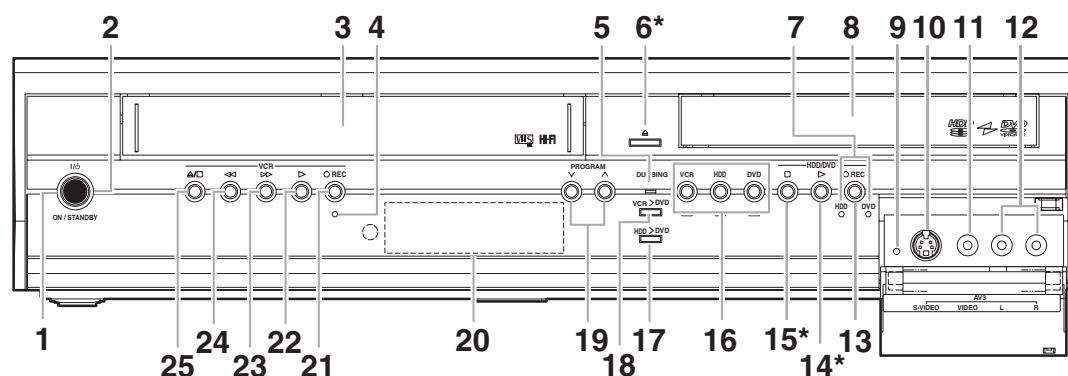
1 I/⏻ **ON / STANDBY button**: Press to turn the unit on / off.

2 I/⏻ **ON / STANDBY indicator**: Lights up when the power is on.

3 **Cassette compartment**: Insert a tape here.

4 **REC indicator (VCR)**: Lights up during VCR recording.

5 **DUBBING indicator**: Lights up during dubbing.

6 **OPEN / CLOSE ⏏ button* (DVD)**: Press to open / close the disc tray.

7 **REC indicators (HDD / DVD)**: Lights up during HDD / DVD recording.

8 **Disc tray**: Place a disc here.

9 **RESET**: Press with a sharp pointed object to restart the unit. Also refer to the "Note" right below.

10 **S-VIDEO input jack (AV3) (HDD / DVD / VCR)**: Connect the S-Video output of an external device here using a commercially available S-Video cable.

11 **VIDEO input jack (AV3) (HDD / DVD / VCR)**: Connect the video output of an external device here using a commercially available Video cable.

12 **AUDIO input jacks (AV3) (HDD / DVD / VCR)**: Connect the audio output of an external device here using a commercially available Audio (L / R) cable.

13 ● **REC button (HDD / DVD)**: Press once to start a basic recording. Press repeatedly to start an OTR (One-touch Timer Recording). Each press increases the recording time by 30 minutes up to 8 hours.

14 **PLAY ▶ button* (HDD / DVD)**: Press to start or resume playback.

15 **STOP ■ button* (HDD / DVD)**: Press to stop playback, recording or dubbing.

16 **Device Select Buttons / Indicators**:
VCR: Press to activate the VCR. Lights up when VCR is selected.
HDD: Press to activate the HDD. Lights up when HDD is selected.
DVD: Press to activate the DVD. Lights up when DVD is selected.

17 **DUBBING HDD ⟩ DVD button**: Press to start One Touch Dubbing from HDD to DVD.

18 **DUBBING VCR ⟩ DVD button**: Press to start One Touch Dubbing from VCR to DVD.

19 **PROGRAM ⌄ / ⌃ buttons**: Press to change the channel.

20 **Front Panel Display**: Shows information and messages. Refer to "Front Panel Display Guide" on page 21.

21 ● **REC button (VCR)**: Press once to start a basic recording. Press repeatedly to start an OTR (One-touch Timer Recording). Each press increases the recording time by 30 minutes up to 8 hours.

22 **PLAY ▶ button (VCR)**: Press to start playback.

23 **F.FWD ▶▶ button (VCR)**: Press to fast forward or fast search.

24 **REW ◀◀ button (VCR)**: Press to rewind or rewind search.

25 **STOP / EJECT ⏏/■ button (VCR)**: Press to eject the videotape. Press to stop recording or playback.

(*) You can also turn on the unit by pressing these buttons.

Note

After pressing **[RESET]**,
• The settings for the items listed below will be lost;
 - Clock Setting
 - Timer Programme
 - Resume point
• The settings for the item listed below will not be lost, but need to be set again;
 - Channel Setting
• All other settings will remain as memorized.

Button names described in the Owner's Manual
The instructions in this manual are described mainly with the operations using the remote control. Some operations can be carried out using the buttons on the front panel.

Rear Panel
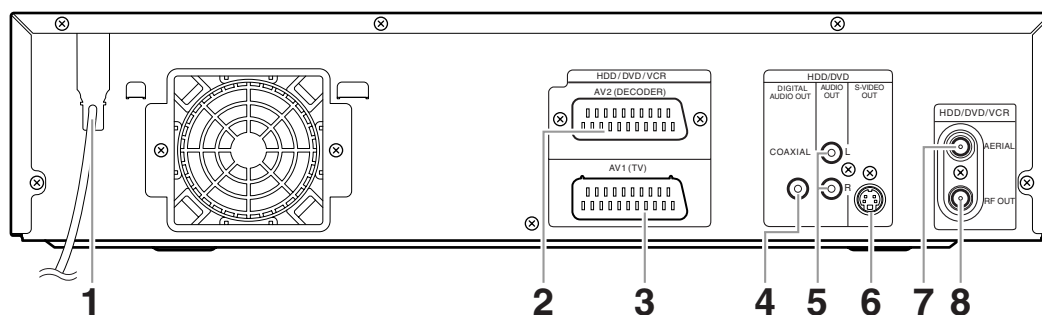
1 Mains cable
- Connect to a standard AC outlet.

2 AV2(DECODER) (HDD / DVD / VCR)
- Connect to VCR, camcorder, or other Audio-Video equipment. Use a commercially available Scart cable.

3 AV1(TV) (HDD / DVD / VCR)
- Connect to the Scart socket on your TV. Use a commercially available Scart cable.

4 DIGITAL AUDIO OUT (COAXIAL) jack (HDD / DVD)
- Connect to an amplifier with a digital input jack such as a Dolby Digital decoder or DTS decoder. Use a commercially available Coaxial cable.

5 AUDIO OUT jacks (HDD / DVD)
- Connect to the audio input jacks on your TV. Use a commercially available Audio cable.

6 S-VIDEO OUT jack (HDD / DVD)
- Connect to the S-Video input jack on your TV. Use a commercially available S-Video cable.

7 AERIAL (HDD / DVD / VCR)
- Connect to an antenna or cable.

8 RF OUT (HDD / DVD / VCR)
- Connect to the Aerial jack on your TV, cable box or direct broadcast system. Use the supplied RF cable.

Note

- Do not touch the inner pins of the jacks on the rear panel. Electrostatic discharge may cause permanent damage to the unit.

• This unit does not have an RF modulator.

Remote Control
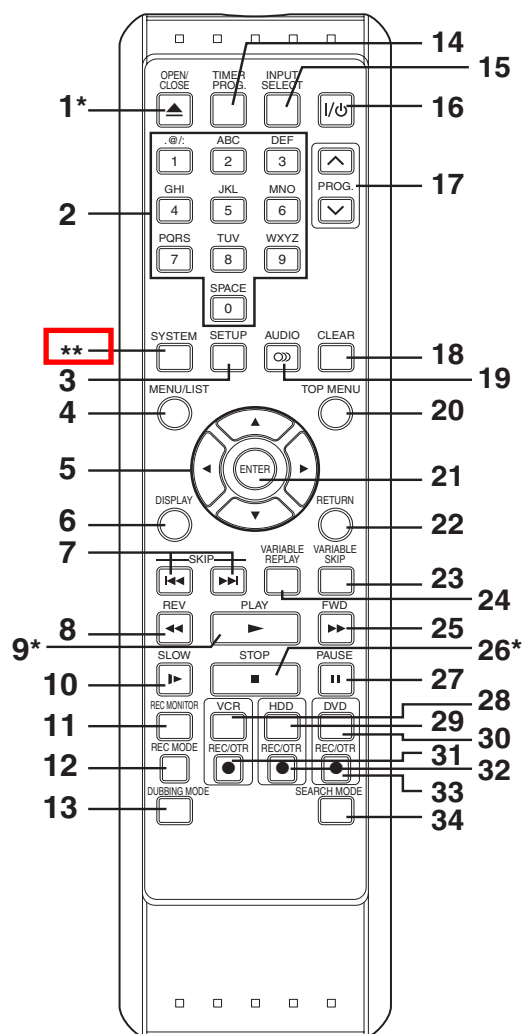
(*) You can also turn on the unit by pressing these buttons when the remote control is in VCR / HDD / DVD mode.

(**) This button does not function for this unit.

1 OPEN / CLOSE ▲ button*
(DVD / VCR): Press to open / close the disc tray or eject a videotape.

2 Number buttons:
Press to select channel numbers.
Press to select a title / chapter / track on the display.
Press to enter setting values.
Press to enter the index number / desired time to search in VCR mode.

3 SETUP button: Press to display the Setup Menu. The unit switches to the HDD / DVD mode when this button is pressed.

4 MENU / LIST button (HDD / DVD):
Displays the Disc Menu.
Changes the Original List and the Playlist.

5 Cursor ▲ / ▼ / ◄ / ► buttons: Selects items or settings.

6 DISPLAY button: Displays the on-screen menu.

7 SKIP I◄◄ / ►►I buttons (HDD / DVD):
During playback, press to skip to the previous / next chapter or track. Or when playback is paused, press to play back in forward / reverse step by step.

8 REV ◄◄ button:
(HDD / DVD) During playback, press to play back in fast reverse. Or when playback is paused, press to play back in slow reverse.
(VCR) Press to rewind the videotape or to view the picture rapidly in reverse during the playback mode.

9 PLAY ► button*:
Press to start or resume playback.
If the resume point has been set, the playback will start from the resume point.

10 SLOW I► button (VCR): During playback, press to view the videotape in slow motion.

11 REC MONITOR button (HDD / DVD):
Press to check the picture and the audio qualities for recording.

12 REC MODE button: Press to select the Rec Mode.

13 DUBBING MODE button: Press to display the Dubbing Menu. The unit switches to the HDD / DVD mode when this button is pressed.

14 TIMER PROG. button: Press to display the Timer Programming List. The unit switches to the HDD / DVD mode when this button is pressed.

15 INPUT SELECT button: Press to select an external input mode ("AV1", "AV2" or "AV3").

16 I/Φ ON / STANDBY button: Press to turn the unit on / off.

17 PROG. ∧ / ∨ buttons:
Press to change the channel up / down.
(VCR) Press to adjust the tracking during playback or in slow motion of the videotape. Also while playback is in still mode, you can stabilize the still picture.

18 CLEAR button:
(HDD / DVD) Press to clear the information once entered, etc.
(DVD) Press to erase the track number entered in the programme play screen for Video / Audio CDs.
(VCR) Press to reset the tape counter.

19 AUDIO ◯⫸ button: During playback, press to change the audio settings.

20 TOP MENU button (HDD / DVD): Displays the Title List.

21 ENTER button: Press to confirm or select menu items.

22 RETURN button: Press to return to the previously displayed Menu Screen.

23 VARIABLE SKIP button (HDD / DVD): Skips by the amount of time set in advance.

24 VARIABLE REPLAY button (HDD / DVD): Replays by the amount of time set in advance.

25 FWD ►► button:
(HDD / DVD) During playback, press to play back in fast forward. Or when playback is paused, press to play back in slow forward.
(VCR) Press to rapidly advance the videotape or view the picture rapidly in forward during playback.

26 STOP ■ button*: Press to stop playback, recording, or dubbing.

27 PAUSE II button: Press to pause playback or recording.

Device Select Buttons:

28 VCR button:
Press to activate the remote control in VCR mode. (See page 19.)
Press to activate the VCR.

29 HDD button:
Press to activate the remote control in HDD mode. (See page 19.)
Press to activate the HDD.

30 DVD button:
Press to activate the remote control in DVD mode. (See page 19.)
Press to activate the DVD.

31 REC / OTR ● button (VCR):
Press once to start a basic VCR recording. Press repeatedly to start a One-touch Timer Recording in VCR mode.

32 REC / OTR ● button (HDD):
Press once to start a basic HDD recording. Press repeatedly to start a One-touch Timer Recording in HDD mode.

33 REC / OTR ● button (DVD):
Press once to start a basic DVD recording. Press repeatedly to start a One-touch Timer Recording in DVD mode.

34 SEARCH MODE button (VCR):
Press to call up the index or time search menu.

Button names described in the Owner's Manual
The instructions in this manual are described mainly with the operations using the remote control. Some operations can be carried out using the buttons on the front panel.

Installing batteries in the remote control

Install two R6 (AA) batteries (supplied) into the remote control, carefully match with the polarity indicated inside the battery compartment.

1 **2** **3**
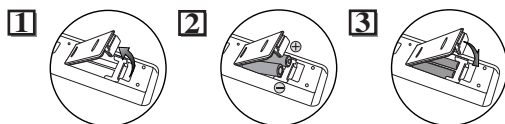
Caution

- Incorrect use of batteries can result in hazards such as leakage and bursting.
- Do not mix new and old batteries together.
- Do not use different kinds of batteries together.
- Make sure that the + and - ends of each battery match the indications inside the battery compartment.
- Remove batteries if the equipment will not be used for a month or more.
- When disposing used batteries, please comply with governmental regulations or the public instructions for environmental protection that apply in your country or area.
- Do not recharge, short-circuit, heat, burn or disassemble batteries.

About the remote control

- Make sure there is no obstacle between the remote control and the remote control sensor on the unit.
- Use within the operating range and angle as shown.

Within about 7 m

30˚

30˚

Remote control

- The maximum operable range as follows:
  Line of sight: approximately 7 m
  Either side of centre: approximately 7 m within 30 degrees
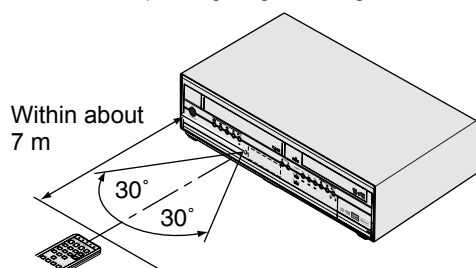- Remote control operation may become unreliable if the remote control sensor of the unit is being exposed by the strong sunlight or fluorescent light.
- Remote controls for different devices can interfere with each other. Be careful when using remote controls for other equipment located close to the unit.
- Replace the batteries when the operating range of the remote control reduces.

HDD / DVD / VCR modes switching

Because this product is a combination of a VCR, a HDD and a DVD recorder, you must select first which component you wish to operate.

Device Select Buttons / Indicators

VCR HDD DVD

DVD button / indicator
HDD button / indicator
VCR button / indicator

VCR button
HDD button
DVD button
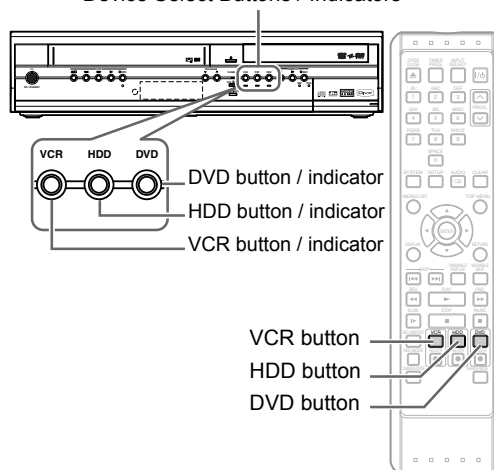
HDD mode

Press **[HDD]** on the remote control.
(Verify that the HDD indicator is lit.)

DVD mode

Press **[DVD]** on the remote control.
(Verify that the DVD indicator is lit.)

VCR mode

Press **[VCR]** on the remote control.
(Verify that the VCR indicator is lit.)

Note

- **Pressing the device select button on the front panel DOES NOT switch the device mode of the remote control. You MUST select the correct device mode on the remote control.**
- If you press **[REC / OTR ●]** of each device, recording starts in its device mode.
- When the buttons listed below are pressed, the unit switches to the HDD / DVD mode.
  - **[TIMER PROG.]**
  - **[SETUP]**
  - **[DUBBING MODE]**

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Guide to Display Information

The Display Menu gives you information on the playback status of the HDD or DVD.

Display Example:

Press **[DISPLAY]** once to show the information on the current operation mode.
Press **[DISPLAY]** one more time to see more information, and to call up the icons for the available features.

```
1 ── DVD MODE    T 8 / 8  C 1 / 4  0:00:04/ 1:30:00 ── 2
     ▶ DVD  Play           AAA                       ── 3



4 ──▶
```
Press **[DISPLAY]** once.

```
  DVD MODE    T 8 / 8  C 1 / 4  0:00:04/ 1:30:00
5     🔍 🔊 ▭ 📹 ↻ 🔍 NR
      SEARCH



      ▶
```
Press **[DISPLAY]** twice.

Each section includes the information as listed below:
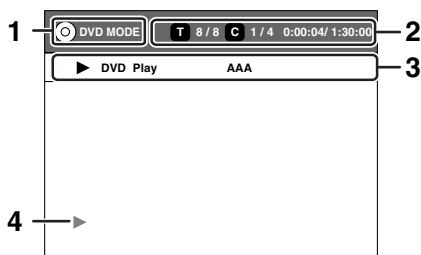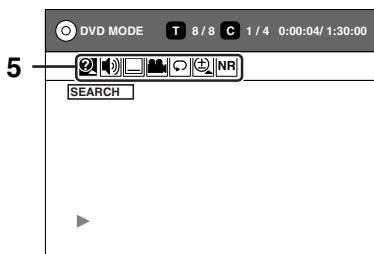
1 Device mode
2 • Current title number / total number of the titles
   • Current chapter number / total number of the chapters
   • Elapsed playback time of the current title / total time of the title
3 • Playback status
   • Name of the current title
4 Playback status icon
5 Icons for the available features:

   🔍 : SEARCH

   🔊 : AUDIO

   ▭ : SUBTITLE

   📹 : ANGLE

   ↻ : REPEAT

   🔍 : ZOOM

   NR : NOISE REDUCTION

Note

• This is an example screen only for explanation. Displayed items varies depending on the actual mode.
• The information will not appear under the following conditions;
  - When there is no title recorded in the HDD/DVD.
  - During recording (DVD only).

Guide to Setup Menu

This unit uses the following on-screen menu for most operations. It allows you to change the settings of the unit to match the environment, and to customise the settings as you prefer.
"Easy Setting Menu" and "Advanced Menu" are available.
"Easy Setting Menu" consists of those frequently needed.
You can make all required settings using "Advanced Menu."

How to use Setup Menus:

Press **[SETUP]** to display "Easy Setting Menu" or "Advanced Menu." Choose either menu using **[Cursor ▲ / ▼]**, then press **[ENTER]**.
• CD Menu is available only when a CD is loaded.

Example: Advanced Menu

```
  Advanced Menu
   ⊙ DVD Menu          DVD Recording Format
   ⊡ HDD Menu
   ⚙ Initial Setup
   ☰ Timer Program
   ⊙ CD
  Easy Setting Menu
```
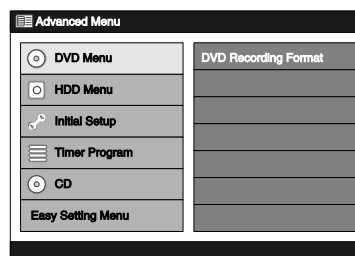
Select a menu using **[Cursor ▲ / ▼]**, then press **[ENTER]**.

```
  Advanced Menu
   ⊙ DVD Menu          Clock Setting
   ⊡ HDD Menu          Channel Setting
   ⚙ Initial Setup     Playback
   ☰ Timer Program     Record
   ⊙ CD                Display
  Easy Setting Menu    Reset to factory default
```
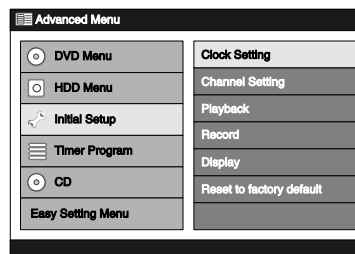
Select an item to set using **[Cursor ▲ / ▼]**, then press **[ENTER]**.
Sub menu or option window will appear.

```
  Advanced Menu
   ⊙ DVD Menu          Clock Setting
   ⊡ HDD          Clock Setting
   ⚙ Initial       Clock Setting
   ☰ Timer        Auto Clock Setting
   ⊙ CD                Reset to factory default
  Easy Setting Menu
```
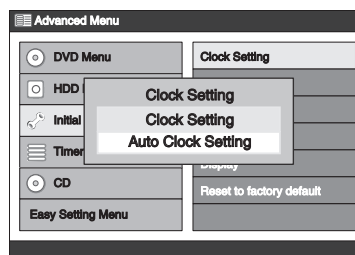
Make your desirable selection using **[Cursor ▲ / ▼ / ◀ / ▶]**, then press **[ENTER]**.

```
Available menus vary among discs.
```

Front Panel Display Guide
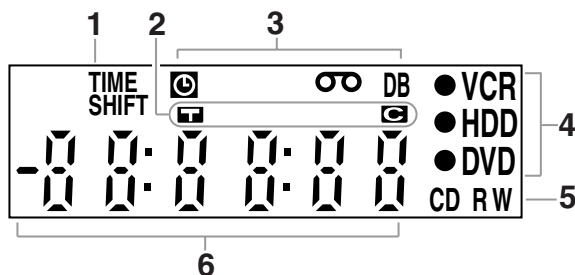
1 TIME SHIFT
Appears during the Time Shift Playback (HDD).

2 Title / Track and Chapter mark
- **T** : Appears when indicating a title / track number.
- **C** : Appears when indicating a chapter number.

3 Current status of the unit
- ⏰ : Appears when Timer Recording is in Standby, or is proceeding. Disappears when all the Timer Recordings are finished. (Does not appear while in the Satellite Link standby mode or the Satellite Link Recording is in progress.)
- ᗧᗧ : Appears when a videotape is in the unit.
- **DB** : Lights up during a dubbing process.

4 ● VCR : Lights up during VCR recording.
● HDD : Lights up during HDD recording.
● DVD : Lights up during DVD recording.

5 Disc type and current status of the unit
- **CD** : Appears when an Audio CD or a disc with MP3 / JPEG / DivX® files is on the disc tray.
- **R** : Appears when a DVD-R disc is loaded on the disc tray.
- **RW** : Appears when a DVD-RW disc is loaded on the disc tray.

6 Displays the following
- Played-back time
- Current title / chapter / track number
- Recording time
- Clock
- Channel number
- VCR tape counter
- Remaining time for a One-touch Timer Recording

Display Messages

Appears when the unit is turning on.

Appears when the disc tray is opening.

Appears when the disc tray is closing.

Appears when the unit is turning off.

Appears when a disc is loaded on the disc tray.

Connections

Connections

Connecting to a TV

Connect the unit to a TV after considering the capabilities of your existing equipment.

Before installation, unplug your TV and this unit.
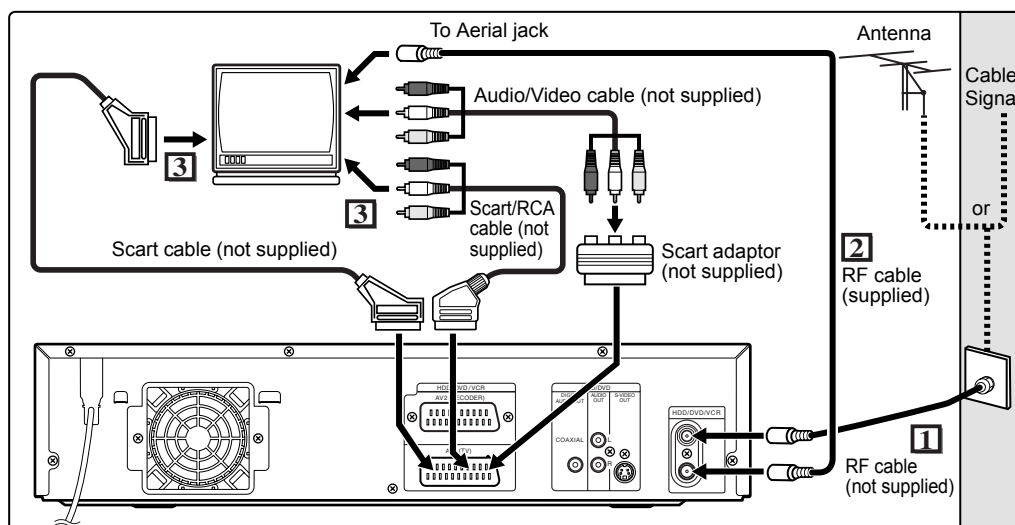
Using the Scart socket

1 Connect the antenna or cable to the **AERIAL jack of this unit.**

2 Connect the RF OUT jack of this unit **to the Aerial jack of your TV. Use the supplied RF cable.**

3 Connect AV1(TV) Scart socket of this **unit to the Scart socket of your TV. Use a commercially available Scart cable.**

Note

- If your TV does not have a Scart socket, use a commercially available Scart adaptor or Scart / RCA cable to connect. Use only AV1(TV) or AV2(DECODER) socket for the VCR output signals of this unit.
- Teletext can only be output in VCR mode through AV1(TV) out.

Using the S-VIDEO OUT jack and the AUDIO OUT jacks (only for HDD / DVD)

If your TV has an S-Video input jack, use S-Video and Audio cables to connect.

1 Follow steps 1 and 2 above.

2 Connect S-VIDEO OUT jack of this unit **to the S-Video input jack of your TV. Use a commercially available S-Video cable.**

3 Connect the AUDIO OUT jacks of this **unit to the analogue Audio input jacks of your TV. Use a commercially available Audio cable.**
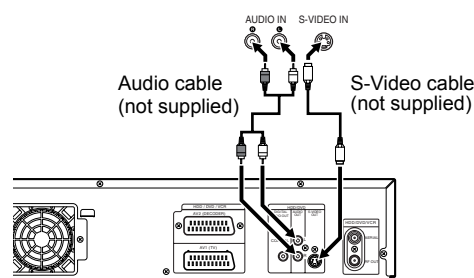
Note for a TV with no S-Video input jack or Scart socket:

- This unit has no RF modulator, so this type of TV cannot be used.

Connecting to external equipment

This unit has three input terminals, AV1(TV) or AV2(DECODER) on the rear panel and AV3 on the front panel. Be sure that all the units are off before making any connections.

Recording from a HDD / DVD player, VCR, Satellite Box or other Audio-Video equipment with a Scart output socket (AV2)

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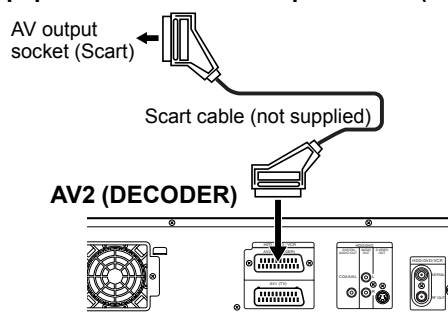
Note

• When you record a TV programme from a Satellite Box, you must connect a Scart cable to AV2(DECODER). (See page 38.)
• If the external equipment connected to the AV2(DECODER) socket supplies control voltage to this unit via Pin 8 of the Scart cable, the display functions (e.g.P01) of the remote control cannot be seen on the TV. In this case, turn off the external equipment to prevent control voltage.

Recording from a camcorder or other Audio-Video equipment with no Scart output socket (AV3)

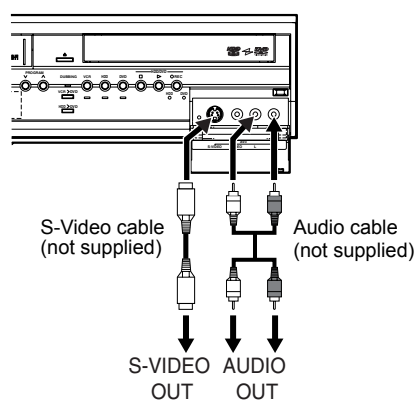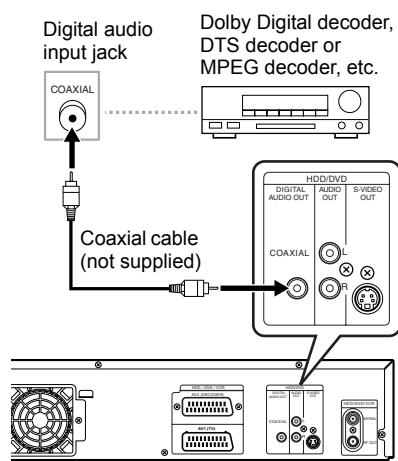If no S-Video input jack is available, connect to VIDEO input jack on the front panel using an RCA Video cable.
Set "S-Video In" when using S-VIDEO input jack. (See page 48.)

AV3 (Front)

S-Video cable (not supplied)
Audio cable (not supplied)

S-VIDEO OUT   AUDIO OUT

Digital audio for better sound quality (only for HDD / DVD)

Digital audio input jack
Dolby Digital decoder, DTS decoder or MPEG decoder, etc.

COAXIAL

Coaxial cable (not supplied)

HDD/DVD
DIGITAL AUDIO OUT   AUDIO OUT   S-VIDEO OUT
COAXIAL   L R

The connections illustrated above are optional for better sound.

1 For clear digital sound quality, use the DIGITAL AUDIO OUT (COAXIAL) jack to connect your digital audio equipment.

If the audio format of the digital output does not match the capabilities of your receiver, the receiver will produce a strong, distorted sound or no sound at all.

Connecting a Dolby Digital™ decoder, DTS decoder or MPEG decoder

• Connecting Multi-channel Dolby Digital decoder allows you to enjoy the Multi-channel Dolby Digital surround system as well as DTS decoder, Multi-channel surround system.
• After connecting to a Dolby Digital decoder, set "Dolby Digital" to "Stream" in "Audio Out". (See page 85.)
• After connecting to a DTS decoder, set "DTS" to "On" in "Audio Out". (See page 85.)
• After connecting to a MPEG decoder, set "MPEG" to "Stream" in "Audio Out". (See page 85.)

Connecting to an MD deck or DAT deck

• The audio source recorded in Dolby Digital Multi-channel surround format cannot be recorded using an MD or DAT deck as a digital sound.
• If not connected to a Dolby Digital decoder, set "Dolby Digital" to "PCM" in "Audio Out" (see page 85). Playing back a DVD using incorrect settings may generate noise distortion, and damage speakers.
• Set "Dolby Digital" and "MPEG" to "PCM" and set "DTS" to "Off" in "Audio Out" (see page 85) for connecting to an MD or DAT deck.
• You can use AUDIO OUT jacks for the connection of your audio system.

After you have completed connections

Switch the input selector on your TV to an appropriate external input channel. For details, refer to the Owner's Manual of your TV.

Note

• Connect this unit directly to the TV. If the AV cables are connected to a VCR, pictures may be distorted due to the effects of the copy protection system.
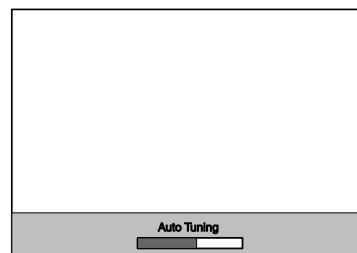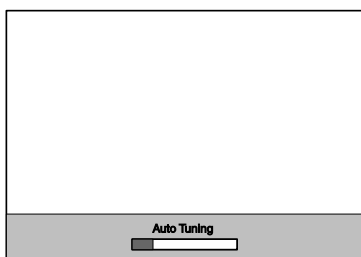
Basic Setup

For the first time use

Right after the purchase of the unit, do the Initialise Setting by doing the following procedures.
This menu may not appear if you have already turned on the unit.

1 **After making all the necessary connections, turn on the TV. Select the appropriate external input channel.** (See pages 22 to 23.)

2 **Press [I/⏻ ON / STANDBY].**
The following screen will automatically appear and the Auto Channel Tuning will start.
If you like to skip this step, press **[RETURN]**.

Auto Tuning

Channel Setting

Auto Tuning

Although your unit may automatically memorise the channels you receive when you turn it on for the first time, you can set up the channels again.

1 **Press [I/⏻ ON / STANDBY] to turn on the unit.**

2 **Turn the TV on and select the input to which the unit is connected.**

3 **In stop mode, press [SETUP].**
"Easy Setting Menu" or "Advanced Menu" will appear.

4 **Select "Initial Setup" using [Cursor ▲ / ▼], then press [ENTER].**

5 **Select "Channel Setting" using [Cursor ▲ / ▼], then press [ENTER].**

6 **Select "Auto Tuning" using [Cursor ▲ / ▼], then press [ENTER].**
The unit will start storing channels available in your area.

Auto Tuning

• Wait for several minutes to finish channel storing.

After Auto Tuning has stopped:
• Use **[PROG. ⌃ / ⌄]** or **[the Number Buttons]** to change the channel.
• When you use **[the Number Buttons]**, press **[0]** first for a single digit number.
• Use **[INPUT SELECT]** to select an external input channel ("AV1", "AV2" or "AV3") of this unit.

To cancel auto tuning:
Press **[SETUP]** or **[RETURN]** during scanning.

Note

• The selection will be affected by how you receive TV channels in your local area.
• If the auto tuning is cancelled during scanning, some channels not yet tuned may not be received.
• You cannot change the channel when either HDD, DVD or VCR is in any recording mode (normal recording, One-touch Timer Recording or Timer Recording).
• Sorting of TV channels from P01 to P06 will be performed automatically as follows.
P01: BBC1   P02: BBC2   P03: ITV
P04: CH4   P05: CH5   P06: SKY NEWS
* If you are using a satellite receiver, turn it on and select SKY NEWS before commencing tuning.

Manual Tuning

Tune each channel manually.

1 **In stop mode, press [SETUP].**
"Easy Setting Menu" or "Advanced Menu" will appear.

2 **Select "Initial Setup" using [Cursor ▲ / ▼], then press [ENTER].**

3 **Select "Channel Setting" using [Cursor ▲ / ▼], then press [ENTER].**

4 **Select "Manual Tuning" using [Cursor ▲ / ▼], then press [ENTER].**

Manual Tuning	
Position	P12
Channel	123
Decoder	On
Skip	Off
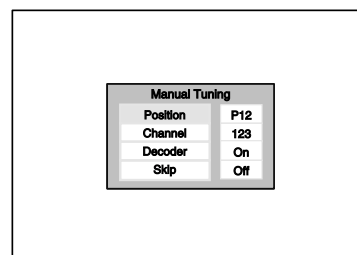
5 Select "Position" using [Cursor ▲ / ▼], then press [Cursor ▶].

6 Select the position number you want using [the Number buttons] or [Cursor ▲ / ▼], then press [Cursor ◀].
You can select position numbers 01 to 99.

7 Select "Channel" using [Cursor ▲ / ▼], then press [Cursor ▶].

8 Press [Cursor ▲ / ▼] to start scanning.
- The tuner will begin to search up or down automatically. When a channel is found, the unit will stop searching and the picture will appear on the TV screen.
- You can select a desired channel number using **[the Number buttons]**. Refer to the following Channel Plan table and press the three digits to select the channel number.
(To select channel 4, press **[0]** first and then press **[0]** and **[4]**. Or press **[4]** and then "– – 4" appears and wait for 2 seconds.)
- If this is the channel you want, press **[Cursor ◀]**.

Channel Plan	
CH Indication	TV Channel
01 – 10	IRA-IRJ, GAP
21 – 69	E21 – E69
74 – 78	X, Y, Z, Z+1, Z+2
80 – 99, 100	S1 – S20, GAP
121 – 141	S21 – S41

This unit can receive the Hyper and Oscar frequency bands.
- If "Skip" is set to "On," select "Skip" using **[Cursor ▲ / ▼]**, then press **[Cursor ▶]**. Select "Off" using **[Cursor ▲ / ▼]**, then press **[Cursor ◀]**.
- If you want to decode scrambled signals, select "Decoder" using **[Cursor ▲ / ▼]**, then press **[Cursor ▶]**. Select "On" using **[Cursor ▲ / ▼]**, then press **[Cursor ◀]**.
- To store another channel, repeat steps 5 to 8.

9 After completion, press [SETUP] to exit.

To select a channel

Notes on using [the Number buttons]:
- Enter channel numbers as a two-digit number for the quickest result. For example, to select channel 6, press **[0]** and **[6]**. If you only press **[6]**, channel 6 will be selected after 2 seconds. You can only select channels 1 to 99.

About an external input:
- You can select the external input mode "AV1," "AV2" or "AV3" using **[INPUT SELECT]**.
- You cannot change the channel when either HDD, DVD or VCR is in any recording mode (normal recording, One-touch Timer Recording or Timer Recording).

To skip a preset channel

You can set the unit to skip channels you can no longer receive or seldom watch when you access channels using **[PROG. ∧ / ∨]**.

1 Follow steps 1 to 4 in "Manual tuning". (See page 24.)

2 Select "Position" using [Cursor ▲ / ▼], then press [Cursor ▶].

3 Select the position number you want to skip using [the Number buttons] or [Cursor ▲ / ▼], then press [Cursor ◀].

4 Select "Skip" using [Cursor ▲ / ▼], then press [Cursor ▶].

5 Select "On" using [Cursor ▲ / ▼], then press [Cursor ◀].
- To skip another channel, repeat steps 2 to 5.

6 Press [SETUP] to exit.

Move

You can replace two channels.

1 Press [SETUP].
"Easy Setting Menu" or "Advanced Menu" will appear.

2 Select "Initial Setup" using [Cursor ▲ / ▼], then press [ENTER].

3 Select "Channel Setting" using [Cursor ▲ / ▼], then press [ENTER].
Channel Setting Menu will appear.

4 Select "Move" using [Cursor ▲ / ▼], then press [ENTER].
Option window will appear.

5 Select the position number of which you want to change the channel using [Cursor ▲ / ▼], then press [ENTER].
You cannot select a position number where "– – –" appears next to the number, because "Skip" is set to "On" for that position number.

6 Move the channel to another position number using [Cursor ▲ / ▼], then press [ENTER].
- To move another channel, repeat steps 5 to 6.
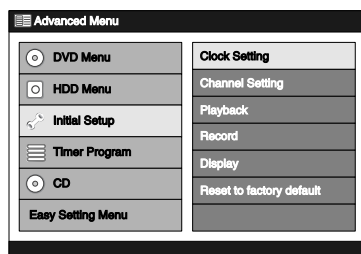
7 Press [SETUP] to exit.

Setting the clock

Auto Clock Setting

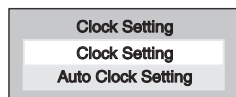**1** **Press [SETUP].**

"Easy Setting Menu" or "Advanced Menu" will appear.

Advanced Menu	
DVD Menu	DVD Disc Format
HDD Menu	DVD Recording Format
Initial Setup	Finalise
Timer Program	Disc Protect
	Delete Playlist
Easy Setting Menu	

2 **Select "Initial Setup" using [Cursor ▲ / ▼], then press [ENTER].**

Advanced Menu	
DVD Menu	Clock Setting
HDD Menu	Channel Setting
Initial Setup	Playback
Timer Program	Record
CD	Display
	Reset to factory default
Easy Setting Menu	
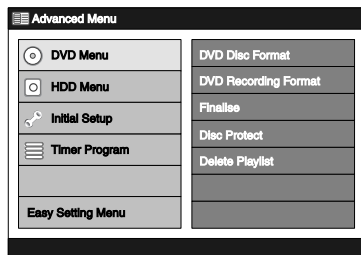
3 **Select "Clock Setting" using [Cursor ▲ / ▼], then press [ENTER].**

Clock Setting Menu will appear.

Clock Setting
Clock Setting
Auto Clock Setting

4 **Select "Auto Clock Setting" using [Cursor ▲ / ▼], then press [ENTER].**

Option window will appear.

Auto Clock Setting
On
Off
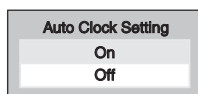
5 **Select "On" using [Cursor ▲ / ▼], then press [ENTER].**

6 **Press [SETUP] to exit.**

7 **Press [⏻ ON / STANDBY] to turn the unit to standby mode.**

The Auto Clock function is activated.
This unit will search for the time only when the unit is in standby mode. Leave the unit for several minutes to give it time to set the clock.

Note

• If you want to cancel "Auto Clock Setting", select "Off" using **[Cursor ▲ / ▼]** at step 5, and then press **[ENTER]**.
• The default setting of "Auto Clock Setting" is "On".
• The clock may set itself automatically after you connect the antenna cable to the unit and plug in the mains cable. In this case, the current time will appear on the front panel display.
• To set the clock automatically, the channel assigned to "P04" must receive the PDC signal and the Decoder must be Off.
• The clock cannot be set automatically if you are not receiving a channel in your area that carries a time signal. In this case, set the clock manually.
• Once the auto clock setting is performed, the unit will correct the current time by receiving PDC broadcasts whenever the unit is in standby mode.
• The unit will correct the current time automatically at 8:00, if the unit is in standby mode.
• From 23:00 to 1:00, the Auto Clock function will not operate even if the unit is in standby mode.

Manual Clock Setting

1 **Follow the steps 1 to 3 in "Auto Clock Setting" on the left.**

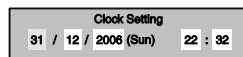**2** **Select "Clock Setting" using [Cursor ▲ / ▼], then press [ENTER].**

Clock Setting Window will appear.

Clock Setting
31 / 12 / 2006 (Sun) 22 : 32

3 **Move to the item you want to set using [Cursor ◄ / ►], and change the setting to suit your preference using [Cursor ▲ / ▼].**

4 **When all the information is entered, press [ENTER].**

Your setting is activated.
Although seconds are not displayed, they will be counted from zero.

5 **Press [SETUP] to exit.**

Note

• Your clock setting will be lost if either there is a power failure or this unit has been unplugged for more than 30 seconds.

Introduction
Connections
Basic Setup
Recording
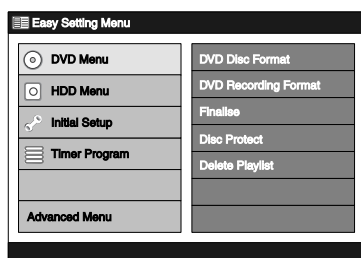Playback
Editing
Function Setup
VCR Functions
Others

Selecting the TV aspect ratio

You can select the TV aspect ratio to match the formats of what you are playing back on the unit and your TV screen (4:3 standard or 16:9 widescreen TV).

1 Press [SETUP].

"Easy Setting Menu" or "Advanced Menu" will appear.
If "Advanced Menu" is displayed, proceed to step 3.

2 Select "Advanced Menu" using [Cursor ▲ / ▼], then press [ENTER].

3 Select "Initial Setup" using [Cursor ▲ / ▼], then press [ENTER].
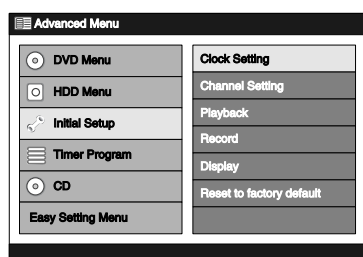
4 Select "Playback" using [Cursor ▲ / ▼], then press [ENTER].

Playback Menu will appear.
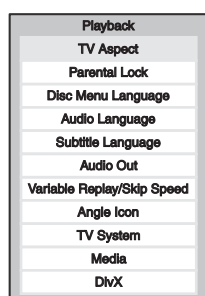
5 Select "TV Aspect" using [Cursor ▲ / ▼], then press [ENTER].

Option window will appear.
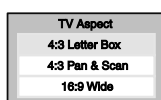
6 Select a desired option using [Cursor ▲ / ▼], then press [ENTER].

Your setting is activated.
• The default setting is "4:3 Letter Box".

7 Press [SETUP] to exit.

Note

• If you have a standard TV:
Select "4:3 Letter Box" for full-length picture with black bars on the top and bottom of the screen.
Select "4:3 Pan & Scan" for a full-height picture with both sides trimmed.
• If you have a widescreen TV:
Select "16:9 Wide".

Recording

Information on supported media

Media types

⭐⭐⭐: Most suitable.　　⭐⭐: Can be used.　　⭐: Some functions are limited.　　—: Cannot be used.

You want to	HDD	DVD-RW VR	DVD-RW Video	DVD-R	VCR
Record TV programmes	⭐⭐⭐	⭐⭐⭐	⭐⭐⭐	⭐⭐⭐	⭐⭐⭐
Reuse by deleting unwanted contents	⭐⭐⭐	⭐⭐⭐	⭐⭐	—	⭐⭐
Edit recorded contents	⭐⭐⭐	⭐⭐⭐	⭐	⭐	—
Edit / Record from connected equipment	⭐⭐⭐	⭐⭐⭐	⭐⭐⭐	⭐⭐⭐	⭐*2
Copy discs for distribution	—	⭐⭐*1	⭐⭐⭐	⭐⭐⭐	—
Play on other HDD / DVD / VCR equipment	—	⭐⭐*1	⭐⭐⭐	⭐⭐⭐	⭐⭐⭐

*1 VR mode DVD-RW can only be played on DVD equipment that is VR compatible.
*2 Programmes can be recorded from other equipment, but they cannot be edited.

Features	HDD	DVD-RW VR	DVD-RW Video	DVD-R	VCR
Recording					
Rewritable	Yes	Yes	Yes	No	Yes
Can create chapters at fixed intervals (auto.)	Yes	Yes	Yes	Yes	No
Can create chapters wherever you like (manual)	Yes	Yes	No	No	No
Can record 16:9 size pictures	Yes	Yes	Yes	Yes	No
Can record copy-once programmes	Yes	Yes*1	No	No	Yes
Editing					
Can perform basic edit functions	Yes	Yes	Yes	Yes	No
Can perform advanced edit functions (Playlist edit)	Yes	Yes	No	No	No

*1 CPRM compatible disc only.

Note

• For details of the above functions and implied restrictions, see the explanations inside this Owner's Manual.

Information:
This unit can record on DVD-RW discs and DVD-R discs.
DVD-R discs allow you to record programmes only once, and the recorded contents cannot be erased.
DVD-RW discs allow you to record programmes repeatedly, and the recorded contents can be erased.
There are 2 recording format: VR mode and Video mode.
VR and Video modes are available for DVD-RW discs while as only Video mode is available for DVD-R discs.

Video mode is the same recording format as used on the pre-recorded DVD-Videos you purchase in local shops. You can play back the discs recorded in this format on most of the DVD players. You will need to finalise such discs (see page 49) before playing them back on other DVD players. Unless finalised, you can record additional materials or edit discs recorded in Video mode with this unit.
VR (Video Recording) mode is a basic recording format for DVD-RW discs.

You can record and edit material repeatedly. It is impossible to record additional materials on a disc formatted in VR mode and already recorded in another video system other than PAL, such as NTSC.

Logo	Attributes
DVD R W / DVD R 4.7	8 cm / 12 cm, single-sided, single layer disc Max. recording time (SEP mode, approx.): 600 minutes (4.7 GB) (for 12 cm) 180 minutes (1.4 GB) (for 8 cm)

If you want to record repeatedly on the same disc, or if you want to edit the disc after recording, use a rewritable DVD-RW type disc.
If you want to save recordings without any alteration, use a non-rewritable DVD-R type disc.

Recordable discs

- Discs that can be used with this recorder:
  DVD-R: 2x, 4x, 8x or 16x
  DVD-RW: 2x or 4x
- Discs that have been tested and are proven to be compatible with this recorder:
  Maxell DVD-R, TDK DVD-RW 2x,
  Verbatim DVD-R 8x, JVC DVD-RW 4x

Disc type	Disc format	Functions
DVD R W	Video mode *Video* **DVD-RW**	Playing back, Limited recording, Limited editing
	VR mode **VR** **DVD-RW**	Playing back, Recording, Original / Playlist editing
DVD R 4.7	Video mode **DVD-R**	Playing back, Limited recording, Limited editing

DVD players bearing the **RW COMPATIBLE** logo are capable of playing back DVD-RW discs recorded in VR mode.

Rec Mode

You can select a Rec Mode among 6 options. And the recording time and the picture / audio quality of recorded material depends on the Rec Mode you select.

Disc size	Rec Mode	Recording time	Video / Sound Quality	
8 cm Disc	XP	18 min	★★★★★★	(good)
	SP	36 min	★★★★★	
	LP	72 min	★★★★	
	EP	108 min	★★★	
	SLP	144 min	★★	
	SEP	180 min	★	(poor)
12 cm Disc	XP	60 min	★★★★★★	(good)
	SP	120 min	★★★★★	
	LP	240 min	★★★★	
	EP	360 min	★★★	
	SLP	480 min	★★	
	SEP	600 min	★	(poor)
HDD (Internal)	XP	34 hrs	★★★★★★	(good)
	SP	68 hrs	★★★★★	
	LP	136 hrs	★★★★	
	EP	204 hrs	★★★	
	SLP	272 hrs	★★	
	SEP	340 hrs	★	(poor)

To select the Rec Mode you prefer, press **[REC MODE]**. The information of the selected media (internal HDD or DVD) will be displayed.

HDD	P07
XP 17:32	

Indicates the remaining time of the disc when recorded with the selected Rec Mode.

Press **[REC MODE]** repeatedly to change the Rec Mode. The speed will be changed each time you press it with the following order:

$$XP \rightarrow SP \rightarrow LP$$
$$SEP \leftarrow SLP \leftarrow EP$$
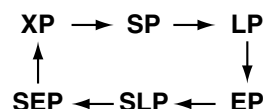
The information will disappear in a few seconds, or press **[DISPLAY]** to exit.

* The recording time is an estimate and actual recording time may differ.
* Audio and video quality of the content being recorded may degrade if the recording time becomes longer.
* Each time you press **[REC MODE]**, remaining recording time is displayed.

Note

- This recorder cannot record on CD-RW or CD-R discs.
- DVD-RW / R discs and CD-RW / R discs recorded on a personal computer or a DVD or CD recorder may not be played back if the disc is damaged or dirty or if there is condensation on the player's lens.
- If you record on a disc using a personal computer, there are cases in which it may not be played back because of the settings of the application software used to create the disc, even if it is recorded in a compatible format. (Check with the software publisher for more detailed information.)
- Discs recorded in Video mode on this unit cannot record additionally using other DVD recorders.
- Since the recording is made by the variable bit rate (VBR) method, the actual remaining time for recording may be a little bit shorter than the remaining time displayed on the OSD, depending on the picture you are recording.
- Playlist will be created automatically when recording to VR mode DVD-RW disc and HDD.
- DVD-RW once formatted with other DVD recorders cannot be recorded on this unit and vice versa.

Restrictions on recording

You cannot record copy-protected video using this unit. Copy-protected video includes DVD-Videos and some satellite broadcasts.
If copy-protected material is detected, recording will pause or stop automatically and an error message appears on the screen.
You can only record "Copy-once only" video using a DVD-RW disc in VR mode with Content Protection for Recordable Media (CPRM).
When recording a TV broadcast or an external input, you can display copy control information on the screen.

CPRM is a scrambling copy protection system for the protection of "copy-once" broadcast programmes. This unit is CPRM compatible, which means that you can record copy-once broadcast programmes, but you cannot make a copy of those recordings. CPRM recordings can only be played back on DVD players that are specifically compatible with CPRM.

Maximum recordable numbers of title / chapters:

HDD:	300 titles per each Playlist and Original List
	999 chapters per title
VR mode DVD:	99 titles per each Playlist and Original List
	999 chapters per each Playlist and Original List
Video mode DVD:	99 titles per disc
	99 chapters per title

Information on copy control

Some satellite broadcasts include copy-protected information. If you wish to record them, refer to the following.

Disc type / format		Copy-free	Copy-once	Copy-prohibited
HDD		☆	☆	—
DVD-RW VR	ver. 1.1 / ver. 1.2	☆	—	—
	ver. 1.1 / ver. 1.2 CPRM compatible	☆	☆	—
DVD-RW Video	ver. 1.1 / ver. 1.2	☆	—	—
	ver. 1.1 / ver. 1.2 CPRM compatible	☆	—	—
DVD-R	ver. 2.0	☆	—	—
VCR		☆	☆	☆

☆ : Recordable
— : Not recordable

Making discs playable in other DVD players (Finalise)

After recording, you must finalise the disc to play it back on other players. (See page 49.)
You cannot finalise discs in other DVD recorders.

• For Video mode discs, the finalisation is required.
• For VR mode discs, the finalisation is recommended.
• For the information on videotapes, refer to "VCR Functions" on pages 89 to 91.

About HDD

HDD is a special component which has high recording density and is suited for long-time recording or high-speed cueing but by contrast, has many factors which can cause breakage. Use HDD on the premise that you should dub the recorded programmes to a DVD disc or a videotape to protect your precious videos.

HDD is a temporary storage location:
HDD is not a permanent storage location of the recorded contents. Be sure to use it as a temporary storage location until you watch the programmes once, edit them, or dub them to a DVD disc or a videotape.

Be sure to dub (back up) data promptly if you find abnormalities in HDD:
If there is mechanical trouble with the HDD, grinding or other sounds may be heard or blocky noise may appear on the image. If you continue to use as it is, deterioration may continue and eventually the HDD may not be used at all. If you notice these symptoms of a failing HDD, promptly dub the data to a DVD disc or a videotape.
When an HDD fails, recovery of recorded content (data) may be impossible.

About the remaining capacity of HDD recording time:
In recording to HDD, the Remaining Capacity Display may differ from the actual recordable time as this unit adopts Variable Bit Rate encoding, which varies the recording (storage) amount of data in conformity with the information amount of video. Before recording to the HDD, ensure there is sufficient space on the HDD by deleting unnecessary titles in advance. (Remaining capacity will not increase if you only delete Playlists.)

Introduction

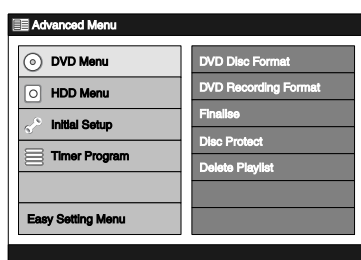Connections

Basic Setup

Recording

Playback

Editing

Function Setup

VCR Functions

Others

Formatting a disc

Selecting the recording format type

DVD-RW VR **DVD-RW Video**

The recording format type you set here will be memorized and applied to the disc whenever you format DVD-RW discs.

1 Press [SETUP].

"Easy Setting Menu" or "Advanced Menu" will appear.

2 Select "DVD Menu" using [Cursor ▲ / ▼], then press [ENTER].

3 Select "DVD Recording Format" using [Cursor ▲ / ▼], then press [ENTER].

Option window will appear.

4 Select "VR" or "Video" using [Cursor ▲ / ▼], then press [ENTER].

Your setting is activated.
• The default setting is "VR".

5 Press [SETUP] to exit.

Auto Format:
Whenever you load a brand new DVD-RW disc, the unit will automatically format the disc in the recording format type you set in this section.
The following message will appear if a Timer Recording is programmed to start in 15 minutes:
"In the middle of programming timer. Format disc?"
If you select "Yes", the formatting process will continue. If you select "No", or do not reply within 1 minute, the formatting will not be performed.
Auto Format will not be performed under the conditions listed below;
- During HDD Playback or recording.

Note

• The Recording Format Setting is effective only for DVD-RW discs. You cannot change the recording format for a DVD-R disc. DVD-R discs will always be in Video mode.
• You cannot mix two formats on one DVD-RW disc. When you load a disc once recorded before, the recording format cannot be changed even if you change it in the Setup Menu.

Formatting a pre-recorded disc (Disc Format)

DVD-RW VR **DVD-RW Video**

If you format a pre-recorded disc, all the data contained in it will be erased and the disc will return to the blank media status. This feature is only available for the DVD-RW disc.

1 Press [SETUP].

"Easy Setting Menu" or "Advanced Menu" will appear.
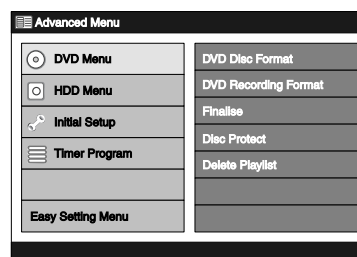
2 Select "DVD Menu" using [Cursor ▲ / ▼], then press [ENTER].

3 Select "DVD Disc Format" using [Cursor ▲ / ▼], then press [ENTER].
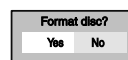
Confirmation window will appear.

4 Select "Yes" using [Cursor ◄ / ►], then press [ENTER].

Final confirmation window will appear.
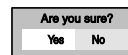
5 Select "Yes" using [Cursor ◄ / ►], then press [ENTER].

Formatting will start.
The progress bar extends depending on the progress status of formatting.
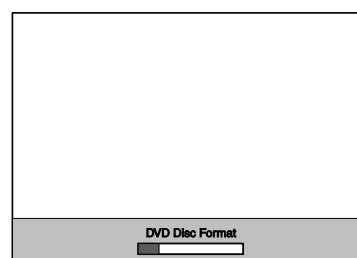
6 **Formatting is complete when the progress bar reaches to the right end.**
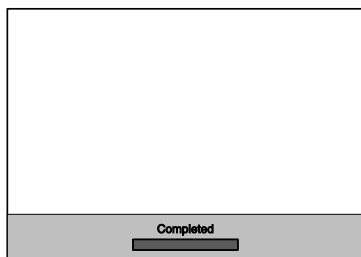
Completed

• The screen returns to normal after formatting is completed.
• This operation may take awhile to be completed.

Note

• When you reformat the disc, all contents of the disc will be erased.
• A disc once formatted with this unit cannot be used on other DVD recorders unless finalised.

Monitoring the recording quality

HDD   DVD-RW VR   DVD-RW Video   DVD-R

Before recording on a DVD, you can confirm the quality of the picture and sound with the recording speed you selected.

If you are recording to the HDD, press [HDD] first. If you are recording to a disc, press [DVD] first.

1 **In stop mode, press [REC MONITOR].**

The TV will display the programme and output the sound you are about to record in the quality of the picture and sound (determined by the recording speed) you selected.
• If you want to change the Rec Mode (to improve the recording quality), press **[REC MODE]** repeatedly.
The Rec Mode is changed each time you press the button.

XP → SP → LP

SEP ← SLP ← EP
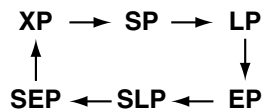
• You cannot change the Rec Mode during recording.

2 **Press [REC MONITOR] again to exit.**

Creating chapter marks automatically

HDD   DVD-RW VR   DVD-RW Video   DVD-R

You can sort out the recording by inserting chapter marks every set time interval.

1 **Press [SETUP].**

"Easy Setting Menu" or "Advanced Menu" will appear. If "Advanced Menu" is displayed, proceed to step 3.

Easy Setting Menu

DVD Menu
HDD Menu
Initial Setup
Timer Program
Advanced Menu

DVD Disc Format
DVD Recording Format
Finalise
Disc Protect
Delete Playlist

2 **Select "Advanced Menu" using [Cursor ▲ / ▼], then press [ENTER].**

3 **Select "Initial Setup" using [Cursor ▲ / ▼], then press [ENTER].**

Advanced Menu

DVD Menu
HDD Menu
Initial Setup
Timer Program
CD
Easy Setting Menu

Clock Setting
Channel Setting
Playback
Record
Display
Reset to factory default
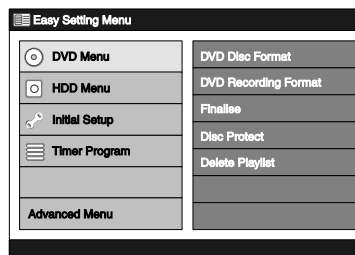
4 **Select "Record" using [Cursor ▲ / ▼], then press [ENTER].**

Record Menu will appear.

Record
Auto Finalise
Auto Chapter
Bilingual Recording Audio
External Input Audio

5 **Select "Auto Chapter" using [Cursor ▲ / ▼], then press [ENTER].**

Option window will appear.

Auto Chapter
Off
5 minutes
10 minutes
15 minutes
30 minutes
60 minutes

6 **Select the desired time option using [Cursor ▲ / ▼], then press [ENTER].**

Your setting is activated.
• The default setting is "15 minutes".

7 **Press [SETUP] to exit.**

Note

- The actual setting time for chapter marks may differ from the time you selected in Video mode.
- Depending the recording time, a chapter with no image may be created at the end.
- Chapter marks will automatically be inserted at the set interval with "Auto Chapter". (Chapter marks will not be inserted while recording is paused.) For chapter marks insertion at other points, refer to "Chapter Marker" on pages 78 to 79.
- With Video mode DVDs discs, you cannot add / delete chapter marks.

Selecting the sound mode

This unit can receive bilingual broadcasts.

You can switch between modes by pressing **[AUDIO ◁))]** on the remote control. Each mode is indicated on the TV screen as follows.
- During reception of bilingual broadcasts

Mode	Audio output	Display on the TV screen
Main	Main audio from both speakers	Main
Sub	Sub audio from both speakers	Sub
Main / Sub	• Main audio from the left speaker • Sub audio from the right speaker	Main / Sub

Setting External Input Audio

HDD   DVD-RW VR   DVD-RW Video   DVD-R

When the external input audio is a bilingual broadcast, or when copying a video tape to a DVD disc, you can choose "Stereo" or "Bilingual" to record on a DVD.
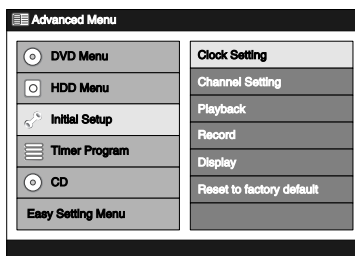
1 **In stop mode, press [SETUP].**

"Easy Setting Menu" or "Advanced Menu" will appear. If "Advanced Menu" is displayed, proceed to step 3.

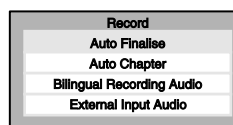**2** **Select "Advanced Menu" using [Cursor ▲ / ▼], then press [ENTER].**

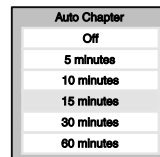**3** **Select "Initial Setup" using [Cursor ▲ / ▼], then press [ENTER].**

4 **Select "Record" using [Cursor ▲ / ▼], then press [ENTER].**

5 **Select "External Input Audio" using [Cursor ▲ / ▼], then press [ENTER].**

6 **Select "Stereo" or "Bilingual" using [Cursor ◄ / ►], then press [ENTER].**

```
External Input Audio
  Stereo      Bilingual
```

7 **Press [SETUP] to exit.**

Hint

- If you select "Stereo":
  The audio will be recorded as "stereo audio".
- If you select "Bilingual":
  The audio will be recorded as "bilingual audio" (see "Setting Bilingual Recording Audio" on page 34 for more detail).

Setting Bilingual Recording Audio

Video
DVD-RW DVD-R

You can select either "Main" or "Sub" audio to record a bilingual broadcast in Video mode.

1 In stop mode, press [SETUP].

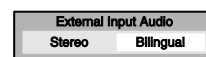"Easy Setting Menu" or "Advanced Menu" will appear. If "Advanced Menu" is displayed, proceed to step 3.

2 Select "Advanced Menu" using [Cursor ▲ / ▼], then press [ENTER].

3 Select "Initial Setup" using [Cursor ▲ / ▼], then press [ENTER].

4 Select "Record" using [Cursor ▲ / ▼], then press [ENTER].

5 Select "Bilingual Recording Audio" using [Cursor ▲ / ▼], then press [ENTER].

6 Select "Main" or "Sub" using [Cursor ◄ / ►], then press [ENTER].

Bilingual Recording Audio	
Main	Sub
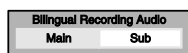
7 Press [SETUP] to exit.

Note

• If you are recording onto a VR mode disc, both "Main" and "Sub" will be recorded regardless of your setting here. And when you play back, you can choose either audio format or a combination of both as your playback audio.

Basic Recording

HDD VR
DVD-RW Video
DVD-RW DVD-R

Follow the steps below to record a TV programme.

• Use only the HDD or CPRM-compatible VR mode DVD-RW discs for recording copy-once programmes. (See page 30.)

If you are recording to the HDD, press [HDD] first. If you are recording to a disc, press [DVD] first. Insert a recordable disc if you are recording to a DVD.

1 Turn on the TV. Select the appropriate external input channel.

(See pages 22 to 23.)

2 Select a Rec Mode using [REC MODE]. (See page 29.)

3 Select the desired channel to record using [PROG. ∧ / ∨] or [the Number buttons].

4 Press [REC / OTR ●] (HDD / DVD) to start recording.

The information will be displayed for 5 seconds.

To pause the recording, press **[PAUSE II]**.
Press **[REC / OTR ●]** (HDD / DVD) or **[PAUSE II]** to resume the recording.

5 Press [STOP ■] to stop the recording.

Note

• Recording starts immediately after you press **[REC / OTR ●]** (DVD) and continues until the disc is full or you stop recording.
• When the Clock Setting has not been made, the space for a date and time of title names in the Original List or Playlist will be blank.
• Up to 300 titles can be recorded on the HDD.
• Up to 99 titles can be recorded on the DVD-RW / R discs.
• You cannot change the recording mode during HDD/ DVD recording.
• If you want to monitor the programme that you are recording, make sure the device such as a Satellite Box is turned off when it is connected to AV2.
• NTSC recording is prohibited in this unit.

One-touch Timer Recording (OTR)

HDD | VR DVD-RW | Video DVD-RW | DVD-R

This is a simple way to set the recording time in blocks of 30 minutes.

If you are recording to the HDD, press [HDD] first. If you are recording to a disc, press [DVD] first.

Preparing for OTR:
- Check that the recording media has enough recordable space for the time you set.
- If you are recording to a DVD, insert a recordable disc.
- Use only the HDD or CPRM-compatible VR mode DVD-RW discs for recording copy-once programmes. (See page 30.)

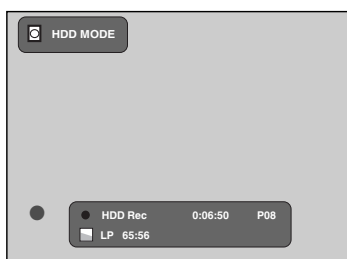## 1 Turn on the TV. Select the appropriate external input channel.

(See pages 22 to 23.)

2 Select a Rec Mode using [REC MODE].

Refer to "Rec Mode" on page 29.
- You can check the current Rec Mode by pressing **[REC MONITOR]**.

3 Select a desired channel to record using [PROG. ∧ / ∨] or [the Number Buttons].

4 Press [REC / OTR ●] (HDD / DVD).

Recording will start.

```
HDD MODE




●   HDD Rec        0:06:50    P08
    LP  65:56
```

5 Press [REC / OTR ●] (HDD / DVD) repeatedly to change the recording time.

```
HDD MODE




●   HDD Rec        0:06:50    P08
    LP  65:56              OTR (0:30)
```

```
            0:30
(Normal Recording)  1:00

    8:00        7:30
```
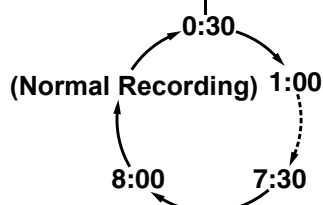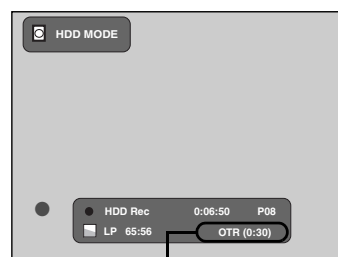
The recording time will be extended by 30 minutes every time you press **[REC / OTR ●]** (HDD / DVD).
- The maximum recording time is 8 hours.
- With HDD / DVD OTR, the recording time that exceeds the remaining time of the recording media will not be displayed.
- To change the recording time during the One-touch Timer Recording, press **[REC / OTR ●]** (HDD / DVD) repeatedly.

6 When OTR ends, the unit will turn off automatically except under conditions listed below.

- If a Timer Recording is programmed to start in 5 minutes.
- During playback of HDD / DVD / VCR.
- During recording of HDD / DVD / VCR.
- While displaying menus or information on the screen.
- To cancel the OTR in progress, press **[STOP ■]**.

Note
- The remaining recording time will be displayed on the Front Panel Display during a One-touch Timer Recording. Press **[DISPLAY]** to see it on the TV screen.
- You cannot pause a One-touch Timer Recording.
- The unit will turn off automatically under the following conditions.
  - When a power failure occurs.
- If you want to monitor the programme that you are recording, make sure the device such as a Satellite Box is turned off when it is connected to AV2.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

VCR Functions

Others

Timer Recording

HDD | DVD-RW VR | DVD-RW Video | DVD-R

You can programme the unit to record up to 32 programmes within a month in advance. Daily or weekly recordings are available.

Preparing for Timer Recording:

- Be sure to set the clock before programming a Timer Recording. Refer to "Setting the clock" on page 26.
- Check that the recording media (internal HDD or DVD) has enough recordable space for the time you set.
- Insert a recordable disc if you are recording to a DVD.
- Use only the HDD or CPRM-compatible VR mode DVD-RW discs for recording copy-once programmes. (See page 30.)

1 Press [TIMER PROG.].

Timer Programming List will appear.

TIMER PROGRAMMING					1 / 1	
Wed 20 / 12 23:30				HDD	SP	1:00
Date	Start	End	CH	HDD/DVD	Mode	PDC
Sun 31/12	19:00	20:00	P12	HDD	SP	Off
			New Program			

- You can access this screen from the Setup Menu also.

2 Select a line indicated "New Program" using [Cursor ▲ / ▼], then press [ENTER].

Timer Programming Window will appear.

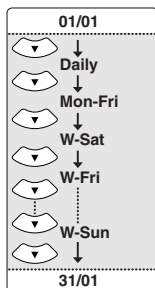| Date	Start	End	CH	HDD/DVD	Mode	PDC
Sun 31/12	19:00	20:00	P12	HDD	SP	Off
				HDD	SP	0:39

4 · **5** · **6** · **8**
1 · **2** · **3** · **7**

1 Recording Date:

When pressing **[Cursor ▼]** at the current date, the setting will change as follows.

e.g., 1st January

```
01/01
  ↓
Daily
  ↓
Mon-Fri
  ↓
W-Sat
  ↓
W-Fri
  ↓
W-Sun
  ↓
31/01
```

2 Start Time:

3 End Time:

4 Recording Channel:

To record from an external input, select "AV1", "AV2" or "AV3". (Using camcorder or other source.)

5 Recording Media (HDD or DVD):

To record onto the HDD, select "HDD". To record onto a disc, select "DVD". VCR is not compatible with Timer Recording.

6 Rec Mode:

Refer to "Rec Mode" on page 29.

7 Available recording time left on the HDD / DVD under the programmed Rec Mode.

- If there are more than one programme, the recording time of the programmes other than the one being edited currently will not be counted in the calculation of the total remaining time on the HDD disc.

8 PDC system:

Refer to "PDC (Programme Delivery Control)" on page 37.

- PDC system is only available for HDD.

3 Select an item to set using [Cursor ◄ / ►], and set the contents to suit your preference using [Cursor ▲ / ▼].

- Pressing **[RETURN]** will reset all the information entered.

4 Press [ENTER] when all the information is entered.

The 🕐 icon will appear on the Front Panel Display indicating one or more Timer Recordings are in standby.

- To set another programme, repeat steps 2 to 4.
- When programmes are overlapped, a warning message "Timer program overlap." will appear. For details on overlapped Timer Programmings, refer to "Hints for Timer Recording" on page 38.

5 Press [TIMER PROG.] to exit.

- If you press **[I/⏻ ON / STANDBY]** to turn the unit to standby mode, it will turn on before 3 minutes from the programmed recording time, and start recording at the programmed recording time. When the recording is completed, you will be asked whether to turn off the unit. The unit will be turned off automatically if you select "Yes" or if you do not make any selection within 1 minute.
- To stop recording in progress, press and hold **[STOP ■]** for 2 seconds, or press **[STOP ■]** on the front panel.

Relay Recording:

If the disc runs out of the space during Timer Recording to a DVD, or if there is no recordable disc in the unit, it automatically detects it and change the recording media to the HDD. This feature is available only for Timer Recording but not for OTR.

Note

- If you have not set the clock, the clock setting window will appear instead of Timer Programming List at step 1. Continue from step 3 in "Setting the clock" on page 26 before programming the timer.
- If a basic recording or One-touch Timer Recording is in progress on the VCR and the Timer Recording set for HDD or DVD is about to begin, the unit will automatically switch to the programmed channel within 15 seconds before the programmed time, and the recording in progress on the VCR will be cancelled UNLESS their recording channel is the same. If their recording channel is the same, the Timer Recording for HDD or DVD will start without cancelling the recording currently in progress on the VCR. In this case, the recording of the same channel will be made on both VCR and the HDD or DVD.

• If the starting time and the end time are the same, it will be recognised as 24 hours recording.
• If the starting time you entered is already in the past, the recording will start as soon as you activate the Timer Recording by pressing **[ENTER]** at step 4.

Editing the Timer Programming information

1 Press [TIMER PROG.].

Timer Programming List will appear.

TIMER PROGRAMMING						1 / 1
Wed 20 / 12 23:30				HDD	SP	1:00
Date	Start	End	CH	HDD/DVD	Mode	PDC
Sun 31/12	19:00	20:00	P12	HDD	SP	Off
Sun 31/12	19:30	20:30	P10	HDD	SP	Off
Sun 31/12	20:30	21:00	P08	HDD	SP	Off

2 Select the programme you want to edit using [Cursor ▲ / ▼], then press [ENTER].

Editing Menu will appear.

Program Change
Edit Title Name
Delete

3 To change the setting of a programme:

1 Select "Program Change" using **[Cursor ▲ / ▼]**, then press **[ENTER]**.
Timer Programming Window will appear.

Date	Start	End	CH	HDD/DVD	Mode	PDC
Sun 31/12	19:00	20:00	P12	HDD	SP	Off
				HDD	SP	0:39

2 Move to the item you want to change using **[Cursor ◄ / ►]**, then press **[Cursor ▲ / ▼]** to change the setting.

To edit a title name:
1 Select "Edit Title Name" using **[Cursor ▲ / ▼]**, then press **[ENTER]**.
Editing window will appear.

TIMER PROGRAMMING
–

Space	A B C D E a b c d e
Right	F G H I J f g h i j
Left	K L M N O k l m n o
BS	P Q R S T p q r s t
Clear	U V W X Y u v w x y
	Z z
	1 2 3 4 5 6 7 8 9 0
	! " # $ % & ' ( ) *
	+ , - . / : ; < = >
	? @ [ ] ^ _ {	} ~
	Decide Return

2 By following the steps in "Guide to Edit Title Name" on page 73, edit the title name. When you finish entering the title name, press **[PLAY ►]**. Or select "Decide" using **[Cursor ▲ / ▼ / ◄ / ►]**, then press **[ENTER]**.

To delete a programme from the list:
1 Select "Delete" using **[Cursor ▲ / ▼]**, then press **[ENTER]**.

Confirmation window will appear.

Delete this Timer Program?
Yes No

You can access this screen by pressing **[CLEAR]** instead of **[ENTER]** at step 2.
2 If you want to delete the title, select "Yes" using **[Cursor ◄ / ►]**.

4 Press [TIMER PROG.] to exit.

Note

• As to the Timer Programme in progress (which is shown in red in the Timer Programming List), you only can edit the end time. The changes made during recording will be recognised as only specific to that recording in progress and it will not affect the daily or the weekly recording setting.

PDC (Programme Delivery Control)

Programme Delivery Control (PDC) assures that the TV programmes you have programmed for timer recording are recorded exactly from beginning to end, even if the actual broadcasting time differs from the scheduled time due to a delayed start or extension of the programme duration. Furthermore, if a programme is interrupted, the recording will also be interrupted automatically and resumed when the programme starts again.

If the PDC signal drops out because the broadcast signal is weak, or if a broadcasting station does not transmit a regular PDC signal, the timer recording is performed in normal mode (without PDC) even if it was programmed for PDC. If the starting time of the PDC timer recording is between 0:00 and 3:59 on a given day, the PDC function will operate from 20:00 on the previous day to 4:00 on the next day. If the starting time of the PDC timer recording is between 4:00 and 23:59 on a given day, the PDC function will operate from 0:00 on the given day to 4:00 on the next day. This means that if the relevant programme is broadcasted within this period, it is recorded correctly. If the timer is not programmed correctly, the incorrect timer setting stays in effect unless you cancel it. To cancel an incorrect timer setting, refer to "Editing the Timer Programming information" on the left.
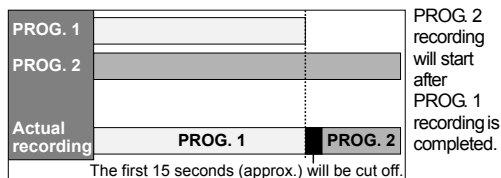
Hints for Timer Recording

The priority of overlapped settings:
When the Timer Programmings are overlapped, you will receive a warning message.
If this happens, check the Timer Programming List and change it as necessary. Otherwise, the unit will prioritize recording as described below.
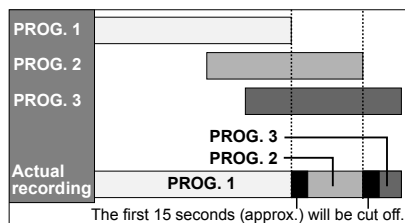
If the starting time is same:
• The Timer Programming set first (PROG. 1) has priority.

PROG. 1				
PROG. 2				
Actual recording	PROG. 1		PROG. 2	

PROG. 2 recording will start after PROG. 1 recording is completed.

The first 15 seconds (approx.) will be cut off.

Different start time and different end time:
• A program with the earlier start time has the priority.

PROG. 1		
PROG. 2		
PROG. 3		
	PROG. 3	
	PROG. 2	
Actual recording	PROG. 1	

The first 15 seconds (approx.) will be cut off.

If the recording time entirely overlaps:
• The shorter Timer Programming (PROG. 2) is not recorded.

PROG. 1	
PROG. 2	
Actual recording	PROG. 1
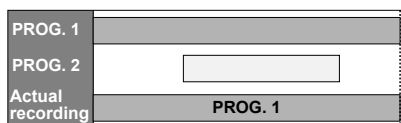
If the End time of the programme currently being recorded and the Start time of the subsequent programme are same:
• If PROG. 1 is a DVD recorded programme, the beginning of PROG. 2 may be cut off.

PROG. 1		
PROG. 2		
Actual recording	PROG. 1	PROG. 2

The last 30 seconds (approx.) will be cut off.
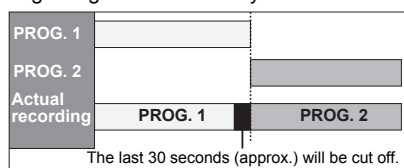
* The amount of time cut off differs depending on the recording media.

Satellite Link

You can set the unit to start recording whenever it detects the scart control signal from the external tuner.
• This feature is only available to HDD.

Preparing for the Satellite Link Timer Recording:

[Preparation of the external tuner]
• The external tuner should be equipped with some kind of timer function. Using timer function of the tuner, set it to be turned on when it comes to the time you want to start recording, and off when it comes to the time you want to finish recording. (Refer to the tuner's manual on how to set the timer.)
• Make sure to turn off the external tuner when you finish setting.

[Preparation of this unit]
• Make sure to select the desired Recording mode beforehand.

External tuner (not supplied)

Scart cable (not supplied)
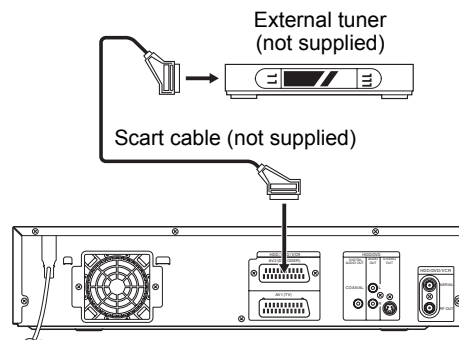
1 Press [SETUP].

Setup Menu will appear.

2 Select "Timer Program" using [Cursor ▲ / ▼], then press [ENTER].

Advanced Menu	
DVD Menu	Satellite Link
HDD Menu	Timer Program
Initial Setup	
Timer Program	
Easy Setting Menu	
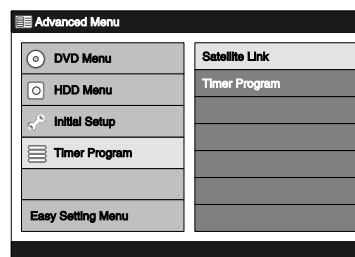
3 Select "Satellite Link" using [Cursor ▲ / ▼], then press [ENTER].

Confirmation message will appear.

| Satellite Link | |
| On | Off |
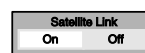
4 Select "On" using [Cursor ◀ / ▶], then press [ENTER].

- "Warning The unit is now turned off to be in Satellite Link standby mode." will appear and the unit will be turned off automatically as it goes into the Satellite Link standby mode.
- "sat" will appear on the front panel display at the start time.

- When the Satellite Link Recording starts, "sat ●HDD" will appear on the front panel display.

●HDD

- When the Satellite Link Timer Recording is over, the unit returns to the Satellite Link standby mode unless you cancel the Satellite Link function.

To cancel the Satellite Link function while in the Satellite Link standby mode:
Press **[I/ᐧ ON / STANDBY]** to turn on the unit.

To cancel the Satellite Link function while the Satellite Link Recording is in progress:
Press **[I/ᐧ ON / STANDBY]**, and then press **[STOP ■]**.

| Note |

- You cannot set the Start / End time for the Satellite Link Timer Recording on this unit.
- The Satellite Link will not be activated unless the unit is in standby mode.
- Recording will be paused while the copy protection signal is being detected, and will resume when the copy protection signal is no longer detected.
- When a regular Timer Recording is completed, "Switch power off ?" will appear.
  If you select "Yes" or do not reply in one minute, the unit will be turned off automatically, and returns to the Satellite Link standby mode.
  If you select "No", the unit will not be turned off and the Satellite Link function will not be activated as a result.
- When there is not enough space on the HDD, the unit cannot go into the Satellite Link Standby mode. Delete the unnecessary titles from the HDD in such case.
- If the unit is turned on during the Satellite Link Recording, the Satellite Link function will become ineffective at that point.

- When a regular Timer Recording and the Satellite Link Timer Recording are overlapped, the regular Timer Recording has priority.

	Example 1
Timer Recording Satellite Link	
Actual Recording	

	Example 2
Timer Recording Satellite Link	
Actual Recording	

	Example 3
Timer Recording Satellite Link	
Actual Recording	

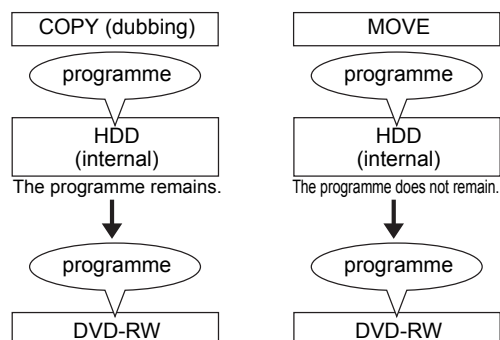|	Example 4
Timer Recording Satellite Link	
Actual Recording	

Information on dubbing

 HDD   DVD-RW   DVD-RW   DVD-R   VCR

You can copy a HDD / DVD disc to a videotape or copy a videotape to a HDD / DVD disc. This function will be possible only if the DVD disc or the videotape is not copy protected.
Before starting this function, prepare for the recording on the DVD-RW / R disc or the videotape. Refer to pages 28 to 30 (HDD / DVD) or page 89 (VCR).

Difference between Copy (dubbing) and Move:

COPY (dubbing)	MOVE
programme	programme
HDD (internal)	HDD (internal)
The programme remains.	The programme does not remain.
programme	programme
DVD-RW	DVD-RW

Available dubbing direction for copy-once programme:

From	To	
HDD (Internal)	DVD-RW (VR) (CPRM-compatible)	O*1,*2
	DVD-RW (Video)	X
	DVD-R	X
	Videotape	O*2
DVD-RW (VR)	HDD (Internal)	X
	Videotape	O*2
Videotape	HDD (Internal)	O
	DVD-RW (VR) (CPRM-compatible)	O*2
	DVD-RW (VR) (Not CPRM-compatible)	X
	DVD-R	X

O: Available
X: Not available

*1: The programme (recorded) moves. (It will be deleted from HDD.)

*2: You cannot dub the recorded programme to HDD or DVD-RW again. (Copy control signal will be recorded to the videotape.)
(Refer to page 30 for details about CPRM.)

Note

- When you dub using **[DUBBING MODE]**, be aware that all the programmes in the Dubbing List will be erased when you switch Original List and Playlist. If you want to dub programmes from both lists (Original List and Playlist), finish up the dubbing of one list first and then make dubbing of the other list.
- NTSC dubbing is prohibited in this unit.

One Touch Dubbing from HDD to DVD

With One Touch Dubbing, you can start dubbing right away with just one touch.
- Recordable DVD must be in the unit. (See pages 28 to 30.)
- There should be enough space on the recording DVD.
- Make sure to press the corresponding Device Select Button before using the device of your choice.

Limitations:
- You cannot dub to the finalised Video mode DVDs.
- You cannot dub to the protected VR mode DVDs.
- If the unit detects that the dubbing will not finish by 3 minutes before the Timer Recording, the dubbing cannot be started. Be noted that with HDD to DVD dubbing, the duration of the dubbing is the duration of the dubbing title (except for the High Speed Dubbing).
- If a copy control signal is detected, the dubbing cannot be started.
- You cannot dub to the DVD if the number of the titles or the chapters of the disc is at its limit.
- Dubbing cannot be executed during HDD or DVD recording.
- Dubbing cannot be executed while the Setup Menu is showing (except for the Title List).

1 There are three ways to start One Touch Dubbing.

Method 1: Play the title you want to dub. When it comes to the point where you want to start dubbing from, press **[STOP ■]** or **[PAUSE II]**. Then, press **[DUBBING HDD ＞ DVD]** on the front panel. The dubbing will start from there to the end.
- If there is not enough space left on the disc, the prohibited icon " ⦸ " will appear and the dubbing will not be started.

Method 2: Select the title you want to dub in the Original List or Playlist. With the title selected (highlighted), press **[DUBBING HDD ＞ DVD]** on the front panel. Or with the title selected (highlighted), press **[ENTER]** to call up the Title List Menu. And select "Dubbing" using **[Cursor ▲ / ▼]**, then press **[ENTER]**.

- The dubbing will start from the beginning of the title to the end of the title.
- When the disc runs out of the space, dubbing stops automatically.

Method 3: If you press **[DUBBING HDD > DVD]** on the front panel in stop mode without selecting any title, the unit will start dubbing the last title in the Original List or the Playlist. It will start dubbing the title in the Original List if the Original List was the last selected list. It will start dubbing the title in the Playlist if the Playlist was the last selected list.

• If the title was in the resume stop mode, the dubbing will start from the resume point to the end.
• If the title was in the regular stop mode, the dubbing will start from the beginning of the title to the end.
• If there is not enough space left on the disc, the prohibited icon will appear and the dubbing will not be started.
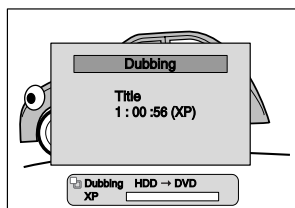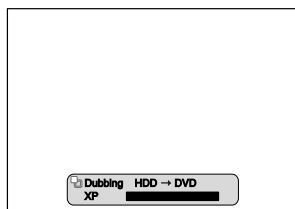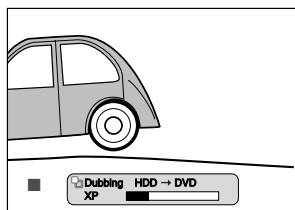

2 **The dubbing will stop automatically when it reaches the end of the title. If you want to stop the dubbing manually, follow the instructions below.**

To stop the dubbing in preparation mode:
• Press **[DVD]**, then press **[STOP ■]**.

To stop the dubbing in progress:
• Press **[DVD]**, then press and hold **[STOP ■]** for 2 seconds. Or press **[STOP ■]** on the front panel.

• This operation may take a while to be completed.

Note
• You cannot switch the device mode except between DVD and VCR during HDD to DVD dubbing.
• High Speed Dubbing is not available for the One Touch Dubbing.

One Touch Dubbing from videotape to DVD

With One Touch Dubbing feature, you can start dubbing right away with just one touch.
• Recordable DVD must be in the unit. (See pages 28 to 30.)
• There should be enough space on the recording DVD.
• A videotape to be dubbed must be in the unit.
• Make sure to press the corresponding Device Select Button before using the device of your choice.

Limitations:
• You cannot dub to the finalised Video mode DVDs.
• You cannot dub to the protected VR mode DVDs.
• If a copy control signal is detected during dubbing, the dubbing will be stopped.
• Copy-once programmes which are recorded directly from the TV can be dubbed to the HDD / DVD.
• Copy-once programmes which are copied from the HDD / DVD to a videotape cannot be dubbed further from the videotape to the HDD / DVD.
• If the unit detects that the dubbing will not finish by 3 minutes before the Timer Recording, the dubbing cannot be started. Be noted that with VCR to DVD dubbing, the unit recognise DVD's remaining time as the dubbing duration although the actual dubbing will end when the videotape ends.
• You cannot dub to the DVD if the number of the titles or the chapters of the disc is at its limit.
• Dubbing cannot be executed during recording of any device.
• Dubbing cannot be executed while the Setup Menu is showing (except for the Title List).

1 **Play the contents you want to dub. When it comes to the point where you want to start dubbing from, press [STOP ■] or [PAUSE ❙❙].**

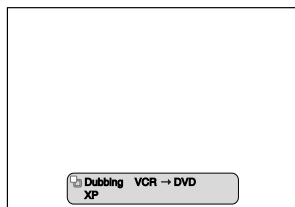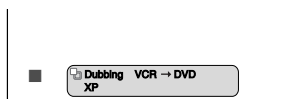## 2 Press [DUBBING VCR ≥ DVD] on the front panel.
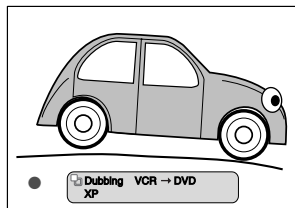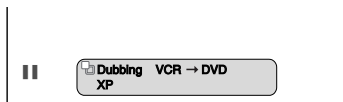
The dubbing will start.

⏸ 📀 **Dubbing VCR → DVD**
XP

⬇

● 📀 **Dubbing VCR → DVD**
XP

To stop the dubbing in preparation mode:
• Press **[DVD]**, then press **[STOP ■]**.

To stop the dubbing in progress:
• Press **[DVD]**, then press and hold **[STOP ■]** for 2 seconds. Or press **[STOP ■]** on the front panel.

■ 📀 **Dubbing VCR → DVD**
XP

⬇

📀 **Dubbing VCR → DVD**
XP

• This operation may take awhile to be completed.

Note

• When dubbing starts, the video image may be distorted because of the Digital Tracking function. This is not a malfunction. Play the videotape until the image clears up and then start the dubbing.
• Playback audio is determined by the setting you make in "Selecting the Sound Mode" section on page 91.
• Dubbing takes as much time as the playback does.
• You cannot switch the device mode except between HDD and DVD.
• If you want to watch the duplicated material, after the VCR to DVD duplication, press **[DVD]** first then press **[PLAY ▶]**.

Dubbing from HDD / DVD to videotape
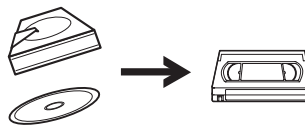
You can copy the contents of the HDD / DVD to a videotape.

Limitations:
• If a copy control signal is detected during dubbing, the dubbing will be stopped.
• If the unit detects that the dubbing will not finish by 3 minutes before the Timer Recording, it will display a confirmation message asking if you really want to continue with the dubbing. If you select "Yes", you can continue with the dubbing, and the Timer Recording will start after the dubbing ends.
Be noted that with HDD / DVD to VCR dubbing, the duration of the dubbing is the duration of the dubbing title.
• An error message will appear if you try to add a programme to the Dubbing List when the total playback time of all the programmes in the Dubbing List exceeds 10 hours and 30 minutes.

Limitation (DVD to VCR):
• Only the contents of the VR mode DVDs or the Video mode DVDs made on this unit can be dubbed. Any other discs cannot be dubbed.

Preparing for dubbing:
• Insert a recordable videotape with a record tab intact.
• Make sure that the videotape has enough space to record the contents.
• Make sure the desired Rec Mode (SP / LP) is selected on the VCR in advance. (See page 89.) (You can change the Rec Mode during dubbing also.)
• If you are dubbing a title contains both main and sub audio, set the audio type you want to dub. To set the audio type, refer to "Switching audio soundtrack" on pages 67 and 68. If you want to dub both main and sub audio, select "Main / Sub" when you set the audio type.

Preparing for dubbing (DVD to VCR):
• If you are dubbing from a disc, insert a disc to be dubbed.

1 Press [DUBBING MODE].

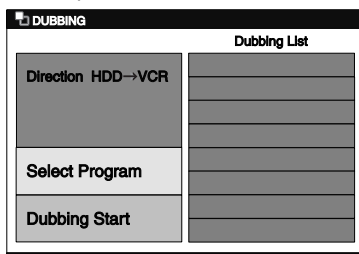The Dubbing Direction and the Rec Mode Menu will appear.

DUBBING	
Dubbing Direction	**Rec Mode**
HDD → DVD	High
DVD → HDD	XP
HDD → VCR	SP
VCR → HDD	LP
DVD → VCR	EP
VCR → DVD	SLP
	SEP
	Auto

2 For HDD to VCR dubbing:
Select "HDD ➡ VCR" using
[Cursor ▲ / ▼], then press [ENTER].
For DVD to VCR dubbing:
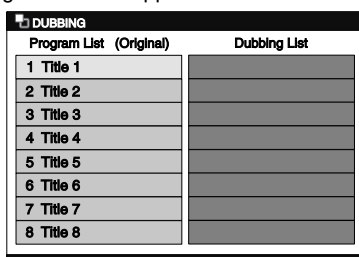Select "DVD ➡ VCR" using
[Cursor ▲ / ▼], then press [ENTER].
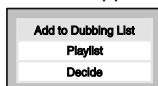Dubbing Top Menu will appear.
Example: HDD ➝ VCR

3 Select "Select Program" using
[Cursor ▲ / ▼], then press [ENTER].
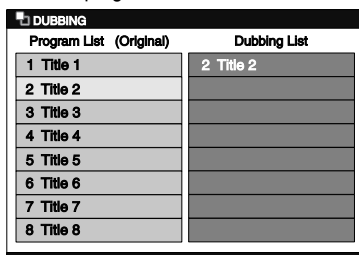Program List will appear.

4 Select a desired programme using
[Cursor ▲ / ▼], then press [ENTER].
Program List Menu will appear.

Add to Dubbing List
Playlist
Decide

5 Select "Add to Dubbing List" using
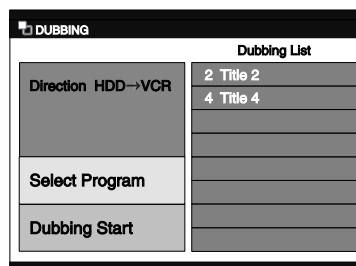[Cursor ▲ / ▼], then press [ENTER].
The selected programme is added to the Dubbing List.

• If you want to select programmes from the
Playlist, select "Playlist" and press **[ENTER]** to
call up the Playlist. Then follow the steps 4 to 5.
(Be noted that Original List programmes and the
Playlist programmes cannot be entered together
in one Dubbing List.)
• If more than one programme is already in the
Dubbing List, a green line will appear in the
Dubbing List. Move the line to the position you
want to insert the programme using
[Cursor ▲ / ▼], then press **[ENTER]**. The
programme is inserted in the selected position.

6 Repeat the steps 4 to 5 until you
select all programmes to be dubbed.

7 After selecting all the programmes
you want, press [RETURN] to go
back to the Dubbing Top Menu. Or
press [ENTER] to call up the option
window and select "Decide".
Then press [ENTER] to go back to
the Dubbing Top Menu.

8 Select "Dubbing Start" using
[Cursor ▲ / ▼], then press [ENTER].
Confirmation window will appear.
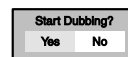
Start Dubbing?
Yes   No

9 Select "Yes" using [Cursor ◄ / ►],
then press [ENTER].
Dubbing will start.

HDD ➝ VCR Dubbing
SP
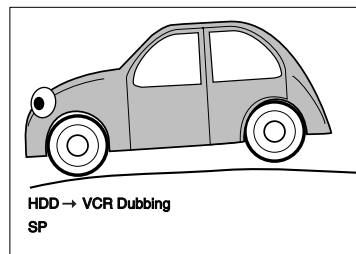
• It may take awhile to prepare for the dubbing.

**To stop the dubbing while in the dubbing
preparation mode:**
• Press **[VCR]** first, then press **[STOP ■]**. Or
press **[STOP / EJECT ⏏/■]** on the front panel.

To stop the dubbing in progress:
• Press **[VCR]** first, then press and hold
[STOP ■] for 2 seconds. Or press
[STOP / EJECT ⏏/■] on the front panel.

Note
• You cannot change the device mode between VCR
and HDD / DVD during the HDD / DVD to VCR
dubbing.
• If you want to watch the duplicated material, after
the DVD to VCR duplication, press **[VCR]** first then
press **[PLAY ►]**.

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Bi-directional Dubbing between HDD and DVD

You can copy the contents of the HDD to a DVD, or vice versa.

Limitation:
- If the unit detects that the dubbing will not finish by 3 minutes before the Timer Recording, the dubbing cannot be started. Be noted that with HDD to DVD dubbing (or vice versa), the duration of the dubbing is the duration of the dubbing title (except for the High Speed Dubbing).

Limitations (HDD to DVD):
- You cannot dub to the finalised Video mode DVDs.
- You cannot dub to the protected VR mode DVDs.
- If you try to dub copy-once programmes, you will be warned that the copy-once programmes cannot be copied but only be moved. If you still want to continue with the dubbing (moving), select "Yes" and continue with the steps. Moving of the copy-once programmes is only available with VR mode DVD-RW (CPRM compatible) discs.
- An error message will appear if you try to add a programme to the Dubbing List under the following conditions;
  - When the number of programmes in the "Dubbing List" exceeds 32 programmes.
  - When the total number of titles in the DVD will exceed 99 titles.
  - When the total number of chapters in the DVD will exceed 999 chapters for VR mode DVDs.

Limitations (DVD to HDD):
- If a copy control signal is detected during dubbing, the dubbing will be stopped.
- The contents of the Video mode DVDs recorded on other unit cannot be dubbed using this unit.
- An error message will appear if you try to add a programme to the Dubbing List under the following conditions;
  - When the total number of titles will exceed 300 titles.

Preparing for dubbing (HDD to DVD):
- Insert a recordable DVD. (See pages 28 to 30.)
- Make sure there is enough space on the DVD.

Preparing for dubbing (DVD to HDD):
- Insert a disc to be dubbed.
- Make sure there is enough space on the HDD.

High Speed Dubbing:
When dubbing from the HDD Original List to the VR mode DVD-RW, High Speed Dubbing will be available. High Speed Dubbing offers you the dubbing speed of 20 times the SEP mode dubbing. To perform the High Speed Dubbing, select "High" at step 3.

Just Dubbing:
When dubbing from HDD to DVD if you select "Auto" in the Rec Mode Menu, the unit will calculate the duration of the dubbing material and the remaining time in the disc and automatically select the most suitable Rec Mode for the dubbing.

1 Press [DUBBING MODE].

The Dubbing Direction and the Rec Mode Menu will appear.

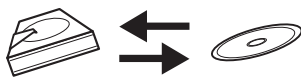| DUBBING	
Dubbing Direction	**Rec Mode**
HDD → DVD	High
DVD → HDD	XP
HDD → VCR	SP
VCR → HDD	LP
DVD → VCR	EP
VCR → DVD	SLP
	SEP
	Auto

2 For HDD to DVD dubbing:
Select "HDD → DVD" using [Cursor ▲ / ▼], then press [ENTER].
For DVD to HDD dubbing:
Select "DVD → HDD" using [Cursor ▲ / ▼], then press [ENTER].

Example: HDD → DVD

DUBBING	
Dubbing Direction	**Rec Mode**
HDD → DVD	High
DVD → HDD	XP
HDD → VCR	SP
VCR → HDD	LP
DVD → VCR	EP
VCR → DVD	SLP
	SEP
	Auto

3 Select a desired Rec Mode using [Cursor ▲ / ▼], then press [ENTER].

Dubbing Top Menu will appear.

DUBBING	
	Dubbing List
Direction HDD→DVD	
Mode XP	
Select Program	
Dubbing Start	

- If you select "Auto" for the Rec Mode, the unit will automatically calculate the remaining time and select the most suitable Rec Mode (HDD to DVD dubbing only).
- High Speed Dubbing is available only when dubbing the titles in the HDD Original List to the VR mode DVD.
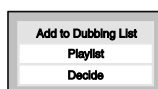
4 **Select "Select Program" using [Cursor ▲ / ▼], then press [ENTER].**

Program List will appear.

DUBBING

Program List (Original)	Dubbing List
1 Title 1	
2 Title 2	
3 Title 3	
4 Title 4	
5 Title 5	
6 Title 6	
7 Title 7	
8 Title 8	

5 **Select a desired programme using [Cursor ▲ / ▼], then press [ENTER].**

Program List Menu will appear.

Add to Dubbing List
Playlist
Decide

6 **Select "Add to Dubbing List" using [Cursor ▲ / ▼], then press [ENTER].**

The selected programme is added to the Dubbing List.

DUBBING

Program List (Original)	Dubbing List
1 Title 1	2 Title 2
2 Title 2	
3 Title 3	
4 Title 4	
5 Title 5	
6 Title 6	
7 Title 7	
8 Title 8	

• If you want to select programmes from the Playlist, select "Playlist" and press **[ENTER]** to call up the Playlist. Then follow the steps 5 and 6. (Be noted that Original List programmes and the Playlist programmes cannot be entered together in one Dubbing List.)
• If more than one programme is already in the Dubbing List, a green line will appear in the Dubbing List. Move the line to the position you want to insert the programme using **[Cursor ▲ / ▼]**, then press **[ENTER]**. The programme is inserted in the selected position.
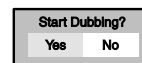
7 **Repeat the steps 5 to 6 until you select all programmes to be dubbed.**

8 **After selecting all the programmes you want, press [RETURN] to go back to the Dubbing Top Menu. Or press [ENTER] to call up the option window and select "Decide". Then press [ENTER] to go back to the Dubbing Top Menu.**

DUBBING

	Dubbing List
Direction HDD→DVD	2 Title 2
	4 Title 4
Mode XP	
Select Program	
Dubbing Start	

9 **Select "Dubbing Start" using [Cursor ▲ / ▼], then press [ENTER].**

Confirmation window will appear.

Start Dubbing?
Yes   No

10 **Select "Yes" using [Cursor ◄ / ►], then press [ENTER].**

Dubbing will start.

Dubbing
Title
1 : 00 :56 (XP)

Dubbing   HDD → DVD
XP

Dubbing   HDD → DVD
XP
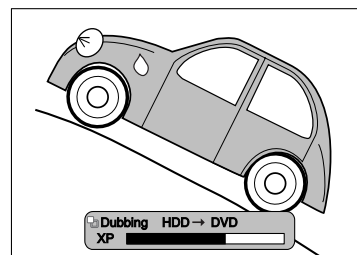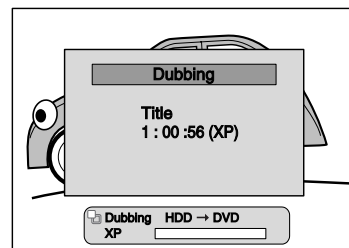
• It may take awhile to prepare for the dubbing.
• During High Speed Dubbing, the playback picture will not appear.

To stop the dubbing while in the dubbing preparation mode:
- Press the Device Select Button of the recording device first (for example, if you are dubbing to DVD, press **[DVD]** first), then press **[STOP ■]**.

To stop the dubbing in progress:
- Press the Device Select Button of the recording device first (for example, if you are dubbing to DVD, press **[DVD]** first). Then press and hold **[STOP ■]** for 2 seconds. Or press **[STOP ■]** on the front panel.

Note

- When dubbing from HDD to DVD (or vice versa), even if the selected Rec Mode is set to the higher quality than that of the material to be dubbed, the programme will not be recorded in the higher quality. It only protects the current picture quality.
- You cannot switch the device mode between HDD and DVD during the bi-directional dubbing between HDD and DVD.
- When you dub a copy-once programme from HDD to DVD, it will be moved to the disc (not copied) and the original data will be erased from the HDD.

Note on the High Speed Dubbing:
- Duration of the High Speed Dubbing will depend on the Rec Mode, the length, the disc type of the material to be dubbed.
- High Speed Dubbing is available only when dubbing the titles in the HDD Original List to the VR mode DVD.

Deleting a programme from the Dubbing List

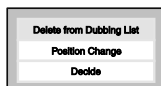**1** **If you are in the Dubbing Top Menu, select "Select Program" and press [ENTER].**

Program / Dubbing List will appear.
If you are already in the Program / Dubbing List, proceed to step 2.

2 **Press [Cursor ▶] to move to the Dubbing List.**

3 **Select a programme you want to delete using [Cursor ▲ / ▼], then press [ENTER].**

Dubbing List Menu will appear.

4 **Select "Delete from Dubbing List" using [Cursor ▲ / ▼], then press [ENTER].**

The programme is deleted.

5 **Press [RETURN] to go back to the Dubbing Top Menu.**

Changing the order of the dubbing list

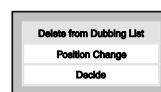**1** **If you are in the Dubbing Top Menu, select "Select Program" and press [ENTER].**

Program / Dubbing List will appear.
If you are already in the Program / Dubbing List Screen, proceed to step 2.

2 **Press [Cursor ▶] to move to the Dubbing List.**

3 **Select a programme you want to move using [Cursor ▲ / ▼], then press [ENTER].**

Dubbing List Menu will appear.

4 **Select "Position Change" using [Cursor ▲ / ▼], then press [ENTER].**

The selected programme will be replaced by a single line.

5 **Move the line to the desired position using [Cursor ▲ / ▼], then press [ENTER].**

The programme is inserted in the selected position.

Dubbing from videotape to HDD / DVD
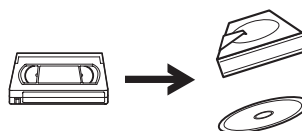
You can copy the contents of a videotape to HDD or DVD disc.

Limitation:
- If a copy control signal is detected during dubbing, the dubbing will be stopped.

Limitations (VCR to HDD):
- If the unit detects that the dubbing will not finish by 3 minutes before the Timer Recording, it will display a confirmation message asking if you really want to continue with the dubbing. If you select "Yes", you can continue with the dubbing, and the Timer Recording will start after the dubbing ends. Be noted that with VCR to HDD dubbing, the unit recognise the HDD's remaining time as the dubbing duration. The maximum possible duration is 10 hours and 30 minutes.

Limitations (VCR to DVD):
- You cannot dub to the finalised Video mode DVDs.
- You cannot dub to the protected VR mode DVDs.
- Copy-once programmes which are recorded directly from the TV can be dubbed to the HDD and CPRM compatible VR mode DVD-RW.
- Copy-once programmes which are copied from the HDD / DVD to a videotape cannot be dubbed further from the videotape to the HDD / DVD.
- If the unit detects that the dubbing will not finish by 3 minutes before the Timer Recording, it will display a confirmation message asking if you really want to continue with the dubbing. If you select "Yes", you can continue with the dubbing, and the Timer Recording will start after the dubbing ends. Be noted that with VCR to DVD dubbing, the unit recognise DVD's remaining time as the dubbing duration although the actual dubbing will end when the videotape ends.

Preparing for dubbing:
- Insert a videotape to be dubbed.

Preparing for dubbing (VCR to HDD):
- Make sure there is enough space on the HDD.

Preparing for dubbing (VCR to DVD):
- Insert a recordable DVD. (See pages 28 to 30.)
- Make sure there is enough space on the DVD.

Press [VCR] first.

1 Press [PLAY ▶] to start playback of the videotape, and press [STOP ■] when it reaches the point you want to start dubbing.

2 Press [DUBBING MODE].

The Dubbing Direction and the Rec Mode Menu will appear.

DUBBING	
Dubbing Direction	**Rec Mode**
HDD → DVD	High
DVD → HDD	XP
HDD → VCR	SP
VCR → HDD	LP
DVD → VCR	EP
VCR → DVD	SLP
	SEP
	Auto

3 For HDD dubbing:
Select "VCR ➡ HDD" using
[Cursor ▲ / ▼], then press [ENTER].
For DVD dubbing:
Select "VCR ➡ DVD" using
[Cursor ▲ / ▼], then press [ENTER].

Example: VCR ➡ HDD

DUBBING	
Dubbing Direction	**Rec Mode**
HDD → DVD	XP
DVD → HDD	SP
HDD → VCR	LP
VCR → HDD	EP
DVD → VCR	SLP
VCR → DVD	SEP

4 Select a desired Rec Mode using [Cursor ▲ / ▼], then press [ENTER].

Dubbing Top Menu will appear.

DUBBING	
	Dubbing List
Direction VCR→HDD	
Mode XP	
Dubbing Start	

5 With "Dubbing Start" selected, press [ENTER].

Confirmation window will appear.

Start Dubbing?
Yes   No

6 Select "Yes" using [Cursor ◀ / ▶], then press [ENTER].

Dubbing will start.

To stop the dubbing while in the dubbing preparation mode:
- Press the Device Select Button of the recording device first (for example, if you are dubbing to DVD, press **[DVD]** first), then press **[STOP ■]**.

To stop the dubbing in progress:
- Press the Device Select Button of the recording device first (for example, if you are dubbing to DVD, press **[DVD]** first). Then press and hold **[STOP ■]** for 2 seconds. Or press **[STOP ■]** on the front panel.

Note
- The device mode change is available only between HDD and DVD during the videotape to the HDD / DVD dubbing.
- After starting dubbing, the picture may be distorted because of the digital tracking function. This is not a malfunction. Be advised to playback the videotape until the picture is stabilized, then set the starting point at which you wish to start recording, and start dubbing.
- Playback audio is determined by the setting you make in the "Selecting the Sound Mode" section on page 91.

Introduction
Connections
Basic Setup
Recording
Playback
Editing
Function Setup
VCR Functions
Others

Settings for external equipment

Connection to external equipment

HDD DVD-RW VR DVD-RW Video DVD-R
VCR

Connect the external equipment using either the input jacks, AV1(TV) (Rear), AV2(DECODER) (Rear) or AV3 (Front). However, for AV3 jacks, you have to select S-VIDEO input or VIDEO input jacks depending on the connected devices.
Use a commercially available Scart, S-Video or Video cable and an Audio cable for this connection.
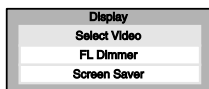
1 Press [SETUP].

"Easy Setting Menu" or "Advanced Menu" will appear. If "Advanced Menu" is displayed, proceed to step 3.

2 Select "Advanced Menu" using [Cursor ▲ / ▼], then press [ENTER].

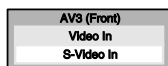**3 Select "Initial Setup" using [Cursor ▲ / ▼], then press [ENTER].**

4 Select "Display" using [Cursor ▲ / ▼], then press [ENTER].

Display Menu will appear.

Display
Select Video
FL Dimmer
Screen Saver

5 Select "Select Video" using [Cursor ▲ / ▼], then press [ENTER].

6 Select the video input type you use, "Video In" or "S-Video In", using [Cursor ▲ / ▼], then press [ENTER].

AV3 (Front)
Video In
S-Video In

Your setting is activated.
• The default setting is "Video In".

7 Press [SETUP] to exit.

Dubbing from the external devices

HDD DVD-RW VR DVD-RW Video DVD-R
VCR

Before recording from an external device, connect the external device correctly by following the direction on the left, and turn the power of the unit and the external device on.

1 Turn on the TV. Select the appropriate external input channel.
(See pages 22 to 23.)

2 Select the recording media.
Recording to HDD:
Press [HDD] first.

Recording to DVD:
Press [DVD] first and insert a disc.
• It may take awhile to load the disc.

Recording to a videotape:
Press [VCR] and insert a videotape.

3 Select the appropriate external input channel of this unit by pressing [INPUT SELECT]. You also can use [PROG. ⌃ / ⌄].
• If you are using the jacks on the front, set the channel to "AV3".
• If you are using the jacks on the rear, set the channel to "AV1" and "AV2".

4 Select a Rec Mode by pressing [REC MODE].
Refer to "Rec Mode" on page 29 for HDD / DVD or page 89 for VCR.

5 Press [● REC] (of the recording device) on this unit to start recording.

6 Press the PLAY button on the external device to record from.

7 For HDD or DVD:
Press [STOP ■] on the recording unit (this unit) first to stop recording.
• This operation may take awhile to be completed.
Then stop the external device.
For VCR:
Press [STOP / EJECT ⏏/■] on the recording unit (this unit) first to stop recording.
Then stop the external device.

Note
• To avoid mistakes, it is recommended to use the buttons on the front panel to operate.
• Read also the instructions for the external device thoroughly.
• If you want to monitor the programme that you are recording, make sure the device such as a Satellite Box is turned off when it is connected to AV2.
• NTSC dubbing is prohibited in this unit.

Setting disc protection

DVD-RW VR

To prevent accidental over-recording, editing or erasing of recordings, you can protect them using the Setup Menu.

1 In stop mode, press [SETUP].

"Easy Setting Menu" or "Advanced Menu" will appear.

2 Select "DVD Menu" using [Cursor ▲ / ▼], then press [ENTER].

3 Select "Disc Protect" using [Cursor ▲ / ▼], then press [ENTER].

• If the disc has already been protected, "Disc Undo Protect" will be listed in the menu instead of "Disc Protect". To undo the disc protection, select "Disc Undo Protect" and press **[ENTER]**.

4 Select "Yes" using [Cursor ◄ / ►], then press [ENTER].

5 Select "Yes" again using [Cursor ◄ / ►], then press [ENTER].

The disc is protected.

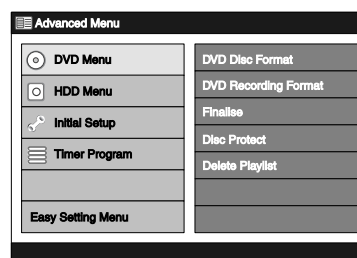**Note**

• Disc Protect is available only for VR mode DVDs.

Finalising a disc
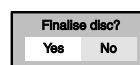
Finalise

DVD-RW VR DVD-RW Video DVD-R

You must first finalise the disc before playing it back on other unit.

1 Press [SETUP].

"Easy Setting Menu" or "Advanced Menu" will appear.

| Advanced Menu	
⊙ DVD Menu	DVD Disc Format
⊙ HDD Menu	DVD Recording Format
🔧 Initial Setup	Finalise
☰ Timer Program	Disc Protect
	Delete Playlist
Easy Setting Menu	

2 Select "DVD Menu" using [Cursor ▲ / ▼], then press [ENTER].

3 Select "Finalise" using [Cursor ▲ / ▼], then press [ENTER].

Confirmation window will appear.

Finalise disc?
Yes   No

• If the disc has already been finalised, "Undo Finalise" will be listed in the menu instead of "Finalise" (DVD-RW only). To Undo the finalisation of the disc, select "Undo Finalise" and press **[ENTER]**.

4 Select "Yes" using [Cursor ◄ / ►], then press [ENTER].

Final confirmation window will appear.

Are you sure?
Yes   No
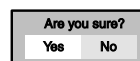
5 Select "Yes" using [Cursor ◄ / ►], then press [ENTER].

A progress bar will appear, and finalising will start.
• If you want to stop the process, press **[ENTER]**.

Finalise   Cancel
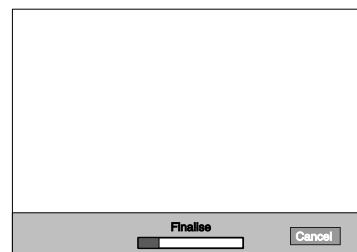
• This operation may take awhile to be completed.
• Finalising ends when the progress bar reaches the right end.

Note

- If "◌" appears when **[ENTER]** is pressed, that means the finalising process has reached the critical point and cannot be stopped.
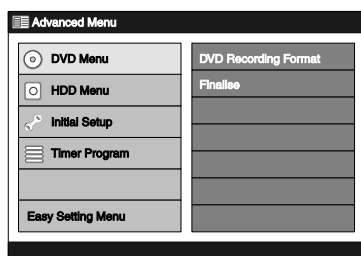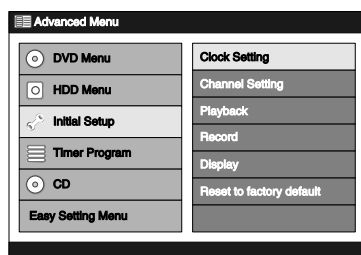- You cannot cancel finalising the DVD-R disc once it has started.

Auto Finalise

DVD-RW   DVD-R

You can finalise discs automatically when the disc space runs out if you set this in the Setup menu. This feature is available only for the Video mode DVDs.

1 Press [SETUP].

"Easy Setting Menu" or "Advanced Menu" will appear.

Example: DVD-R (Advanced Menu)

Advanced Menu	
DVD Menu	DVD Recording Format
HDD Menu	Finalise
Initial Setup	
Timer Program	
Easy Setting Menu	

2 Select "Initial Setup" using [Cursor ▲ / ▼], then press [ENTER].

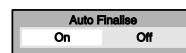| Advanced Menu	
DVD Menu	Clock Setting
HDD Menu	Channel Setting
Initial Setup	Playback
Timer Program	Record
CD	Display
Easy Setting Menu	Reset to factory default

- If you are using the "Easy Setting Menu", proceed to step 4.

3 Select "Record" using [Cursor ▲ / ▼], then press [ENTER].

Record Menu will appear.

Record
Auto Finalise
Auto Chapter
Bilingual Recording Audio
External Input Audio
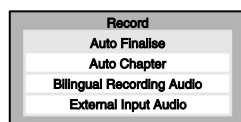
4 Select "Auto Finalise" using [Cursor ▲ / ▼], then press [ENTER].

Option window will appear.

Auto Finalise	
On	Off

The unit automatically finalises the disc when the disc space runs out.

5 Select "On" using [Cursor ◀ / ▶], then press [ENTER].

Your setting is activated.

6 Press [SETUP] to exit.

Note

- Although finalisation is recommended, you may be able to play the VR mode discs on other unit without finalising. With regard to the Video mode discs, you MUST finalise them before playing them back on other unit.
- After DVD-R discs are finalised:
  - A DVD Menu is created automatically.
  - Undo finalisation is impossible.
  - Additional recording or editing is impossible.
- After Video mode DVD-RW discs are finalised:
  - A DVD Menu is created automatically.
  - Undo finalisation is possible.
  - Additional recording or editing is possible if you undo finalise.
- After VR mode DVD-RW discs are finalised:
  - A DVD Menu is not created.
  - Undo finalisation is possible.
  - Additional recording or editing is possible even without undo finalisation.
- When DVD Menu is created Title List will no longer be available.
- If timer programmes are set, you cannot finalise the disc from 1 hour (Video Mode) or 1 hour and half (VR Mode) before the timer programmes start.

Playback

Information on playback

Read the following information before you play back a DVD.

Playable discs

You can play back all the discs listed on the right. Before attempting to play back a DVD, make sure it meets the requirements for Region Codes and Colour Systems as described in this section. Discs that bear any of the logos shown below will be played back correctly in this unit. Other disc types are not guaranteed to be played back.

Colour systems

DVDs are recorded using different colour systems throughout the world. The most common colour system, used primarily in the U.K. and other EU countries, is PAL.
This unit uses the PAL system. However, it is also possible to play back DVDs using other colour systems, such as NTSC.

Region codes

This unit has been designed to play back DVDs for Region Two (2). It is only possible to play back DVDs in this unit that are labelled for Region 2 or for ALL regions. You cannot play back DVDs that are labelled for other regions. Look for DVDs that bear either of the symbols shown below. If these region symbols do not appear on your DVD, you cannot play back the DVD in this unit.

The number inside the globe refers to region of the world.
A DVD labelled for a specific region can only be played back in the unit with the same region code.

Disc	Logo
DVD-Video	
DVD-RW (VIDEO/VR mode, DivX® files)	
DVD-R (VIDEO mode, DivX® files)	
CD-DA (AUDIO CD)	
VCD (VIDEO CD)	
CD-RW (CD-DA FORMAT, MP3, JPEG, DivX® files)	
CD-R (CD-DA FORMAT, MP3, JPEG, DivX® files)	

is a trademark of DVD Format/Logo Licensing Corporation.

Introduction
Connections
Basic Setup
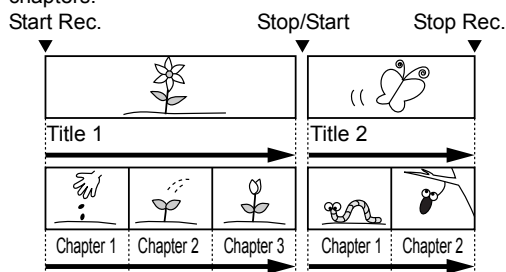Recording
Playback
Editing
Function Setup
VCR Functions
Others

EN 51

Basic playback

Hint for HDD / DVD playback

The contents of a HDD / DVD are generally divided into titles. Titles are sometimes further subdivided into chapters.

Start Rec.   Stop/Start   Stop Rec.

Title 1   Title 2

Chapter 1 | Chapter 2 | Chapter 3   Chapter 1 | Chapter 2

Direct Playback

HDD **DVD-V** **DVD-RW VR** **DVD-RW Video**
DVD-R **CD**

If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.

1 Turn on the TV. Select the appropriate external input channel.
(See pages 22 to 23.)
• If you are playing the HDD, proceed to step 5.

2 Press [OPEN / CLOSE ▲] to open the disc tray.

3 Place the disc on the disc tray with its label facing up. Be sure to align the disc with the disc tray guide.

Disc tray guide
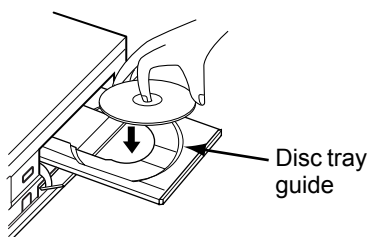
4 Press [OPEN / CLOSE ▲] to close the disc tray.

5 Press [PLAY ▶] to start playback.
Playback will start.
• Depending on the media, the playback may start from a resume point. (See page 60.)
• If you are playing back a DVD-Video, a Disc Menu may appear. Refer to page 58 for more details about the Disc Menu.

6 Press [STOP ■] to stop playback.

| Note |

• Some discs may start playback automatically.
• If no resume point is set when you stop HDD playback, it will start from beginning of the last title.

Playback from the Title List

HDD **DVD-RW VR** **DVD-RW Video** **DVD-R**

If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.

1 Follow steps 1 to 4 in "Direct Playback" on the left.
• If you are playing the HDD, follow step 1 in "Direct Playback".

2 Press [TOP MENU].
Title List will appear.
Press **[MENU / LIST]** to switch Original List / Playlist if necessary.
• To exit the Title List, press **[TOP MENU]** or **[RETURN]**.

3 Select a desired title using [Cursor ▲ / ▼ / ◀ / ▶], then press [PLAY ▶].
Playback will start.
• Use **[Cursor ▲ / ▼ / ◀ / ▶]** to move among the titles one by one, and use **[FWD ▶▶]** or **[REV ◀◀]** to jump to the next / previous Title List page.
• For HDD, playback will start from the resume point. If you want to start it from the beginning, use the Title List Menu.

4 Press [STOP ■] to stop playback.

Playback from the Title List Menu

HDD **DVD-RW VR** **DVD-RW Video** **DVD-R**

(Not available for the DVD-Videos, the finalised Video mode DVDs, or the Video mode discs made on other unit)

If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.

1 Follow steps 1 to 4 in "Direct Playback" on the left.
• If you are playing the HDD, follow step 1 in "Direct Playback".

2 Press [TOP MENU].
Title List will appear.
Press **[MENU / LIST]** to switch Original List / Playlist if necessary.
• To exit the Title List, press **[TOP MENU]** or **[RETURN]**.

3 Select a desired title using [Cursor ▲ / ▼ / ◀ / ▶], then press [ENTER].
Title List Menu will appear.
• Use **[Cursor ▲ / ▼ / ◀ / ▶]** to move among the titles one by one, and use **[FWD ▶▶]** or **[REV ◀◀]** to jump to the next / previous Title List page.

4 **If you want to play the title from the beginning, select "Play From Start" using [Cursor ▲ / ▼].**
Select "Resume Play" (HDD only) if you want to play the title from the point where it is stopped last time. Then press [ENTER].
Playback will start.

5 **Press [STOP ■] to stop the playback.**

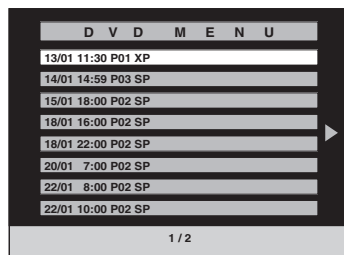## Playback from the DVD Menu

Video DVD-RW DVD-R

With finalised Video mode DVDs or the Video mode DVDs made on other units, a DVD Menu may be appeared instead of the Title List. DVD Menus are created automatically when you finalise a Video mode disc. With such discs, Title List is no longer available. Follow the steps below to play back a disc using the DVD Menu.

Press [DVD] first.

1 **Insert a disc.**

DVD Menu may appear automatically. Otherwise press **[TOP MENU]** to call up the DVD Menu.

D V D M E N U	
13/01 11:30 P01 XP	
14/01 14:59 P03 SP	
15/01 18:00 P02 SP	
18/01 16:00 P02 SP	
18/01 22:00 P02 SP	▶
20/01 7:00 P02 SP	
22/01 8:00 P02 SP	
22/01 10:00 P02 SP	
1 / 2	

Press **[STOP ■]** if you want to exit from the menu.

2 **Select a desired title using [Cursor ▲ / ▼], then press [PLAY ▶] or [ENTER].**

Playback will start.
• Use **[Cursor ◀ / ▶]** to jump to the next / previous Title List page.

3 **Press [STOP ■] to stop playback.**

Note

• Operation may vary depending on the discs.

Playing back a DVD-Video / Video CD / CD

DVD-V VCD CD

1 **Follow steps 1 to 4 in "Direct Playback" on page 52.**

2 **Press [PLAY ▶] to start playback.**
Playback will start.

If you are playing back a DVD-Video or a Video CD, a menu may appear.
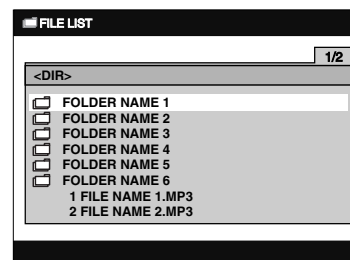See pages 58 to 59 for details.

3 **Press [STOP ■] to stop playback.**

Playing back an MP3

MP3

Press [DVD] first.

1 **The MP3 Menu will appear automatically when you insert a disc. Or in stop mode, press [TOP MENU] to call up the MP3 List.**

▣ FILE LIST	
	1/2
<DIR>	
▢ FOLDER NAME 1	
▢ FOLDER NAME 2	
▢ FOLDER NAME 3	
▢ FOLDER NAME 4	
▢ FOLDER NAME 5	
▢ FOLDER NAME 6	
1 FILE NAME 1.MP3	
2 FILE NAME 2.MP3	

• To exit the menu, press **[TOP MENU]** again.

2 **Press [Cursor ▲ / ▼] to select the desired folder (group) or file (track), then press [ENTER].**

If a file is selected:
Playback will start.

If a folder is selected:
The files in the folder will appear.
Press **[Cursor ▲ / ▼]** to select a file or folder you want, then press **[ENTER]**.
• Press **[ENTER]** or **[FWD ▶▶]** to move to any lower folders.
• Press **[REV ◀◀]** or **[RETURN]** to move back to the folder above.

3 **Press [STOP ■] to stop playback.**

Hints for MP3 files:
• Folders are known as Groups, Files are known as Tracks.
• Folders are shown with the ☐ icon.
• The system can recognise up to 999 groups (or folders) per disc, and up to 999 tracks (or files) per disc.
• The maximum displayable number of letters for the group or the track name varies depending on their names. Unrecognisable characters will be replaced with asterisks (∗).
• Unplayable groups and tracks may be displayed depending on the recording conditions.
• For MP3 file recorded in Variable Bit Rate (VBR), the unit may not display the actual elapsed time.

It is recommended that files to be played back in this unit are recorded under the following specifications:
[MP3]
• Sampling frequency: 44.1 kHz or 48 kHz
• Constant Bit Rate: 112 kbps to 320 kbps

Note

• MP3 files cannot be recorded as digital sound using an MD or DAT deck.
• Files with extensions other than ".mp3 (MP3)" will not be listed in the File List.
• Some folders or files listed in the File List may be unplayable due to their recording status.
• The File List displays only up to 8 folder and file names.

Playing back a JPEG

<JPEG>

Press [DVD] first.

1 Press [TOP MENU].

• To exit the JPEG list, press **[TOP MENU]** again, **[STOP ■]** or **[RETURN]**.
• If there are more than one page of JPEG list, press **[FWD ▶▶]** to jump to the next page or press **[REV ◀◀]** to jump to the previous page.

2 Press [Cursor ▲ / ▼ / ◀ / ▶] to select a desired file to be played back, then press [PLAY ▶] or [ENTER].
An image will be played back from the selected file and go to the next one in turn.

3 Press [STOP ■] to stop playback.

Notes on JPEG:
After the file is displayed for 5 seconds or 10 seconds (see "Slide Show" on page 64), the display will move to the next file.
During JPEG playback, press **[Cursor ▶]** or **[Cursor ◀]** to rotate a picture 90 degrees clockwise or counterclockwise respectively. (Not available when the display menu appears.)
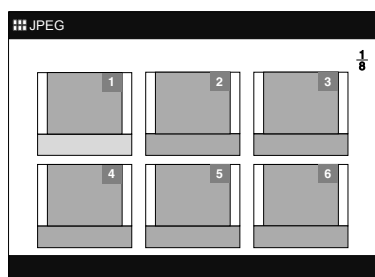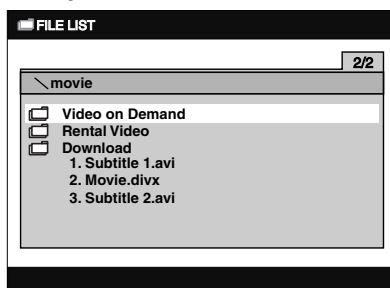Files with extensions other than ".jpg/.jpeg (JPEG)" will not be listed in the File List.

[JPEG] Size of picture
• Upper limit: 6300 x 5100 dots
• Lower limit: 32 x 32 dots
• Capacity limit: less than 2.2 MB
• High resolution or large-size JPEG files take a few moments to be displayed.
• It is impossible to play back progressive JPEGs (JPEG files saved in progressive format) on this unit.
• It is impossible to play back JPEG files of 2.2 MB or more.

Playing back a DivX®

DivX®

1 **The DivX® Menu will appear automatically when you insert a disc. Or in stop mode, press [TOP MENU] to call up the DivX® List.**

```
█ FILE LIST

                                    2/2
 ＼movie

  ⬜ Video on Demand
  ⬜ Rental Video
  ⬜ Download
       1. Subtitle 1.avi
       2. Movie.divx
       3. Subtitle 2.avi
```

To exit the File List, press **[TOP MENU]** again.

2 **Press [Cursor ▲ / ▼] to select the desired folder (group) or file (track), then press [ENTER].**

If a file is selected:
Playback will start.

If a folder is selected:
The files in the folder will appear.
Press **[Cursor ▲ / ▼]** to select the file or folder you want, then press **[ENTER]**.
• Press **[ENTER]** or **[FWD ▶▶]** to move to any lower folders.
• Press **[REV ◀◀]** or **[RETURN]** to move back to the folder above.

It is recommended that files to be played back in this unit are recorded under the following specifications:
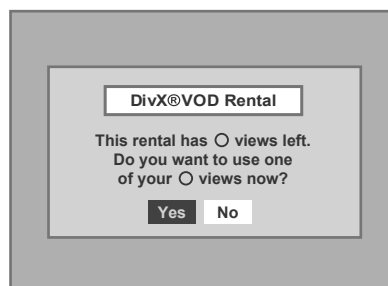
[DivX®]
• Official DivX® Certified product
• Plays all versions of DivX® video (including DivX® 6) with standard playback of DivX® media files.
• Maximum size of image   : 720 x 480 @30 fps
                               720 x 576 @25 fps
• Sampling frequency of audio : 8 kHz - 48 kHz
• Audio type   : MPEG1 audio layer2,
                          MP3 (MPEG1, 2, 2.5
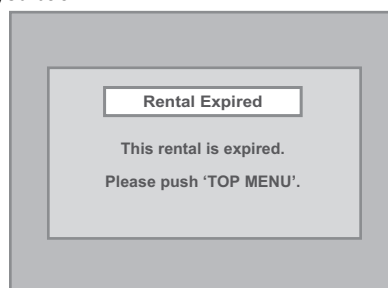   audio layer3),
                          Dolby Digital

Hint for the purchased or rental official DivX® Certified product
• When you purchased or rental a DivX® file through the DivX® Video-On-Demand (VOD) services, a registration code is required every time you get the new file from the DivX® VOD services. Refer to "DivX® VOD" on page 57.
• Some DivX® VOD files are restricted with the limited playable times (you cannot play them back beyond the limit). If your DivX® VOD file has such limit, the playback confirmation screen will appear.

Use **[Cursor ◀ / ▶]** to select "Yes" if you want to play back the file, or to select "No" if you do not wish to play it back. Then, press **[ENTER]** to confirm the selection.

```
 ┌─────────────────────────┐
 │   DivX®VOD Rental        │
 └─────────────────────────┘
 This rental has ○ views left.
    Do you want to use one
    of your ○ views now?

        Yes   No
```

• You cannot play back the DivX® VOD files, of which rental period has been expired. In such case, press **[TOP MENU]** and select other files that can be played back.

```
 ┌─────────────────────────┐
 │   Rental Expired         │
 └─────────────────────────┘
   This rental is expired.

   Please push 'TOP MENU'.
```

Hint

• DivX® is a codec (compression/decompression) that can compress images to a very small amount of data. The software can compress video data from almost any sources to the size that can be sent on the Internet without compromising visual quality of the images.
• A file with an extension of ".avi" and ".divx" is called a DivX® file. All files with the ".avi" extention are recognised as MPEG4.
• Files whose extension other than ".avi" and ".divx" will not be listed on the DivX® menu. However, unplayable groups or tracks may be displayed, depending on the recording conditions.
• Even if the file has an extension of either ".avi" and ".divx", this unit cannot play it back if it is recorded in the format other than DivX®.
• Folders are known as Groups; files are known as tracks.
• A maximum of 255 folders or 999 files may be recognised in one disc.
• Up to 8 hierarchies can be recognised in one folder. Files in the 9th or deeper hierarchies cannot be played back.
• If the track extends beyond the scope of screen, a down arrow "▼" appears, indicating that the user can view another part on the previous page. The current page number and the number of total pages are shown on the right of the down arrow "▼".
• The name of group and track can be displayed up to 29 characters. Unrecognisable characters will be replaced with asterisks (∗).
• You can play back the disc recorded in multi-session.
• Playback will be paused if the File List is displayed during the playback.

- It may take awhile for audio and images to be output after you inserted a disc and pressed **[PLAY ▶]**.
- When playing back the files recorded in high bit rates, the images can be interrupted in some occasions.
- Although DivX® logo has been obtained for this unit, it may not be able to play back some data, depending on the characteristics, bit rates, or audio format settings, etc.
- Use the software recognised by the DivX, Inc. when you make DivX® files.
- A DivX® file whose file size exceeds 2 GB cannot be played back.
- When using tools or utilities to make up DivX® files, read their instruction manual beforehand.
- Never use the MPEG4 tools when you make DivX® files. Otherwise, noise or disturbance of the picture and sound may be generated.
- If a large-sized DivX® file is selected, it may take awhile to start the playback (over 20 seconds sometimes).
- If DivX® files written on CD discs cannot be played back, rewrite them on a DVD disc and try to play back.
- For more information for DivX®, please visit http://www.divx.com.
- You cannot play back the DivX® VOD files obtained with different registration codes on this unit. Press **[TOP MENU]** and select other files that can be played back.

Authorization Error

This player is not authorized to play this video.
Please push 'TOP MENU'.
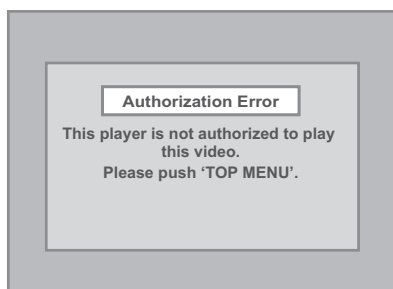
DivX® Subtitle

The subtitle created by the user can be displayed during DivX® playback.

1 After the DivX® file is selected, the Subtitle List will appear.

Subtitle List

File
Subtitle 1

Off
Smi
Srt
Sub
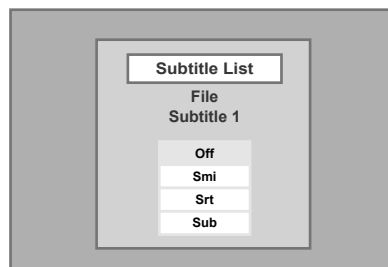
2 Press [Cursor ▲ / ▼] to select the desired extension you want to display, then press [ENTER]. DivX® with the subtitle starts playback. The subtitle cannot be displayed when the setting is "Off".

- If there is more than one extension, the extension selection will appear in the Subtitle List.
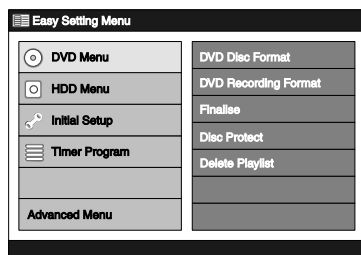
Note

- DivX® subtitle can only be displayed according to the same name with an extension of the DivX® file name.
- Files whose extension is other than ".SMI", ".smi", ".SRT", ".srt", ".SUB" and ".sub" will not be listed in the Subtitle List.
- This unit cannot be recognised if the DivX® file and its subtitle file are not in the one folder.
- The subtitle may not be displayed if the file size is too large.
- To change the subtitle, refer to "DivX Subtitle" on page 86 if multiple subtitles are available.
- The subtitle cannot display if the on-screen information is displayed.
- If "DivX Subtitle" is set to "Off" in Playback menu, the Subtitle List will not be displayed even if you select a DivX® file with created subtitle. (Refer to "DivX Subtitle" on page 86.)
- Unrecognisable characters will be replaced with asterisks (✳).

Playing back discs contains mixture of different type of media

For playing back a CD-RW / R that contains mixture of different type of media (DivX®, MP3, JPEG etc.), you need to setup which media to play.
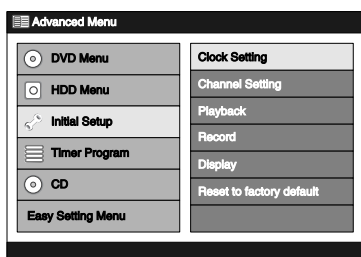
1 Press [SETUP].

"Easy Setting Menu" or "Advanced Menu" will appear. If "Advanced Menu" is displayed, proceed to step 3.
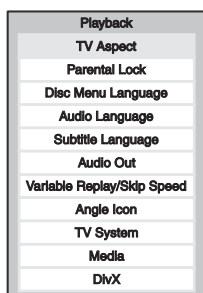
```
Easy Setting Menu

DVD Menu              DVD Disc Format
HDD Menu              DVD Recording Format
Initial Setup         Finalise
Timer Program         Disc Protect
                      Delete Playlist

Advanced Menu
```

2 Select "Advanced Menu" using [Cursor ▲ / ▼], then press [ENTER].

3 Select "Initial Setup" using [Cursor ▲ / ▼], then press [ENTER].

```
Advanced Menu

DVD Menu              Clock Setting
HDD Menu              Channel Setting
Initial Setup         Playback
Timer Program         Record
CD                    Display
                      Reset to factory default
Easy Setting Menu
```

4 Select "Playback" using [Cursor ▲ / ▼], then press [ENTER].

Playback Menu will appear.

```
Playback
TV Aspect
Parental Lock
Disc Menu Language
Audio Language
Subtitle Language
Audio Out
Variable Replay/Skip Speed
Angle Icon
TV System
Media
DivX
```

5 Select "Media" using [Cursor ▲ / ▼], then press [ENTER].

Media Menu will appear.

```
Media
Video
Audio
Picture
```
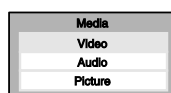
6 Select the media to play using [Cursor ▲ / ▼], then press [ENTER].

Video : To play DivX® files.
Audio : To play MP3 files.
Picture : To play JPEG files.
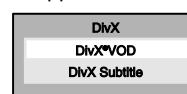
DivX® VOD

DivX®

This unit allows you to play back the files purchased or rented from DivX® Video-On-Demand (VOD) services. The files are available on the internet. When you purchase or rent DivX® VOD files on the internet, you will be asked to enter a registration code. This menu item provides you the registration code.

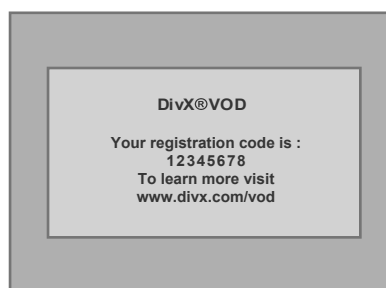### 1 Follow the steps 1 to 4 on the left to display the Playback Menu.

2 Select "DivX" using [Cursor ▲ / ▼], then press [ENTER].

DivX Menu will appear.

```
DivX
DivX®VOD
DivX Subtitle
```

3 Select "DivX®VOD" using [Cursor ▲ / ▼], then press [ENTER].

Your registration code will appear.

```
DivX®VOD

Your registration code is :
12345678
To learn more visit
www.divx.com/vod
```

Note

• One registration code is only valid for one DivX® VOD file.
• You must first download the file from the internet and play it back on this unit before you are able to get another code.
• You must follow this step every time you purchase or rent a DivX® VOD file from the internet.
• For more information for DivX®, please visit http://www.divx.com/vod.

Playing back discs using the Disc menu

DVD-V

A DVD contains a disc menu, which lists the contents and enables you to customize playback. The menu may offer choices for subtitle languages, special features, and chapter selection. Usually this information appears automatically when you start playback, but sometimes you need to press **[MENU / LIST]** to display the menu.

Press [DVD] first.

1 Press [MENU / LIST].

Disc Menu will appear.
If the feature is not available, " ⃠ " may appear on the TV screen.

2 Select an item using [Cursor ▲ / ▼ / ◀ / ▶], then press [ENTER].

Repeat this step until all the features you want are set up or to start playing back the disc from the menu. The following operations are available.

[MENU / LIST] button:
Displays the DVD Menu, which will vary among discs, and may be same with the Title menu.

[Cursor ▲ / ▼ / ◀ / ▶] buttons:
Move the cursor from item to item on the screen.

[ENTER] button:
Selects the currently highlighted menu option.

[the Number buttons]:
Selects a numbered menu option (available on certain discs).

3 Press [MENU / LIST] to exit the disc menu.

Note

• Menus vary among discs. Refer to the information accompanying the disc for details.

Playing back discs using the Title menu

DVD-V

Some DVDs have a title menu, which lists the titles available on the DVD. You can start playing back such discs at a specific title.

Press [DVD] first.

1 Press [TOP MENU].

Title Menu will appear.
If the feature is not available, " ⃠ " may appear on the TV screen.

2 Select a desired item using [Cursor ▲ / ▼ / ◀ / ▶], then press [ENTER].

The disc will start playing back at the title you selected. The following operations are available.

[TOP MENU] button:
Displays the DVD "Title Menu" which will vary between discs.

[Cursor ▲ / ▼ / ◀ / ▶] buttons:
Move the cursor from item to item on the screen.

[ENTER] button:
Selects the currently highlighted menu option.

[the Number buttons]:
Selects a numbered menu option (available on certain discs).

3 Press [TOP MENU] to exit.

Note

• **[TOP MENU]** will not be available for some DVDs.
• Menus vary among discs. Refer to the information accompanying the disc for details.

PBC function for Video CDs

VCD

This unit conforms to ver.1.1 and ver.2.0 of the Video CD standard playback control (PBC) function. This enables you to play back interactive software using menu screens. Refer to the information accompanying the Video CD.
Ver.1.1 (without PBC function): You can still enjoy playback of pictures and music from the CD.
Ver.2.0 (with PBC function): "Pbc" will appear on the front panel display when playing back a Video CD with the PBC function.

Hint

• When playing back Video CDs with the PBC function, "Pbc" is displayed instead of the playing back time and current track indications on the front panel display.

Note

• Some operations cannot be performed unless the function is cancelled either automatically or intentionally by you.
• Operations that are not available when the PBC function is set to "On" are indicated by the following symbol in this manual:

VCD
(PBC OFF)

Playing back a Video CD using the menu

VCD

1 When playing back a Video CD with the PBC function, the menu will appear automatically.

2 Press [the Number buttons] to select the desired track.

Playback will start at the selected track.

3 Press [RETURN] to go back to the menu.

Note

• While the Display appears, you cannot perform steps 2 and 3.

Cancelling and Recalling the PBC function

VCD

Insert a Video CD.

1 In stop mode, press [SETUP].

"Easy Setting Menu" or "Advanced Menu" will appear.

2 Select "CD" using [Cursor ▲ / ▼], then press [ENTER].
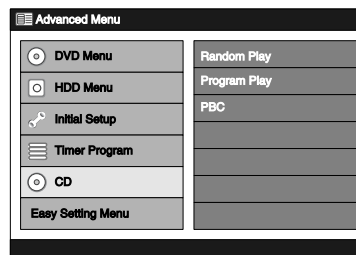
3 Select "PBC" using [Cursor ▲ / ▼], then press [ENTER].

PBC Menu will appear.
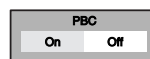
4 Select "Off" using [Cursor ◀ / ▶], then press [ENTER].

5 Press [SETUP] to exit.

To recall the PBC function, select "On" at step 4 above.

Note

• The default setting of "PBC" is "On."

Special playback

Resume playback

HDD | DVD-V | VR DVD-RW | Video DVD-RW

DVD-R | CD | VCD (PBC OFF) | MP3 | JPEG

DivX®
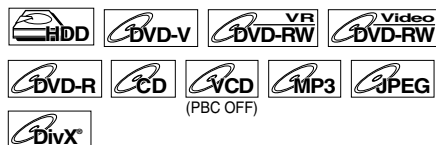
You can resume playback from the point where you stopped it before.

If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.

1 During playback, press [STOP ■].

Press **[STOP ■]** twice will cancel the Resume function.

2 Press [PLAY ▶].

In a few seconds, playback will resume from the point at which you stopped it before. Even if you turn off the unit, you can resume playback at the same point after the unit is powered on.

For HDD:
You can set a resume point per every title.
• If you play back from the Title List Menu, you can choose "Play From Start" or "Resume Play". Otherwise the playback will start from the resume point of the last played title.
• Press **[STOP ■]** twice at step 1 if you do not want to set a resume point. In this case, next time you press **[PLAY ▶]**, the playback will start from the beginning of the last title in the Title List.

For DVDs:
You can set only one resume point per disc.
• If a resume point is set, the playback will start from the resume point next time you press **[PLAY ▶]**.
• Press **[STOP ■]** twice at step 1 if you do not want to set a resume point. In this case, next time you press **[PLAY ▶]**, the playback will start from the beginning of the first title in the Title List.

For Video CD, CD, MP3 and JPEG:
You can set only one resume point per disc.
• If a resume point is set, the playback will start from the resume point next time you press **[PLAY ▶]** if you are playing a CD or Video CD with PBC off. As for the MP3 and JPEG files, the resume playback will start from the beginning of the track last played.
• Press **[STOP ■]** twice at step 1 if you do not want to set a resume point. In this case, next time you press **[PLAY ▶]**, the playback will start from the beginning of the disc.

To cancel the resume playback and start playing back the disc from the beginning:
Press **[STOP ■]** while playback is stopped.

Note

• For Video CDs, if you turn "PBC" on using the setting menu, the resume function is cancelled.
• For MP3 and JPEG files, playback will resume from the beginning of the track at which playback was stopped.
• Resume point will be lost when you;
  - Open / Close the disc tray.
  - Switch Original List and Playlist.

Fast forward / Fast reverse playback

HDD | DVD-V | VR DVD-RW | Video DVD-RW

DVD-R | CD | VCD | MP3 | DivX®

If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.

1 During playback, press [FWD ▶▶] or [REV ◀◀].

Each time you press **[FWD ▶▶]** or **[REV ◀◀]**, the approximate speed will change as follows.

Press button ▶▶ : +1 ◀◀ : -1	-3	-2	-1	0	+1	+2	+3
Speed (HDD/DVD)	x40	x20	x1	Normal speed	x1.5	x20	x40
Speed (CD)	-	-	x8	Normal speed	x8	-	-
Speed (VCD)	x16	x8	x2	Normal speed	x1.5	x8	x16
Speed (MP3)	-	-	x16	Normal speed	x16	-	-
Speed (DivX®)	x40	x20	x5	Normal speed	x1.5	x20	x40
OSD indication	▶◀◀◀	▶◀◀	▶◀		▶▶	▶▶▶	▶▶▶▶

• For HDD / DVD discs, sound will be output only during x1.5 fast forward if you set "Fast Forward with Audio" to "On" in the Setup Menu, otherwise the sound will be muted.
• For Audio CDs, approximate speed is fixed at x8 with sound.
• For Video CDs, approximate forward speeds are x1.5, x8 and x16, and approximate reverse speeds are x2, x8 and x16.
• For MP3 files, approximate speed is fixed at x16.
• For DivX® files, approximate forward speeds are x1.5, x20 and x40, and approximate reverse speeds are x5, x20 and x40.
• To return to playback at normal speed, press **[PLAY ▶]**.
• Picture quality of DivX® files in fast reverse is lower than that in fast forward.
• For some DivX® files, Fast forward/Fast reverse may not function.

Note

• Fast forward or fast reverse playback across titles (for HDD/DVD) or tracks (for VCD/MP3/DivX®) is impossible.

Slow forward / Slow reverse playback

HDD DVD-V DVD-RW VR DVD-RW Video

DVD-R VCD DivX®

If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.

### 1 During playback, press [PAUSE ❙❙], then press [FWD ▶▶] or [REV ◀◀].

Each time you press **[FWD ▶▶]** or **[REV ◀◀]**, the approximate speed change as follows.
(The sound will remain muted.)

Press button ▶▶ : +1 ◀◀ : -1	-3	-2	-1	0	+1	+2	+3
Speed (HDD/DVD)	x1/4	x1/8	x1/16	Normal speed	x1/16	x1/8	x1/2
VCD,DivX®	-	-	-	Normal speed	x1/16	x1/8	x1/2
OSD indication	▶◀◀◀	▶◀◀	▶◀		▶▶	▶▶▶	▶▶▶▶

To return to normal playback, press **[PLAY ▶]**.

Note

- For some DivX® files, Slow forward may not function.
- Only slow forward is available when playing back Video CDs and discs with DivX® files.

Time shift playback

HDD

You can playback a title being recorded from the beginning while recording continues.

Press [HDD] first.

1 Press [PLAY ▶] during recording.

Playback of the title you are recording will start from the beginning.
- Elapsed playback time will be displayed in the Front Panel Display.

2 To stop the playback, press [STOP ■] once.

- The Front Panel Display will switch back to show the elapsed recording time.

Important

- If you press **[STOP ■]** twice, it will stop the recording.

Note

- You cannot use the OTR function during Time shift playback.
- Before you start Time shift playback, make sure no resume point is set on other titles.

Simultaneous playback and recording

HDD DVD-V DVD-RW VR DVD-RW Video

DVD-R VCR

You can play back a title on one device while making a recording on other device.
To do so, simply select the device (HDD, DVD or VCR) you like to use for the playback by pressing **[HDD]**, **[DVD]** or **[VCR]** button during HDD/DVD/VCR recording. And then follow the normal playback procedure.

Only with regard to the HDD, you can playback a title in the same device (HDD).
To do so, press **[TOP MENU]** during recording and select a title you like to play, and then press **[PLAY ▶]**.
To playback a title being recorded while continuing to record, refer to "Time shift playback" on the left.

Note

- Video CDs, Audio CDs, MP3, JPEG and DivX® can also be played back during HDD/VCR recording.

Pause

HDD DVD-V DVD-RW VR DVD-RW Video

DVD-R CD VCD MP3 JPEG

DivX®

If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.

1 During playback, press [PAUSE ❙❙].

Playback will pause with the sound muted.

2 Press [PLAY ▶] to resume playback.

Step by step playback

[HDD] [DVD-V] [DVD-RW VR] [DVD-RW Video]

[DVD-R] [VCD] [DivX®]

1 During playback, press [PAUSE ⏸].

2 Press [SKIP ⏮ / ⏭] repeatedly.

Each time you press **[SKIP ⏭]**, playback will go forward one frame (or step) at a time with the sound muted.
To go backward one frame (or step), press **[SKIP ⏮]**.

3 Press [PLAY ▶] to resume playback.

Note

- Only step by step forward is available when playing back Video CDs and discs with DivX® files.

Variable replay / Variable skip

[HDD] [DVD-V] [DVD-RW VR] [DVD-RW Video]

[DVD-R]

During playback, you can skip forward or backward by the amount of time you set in the Setup Menu.
To set the time amount, refer to "6. Variable Replay/Skip Speed" on page 86.

If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.

Press [VARIABLE SKIP] if you want to skip forward.
Press [VARIABLE REPLAY] if you want to skip backward.

Zoom

[HDD] [DVD-V] [DVD-RW VR] [DVD-RW Video]

[DVD-R] [VCD] [JPEG] [DivX®]

If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.

1 During playback, press [DISPLAY] twice.

Icons for the available features will appear.

2 Select the 🔍 icon using [Cursor ◀ / ▶], then press [ENTER].
Option window will appear.

```
⊙ DVD MODE [T] 1 / 1 [C]  1 / 1  0:00:04/ 1:30:00

🔍 🔊 ⬜ 📷 🔁 🔍 NR

              × 1. 2
              × 1. 5
              × 2. 0
```
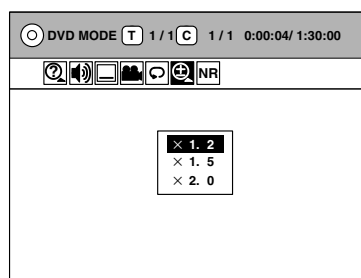
Four options are available, "x1.0", "x1.2", "x1.5" and "x2.0". These are displayed excluding the current zoom rate.

3 Select the desired zoom factor to zoom using [Cursor ▲ / ▼], then press [ENTER].
The zoom area is displayed.

4 Select the desired zoom position using [Cursor ▲ / ▼ / ◀ / ▶], then press [ENTER].
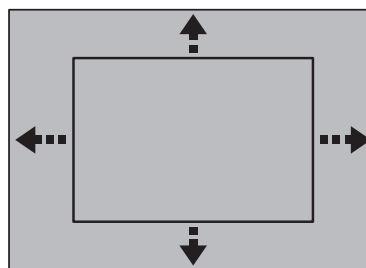
Zoom playback will start.

Note

- If selecting a smaller factor than that currently selected, the zoom area is not displayed.
- To cancel the zoom function, select "x1.0" using **[Cursor ▲ / ▼]**, then press **[ENTER]**.
- You cannot slide the zoomed picture on some JPEG files.

Repeat / Random / Programme playback / Slide Show

Repeat playback
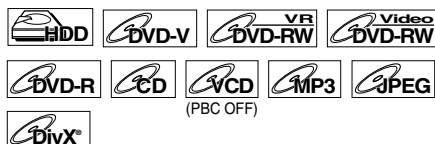
HDD | DVD-V | DVD-RW (VR) | DVD-RW (Video)

DVD-R | CD | VCD | MP3 | JPEG
(PBC OFF)

DivX®

**If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.**

1 **During playback, press [DISPLAY] twice.**

2 **Select the 🔁 icon using [Cursor ◀ / ▶], then press [ENTER].**

3 **Select the desired option to repeat using [Cursor ▲ / ▼], then press [ENTER].**

The selected repeat playback will start.
The following operations are available.

Title:
(Not available during Time shift playback)
The current title will be played back repeatedly.
(HDD and DVD)

Chapter:
(Not available during Time shift playback)
The current chapter will be played back repeatedly. (HDD and DVD)

All:
The current disc will be played back repeatedly.
(DVD-RW (VR mode), Audio CD, Video CD, MP3,
JPEG and DivX®)

A-B:
The A-B point will be played back repeatedly.
(HDD, DVD, Audio CD, Video CD and DivX®)
1. Select "A-B" using **[Cursor ▲ / ▼]**, then press **[ENTER]**.
2. Press **[ENTER]** to set point "A".
3. Press **[ENTER]** again to set the ending point "B" after point "A" is set.
The A-B Repeat Setting is activated.

Track:
The current track will be played back repeatedly.
(Audio CD, Video CD, MP3, JPEG and DivX®)

Group:
The current group will be played back repeatedly.
(MP3 and DivX®)

Hint
• To cancel the repeat playback, select "Off" at step 3.
The repeat setting is also cancelled when you stop playback.

Note
• You can only set A-B repeat playback within the current title (for HDD and DVD) or current track (for Audio CDs, Video CDs and discs with DivX® files).
• Group Repeat is not available during the Random Playback.
• For some DivX® files, A - B Repeat playback may not function.
• For Video CDs with PBC function, repeat playback does not work while PBC function is on.

Random playback

CD | VCD | MP3 | JPEG
(PBC OFF)

You can use this function to play back a disc randomly instead of recorded order.

1 **In stop mode, press [SETUP].**
"Easy Setting Menu" or "Advanced Menu" will appear.

2 **Select "CD" using [Cursor ▲ / ▼], then press [ENTER].**

3 **Select "Random Play" using [Cursor ▲ / ▼], then press [ENTER].**
Random playback will start.

Hint
• To cancel random playback, press **[STOP ■]** twice during random playback.
• For Video CDs, if you select random playback with the PBC function on, the PBC function will be turned off automatically and random playback starts.

Note
• During random playback, if you forward the track to the end, the playback speed of the next track will be normal.
• During random playback, you cannot use the search function except for the search with **[SKIP ◀◀ / ▶▶]**.
By pressing **[SKIP ◀◀]**, you can return only to the beginning of the current track.
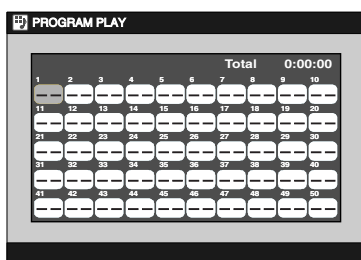
Programme playback

CD **VCD**
(PBC OFF)

You can programme the disc to play back in your desired order.

1 **Follow steps 1 and 2 in "Random playback" on page 63.**

2 **Select "Program Play" using [Cursor ▲ / ▼], then press [ENTER].**
Program play screen will appear.

3 **Select the desired track using [Cursor ▲ / ▼], then press [ENTER] or [Cursor ▶].**

4 **Press [PLAY ▶] to start programme playback.**

Hint

• To erase tracks you entered, select the track and then press **[CLEAR]**.
• You can make up to 50 track settings.
• To cancel programme playback, press **[STOP ■]** twice during programme playback.
• You may also select the desired track using **[the Number buttons]** at step 3.
• For Video CDs, if you select programme playback with the PBC function on, the PBC function will be turned off automatically and programme playback starts.

Note

• During programme playback, if you forward the track to the end, the playback speed of the next track will be normal.
• During programme playback, you cannot use the search function except for the search with **[SKIP |◀◀ / ▶▶|]**.

Slide Show

JPEG

You can select the display time between 5 seconds and 10 seconds.

1 **Follow steps 1 and 2 in "Random playback" on page 63.**

2 **Select "Slide Show" using [Cursor ▲ / ▼], then press [ENTER].**

3 **Select the display time using [Cursor ▲ / ▼], then press [ENTER].**

4 **Press [SETUP] to exit.**

Note

• Large-size JPEG files take a few moments to be displayed.

Search

Title / Chapter search

HDD DVD-V DVD-RW VR DVD-RW Video

DVD-R

If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.

Using [SKIP |◄◄ / ►►|] buttons

1 During playback, press [SKIP ►►|] to skip the current title or chapter and move to the next.

The unit moves to the next title or chapter one after the other.

To go back to the previous title or chapter, press **[SKIP |◄◄]** twice in quick successions.

Using the [DISPLAY] button

1 During playback, press [DISPLAY] twice.

2 Select the ⓘ icon using [Cursor ◄ / ►], then press [ENTER].

🅣 for the title number is highlighted.

Searching for a Title:

3 Enter the desired title number to search for using [Cursor ▲ / ▼] or [the Number buttons], then press [ENTER].

Title search will start.

Hint
• Total number of chapters and playback time of the selected title are also displayed.

Searching for a Chapter:

3 Press [Cursor ◄ / ►] to highlight the number displayed in the right side of the 🅒 icon.

4 Enter the desired chapter number to search for using [Cursor ▲ / ▼] or [the Number buttons], then press [ENTER].

Chapter search will start.

Hint
• The title number and playback time of the selected chapter are also displayed.

Track search

CD VCD MP3 JPEG DivX®
(PBC OFF)

Press [DVD] first.

Using [SKIP |◄◄ / ►►|] buttons

1 During playback, press [SKIP ►►|] to skip the current track and move to the next.

The unit moves to the next track one after the other.
To go back to the previous track, press **[SKIP |◄◄]** twice in quick successions.

Using the [DISPLAY] button

1 During playback, press [DISPLAY] twice.

2 Select the ⓘ icon using [Cursor ◄ / ►], then press [ENTER].

🅣 for the track number is highlighted.

3 Enter the desired track number to search for using [Cursor ▲ / ▼] or [the Number buttons], then press [ENTER].

Track search will start.

Hint
• For Video CDs, you can perform the track search function in stop mode without turning PBC off manually.

Note
• During random playback or programme playback, you cannot search the desired track.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

VCR Functions

Others

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Time search

(PBC OFF)
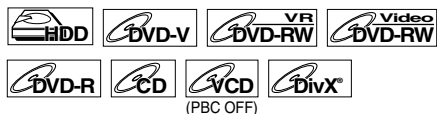
If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.

1 During playback, press [DISPLAY] twice.

2 Select the ⓘ icon using [Cursor ◄ / ►], then press [ENTER].
T for the title or track number is highlighted.

3 Move the cursor to the elapsed time counter using [Cursor ►].

4 Enter the desired time to search for using [Cursor ▲ / ▼] or [the Number buttons], then press [ENTER].
Time search will start.

Hint

• For Video CDs, you can perform the time search function in stop mode without turning PBC off manually.

Note

• During random playback or programme playback, you cannot search the desired time.
• The title number and chapter number of the setting time are also displayed.
• Time search function is available only in the same track or title.
• If the time search is not available, – –:– –:– – / – –:– –:– – (or 0:00:00 / 0:00:00 for CD) is displayed instead of the time count.

Series search

You can search for the group of titles made with the same Periodical Timer Recordings. We refer to such a group of titles as "series". This feature is available only with the HDD.

Press [HDD] first.

1 Press [TOP MENU].
Title List will appear.
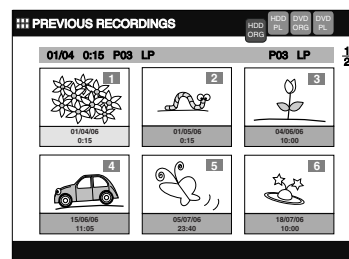
Press **[MENU / LIST]** to switch Original List / Playlist if necessary.

2 Select any title that belongs to the series you want to search using [Cursor ▲ / ▼ / ◄ / ►], then press [ENTER].
Title List Menu will appear.
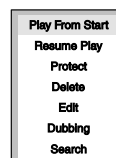
3 Select "Search" using [Cursor ▲ / ▼], then press [ENTER].
Series List will appear.
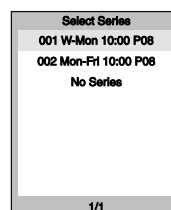
Highlight will be on the series that contains the selected title.

4 Select the desired series using [Cursor ▲ / ▼], then press [ENTER].
Title List of the selected series will appear.
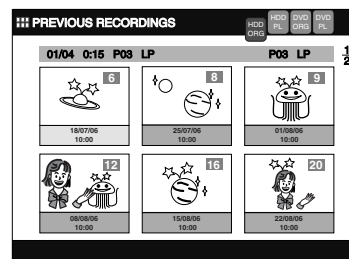
5 Select a desired title to play using [Cursor ▲ / ▼ / ◄ / ►], then press [PLAY ►]. Or press [ENTER] to call up the Title List Menu and select your desired playback style.

To show the regular Title List, select "Display All Program" from the Title List Menu. Then press **[ENTER]**.

```
                                                   1
         ┌──────────────────────────┐
         │      Select Series         │
         │ ┌──────────────────────┐   │
         │ │ 001 W-Mon 10:00 P08  │   │── 2
         │ └──────────────────────┘   │
         │   002 Mon-Fri 10:00 P08    │
         │ ┌──────────────────────┐   │
         │ │       No Series      │   │── 3
         │ └──────────────────────┘   │
         │                            │
         │                            │
         │                            │
         │                            │
         │              ┌────┐        │
         │              │1/1 │        │── 4
         └──────────────└────┘────────┘
```
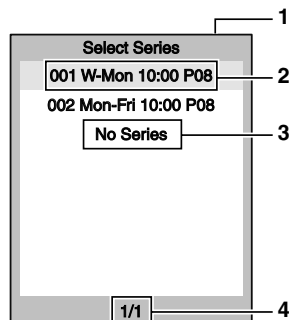
1 Series List
  • Up to 8 series can be displayed on 1 page.
  • The series that contains the oldest title comes first on the list.
2 Information on the series.
  • Type of the Periodical Recording (example: every Monday), start time, and the recording channel. (In the example here, the information tells you this series is recorded on every Monday, starting at 10:00 on P08.)
3 No Series
  • All recordings which are not periodical fall into this category.
  • "No Series" will always be at the last on the list.
4 Current page / Total number of pages.
  • Up to 38 pages (300 series) are available.

Note
• The unit exits the Series search mode when you switch the list type or the device mode.

Selecting the format of audio and video

You can select the format of audio and video to suit the content of the disc you are playing back.

Switching subtitles

[DVD-V] [DVD-RW VR] [DivX®]

Many DVD-Videos have subtitles in one or more languages. The available languages are usually printed on the disc case. You can switch subtitle languages at any time during playback.

Press [DVD] first.

1 During playback, press [DISPLAY] twice.

2 Select the ▢ icon using [Cursor ◄ / ►], then press [ENTER].

3 Select the desired subtitle language using [Cursor ▲ / ▼], then press [ENTER].

Subtitles are displayed in the selected language. If you select "Off," subtitles will disappear.

Note
• With some discs, it is only possible to change the subtitle language from the disc menu. Press **[MENU / LIST]** to display the disc menu.
• If a 4-digit language code appears in the subtitle menu at step 3, refer to the "Language code" on page 97.
• For discs with DivX® files, the screen only displays the number of subtitle languages.

Switching audio soundtrack

[HDD] [DVD-V] [DVD-RW VR] [CD] [VCD]

[MP3] [DivX®]

When playing back a DVD-Videos recorded with two or more soundtracks (often in different languages), you can switch among them during playback.
When playing back Audio CDs, Video CDs or MP3 files, you can switch among the left (L), the right (R) channel, and stereo (L / R).

If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.

1 During playback, press [AUDIO ⊙] to call up the available audio settings on the TV screen.

<Example: DVD-Video>

| ✓ 1. Dolby Digital 2ch English |
| 2. Dolby Digital 5.1ch English |
| 3. Dolby Digital 2ch English |

<Example: CD / MP3 / Video CD>

| ✓ L / R |
| L |
| R |

<Example: DivX®>

| ✓ 1.   MP3 |
| 2.   MP3 |
| 3.   MP3 |
| 4.   MP2 |
| 5.   Dolby Digital |
| 6.   — — — |
| 7.   MP3 |
| 8.   MP3 |
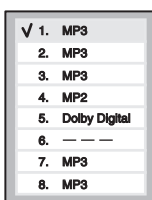
2 Select a desired setting using [Cursor ▲ / ▼], then press [ENTER].

As in the example below, if the title contains both main and sub audio, you can further select "Main", "Sub" or "Main / Sub".
Example:VR mode DVD-RW disc

| ✓ 1.Dolby Digital DUAL Main |

Press **[ENTER]**.

| ✓ Main |
| Sub |
| Main / Sub |

Using **[Cursor ▲ / ▼]**, select the desired setting, then press **[ENTER]** to activate the setting.
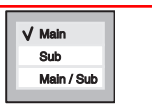
3 Press [DISPLAY] to exit.

[DISPLAY] button can also lead you to the AUDIO Menu. Simply press **[DISPLAY]** twice during playback to show the icons for the available features, then using **[Cursor ◄ / ►]**, select ⊲)) and press **[ENTER]**.

Note

• With some discs, it is only possible to change the soundtrack from the disc menu. Press **[TOP MENU]** to display the disc menu.

Switching camera angles

DVD-V

Some DVD-Videos feature scenes shot from two or more angles. The disc case is usually marked with an angle icon if the disc has multi-angle scenes.

Press [DVD] first.

1 During playback, press [DISPLAY] twice.

The angle icon appears when a switching camera angle is available. (Available only when the angle icon appears in bottom right on the TV screen.)

2 Select the 🎥 icon using [Cursor ◄ / ►], then press [ENTER].

The angle will switch each time you press **[ENTER]**.

Note

• " ⊘ " will appear when Angle feature is not available.

Visual noise reduction

HDD *DVD-V* *DVD-RW VR* *DVD-RW Video*
DVD-R *VCD* *DivX®*

This feature allows you to reduce visual noise during playback.

If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.

1 During playback, press [DISPLAY] twice.

2 Select the NR icon using [Cursor ◄ / ►], then press [ENTER].

Option window will appear.

3 Select the desired option using [Cursor ▲ / ▼], then press [ENTER].

This function reduces noise in the playback picture. When playing back discs recorded in long time modes such as SLP or SEP, select "Type 1" or "Type 2". "Type 2" is more effective. When playing back discs with a little noise, such as DVD-Videos, select "Off".

Editing

Disc editing

You can edit a disc recorded using the PAL system. It is impossible to edit discs recorded using the NTSC system.

Guide to the Title List

When you record programmes to the HDD / DVD, a title list will be created. Title list is the thumbnails of the recorded programmes (titles). You can call up the Title List by pressing **[TOP MENU]** and select the title of your choice from the list and can play or edit it from the Title List Menu.
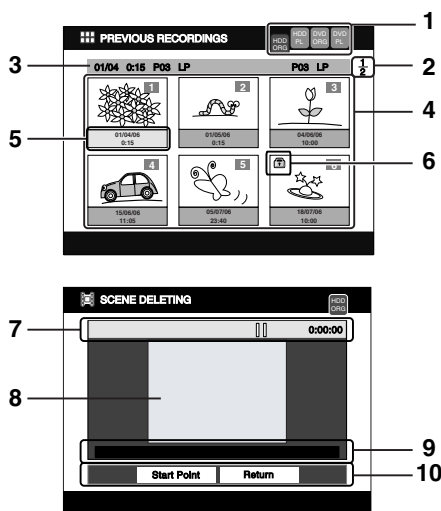
1 Selected device (HDD or DVD) and selected list type (Original List or Playlist)

2 The number of the current Title List page / the total number of the Title List pages
Use **[FWD ▶▶]** to jump to the next page. Use **[REV ◀◀]** to jump to the previous page. Use **[Cursor ◀ / ▶]** to move among titles one by one.

3 Date, time, recorded channel and Rec Mode (if the title name has not been assigned yet, the date and the time of the recording was made, the recorded channel (Original List Titles in the HDD or VR mode DVD-RW only), and the Rec Mode (Original List only) will be assigned as the title name automatically.)

4 Thumbnails of the titles
Only the highlighted thumbnail can be seen in motion.

5 Date and time of the title was recorded

6 Protect icon
This icon appears only when the title is protected (Original List only).

7 Status bar

8 Preview window

9 Progress bar

10 Command bar

Available Menus

|	Item	Media					Page	Description
		HDD		Video Mode DVDs	VR mode DVDs			
		Original	Playlist	Original	Original	Playlist		
Title List Menu	Play From Start	○	○	○	○	○	52-53	To play from the beginning of the title.
	Resume Play	○	○	×	×	×	60	To resume playback from the point where it is stopped last time.
	Protect/Undo Protect	○	×	×	○	×	72	To protect/undo protect the title.
	Delete	○	○	○	○	○	70-71	To delete a title.
	Edit	○	○	○	○	○	-	
	Dubbing	○	○	×	×	×	40-47	To make copies.
	Search	○	○	×	×	×	65-67	To search for the group of titles made with the same Periodical Timer Recordings.
Edit Menu	Protect/Undo Protect	○	×	×	○	×	72	To protect/undo protect the title.
	Delete	○	○	○	○	○	70-71	To delete a title.
	Edit Title Name	○	○	○	○	○	72-73	To edit title names.
	Scene Delete	○	○	×	○	○	73-75	To delete a part of the title.
	Divide	×	○	×	×	○	75	To divide a title into two titles.
	Combine	×	○	×	×	○	76	To combine two titles into one.
	Move	×	○	×	×	○	77	To rearrange the order of the Title List.
	Chapter Mark	○	○	×	○	○	78-79	To add/delete the chapter marks.
	Add To Playlist	○	○	×	○	○	80	To add a title to the Playlist.

○: Available
×: Not available

What are Original List and Playlist?

There are 2 types for the title list: Original List and Playlist.

Original List:
Original List is the list of the recorded programmes (titles) which are created automatically when they are recorded. Original List is available for HDD, DVD-RW and DVD-R. Please note that editing the titles in the Original List is like editing the original data. For example, if you erase a title in the Original List, the title cannot be recovered. So, please be careful when you work in the Original List.

Playlist:
Playlist is the copy of the Original List. You can edit the titles in the Playlist as you like without affecting the original data in the Original List. It works like a back up for the Original List. Delete a title from the Playlist does not delete the corresponding title in the Original List. But delete a title from the Original List, the corresponding title in the Playlist will be deleted. With HDD and VR mode DVD-RW, the Playlist is created automatically. Playlist is available only for the HDD and the VR mode DVDs. There is no Playlist for the Video mode DVDs.

Deleting titles

Deleting selected titles

[VIDEO] [VR] [ORIGINAL] [PLAYLIST]

You can delete titles which you do not need anymore. Be advised that the titles once deleted cannot be recovered.
With DVD-R discs, deleting titles will not affect the recordable disc space.
With Video mode DVD-RW discs, the disc space will increase only when the last title in the Original List is deleted.
With VR mode DVD-RW discs, the disc space will increase when any title in the Original List is deleted. Deleting a title in the Playlist will not delete the corresponding title in the Original List.

If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.

**1 Press [TOP MENU].**
Title List will appear.

Example: HDD Original List
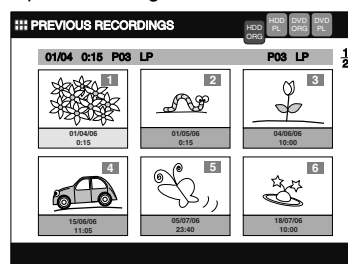
Press **[MENU / LIST]** to switch Original List / Playlist if necessary.

2 Select a desired title to delete using [Cursor ▲ / ▼ / ◀ / ▶], then press [ENTER].
Title List Menu will appear.
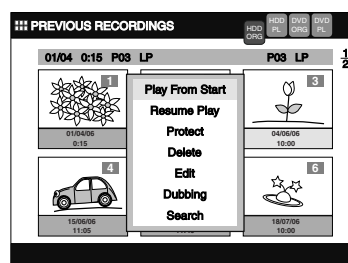
3 Select "Delete" using [Cursor ▲ / ▼], then press [ENTER].
Confirmation window will appear.

4 Select "Yes" using [Cursor ◀ / ▶], then press [ENTER].
Final confirmation window will appear.
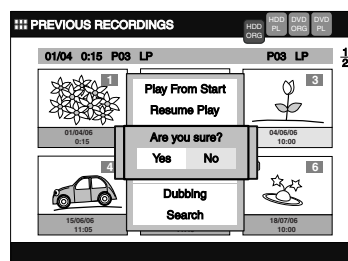
5 Select "Yes" using [Cursor ◀ / ▶], then press [ENTER].

The selected title is deleted.
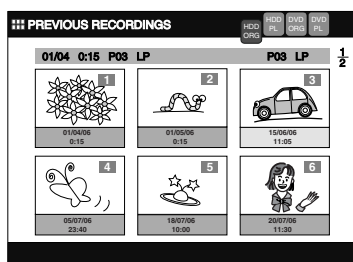
6 Press [TOP MENU] to exit.

Note
• When a title is deleted from an Original List, corresponding title on the Playlist(s) will be also deleted.
• Deleting a Playlist will not increase the recordable disc space.

Deleting all titles in HDD

[ORIGINAL] [PLAYLIST]

Press [HDD] first.

1 Press [SETUP].

"Easy Setting Menu" or "Advanced Menu" will appear.
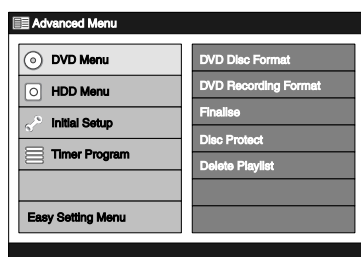
2 Select "HDD Menu" using [Cursor ▲ / ▼], then press [ENTER].
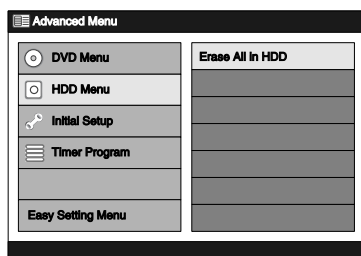
3 With "Erase All in HDD" selected, press [ENTER].

Option window will appear.

4 Select the desired option using [Cursor ▲ / ▼], then press [ENTER].

Confirmation window will appear.
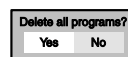
5 Select "Yes" using [Cursor ◀ / ▶], then press [ENTER].

Final confirmation window will appear.
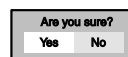
6 Select "Yes" using [Cursor ◀ / ▶], then press [ENTER].

All titles in the selected list are erased.

Protecting / Undo protecting titles

[VR] [ORIGINAL]

To prevent accidental editing or title erasing, you can protect the contents in the Original List.

If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.

1 Press [TOP MENU].

Title List will appear.

Example: HDD Original List
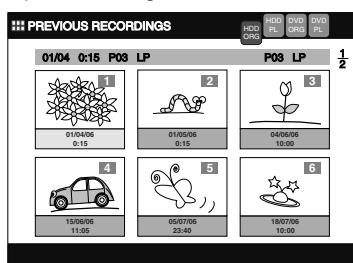
Press **[MENU / LIST]** to switch to Original List if necessary.

2 Select a desired title to protect using [Cursor ▲ / ▼ / ◄ / ►], then press [ENTER].

Title List Menu will appear.
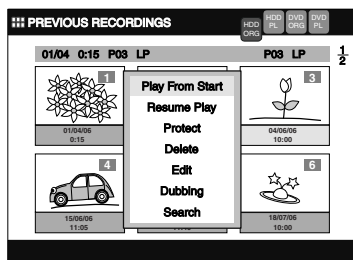
3 Select "Protect" using [Cursor ▲ / ▼], then press [ENTER].

The protect icon will appear at the upper left corner of the thumbnail.

If the title has already been protected, "Undo Protect" will be listed in the Title List Menu instead of "Protect". To cancel the protection, select "Undo Protect" and press **[ENTER]**. The protect icon will disappear.

4 Press [TOP MENU] to exit.

To protect the disc itself, refer to "Setting disc protection" on page 49.

Editing title names

[VIDEO] [VR] [ORIGINAL] [PLAYLIST]

You can name titles or change the title names from this menu.
The names you put on the titles will be displayed on a Title List.

If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.

1 Press [TOP MENU].

Title List will appear.

Example: HDD Original List
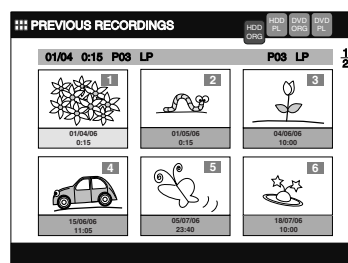
Press **[MENU / LIST]** to switch Original List / Playlist if necessary.

2 Select a desired title to edit using [Cursor ▲ / ▼ / ◄ / ►], then press [ENTER].

Title List Menu will appear.

3 Select "Edit" using [Cursor ▲ / ▼], then press [ENTER].

Edit Menu will appear.
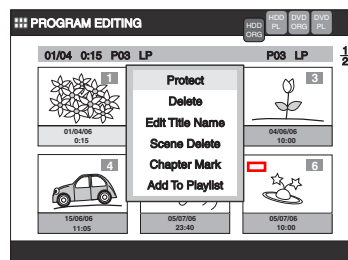
4 **Select "Edit Title Name" using [Cursor ▲ / ▼], then press [ENTER].**

Editing Screen will appear.
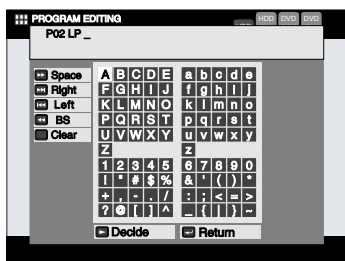
5 **To enter a title name, refer to "Guide to Edit Title Name" below.**

6 **When you finish entering the title name, press [PLAY ▶]. Or select "Decide" using [Cursor ▲ / ▼ / ◀ / ▶], then press [ENTER].**

Your setting is activated.

7 **Press [TOP MENU] to exit.**

Guide to Edit Title Name

Method 1: By selecting the letters on the screen:
Move to a desired letter or a command key using **[Cursor ▲ / ▼ / ◀ / ▶]**, then press **[ENTER]**.
The selected letter will be entered in the field at the top of the screen.

Method 2: By entering the letters directly using [the Number Buttons]:
Following the list below, press **[the Number Buttons]** repeatedly until the desired letter appears.

Press		
0	space , 0	
1	. @ / : 1	
2	ABC	abc	2
3	DEF	def	3
4	GHI	ghi	4
5	JKL	jkl	5
6	MNO	mno	6
7	PQRS	pqrs	7
8	TUV	tuv	8
9	WXYZ	wxyz	9

press [2]ABC
A B C a···
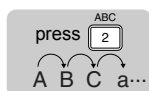
Note
• Unidentified letters in a title name are shown by "✻". If you delete them, adjoining letters may change to "✻" or other.

• If you want to enter the same letters successively, for example if you want to enter AA, press **[ENTER]** after you enter the first A ([2]), then enter the other A by pressing ([2]) one more time.
• Press **[FWD ▶▶]** for a space.
• Press **[SKIP I◀◀ / ▶▶I]** to move the cursor to the left or right.
• Press **[REV ◀◀]** for a back space.
• Press **[CLEAR]** to erase all letters entered.
• You can enter up to 64 letters, for the titles in the HDD and the VR mode DVDs.
• You can enter up to 30 letters, for the titles in the Video mode DVDs.

Deleting a part of a title

[VR] [ORIGINAL] [PLAYLIST]

You can delete a specific part of a title.
Even if a part of a title is deleted from the Playlist, the title in the Original List will remain as it was, and recordable disc space will not increase.

**If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.**

1 **Press [TOP MENU].**

Title List will appear.

Example: HDD Original List
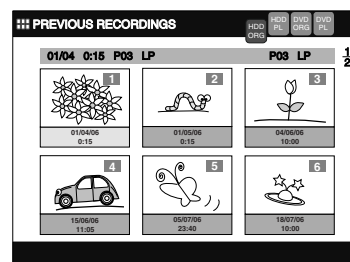
Press **[MENU / LIST]** to switch Original List / Playlist if necessary.

2 **Select a desired title to edit using [Cursor ▲ / ▼ / ◀ / ▶], then press [ENTER].**

Title List Menu will appear.
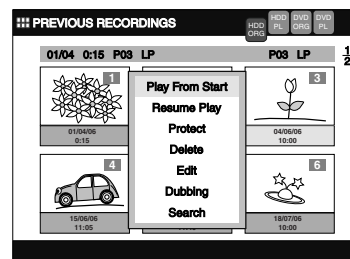
3 **Select "Edit" using [Cursor ▲ / ▼], then press [ENTER].**

Edit Menu will appear.
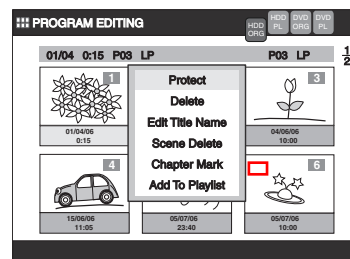
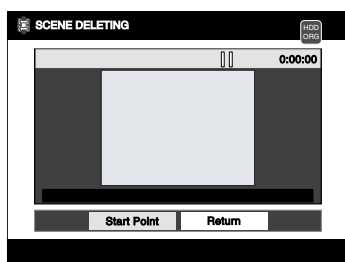Introduction
Connections
Basic Setup
Recording
Playback
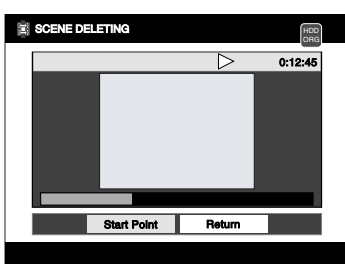**Editing**
Function Setup
VCR Functions
Others

4 **Select "Scene Delete" using [Cursor ▲ / ▼], then press [ENTER].**

Editing Screen will appear.
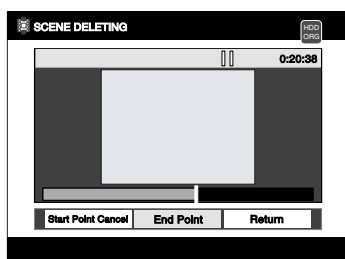

5 **Press [PLAY ▶] to start playback.**

Play the title up to the point where you want to set a start point for the scene to be deleted.

- If you want to quit the process, select "Return" with **[Cursor ◀ / ▶]**. Then press **[ENTER]**.

6 **When it reaches the desired start point, press [ENTER], or press [PAUSE ❚❚] or [STOP ■] and then [ENTER].**

A start point is marked and the display shown below will appear.

- If you want to reset the start point, select "Start Point Cancel" with **[Cursor ◀ / ▶]**, then press **[ENTER]**.
- If you want to quit the entire process, select "Return" with **[Cursor ◀ / ▶]**, then press **[ENTER]**.

7 **Press [PLAY ▶] to start play back again.**

Play the title up to the point where you want to set an end point for the scene to be deleted.

8 **When it reaches the desired end point, press [ENTER], or press [PAUSE ❚❚] or [STOP ■] and then [ENTER].**

An end point is marked, and the display shown below will appear.
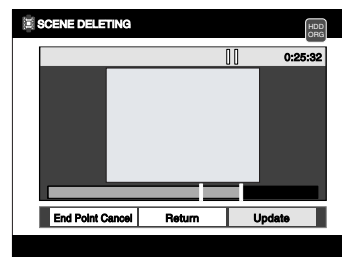
- If you want to reset the end point, select "End Point Cancel" with **[Cursor ◀ / ▶]**, then press **[ENTER]**.
- If you want to quit the entire process, select "Return" with **[Cursor ◀ / ▶]**, then press **[ENTER]**.

9 **With "Update" selected, press [ENTER].**

Confirmation window will appear.
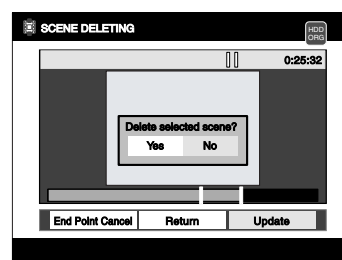
10 **Select "Yes" using [Cursor ◀ / ▶], then press [ENTER].**

Final confirmation window will appear.
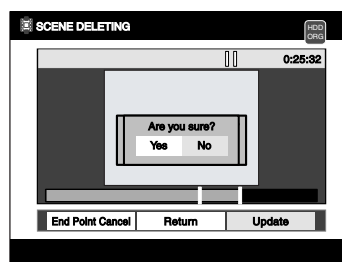
11 **Select "Yes" using [Cursor ◀ / ▶], then press [ENTER].**

The scene is deleted.

12 **If you want to delete other parts, repeat steps 5 to 11. Otherwise, select "Return" and press [ENTER].**

Select "Yes" using **[Cursor ◀ / ▶]**, then press **[ENTER]** to finish the editing.

13 **Press [TOP MENU] to exit.**

Note

- If a certain scene is deleted from the title in the Original List, the title in the Playlist that contains the corresponding scene will be deleted also.
- When you search for the start / end point, you can use **[SKIP I◄◄ / ►►I]**, **[FWD ►► / REV ◄◄]**, **[VARIABLE REPLAY / VARIABLE SKIP]**, **[PAUSE II]** or **[PLAY ►]** as usual.
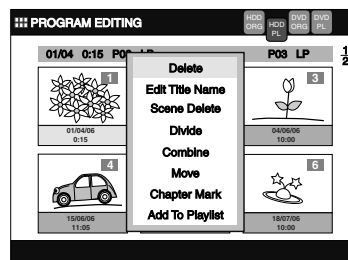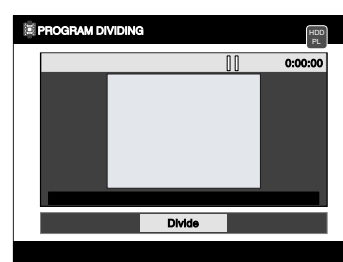
Dividing a title

HDD   DVD-RW VR

[VR] [PLAYLIST]

You can divide a title into two new titles.

If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.

1 Press [TOP MENU].

Title List will appear.

Example: HDD Playlist
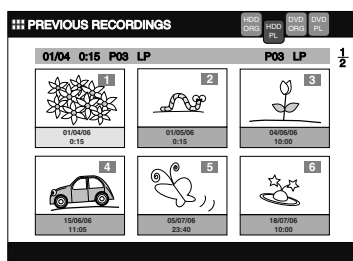
Press **[MENU / LIST]** to switch to Playlist if necessary.

2 Select a desired title to edit using [Cursor ▲ / ▼ / ◄ / ►], then press [ENTER].

Title List Menu will appear.
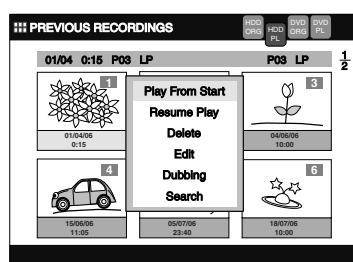
3 Select "Edit" using [Cursor ▲ / ▼], then press [ENTER].

Edit Menu will appear.

4 Select "Divide" using [Cursor ▲ / ▼], then press [ENTER].

Editing Screen will appear.

5 Press [PLAY ►] to start playback.

Play the title up to the point where you want to divide the title.

6 When it reaches the desired dividing point, press [ENTER], or press [PAUSE II] or [STOP ■] and then [ENTER].

Confirmation window will appear.
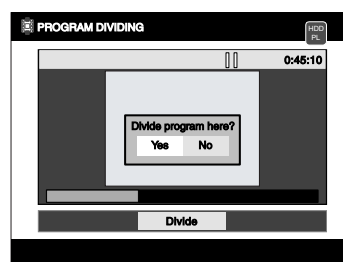
7 Select "Yes" using [Cursor ◄ / ►], then press [ENTER].

The title is divided.

8 Press [TOP MENU] to exit.

Note

- If a disc contains the maximum number of recordings (HDD: 300, DVD-RW disc: 99), you cannot divide any titles.
- With DVD-RW disc, you cannot divide the titles if the total number of chapters has already reached 999.
- When you search for the dividing point, you can use **[SKIP I◄◄ / ►►I]**, **[FWD ►► / REV ◄◄]**, **[VARIABLE REPLAY / VARIABLE SKIP]**, **[PAUSE II]** or **[PLAY ►]** as usual.

Combining titles

HDD | DVD-RW VR

[VR] [PLAYLIST]

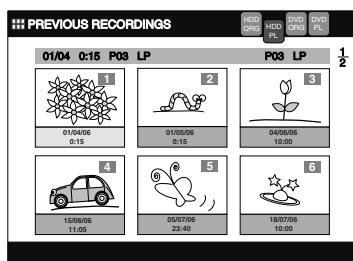You can combine two titles into a single title.

Steps on how to combine title 1 and 2 are shown here as an example.

If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.

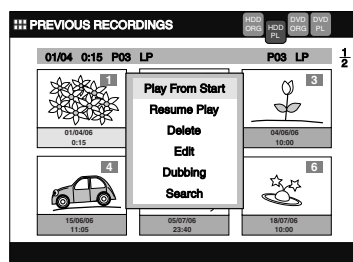## 1 Press [TOP MENU].

Title List will appear.

Example: HDD Playlist

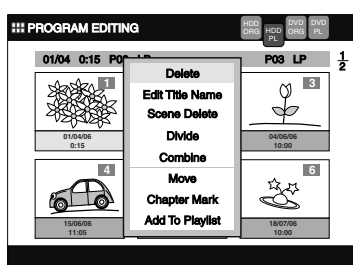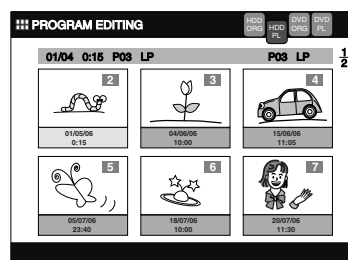Press **[MENU / LIST]** to switch to Playlist if necessary.

2 Select a desired title (title 1) using [Cursor ▲ / ▼ / ◄ / ►], then press [ENTER].

Title List Menu will appear.

3 Select "Edit" using [Cursor ▲ / ▼], then press [ENTER].
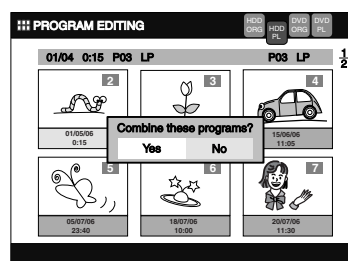
Edit Menu will appear.

4 Select "Combine" using [Cursor ▲ / ▼], then press [ENTER].

The selected title will disappear temporarily, and the frame of the next title will be highlighted.

5 Select a title to combine (title 2) using [Cursor ▲ / ▼ / ◄ / ►], then press [ENTER].

Confirmation window will appear.

6 Select "Yes" using [Cursor ◄ / ►], then press [ENTER].

Two titles will be combined into a single title.

7 Press [TOP MENU] to exit.

Note

- If the number of chapter marks in the combined title exceeds 999, the combination will be rejected.
- If one of two titles in the Original List is deleted, the combined new title will be deleted.
- The name of the title selected first will become the name of the combined title.
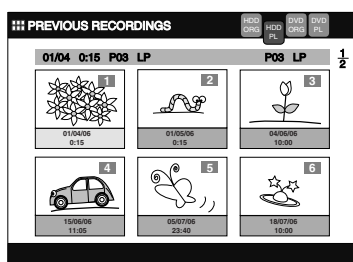- The title selected first will be the first half of the combined title.

Moving titles

HDD **DVD-RW VR**

[VR] [PLAYLIST]

You can move the title position.

If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.
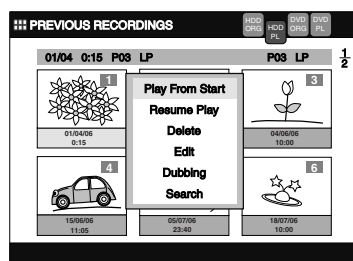
1 Press [TOP MENU].

Title List will appear.

Example: HDD Playlist

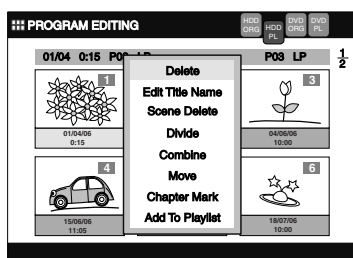Press **[MENU / LIST]** to switch to Playlist if necessary.

2 Select a desired title to move using [Cursor ▲ / ▼ / ◀ / ▶], then press [ENTER].
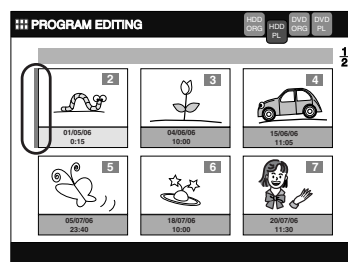
Title List Menu will appear.

3 Select "Edit" using [Cursor ▲ / ▼], then press [ENTER].
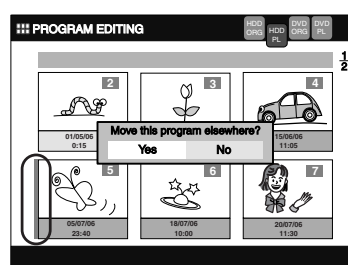
Edit Menu will appear.

4 Select "Move" using [Cursor ▲ / ▼], then press [ENTER].

The selected title will become a single line.

5 Move the line to the desired position using [Cursor ▲ / ▼ / ◀ / ▶], then press [ENTER].

Confirmation window will appear.

6 Select "Yes" using [Cursor ◀ / ▶], then press [ENTER].

The title is moved to the new position.

7 Press [TOP MENU] to exit.

Note

• When the total number of the titles exceeds 6, press **[FWD ▶▶]** to move to the first title of the next page, and press **[REV ◀◀]** to move to the last title of the previous page.

Chapter Marker

Adding chapter marks

[VR] [ORIGINAL] [PLAYLIST]

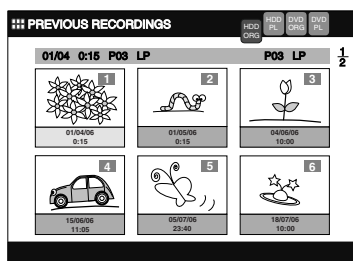You can add or delete chapter marks on each title and can use them for the Chapter Search.
You can add up to 999 chapter marks anywhere you want.

If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.
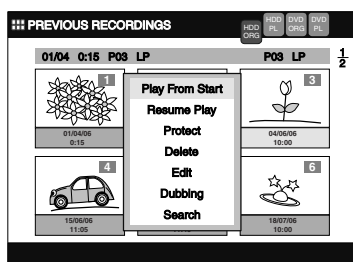
1 Press [TOP MENU].

Title List will appear.

Example: HDD Original List

Press **[MENU / LIST]** to switch Original List / Playlist if necessary.
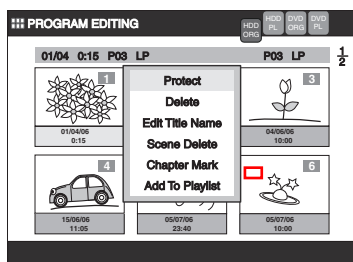
2 Select a desired title to edit using [Cursor ▲ / ▼ / ◄ / ►], then press [ENTER].
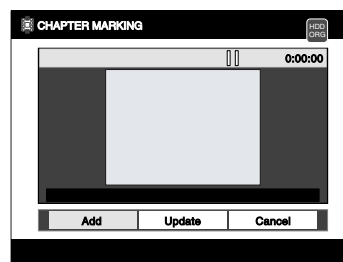
Title List Menu will appear.

3 Select "Edit" using [Cursor ▲ / ▼], then press [ENTER].

Edit Menu will appear.

4 Select "Chapter Mark" using [Cursor ▲ / ▼], then press [ENTER].
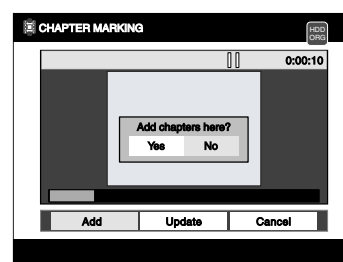
Editing Screen will appear.

• If there are chapter marks already set for the title, they are indicated on the progress bar.

5 Press [PLAY ►] to start playback.

Play the title up to the point where you want to set a chapter mark.

6 When it reaches the desired point, press [ENTER], or press [PAUSE II] or [STOP ■] and then [ENTER].

Confirmation window will appear.

7 Select "Yes" using [Cursor ◄ / ►], then press [ENTER].

The point will be marked with a single line.

8 Repeat steps 5 to 7 until you set as many chapter marks as you want.

9 When you finish setting all the marks you want, select "Update" using [Cursor ◄ / ►], then press [ENTER].

Final confirmation window will appear.
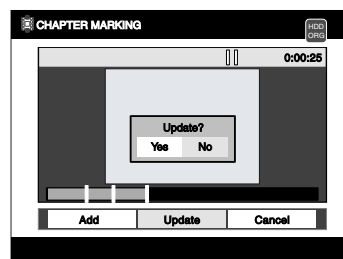
• If you want to quit the entire process, select "Cancel" using **[Cursor ◄ / ►]**, then press **[ENTER]**.

10 Select "Yes" using [Cursor ◄ / ►], then press [ENTER].

Chapter marks are added.

11 **Press [TOP MENU] to exit.**

Note

- When you search for the point to add a chapter mark, you can use **[SKIP |◄◄ / ►►|]**, **[FWD ►► / REV ◄◄]**, **[VARIABLE REPLAY / VARIABLE SKIP]**, **[PAUSE ❙❙]** or **[PLAY ►]** as usual.

Deleting chapter marks

[VR] [ORIGINAL] [PLAYLIST]

**If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.**

1 **Press [TOP MENU].**
Title List will appear.
Example: HDD Original List

Press **[MENU / LIST]** to switch Original List / Playlist if necessary.

2 **Select a desired title to edit using [Cursor ▲ / ▼ / ◄ / ►], then press [ENTER].**
Title List Menu will appear.

3 **Select "Edit" using [Cursor ▲ / ▼], then press [ENTER].**
Edit Menu will appear.
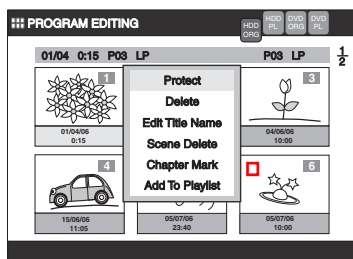
4 **Select "Chapter Mark" using [Cursor ▲ / ▼], then press [ENTER].**
Editing Screen will appear.
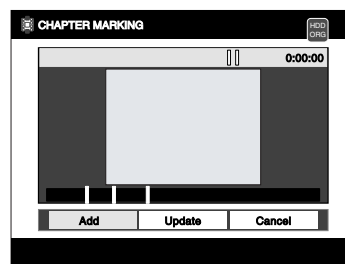
5 **Press [Cursor ▲] to move to the progress bar, and then select a chapter mark you want to delete using [Cursor ◄ / ►], then press [ENTER].**
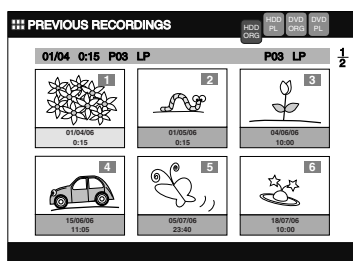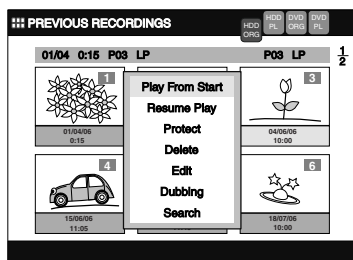Confirmation window will appear.

6 **Select "Yes" using [Cursor ◄ / ►], then press [ENTER].**
The chapter mark disappears.

7 **Repeat steps 5 to 6 until you erase as many chapter marks you want.**

8 **When you finish deleting all the unnecessary marks, press [Cursor ▼] to move back to the command bar. Then select "Update" using [Cursor ◄ / ►], and press [ENTER].**
Confirmation window will appear.
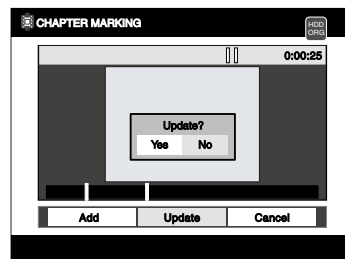
9 **Select "Yes" using [Cursor ◄ / ►], then press [ENTER].**
The chapters marks are deleted from the title.

10 **Press [TOP MENU] to exit.**

Introduction

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Adding titles to a Playlist

[VR] [ORIGINAL] [PLAYLIST]

You can add a title to the Playlist as you prefer.
You can add up to 99 titles for DVDs and 300 titles for HDD.

If you are playing the HDD, press [HDD] first.
If you are playing a disc, press [DVD] first.

1 Press [TOP MENU].

Title List will appear.

Example: HDD Original List
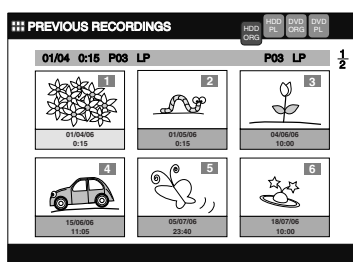
Press **[MENU / LIST]** to switch Original List / Playlist if necessary.

2 Select a desired title to add to the Playlist using [Cursor ▲ / ▼ / ◄ / ►], then press [ENTER].

Title List Menu will appear.

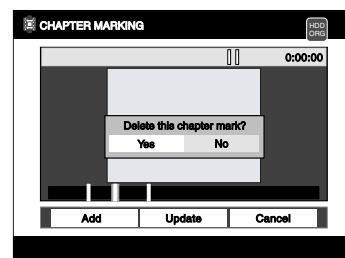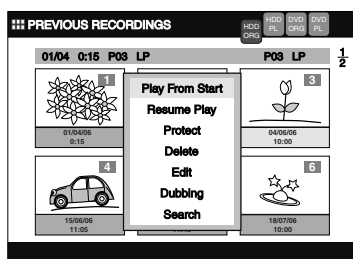**3 Select "Edit" using [Cursor ▲ / ▼], then press [ENTER].**

Edit Menu will appear.
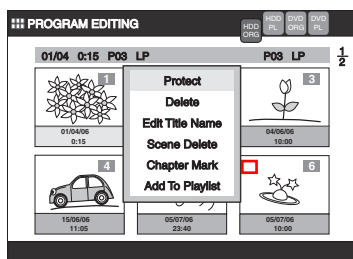
4 Select "Add To Playlist" using [Cursor ▲ / ▼], then press [ENTER].

Confirmation window will appear.
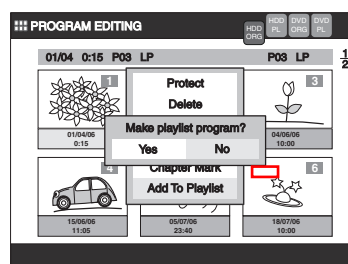
5 Select "Yes" using [Cursor ◄ / ►], then press [ENTER].

The selected title is added to the Playlist, and the Playlist will be displayed automatically.

6 Press [TOP MENU] to exit.

| Note |

• For VR mode DVD-RW disc, if the Playlist contains more than 99 titles or 999 chapters, "Add To Playlist" cannot be selected.
• For the HDD, if the Playlist contains more than 300 titles, "Add To Playlist" cannot be selected.
• To delete titles from Playlist, refer to "Deleting Titles" on pages 70 to 71.

Function Setup

Introduction

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Tour of the Setup Menus

The following table shows the items which you can change the setting and their default settings. Refer to the following table for your convenience.

Setup Menu	Items	Selection (highlight is the default)	Contents
Clock Setting	Clock Setting	➡ Page 26	Set the clock.
Channel Setting	Auto Tuning	➡ Page 24	Tune the channels automatically.
	Manual Tuning	➡ Page 24	Tune the channels manually.
	Move	➡ Page 25	Move the channel to different position.
Playback	TV Aspect ➡ Page 27	4 : 3 Letter Box 4 : 3 Pan & Scan 16 : 9 Wide	Set a picture size according to aspect ratio of your TV.
	Parental Lock ➡ Page 83	All Level 8 to 1	Set the parental level for DVD disc playback.
	Disc Menu Language ➡ Page 84	English Other	Set the language for Disc Menu.
	Audio Language ➡ Page 84	Original English Other	Set the language for audio.
	Subtitle Language ➡ Page 84	Off English Other	Set the language for subtitles.

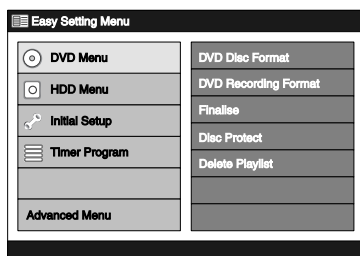| Setup Menu	Items	Selection (highlight is the default)	Contents
Playback	Audio Out ➡ Page 85	PCM 48kHz 96kHz	Set whether the sound recorded at 96kHz is down sampled to 48kHz or not.
		Dolby Digital PCM Stream	Set the type of sound signal output from the digital audio output jack.
		MPEG PCM Stream	Set the digital audio output signal specification.
		DTS On Off	Set whether DTS signal is output or not.
		Dynamic Range Control On Off	Compress the range of sound volume.
		Fast Forward with Audio On Off	Set whether or not to output sound during fast forward playback.
	Variable Replay/Skip Speed ➡ Page 86	Variable Skip 5 seconds 15 seconds 30 seconds 1 minute 5 minutes	Set the amount of skip time when you press **[VARIABLE SKIP]**.
		Variable Replay 5 seconds 15 seconds 30 seconds 1 minute 5 minutes	Set the amount of rewind time when you press **[VARIABLE REPLAY]**.
	Angle Icon ➡ Page 86	On Off	Set whether or not to display the angle icon.
	TV System ➡ Page 86	PAL Auto	Set the TV system.
	Media ➡ Page 57	Video Audio Picture	Set the media to play for discs contains mixture of different type of media.
	DivX	DivX® VOD ➡ Page 57		Provide DivX® VOD registration code.
		DivX Subtitle ➡ Page 86	Off English	Set the language for DivX® Subtitle.
Record	Auto Finalise ➡ Page 50	On Off	Set the unit to finalise the disc automatically.
	Auto Chapter ➡ Page 32	Off 5 minutes 10 minutes 15 minutes 30 minutes 60 minutes	Insert chapter marks every set time interval.
	Bilingual Recording Audio ➡ Page 34	Main Sub	Set the audio type for recording.
	External Input Audio ➡ Page 33	Stereo Bilingual	Set the external input audio type for recording.
Display	Select Video ➡ Page 48	AV3 (Front) Video In S-Video In	Set the video input type for the external input.
	FL Dimmer ➡ Page 87	Auto Bright Dark	Set the brightness of the Front Panel Display.
	Screen Saver ➡ Page 87	On Off	Set the idling time before the screen saver starts.
Reset to factory default	➡ Page 88		Return the initial settings to the factory default.

Note

• If you change the settings in the Setup Menus, the information of the contents remain memorized even after the power is turned off or the disc tray is opened or closed.
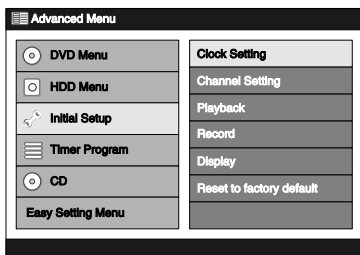
Playback Setting

1 Press [SETUP].

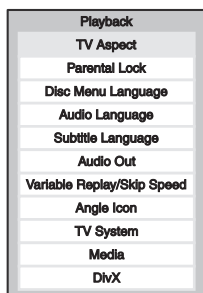"Easy Setting Menu" or "Advanced Menu" will appear. If "Advanced Menu" is displayed, proceed to step 3.

Easy Setting Menu	
DVD Menu	DVD Disc Format
HDD Menu	DVD Recording Format
Initial Setup	Finalise
Timer Program	Disc Protect
	Delete Playlist
Advanced Menu	

2 Select "Advanced Menu" using [Cursor ▲ / ▼], then press [ENTER].

3 Select "Initial Setup" using [Cursor ▲ / ▼], then press [ENTER].

Advanced Menu	
DVD Menu	Clock Setting
HDD Menu	Channel Setting
Initial Setup	Playback
Timer Program	Record
CD	Display
Easy Setting Menu	Reset to factory default

4 Select "Playback" using [Cursor ▲ / ▼], then press [ENTER].

Playback Menu will appear.

Playback
TV Aspect
Parental Lock
Disc Menu Language
Audio Language
Subtitle Language
Audio Out
Variable Replay/Skip Speed
Angle Icon
TV System
Media
DivX

5 Select a desired item to set using [Cursor ▲ / ▼], then press [ENTER].

Menu or option window will appear.

6 Refer 1. to 9. on pages 83 to 86 and set the selected item.

7 When you finish with the setting, press [SETUP] to exit.

1. Parental Lock (Default: All)

You can set the Parental Lock Level to keep your children from viewing the inappropriate materials. (Follow the steps 1 to 4 on the left.)

Select "Parental Lock" using [Cursor ▲ / ▼], then press [ENTER].

Option window will appear.
• If you have not set a password, proceed to **A**.
• If you have already set a password, proceed to **B**.

A: When a password has not been set yet.
Parental Level List will appear.

Parental Lock
√ All
8
7
6
5
4
3
2
1
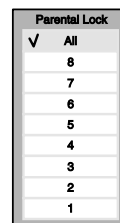
1 Select a desired level using [Cursor ▲ / ▼], then press [ENTER].

Confirmation window will appear.

Change password?	
Yes	No
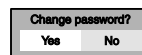
2 Select "Yes" using [Cursor ◄ / ►], then press [ENTER].

Password input field will appear.

Password
▮---

3 Enter the 4-digit password using [the Number Buttons], then press [ENTER].

Your setting is activated.

B: When a password has been set already.
Password input field will appear.

Password
▮---

1 Enter the 4-digit password using [the Number Buttons] (the password will be displayed as "∗" for your security), then press [ENTER].

Parental Level List will appear.

2 Select a desired level using [Cursor ▲ / ▼], then press [ENTER].

"Change password?" will appear.

Change password?
Yes   No
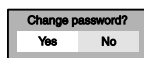
- If you want to change the password, select "Yes" using **[Cursor ◄ / ►]**, then press **[ENTER]**. The password input field will appear. Input the new password, then press **[ENTER]**. Your setting is activated.

- If you only want to change the setting and not want to change the password, select "No" using **[Cursor ◄ / ►]**, then press **[ENTER]**. Your setting is activated.

Rating Explanation:
- ALL - Parental Controls is inactive; all discs can play.
- 8 - Virtually all DVD software of any grade (adult/general/children) can be played back.
- 7 to 2 - Only DVD software intended for general use and children can be played back.
- 1 - Only DVD software intended for children can be played back.

3 Press [SETUP] to exit.

- If the rating set is lower than the disc rating, a message will appear. Select "Yes" if you want to continue playback and input the password followed by **[ENTER]** if the password is set previously.

Note

- Some DVD-Videos feature the Parental Lock function. If the rating of the inserted disc exceeds the level you set, playback will stop. You must enter a password before the disc will be played back. This feature prevents your children from viewing inappropriate material.
- The parental lock function may not be available on some discs.
- It may be difficult to determine if some DVDs support the parental lock function. Be sure to confirm that the parental lock function operates in the way that you have set.
- Record the password in case you forget it.
- Press **[Cursor ◄]** to erase numbers entered incorrectly.
- If you forget your password or you want to clear all settings in Parental Lock, enter **[4]**, **[7]**, **[3]**, **[7]** using **[the Number buttons]** at the option window. Your password is cleared and parental levels are set to "All".
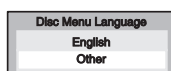
2. Disc Menu Language (Default: English)

Set the Disc Menu language.
(Follow steps 1 to 4 on page 83 as left.)

Select "Disc Menu Language" using [Cursor ▲ / ▼], then press [ENTER].

Option window will appear.

Disc Menu Language
English
Other

Select a setting using [Cursor ▲ / ▼], then press [ENTER].
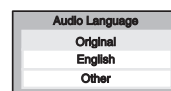
Your setting is activated.

3. Audio Language (Default: Original)

Set the Audio language.
(Follow steps 1 to 4 on page 83 as left.)

Select "Audio Language" using [Cursor ▲ / ▼], then press [ENTER].

Option window will appear.

Audio Language
Original
English
Other

Select a setting using [Cursor ▲ / ▼], then press [ENTER].

Your setting is activated.
If "Original" is selected, the audio language is the default of the inserted disc.

4. Subtitle Language (Default: Off)

Set the Subtitle language.
(Follow steps 1 to 4 on page 83 as left.)

Select "Subtitle Language" using [Cursor ▲ / ▼], then press [ENTER].

Option window will appear.

Subtitle Language
Off
English
Other
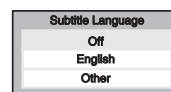
Select a setting using [Cursor ▲ / ▼], then press [ENTER].

Your setting is activated.

If "Other" is selected, enter the appropriate 4-digit code using [the Number buttons]. Refer to "Language code" on page 97.

Code
_ _ _ _

When you finish entering the code, press [ENTER].

Note

- You can also change or turn off the subtitles on a DVD from the disc menu if it is available.
- Press **[Cursor ◄]** to erase numbers entered incorrectly.
- You can only select the languages supported by the inserted disc.
- The Audio language setting may not be available for some discs.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

VCR Functions

Others

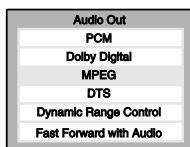## 5. Audio Out

Set the digital audio output.
(Follow steps 1 to 4 on page 83 as left.)

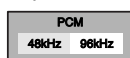### Select "Audio Out" using [Cursor ▲ / ▼], then press [ENTER].

Menu window will appear.

```
Audio Out
PCM
Dolby Digital
MPEG
DTS
Dynamic Range Control
Fast Forward with Audio
```

Select a setting using [Cursor ▲ / ▼], then press [ENTER].

Proceed with either of the following steps.

PCM (Default: 48kHz)

```
PCM
48kHz    96kHz
```

Select a setting using [Cursor ◄ / ►], then press [ENTER].
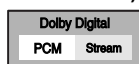
Your setting is activated.

48kHz: If your amplifier / decoder is NOT compatible with 96 kHz PCM, select "48kHz". Sound recorded at 96 kHz is down sampled to 48 kHz.
96kHz: If your amplifier / decoder is compatible with 96 kHz PCM, select "96kHz". Sound is sampled at 96 kHz.

| Note |

When playing back disc with copyright protection:
• Even if you select "96kHz", the sound will be down sampled at 48 kHz.

Dolby Digital (Default: Stream)

```
Dolby Digital
PCM    Stream
```

Select a setting using [Cursor ◄ / ►], then press [ENTER].
Your setting is activated.

PCM: Converts the Dolby Digital into PCM (2 channel).
If your amplifier / decoder is NOT compatible with Dolby Digital, set to "PCM".
Stream: Outputs Dolby Digital signals.
If your amplifier / decoder is compatible with Dolby Digital, set to "Stream".

| Hint |

When playing back a DVD-RW disc recorded in VR mode:
• If the audio source on a disc is in Dolby Digital format, set "Dolby Digital" to "PCM" so that you can switch to main audio (L), sub audio (R), or a combination of both (L / R) using your amplifier / decoder.

MPEG (Default: PCM)

```
MPEG
PCM    Stream
```
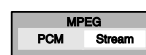
Select a setting using [Cursor ◄ / ►], then press [ENTER].

Your setting is activated.

PCM: Converts MPEG into PCM.
If your amplifier / decoder is NOT compatible with MPEG, set to "PCM".
Stream: Outputs MPEG Audio signals.
If your amplifier / decoder is compatible with MPEG, set to "Stream".

DTS (Default: On)

```
DTS
On    Off
```
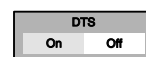
Select a setting using [Cursor ◄ / ►], then press [ENTER].

Your setting is activated.

On: Outputs DTS signals.
If your amplifier / decoder is compatible with DTS, set to "On".
Off: No DTS signal is output.
If your amplifier / decoder is NOT compatible with DTS, set to "Off".

Dynamic Range Control (Default: On)
Set to "On" to make the dynamic range narrower.

```
Dynamic Range Control
On    Off
```
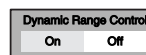
Select a setting using [Cursor ◄ / ►], then press [ENTER].

Your setting is activated.
The Dynamic Range Control function is effective only with analogue audio connection.

Fast Forward with Audio (Default: Off)
Set to "On" to output the sound during DVD playback at x1.5 fast forward.
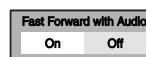
```
Fast Forward with Audio
On    Off
```

Select a setting using [Cursor ◄ / ►], then press [ENTER].

Your setting is activated.

6. Variable Replay/Skip Speed

Assign the **[VARIABLE REPLAY]** or **[VARIABLE SKIP]** button to rewind or skip by a certain amount of time.
(Follow steps 1 to 4 on page 83 as left and see page 62.)

Select "Variable Replay/Skip Speed" using [Cursor ▲ / ▼], then press [ENTER].

Menu window will appear.

> Variable Replay/Skip Speed
> Variable Skip
> Variable Replay

Select a desired item to set using [Cursor ▲ / ▼], then press [ENTER].

Option window will appear.
Refer to the explanations below and set the selected item.

Variable Skip (Default: 30 seconds)
Sets the amount of skip time for **[VARIABLE SKIP]**.

> Variable Skip
> 5 seconds
> 15 seconds
> 30 seconds
> 1 minute
> 5 minutes

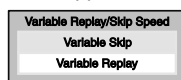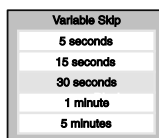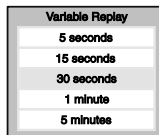**Variable Replay (Default: 30 seconds)**
Sets the amount of rewind time for **[VARIABLE REPLAY]**.

> Variable Replay
> 5 seconds
> 15 seconds
> 30 seconds
> 1 minute
> 5 minutes

7. Angle Icon (Default: Off)

You can set to "On" to show the Angle icon on the screen whenever the feature is available.
(Follow steps 1 to 4 on page 83 as left and see page 68.)

Select "Angle Icon" using [Cursor ▲ / ▼], then press [ENTER].

Option window will appear.

> Angle Icon
> On   Off
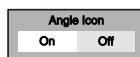
Select a desired setting using [Cursor ◄ / ►], then press [ENTER].

Your setting is activated.

8. TV System (Default: PAL)

You can set the TV system.
(Follow steps 1 to 4 on page 83 as left.)

Select "TV System" using [Cursor ▲ / ▼], then press [ENTER].

Option window will appear.
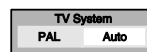
> TV System
> PAL   Auto

Select the desired system setting using [Cursor ◄ / ►], then press [ENTER].

Your setting is activated.

PAL: Outputs a modified PAL signal for viewing discs recorded with the NTSC system on a PAL system TV.
Auto: Changes the video system (PAL / NTSC) automatically according to the format of the inserted disc.

Note

• With discs recorded using the PAL system, a PAL signal is output for viewing on a PAL system TV.
• Discs recorded with the PAL system cannot be viewed on an NTSC system TV.
• With discs recorded using the NTSC system, an NTSC signal is output for viewing on an NTSC or Multi system TV.
• With discs recorded using the NTSC system, select PAL to view on a PAL system TV.

9. DivX Subtitle (Default: Off)

You can set the DivX® Subtitle language.
(Follow steps 1 to 4 on page 83 as left.)

Select "DivX" using [Cursor ▲ / ▼], then press [ENTER].

Menu window will appear.

> DivX
> DivX® VOD
> DivX Subtitle
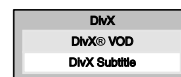
Select "DivX Subtitle" using [Cursor ▲ / ▼], then press [ENTER].

Option window will appear.

> DivX Subtitle
> Off
> English
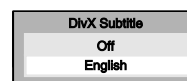
Select a setting using [Cursor ▲ / ▼], then press [ENTER].

Your setting is activated.

Display Setting

1 Press [SETUP].

"Easy Setting Menu" or "Advanced Menu" will appear. If "Advanced Menu" is displayed, proceed to step 3.

Easy Setting Menu

DVD Menu	DVD Disc Format
HDD Menu	DVD Recording Format
Initial Setup	Finalise
Timer Program	Disc Protect
	Delete Playlist
Advanced Menu	

2 Select "Advanced Menu" using [Cursor ▲ / ▼], then press [ENTER].

3 Select "Initial Setup" using [Cursor ▲ / ▼], then press [ENTER].

Advanced Menu

DVD Menu	Clock Setting
HDD Menu	Channel Setting
Initial Setup	Playback
Timer Program	Record
CD	Display
Easy Setting Menu	Reset to factory default
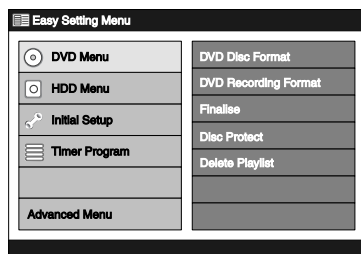
4 Select "Display" using [Cursor ▲ / ▼], then press [ENTER].

Display Menu will appear.

Display
- Select Video
- FL Dimmer
- Screen Saver

5 Select a desired item to set using [Cursor ▲ / ▼], then press [ENTER].

Menu or option window will appear.

6 Refer to 1. and 2. below to set the selected item.

7 When you finish with the setting, press [SETUP] to exit.

1. FL Dimmer (Default: Auto)

Set the front panel display brightness.
You can choose one from "Auto," "Bright" and "Dark".
If "Auto" is selected, the display gets dark when the power is off.
(Follow steps 1 to 4 above.)

Select "FL Dimmer" using [Cursor ▲ / ▼], then press [ENTER].

Option window will appear.

FL Dimmer
- Auto
- Bright
- Dark
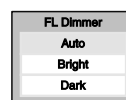
Select a setting using [Cursor ▲ / ▼], then press [ENTER].

2. Screen Saver (Default: On)

You can set to "On" to activate the Screen Saver after 10 minutes of no activity.
(Follow steps 1 to 4 on the left.)

Select "Screen Saver" using [Cursor ▲ / ▼], then press [ENTER].
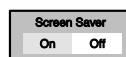
Option window will appear.

Screen Saver On Off

Select a setting using [Cursor ◄ / ►], then press [ENTER].

Your setting is activated.

Reset to factory default

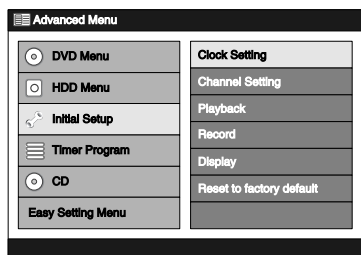Resets the settings to the factory default (refer to the "Note" on this page for the exceptions).

1 Press [SETUP].

"Easy Setting Menu" or "Advanced Menu" will appear. If "Advanced Menu" is displayed, proceed to step 3.

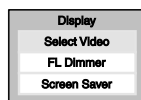| Easy Setting Menu	
DVD Menu	DVD Disc Format
HDD Menu	DVD Recording Format
Initial Setup	Finalise
Timer Program	Disc Protect
	Delete Playlist
Advanced Menu	

2 Select "Advanced Menu" using [Cursor ▲ / ▼], then press [ENTER].

3 Select "Initial Setup" using [Cursor ▲ / ▼], then press [ENTER].

Advanced Menu	
DVD Menu	Clock Setting
HDD Menu	Channel Setting
Initial Setup	Playback
Timer Program	Record
	Display
	Reset to factory default
Easy Setting Menu	
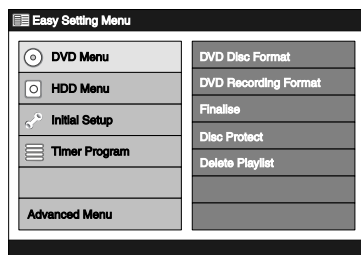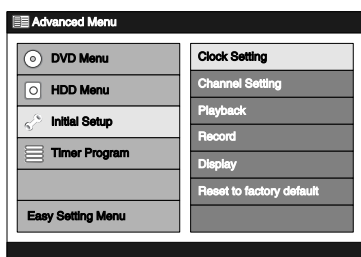
4 Select "Reset to factory default" using [Cursor ▲ / ▼], then press [ENTER].
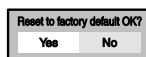
Confirmation window will appear.

> Reset to factory default OK?
> Yes   No

5 Select "Yes" using [Cursor ◄ / ►], then press [ENTER].

Final confirmation window will appear.

> Are you sure?
> Yes   No
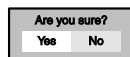
6 Select "Yes" using [Cursor ◄ / ►], then press [ENTER].

All setting are reset to the factory default.

7 Press [SETUP] to exit.

Note

• The settings listed below will remain unchanged even after resetting to the factory default.
  - Clock Setting
  - Parental Lock Setting
  - HDD/DVD Timer Programmes
  - HDD Original List / Playlist

VCR Functions

Playback

1 Press [I/⏻ ON / STANDBY] to turn on the unit.

To play back a tape, turn on the TV and be sure to select the input to which the unit is connected.

2 Press [VCR].

3 Insert a pre-recorded tape, then press [PLAY ▶] to begin playback.

4 During playback, press [PAUSE ❚❚].

Playback will be paused and sound will be muted.

5 Press [PLAY ▶] to resume playback.

6 Press [STOP ■] to stop playback.

7 Press [OPEN / CLOSE ⏏] to eject the tape.

| Note |

- When a tape without record tab is inserted, the unit will start playback automatically.
- Tracking will be automatically adjusted upon playback. To adjust the tracking manually, press **[PROG. ⌃ / ⌄]**.

Recording and One-touch Timer Recording (OTR)

Basic Recording

Before recording, make sure:

- The desired channel is selected by pressing **[the Number buttons]** or **[PROG. ⌃ / ⌄]** on the remote control.
- There is a tape with a record tab in the unit.
- The desired recording speed is selected in SP (standard play) or LP (long play) mode by pressing **[REC MODE]** on the remote control.

Tape speed	Recording / Playback Time			
Type of tape	E60	E120	E180	E240
SP mode	1 hour	2 hours	3 hours	4 hours
LP mode	2 hours	4 hours	6 hours	8 hours

1 Turn on the unit and insert a recordable tape.

Make sure that the TV input is set on the unit.

2 Press [VCR].

3 Select the recording speed using [REC MODE].

- The desired recording speed is selected in SP (standard play) or LP (long play) mode by pressing **[REC MODE]**.

4 Select the desired channel to record using [PROG. ⌃ / ⌄] or [the Number buttons].

5 Press [REC / OTR ●] (VCR) to start recording.

To temporarily stop recording or to resume it, press **[PAUSE ❚❚]**.

After the unit has been in pause mode for 5 minutes, it will stop automatically to protect the tape and the video head from damage.

6 Press [STOP ■] when the recording is completed.

Accidental erasure prevention

To prevent accidental recording on a recorded cassette, remove its record tab. To record on it later, cover the hole with cellophane tape.

Record tab

| Note |

- Although you can playback a videotape recorded in the SP or LP mode on this unit, SLP mode recording is not available.
- Timer Recording is not available for VCR.
- If a basic recording or One-touch Timer Recording is in progress on the VCR and the Timer Recording set for HDD or DVD is about to begin, the unit will automatically switch to the programmed channel within 15 seconds before the programmed time and the recording in progress on the VCR will be cancelled UNLESS their recording channel is the same. If their recording channel is the same, the Timer Recording for HDD or DVD will start without cancelling the recording currently in progress on the VCR. In this case, the recording of the same channel will be made on both VCR and the HDD or DVD.

To view one channel while recording another:
If you want to watch the TV programmes, simply select the channel you want to watch with the TV's remote.
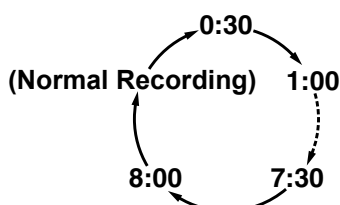
One-touch Timer Recording

VCR

This feature allows you to set the recording length simply by pressing **[REC / OTR ●]** (VCR).

1 Turn on the unit and insert a recordable tape.

Make sure that the TV input is set on the unit.

2 Press [VCR].

3 Select the recording speed using [REC MODE]. (See page 89.)

4 Select the desired channel to record using [PROG. ∧ / ∨] or [the Number buttons].

5 Press [REC / OTR ●] (VCR) repeatedly until the desired recording time (30 minutes to 8 hours) appears on the TV screen.

One-touch Timer Recording will start.

```
          0:30
           ↗ ↖
(Normal Recording)   1:00

8:00            7:30
```

- When the unit reaches the specified time, it will be turned off automatically.
- To change the recording length during One-touch Timer Recording, press **[REC / OTR ●]** (VCR) repeatedly until the desired length appears.
- To cancel One-touch Timer Recording within the specified time, press **[STOP ■]**.

Note

- The remaining recording time will appear on the front panel display during a One-touch Timer Recording. Press **[DISPLAY]** can also see the remaining recording time on the TV screen.
- You cannot pause a One-touch Timer Recording.
- If a basic recording or One-touch Timer Recording is in progress on the VCR and the Timer Recording set for HDD or DVD is about to begin, the unit will automatically switch to the programmed channel within 15 seconds before the programmed time and the recording in progress on the VCR will be cancelled UNLESS their recording channel is the same. If their recording channel is the same, the Timer Recording for HDD or DVD will start without cancelling the recording currently in progress on the VCR. In this case, the recording of the same channel will be made on both VCR and the HDD or DVD.

Search

Index search

VCR

An index mark will be assigned at the beginning of each recording you make. You may skip to a specific marked point by following the steps below.

1 Press [VCR].

2 Press [SEARCH MODE] to display the index search menu.

3 Enter the number of recordings you want to skip using [the Number buttons] within 30 seconds.

4 Press [FWD ▶▶] or [REV ◀◀] to start index search.

If you want to go in the forward direction, press **[FWD ▶▶]**.
If you want to go in the reverse direction, press **[REV ◀◀]**.
After index search, the VCR will play back the tape automatically.

Note

- This function is not available during recording.
- Every time a tape is recorded, an index mark is written on the tape.

Time search

VCR

This feature allows you to go to a specific point on a tape by entering the exact amount of time you want to skip in order to reach the point.

1 Press [VCR].

2 Press [SEARCH MODE] repeatedly until the time search menu appears.

3 Enter your desired time to skip using [the Number buttons] within 30 seconds.

4 Press [FWD ▶▶] or [REV ◀◀] to start time search.

If you want to go in the forward direction, press **[FWD ▶▶]**.
If you want to go in the reverse direction, press **[REV ◀◀]**.
After time search, the unit will play back the tape automatically.

Note

- This function is not available during recording.
- Press **[STOP ■]** to stop the search.
- If the tape reaches the end during the Search, this unit will cancel it and rewind the tape.

Introduction

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Other operations

VCR

Press [VCR] first.

To cue or review picture during playback (Picture Search):
Press **[FWD ▶▶]** or **[REV ◀◀]** during playback.
Press it again and the unit will search in super high speed.

To freeze the picture on TV screen during playback (Still mode):
Press **[PAUSE ❙❙]**. Each time you press the button, the picture will be forwarded frame by frame.
If the picture begins to vibrate vertically during the still mode, stabilize the picture by pressing the **[PROG. ∧ / ∨]**.
If the picture is distorted or rolling vertically, adjust the vertical hold control on your TV, if equipped.

Counter Reset:
Press **[CLEAR]**.

To play back in slow forward:
Press **[SLOW ❙▶]** during playback or the still mode.
If the noise bars appear on the TV screen, you can reduce it by pressing **[PROG. ∧ / ∨]**.

Note

- Still / Slow mode will be automatically cancelled after 5 minutes to prevent damage to the tape and the video head.
- To return to normal play back from the Picture Search / Still / Slow mode, press **[PLAY ▶]**.

Hi-Fi Stereo Sound System

This unit will record and playback Hi-Fi stereo sound. In addition, it has an AV2 and NICAM stereo sound decoder. This unit will receive stereo and bilingual broadcasts and it is possible to record in several ways and to play back the sound.

Selecting the Sound Mode
You can select each mode by pressing **[AUDIO ◎⟫]** on the remote control. Each mode is indicated on the TV screen as following.

- During playback of the recorded tape in Hi-Fi mode
- During reception of stereo broadcasts

Mode	Audio output	Display on the TV screen
Stereo	Stereo	STEREO
L	L audio from both speakers	LEFT
R	R audio from both speakers	RIGHT
Normal	Monaural	MONO

- During reception of bilingual broadcasts

Mode	Audio output	Display on the TV screen
Main	Main audio from the both speakers	Main
Sub	Sub audio from the both speakers	Sub
Main / Sub	• Main audio from the left speaker • Sub audio from the right speaker	Main Sub

Note

- If you play back non-Hi-Fi tapes, the unit will play back automatically in monaural even if you select any mode.
- If the stereo signal becomes weak, the broadcast is automatically recorded in monaural.

Others

Troubleshooting

Before requesting service for this unit, check the table below for a possible cause of the problem you are experiencing.
Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper performance.

General Operation

Error message	Cause & Solution
🚫	• The operation is not available.
Error Now Recording.	• The operation is not available during recording.
Error Now Dubbing.	• The operation is not available during dubbing.
Error Timer program starts soon.	• The operation is not available since a Timer Recording will start soon.

Discs

Error message	Cause & Solution
Disc Error	• Invalid disc is inserted. Please insert a disc supported by this unit. (See pages 29 and 51.)
Region Error Please eject the disc. Playback is not authorized in your region.	• A disc with the invalid region code is inserted. This unit only supports the discs with region code 2 or ALL.
Error Please insert a valid disc.	• No disc or an invalid disc is inserted. Please insert a disc supported by this unit. (See pages 29 and 51.)

Error
Cannot format.
	• The discs not supported by this unit cannot be formatted.
	  Please use the discs supported by this unit. (See page 29.)
	• During HDD playback or recording, formatting will not be executed.
	  Stop the playback or recording.

Error Cannot finalise.	• The discs not supported by this unit cannot be finalised. Please use the discs supported by this unit. (See page 29.)
Error Un-finalise cannot be performed.	• The finalisation of the Video mode DVD discs made on other unit cannot be undone.
Error Disc protect cannot be performed.	• Disc Protect is only available with the VR mode DVD-RW discs. Other discs cannot be protected. (See page 49.)

Timer Recording / Recording & Navigator

Error message	Cause & Solution
Error Prohibited timer program.	• The entry for the Timer Recording is invalid. The recording duration must be in 24 hour period. The end time must be later than the present time, and the start time must be before 1-1-2055. Re-programme the Timer Recording correctly. (See page 37.)
Error Cannot register timer program.	• The maximum number of Timer Programmes is exceeded. Delete unnecessary Timer Programmes. (See page 37.)
Error Timer program starts soon.	• This message is shown when you press **[I/⏻ ON / STANDBY]** to turn off the unit by 4-5 minutes before Timer Recording starts.

Playback / Editing

Error message	Cause & Solution
Parental Lock On The current selected parental level prohibits playback.	• The current Parental Lock setting prohibits the playback. Change the Parental Level. (See pages 83 to 84.)
Error Program Edit Error. The number of titles is maximum.	• The maximum number of titles is exceeded. Delete unnecessary original titles. (See pages 70 to 71.)
Error The number of chapters is maximum.	• The maximum number of chapters is exceeded. Delete unnecessary chapter marks. (See pages 78 to 79.)
Error Program Edit Error. The number of programs in playlist is maximum.	• The maximum number of titles in the Playlist is exceeded. Delete unnecessary titles in the Playlist. (See pages 70 to 71 and 76.)

Dubbing

Error message	Cause & Solution
Error Cannot dubbing now.	• No recording media is inside the unit. Insert the recordable media. • Recordable space is not enough. Make sure the recording media has enough space. • The device is in use for playback or recording. Stop the playback or recording. • The dubbing material is copy protected. You cannot dub the copy protected material. • You are trying to dub to the finalised Video mode DVD. You cannot dub to the finalised Video mode DVDs.
Error Timer programmed. No dubbing now.	• The dubbing you are trying to make does not finish by 3 minutes before the Timer Recording. Re-arrange the Timer Programmes, or try dubbing when there is no Timer Recording in standby.
Error Cannot select program.	• You are trying to add more than 32 titles to the Dubbing List. Or the number of the titles or the chapters of the recording media exceeds the max. Delete unnecessary titles or the chapters from the list.
Error Copy guard detected. Dubbing is stopped.	• The recording function encountered a copy control signal. • You cannot dub copy protected programmes.
Error HDD remaining space error Dubbing cannot be performed.	• There is not enough space left on the HDD to finish the dubbing. Delete the unnecessary titles in the Original List, or change the Rec Mode.
Error DVD remaining space error Dubbing cannot be performed.	• There is not enough space left on the DVD to finish the dubbing. Insert a recordable DVD, delete the unnecessary titles in the Original List, or change the Rec Mode.

Symptom	Solution
The power does not turn on.	• Check that the AC power cord is connected securely. • Batteries of the remote control are weak. • If above solutions do not work, press **[RESET]** on the front panel with a sharp pointed object to re-start the unit. (See page 15.)
The unit turns on automatically without any operation.	• During Auto Clock Setting, the **I/**⏻ ON / STANDBY indicator lights up. • The unit turns on automatically 3 minutes before the Timer Recording.
The power turns off automatically.	• The power turns off automatically when abnormality is detected on the disc. Press **[I/**⏻ **ON / STANDBY]** or **[OPEN / CLOSE ⏏]** on the unit to open the disc tray, and before it is opened completely, press the button again. Then take out the disc. • The power turns off automatically when an OTR is completed. • There is a possibility that the safety device is working. Try pressing **[RESET]** on the front panel with a sharp pointed object to re-start the unit. (See page 15.)

POWER

Symptom	Solution
The unit does not function.	• ⊘ or error message appears if the operation is prohibited. • Batteries of the remote control are weak or exhausted. • There is a possibility that the safety device is working. Try pressing **[RESET]** on the front panel with a sharp pointed object to re-start the unit. (See page 15.)
No picture, sound or menu appears on the screen.	• Check if the connections are made securely and correctly. • Check if the cables are damaged. • Check if a correct external input channel is selected on your TV. (See page 23.) • Check if you have completed the Channel Setting. (See pages 24 to 25.)
Clock Setting and Channel Setting cannot be performed.	• If a Timer Recording is in standby or if a recording is in progress, these operations cannot be performed. Delete Timer Programmes or stop the recording.
The unit does not operate properly.	• Moisture has condensed inside the unit. Remove the disc and leave the unit turned on for about two hours until the moisture evaporates. (See page 4.)
The abnormal display appears on the Front Panel Display.	• There is a possibility that the safety device is working. Try pressing **[RESET]** on the front panel with a sharp pointed object to re-start the unit. (See page 15.)

GENERAL

Symptom	Solution
TV channels cannot be changed.	• Check if the connections are made securely and correctly. • Check if the cables are damaged. • Try Channel Setting by following the steps on pages 24 to 25.
Only specific channels do not appear.	• The channels may be set to be skipped. (See page 25.)
The external input channels (such as AV1, AV2 or AV3) cannot be skipped.	• This unit does not skip the external input channels. This is not a malfunction.

CHANNEL

Symptom	Solution
Recording is impossible.	• This unit cannot record a programmes that contains copy protection signal. This is not a malfunction. • The space of the recording media may be used up. Try deleting unnecessary titles from the Original List, or exchange it with the recordable media. • The maximum number of titles or chapters has exceeded. Delete the unnecessary titles to make enough space or insert a new recordable media. • Check if the connections are made securely and correctly.
Recording on the DVD disc is impossible.	• Copy-once programmes can only be recorded on a CPRM compatible VR mode DVD-RW. • Check if the disc is protected or finalised. Undo the protection or the finalisation. • DVD-RW once formatted with other DVD recorders cannot be recorded on this unit. This is not malfunction. • Video mode DVDs recorded by other DVD recorders cannot be used on this unit unless finalised. • Check if the connections are made securely and correctly.
The image from the external device cannot be displayed or recorded.	• Try pressing **[INPUT SELECT]** repeatedly. • Turn on all connected devices. • Check if the connections are made securely and correctly.
Timer Recording cannot be performed.	• The internal clock of the unit may have been stopped due to a power failure that lasted for more than 30 seconds. Reset the clock. (See page 26.)
Recording to a videotape is impossible.	• Check if a videotape is inserted. • Check if a videotape has a record tab intact.

RECORDING

Symptom	Solution
Disc Playback cannot be performed.	• Check if the playable disc is inserted. • Check if the disc is loaded correctly with the labelled side facing up. • Discs made on other devices or on personal computers cannot be played back on this unit unless it is finalised on the device. Even if it is finalised, the performance of those discs are not guaranteed on this unit. • The disc may be dirty or flawed. Clean the disc. • Check if all the connections are made correctly. • Check the Parental Lock Setting. (See pages 83 to 84.)
Playback does not start from the beginning.	• Resume function may be activated. See page 60 to cancel the resume point.
TV aspect ratio does not match for your TV screen.	• Check the TV Aspect Ratio. (See page 27.) • A different aspect ratio will be used when the aspect ratio specified by the disc is not supported by this unit.
Playback picture is distorted. Colour of the picture is abnormal.	• During fast forward or fast reverse, playback picture may be distorted. This is not a malfunction. • Connect to TV directly. When you connect this unit with the television via VCR or other devices, the picture may be distorted due to the copy-protection signal. • Check if the cables are damaged. • Keep the equipment which may cause electrical disturbances, such as a cellular phone, away.
There is no sound, or no subtitle.	• Turn on all connected devices. • Check if the external input channel is set correctly. • Check if the connections are made securely and correctly. • Check if the Audio Out Setting is set correctly. (See page 85.) • There is a possibility that the selected subtitle language is not supported by the disc.
Audio Out Setting cannot be changed.	• If the audio source is in the Dolby Digital format, set the Dolby Digital Setting to "PCM" in the Setup Menu. (See page 85.)
Audio Language or the Subtitle Language of the DVD cannot be changed.	• Multilingual subtitles are not supported by the disc. • Some audio languages or the subtitle languages can be changed only from the Disc Menu. Please refer to the disc's manual.
Camera angles cannot be changed.	• Even though the multi-angle feature is supported by the disc, that does not mean all the scenes are shot from multi-angles. Changing angles are available only for those scenes shot from the multi-angle.
VCR picture is noisy.	• Adjust the tracking by pressing **[PROG. ∧ / ∨]** while you are playing a videotape.
During VCR playback, pictures do not come out even though sound does.	• VCR Head cleaning may be necessary. Refer to "AUTO HEAD CLEANING" on page 5.

PLAYBACK

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EN 95

Symptom	Solution
Titles cannot be edited or deleted.	• The titles or the disc itself may be protected. Cancel the protection by following the steps on page 72 for title protection, and page 49 for disc protection. • The titles in the Video mode discs cannot be edited or deleted if they are finalised. Undo the finalisation by following the steps on page 49.
The capacity of the disc doesn't increase even if the recorded programme is deleted.	• With Video mode DVD-RW discs, the disc space will increase only when the last title in the Original List is deleted. With DVD-R discs, deleting a title will not increase the disc space. • Deleting a title in the Playlist will not increase the capacity, try deleting a title in the Original List.
The disc cannot be played back on other player even though it is finalised properly.	• Some DVD players do not play back the disc made on other recorder. Refer to the manual of the player.
Dubbing cannot be executed.	• Video mode discs made on other recorder cannot be dubbed using this unit. • When the number of the titles or the chapters exceeds the maximum recordable number, the dubbing will not be executed. • Copy-once programmes or the copy protected programmes may not be dubbed depending on the recording media. Regarding the limitations on dubbing, refer to the page 40.

EDITING

Symptom	Solution
The remote control does not function.	• No batteries in the remote or the batteries may be weak. Replace the batteries. • Make sure there is no obstacle between the remote and the unit. • Try getting closer to the unit. (See page 19.) • Make sure to press the Device Select Buttons (**[HDD]**, **[DVD]** or **[VCR]**) before operating on the device of your choice. • If above solutions do not solve the problem, please call an Authorized Service Centre.
Setup Menu Screen does not display when **[SETUP]** is pressed.	• While the Programmed Recordings Screen, the Dubbing Menu Screen, or the Title List is displayed or while the disc is loading, **[SETUP]** does not respond.

REMOTE CONTROL

Symptom	Solution
The Clock display does not appear in the Front Panel Display.	• Check that the AC power cord is connected securely. • (In case of power failure) Check the breaker and Clock Setting.
When you forget the password EDITING for Parental Lock.	• Please cancel the password and the set level. (See pages 83 and 84.)

OTHERS

* If you are still having trouble with this unit after checking "Troubleshooting", write down the error code and the error description, and please call an Authorized Service Centre.

Language code

Language	Code	Language	Code	Language	Code	Language	Code
Abkhazian	4748	French	5264	Lithuanian	5866	Sindhi	6550
Afar	4747	Frisian	5271	Macedonian	5957	Singhalese	6555
Afrikaans	4752	Galician	5358	Malagasy	5953	Siswat	6565
Albanian	6563	Georgian	5747	Malay	5965	Slovak	6557
Amharic	4759	German	5051	Malayalam	5958	Slovenian	6558
Arabic	4764	Greek	5158	Maltese	5966	Somali	6561
Armenian	5471	Greenlandic	5758	Maori	5955	Spanish	5165
Assamese	4765	Guarani	5360	Marathi	5964	Sundanese	6567
Aymara	4771	Gujarati	5367	Moldavian	5961	Swahili	6569
Azerbaijani	4772	Hausa	5447	Mongolian	5960	Swedish	6568
Bashkir	4847	Hebrew	5569	Nauru	6047	Tagalog	6658
Basque	5167	Hindi	5455	Nepali	6051	Tajik	6653
Bengali;Bangla	4860	Hungarian	5467	Norwegian	6061	Tamil	6647
Bhutani	5072	Icelandic	5565	Occitan	6149	Tatar	6666
Bihari	4854	Indonesian	5560	Oriya	6164	Telugu	6651
Bislama	4855	Interlingua	5547	Oromo (Afan)	6159	Thai	6654
Breton	4864	Interlingue	5551	Panjabi	6247	Tibetan	4861
Bulgarian	4853	Inupiak	5557	Pashto; Pushto	6265	Tigrinya	6655
Burmese	5971	Irish	5347	Persian	5247	Tonga	6661
Byelorussian	4851	Italian	5566	Polish	6258	Tsonga	6665
Cambodian	5759	Japanese	5647	Portuguese	6266	Turkish	6664
Catalan	4947	Javanese	5669	Quechua	6367	Turkmen	6657
Chinese	7254	Kannada	5760	Rhaeto-Romance	6459	Twi	6669
Corsican	4961	Kashmiri	5765	Romanian	6461	Ukrainian	6757
Croatian	5464	Kazakh	5757	Russian	6467	Urdu	6764
Czech	4965	Kinyarwanda	6469	Samoan	6559	Uzbek	6772
Danish	5047	Kirghiz	5771	Sangho	6553	Vietnamese	6855
Dutch	6058	Kirundi	6460	Sanskrit	6547	Volapuk	6861
English	5160	Korean	5761	Scots Gaelic	5350	Welsh	4971
Esperanto	5161	Kurdish	5767	Serbian	6564	Wolof	6961
Estonian	5166	Laothian	5861	Serbo-Croatian	6554	Xhosa	7054
Faroese	5261	Latin	5847	Sesotho	6566	Yiddish	5655
Fiji	5256	Latvian; Lettish	5868	Setswana	6660	Yoruba	7161
Finnish	5255	Lingala	5860	Shona	6560	Zulu	7267

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Glossary

Analogue audio

An electrical signal that directly represents sound. In contrast, digital audio can also be an electrical signal, but is an indirect representation of sound. See also Digital audio.

Aspect ratio

The width of a TV screen relative to its height. Conventional TVs are 4:3 (i.e., the screen is almost square). Widescreen models are 16:9 (the screen is almost twice as wide as its height).

Chapter

Just as a book is split up into several chapters, a title on a DVD disc is usually divided into chapters. See also Title.

CPRM
(Content Protection for Recordable Media)

CPRM is a scrambling copy protection system for the protection of "copy-once" broadcast programmes (e.g. some satellite broadcasts).

Digital audio

An indirect representation of sound using numbers. During recording, the sound is measured at discrete intervals (44 or 100 times a second for CD audio) by an analogue-to-digital converter, generating a stream of numbers. On playback, a digital-to-analogue converter generates an analogue signal based on these numbers. See also Sampling frequency and Analogue audio.

Dolby Digital

A system developed by Dolby Laboratories that compresses digital sound. It works with stereo (2ch) or multi-channel audio.

DTS
(Digital Theater System)

DTS is a Multi-channel surround sound system, but it is different from Dolby Digital. Both formats were developed by Digital Theater Systems, Inc.

Finalise

To make DVDs that have been recorded playable in DVD players, finalise DVD-RW / R discs with this unit.

JPEG
(Joint Photographic Experts Group)

JPEG is a method of compressing still image files. You can copy JPEG files on CD-RW / R discs from a computer and play back the files on this unit.

MP3
(MPEG Audio Layer 3)

MP3 is a method of compressing files. You can copy MP3 files on CD-RW / R discs from a computer and play back the files on this unit.

PBC (Video CD only)
(Playback Control)

This function enables you to play back interactive software using a menu screen. See also Title.

PCM
(Pulse Code Modulation)

PCM is a format that converts audio into digital data. It is mainly used for Audio CDs and DAT. This unit can play back sounds as realistic as possible by converting even compressed Dolby Digital and MPEG audio to PCM.

Playlist

From this list you can play back contents of a disc in your desired order or in sequence. It is also possible to directly search for a specific scene.

Region code

Regions associate discs and players with particular areas of the world. This unit will only play back discs that have compatible region codes. You can find the region code of your unit by looking on the rear panel. Some discs are compatible with more than one region (or all regions).

Sampling frequency

The rate at which sound is measured by a specified interval to turn it into digital audio data. The number of samples in one second is defined as the sampling frequency. The higher the rate is, the better the possible sound quality.

S-Video output

Video is output as the individual signals of colour (C) and luminance (Y), so a higher-quality picture will be displayed.

Title
(DVD)

A collection of chapters on a DVD. See also chapter.

(Video CD)

The contents of a Video CD. When playing back a Video CD with the PBC function, the title menu will appear automatically.

Track

Audio CDs and Video CDs use tracks to divide the contents of a disc. The DVD equivalent is called a chapter. See also Chapter.

Specifications

General

System	HDD, DVD-Video, DVD-RW / R, VCD, CD-DA, CD-RW / R, Video Cassette Tape
VCR video heads	Four heads
HDD	Internal 3.5 inch HDD 160 GB
Power requirements	220–240 V~ ± 10%, 50 Hz ± 0.5%
Power consumption	60 W (standby: 8.5 W)
Weight	5.8 kg
Dimensions (width x height x depth)	435 x 99.5 x 380 mm
Operating temperature	5°C to 40°C
Operating humidity	Less than 80% (no condensation)
TV format	PAL-I

Recording

Recording format	Video Recording format (DVD-RW only), Video format (DVD-RW, DVD-R)
Recordable discs	DVD-ReWritable, DVD-Recordable
Video recording format Sampling frequency Compression format	13.5 MHz MPEG
Audio recording format Sampling frequency Compression format	48 kHz Dolby Digital

Tuner

Receivable channels IRA-E69	

Input/Output

Front Panel : (AV3)

Video input Input level	One RCA connector 1 Vp-p (75 Ω)
S-Video input Input level	One Mini DIN 4-pin jack Y (luminance) 1 Vp-p (75 Ω) C (colour) 300 mVp-p (75 Ω)
Audio input Input level	Two RCA connectors 2 Vrms (input impedance: more than 10 kΩ)

Rear Panel

VHF/UHF antenna input/output terminal	VHF/UHF set 75 Ω
Audio input /output	Two 21-pin scart sockets (AV1, AV2)
Video input /output Input /output level	Two 21-pin scart sockets (AV1, AV2) 1 Vp-p (75 Ω) each
S-Video output Input /output level	One Mini DIN 4-pin jacks Y (luminance) 1 Vp-p (75 Ω) C (colour) 300 mVp-p (75 Ω)
Audio output Output level	Two RCA connectors 2 Vrms (output impedance: ≃680 Ω)
Digital audio output Output level	One Coaxial pin jack 500 mVp-p (75 Ω)

Note

• The specifications and design of this product are subject to change without notice.