

TOSHIBA



DVD VIDEO RECORDER

D-R2SU D-R2SC D-KR2SU

OWNER'S MANUAL



OPERATIONS

Read "INSTALLATION GUIDE" first.



- Introduction
- Recording
- Playback
- Editing
- Library
- Function setup
- Others

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Caution for safety

Read “SAFETY PRECAUTIONS”, “IMPORTANT SAFETY INSTRUCTIONS”, “Precautions” and others of the “INSTALLATION GUIDE” first.

About this product

Some differences

This DVD recorder is more similar to a computer than it is to a standard DVD player. In addition to a microprocessor, it contains an operating system, random access memory (RAM), and a DVD-RAM/R/RW drive. The operating system includes software that is transferred to the RAM when the machine is turned on and at other times during operation. This transfer can take time. Thus, when you turn on the DVD recorder, it may be a minute or so before it is ready to use. Likewise, other functions may not be performed as quickly as they would on other AV equipment. In addition, accessing programs stored on the DVD-RAM/R/RW drive (or deleting a program from a DVD-RAM or DVD-RW disc) may take more time. Please take these factors into consideration as you use the DVD recorder.

Playback Restrictions

This owner's manual explains the basic instructions for this recorder. Some DVD video discs are produced in a manner that allows specific or limited operation during playback. As such, the recorder may not respond to all operating commands. This is not a defect in the recorder. Please refer to the notes on compatible discs later in this Introduction and to the discussion of DVD playback and features later in this manual.

“Ⓢ” may appear on the TV screen during operation.
 “Ⓢ” means that the operation is not permitted by the recorder or the disc.

Recording Restrictions

Copy-protected contents of DVD-Video disc, VIDEO CDs or audio CDs on the market cannot be copied on this recorder.

Contents without copy protection should be copied or edited only in accordance with applicable copyright laws, which may restrict copying or editing. Contents that permit single copying (copy once contents) can be recorded onto DVD-RAM discs, with some dubbing and editing restrictions. DVD-R/RW discs cannot record these contents.

Compatibility

In isolated cases, a disc bearing the DVD or CD logo may not fully and properly play back all features. This can be due, among other reasons, to problems and errors that can occur during the creation or recording of DVD and other software and the manufacture of software discs (including blank discs). Moreover, because of variations in the quality of discs, this recorder may not be able to record on all discs that bear a DVD-RAM, DVD-R or DVD-RW logo, but you should not encounter difficulty if you use only high quality recordable DVD discs. If you happen to encounter difficulties playing or recording a DVD disc or playing a CD disc, please feel free to call our Customer Service Hotline at 1-800-319-6684.

Compatible discs

There are many types and formats of discs. Please use the following information to select an appropriate disc.

Notes

- Handle the disc according to the disc instruction manual.
- Depending on the data recording method or the disc status, playback or recording on this recorder may not be possible, even if the disc is labeled as below. Toshiba cannot assure that all discs bearing the DVD or CD logos will operate as expected. Please see the discussion of compatibility on page 5.

For recording / playback

Disc	Mark	Specification	Remarks
DVD-RAM		<ul style="list-style-type: none"> • Single sided 4.7GB (12cm (4³/₄ in.)) • Double sided 9.4GB (12cm (4³/₄ in.)) 	<p>Read carefully the section “On DVD-RAM discs” (➡ page 8).</p> <p>Select a DVD-RAM disc that shows a statement on its package such as “this disc can be used with video recorders and drives compatible with 4.7GB DVD-RAM discs” or “this disc can copy images that permit single copying.”</p>
DVD-R		<ul style="list-style-type: none"> • 4.7GB For General Ver.2.0 (12cm (4³/₄ in.)) 	<p>Read carefully the section “On DVD-R discs” (➡ page 9).</p> <p>Depending on the disc status or the recording equipment, playback of the disc may not be possible on this recorder.</p>
DVD-RW		<ul style="list-style-type: none"> • Ver. 1.1 or later (12cm (4³/₄ in.)) 	<p>Read carefully the section “On DVD-RW discs” (➡ page 9).</p> <p>Depending on the disc status or the recording equipment, playback of the disc may not be possible on this recorder.</p>

Using different disc types for different purposes

DVD-RAM discs for your personal library

DVD-RAM discs comply with the global standard DVD-VR (Video Recording) format, and are optimized for recording of TV programs. You can rewrite repeatedly without deterioration of an image quality, erase unnecessary parts, divide a chapter, or specify playback area by frame. Its cartridge is suitable for a longer-term storage and family use, and its large capacity of 9.4 GB allows more recording space.

DVD-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 your 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 rewriteable, can be used as well.

* DVD-R and DVD-RW may not be the best suited format for recording TV programs. Because of the way the discs are formatted, it may not be possible to edit or divide the program as you may prefer, to record secondary languages, or programs that are copy protected in a way that allows only one copy. (NOTE: “Copy once” protected programs generally can be recorded to DVD-RAM discs.)

* This recorder records on a DVD-R/RW disc in DVD-Video format only. In DVD-VR format, recording is not possible.

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

For playback only

Disc	Mark	Specification	Remarks
DVD video disc	 	<ul style="list-style-type: none"> • 12cm (4³/₄ in.) / 8cm (3¹/₄ in.) • Region number  or  • Color system: NTSC 	The region number of this DVD recorder is 1. If region numbers, corresponding to a specific playable area, are printed on your DVD video disc and you do not find  or  , or the disc is encoded to permit playback only in regions other than Region 1, disc playback will not be allowed by the recorder.
DVD-RW		<ul style="list-style-type: none"> • 12cm (4³/₄ in.) • DVD-VR mode 	It is not possible to play contents recorded from programs which are not copy-free. Depending on the disc status, playback may not be possible.
VIDEO CD		<ul style="list-style-type: none"> • 12cm (4³/₄ in.) / 8cm (3¹/₄ in.) • Color system: NTSC • Version 1.1 and 2.0 	
Audio CD		<ul style="list-style-type: none"> • 12cm (4³/₄ in.) / 8cm (3¹/₄ in.) 	
CD-R		<ul style="list-style-type: none"> • 12cm (4³/₄ in.) • CD-DA (audio CD) format 	Depending on the disc status, playback may not be possible.
CD-RW			

- You cannot play discs other than those listed above.
- You cannot play non-standardized discs even if they may be labeled as above.
- You cannot play discs with specialized encoding (such as SACD discs) or the DVD audio portions of DVD Audio discs.
- This recorder uses the NTSC color system, and cannot play DVD video discs recorded in any other color system (PAL, SECAM, etc.), even if they have region marks  or .
- Toshiba cannot assure that all discs bearing the DVD or CD logos will operate as expected. Please see the discussion of compatibility on page 5.

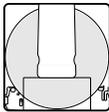
On DVD-RAM discs

■ Use only DVD-RAM discs that comply with DVD-RAM standard Version 2.0 or 2.1.

The recorder cannot record on a disc formatted in any other standard. When using such a disc, initialize it by using the disc-format function of this recorder.

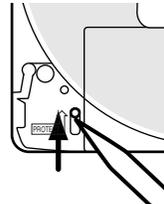
- The recorder may not record, dub, or edit some DVD-RAM discs, because they are edited/recorded with another manufacture's equipment or PC, contain a large number of titles, or have little remaining capacity. Also, a DVD-RAM disc may not be edited or recorded if its title contains still pictures.
- DVD-RAM discs formatted in UDF2.0 on a PC are not compatible with this recorder. Before using these discs, initialize them on this recorder.
- This recorder complies with current copyright protection technology and can copy a disc only when the disc permits copying once. When there is no indication on the disc, copying will not be allowed. Such an indication on a disc is required also for the Library Management database.

■ DVD-RAM discs with cartridges are recommended for recording.

- Two types of DVD-RAM discs are available: ones with cartridges and ones without cartridges. You can use either of them with this recorder, but the former ones are recommended. 
- In order to record highly detailed data, make sure the disc is clean. DVD-RAM discs with cartridges are easier to handle in this regard.
- Do not open the cartridge shutter. The disc may not play, or may not be recorded or edited once it becomes dirty.
- There are two types of DVD-RAM cartridges; removable (TYPE 2/4) and not removable (TYPE 1). It is recommended you do not remove the disc even when you can. Refer to the instruction manual that comes with the disc if it is absolutely necessary to remove the disc.
- Some commercially available cartridge discs cannot be recorded or edited once the inside discs are removed.

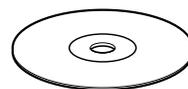
● To protect recorded contents

Slide the write-protect tab to "PROTECT" with something small enough. The disc can play, but cannot be edited or erased. Refer to the instructions that come with the disc.



■ When using a disc without a cartridge (commercially available discs)

- Discs without cartridges can easily attract fingerprints and dust, which is the reason they are not recommended. If you cannot avoid using them, handle with proper care.
- When you write in a title column on a disc, use a pen with a soft tip. Do not use a pen with a hard tip, such as a ballpoint pen.



Recommended discs

The following discs have been tested with this recorder:
 9.4 GB double-sided cartridge: Panasonic LM-AD240U
 4.7 GB single-sided cartridge: Panasonic LM-AB120U

- The company does not hold any responsibility to compensate the contents which should have been recorded, and any losses or damages (e.g. losses of business profit, or business intermission) that may arise from malfunction of this recorder (not recording/editing as intended). Problems arising in the following situations are included.
 - When a DVD disc recorded on this recorder is used in a DVD recorder of another manufacturer, or used (insertion, playback, recording or editing) in a personal computer DVD drive.
 - When a DVD that has been used as above is used again in this recorder.
 - When a DVD disc recorded in a DVD recorder of another manufacturer, or in a personal computer DVD drive is used.
- Some functions such as Library may not work with PC discs.

On DVD-R discs

■ Standards

- DVD-R for General Ver.2.0 discs can be used for recording and playback.
- Discs compatible with 2X speed recording (labeled Ver.2.1/2X etc.) and discs compatible with 4X speed recording (labeled Ver.2.1/4X etc.) can also be used.
- Select discs labeled “for video,” “for recording,” “120 min.” etc.
- DVD-R for authoring Ver.1.1 cannot be used.

■ Recording conditions

- Images for which copying is prohibited or restricted (copy once or copy prohibited) cannot be recorded. Even if the disc is labeled as CPRM compatible, this recorder can only be used to record copy-free material.

■ Recommended disc

Taiyo-Yuden 4x

■ Tested discs

Panasonic LM-RF120 (4.7GB/120 min.).

On DVD-RW discs

■ Standards

- Discs labeled DVD-RW Ver.1.1 can be used.
- Discs compatible with 2X speed recording (labeled Ver.1.1/2X etc.) can also be used.
- Select discs labeled “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. Even if the disc is labeled as CPRM compatible, this recorder can only be used to record copy-free material.
- DVD-VR mode recording is not possible.

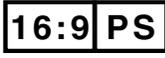
■ Recommended discs*

Victor/JVC VD-RW47BU

*Operation has been confirmed with recommended discs and tested disc, but some other discs may not be usable.

Marks on DVD video discs

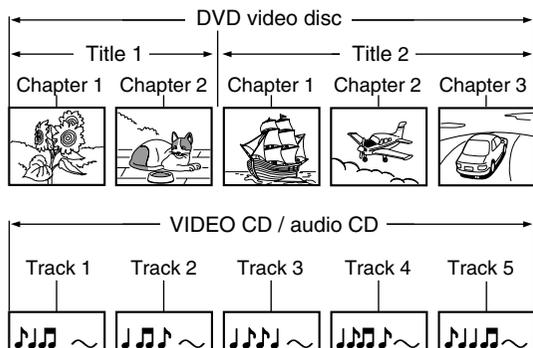
The following are examples of marks and the meanings.

Mark	Meanings
	Number of audio streams recorded in the disc. (2 streams such as English and Japanese in this example.)
	Number of subtitle languages recorded in the disc. (2 subtitle languages are recorded in this example.)
	Number of camera angles recorded in the disc. (3 camera angles are recorded in this example.)
	Pictures are recorded in the standard picture shape (4:3 aspect ratio).
	Pictures are recorded in the letter box picture shape (4:3 aspect ratio with horizontal black bars in the top and bottom of pictures).
	Pictures are recorded in the 16:9 wide picture shape. TVs with 4:3 aspect ratio will display them in the letter box style.
	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.

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.



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.

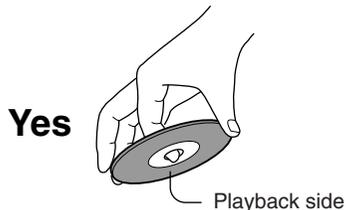
Each title, chapter, or track is assigned a number, which is called "title number", "chapter number", or "track number" respectively.

Some discs may not have these numbers.

When you record on a DVD-RAM/R/RW disc, one recording will always equal one title.

On handling discs

- Do not touch the playback side of the disc.



- Do not stick paper or tape to discs.



On cleaning discs

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



- If you cannot wipe off the dust with a soft cloth, wipe the disc lightly with a slightly moistened soft cloth and finish with a dry cloth.
- Do not use any type of solvent such as thinner, benzene, 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

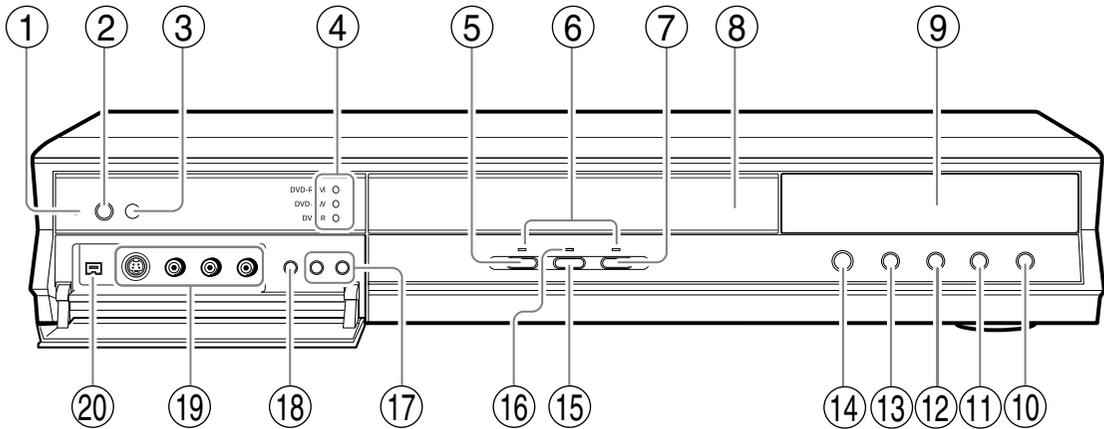
The table shows main functions which are available on this recorder per disc category. This will help you choose discs.

	DVD-RAM disc	DVD-RW disc	DVD-R disc
Characteristics on this recorder	Suitable for repeat use of the disc, and data storage for video library. Copy once contents can be recorded using a compatible disc.	Suitable for saving data in DVD-Video format to play on compatible devices. You can erase recorded contents to use the disc repeatedly.	Suitable for saving data in DVD-Video format to play on compatible devices. Once you execute DVD-Video finalizing process on a recorded disc so that it can be played on other players, you cannot make addition, correction and deletion of contents on the disc.
For the first use	No preparatory steps required, however initializing is recommended.	Initialize the disc.	No preparatory steps required.
Recording a TV program	Yes	Yes	Yes
Erasing recorded contents	Yes	Yes If the disc has been executed DVD-Video finalizing process, first cancel the process then delete contents.	Yes Deleting contents cannot restore the disc space. <u>After you execute DVD-Video finalizing process on a recorded disc, you cannot delete contents of the disc.</u>
Recording additional content on a recorded disc	Yes	Yes If the disc has been executed DVD-Video finalizing process, first cancel the process then delete contents.	Yes <u>After you execute DVD-Video finalizing process on a recorded disc, you cannot add contents to the disc.</u>
Indexing recorded contents Naming a title Creating a thumbnail	Yes Yes	Yes Yes <u>After you execute DVD-Video finalizing process on a recorded disc, you cannot name a title or create a thumbnail.</u>	Yes Yes <u>After you execute DVD-Video finalizing process on a recorded disc, you cannot name a title or create a thumbnail.</u>
Collecting favorite scenes (Playlist Editing)	Yes	No	No
Making a new title from a Playlist containing favorite scenes (Copy within the same disc)	Yes	No	No
Playing contents recorded on this recorder, on other devices	Contents can be played on any devices compatible with DVD-RAM discs. Follow the instruction of the device to play.	Execute DVD-Video finalizing process on this recorder. This process makes the disc playable on other compatible devices. (Some models excepted.)	Execute DVD-Video finalizing 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:	Initialize the disc. If it is still unusable, try to execute DVD-RAM Physical Format.	Initialize the disc.	—

Index to parts and controls

See pages with arrows for details.

Front panel



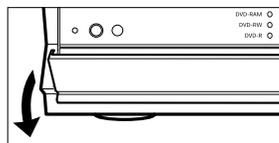
* The above illustration displays the front panel with the cover open. See the following page on how to open or close the cover.

- ① **ON/STANDBY indicator** ➔ page 20, 21
Displays the operational state of the recorder.
- ② **ON/STANDBY button** ➔ page 20, 21
Turns the power on/restores the unit in the standby mode.
- ③ **Remote sensor** ➔ page 12 in “INSTALLATION GUIDE”
- ④ **Media indicator**
Indicates the current media.
- ⑤ **● (REC) button** ➔ page 34
Starts recording.
- ⑥ **Operational status indicator**
Indicates the operational status of the recorder.
● REC : Illuminates when recording.
▶ PLAY : Illuminates when playing.
● REC ▶ PLAY : Illuminates when copying within a disc.
- ⑦ **▶ (PLAY) button** ➔ page 59
Starts playback.
- ⑧ **Disc tray** ➔ page 20
Loads a disc into the disc drive.
- ⑨ **Front panel display** ➔ page 18
- ⑩ **■ (STOP) button** ➔ page 35, 59
Stops playback or recording.
- ⑪ **▶▶ (PICTURE SEARCH) button** ➔ page 63
Scans the picture forward.
- ⑫ **◀◀ (PICTURE SEARCH) button** ➔ page 63
Scans the picture backwards.
- ⑬ **|| (PAUSE) button** ➔ page 35, 59
Stops playback or recording momentarily.
- ⑭ **▲ (OPEN/CLOSE) button** ➔ page 20, 21
Opens and closes the disc tray.
- ⑮ **TIMESLIP button** ➔ page 61, 62
Selects the time slip mode.
- ⑯ **TIMESLIP indicator**
Lights up in the time slip mode.
- ⑰ **CHANNEL buttons** ➔ page 20, 33
Selects the channel.

- ⑱ **INPUT SELECT button** ➡ page 32
Pressing repeatedly selects between various input sources.
- ⑲ **INPUT 2 jacks** ➡ page 36
Use this when recording from other input source such as a VCR or a camcorder.
- ⑳ **DV input terminal** ➡ page 112
Use this when recording from a digital video device such as a digital video camera.

■ **To open or close the cover on the front panel**

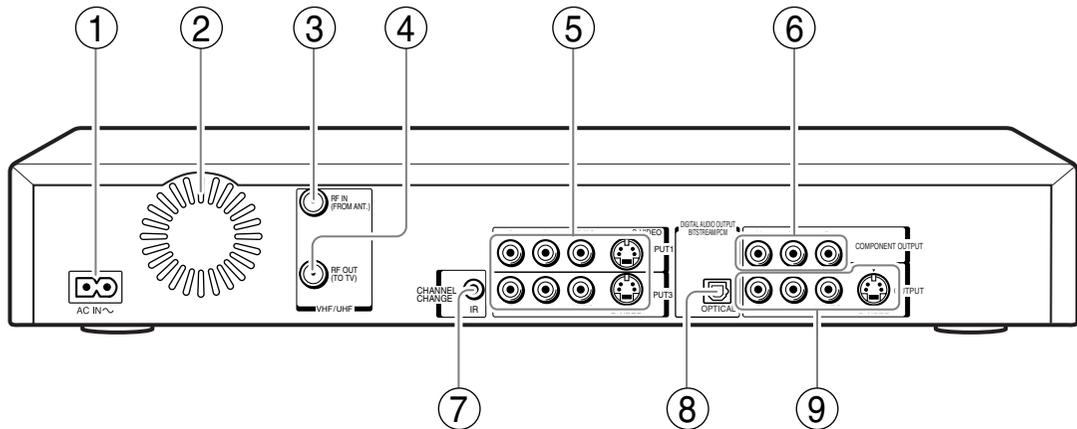
Put your finger on the left edge of the cover and pull it down to open.



Note

- Do not place a heavy object on the cover while it is open. Doing so may damage the recorder.

Rear panel



- ① **AC IN socket** ➔ page 15 in “INSTALLATION GUIDE”

Connects the supplied power cord.

- ② **Ventilation fan**

- ③ **VHF/UHF RF IN (FROM ANT.) input socket** ➔ page 14 in “INSTALLATION GUIDE”

Connects to an antenna or cable signal.

- ④ **VHF/UHF RF OUT (TO TV) output socket** ➔ page 14 in “INSTALLATION GUIDE”

Connects the supplied coaxial cable to a TV.

- ⑤ **INPUT1/INPUT3 jacks** ➔ page 36

Use this to connect the recorder to output jacks of external devices such as another player or camcorder.

- ⑥ **COMPONENT OUTPUT jacks** ➔ page 20 in “INSTALLATION GUIDE”

Outputs video signals to a connected TV or monitor.

Connects to a TV or monitor equipped with component video jacks.

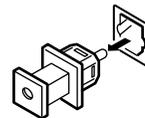
- ⑦ **CHANNEL CHANGE IR jack** ➔ page 19 in “INSTALLATION GUIDE”

Connect the supplied IR control cable to control cable/satellite channels according to timer programs.

- ⑧ **DIGITAL AUDIO OUT BITSTREAM/PCM OPTICAL jack** ➔ page 22, 23, 24 in “INSTALLATION GUIDE”

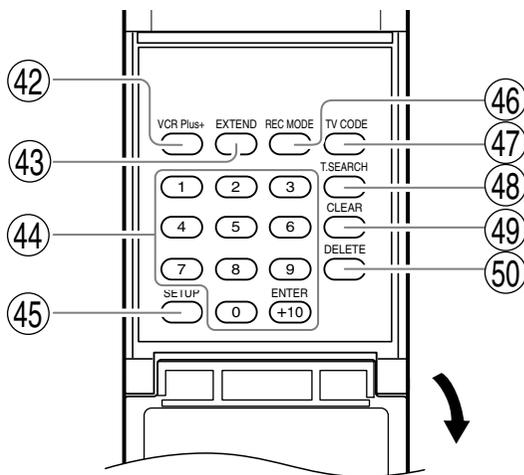
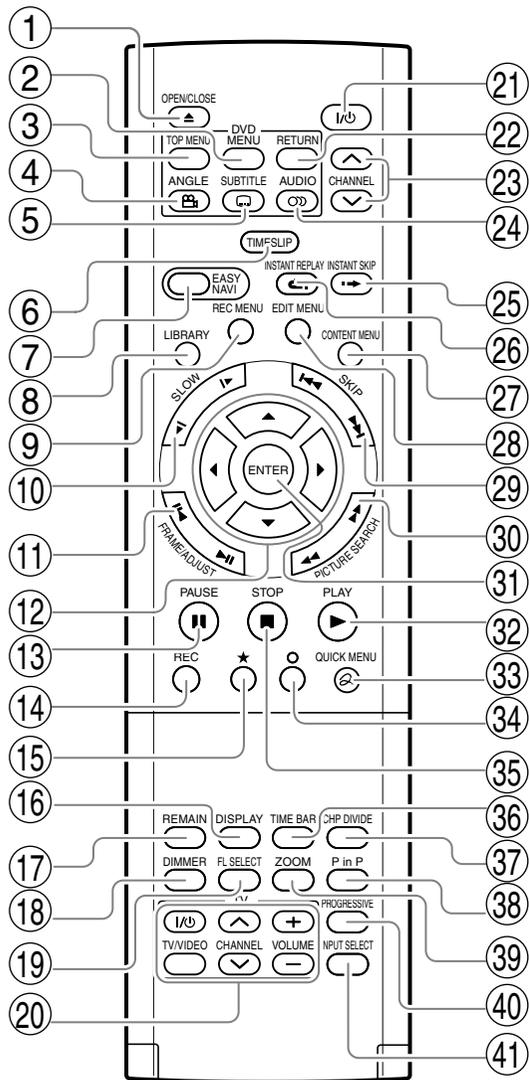
Use this to connect the recorder to an audio receiver equipped with an optical digital audio input jack.

When connecting the optical digital cable, remove the cap and fit the connector into the jack firmly. When not using the jack, keep the cap inserted to protect it from dust intrusion.



- ⑨ **OUTPUT jacks** ➡ page 15, 17, 18, 22 in
“INSTALLATION GUIDE”
Outputs video and audio signals to a connected
TV or amplifier.

Remote control



- ① OPEN/CLOSE button ➞ page 20, 21
- ② MENU button*¹
- ③ TOP MENU button ➞ page 60
- ④ ANGLE button ➞ page 68
- ⑤ SUBTITLE button ➞ page 69
- ⑥ TIMESLIP button ➞ page 61, 62
- ⑦ EASY NAVI button ➞ page 23
- ⑧ LIBRARY button ➞ page 116
- ⑨ REC MENU button ➞ page 39
- ⑩ SLOW button ➞ page 64
- ⑪ FRAME/ADJUST button ➞ page 39, 65
- ⑫ Direction buttons (▲/▼/◀/▶) ➞ page 53, 122
- ⑬ PAUSE button ➞ page 35, 54
- ⑭ REC button ➞ page 34
- ⑮ ★ button ➞ page 53
- ⑯ DISPLAY button ➞ page 79
- ⑰ REMAIN button ➞ page 27
- ⑱ DIMMER button ➞ page 19
- ⑲ FL SELECT button ➞ page 19
- ⑳ Buttons for TV operation ➞ page 46 in "INSTALLATION GUIDE"
- ㉑ ON/STANDBY button ➞ page 20, 21
- ㉒ RETURN button*²
- ㉓ CHANNEL buttons ➞ page 20, 33
- ㉔ AUDIO button ➞ page 71
- ㉕ INSTANT SKIP button ➞ page 63
- ㉖ INSTANT REPLAY button ➞ page 63
- ㉗ CONTENT MENU button ➞ page 53, 89
- ㉘ EDIT MENU button ➞ page 104
- ㉙ SKIP button ➞ page 64
- ㉚ PICTURE SEARCH button ➞ page 53, 63
- ㉛ ENTER button ➞ page 53, 122
- ㉜ PLAY button ➞ page 59
- ㉝ QUICK MENU button ➞ page 24, 81
- ㉞ O button ➞ page 122
- ㉟ STOP button ➞ page 35
- ㊱ TIME BAR button ➞ page 80
- ㊲ CHP DIVIDE button ➞ page 89
- ㊳ P in P button ➞ page 78
- ㊴ ZOOM button ➞ page 70
- ㊵ PROGRESSIVE button ➞ page 20 in "INSTALLATION GUIDE"
- ㊶ INPUT SELECT button ➞ page 37
- ㊷ VCR Plus+ button ➞ page 46
- ㊸ EXTEND button ➞ page 43, 45
- ㊹ Number buttons ➞ page 39, 66
- ㊺ SETUP button ➞ page 122
- ㊻ REC MODE button ➞ page 34
- ㊼ TV CODE button ➞ page 46 in "INSTALLATION GUIDE"
- ㊽ T.SEARCH button ➞ page 67
- ㊾ CLEAR button ➞ page 66
- ㊿ DELETE button ➞ page 49

*¹ MENU

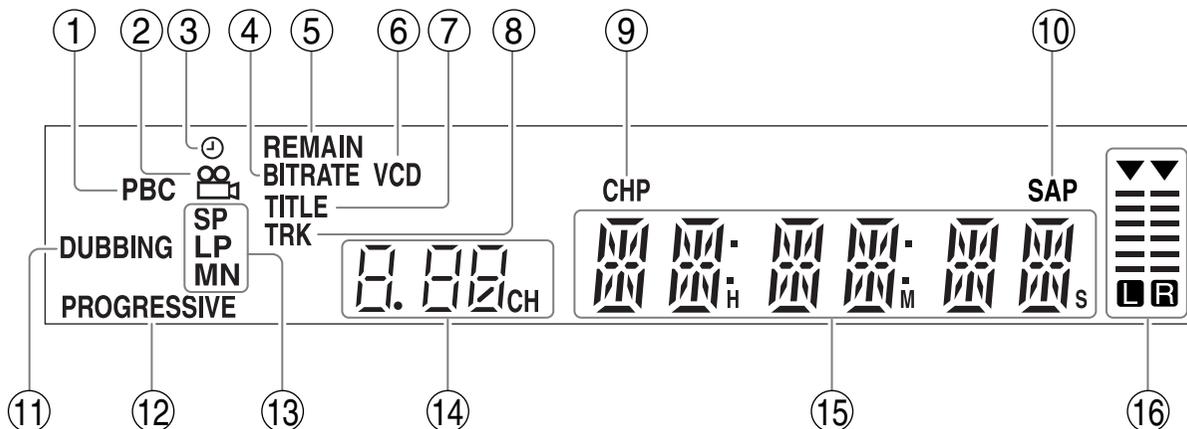
Use this to display a menu screen that is recorded on a DVD video disc.

Operate the menu screen as the same manner as "Locating a title using the top menu (➞ page 60)". A menu screen is not recorded on some discs.

*² RETURN

Returns to the previous screen (the screen may be specified depending on the disc). Refer to the instructions of the disc.

Display



① **PBC indicator**

Illuminates when PBC function is "On" (➡ page 128) and a PBC-controllable VIDEO CD is loaded.

② **Angle icon** ➡ page 68

Illuminates when playing a scene recorded with multi angles.

③ **Program recording indicator**

Illuminates when the recorder holds a timer program.

④ **Bit rate indicator**

Illuminates when displaying the bit rate selected for recording, or when displaying the actual bit rate.

⑤ **REMAIN (Remaining space) indicator**

Illuminates when an available recording time is displayed.

⑥ **VCD/CD indicator**

VCD : Illuminates when a VIDEO CD is loaded.
CD : Illuminates when an audio CD is loaded.

⑦ **Title indicator**

Illuminates when a title number is displayed.

⑧ **TRK (Track) indicator**

Illuminates when a track number is displayed.

⑨ **CHP (Chapter) indicator**

Illuminates when a chapter number is displayed.

■ Dimming the display

Pressing the DIMMER button on the remote control changes the brightness of the display (normal/dimmed/off).

■ Switching the display

Every time you press the FL SELECT button, the display changes between the channel, title number, and time. The display may not change, depending on the disc or recording conditions.

⑩ SAP indicator

Illuminates when receiving a SAP broadcast.

⑪ DUBBING indicator

Illuminates when copying.

⑫ PROGRESSIVE indicator

Illuminates when video signals are output in the progressive format.

⑬ Picture quality mode indicator ➡ page 133

The current picture quality mode lights up.
The modes are: MN (Manual)/SP (Standard Play)/LP (Long Play)/SP+LP+MN (Auto)

⑭ Channel indicator

Displays the current channel or other numbers such as a title number, track number, bit rate or input selection.

⑮ Multi display

Displays the current time, elapsed time, remaining time, starting time of programmed recording, chapter number or message, etc.

⑯ Analog output level indicator

Displays the analog output level.
L+R: Stereo and bilingual (left (main) channel and right (sub) channel)

L : Left (main) channel

R : Right (sub) channel

Off : Mono

Level indicator may not show exact sound level. It only shows the average level.

Before operating this recorder

■ Is your recorder ready?

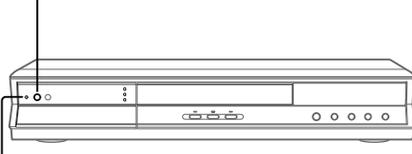
- Refer to the supplied "INSTALLATION GUIDE" manual and finish the necessary preparations.
- Turn on the connected equipment such as a TV or audio system and select the input from the recorder.

■ Turning the power on

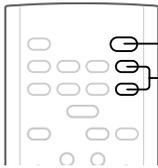
(This owner's manual instructions are based on the assumption that all proper connections have been completed and the TV is turned on.)

Press ON/STANDBY on the front panel of the recorder or on the remote control.

ON/STANDBY button



ON/STANDBY indicator



ON/STANDBY button

CHANNEL buttons

When the power turns on, the ON/STANDBY indicator changes from red (standby mode) to green (operation). After a few seconds, a start-up screen appears. The following icon appears at the top right corner of the screen.

e.g.



When this icon disappears, the recorder is ready to operate. If the disc drive contains a disc, it takes a little longer to start up.

■ Viewing TV channels through this recorder

After turning the power on, the recorder will output TV channel signals to the connected TV (also in the stop mode).

You can select a desired channel by pressing the CHANNEL buttons, or the number buttons.

(These buttons can select channels of a connected cable box or satellite system, if "IR control" (▶ page 37, in "INSTALLATION GUIDE") is set to "On".)

■ Loading a disc

Check disc compatibility beforehand (▶ page 6, 7) and use a proper playable disc.

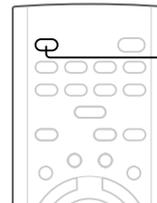
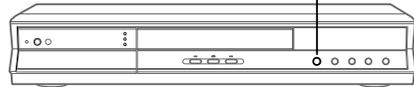
Caution

- Keep your fingers well clear of the disc tray. Neglecting this may cause serious personal injury. Keep a close watch on children.
- Do not use a cracked, deformed, or repaired disc.

1 Open the disc tray.

Press the ▲ button on the front panel or the OPEN/CLOSE button on the remote control.

▲ button



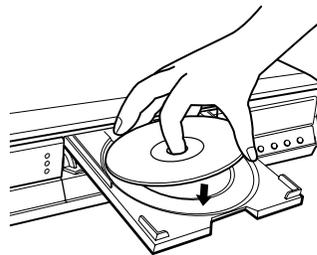
OPEN/CLOSE button

2 Insert a disc.

Disc without a cartridge

Insert with the playback side down.

There are two kinds of disc size. Place a disc to fit the guide. If a disc is out of the guide, it may result in damage to the disc or malfunction.



Place a disc in the inside hollow.

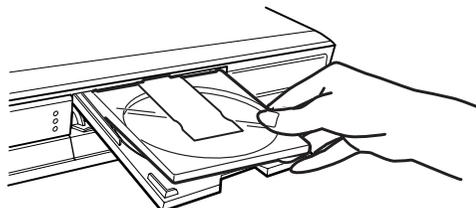
DVD-RAM disc with cartridge (TYPE1/TYPER2/TYPER4)

Single sided

Turn the printed side up, and insert the cartridge into the tray frame following the direction of the arrow on the cartridge.

Double sided

Turn the desired recording/playback side up, and insert the cartridge into the tray frame following the direction of the arrow on the cartridge.



3 Close the disc tray.

Press ▲ on the front panel or the OPEN/CLOSE button on the remote control.

Notes

- Use the button on the front panel or the remote control to open and close the disc tray. Do not push or hold the disc tray while it is moving. Doing so may cause the recorder to malfunction.
- Do not insert a disc which is unplayable, or any object other than a playable disc.
- Do not apply downforce to the disc tray. Doing so may cause the recorder to malfunction.
- If the disc tray stops while closing, the mechanical protection system of this recorder will open it. Do not force it to close. Doing so may cause malfunction.
- If the disc tray will not open, turn the recorder off, and press the ▲ button on the front panel or the OPEN/CLOSE button on the remote control. This may turn the recorder on and open the disc tray. If it still won't open, contact your nearest TOSHIBA dealer.

■ Turning the power off

Press ON/STANDBY on the front panel of the recorder or on the remote control.

The "Unloading" icon appears at the top right corner of the screen, and the ON/STANDBY indicator turns red, then the power turns off (Standby mode.)

Caution

- If the power fails or the power cord is disconnected from a wall outlet while the recorder is in operation (ON/STANDBY indicator lit in green), the loaded disc may become recording disabled. In such a case, executing an initialization of the disc using the formatting function of the recorder may refresh it. However, all contents stored on the disc will be completely erased by this initialization process.
- This recorder may indicate alert messages with some DVD-RAM discs right after insertion. If such a disc is used for playback or recording on other equipment, all data in the disc may be damaged and the disc will not be played. By executing an initialization of the disc using the formatting function of the recorder, the disc will become operational.
- If the recorder freezes and does not respond at all, leave it alone for about 15 minutes or longer. This may restore the recorder. After the recorder has recovered, turn it off once and turn it on again to use as usual. If the recorder is still inoperable after more than 15 minutes have passed, press and hold the ON/STANDBY button on the front panel or the remote control for about 10 seconds or longer. The recorder is forced to quit and the power turns off. Turn the recorder on again and use it as usual. (This is an emergency measure, which may cause losses and/or damages of data. Avoid casual use of this measure.) (This 15-minute measure is available only when "Screen Protector" is set to "On." (▶ page 131))

Note

- If there are any performance malfunctions of the disc drive, immediately discontinue use of this recorder, and disconnect the power cord from a wall outlet, then contact your dealer. Continuous use of the recorder in such a condition will aggravate the condition and result in increased cost and repair time.

■ Disc tray lock

You can lock the disc tray.

Press and hold II on the front panel or PAUSE on the remote control for longer than about 3 seconds.

To unlock, during stop press the button for longer than about 3 seconds.

Note

- Turning the power off also unlocks the disc tray.

Before operating this recorder (Continued)

Start-up/Shutdown (closing) icons

These icons are displayed at the top right corner of the screen when startup or finishing. While they are flashing, the recorder is operating as follows:



Start-up, reading a disc, finishing the recording



Unloading a disc, finishing the operation



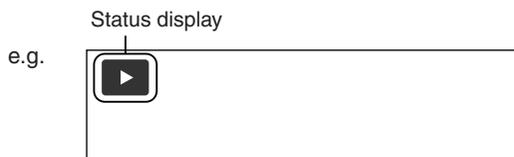
Opening a disc tray



Closing a disc tray

Status display

Each time you operate the recorder, the following displays appear on the TV screen to indicate the status of the recorder.



Main on-screen displays
(Depending on the disc, some of these may not appear.)

- ▶ : Playback
- || : Pause
- : Stop
- ▶▶ : Fast-forward
- ◀◀ : Fast-reverse
- ▶▶| : Forward skip*
- ◀◀| : Reverse skip*
- ▶|x1/2 : Forward slow-motion
- ◀|x1/2 : Reverse slow-motion
- ||▶ : Forward frame by frame playback
- ◀|| : Reverse frame by frame playback
- : Recording
- || : Recording pause
- Title End : When title playback is completed
- ▶→ : Instant skip
- ↶ : Instant replay
- Chapter Divide : Chapter division
- ↶ 1/20 : Forward skip by 1/20
- ↷ 1/20 : Reverse skip by 1/20

* Accompanied with the followings:

DVD-RAM | **DVD-R** | **DVD-RW** :

Title number/title name and chapter number/
chapter name

DVD-VIDEO :

Title number and chapter number

VCD | **CD** :

Track number

Notes

- To disable the status display, set "On Screen Display" (➡ page 131) to "Off."
- You can add the current status of the settings to this display. See ➡ page 79.

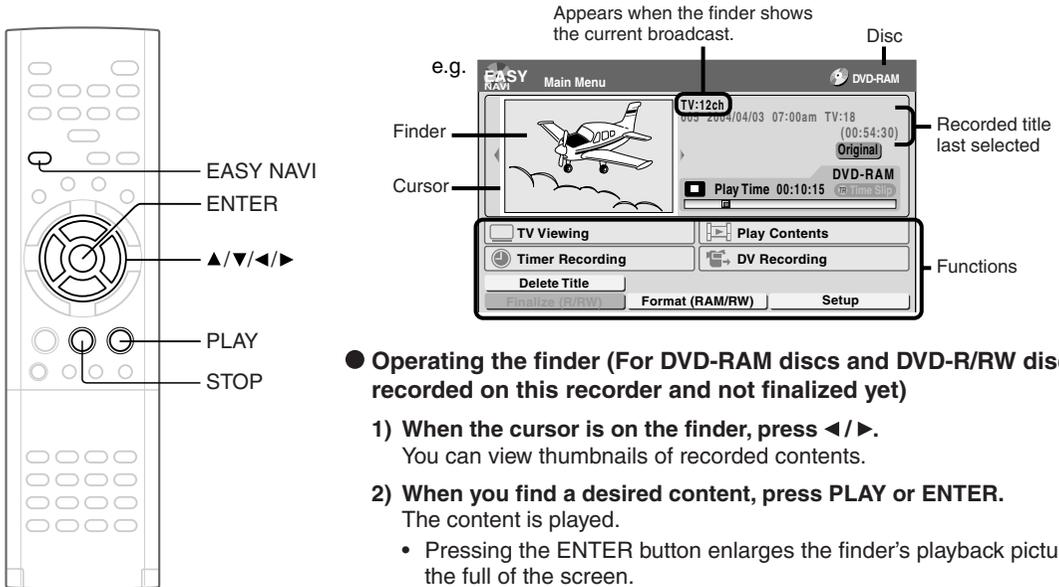
Key operation - EASY NAVI & QUICK MENU

The **EASY NAVI** button opens the “EASY NAVI Main Menu”, a main gate to the functions of this recorder. From this menu, you can access the desired functions while viewing a current picture. Additionally, the **QUICK MENU** button provides you a sub menu of the current function.

■ EASY NAVI

Press **EASY NAVI**.

Sound is muted and the following GUI appears. (Actual displays vary depending on operational status.)



● Operating the finder (For DVD-RAM discs and DVD-R/RW discs recorded on this recorder and not finalized yet)

1) When the cursor is on the finder, press ◀/▶.

You can view thumbnails of recorded contents.

2) When you find a desired content, press PLAY or ENTER.

The content is played.

- Pressing the ENTER button enlarges the finder's playback picture to the full of the screen.
- You can change playback speed. See ➡ page 63.

3) To stop, press STOP.

A current channel broadcast appears. (“TV:xxxch” accompanies.)

- Pressing the REC button starts recording. On recording, see ➡ page 25.

● Item selection

Press ▲/▼/◀/▶ to select an item, then press ENTER.

(Unavailable features are grayed out.)

Item	Function	➡ page
TV Viewing	A current channel's broadcast returns.	—
Play Contents	Recorded contents are listed in a thumbnail view.	53
Timer Recording	A list of timer programs appears.	39
DV Recording	The setting menu for recording contents from equipment connected to the DV terminal.	112
Delete Title	You can delete the current content. Operate according to the message.	49
Finalize (R/RW)	You can execute the DVD-Video finalizing process on the loaded disc.	108
Format (RAM/RW)	You can format the loaded disc.	28
Setup	A setup menu appears.	122

(Continued)

- **To exit the EASY NAVI**
Press EASY NAVI again.

Note

- For a disc other than the specified one, the finder cannot be operated. To play the disc, exit the EASY NAVI then press the PLAY button, or select the “Play Contents” function.

■ **Quick Menu operation**

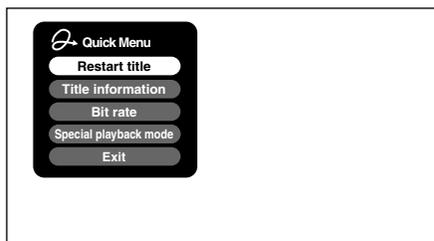
To access various optional functions of this recorder, open the Quick Menu. The Quick Menu displays a list of selections relevant to your current mode.

● **Opening a Quick Menu**

1) **Press the QUICK MENU button.**

The following menu (“Quick Menu”) appears.
(Actual selections vary depending on operational status.)

e.g.



2) **Press ▲ / ▼ to select an item, then press ENTER.**

● **To exit the Quick Menu**

Press QUICK MENU again.

Alternatively

Select “Exit” with ▲ / ▼, then press ENTER.

Hint on reading this manual

The following icons show the playable discs for each function described on this instruction manual.

DVD-RAM : DVD-RAM disc

DVD-RW : DVD-RW disc

DVD-R : DVD-R disc

DVD-VIDEO : DVD video disc

VCD : VIDEO CD

CD : Audio CD
(For CD containing JPEG or MP3/WMA files, see ➡ page 74, 76.)

Most instructions are based on remote control operation, unless otherwise noted. You can use the buttons on the remote control and those on the main unit as well when they have the same function.

If copy protection signal is detected during recording on this recorder, the recording automatically pauses and a message appears. In this case, the PAUSE button cannot release the recording. (It is possible to end the recording by pressing the STOP button.) If the copy protection signal continues, the recording will terminate.

Recording

Recording variations for many types of programs or situations.

- **Before recording**
- **Recording a TV program**
- **Recording an external source**
- **Programing a recording (REC MENU)**
- **VCR Plus+ recording**
- **Others**

Before recording

Please be sure to read this critical background information prior to making a recording.

Conventional video cassette recorders have required tapes to record, while this recorder enables recording on a DVD-RAM/R/RW disc whenever you want, without selecting an available tape and confirming a point to start a recording from. Further, if you use DVD-RAM discs, you can collect necessary scenes and store them in it to make your own video library.

■ Is your DVD recorder ready?

Before recording a TV program on this recorder, insure that channels you want to record are correctly tuned in on this recorder.

If not tuned in, read the separate "INSTALLATION GUIDE" volume again, and confirm all the necessary connections and settings have been done.

Also, insure the clock is set precisely for program recording. Set the clock using the "Initial settings" menu (➡ page 31, INSTALLATION GUIDE).

■ Disc initializing

Whenever you use a new DVD-RAM/RW disc on this recorder, be sure to initialize the disc. For DVD-RAM disc, initialization is indispensable to the database system of this recorder.

DVD-R discs can be used on this recorder without initializing.

For details of initialization of DVD-RAM/RW discs, see ➡ page 28.

If an initialized DVD-RAM disc is still unusable, it may become usable by executing "DVD-RAM physical format" in the "Management settings" menu.

For "DVD-RAM physical format", see ➡ page 29.

■ Note on recording on a DVD-RAM disc

Confirm disc compatibility and prepare an available DVD-RAM disc to record on (➡ page 6, 8).

Some discs may need to be formatted for use on this recorder. A message will appear asking you to execute disc formatting. Follow the procedure displayed on-screen to format the DVD-RAM disc compatible with this recorder.

Some DVD-RAM discs formatted on a PC may not be usable.

Note

- This recorder records on a DVD-RAM disc if it complies with DVD-RAM standard Version 2.0 or 2.1. However, you may not record on some DVD-RAM discs that have complicated contents (often, to protect the recorded data). When you select a DVD-RAM disc that has already been recorded, check that the disc is suitable for recording or the remaining time of the disc is displayed. It is recommended to use a new DVD-RAM disc for an important recording.

■ Note on recording on a DVD-RW disc

Confirm disc compatibility and prepare an available DVD-RW disc to record on (➡ page 6, 9).

Some discs may need to be initialized for use on the recorder. A message will appear asking you to execute disc initializing. Follow the procedure displayed on-screen for initialize the DVD-RW disc compatible with this recorder.

Some DVD-RW discs initialized on a PC may not be usable.

To play a DVD-RW disc recorded on this recorder on other devices, finalize the DVD-RW disc on this recorder. (➡ page 108)

The finalization disables the disc's rewritability. To rewrite a finalized DVD-RW disc, cancel the finalization (➡ page 111).

- On DVD-RW discs recorded on other devices, you cannot execute DVD-Video finalize process or cancel the finalize process, or add recordings on this recorder.
- You cannot rewrite or edit a DVD-RW disc if recorded in DVD-VR mode.
- DVD-RW discs which are recorded on other devices and not finalized yet, cannot be read on this recorder. Do not rush to initialization. Check that the contents can be erased or not.

■ Note on recording on a DVD-R disc

Confirm disc compatibility and prepare an available DVD-R disc to record on (➡ page 6, 9).

To play a DVD-R disc recorded on this recorder on other devices, finalize the DVD-R disc on this recorder. (➡ page 108)

The finalization permanently disables the disc's rewritability. (Canceling the finalization is not possible.)

- DVD-Video finalize process cannot be canceled if once executed on a DVD-R disc.
- On DVD-R discs recorded on other devices, you cannot execute DVD-Video finalize process or add recordings on this recorder.

■ To check space remaining on a disc

1) Press REMAIN.

The current capacity is displayed at the bottom of the screen and on the front panel display.

2) After checking the capacity, press the button again to turn off the display.

Note

- You can also check the capacity of the disc by selecting "Disc budget calculation" from the Quick Menu within the REC MENU (➡ page 44).

■ Programmed recording and operational status

The recorder gives priority to programmed recordings in every operating mode. Even if the recorder is playing, recording or editing, or even in standby mode, at a starting time of a programmed recording the recorder will make itself ready or stop those operations and start the recording.

However, "DVD-Video finalizing process" (➡ page 108) operations may have priority over programmed recordings.

■ When the programmed settings overlap

Before the first recording is completed, the second program is scheduled to begin recording. When using a DVD-RAM disc, the recording of the previous program stops 15 seconds before the next program starts.

When using a DVD-R or DVD-RW disc, the recording of the previous program stops about 2 minutes before the next program starts, to complete data process. In this 2 minutes, you cannot operate the loaded DVD-R or DVD-RW disc.

■ On a programmed recording across the change-over of Daylight-saving time

- When the clock gains across Daylight-saving time during a programmed recording, it means that the recording completion time is consequently set one-hour earlier. In this case, set the programmed recording one-hour longer in advance. If not set accordingly, the programmed recording stops one-hour shorter.
- When the clock loses across Daylight-saving time during a programmed recording, it means that the recording completion time is consequently set one-hour later. In this case, as the programmed recording continues one-hour longer, delete unnecessary chapters by chapter dividing after the completion of recording.

Notes

- The "Loading" icon appears in the top right of the screen after recording. This indicates that the unit is executing the final recording process (writing managing information). Operations other than changing channels cannot be done until this icon disappears. The time for executing this process differs depending on the recording time or capacity of the disc.
- Note that all recording content may be deleted if the unit is disconnected from a wall outlet, or a power failure occurs, during recording.
- If a power failure occurs within five minutes prior to the programmed recording start time, the programmed recording may not be executed.
- A programmed recording may not be executed correctly if scheduled when Daylight-Saving time starts or ends.

Initializing a DVD-RAM/RW disc (Logical format)

Be sure to read this section prior to using a DVD-RAM/RW disc on this recorder for the first time. For DVD-R, initializing is not necessary.

A disc should be initialized in the following cases: (The recorder may display a message to request you to do so.)

e.g.

- When you use a DVD-RAM/RW disc on this recorder for the first time.
- If data fragments produced by repeated recording or erasing have accumulated.
- If a disc error has occurred.
- When you want to record on a DVD-RAM disc for PC. (➡ page 8)

Initializing formats a disc logically and insures that it will perform to its full capability. However, this erases all data on the disc, so make sure that it does not matter if data on the disc is erased whenever you initialize a disc.

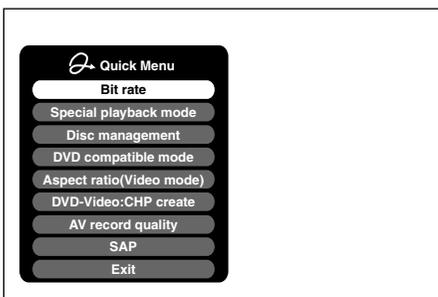
■ How to initialize a disc

To initialize a DVD-RAM disc, load it in the recorder. See ➡ page 20 for loading a disc.

1) During stop, press QUICK MENU.

The following menu appears. (The actual contents depends on the operational status of the recorder.)

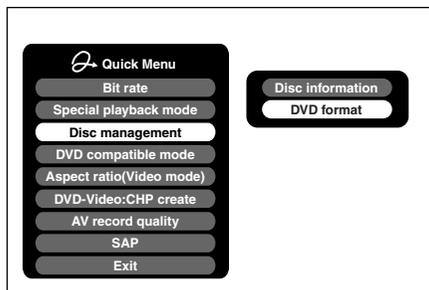
e.g.



2) Press ▲ / ▼ to select “Disc management,” then press ENTER.

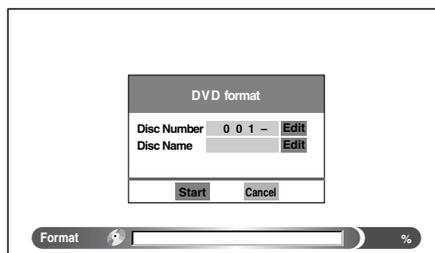
A sub menu appears on the right side.

e.g.



3) Press ▲ / ▼ to select “DVD format,” then press ENTER.

e.g.



Numbering a disc

The recorder automatically numbers discs when initializing. However, you can assign a desired number (using 3 digits) and designate sides A and B on a double-sided disc. (DVD-RW discs cannot be numbered.)

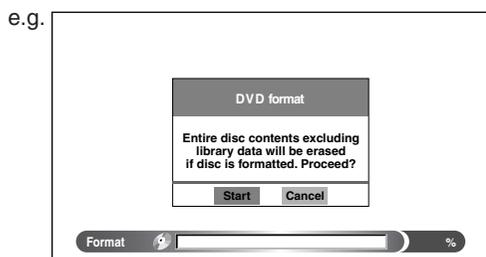
- (1) Press the ▲ / ▼ buttons to select “Edit” of “Disc Number” then press the ENTER button.
- (2) Press the ▲ / ▼ buttons to select a digit.
- (3) Press the ◀ / ▶ buttons to shift.
- (4) Repeat steps (2) and (3).
- (5) Press the ENTER button.

Naming a disc

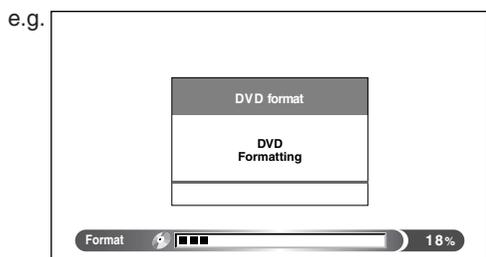
You can name a disc.

- (1) Press the ▲ / ▼ buttons to select “Edit” of “Disc Name,” then press the ENTER button. The character input window appears.
- (2) Enter a disc name following the procedure of “Entering characters” (➡ page 30).
- (3) Press the ★ button to eliminate the window.

- 4) Press ◀/▶ to select “Start,” then press ENTER.



- 5) Press ◀/▶ to select “Start,” then press ENTER.
Initialization starts.



When initialization is completed, the setup window disappears.

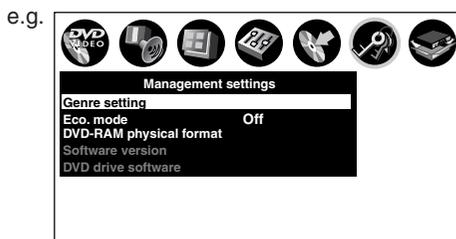
DVD-RAM physical format

Physical formatting is a simple execution for a disc which cannot be used or read (or which is becoming hard to read). It may refresh such a disc for recording and playback. (There is no guarantee that all such discs will be recovered.)

“DVD-RAM logical format” process only rewrites certain data on file system and management information, however, “DVD-RAM physical format” rewrites all data on a disc, therefore it takes a much longer time to complete. For a 4.7GB single sided DVD-RAM, about 70 minutes will be necessary. While processing, all recorder operations and functions including program recording will not work until the process is finished. Also this process erases all data stored on the DVD-RAM disc.

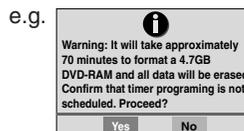
- 1) During stop, press SETUP.

- 2) Press ◀/▶ to select “Management settings” then press ENTER.



- 3) Press ▲/▼ to select “DVD-RAM physical format,” then press ENTER.

- 4) Press ◀/▶ to select “Yes,” then press ENTER to execute.



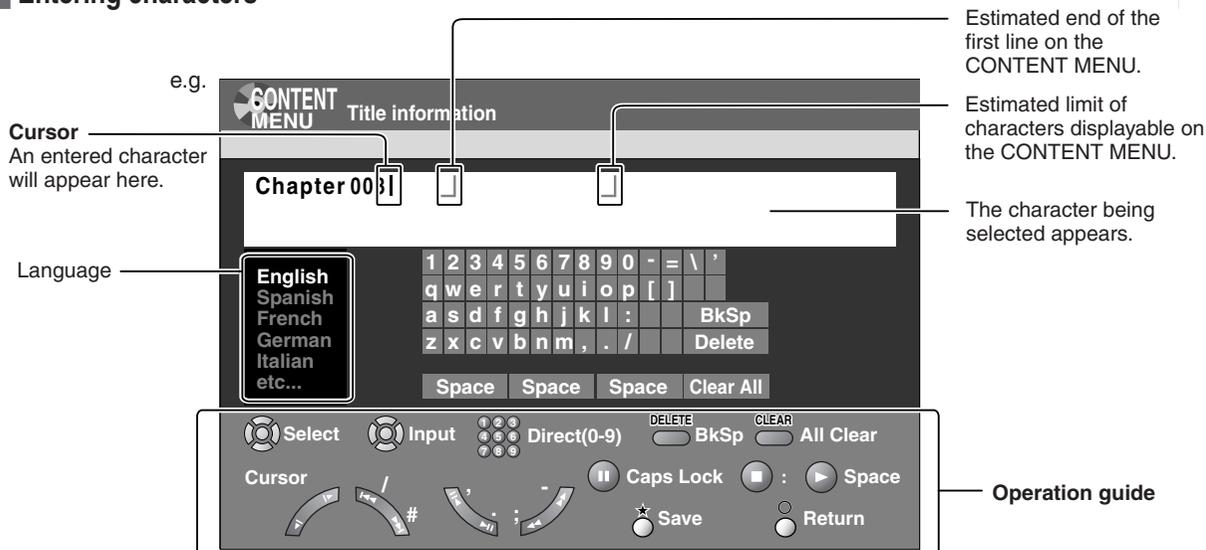
To cancel, select “No”, then press the ENTER button.

- 5) Read the message, and press ◀/▶ to select “Yes” or “No”, then press ENTER.

Notes

- The physical format process may fail if executed to a dirty DVD-RAM disc. Also, the disc may be difficult to record, even if it finished. Before executing DVD-RAM physical format process, be sure to confirm the disc is not dirty. Clean it if necessary. If the disc has scratches or dust beyond cleaner’s efficacy, do not execute DVD-RAM physical format process on the disc.
- The following DVD-RAM discs require physical formatting:
 - A disc which is not formatted correctly.
 - The disc which has errors during writing because of dirt on the disc, and cannot be further recorded, or cannot initialize normally.
- You need to start physical formatting from the first step again when you use a failed disc.
- Physical formatting does not work if the disc contains a lot of voids beyond the limitation of this recorder.
- If an error occurs in physical formatting, “ERR-01” appears in the front panel display. To turn off the message, press the DISPLAY button.

Entering characters



■ Operation guidance of the remote control

To enter the character, normally use the direction ▲ / ▼ / ◀ / ▶ buttons on the remote. About the other buttons to be used are shown on the operation guide.

 : Shifts a cursor.

 : Enters the number.

 : Erases one character immediately to the left side of the cursor.

 : Erases all the characters on the input column.

 : Caps Lock

 : Saves the changes on the input column and returns to the previous screen.

 : Cancels the changes on the input column and returns to the previous screen.

 : Enters a space.

 : Enters a symbol.

■ Switching a language

Before entering a character, move a cursor to the language selection area by pressing the ◀ / ▶ buttons. Then press the ▲ / ▼ buttons to select a language, then press the ENTER button.

■ Entering characters

The cursor may be followed by unwanted characters. You can erase them if necessary by either of the following measures:

Erasing characters

- Erasing all the characters on the writing board
Select "Clear All" by pressing the ▲ / ▼ / ◀ / ▶ buttons, then press the ENTER button.
Alternatively, open the lid of the remote control and press the CLEAR button.
- Erasing one character before the cursor
Select "BkSp" by pressing the ▲ / ▼ / ◀ / ▶ buttons, then press the ENTER button.
Alternatively, open the lid of the remote control and press the DELETE button.

- (1) Press the **||** button to select an input mode.
- (2) Press the ▲ / ▼ / ◀ / ▶ buttons to select a character, then press the ENTER button.
The selected character is input on the cursor.
- (3) Repeat steps 1 and 2 to enter characters.
- (4) When finished, press **★** to save the characters.
The characters you entered appears.

Notes

- You can enter up to 64 characters.
- When unnecessary information appears, or when you want to alter the input character, press the CLEAR button to erase all, or press the DELETE button to erase an unnecessary character.

Recording a TV program

To record a TV program currently being broadcast, follow the procedures of this chapter.

■ Preparation

- Load a DVD-RAM/R/RW disc into the recorder.
 - Load a disc which has sufficient space available to record the program.
 - Make sure the loaded disc is not write-protected.
- If you record on a DVD-R or a DVD-RW disc, set "DVD compatible mode" (➡ page 134) to "Main" or "SAP." In DVD-R/RW recording, "Off" setting is regarded as "Main."
- If you record on a DVD-R or DVD-RW disc, set "Aspect ratio(Video mode)" (➡ page 134) according to recording sources.



1 Press INPUT SELECT repeatedly to select a recording source.

INPUT SELECT



Each time you press the button, the indicator alternates.

- Ch-:** To record a TV program or cable program with recorder tuner.
- L-1:** To record a source connected to the INPUT1 jacks on the rear panel (➡ page 36).
- L-2:** To record a source connected to the INPUT2 jacks on the front panel (➡ page 36).
- L-3:** To record a source connected to the INPUT3 jacks on the rear panel (➡ page 36).

To record a program from a connected set top box, set the channel to "Ch-3", "Ch-4", "L-1" or "L-3" according to the connection (the same as ➡ page 40 on "INSTALLATION GUIDE").

If the connection of the supplied IR control cable and the necessary settings are all done, you can select channels of the connected set top box with the recorder's remote control.

If not, select the proper channel on the set top box to receive the desired program.



Open the lid.

2 Press the number buttons to select a channel to record.



The CHANNEL buttons (↖↗) are also available.

3 Press QUICK MENU to display the Quick Menu. (If you want to use the default setting for “AV record quality,” skip to step 7.)



4 Press ▲ / ▼ to select “AV record quality,” then press ENTER.



5 Press ADJUST to select the setting number.



e.g.

AV record quality			
DVD		Setting 2	SP 4.6 D D / M1
Custom setting			
Setting	Mode	Rate	Audio quality
1	Manual	6.6	L-PCM
2	SP	4.6	D D / M1
3	LP	2.2	D D / M1
4	Manual	6.0	D D / M2
5	Manual	3.2	D D / M1
Total recording time: approx. 122min. (with 4.7 GB unused)			

See ⇨ page 40 for details on “Mode”, “Rate” and “Audio quality”.

(Continued)



6 Press ENTER.

The menu disappears.



7 Press REC.

Recording starts.



■ Selecting the recording mode

Before recording, you can select the setting of picture and sound quality. During stop mode, press the REC MODE button. By pressing the button repeatedly, you can select one from 5 settings of “AV record quality” appearing in the front panel display.

Notes

- During recording, you cannot change the recording parameters, such as modes, channels, etc.
- The number of titles cannot exceed 99 for any disc.
- During normal recording, you can set the programmed recording using the REC MENU.
- You cannot start recording immediately before a programmed recording starts.
- For recorded sound, see ➡ page 73.
- During monaural sound recording, the same sound is recorded on both the left and right channels.
- When “Audio” is set to “L-PCM”, multi-channel sound is recorded as stereo sound. When playing this recorded sound, you will hear MAIN and SAP sounds simultaneously. Press the AUDIO button to select a desired sound.
- When “DVD compatible mode” is set to “Main” or “SAP”, the unit records the same sounds on both the left and right channels when receiving monaural sound. When receiving the multi-channel sound, the selected sound, Main or SAP, is recorded on both the left and right channels.
- Depending on the disc contents, pressing the REC button may take a longer time to start recording.
- When a starting time of a programmed recording comes, a recording in execution is stopped and the programmed recording starts. If you do not want to stop the recording, cancel the timer program before it starts.
- Even if you set “Aspect ratio(Video mode)” (➡ page 134) to “16:9”, images are recorded in 4:3 aspect ratio when using a DVD-R or DVD-RW disc with “Rate” set to “1.4” (Mbps).
- Be careful of a programmed recording across the change-over of Daylight-saving time (➡ page 27).

■ To stop recording

Press **STOP**.

■ To pause recording (to omit an unnecessary portion)

During recording, press **PAUSE**.

To resume recording, press it again.

Note

- Pausing recording automatically creates a new chapter division at that point.

■ To change a TV channel to be recorded

1) During recording, press **PAUSE**.

Recording pauses.

2) Press **CHANNEL** to change the channel.

3) Press **PAUSE** to resume recording.

■ To view a TV program while recording another

1) Start recording on this recorder.

2) On a connected TV, select the TV mode.

3) Using the channel selector of the TV, select a desired channel on the TV.

■ To reduce noise on recordings (Rec DNR)

Before recording, set "Rec DNR" (➡ page 134).

■ To set an end time of a recording which is in progress

1) During recording, press **QUICK MENU**.

The Quick Menu appears.

2) Press **▲ / ▼** to select "End time" then press **ENTER**.

The display changes as follows:

e.g.



3) Press **◀ / ▶** to select an item then press **ADJUST** to change the value.

4) Press **ENTER**.

Notes

- By setting an end time, it is memorized as a programmed one, and the  indicator in the front panel display illuminates to indicate that the recorder holds a timer program of recording.
- The programmed end time must be set for 5 minutes later than the current time.

■ To play a title recorded on a DVD-RAM disc while recording another on the same disc (Recorded Title Play) **DVD-RAM**

During recording, you can play a title recorded on the same disc.

1) While recording on a DVD-RAM disc, press **CONTENT MENU**.

2) Press **▲ / ▼ / ◀ / ▶** to select a desired title, then press **ENTER**.

Playback of the selected title starts.

Pressing the **STOP** button stops playback, and the content currently recorded returns. If you press the **PLAY** button, playback resumes from the location you last stopped.

Notes

- The playback picture may appear after a delay of several seconds.
- While you are using this function, the following operations/functions are not available.
 - Programmed playback (repeat playback, intro scan etc.)
 - Editing (Playlist programming, dubbing, title/chapter naming, title thumbnail setting, etc.)
- Depending on the data condition, playback may pause.

■ Creating chapters while recording

Press the **CHP DIVIDE** button.

The content is divided into two chapters at the point you pressed the button.

Note

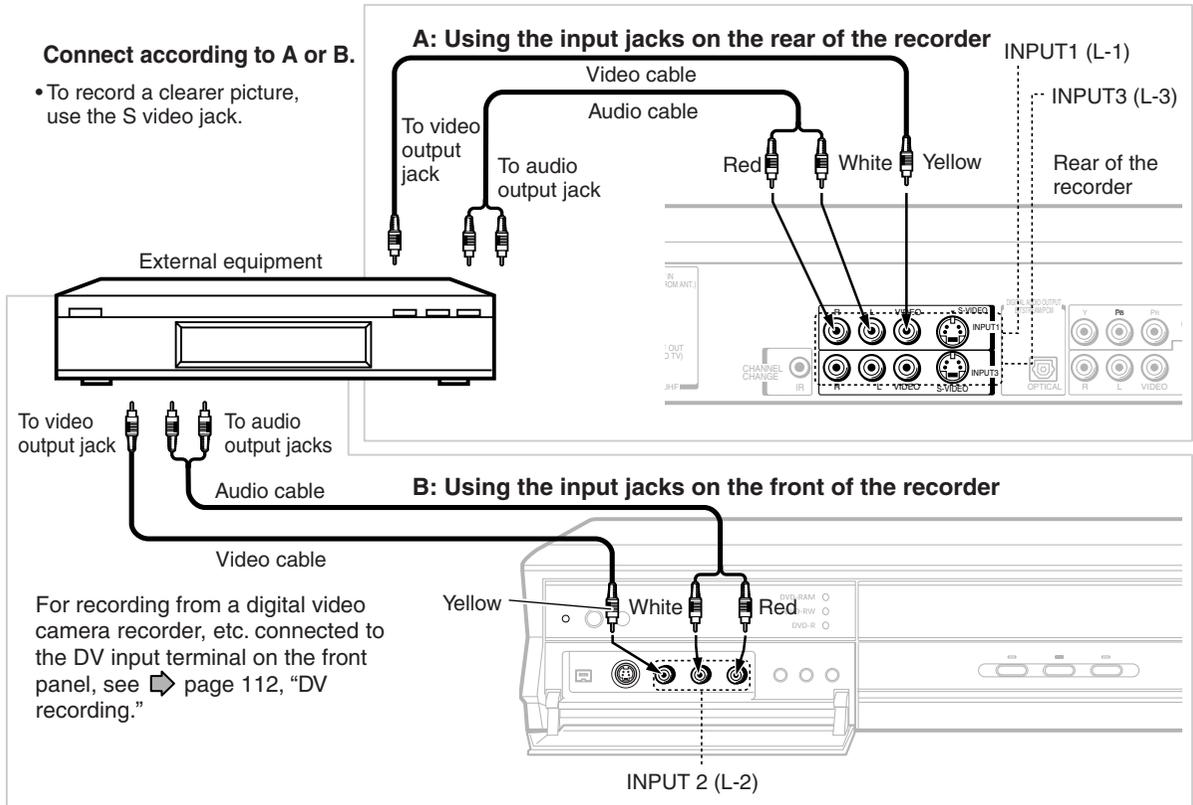
- If you want to divide into chapters at desired points on DVD-R/RW discs, use this method. On those discs, you cannot create chapters after recording.

■ Creating chapters automatically at regular intervals

Set "DVD-Video:CHP create" (➡ page 134).

Recording an external source

You can record programs from connected equipment on a DVD-RAM/R/RW disc.



■ Preparation

- Load a DVD-RAM/R/RW into the recorder.
 - Load a disc which has sufficient remaining space to record the program.
 - Make sure the loaded disc is not write-protected.

Notes

- Even if a source of high quality sound track such as DVD audio is recorded with this recorder, the sound quality becomes regular audio CD's one. Refer to the instructions of the connected equipment.
- When you record an external source onto a DVD-R/RW disc, set the connected equipment to output sound you want to record (if selectable such as multiplex broadcasting), as the recorder records sounds of external source in the stereo type onto a DVD-R/RW disc, neglecting the setting of “DVD compatible mode” ([page 134](#)).
- DVD-R/RW discs cannot record contents with copy restriction signal embedded (copy-protected or copy once contents), DVD-RAM discs can record copy once contents.
- Some satellite programs via a connected tuner may contain both 4:3 pictures and 16:9 pictures. DVD-R/RW discs cannot record such contents, under restriction of DVD-Video standard. To record them, use DVD-RAM discs.
- When both the VIDEO (yellow) jack and the S-VIDEO jack are connected, the S-VIDEO jack has priority.



1 Press INPUT SELECT repeatedly so that “L-1,” “L-2,” or “L-3” appears on the front panel display, corresponding to the input in which the device is connected.

INPUT SELECT



Each time you press the button, the indicator changes.

L-1: To record pictures from equipment connected to the INPUT 1 jacks on the rear panel.

L-2: To record pictures from equipment connected to the INPUT 2 jacks on the front panel.

L-3: To record pictures from equipment connected to the INPUT 3 jacks on the rear panel.

2 Start playback of the source content on the connected equipment.

3 Press REC of this recorder to start recording.

REC



4 When recording is completed, press STOP.

STOP



■ Notes on recording from a connected VCR or camcorder

● Check the condition of the source equipment before playing.

Set the equipment in good condition, e.g. clean the head or adjust the tracking, etc. to obtain optimum playback. Bad condition may produce noises in playback. These noises may be detected as copy protection signals, resulting in stop of recording on this recorder.

Play a source in an usual mode. Avoid using any correcting or enhancing features, as they may add signals which can be detected as copy protection signals.

Source quality or tape condition beyond adjustments on the source equipment may stop a recording on this recorder.

● Do not operate the source equipment during recording on this recorder.

Operations such as pausing, resuming, fast-forwarding (CUE) and fast-reversing (REVIEW), etc. may produce noises, which may be detected as copy protection signals. Therefore, first start playback on the source equipment to confirm that the desired source can be played properly, and then start recording on this recorder.

Do not operate the source equipment during recording. After completing the desired scene, stop the recording on the recorder, and then stop the playback on the source equipment. Delete unnecessary scenes using editing functions (▶ page 104). If you want to operate the source equipment during recording, pause or stop the recording. After operating the source equipment, resume the recording as above.

● When recording from a camcorder

Follow the above notes. Be sure to power the camcorder by its AC adapter, not batteries. If batteries are used, the recording may be finished on the way.

Programming a recording (REC MENU)

Use the REC MENU to program a recording. It will take less time to prepare, as it provides all necessary information for recording, including estimated disc space remaining.

For more information, see “Before recording” (➡ page 26).

Be careful when you program a recording across the change-over of Daylight-saving time (➡ page 27).



Open the lid.

1 During stop, press REC MENU.



The REC MENU appears.

e.g.

REC MENU		Timer Programming				1 / 1	4/3 (Sa) 9:00 pm	
Exec	CH	Date	Start	End	Media	Video	Audio Disc	
		----	--:--	--:--	am	am	DVD	SP 4.6

2 Press ENTER.



“CH” is ready for setting.

e.g.

REC MENU		Timer Programming				1 / 1	4/3 (Sa) 9:00 pm	
Exec	CH	Date	Start	End	Media	Video	Audio Disc	
✓	2	----	--:--	--:--	am	am	DVD	SP 4.6

3 Select an item by pressing ◀/▶, then press ADJUST (◀▶) to set the item.



e.g.

REC MENU		Timer Programming				1 / 1	4/3 (Sa) 9:00 pm	
Exec	CH	Date	Start	End	Media	Video	Audio Disc	
✓	23	4/10 (Sa)	7:00 pm	8:00 pm	DVD	SP 4.6	DNR	

- Refer to the setting items on the next page.
- You can also set the item by pressing the ▲ / ▼ button.
- “CH” can be input by the number buttons.

4 When complete, press ENTER.



To program another recording, press the ▼ button to move to the next line, then repeat steps 2 to 4.

5 Press REC MENU to exit.



Your program is entered.

Programming a recording (REC MENU) (Continued)

■ Setting items

Exec	√	A timer program with this mark will be executed. To disengage, remove this indicator.
CH	2-69 (TV), 1-125 (Cable), 0-999 (When "IR control"*** is "ON"), L1-L3	Select a channel you want to record. (While "L1" - "L3" is selected, the number buttons are not available to select channels.)
Date	Specific date (from today to 2 month later) Every Sunday to Saturday, Monday to Thursday, Monday to Friday, Monday to Saturday, everyday.	Select a date of a TV program you want to record.
Start*	12:00 am – 11:59 pm	Enter a starting time of recording. (An initial setting is 10 minutes later than current time.) You can also use the number buttons under the lid of the remote.
End*	12:00 am – 11:59 pm	Enter an end time. (Set the timer to begin recording no sooner than 2 minutes past the current time.) You can also use the number buttons under the lid of the remote.
Media	DVD	Fixed. (Not adjustable.)
Video	SP	Standard setting of recording time and picture quality. (Not applicable when "L-PCM" is selected.)
	LP	For longer recording, but inferior to "SP" in picture quality. (Not applicable when "L-PCM" is selected.)
	MN (Manual)	Customized setting of rate (bit rate).
	AT (Auto)	To set a rate automatically according to the remaining volume of the disc. (If the disc does not have room for the TV program, the program cannot be recorded to the end.)
(Bit Rate)	1.4, 2.0-9.2	Not applicable when "SP", "LP" or "AT" is selected. You can set a rate at intervals of 0.2Mbps from 2.0 to 9.2. (The upper limit of the value depends on the "Audio" setting.)
Audio	□□ D /M1***	Standard setting.
	□□ D /M2***	Superior to □□ D /M1. Recommended for recording music programs.
	L-PCM	Uncompressed original digital audio. Equal quality to audio CD, but recordable time will be shorter.
Disc		A programmed recording onto a Reservation Disc is marked with an icon.

* If you set summer time on the clock of the recorder, see the notes on  page 32 in the "INSTALLATION GUIDE".

** See  page 37 in the "INSTALLATION GUIDE".

*** The digital recording technology for consumer products of Dolby Laboratories is used for □□ D /M1 and □□ D /M2. Dolby Digital 192 kbps is set for □□ D /M1 and Dolby Digital 384 kbps for □□ D /M2.

Notes

- See  page 50 for details on "Video" and "Audio".
- If you record with setting the bit rate to about 4.0 Mbps or below, the recorded pictures may not be played properly if change the playback speed. There will be noise, and the picture quality is lower than other rate settings.

■ Suggestions for the picture quality setting

- **For normal recording or when you cannot decide which mode to choose.**
Select "SP"
- **When you need a longer recording time and video quality is not important**
Select "LP." Inferior to "SP" in picture quality, but it can record longer.
- **To record a high quality picture**
Select "MN (Manual)" to set a desired bit rate. The higher the bit rate, better the picture quality is, but shorter the recording length becomes. We recommend that you set about 6.0 Mbps to 6.8 Mbps.
- **To fill the disc**
Select "AT (Auto)." A bit rate is calculated automatically according to the remaining volume of the disc. Some contents may not be recorded on the disc even if you select this function. This is not the function to make full use of the remaining space capacity.

Notes

- The disc tray does not close automatically, even when the recording start time arrives. Set the recorder loaded an available DVD-RAM/R/RW disc beforehand.
- When there is little time before a programmed recording starts, you may not be able to start another recording.
- Playback pauses when a programmed recording starts.
- Do not change the “TV/Cable” selection of the Initial settings while a recording is programmed. If you want to change it, cancel the program recording. After then, make the programming again if necessary.
- Confirm the “DVD compatible mode” setting. “Main” or “SAP” records main sound or sub-sound of multiplex broadcasts respectively, and does not record the other. Therefore, select “Main” or “SAP” only when you record onto a DVD-R/RW disc.
- When recording onto a DVD-R/RW disc, set “DVD compatible mode” (➡ page 134) to the desired recording sound for each timer program.

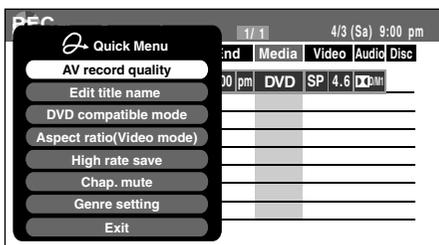
■ Setting the details for every timer program

You can specify detail items for each of your timer program.

- 1) Press **QUICK MENU** at step 3 on ➡ page 39.

The Quick Menu is displayed.

e.g.



- 2) Press **▲ / ▼** to select an item and press **ENTER**.

For details, see “Quick menu items.”

- 3) Press **▲ / ▼** to make a selection, and press **ENTER**.

The selection you have made for the timer program is shown at the bottom of the display.

Quick menu items

AV record quality

Select an item from registered selections (1-5) for the picture and audio quality.

Edit title name

Enter a name for the timer program. Use the input screen to enter a name (➡ page 30).

DVD compatible mode

DVD-RAM **DVD-RW** **DVD-R**

When recording onto a DVD-R/RW disc, make this selection (➡ page 134) for each timer program. “Off” setting is neglected and regarded as “Main” in DVD-R/RW recording.

Aspect ratio(Video mode)

DVD-RW **DVD-R**

Select the aspect ratio when recording onto a DVD-R/RW disc. (➡ page 134)

High rate save

Use this feature when you want to save space while using the best picture quality rate for recording.

This will use 9.2 Mbps for recording and reduce the rate temporarily for the portion where the high rate is not required where picture is fairly constant.

Off: This feature is disabled and the normal recording is performed.

On: This feature is enabled.

Notes

- When the audio quality is set to "L-PCM", the picture quality is set to "Manual 8.0 Mbps". When the audio quality is set to any other selection, the picture quality is set to "Manual 9.2 Mbps".
- While this is set to "On," you cannot change the mode or rate.
- The space used may not change, depending on the picture contents.

Chap. mute**DVD-RAM**

This feature automatically creates divisions for chapters when no audio (no audible sound) portion is found.

For example, when you have recorded a program of music clips, you can use this feature to jump to the beginning of a clip during playback. It does not create completely independent chapters or automatically divide into chapters when no audio portion is found.

Off: This feature is disabled.

On: Division for chapters when no audio portion is found.

Notes

- Divisions for chapters may not be created, depending on the contents of the program or the condition of no audio portion, or it may be created at different positions. A division for a chapter may be created within a music clip.
- Depending on the specification made for the recording sound level, a division for a chapter may not be created or it may be created at different positions.
- Setting "On" may create many chapters, and their number may reach the maximum allowed. At that point, no more chapters can be created. In this case, decrease the chapters, for example by combining chapters (➡ page 106).
- This feature is not available on DVD-R/RW discs. To create chapters automatically during recording on DVD-R/RW discs, set "DVD-Video:CHP create." (➡ page 134).

Genre setting

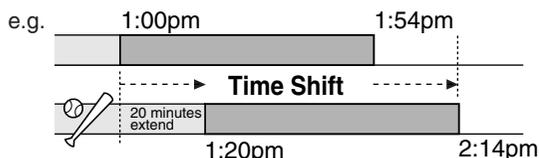
You can set a genre before setting programmed recording.

To see the registered list, refer to Genre setting (➡ page 135).

Set the genre according to recording contents.

■ Shifting a time period of a recording (Time Shift)

If a prior TV program extends beyond its scheduled time and into one that you programmed, you can shift the programmed start and end time of the recording.



- 1) **Press REC MENU.**
The REC MENU appears.
- 2) **Press ▲ / ▼ to select a timer program you want to shift the time period.**
- 3) **Open the lid of the remote control and press EXTEND.**
“Start time” and “End time” are ready to be input.
- 4) **Press EXTEND repeatedly.**
Each time you press the button, “Start time” and “End time” is shifted in 10 minutes intervals to, up to 60 minutes later.
- 5) **Press ENTER.**
- 6) **Press REC MENU to exit.**

Note

- After you shifted the time of a timer program which will be repeated daily or weekly, you should restore the original start/stop time for future recordings.

■ Adding a timer program

- 1) **Press REC MENU.**
The REC MENU appears.
- 2) **Press ▼ to select a blank line, then press ENTER.**
- 3) **Press ◀ / ▶ to select the item, then press ADJUST to set the item.**
- 4) **When complete, press ENTER.**
- 5) **Press REC MENU to exit.**

Note

- While the recorder is preparing for or executing a programmed recording, you cannot add a timer program which will start within 5 minutes and 15 seconds from the current time.

■ Deleting a timer program

- 1) **Press REC MENU.**
The REC MENU appears.
- 2) **Press ▲ / ▼ to select a timer program you want to delete.**
- 3) **Press QUICK MENU.**
The Quick Menu appears.
- 4) **Press ▲ / ▼ to select “Program cancel”, then press ENTER.**
Check the message, then delete the entry.
- 5) **Press REC MENU to exit.**

Note

- You cannot delete a timer program while another is executed.

■ Correcting a timer program

- 1) **Press REC MENU.**
The REC MENU appears.
- 2) **Press ▲ / ▼ to select a timer program you want to change, then press ENTER.**
- 3) **Press ◀ / ▶ to select an item, then press ADJUST to set the item.**
- 4) **Press ENTER.**
The modification is registered.
- 5) **Press REC MENU to exit.**

Important

- You cannot correct a timer program within 5 minutes before the recording start time. You can only delete the timer program.

Note

- You can program a timer recording whose start time has already passed, unless the another program recording will start within 5 minutes. The portion of the program before the recording starts cannot be saved.

Programming a recording (REC MENU) (Continued)

■ Remaining volume

1) Press REC MENU.

The REC MENU appears.

2) Press QUICK MENU.

The Quick Menu appears.

3) Press ▲ / ▼ to select “Disc budget calculation” then press ENTER.

The Disc budget calculation menu appears.

4) Press ▲ / ▼ to select a timer program, then press ENTER or press ADJUST.

The recorder calculates on a bar graph how much a specific program (identified by a check mark) will occupy on the disc.

Pressing the ADJUST button can display or remove the check mark.

e.g.

CH	Date	Start	End	Media	Video	Audio	Result
✓ 3	4/10 (Sa)	11:30 pm	11:50 pm	DVD	MN 6.6	DXDMS	○
✓ 10	4/13 (Tu)	9:30 pm	10:00 pm	DVD	MN 6.6	DXDMS	○
✓ 42	4/16 (Fr)	10:30 pm	11:30 pm	DVD	LP 2.2	DXDMS	○
✓ 4	4/16 (Fr)	8:30 pm	11:30 pm	DVD	SP 4.6	DXDMS	○

Legend: Elapsed Selected(current) Available

Selected entry

Available disc volume

When the entry item is marked X, the recording does not fit. Change the setting.

5) Correct the parameters of the timer program if necessary.

(Skip to step 7 if you do not need this.)

You can change “Video” and “Audio”.

Select an item you want to modify and press the ENTER button. The item will be ready to be altered. Press the ADJUST button to modify. When complete, press the ENTER button.

You can adjust to a lower mode (SP to LP) and/or lower the rate to reduce the quality of the recording, and thus provide more disc capacity (space).

6) Press ★.

Program modification is registered.

7) Press REC MENU to exit the GUI.

Notes

- When a Reservation disc is inserted in the recorder (▶ page 48), you cannot check the remaining volume of other discs.
- The nearest 8 programs are calculated at a time.
- While the recorder is preparing for or executing a programmed recording, any program modification cannot be registered. Only programs which will start after 5 minutes or later can be modified.
- Available disc volume is not displayed for a DVD-R/RW disc on which DVD-Video finalize process was executed.

■ To stop a programmed recording

To finish,

Press ■ on the front panel twice.

When you press it once, a message appears. While the message is displayed, press the ■ button once again.

To pause recording,

Press || on the front panel.

To resume recording, press it again.

■ Turning the power off automatically after completing a programmed recording

1) While executing a programmed recording, press QUICK MENU.

The Quick Menu appears.

2) Press ▲ / ▼ to select “Auto power off” then press ENTER.

■ Keeping the power on even after the programmed recording finished

If the recorder turns itself on to execute a programmed recording, it will turn itself off after finishing the recording. You can restrict this and keep the recorder powered on.

1) While executing a programmed recording, press QUICK MENU.

2) Press ▲ / ▼ to select “Continuous power on” then press ENTER.

■ Delaying the end time of a programmed recording while it is recording

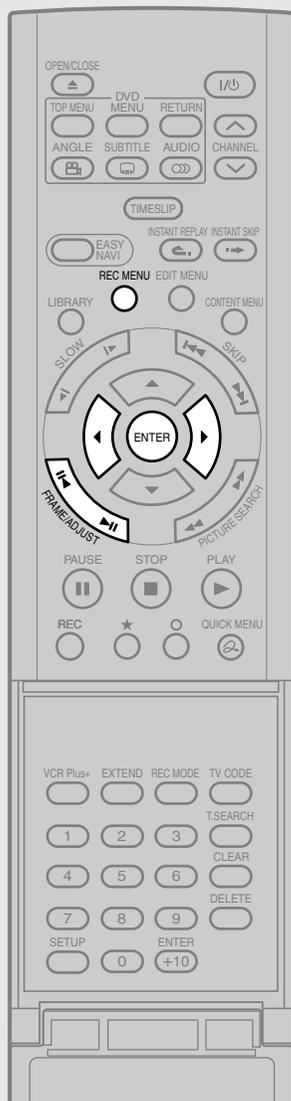
While a programmed recording has started, open the lid of the remote control and press EXTEND.

The first press displays the programmed end time (in the front panel display).

Each time you press the button, it is delayed 10 minutes, up to 60 minutes.

Notes

- Pressing a button except EXTEND in the above procedure will set the currently selected delay.
- You cannot delay the end time of a programmed recording which will end within 1 minute from the current time.
- Even if you delay the end time of a programmed recording, the recording will stop when the disc is exhausted.



4 Select an item by pressing ◀/▶, then press ADJUST (◀▶/▶▶) to set the item, if necessary.



For details about items, see ➔ page 40.

Recording channels and “IR control” setting (➔ page 37, INSTALLATION GUIDE):

When set to “Off”, make sure “CH” shows the channel you want to record.

When set to “On”, select a channel on the set top box connected to the input you selected, and keep the set top box powered on.

5 Press ENTER.



6 To enter another program, repeat steps 1 to 5.

7 After completing all your entries, press REC MENU.



The REC MENU disappears.

To confirm your data, it is recommended to turn on the REC MENU again.

Notes

- The maximum timer program capacity is 32. Any new program will be rejected if the recorder is full. To enter a new program, you must cancel an existing one (➔ page 43).
- Depending on the program, an actual recording may continue a few minutes longer than programmed.
- Entries made under the following conditions will be rejected.
 - when an entry is for a non existing program.
 - when the digit order of an entry is in error.
 - when the guide channel has not yet been set.
- To erase a timer program, press the QUICK MENU button to display a Quick Menu on the REC MENU. For details, see “Deleting a timer program” (➔ page 43).
- When recording onto a DVD-R/RW disc, set “DVD compatible mode” (➔ page 41) to the desired recording sound for each timer program.
- In the event of a broadcast delay, the next program starts even if when the start time arrives prior to the end of the previous program.

Others

Reservation Disc (“Lock program record”)

DVD-RAM

This function is convenient when you wish to record multiple serial related programs on the same disc.

The disc on which you write the reservation data is called “Reservation Disc.” A Reservation Disc may contain only one reservation.

Once a Reservation Disc is created, you cannot use other discs to record the same serial program. The Reservation Disc can be used only for recording a program reserved for the Reservation Disc.

As an example, if you create a Reservation Disc for a serial broadcast from 9 pm to 10 pm on Monday, then you can use that disc only for that program. When you attempt to make a reservation or record that serial, the recorder will ask you to insert that Reservation Disc.

1) Load a DVD-RAM disc.

2) Press REC MENU.

The REC MENU appears.

3) Press ▲ / ▼ to select the program you want to record.

4) Press QUICK MENU.

The Quick Menu appears.

5) Press ▲ / ▼ to select “Lock program record” then “Yes” and press ENTER.

After the recording data is entered, a Reservation disc icon appears on the REC MENU.

If the Reservation Disc is not loaded, the entry data and icon are displayed in gray.

● To cancel the Reservation Disc setting

Load the disc you want to cancel and select the recording option on the REC MENU. Press the QUICK MENU button to select “Unlock program record” then “Yes”, and press the ENTER button.

● To delete the information of a Reservation Disc

If you lose a Reservation Disc, delete the information of the Reservation Disc.

Press the QUICK MENU button to select the program of which data you want to delete, and press the QUICK MENU button. Select “Program record unlock” and then “Unlock selected program.”

If no programmed recording is set on the loaded disc, press the QUICK MENU button to select “Program record unlock” and then “Unlock prog. rec. disc”.

If you schedule a date for programmed recording on the Reservation Disc, the recording information is automatically deleted after the programmed recording is completed.

● To stop the Reservation Disc recording

Press the STOP button on the front panel once. The message appears.

While it is displayed, press the STOP button again. Recording stops.

■ If the start time of a programmed recording of a Reservation Disc comes while recording

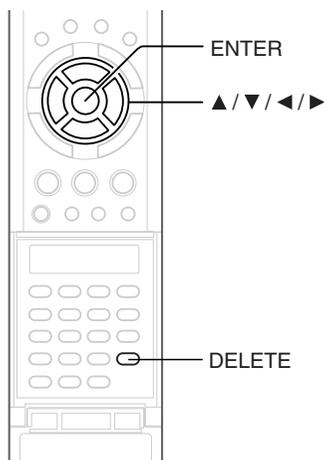
The currently executed recording has priority. The programmed recording of the Reservation Disc does not start.

To delete recorded content

DVD-RAM DVD-RW DVD-R

Important note

Any deleted title/chapter (original) cannot be restored. Before deleting, be sure to check contents on the disc.



- 1) Perform steps 1 and 2 in “Playing recorded contents (CONTENT MENU)” (➡ page 53) to select a title (chapter).
- 2) Open the lid of the remote control and press **DELETE**.
Alternate method:
Press **QUICK MENU**, then press ▲ / ▼ to select “Title delete” (“Chapter delete”) and press **ENTER**.
- 3) Read the message and press ◀ / ▶ to select “Yes,” then press **ENTER**.

Notes

- Deleting a title (a chapter) decreases the numbers of the succeeding titles (chapters).
- A chapter of about 5 seconds or shorter may not be deleted. Deleting a short chapter may not change the display of the available disc volume.
- Deleting a playlist (➡ page 86) title/chapter does not affect the original title/chapter.
- Deleting an original (➡ page 86) title/chapter affects all the corresponding playlist title/chapters.
- Deleting all chapters in a title erases the title itself.
- Title and chapter which contains still pictures cannot be deleted.
- On a DVD-R/RW disc, deleting is not possible if the disc is finalized (➡ page 108).
- Chapters in a DVD-R/RW disc cannot be deleted.
- On a DVD-RW disc, only a title last recorded can restore the disc capacity by being deleted.
- On a DVD-R disc, deleting cannot restore the disc capacity.

To protect recorded content

DVD-RAM

You can protect recorded content from unexpected deletion.

Protection is provided for each title (original).

- 1) Perform steps 1 and 2 in “Playing recorded contents (CONTENT MENU)” (➡ page 53) to select a title.
- 2) Press **QUICK MENU**, and press ▲ / ▼ to select “Title information”. Then press **ENTER**.
- 3) Press **QUICK MENU**, and press the ▲ / ▼ to select “Lock” and then press **ENTER**.
The mark  appears.

Notes

- To cancel protection, repeat this procedure.
- Disc initialization erases all titles on a disc even if they are protected.

Technical information

● About recording time

The recording time of a typical VCR (Video Cassette Recorder) is determined by the length of a video tape and recording speed (SP, LP, etc.). Video tapes with various recording times are available in the market. On the other hand, the recording time of a DVD-RAM/R/RW depends on the bit rate (Mbps: amount of data transmitted per second), which can be varied in MPEG2 (Moving Picture Experts Group2) compression technology.

As an example, when you pour water into a bucket from a faucet, the faster the water flows, the sooner the bucket is filled with water. On the other hand, the slower the water flows, the more slowly the bucket is filled. The DVD-RAM/R/RW is, so to speak, such a bucket, and the degree you turn the faucet is bit rate, the time required to fill the bucket with water is the recording time available for a disc. The higher you set the bit rate (making much more water flow), the sooner a disc is filled. Consequently, the recording time becomes shorter. The lower you set the bit rate, the longer time it takes to fill a disc.

● About picture quality (SP, LP, Auto, Manual mode)

The higher you set the bit rate, the more the volume of information for the picture. The lower the bit rate, the less the volume of picture information.

However a high bit rate does not always mean that the picture quality is high. The difference between the 1.4 Mbps and 9.2 Mbps is obvious, but when comparing similar bit rates, the difference may be insignificant. Generally when you set the bit rate low for longer recording time, the data volume shortage will result in a lack of detail information. As a result, the picture quality is decreased (more noticeable with dynamically moving images). For example, square noises (block noise) may occur in a scene with fast action or a scene with light and shadows, such as a water surface.

This recorder has a two settings, 2 hour recording at "SP" mode or 4 hour recording at "LP" mode (both assume a blank 4.7 GB DVD-RAM). It is recommended to consider the "SP" mode as a standard mode and use the "LP" mode when you want to record for long time regardless of the picture quality. If you want to record for about 2 hours or are uncertain which one to select, select the "AT" mode.

On a blank 4.7 GB DVD-RAM disc, the "AT" mode automatically sets the appropriate bit rate corresponded to the recording time from about 1 hour to up to 2 and a half hours so that you can achieve the best picture quality. If a part of a DVD-RAM disc has already been recorded, the "AT" mode sets the bit rate suitable for the remaining space on the disc. (The picture quality is determined referring the remaining space just before recording. When the remaining space is scarce in the disc, the picture quality may decrease from what you set beforehand or the recording may stop halfway.) "AT" mode is available also on DVD-R/RW recordings.

When you want to record a music program or animation with high picture quality, it is recommended that you select the "Manual" mode. If you select more than 6 Mbps, you can usually record with considerably higher picture quality. However the higher you set the bit rate, the shorter the recording time.

● DD D /M1, DD D /M2

Sound recording format onto DVD-RAM discs. When recording, sounds are converted into digital signals and compressed. In playback, they are extracted to the original sound. The standard differentiates DD D /M1 and DD D /M2 in data volume to use. DD D /M1 and DD D /M2 are applied the digital recording technology for consumer products of Dolby Laboratories. Dolby Digital 192 kbps is set for DD D /M1 and Dolby Digital 384 kbps for DD D /M2.

● L-PCM (Linear PCM)

Sound recording format, like Dolby Digital. However, sounds are converted into digital signals and recorded as they are without compression. This process requires more data than Dolby Digital.

Playback

Play your favorite contents.

- **Information on playback**
- **Playing recorded contents (CONTENT MENU)**
- **Playing a DVD video disc**
- **Pausing a TV broadcast to resume later**
- **Playing a TV program currently being recorded**
- **Playing at various speeds**
- **Locating by entering the number**
- **Selecting the camera angle**
- **Selecting subtitles**
- **Zooming a picture**
- **Selecting the sound**
- **Viewing JPEG files**
- **Playing MP3/WMA files**
- **Watching a TV broadcast in the sub window (P in P playback)**
- **Checking the current status and settings**
- **Functions in the Quick Menu**

Information on playback

The operation procedure depends on the kind of disc. See the respective pages for basic procedure to play the disc.

■ To play contents recorded onto a DVD-RAM disc

Playing recorded contents (CONTENT MENU) (➡ page 53)

■ To play a DVD video disc

Playing a DVD video disc (➡ page 59)

■ To play a DVD-R/RW disc

DVD-R/RW discs recorded on this recorder

Playing recorded contents (CONTENT MENU) (➡ page 53)

DVD-R/RW discs recorded on other devices

Playing a DVD video disc (➡ page 59)

DVD-R/RW discs recorded in DVD-VR mode

Playing a DVD-RW disc recorded in DVD-VR mode (➡ page 58)

■ To switch the picture to view TV broadcasts

Press the STOP button to stop playback.

■ To start recording

Press the STOP button to stop playback.

Then press the REC button to start recording.

■ Screen Protection

If you pause playback or display a menu and leave it still for about 15 minutes, the recorder switches the output picture source to a TV broadcast or connected equipment.

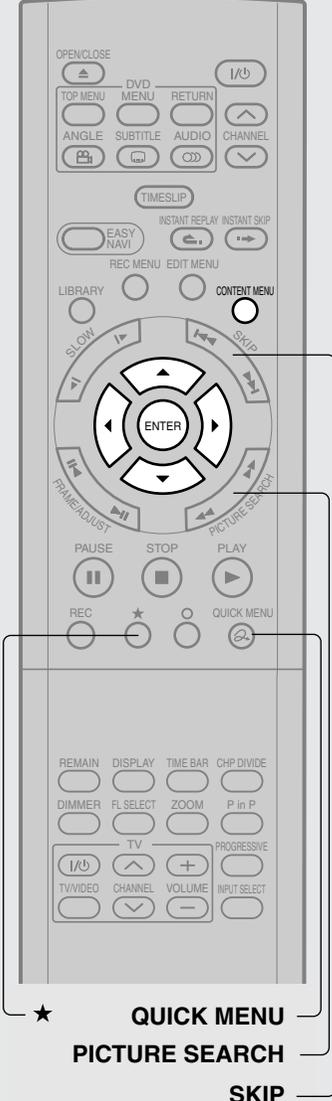
A still picture may be displayed after all titles are played. In this case, the screen protection activates after about 10 seconds.

Notes

- Do not move the recorder during playback. It may damage the disc.
- Occasionally the picture may stop at the last scene, or the main menu may appear after playing. If you display a still picture such as the main menu on the TV screen for a prolonged period, the TV may be damaged (image burn). To prevent this, press the STOP button to stop playback.
- A still picture for about 15 minutes while the TIMESLIP indicator illuminates, will return to normal playback. If the playback is completed, a still picture of the title end will continue unless you press the TIMESLIP button.

Playing recorded contents (CONTENT MENU)

Titles and chapters recorded on a DVD-RAM/RW disc are displayed in thumbnail view, so that you can easily locate a desired one.



1 During stop or playback, press **CONTENT MENU**.

The following **CONTENT MENU (Title List)** appears.

e.g.

CONTENT MENU Title List			
1 / 2 Page		DVD-RAM	
001:	2004/06/08 07:00 am TV:4 (0:53:45) Original	2004/06/08 11:00 pm TV:5 (0:29:50) Original	
003:	2004/06/12 09:00 pm TV:3 (0:52:40) Original	2004/07/11 07:00 am TV:8 (0:54:30) Original	
005:	2004/07/12 11:00 pm TV:4 (0:51:28) Original	2004/07/12 09:00 pm TV:10 (0:51:28) Original	

Attribution (original/playlist) → page 86

2 Press **▲ / ▼ / ◀ / ▶** to select a title (chapter).

You can view succeeding or prior pages by pressing the **PICTURE SEARCH (◀◀ / ▶▶)** button. To select a chapter, select a title and press the **★** button. The Chapter List appears. By pressing the **★** button again, you can return to the Title List.

3 Press **ENTER**.

Playback starts from a selected title (chapter).

Notes

- In a **CONTENT MENU**, titles (Original) precede titles (Playlist), in order from the oldest one respectively.
- To turn off the **CONTENT MENU**, press the **CONTENT MENU** button. Absence of operations for longer than about 15 minutes also turns off the **CONTENT MENU**.
- The mark **||** is displayed in every thumbnail when "Title playback" (→ page 132) is set to "Title resume". When set to "Serial playback", it is displayed in a thumbnail last operated.
- You can change a thumbnail picture. See → page 99.
- You cannot display the **CONTENT MENU** for DVD-R/RW discs recorded on other devices.
- For playing a recorded title while recording another, see → page 35.
- A black thumbnail with "Recording" means that the title is being recorded or its recording will start within 15 seconds. This thumbnail cannot start playback.

■ **To stop playback**

Press **STOP**.



■ **To pause playback (still playback)**

Press **PAUSE**.



To resume normal playback, press the **PLAY** button or the **PAUSE** button.

Note

- Sound is muted during still mode.

■ **Resuming playback from the location last stopped (Title resume) DVD-RAM**

The recorder memorizes the location you last stopped playback to resume there.

To use this function, set “Title playback” (➡ page 132) to “**Title resume**.” The recorder will memorize the location you last stopped at in each title, so you can resume playback there. For example, if there are 6 titles, you can start each of them as if you had stored 6 video tapes in the recorder.

- **To return to the beginning of the title**
During playback, press the **QUICK MENU** button, then press the **▲ / ▼** buttons to select “Restart title,” then press the **ENTER** button.
- **To play another title**
Press the **CONTENT MENU** button to display “CONTENT MENU Title List,” then select a title.

You can make the recorder memorize only the very last point, regardless of the number of titles. Set “Title playback” (➡ page 132) to “**Serial playback**.”

- **To return to the beginning of the title**
Press the **SKIP (⏮)** button repeatedly until the beginning of the title appears.
- **To play the other title**
Press the **SKIP (⏮ / ⏭)** button repeatedly.

Notes

- Depending on the status or the contents, playback may not start from the location last stopped, but instead another location. For example, from the beginning of the disc or title.
- Depending on the disc, there may be a slight difference between the location the recorder memorized and the actual location where playback starts.
- This function is not available on DVD-R/RW discs.
- The resuming function will not work if the write-protect tab is set to “**PROTECT**” (➡ page 8).

■ **Playing the digest (Skip Search)**

DVD-RAM

This feature repeats playback of about 5 seconds and skip of 1 minute from the beginning to the end of a recorded title, so that you can view the digest of it.

- 1) **Perform steps 1 and 2 on ➡ page 53, and select a title that you want to view the digest.**
- 2) **Press QUICK MENU.**
The Quick Menu is displayed.
- 3) **Press ▲ / ▼ to select “Special playback mode”, then press ENTER.**
- 4) **Press ▲ / ▼ to select “Skip search”, then press ENTER.**
The Skip Search starts.

Notes

- This feature can be used only one title (original) recorded on a DVD-RAM disc.
- While using this feature, you cannot use speed-related functions such as fast forward or fast reverse.
- If you press the **ENTER** button while using this feature, the normal playback starts.
- To cancel this feature, press the **STOP** button twice.

■ Viewing the first scenes of titles (Original) (Intro scan) **DVD-RAM**

- 1) After step 1 on ➔ page 53, press **QUICK MENU**.

The Quick Menu appears.

- 2) Press **▲ / ▼** to select “Special playback mode”, then press **ENTER**.

- 3) Press **▲ / ▼** to select “Intro scan”, then press **ENTER**.

The recorder plays the first 5 seconds of each title beginning from title 1.

You can go forward or back by pressing the **SKIP** buttons.

▶▶ : to go to the next title.

◀◀ : to go back to the current title.

Press twice to go back to the previous title.

- 4) When you find a desired title, press **ENTER**.

The selected title is played.

Notes

- To stop Intro scan, press the **STOP** button twice.
- This feature can be used only titles (Original) recorded on a DVD-RAM disc.

■ Playing all titles (original/playlist) in a disc

DVD-RAM

Set “Title playback” (➔ page 132) to “Serial playback”. You can play all titles in a DVD-RAM disc in the order of the thumbnails on the **CONTENT MENU**, as if they were recorded in one video tape.

■ Playing all titles (original) in a disc (Play all ORG titles) **DVD-RAM**

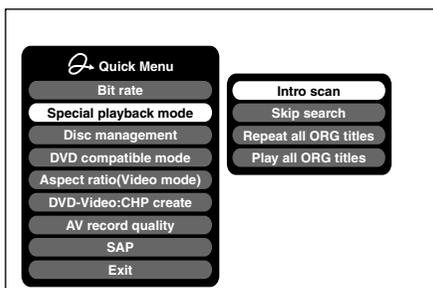
You can play all original titles in a DVD-RAM disc in the order of the thumbnails on the **CONTENT MENU**, as if they were recorded in one video tape.

- 1) During stop, press **QUICK MENU**.

The Quick Menu appears.

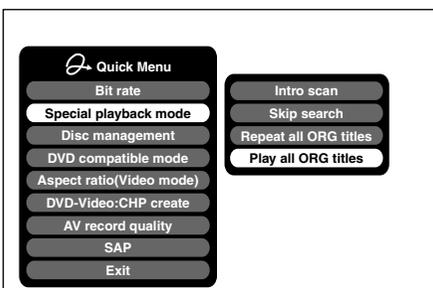
- 2) Press **▲ / ▼** to select “Special playback mode”, then press **ENTER**.

e.g.



- 3) Press **▲ / ▼** to select “Play all ORG titles”, then press **ENTER**.

e.g.



Playback starts from the beginning of title 1.

Notes

- To stop this playback feature, press the **STOP** button twice. (However, doing this when you are playing a title recorded in a DVD-RAM disc while recording on the DVD-RAM disc (➔ page 35) will stop the recording.) Alternatively, press the **QUICK MENU** button to display the quick menu, and press the **▲ / ▼** buttons to select “Cancel play all ORG titles” and press the **ENTER** button.
- When the last title is complete, this playback feature stops.
- If you select “Repeat all ORG titles” at step 3), this playback feature repeats.
- A location where you last stopped is memorized. Playback will resume from there.

Playing recorded contents (CONTENT MENU) (Continued)

■ **Checking the background information on a selected title**

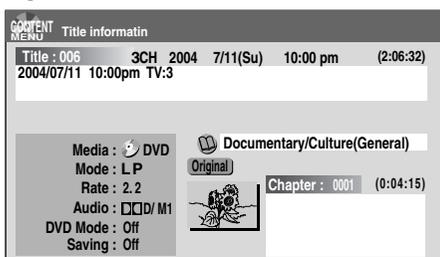
- 1) At step 2 on  page 53, select a title (chapter) then press **QUICK MENU**.

The Quick Menu appears.

- 2) Press **▲ / ▼** to select “Title information”, then press **ENTER**.

Detailed information of a selected title (chapter) appears.

e.g.

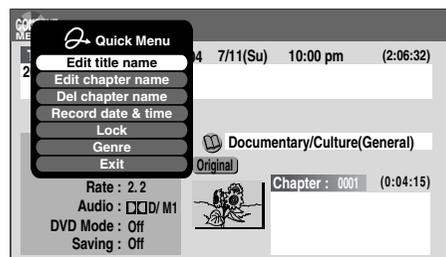


Changing the title information:

- 1) While the “CONTENT MENU Title Information” is displayed, press **QUICK MENU**.

The Quick Menu appears.

e.g.



- 2) Press **▲ / ▼** to select an title, then press **ENTER**.

Edit title name:

The text entry screen is displayed.

Following the procedure on  page 30, enter a new name for the title.

Edit chapter name:

(First press the PICTURE SEARCH () button to display the chapter you want, then select this item.)

The text entry screen is displayed.

Following the procedure on  page 30, enter a new name for the chapter.

Del chapter name:

(First press the PICTURE SEARCH () button to display the chapter you want, then select this item.)

Record date & time:

The recording date is highlighted so that you can correct the digits.

Lock:

Set the protection for the currently selected title. The protection icon  appears. ( page 49)

Genre:

The submenu appears.

Press the **▲ / ▼** buttons to select a genre, then press the **ENTER** button.

A name of the selected genre and the icon appear.

Notes

- To change the title information, be sure to load a DVD-RAM/R/RW disc which contains the desired title.
- You may not be able to change the title name, etc. of a DVD-R disc, if the disc is in a certain condition such as a minimal remaining space.
- You cannot set the protection of titles in DVD-R/RW discs.
- By pressing the **O** button, you can return to the previous display.
- To exit these steps, press the **CONTENT MENU** button.

■ Viewing information of a loaded disc

1) Press **CONTENT MENU**.

The **CONTENT MENU** appears.

2) Press **QUICK MENU**.

The Quick Menu appears.

3) Press **▲ / ▼** to select “Disc information”, then press **ENTER**.

You can view information on a loaded disc.

e.g.

Disc information	
Disc Type	DVD-RAM
Writing Mode	VR mode
Original Titles	4
Playlist Titles	0 (Current)
Disc Status	Normal
Disc Lock	Lock Off
Finalize	-
Increment Rec	-
Increment Rec	Possible

Record Time (h:m)		Remain Time (h:m)	
1	MN 6.6Mbps / L-PCM	0:05	
2	SP 4.6Mbps / □□D/M1	0:10	
3	LP 2.2Mbps / □□D/M1	0:22	
4	MN 6.0Mbps / □□D/M2	0:07	
5	MN 3.2Mbps / □□D/M1	0:15	

Changing the disc information:

You can change the number or name of a DVD-RAM disc.

1) Press **◀ / ▶** to select “Edit Disc Number” or “Edit Disc Name”, then press **ENTER**.

2) Following the procedure on page 30, enter a new name for the disc.

To change the disc number, press the **ADJUST** button.

Notes

- You cannot change the disc name of a blank DVD-R disc. After recording, change the disc name.
- You may not be able to change the disc name of a DVD-R disc, if the disc is in a certain condition such as a minimal remaining space.

■ Changing the order of the titles

You can change the order or sort the titles by genre.

1) Press **CONTENT MENU**.

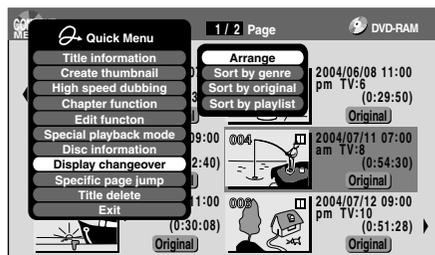
The **CONTENT MENU** appears.

2) Press **QUICK MENU**.

The Quick Menu appears.

3) Press **▲ / ▼** to select “Display changeover”, then press **ENTER**.

e.g.



4) Press **▲ / ▼** to select the item, then press **ENTER**.

• **Arrange**

The titles are rearranged along with the selected order.

Press the **▲ / ▼** buttons to select the order, then press the **ENTER** button.

• **Sort by genre**

Titles of the selected genre are sorted.

Press the **▲ / ▼** buttons to select the genre, then press the **ENTER** button.

• **Sort by original**

Titles (Original) are sorted.

• **Sort by playlist**

Titles (Playlist) are sorted.

Note

- The recorder holds your selection until the power is turned off. To cancel, select “Display changeover” then “Cancel Arrange/Narrowing” from the Quick Menu.

■ **Jumping to a specified page**

1) **Press CONTENT MENU.**

The CONTENT MENU appears.

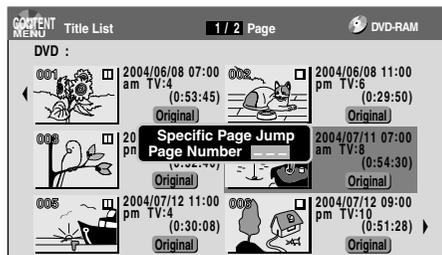
2) **Press QUICK MENU.**

The Quick Menu appears.

3) **Press ▲ / ▼ to select “Specific page jump”, then press ENTER.**

4) **Enter the page number you want by pressing ADJUST, ▲ / ▼ or the number buttons.**

e.g.



To clear the number, press the CLEAR button.

5) **Press ENTER.**

The specified page appears.

■ **Playing a DVD-RW disc recorded in DVD-VR mode **DVD-RW****

See ➡ page 53.

Notes

- Some disc's conditions or discs which contain copy once contents may not permit proper playback.
- “Title resume” (➡ page 132) is not available.

Playing a DVD video disc

You can also play VIDEO CDs, audio CDs or finalization processed DVD-R/RW discs in the same manner. To play recorded contents, follow the instructions on [▶ page 53](#).

■ Preparation

- Turn on a TV or audio system and select the corresponding input source that the recorder is connected to.
- Load a disc you want to play. ([▶ page 20](#))

1 Press PLAY.

Playback starts.

PLAY

- Depending on the disc, playback starts automatically by loading the disc.
- The recorder may take a short time to start playback. This occurs because the recorder is reading the data of a disc.

■ To stop playback

Press STOP.



■ To pause playback (still playback)

Press PAUSE.



To resume normal playback, press the PLAY button or the PAUSE button.

Note

- Sound is muted during still mode.

Note

- DVD video disc provides high resolution pictures and a lot of information. Because of this, you may notice some fine picture noises on TV screen, which you have never seen with regular broadcast TV program. While the amount of noise depends on the TV you use with the recorder, you should generally reduce the sharpness adjustment on your TV when viewing DVD video discs.

■ Resuming playback from the location last stopped (Resume Play)

DVD-RW | DVD-R | DVD-VIDEO | VCD | CD

You can resume playback from the location where you stopped.

If you press the PLAY button after stopping playback, playback resumes from the location you have stopped.

If you stop playback by pressing the STOP button twice, the resume playback feature will be cancelled.

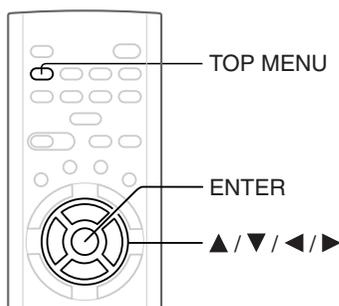
Notes

- Resume feature cannot function when:
 - you select a disc menu language (➡ page 126) or change the parental lock setting (➡ page 127).
 - you play a PBC-featured VIDEO CD while “PBC” (➡ page 128) is set to “On”.
 - you open the disc tray.
 - you cancel the DVD-Video finalizing process of a DVD-RW disc.
- There may be a difference in the location where playback resumes depending on the disc.
- While the recorder retains a location in memory, initial setting changes with GUI may function only after the memory is cleared.

Locating a title using the top menu

DVD-RW | DVD-R | DVD-VIDEO

Some DVD video discs may include a top menu, on which you can view the structure of contents or select a scene. Most of the top menus automatically appear in certain scenes, and also are displayed on demand. Actual operation of the top menu depends on the disc. This section explains a general example of how to operate a top menu. Also refer to the instructions of the disc itself.



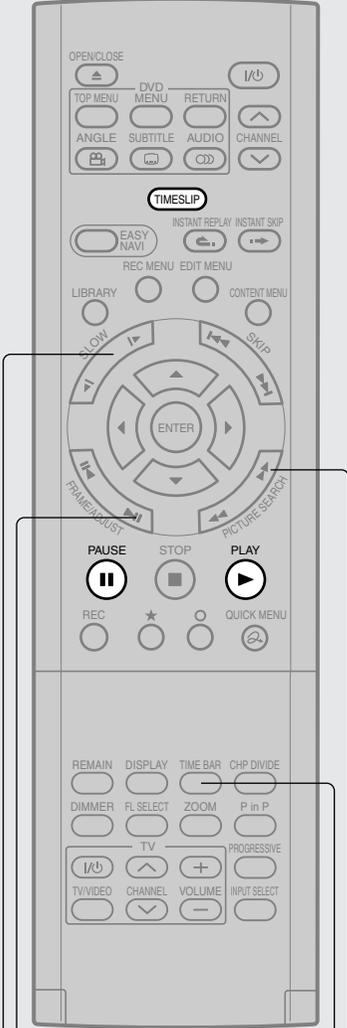
- 1) Press TOP MENU.
- 2) Press ▲ / ▼ / ◀ / ▶ to select the title you want.
If the titles in the top menu are assigned a number, you can directly locate a specific title by pressing its designated number with the number buttons.
- 3) Press ENTER.

Notes

- The instructions above describe basic procedures which may vary depending on the contents of the DVD video disc. If different instructions appear on the TV screen, follow those instructions.
- If you display the top menu during playback and press the TOP MENU button again without selecting any title, the recorder may resume playback from the point where you first pressed the TOP MENU button. (depending on the actual DVD video disc.)
- This method of locating a title is available only on a disc that contains a top menu.
- Instruction notes of discs may refer to the button that displays the top menu as the TITLE button.

Pausing a TV broadcast to resume later

This function enables you to pause a TV broadcast and resume viewing at a later, more convenient time, by storing the TV broadcast temporarily on a DVD-RAM disc.



1 While viewing a TV broadcast via this recorder or immediately before it starts, press **TIMESLIP**.

TIMESLIP

The current picture pauses.
The recorder begins to store the broadcast on a DVD-RAM disc the moment you press the **TIMESLIP** button.

2 Resume playback by pressing **PAUSE** or **PLAY**.

PAUSE 

PLAY 

- You can confirm how far you are from the current broadcast by pressing the **TIME BAR** button.
- Playback may not resume immediately after you press the **PLAY** or **PAUSE** button.

3 Locate a scene you want by the following methods.

Fast-forward/fast-reverse:
Press the **PICTURE SEARCH** button.

Forward/reverse Slow-motion:
Press the **SLOW** button.

Forward/reverse frame by frame play:
First press the **PAUSE** button then press the **FRAME** button.

- To resume normal playback, press the **PLAY** button.
- You can play in fast-forward to within 10 seconds prior to the current broadcast.

4 Press **TIMESLIP** to exit this mode.

TIMESLIP

The recorder stops storing the broadcast on a DVD-RAM disc.
A message appears and asks you whether you will save the stored data or erase it.
Press the **◀/▶** buttons to select, then press the **ENTER** button.

FRAME

TIME BAR

SLOW

PICTURE SEARCH

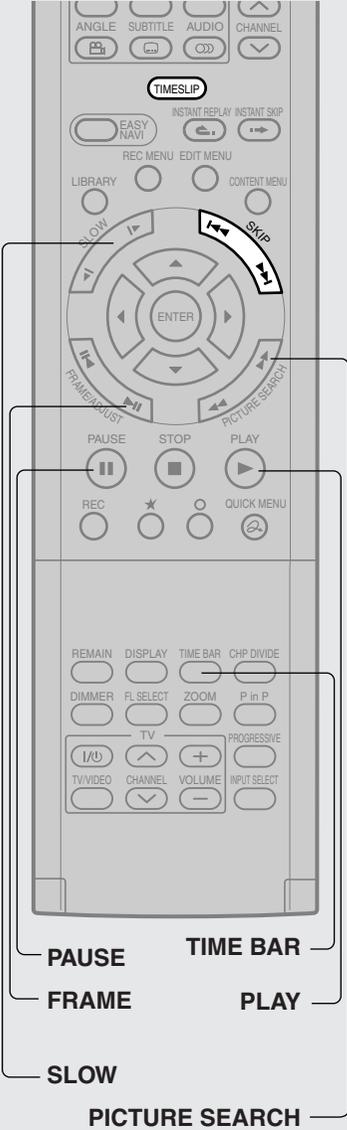
Notes

- This function is not available during recording.
- Pause TV recording stops when the DVD-RAM disc is filled up. It will not begin if a DVD-RAM disc is full.
- While using this pause TV recording, you cannot program a recording.
- Playback may jump a few seconds back or pause depending on the disc or data condition.

Playing a TV program currently being recorded

You can begin playback from the beginning of a program currently being recorded.

You will find this function of great advantage on long programs, as you do not have to wait for the end of recording to begin playback.



- ## 1 While recording a TV program on a DVD-RAM disc, press TIMESLIP.

The recorder displays a TV program as it is being recorded.



- ## 2 Go back to the beginning of the TV program using SKIP.

When you go back to the beginning, playback starts automatically.



You can confirm how far you are from the current broadcast by pressing the TIME BAR button.

- ## 3 Locate a scene you want through the following operations if necessary.

Fast-forward/fast-reverse:
Press the PICTURE SEARCH button.

Forward/reverse Slow-motion:
Press the SLOW buttons.

Forward/reverse frame by frame play:
First press the PAUSE button then press the FRAME button.

 - To resume normal playback, press the PLAY button.
 - You can play in fast-forward to within 10 seconds prior to the current broadcast.

- ## 4 Press TIMESLIP to exit.

The current broadcast returns.

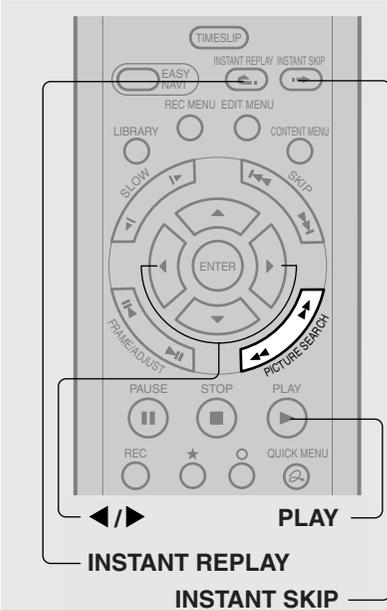


Notes

- Time slip recording/playback stops when the DVD-RAM disc is filled up. You can play up to a location where the recorder stopped the recording. The time slip recording/playback cannot begin if a DVD-RAM disc is full.
- The playback picture may appear after a delay of several seconds.
- The playback location will never be identical to the record location in the program. It will always trail the record location by a few seconds.
- While using time slip recording/playback, you cannot program a recording.
- While the TIMESLIP indicator is on, you cannot change the setting of the feature that turns off the recorder after a programmed operation has finished.
- Even while "Auto power off" is selected, the recorder does not turn off if the recording end time comes during playback of a program being recorded.
- Playback may jump a few seconds back or pause depending on the disc or data condition.

Playing at various speeds

Playing in fast reverse or fast forward



1 During normal playback, press PICTURE SEARCH.



- ▶▶ : Fast forward playback
- ◀◀ : Fast reverse playback

Each time you press the button, the playback speed changes.

During fast forward playback at “▶▶” speed, sound is reproduced. (Not available on VIDEO CD.)

- This function is not available when you play a title recorded on a DVD-RAM disc while recording another.

Notes

- The playback speed may vary depending on the disc.
- Depending on the disc or data condition, picture and sound in fast forward playback at “▶▶” speed may be disturbed.

■ To resume normal playback

Press **PLAY**.

■ To skip the contents in pre-determined increments

During playback, press INSTANT SKIP.

Each time you press the button, you can skip by the specified time.

You can select the interval per press of the button. See “Instant skip interval” of “Operational settings” (➡ page 132).

■ To skip by 1/20 of whole

During playback, press ◀/▶.

Each time you press the button, you can skip by 1/20 of the current title or track if it is longer than 1 minute.

■ Time bar display

Fast-forward or fast-reverse playback automatically displays a time bar.

e.g.



For details, see ➡ page 80.

■ To skip back in pre-determined increments

During playback, press INSTANT REPLAY.

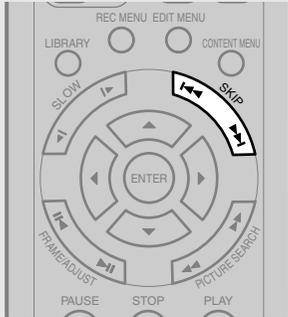
Each time you press the button, you can go back by the specified time to resume playback.

You can select the interval per press of the button. See “Instant replay interval” of “Operational settings” (➡ page 132).

Notes

- Some discs may not permit this operation.
- Depending on disc structure, some operations may be limited.
- Depending on playback status, some operations may not work.

Skipping to the next/previous chapter or track DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD CD



1 Press SKIP (↩/▶) repeatedly until the chapter or track number you want appears.



Playback starts from the selected chapter or track.

▶▶ : Playback starts from the beginning of the next chapter or track.

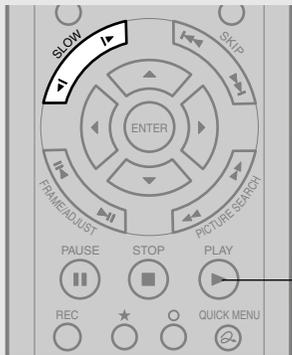
◀◀ : Playback starts from the beginning of the current chapter or track.

When you press twice, playback starts from the beginning of the previous chapter or track.

Notes

- Some titles may not display chapter numbers.
- When playing a DVD-RAM disc, you can access chapters only in the current title if “Title playback” (☞ page 132) is set to “Title resume”. To access chapters in other titles, set to “Serial playback”.
- When playing a DVD video disc or a DVD-R/RW disc, you can locate chapters only in the current title if “DVD title stop” (☞ page 128) is set to “On”. To access chapters in other titles, set to “Off”. However, in this instance even though you press the SKIP button (↩) to go back to the previous title, playback starts not from the last chapter of the title but from the first chapter.

Playing in slow-motion DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD



1 Press SLOW during playback.



▶ : Forward slow-motion

◀ : Reverse slow-motion

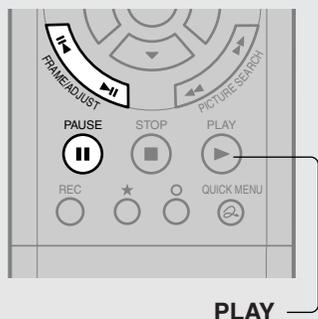
Each time you press the SLOW button, the slow-motion speed changes.

Notes

- Slow-motion does not provide smooth playback.
- When playing a VIDEO CD, reverse slow-motion playback is not available.
- The speed level displayed is approximate.

■ **To resume normal playback Press PLAY.**

Playing frame by frame DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD



1 During playback, press PAUSE.



A still picture is displayed.

2 Press FRAME (◀▶/▶▶).



▶▶ : Playback direction
◀▶ : Opposite direction

- To resume normal playback
Press the PLAY or PAUSE button.

Notes

- Sound is muted during frame by frame playback.
- Frame by frame playback cannot provide smooth playback.
- Picture may advance more than 1 frame at a time.
- Depending on the scene, some frames may not be played.
- When playing a VIDEO CD, reverse frame by frame playback is not available.

Viewing still pictures (Playing a disc that contains still pictures) DVD-RAM DVD-VIDEO



1 Press PLAY.



The first still picture on a disc is displayed.

Some DVD video discs may allow you to change the pictures using the PLAY, ENTER or SKIP button.

2 Press FRAME (◀▶/▶▶).



▶▶ : Displays the next still picture.
◀▶ : Displays the previous still picture.

Locating by entering the number

Locating by entering the number of a desired section

Normally titles, chapters, and tracks are numbered. By entering these numbers, you can access a desired section.



Open the lid.

CLEAR

1 Press T.SEARCH.



If you are using a VIDEO CD/audio CD, skip step 2.
e.g.



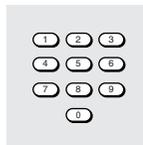
2 Press ▲ / ▼ to select a section (title or chapter) you want to locate.



e.g. When you want to locate a chapter.



3 Press the number buttons to enter a number of the section.



e.g. To enter 25, press "2", then press "5".

4 Press ENTER.



Playback starts from the selected location.

Notes

- Pressing the CLEAR button resets the numbers. To clear the display, press the T.SEARCH button several times (depending on the disc).
- This method of locating a title is available only on a disc that contains title numbers.
- If a title is erased, the numbers of the following titles decrease respectively.
- When you record a new title (Original) on a DVD-RAM disc, it is added prior to current titles (Playlist), and each following title (Playlist) reference number will advance by a factor of 1.

Locating a specific point by entering its elapsed time (Time Search)



Open the lid.

CLEAR

1 Press T.SEARCH.



You may have to press repeatedly, depending on the disc. Press the button until the following display appears.

e.g.



2 Press the number buttons and ◀/▶ to enter the desired time location on the disc.



e.g. To enter 1 hour, 25 minutes, and 30 seconds

“0” → “1” → “▶” → “2” → “5” → “▶” → “3” → “0”
hour minute second

3 Press ENTER.



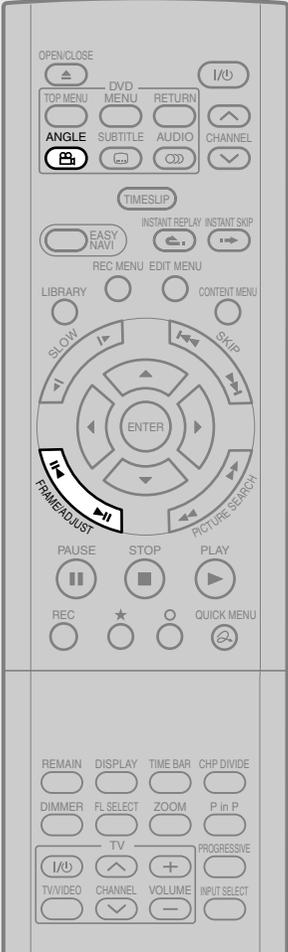
Playback starts from the selected location.

Notes

- Some discs may not respond to this process.
- Some scenes may not be accessed precisely as you specified.
- This method for accessing specific locations is available only within the current title of a DVD-RAM/R/RW/DVD video disc or within a current track of a VIDEO CD/audio CD.
- Pressing the CLEAR button resets the numbers.

Selecting the camera angle

If the scene was recorded with multiple angles, you can easily change the camera angle of the scene you are watching.



1 Press ANGLE while playing a scene recorded with multiple angles.

ANGLE


While playing a scene recorded with multiple angles, the angle icon appears on the TV screen and on the front panel. Press the ANGLE button while the angle icon is displayed.

e.g.

Angle
1 / 6



↑ Total number of angles

↓ Current selection

2 Press ADJUST while the angle number is displayed on the TV screen.



You can also select the camera angle by pressing the ANGLE button several times.

Angle
1 / 6



↓ 2 / 6

↓ 3 / 6

⋮

↓ 6 / 6

- The angle icon disappears after about 3 seconds if no further selections are made.

Notes

- You can also change the camera angle during still playback. The camera angle changes to the new setting when you resume normal playback.
- If you pause a picture immediately after changing a camera angle, the resumed playback picture may not display the new camera angle.
- Depending on the disc, the camera angle may not change even though the angle number changes.

■ To turn off the angle icon

Set "On screen display" in the setup menu to "Off" (➡ page 131).

Most of the on-screen display including the angle icon will not appear.

While the angle icon is flashing on the front panel display, you can change the camera angle.

Selecting subtitles

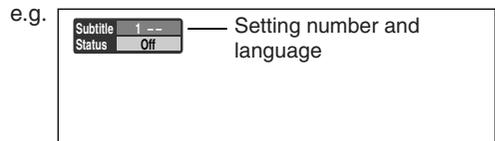
You can display subtitles on the TV screen and select a subtitle language from those included on the disc.



1 Press SUBTITLE during playback.



The current subtitle setting appears.



The language code appears instead of the language name. Refer to the list of languages and their abbreviations. (▶ page 143)

2 Press ▼ to select "Status," then press ADJUST to select "On."



Skip to step 3 if "On" is already displayed.

3 Press ▲ to select "Subtitle," then press ADJUST to select a language.



The subtitles of recorded languages appear.



The display turns off after about 3 seconds if you do not make a selection.

Notes

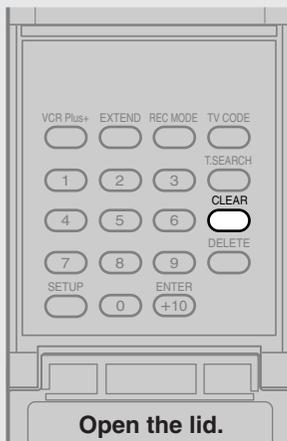
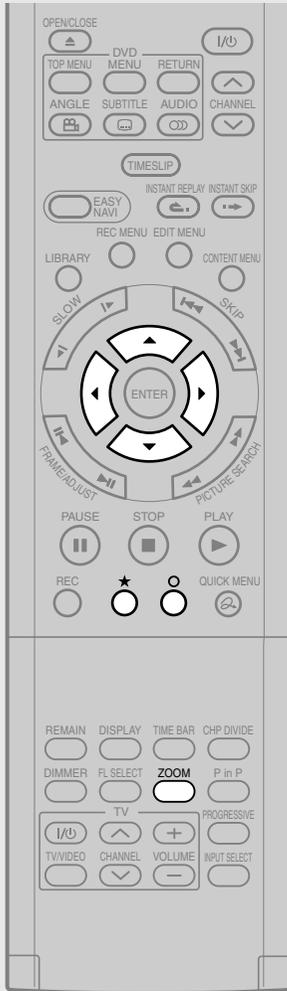
- Some DVD video discs are set to display subtitles automatically.
- Depending on the scene, subtitles may not appear immediately after you set the subtitle function to on.
- Some DVD video discs will allow you to change subtitle languages and turn subtitles on or off only via the disc menu.

■ To turn the subtitles on or off

At step 2, select "Off" by pressing the ADJUST button.

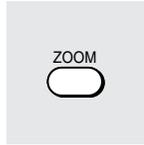
Zooming a picture

You can magnify areas within a picture.



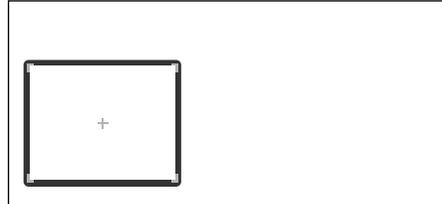
Open the lid.

1 Press ZOOM.



A zoom scope appears.

e.g.



2 Select a zoom point and magnification level.



★:

Raises the magnification level.

○:

Lowers the magnification level.

▲ / ▼ / ◀ / ▶:

Moves the zoom point. (only after the image has been magnified)

CLEAR:

Returns the zoom point to the center of the picture.

Notes

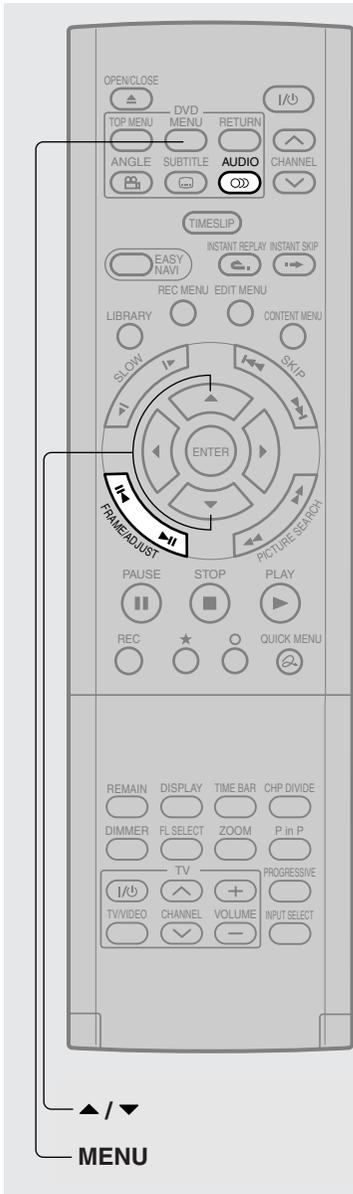
- Some discs may not respond to zoom feature.
- During some scenes, the buttons may not work as described.
- The zoom feature is canceled when the disc menu is operated.
- The magnification level varies depending on the picture size you select (➔ page 44, "INSTALLATION GUIDE").
- The zoom feature is not available while displaying a GUI.
- The zoom feature is canceled when you stop playback or start playback.

■ To cancel the zoom

Press ZOOM.

Selecting the sound

You can select a preferred language and a sound format.



1 Press AUDIO during playback or while receiving a broadcast.



The current audio setting appears.

The language code appears instead of the language name. Refer to the list of languages and their abbreviations. (➡ page 143)

2 Press ADJUST while the audio setting is displayed on the TV screen.



Variation of channels depends on the disc or the type of TV broadcast.

- **DVD-RAM**, TV channel signals

Stereo sound
 → “Stereo” (left channel and right channel)
 → “Stereo L” (left channel)
 → “Stereo R” (right channel)
 (→ Back to “Stereo”)

SAP sound

“Main” → “SAP” → “Main + SAP” (→ Back to “Main”)

DVD-RW | DVD-R | DVD-VIDEO

Language name / sound recording system / No. of channels

e.g.



- **VCD**

“Stereo” → “Stereo L” → “Stereo R” (→ Back to “Stereo”)

The display turns off if you do not operate for more than 3 seconds.

If you press the ▲ / ▼ buttons to select “Output,” you can select the audio output setting (➡ page 130) by using the ADJUST buttons.

■ MTS Broadcast Compatibility

This recorder can receive or record MTS (Multichannel TV sound) broadcast. By connecting the recorder to your stereo system or stereo TV, you will experience the SAP or stereo sound.

SAP (Second Audio Program broadcast)

A separate audio program, usually broadcast in a second language with the main language.

Sounds in playback

You can play SAP and/or stereo broadcasts with this recorder. Refer to steps 1 and 2 to select a desired audio.

Desired sound	L, R indicators on the front panel	Sound output
SAP sound	R (right) is on.	SAP
Stereo sound	Both R (right) and L (left) are on.	Stereo Sound

Selecting the sound (Continued)

Recorded sounds

According to your setting of “SAP” on the setup menu screen, (➡ page 130), the sound is recorded onto different channels of the disc below. Set “SAP” to “On” or “Off” appropriately.

Setting on the setup screen		Type of receiving broadcast	Contents of recorded sound		Type of record
DVD Compatible Mode	SAP		Lch	Rch	
Off	Off	Stereo + SAP	L	R	Stereo
		Mono + SAP	Mono	Mono	Stereo
		Stereo	L	R	Stereo
		Mono	Mono	Mono	Stereo
	On	Stereo + SAP	L + R	SAP	Dual Mono*
		Mono + SAP	Mono	SAP	Dual Mono*
		Stereo	L	R	Stereo
		Mono	Mono	Mono	Stereo
Main	Off	Stereo + SAP	L	R	Stereo
		Mono + SAP	Mono	Mono	Stereo
		Stereo	L	R	Stereo
		Mono	Mono	Mono	Stereo
	On	Stereo + SAP	L + R	L + R	Stereo
		Mono + SAP	Mono	Mono	Stereo
		Stereo	L	R	Stereo
		Mono	Mono	Mono	Stereo
SAP	Off	Stereo + SAP	L	R	Stereo
		Mono + SAP	Mono	Mono	Stereo
		Stereo	L	R	Stereo
		Mono	Mono	Mono	Stereo
	On	Stereo + SAP	SAP	SAP	Stereo
		Mono + SAP	SAP	SAP	Stereo
		Stereo	L	R	Stereo
		Mono	Mono	Mono	Stereo

* This will be “Stereo” when a recording is made with “L-PCM” selected.

Notes

- Some discs allow you to change audio selections only via the disc menu. If this is the case, press the MENU button and choose the appropriate language from the selections on the disc menu.
- When you turn on the recorder or replace a disc, the recorder returns to the initial default setting. (➡ page 126)
Depending on the disc, the sound that is specified the disc is played back.
- Immediately after you have switched sounds, there may be a temporary discrepancy between the display and actual sound.
- The BITSTREAM/PCM jack may not output SAP sound you select. In this instance, set “Audio out select” to “PCM”. (➡ page 130)
- You cannot change SAP sound if recorded with “DVD compatible mode” (➡ page 134) set to “Main”. Even when “DVD compatible mode” (➡ page 134) is set to “Off,” the recorder regards it as “Main” when recording to a DVD-R/RW disc.

■ Output sound conversion table

Disc	Sound format	Audio setting (➡ page 130) and output in the default setting display					
		Bitstream		Analog 2ch		PCM	
		BITSTREAM/ PCM jack	Analog (L/R) jacks	BITSTREAM/ PCM jack	Analog (L/R) jacks	BITSTREAM/ PCM jack	Analog (L/R) jacks
DVD- video disc*	Dolby Digital	Bitstream	48 kHz/20 bit	Bitstream	48 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit
	Linear PCM	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit
		48 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit	48 kHz/16 bit
		48 kHz/24 bit	48 kHz/16 bit	48 kHz/24 bit	48 kHz/16 bit	48 kHz/24 bit	48 kHz/16 bit
		96 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	—	96 kHz/16 bit	48 kHz/16 bit
		96 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit	—	96 kHz/20 bit	48 kHz/16 bit
	96 kHz/24 bit	48 kHz/16 bit	48 kHz/24 bit	—	96 kHz/24 bit	48 kHz/16 bit	
DTS	Bitstream	—	Bitstream	—	—	—	
MPEG2	Bitstream	48 kHz/16 bit	Bitstream	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	
VIDEO CD	MPEG1	44.1 kHz/16 bit	44.1 kHz/16 bit	44.1 kHz/16 bit	44.1 kHz/16 bit	44.1 kHz/16 bit	44.1 kHz/16 bit
Audio CD	Linear PCM 44.1 kHz/16 bit	44.1 kHz/16 bit	44.1 kHz/16 bit	44.1 kHz/16 bit	44.1 kHz/16 bit	44.1 kHz/16 bit	44.1 kHz/16 bit
	DTS	Bitstream	(Noise)	Bitstream	(Noise)	Bitstream	(Noise)
DVD- RAM/RW/ R	Dolby Digital	Bitstream	48 kHz/20 bit	Bitstream	48 kHz/20 bit	48 kHz/16 bit	48 kHz/20 bit
	Linear PCM 48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit
	MPEG2	Bitstream	48 kHz/16 bit	Bitstream	48 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit
CD-R/RW	MP3/WMA	44.1 kHz or 32 kHz or 48 kHz/16 bit					

* “DVD video disc” above does not include DVD-R/RW discs recorded on this recorder.

- Do not select a connection or setting indicated as “Noise” in the above list.

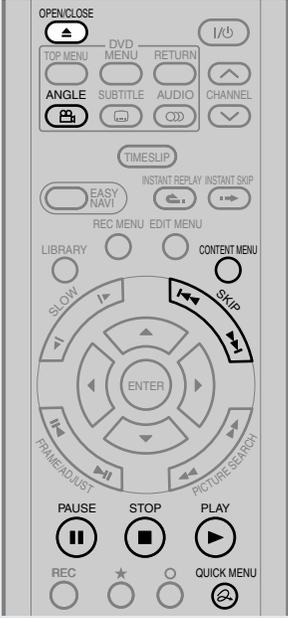
Manufactured under license from Dolby Laboratories. “Dolby” and the double-D symbol are trademarks of Dolby Laboratories.

Viewing JPEG files

You can play JPEG files that have been recorded on a CD-R or CD-ROM on the recorder.

■ Preparations

- Prepare a compatible disc (➡ page 75) that contains JPEG files you want to view.
- Set "Priority contents" (➡ page 132) to "Photo".
- Make your TV shape conform to the 4:3 picture size. Only 4:3 pictures can be played regardless of the function settings via the on-screen displays of the recorder (➡ page 44, "INSTALLATION GUIDE"). If the TV is adjusted to other sizes, e.g. "WIDE," images will appear to be horizontally expanded. For details, refer to the owner's manual of your TV.



1 Load a CD that contains JPEG files.

Each photo appears for about 3 seconds (slide show).
If a slide show does not start, press the PLAY button.

Depending on the disc, the "CONTENT MENU Picture List" appears. See "On the "CONTENT MENU Picture List"" (➡ page 75) to operate.

Notes

- Some files may not display their own entire images depending on the size.
- Operation to JPEG file will be disabled at about 5 minutes before a programmed recording starts.

■ To stop playback (slide show)

Press STOP.

If you press the PLAY button after pressing the STOP button, playback will start from the photo you stopped.

■ To pause playback (slide show)

Press PAUSE.

To resume, press the PAUSE button again or press the PLAY button.

■ To skip photos

During playback, press the SKIP button repeatedly.

▶▶: To skip forward.

◀◀: To skip backward.

■ To rotate a picture

Press ANGLE repeatedly.

Each time you press the button, the picture rotates by 90° degree.

Notes

- The rotated image is displayed after its original posture appears momentarily.

■ To magnify a picture

Follow the procedure on ➡ page 70.

Notes

- The magnified image is displayed after its original posture appears momentarily.
- For small pictures, the reduction level may be limited.

■ Viewing a specified photo (single view)

Full screen still view.
2 ways are available:

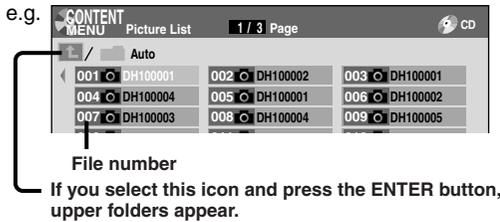
● On the “CONTENT MENU Picture List”

1) Press CONTENT MENU.

The “CONTENT MENU Picture List” appears.

Depending on the disc, the recorder creates either temporary folder, “Auto” or “All”.

“Auto”: For CD of which compatibility confirmed by TOSHIBA. Only playable files are listed.



“All”: For CD other than above. All files are listed.



• Some CDs may not comply with the above.

2) Press ▲ / ▼ / ◀ / ▶ to select a folder or photo.

Pressing the PICTURE SEARCH (◀▶▶▶) button turns the pages.

If you press the ★ button, the list changes to thumbnail view (“CONTENT MENU Pictures”).



Pressing the ANGLE button rotates the picture. The rotation of pictures is kept until the CD is ejected.

To return to the previous list, press the ★ button again.

3) Press ENTER.

If you select a folder at step 2), repeat steps 2) and 3) until your favorite file appears.

The selected photo appears in full screen.

Notes

- The “CONTENT MENU Picture List” cannot show all the files in a disc, but only ones regarded as objects of regular play of the disc.
- The larger the file size is, the longer the thumbnail takes time to appear.
- Letters of a file/folder name overflowing the given space are not displayed.

● Direct input of a photo number

1) During playback or stop, press T.SEARCH.

An input window appears.

e.g.



2) Input a photo number using the number buttons or ADJUST.

3) Press ENTER.

The selected photo appears in full screen.

■ To change the playback order

1) During playback (slide show) or stop, press QUICK MENU.

2) Press ▲ / ▼ to select an item, then press ENTER.

To shift the cursor, press the ▲ / ▼ buttons.

Reverse : To reverse the order.

Repeat : To repeat the current folder.

3) Press ENTER.

Playback in the selected mode starts.

JPEG files compatibility

Discs whose compatibility with this recorder has been confirmed by TOSHIBA are as follows.

CANON QuickCD
FUJICOLOR CD
Kodak Picture CD
NORITSU QSS CD

JPEG disc compatibility with this recorder is limited as follows:

- Playable discs:
 - CD-ROM, CD-R
 - CD-RW is not recommendable.
- CD physical format:
 - Mode 1, Mode 2 XA Form 1
- File system:
 - ISO9660 Level 1, 2 or Joliet
- File name:
 - A file name should be in alphabet and numerals only, and must incorporate “JPG” extension.
 - e.g. “*****.JPG”
- Total number of folders:
 - Less than 256
- Total number of files:
 - Less than 1000

Some files may not display their own entire image depending on the size.

Some discs may not permit this operation. Especially, the following conditions of included files will increase the disc’s disability.

1. Pixels over 5000 x 5000 in height and/or width
2. File format except Exif

Playing MP3/WMA files

You can play MP3/WMA files that have been recorded on a CD-R or CD-ROM on this recorder.

■ Preparations

- Make sure that a disc you want to play is compatible with this recorder. See ➔ page 77.
- Set “Priority contents” (➔ page 132) to “Audio”.

1 Load a CD that contains MP3/WMA files.

Playback starts from the first track of a current folder.

OPEN/CLOSE

Notes

- WMA tracks copy-protected cannot be played.
- The DIGITAL AUDIO OUT BITSTREAM/PCM jack outputs MP3/WMA sounds in the linear PCM format regardless of the current “Audio out select” (➔ page 130) selection.
- You cannot change the playback speed of MP3/WMA playback.

■ To stop playback

Press STOP.

If you press the PLAY button after pressing the STOP button, playback will start from the beginning of the track.

■ To pause playback

Press PAUSE.

To resume, press the PAUSE button again or press the PLAY button.

■ To skip tracks

During playback, press SKIP repeatedly.

- ▶▶: To skip forward.
- ◀◀: To skip backward.

■ Selecting a track in the disc

2 ways are available:

On the “CONTENT MENU Audio List”

1) Press the CONTENT MENU button.

The “CONTENT MENU Audio List” appears.

e.g.

CONTENT MENU Audio List 1/1 Page CD		
MP3		
001	MP3_0001	002 MP3_0002
004	MP3_0004	005 MP3_0005
007	MP3_0007	009 MP3_0009

If you select this icon and press the ENTER button, upper folders appear.

e.g.

CONTENT MENU Audio List 1/1 Page CD		
JPG_MP3		All
MP3	MP3a	MP3b
MP3c	001 MP3_0001	002 MP3_0002
003 MP3_0003	004 MP3_0004	

The recorder creates temporary folder “All”, which contains all playable files.

2) Press ▲ / ▼ / ◀ / ▶ to select a track or folder.

Pressing the PICTURE SEARCH (◀◀ / ▶▶) button turns the pages.

3) Press ENTER.

If you select a folder at step 2), repeat steps 2) and 3) until your favorite file appears.

Notes

- The “CONTENT MENU Audio List” cannot show all the tracks in a disc, but only ones regarded as objects of proper play of the disc.
- Letters of a file/folder name overflowing the given space are not displayed.

Direct input of a track number

1) During playback or stop, press T.SEARCH.

An input window appears.

e.g.



2) Input a track number using the number buttons or the ADJUST button.

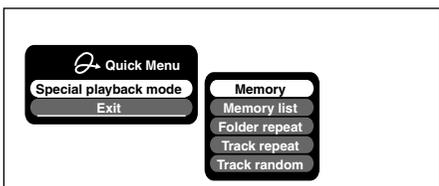
3) Press ENTER.

■ To change the playback order

1) During playback or stop, press QUICK MENU.

2) Press ▲ / ▼ to select “Special playback mode”, then press ENTER.

e.g.



3) Press ▲ / ▼ to select an item, then press ENTER.

Memory list : To play favorite tracks only in a favorite order.

Input a track number by using the number buttons or the ADJUST button.

To shift the cursor, press the ▲ / ▼ buttons.

Folder repeat : To repeat the current folder.

Track repeat : To repeat the current file.

Track random : To play files in the current folder in a random order.

Notes

- To cancel these modes, stop the playback or select the cancel command from the Quick Menu.

Playable files

MP3/WMA disc compatibility with this recorder is limited as follows:

- Playable discs:
 - CD-ROM, CD-R
 - CD-RW is not recommendable.
- Sampling Frequency / Bitrate:
 - WMA: 32 kHz / 48 Mbps (CBR), VBR
 - 44.1 kHz / 48-192 Mbps (CBR), VBR
 - 48 kHz / 128-192 Mbps (CBR), VBR
 - MP3: 8 kHz, 11.025 kHz, 12kHz, 16 kHz, 22.05 kHz, 24 kHz / 8-160 kbps (CBR), VBR
 - 32 kHz, 44.1 kHz, 48 kHz / 32-320 kbps (CBR), VBR
- CD physical format:
 - Mode 1, Mode 2 XA Form 1
- File system:
 - ISO9660 Level 1, 2 or Joliet
- File name:
 - A file name should be in alphabet and numerals only, and must incorporate “MP3” or “WMA” extension.
 - e.g. “*****.MP3”, “*****.WMA”
- Total number of folders:
 - Less than 256
- Total number of files:
 - Less than 1000
- WMA codec version:
 - V7, V8, V9

* This recorder supports ID3v2 (ID3 Tag Version 2) of MP3, to display text data such as names of title and artist. Some characters may be displayed properly.

This recorder requires discs/recordings to meet certain technical standards in order to achieve optimal playback quality. Pre-recorded DVDs are automatically set to these standards. There are many different types of recordable disc formats (including CD-R containing MP3/WMA files). Given the fact that technology in this area is still maturing, Toshiba cannot guarantee that all genre of recordable discs will produce optimal playback quality. The technical criteria set out in this owner’s manual are meant as a guide only.

Customers should also note that permission is required in order to download MP3/WMA files and music from the internet. Toshiba has no right to grant such permission. Permission should always be sought from the copyright owner.

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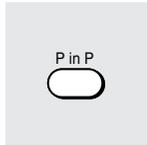
Watching a TV broadcast in the sub window (P in P playback)

During playback, you can watch a TV broadcast in the sub window. (P in P : Picture in Picture)



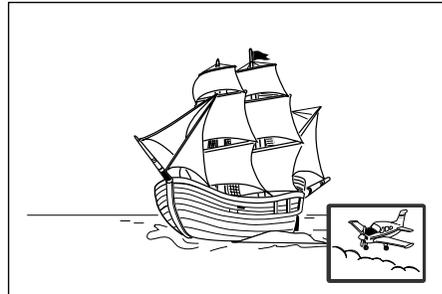
CHANNEL

1 During playback, press P in P.



A sub window (program on the air or on the recording) appears.

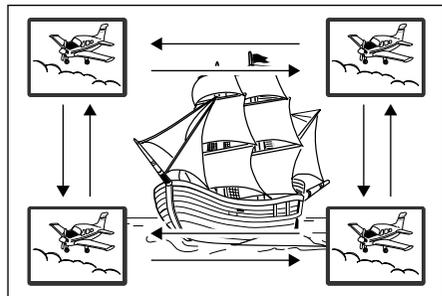
e.g.



2 Press ▲ / ▼ / ◀ / ▶ to select the position of the sub window.



You can shift the sub window in following 4 directions.



↑ / ↓ / ← / → is the moving range.

To turn off the sub window, press the P in P button.

Notes

- You can change the channel of the sub window by pressing the CHANNEL \vee / \wedge button.
- The P in P function is available only during playback.
- You cannot swap the playback picture with the picture within the sub window, or change the audio settings.
- Press the P in P button during "Chase Play" or "Pause TV", the actual broadcast appears on the sub window in real time.
- If this function is stopped after shifting the sub window, before you press the P in P button again, the sub window will appear in the last position you set. However, if you turn off the power, the sub window re-appears in the lower right (default) position.

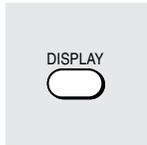
Checking the current status and settings

You can confirm operational status and setting details.

Operational status and setting details



1 Press DISPLAY.



The following on-screen display appears. (The actual display varies depending on the disc.)

e.g. while playing a DVD-RAM disc

**Elapsed time of a title/
Elapsed time of a chapter** **Mode indicator**

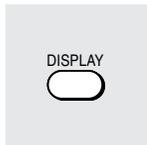
**Title No./
Chapter No.** **Playback
mode** **Operating disc**

Status display **Receiving
channel**

e.g.

▶ Title Chapter 0005: 00:05:15	002: 00:10:29	Title repeat	DVD RAM	3 Stereo
-----------------------------------	---------------	-----------------	------------	-------------

2 Press DISPLAY again.



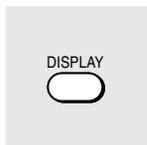
An expanded display appears. (Actual display varies depending on the disc.)

e.g.

Remaining time

▶ Title Chapter 0005: -00:00:07	002: -00:22:01	Title repeat	DVD RAM	3 Stereo
Virtual surround : Off DNR (Recording) : Off Picture Quality : SP Audio Quality : DTS Audio : 1 Stereo R Original Audio Output : Bitstream Subtitle : --- Off				

3 Press DISPLAY again to turn the display off.



Using the time bar

The time bar shows the current progress in playback or recording.

1 During playback or recording, press TIME BAR.

The time bar appears. (The actual display varies depending on the disc.)

TIME BAR

e.g. Playback Locator (Shows the current location.)

Chapter division Elapsed time Total playing time of current title
(In the case of a VIDEO CD or audio CD, it shows the total playing time of the disc.)

e.g. Recording Locator (Shows the current location.)

Elapsed time Elapsed recording time (per 30 minutes)
(Recording end time if it comes within 30 minutes.)

Note

- Time display is an approximation.

■ **Changing the location of the time bar**

While the time bar is displayed, press the ▲ / ▼ buttons.

The time bar shifts up and down.

■ **Turning off the time bar**

Press TIME BAR.

Functions in the Quick Menu

Besides these examples, various other ones are introduced on respective pages for your convenience. See  page 24 on how to operate the Quick Menu.

■ To play repeatedly (Repeat playback)

DVD-RAM **DVD-RW** **DVD-R** **DVD-VIDEO** **VCD** **CD**

You can repeat a desired section.

- 1) During playback, press **QUICK MENU**.
- 2) Press **▲ / ▼** to select “Special playback mode”, then press **ENTER**.

Special playback mode

The sub menu appears. Select the next item by pressing the **▲ / ▼** buttons and the **ENTER** button.

A-B repeat

You can designate a portion in a title or track to repeat continuously.

If you select “A-B repeat” and press the **ENTER** button, the following display appears. Perform steps 1 and 2 below.

e.g.



To cancel the procedure, press the **○** button.

- 1) Press **ENTER** at the beginning of the segment (point A) you want to repeat.
The location of point A is memorized.
The display changes to “Set B”.
- 2) Press **ENTER** at the end of the segment (point B).
The location of point B is memorized, and repeat playback begins between point A and B.

Title repeat

To repeat the same title.

Chapter repeat

To repeat the same chapter.

Track repeat

VCD **CD**

To repeat the same track.

Disc repeat

DVD-RW **DVD-R**

To repeat the entire disc.

Repeat all ORG titles **DVD-RAM**

To repeat all original titles in a disc.

Repeat all PL titles **DVD-RAM**

To repeat all playlist titles in a disc.

Cancel repeat

(in Repeat playback mode)

To resume normal playback.

Playback of a DVD-RAM disc stops.

Notes

- Some discs may not permit repeat operation.
- You cannot use the repeat playback function in conjunction with the random playback function.
- If you press the **STOP** button during repeat playback, this operation is canceled.
- While you are performing repeat playback on a DVD-RAM disc, other operations ( pages 63 to 65) except pause play are not available.

■ To play in random order (Random play)

DVD-RW **DVD-R** **DVD-VIDEO** **VCD** **CD**

You can play sections in random order.

- 1) During playback or stop, press **QUICK MENU**.
- 2) Press **▲ / ▼** to select “Special playback mode”, then press **ENTER**.

Special playback mode

The sub menu appears. Select the next item by pressing the **▲ / ▼** buttons and the **ENTER** button.

Title random

Plays all titles in a loaded disc in random order. Each title is played beginning from chapter 1.

Chapter random

Plays all chapters in a current title in random order.

Track random

Plays all tracks on a loaded disc in random order.

Functions in the Quick Menu (Continued)

Cancel random : (in Random play mode)
Resumes normal playback.

Notes

- Some discs may not permit random playback operation.
- You cannot use the random playback function in conjunction with the memory playback function.
- You cannot use the random playback function in conjunction with the repeat playback function.
- Pressing the STOP button during operation cancels random playback.

■ **To play in favorite order (Memory playback)**

DVD-RW | DVD-R | DVD-VIDEO | VCD | CD

You can select 30 titles, chapters, or tracks and play them in favorite order.

(To play contents in a DVD-RAM disc in favorite order, make a playlist. For details, see “Editing” on page 86.)

- 1) During playback or stop, press QUICK MENU.
- 2) Press ▲ / ▼ to select “Special playback mode”, then press ENTER.

Special playback mode

The sub menu appears. Select the next item by pressing the ▲ / ▼ buttons and the ENTER button.

Memory list

If you select this and press the ENTER button, the following display appears. Perform the steps below.

e.g.

01 T	CT	011 T	CT	021 T	CT
02 T	CT	012 T	CT	022 T	CT
03 T	CT	013 T	CT	023 T	CT
04 T	CT	014 T	CT	024 T	CT
05 T	CT	015 T	CT	025 T	CT
06 T	CT	016 T	CT	026 T	CT
07 T	CT	017 T	CT	027 T	CT
08 T	CT	018 T	CT	028 T	CT
09 T	CT	019 T	CT	029 T	CT
10 T	CT	020 T	CT	030 T	CT

- 1) Input numbers of a titles, chapters, or tracks by using the number buttons, in favorite order.

Input each 3-digit number.

To input a 1- or 2-digit number, first input 0.

(e.g. “0”, “0”, “3”.)

To cancel the numbers, press the CLEAR button.

To input a chapter number, press the ◀ / ▶ buttons to shift the cursor.

- 2) Press ▲ / ▼ to select the next box, then perform step 1).

To select another chapter in the same title, you do not need to select the title number.

Repeat these steps if necessary.

You can program up to 30 selections into memory.

- 3) Press ENTER.

Memory playback starts.

Memory : (in normal playback mode)

To display an entry box for one program selection.

Memory release : (in memory playback mode)

To resume normal playback.

Memory repeat : (in memory playback mode)

To repeat a current memory playback.

Notes

- Some discs may not permit memory playback operation.
- Inputting numbers of titles, chapters or tracks that a disc does not contain will result in error.
- You cannot program/change selections during memory playback. To change selections, cancel memory playback by pressing the STOP button.
- When you turn off the power, the selected memory is erased.
- You can exit the memory playback display by pressing the O button.

■ To display the current bit rate

DVD-RAM | DVD-RW | DVD-R | DVD-VIDEO

- 1) During playback, press QUICK MENU.
- 2) Press ▲ / ▼ to select “Bit rate”, then press ENTER.

Bit rate

Note

- To turn off the bit rate display, select this item again.

■ To check information on a title

DVD-RAM | DVD-RW | DVD-R

- 1) During playback, press QUICK MENU.
- 2) Press the ▲ / ▼ buttons to select “Title information”, then press ENTER.

Title information

■ To exit the Quick Menu

DVD-RAM | DVD-RW | DVD-R | DVD-VIDEO | VCD | CD

Press QUICK MENU again.

or

Press ▲ / ▼ to select “Exit”, then press ENTER.

Exit

Editing

You can create your own movie from your assembled scenes.

- **Before editing**
- **Creating chapters**
- **Playlist editing**
- **Creating thumbnails**
- **High speed Library dubbing**
- **Deleting selected Items**
- **Combine Original titles**
- **DVD-Video finalizing process**
- **DV recording**

Before editing

This section describes information for editing of contents recorded on a DVD-RAM disc. Be sure to read before performing any editing.

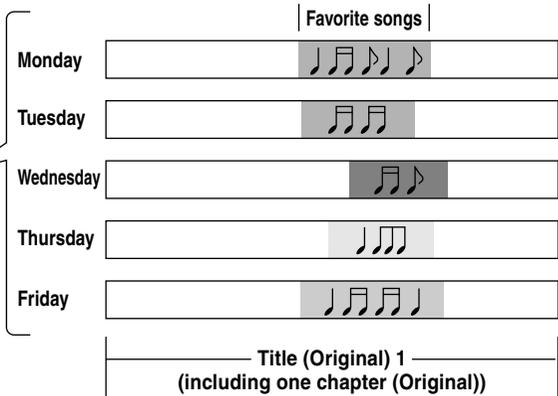
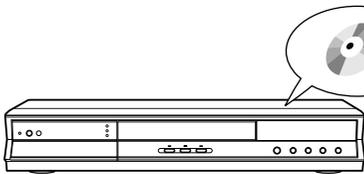
Basic steps of editing

Creating chapters → Programming a Playlist → Dub (Copy) the Playlist (this will create an Original title of the desired scenes)

Editing is executed by a title and a chapter. Titles and chapters are classified into “Original” and “Playlist.” First, specify a desired scene by dividing a title (Original) into chapters. Then compile the necessary chapters (Original) in desired order by programming a Playlist. Then dub (copy) the Playlist on the same disc. This creates a title (Original). Refer to the following examples about “Playlist” and “Original.”

Example: Creating your own music compilation by collecting songs from music programs you record from Monday to Friday.

● You can create one title for one recording.

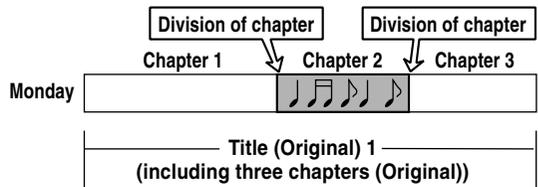


In the example above, five titles are created, as you recorded programs five times from Monday to Friday. **The content you recorded** is called “**Title (Original)**”
All chapters in a title (Original) are chapters (Original).



● Specify the range (a favorite song) you need in each title (Original).

To specify the range, create a chapter. A segment of a song becomes one chapter by creating divisions in a chapter at the beginning and end of a song. In the example to the right, three chapters (Original) are created in one title (Original).





● Compile chapters in a desired order.

You can select any chapter or order of chapters, as you want. Also you can assign a title to multiple chapters.

Each element to be compiled is called a part. In the example to the right, the three chapters in Wednesday, Friday, and Monday are the parts. When compiled, the source chapter (Original) remains as it is in the title (Original).

A new part is not created by copying the source chapter (Original). It does not contain actual recorded content but only exists as an informational sub-set of the chapter name and the playback order (in the right example, the chapter names are “Monday, Wednesday, and Friday” and the playback order is “Wednesday→Friday→Monday”).

For actual playback, the contents of the source chapter (Original) are played. Basically, it is a list for the recorder to go and find the content.

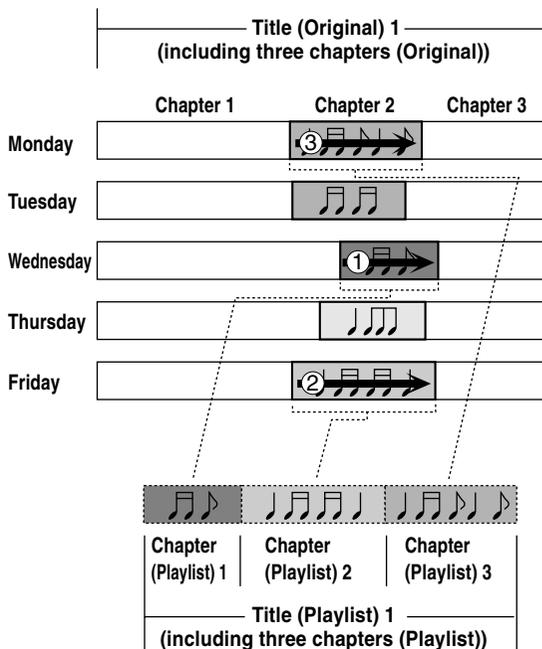
You can create a part from the Original as many times as you want and you can make different titles with the same parts by changing the combination or order.

For parts, you can use not only chapters like in the example, but also titles (Original) and other Playlist.

You can play the actual recorded content, such as titles (Original) and chapters (Original), or by managing the Originals and parts, you can virtually create a variety of titles without increasing the use of disc space.

These **virtual titles or chapters** are called “**Title (Playlist)**” or “**Chapter (Playlist)**” respectively.

In order to differentiate titles (Playlist) from titles (Original), an Original is displayed on screen as “ORG” and a Playlist is displayed as “PL”.

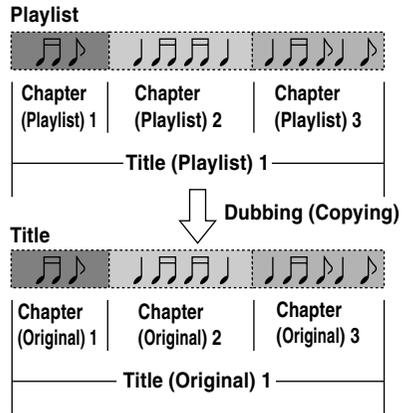


When title (Playlist) 1 is played, ①, ② and ③ are played in order.

● **Make the compiled chapters into a title (Original).
(Dubbing)**

If you just want to play the compiled chapters in desired order, you only play the Playlist. If you want to delete a title (Original) which contains unnecessary chapters, be sure to dub (copy) the Playlist and make it into a title (Original).

You are now converting the virtual file (playlist) into an actual file that will become a new original file.



Notes

- A title (Playlist) or a chapter (Playlist) is based on a title (Original) or a chapter (Original). Therefore changing or deleting a title (Original) or a chapter (Original) will affect the related title (Playlist) or chapter (Playlist).
- Some recorded content cannot be edited (for example, a title including still images).
- The boundary of the title with unnecessary part deleted and titles (Playlist) having different parts cannot be played back seamlessly (without break).

Proceed to the practical operations.

See “Creating chapters” (➡ page 89) and “Playlist editing (Collecting desired scenes)” (➡ page 94).

For the dubbing procedure, see “High speed Library dubbing” (➡ page 102).

Creating chapters

A recording makes 1 title, which includes 1 chapter. By dividing it into several chapters, it will be easier to access a desired scene, and your editing or playback will be much easier.

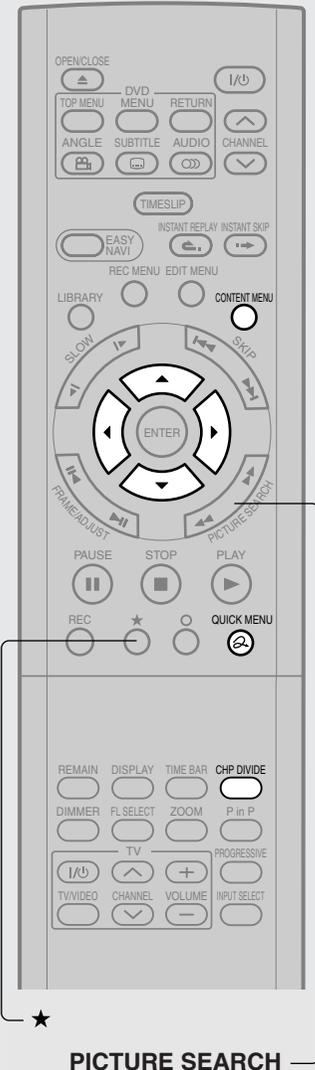
To create chapters in a title, insert a chapter mark. Playback the content, locate a point where you want to divide, then press the **CHP DIVIDE** button. You can insert a chapter mark also while recording, by pressing the **CHP DIVIDE** button. (A chapter will also be placed in the recording when you pause.)

The point divides the chapter (into two). You can create multiple chapters by repeating the above operation.

Notes

- Chapters cannot be created in the following modes:
Dubbing / Fast-reverse, Fast-forward / Slow-motion
- You cannot divide a title of a DVD-R/RW disc into chapters. It is possible to create chapters in a DVD-R/RW disc by pressing the **CHP DIVIDE** button during recording at the desired points, or by selecting an option that inserts chapter marks automatically during recording at regular intervals. (▶ page 134)

If you want to modify the chapter division, or want to place a chapter mark more precisely monitoring the frame counter, follow the procedures below.



1 During stop, playback or recording, press **CONTENT MENU**.



The "CONTENT MENU Title List" appears.

2 Press **▲/▼/◀/▶** to select a title.



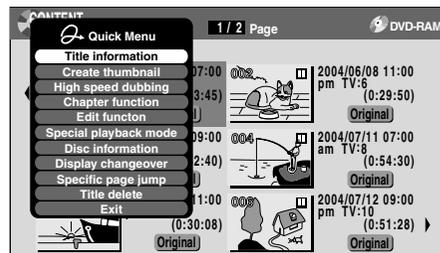
- To go to the next or previous page, press the **PICTURE SEARCH** (◀◀/▶▶) button.
- To select a chapter, first highlight the title that contains the chapter you want, then press the **★** button. The display changes to "CONTENT MENU Chapter List". To go back to the title display, press the **★** button again.

3 Press **QUICK MENU**.

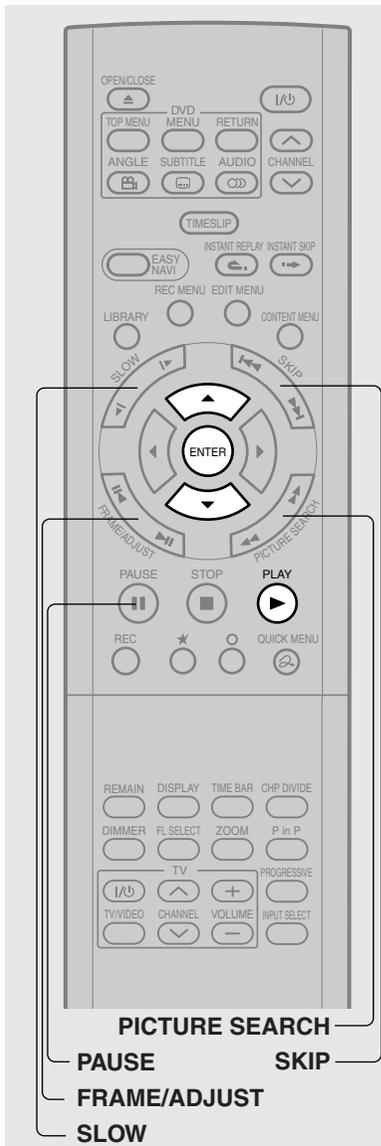


The Quick Menu appears.

e.g.



(Continued)

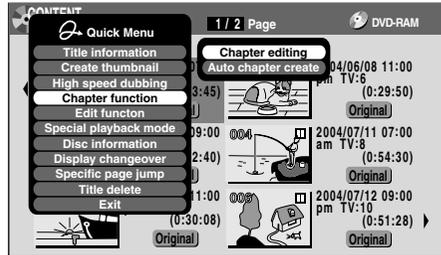


4 Press ▲ / ▼ to select “Chapter function”, then press ENTER.



The submenu appears.

e.g.

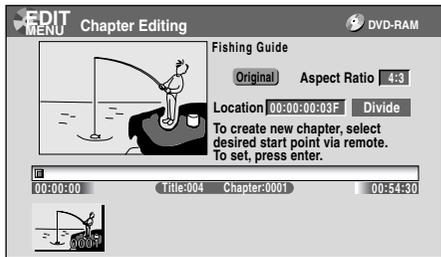


5 Press ▲ / ▼ to select “Chapter editing”, then press ENTER.



The “EDIT MENU Chapter Editing” appears.

e.g.



6 Press PLAY to start playback.



Locate a scene where you want to insert a chapter mark.

You can use the following buttons.
PICTURE SEARCH, SLOW, SKIP, PAUSE,
FRAME/ADJUST, etc.

The locator shows the current position on the time bar.
And the live video plays in the upper left.

- To access other chapters:
Press the ▲ / ▼ buttons to move to the thumbnail display, then press the ◀ / ▶ buttons to select a desired thumbnail.
To go to the next page, press the PICTURE SEARCH button.
- You can confirm the first and last scenes of a chapter.
Select a thumbnail and press the ENTER button.
3 seconds of the first and last scenes are played.

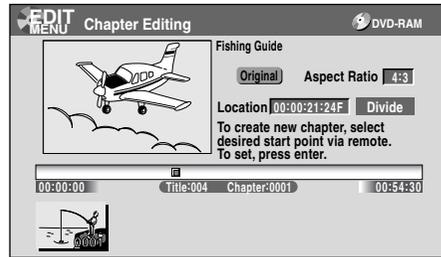


7 At a point where you want to make a chapter division, press PAUSE.

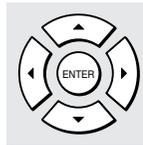


The picture pauses.

e.g.

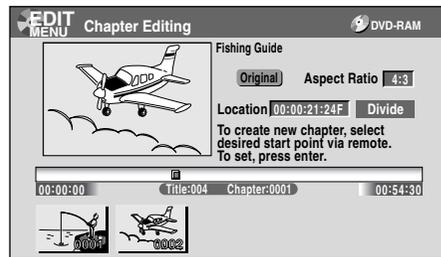


8 Press ▲/▼/◀/▶ to select “Divide,” then press ENTER.



A chapter division is created at the selected location, and the first scene of the new chapter is registered as a chapter thumbnail.

e.g.

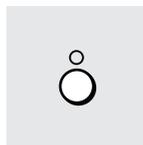


9 Repeat steps 6 to 8.

Locations of chapter division are indicated by the markers on the time bar.

To erase a chapter division, see “Merging chapters” (▶ page 93).

10 When all chapter divisions have been made, press ○.



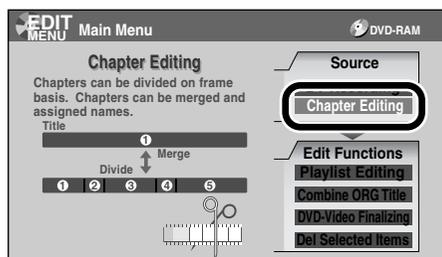
The recorder displays a message, and starts saving the chapter divisions on the time bar.

When complete, the CONTENT MENU returns.

Notes

- This recorder supports a limited number of chapters on a disc. If exceeded, a message appears. In this event, reduce the number of chapters by merging chapters. (➡ page 93)
- The “EDIT MENU Chapter Editing” can also be viewed by selecting “Chapter Editing” from the “EDIT MENU Main Menu”.

e.g.



- To exit the EDIT MENU Main Menu, press the EDIT MENU button.
- Making chapters in a title (Original) does not affect the related titles (Playlist).
- There may be a small difference between a location you marked and a chapter division actually played.
- Pausing a recording automatically creates a chapter division.

■ Creating chapters automatically when recording

You can create chapter marks from the beginning of a title at regular intervals automatically. (Chapter marks are added to those already existing.) This is convenient for long programs, such as live sports games.

- 1) Perform steps 1 to 4 on ➡ pages 89 to 90.
- 2) Press ▲ / ▼ to select “Auto chapter create”, then press ENTER.
- 3) Press ▲ / ▼ to select a chapter division interval, then press ENTER.

Chapter divisions are automatically marked at the selected intervals.

■ Editing chapter break

You can adjust positions of chapter marks. You can shift the beginning of a chapter currently selected.

- 1) Perform steps 1 to 5 on ➡ page 89 to 90.
- 2) Press QUICK MENU.
- 3) Press ▲ / ▼ to select “Chapter break edit mode”, then press ENTER.
- 4) Press ▲ / ▼ to select the item, then press ENTER.

“by frame (VR mode)”

The chapter mark shifts by one frame.

“by GOP (Video mode)”

The chapter mark shifts by a GOP (about 0.5 second), which is a unit of editing in DVD-Video format.

- 5) Press ◀ / ▶ to select a chapter whose beginning you want to shift.
- 6) Press FRAME (II◀ / ▶II) repeatedly until a desired scene appears.
Select a point while monitoring the thumbnail, which changes as you press the button. To operate other chapters, press the ◀ / ▶ buttons to select another, then follow the above steps.
- 7) When complete, press QUICK MENU, and select “Chapter break edit mode off (by frame)” or “Chapter Break Edit Mode off (by GOP)” then press ENTER.

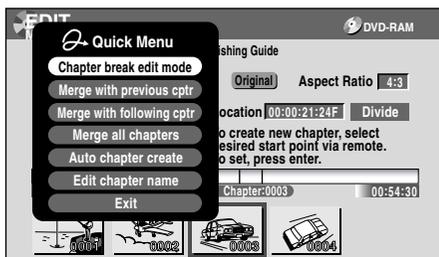
Notes

- You cannot shift a chapter mark beyond the adjacent chapter marks or a logical gap on recorded data within a chapter.
- Shifting a chapter mark restores a thumbnail to the beginning of a chapter. This may occur also on the previous chapter depending on the data condition.

■ Merging chapters

- 1) Perform steps 1 to 5 on  pages 89 to 90, to view the EDIT MENU Chapter Editing display.
- 2) Press **▲ / ▼ / ◀ / ▶** to highlight a chapter.
Pressing the PICTURE SEARCH button can access preceding or following pages.
- 3) Press QUICK MENU.

e.g.



- 4) Press **▲ / ▼** to select an item.

Merge with previous cptr:

To delete the chapter division between the selected chapter and the previous one.

Merge with following cptr:

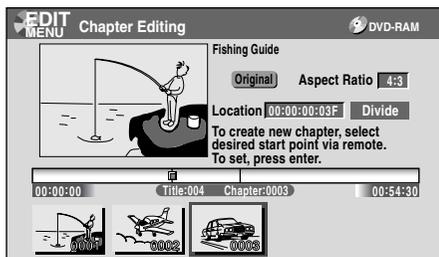
To delete the chapter division between the selected chapter and the succeeding one.

Merge all chapters:

To merge all chapters in the title.

- 5) Press ENTER.

e.g. When “Merge with previous cptr” is selected:
The selected chapter is merged into the previous chapter and its thumbnail is erased.



Notes

- To turn off the EDIT MENU Main Menu, press the EDIT MENU button.
- When chapters are merged, the numerical value of following chapters will decrease correspondingly.
- Merging chapters does not affect the related titles (Playlist). You can also merge chapters in the title (Playlist). In this case, the title (Original) is not affected.
- You can access the feature of merging chapters also from the Quick Menu on the CONTENT MENU Chapter List.

■ Naming a chapter

- 1) From the EDIT MENU Chapter Editing, select a chapter which you want to name.
- 2) Press QUICK MENU.
- 3) Press **▲ / ▼ / ◀ / ▶** to select “Edit chapter name”, then press ENTER.

A keyboard appears.

Enter a name following the on-screen icon guides.

Notes

- There is a limit to the number of chapters which can be named. If exceeded, a message appears.
- You can also access the keyboard to enter a chapter name by selecting a chapter with the PICTURE SEARCH button on the CONTENT MENU Title Information, and by selecting “Edit chapter name” from the Quick Menu on the CONTENT MENU Chapter List.
- You can change chapter names also on a DVD-R/RW disc, if the disc is not finalized yet.

Playlist editing (Collecting desired scenes)

Create a "Playlist" to omit unnecessary scenes for dubbing, or compile desired scenes.



1 During stop, playback or recording, press CONTENT MENU.



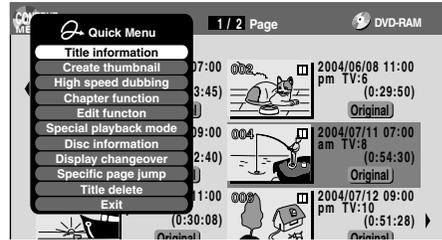
The "CONTENT MENU Main Menu" appears.

2 Press QUICK MENU.



The Quick Menu appears.

e.g.

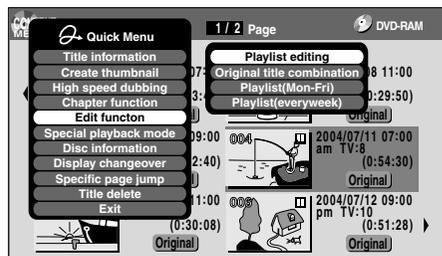


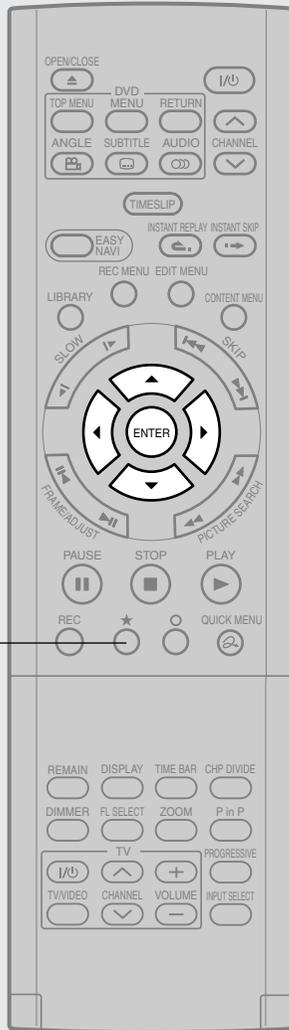
3 Press ▲ / ▼ to select "Edit function", then press ENTER.



The submenu appears.

e.g.



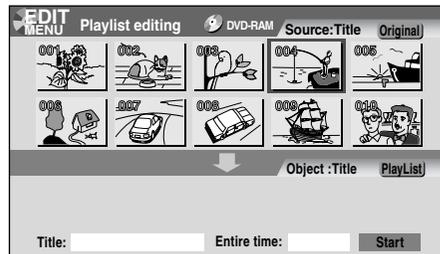


4 Press ▲ / ▼ to select “Playlist editing”, then press ENTER.

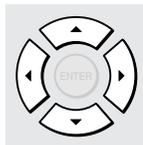


The “EDIT MENU Playlist editing” appears.

e.g.

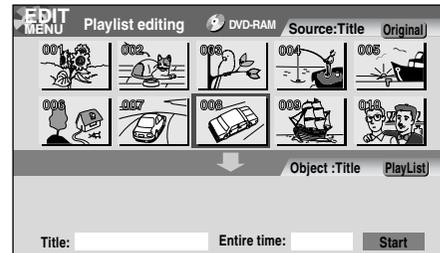


5 Press ▲ / ▼ / ◀ / ▶ to select a title or chapter.



To select between titles and chapters, press the ★ button.

e.g.



6 Press ENTER.

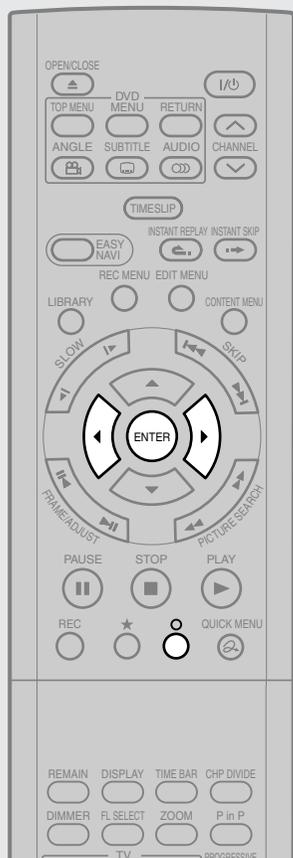


A cursor appears, indicating the point where the selected item will be inserted.

e.g.



(Continued)



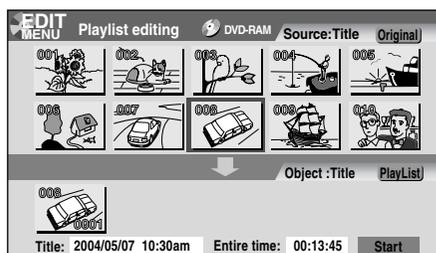
7 Press ◀/▶ to select a point where you want to insert the item, then press ENTER.



If there are no parts in the lower area, leave the cursor to the left and press the ENTER button.

The selected part is inserted at the location of the cursor.

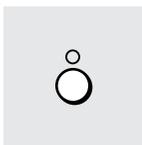
e.g.



8 Repeat steps 4 to 6 to insert items.

To cancel the selection, see “Canceling selection of a part” (▶ page 97).

9 When all items have been inserted, press ○.



The recorder displays a message, and starts saving the Playlist.

When complete, the CONTENT MENU returns.

Notes

- You can access the “EDIT MENU Playlist editing” also by selecting “Playlist editing” on the EDIT MENU.
- If you delete titles and chapters (Original), the corresponding titles and chapters (Playlist) are also deleted. Contrarily, if you delete titles and chapters (Playlist), the corresponding titles and chapters (Original) are not deleted.
- Playback may pause if a gap between the content is played.
- There may be a small difference between the chapter boundary and the actual playback picture.
- A title or chapter which is being edited cannot be selected as an item.
- You cannot add a title of still pictures, or a title or a chapter which contains both still and moving pictures, to a playlist.
- By copying (dubbing) a Playlist, a title (Original) of the same contents is created.
- You cannot program a Playlist of contents recorded on a DVD-R/RW disc.
- Down arrow on the thumbnails means: Orange: This title already selected. Green trimmed: Some chapters in this title already selected. Green: This title already selected.
- A black thumbnail with “Recording” means that the title is being recorded or its recording will start within 15 seconds. This thumbnail cannot start playback.

■ Canceling selection of a part

- 1) From the “EDIT MENU Playlist editing”, press ▲ / ▼ / ◀ / ▶ to select a part to cancel.
- 2) Press QUICK MENU.
The Quick Menu appears.
- 3) Press ▲ / ▼ to select “Cancel selected title”, then press ENTER.
The part you have selected is canceled.

■ Confirming the first and last scenes of a part or a Playlist

You can play the first and last 3 seconds of a scene (Preview). (If a title contains several chapters, the first and last scenes of the chapters are also played.)

Preview of a part:

- 1) At step 5 on ➡ page 95, select a title or a chapter, then press QUICK MENU.
- 2) Press ▲ / ▼ to select “Preview”, then press ENTER.

Preview of all parts:

- 1) Move the cursor to an any part (in the lower area), then press QUICK MENU.
- 2) Press ▲ / ▼ to select “Preview all playlists”, then press ENTER.

■ Confirming the title information

- 1) At step 5 on ➡ page 95, select a title or a chapter, then press QUICK MENU.
- 2) Press ▲ / ▼ to select “Title information” then press ENTER.

■ Correcting a Playlist

You can add or delete parts to correct a Playlist.

- 1) From the CONTENT MENU, select a Playlist to correct.
- 2) Press QUICK MENU.
- 3) Press ▲ / ▼ to select “Playlist re-editing” and then press ENTER.

The “EDIT MENU Playlist editing” appears.

Follow the procedure from steps 4 on ➡ page 95, add or delete parts as necessary.

Note

- You cannot edit a title (Playlist) of still pictures, or a title (Playlist) which contains both still and moving pictures.

■ Using a part in a Playlist also in another Playlist

- 1) In play or stop mode of a Playlist title, press EDIT MENU.

The “EDIT MENU Main Menu” appears.

- 2) Press ▲ / ▼ / ◀ / ▶ to select “Playlist editing,” then press ENTER.

The “EDIT MENU Playlist editing” appears.

- 3) Press ▲ / ▼ / ◀ / ▶ to select “Start” then press ENTER.

The areas of title name and part selection become blank.

- 4) Following the procedures outlined on ➡ page 95, make a Playlist.

■ Naming a title (Playlist)

- 1) From the “EDIT MENU Playlist editing”, move a cursor to the lower side (selected parts) then press QUICK MENU.

- 2) Press ▲ / ▼ to select “Edit title name,” then press ENTER.

A keyboard appears.

- 3) Following the procedures outlined on ➡ page 30, enter a title name.

Note

- You can name a title also while viewing its information. From the “CONTENT MENU Title List”, select a title and press the QUICK MENU button then select “Title information” by the ▲ / ▼ buttons and the ENTER button. Further press the QUICK MENU button, and select “Edit title name” by the ▲ / ▼ buttons and the ENTER button.

■ **Making a Playlist of recorded contents where starting times are the same (i.e. daily or weekly recordings)**

This will help to sort serials.

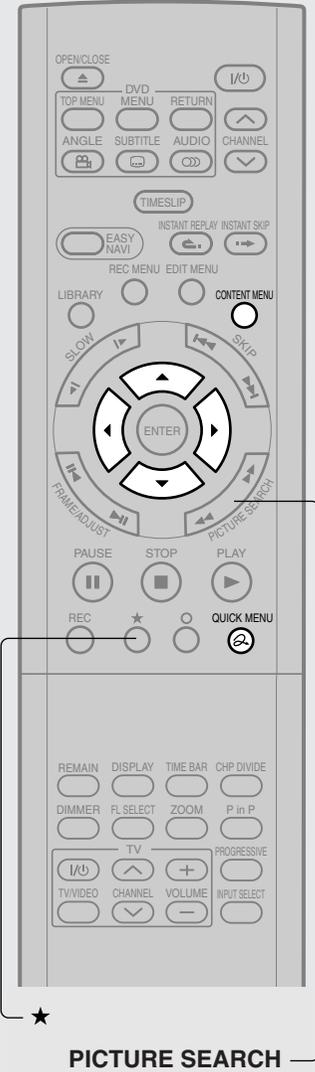
- 1) From the “CONTENT MENU Title List”, press **QUICK MENU**.
- 2) Press **▲ / ▼** to select “Edit function”, then press **ENTER**.
- 3) Press **▲ / ▼** to select the item.
 - “**Playlist(every week)**”
To sort out programs recorded on the same time of the same day of the week to make a Playlist.
 - “**Playlist(Mon-Fri)**”
To sort out programs recorded on the same time on Monday to Friday to make a Playlist.
- 4) Press **ENTER**.

Notes

- Only titles (Original) can be sorted.
- The maximum number of sorted titles is 99.
- If you modify the recording start time or date of one of the recorded serials, the title will not be sorted out. Contrarily, any program can be sorted if its channel, recording start time and date are modified as the same as others.
- “Playlist (Mon-Fri)” can sort titles even if they are not complete 5 collections of Monday to Friday, on condition that they have the same channel and recording start time, and any recording date except Saturday and Sunday.

Creating thumbnails (Changing the picture on the CONTENT MENU)

You can register your favorite scene as a thumbnail displayed on the CONTENT MENU.
On a finalized DVD-R/RW disc, this feature is not available.

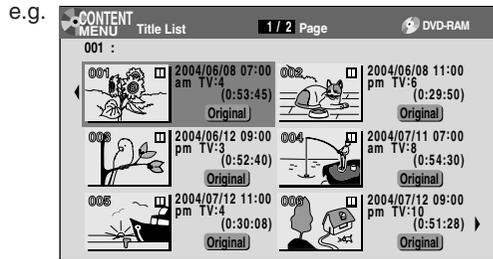


PICTURE SEARCH

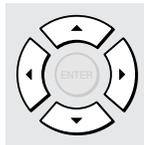
1 During stop or playback, press CONTENT MENU.



The "CONTENT MENU Title List" appears.



2 Press ▲ / ▼ / ◀ / ▶ to select a title whose thumbnail you want to change.

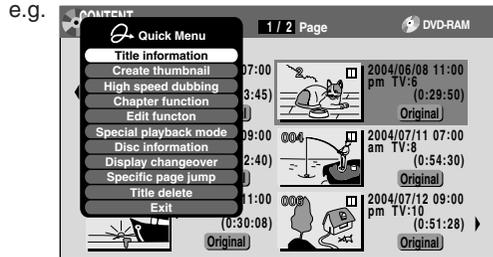


- To go to the next or previous page, press the PICTURE SEARCH (◀◀ / ▶▶) button.
- To select a chapter, select a title and press the ★ button. The Chapter List appears.
By pressing the ★ button again, you can return to the Title List.

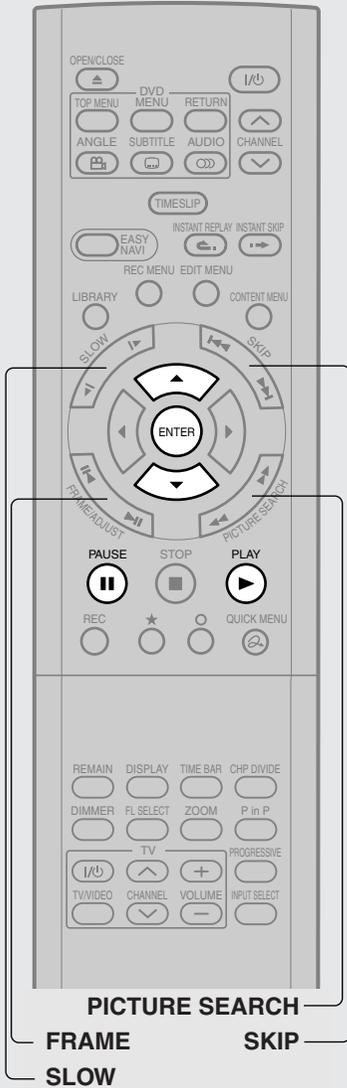
3 Press QUICK MENU.



The Quick Menu appears.



(Continued)



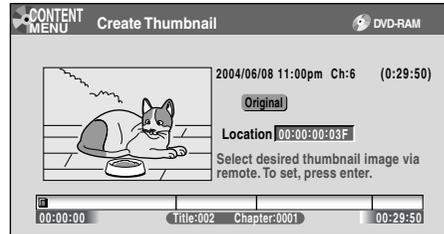
Note

- There may be a small difference between a thumbnail made on the Create Thumbnail display and that displayed in the CONTENT MENU. Operation with the PICTURE SEARCH button may extend the difference.

4 Press ▲ / ▼ to select “Create thumbnail” (or “Create CHP thumbnail” if selected a chapter at step 2), then press ENTER.



The “CONTENT MENU Create Thumbnail” appears.
e.g.



5 Press PLAY to start playback.

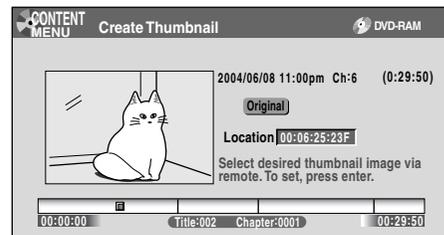


Locate a scene you want to capture as a thumbnail.
You can use the following buttons.
PICTURE SEARCH, FRAME, SLOW, SKIP, PAUSE, etc.

6 At the point where you want to capture a thumbnail image, press PAUSE.



e.g.

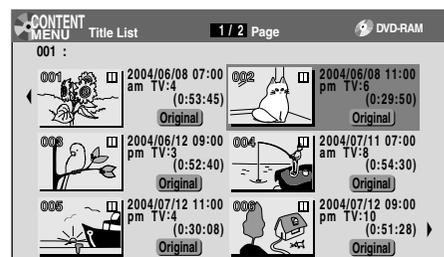


7 Press ENTER.



The CONTENT MENU returns. The selected scene is displayed as a thumbnail.

e.g.



Notes

- You cannot create thumbnails of chapters in a title that contains a still picture.
- If you create a chapter thumbnail, and then shift the chapter mark (▶ page 92) or record or edit the disc on other devices, the chapter thumbnail may return to the top of the chapter.

Introduction

Recording

Playback

Editing

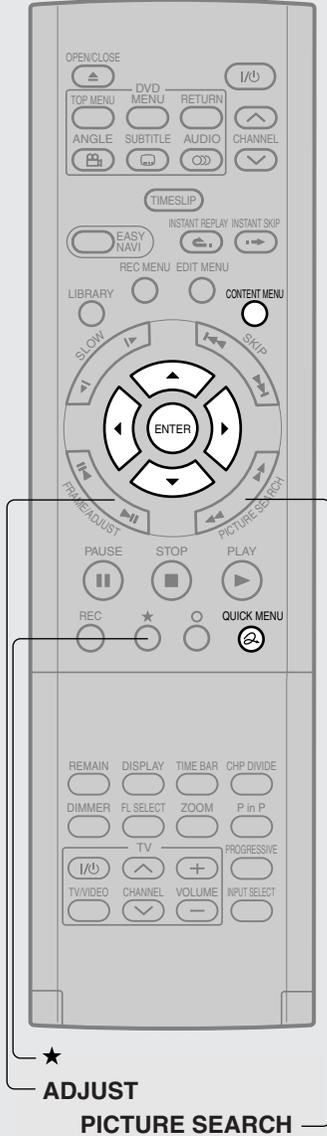
Library

Function setup

Others

High speed Library dubbing (Dubbing only a specified part)

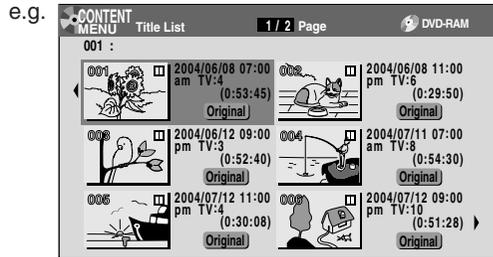
This section explains how to copy a title or chapter recorded on a DVD-RAM disc within the same disc at high speed (high speed: in a shorter time than actual playing time of the title or chapter). Follow this procedure when you convert a playlist into an original title.



1 During playback or stop, press CONTENT MENU.



The "CONTENT MENU Title List" appears.



2 Press ▲ / ▼ / ◀ / ▶ to select a part (a title or chapter) to copy or move.

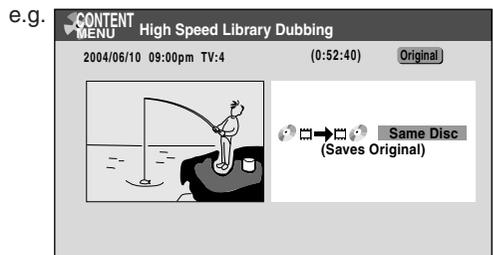


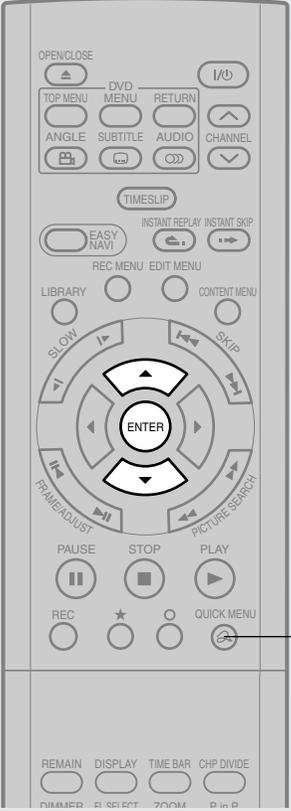
- You can go forward/back to pages by pressing the PICTURE SEARCH (◀◀ / ▶▶) button. You can jump to a page by specifying the page number. Press the QUICK MENU button, select "Specific page jump". Use the ADJUST button to change the page number.
- To select a chapter, highlight a title and press the ★ button. If you press the button again, the title list reappears.

3 Press QUICK MENU then select "High speed dubbing" pressing ▲ / ▼ from the Quick Menu, then press ENTER.



The "CONTENT MENU High Speed Library Dubbing" appears.





4 Press ENTER.

Copying starts.
A new title with the same contents is reproduced on the same disc.
The job progress is displayed on the screen and the front panel display.
When the job finishes, the graph disappears and the buzzer sounds.

You can set the recorder to turn off automatically when the job finishes.

- (1) During the operation, press the QUICK MENU button.
- (2) Press the ▲ / ▼ buttons to select “Auto power off”.
- (3) Press the ENTER button.

QUICK MENU

Notes

- Copying a Playlist makes an Original, leaving the Playlist as it is.
- A title or a chapter becomes a title by being copied.
- Copying is interrupted when a program recording is about to start.
- Copying using a DVD video disc, VIDEO CD, audio CD, CD-R, CD-RW, DVD-R or DVD-RW disc is not possible.
- If copying is not allowed due to some conditions, such as lack of disc space, etc., a message will appear. Follow the procedure indicated there.
- Depending on the contents, some reference information or appendix data may not be copied.
- A title that contains a still picture cannot be copied.

■ To cancel copying halfway through the operation

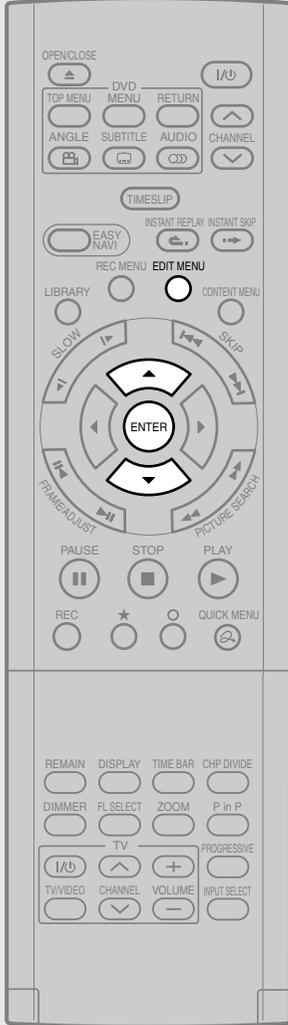
- 1) **During copying, press QUICK MENU.**
The Quick Menu appears.
- 2) **Press ▲ / ▼ to select “Cancel dubbing”, then press ENTER.**

Note

- Cancellation of a copying operation will result in deletion of a portion of the title or chapter already copied.

Deleting selected items (Deleting multiple specified parts)

This section explains how to simultaneously delete unnecessary titles, or unnecessary chapters. On a finalized DVD-R/RW disc, this feature is not possible.



1 During playback or stop, press EDIT MENU.

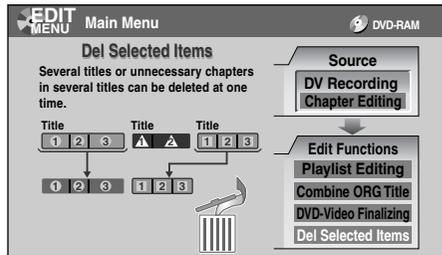


The "EDIT MENU Main Menu" appears.

2 Press ▲ / ▼ to select "Del Selected Items".



e.g.

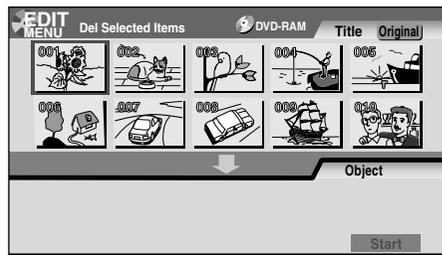


3 Press ENTER.

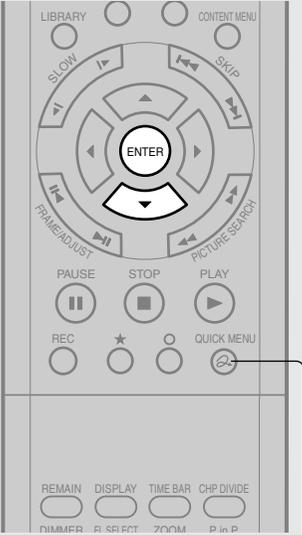


The "EDIT MENU Del Selected Items" appears.

e.g.



Thumbnails of the parts in the disc are displayed in the upper area.



QUICK MENU

4 Following steps 4 to 6 on ➔ page 94, 95, assemble the items to delete.

5 Press ▼ repeatedly to select “Start”, then press ENTER.



The recorder begins the deletion process. To cancel deleting, press the ◀/▶ buttons to select “No”, then press the ENTER button.

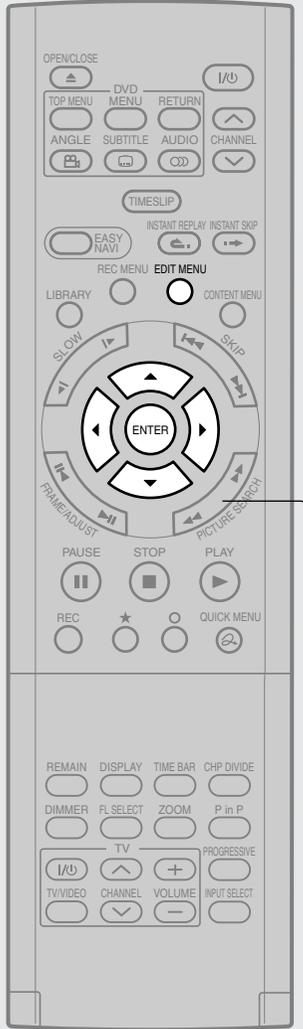
When the process is finished, the “EDIT MENU Main Menu” returns.

Notes

- To confirm the first and last scenes of an item, first select an item then press the QUICK MENU button. Press the ▲ / ▼ buttons to select “Preview” (or “Title information”) then press the ENTER button. This is available only on contents recorded in DVD-RAM discs.
- Titles and chapters show their names for about 2 seconds at the bottom of the screen when they are selected.
- On a DVD-RW disc, deleting can restore the disc space only by deleting the last recorded title.
- Deleting cannot be canceled once started. Be careful when executing the deletion process.
- If you select a title for the part to be removed, you cannot select chapters in that title.
- Chapters in DVD-R/RW discs cannot be selected to delete.

Combine Original titles (Combine two titles into one)

Use this feature to combine two titles into one. The second title is deleted as the second title is added to the end of the first title.



PICTURE SEARCH

1 During playback or stop, press EDIT MENU.



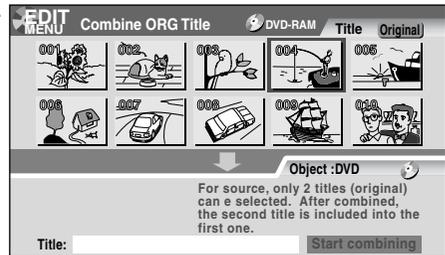
The "EDIT MENU Main Menu" appears.

2 Press ▲ / ▼ to select "Combine ORG Title", then press ENTER.



The "EDIT MENU Combine ORG Title" appears.

e.g.



3 Press ◀ / ▶ to select the first title to merge.



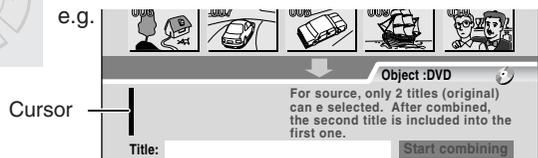
Press the PICTURE SEARCH button to move to the previous or next page.

4 Press ENTER.



The cursor appears in the lower area of the screen (the title to merge to).

e.g.





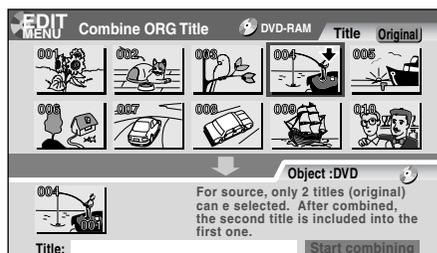
QUICK MENU

5 Press ◀/▶ to select the location to put the part and press ENTER.



It is fixed at the left side at the beginning. Press the ENTER button. The selected part moved into the location of the cursor.

e.g.



6 Perform steps 3 to 5 and select the second title.

You cannot select the same title.

To cancel the registered part:

- 1) Select the part that you want to cancel, and press the QUICK MENU button to display the Quick Menu.
- 2) Press the ▲/▼ buttons to select “Cancel selected title” (or “Clear all selected items” for cancelling the selection of multiple items at a time).
- 3) Press the ENTER button.

7 Press ▲/▼ to select “Start combining” and press ENTER, then select “Yes” and press ENTER.



The combining process starts.

Notes

- You cannot stop the combining process after it has started.
- You cannot combine a protected title or a title containing still pictures.
- The title name of the first title is given to the title after combining.
- The second title is combined into the first title, maintaining the chapter divisions and chapter names.
- Titles and chapters show their names for about 2 seconds at the bottom of the screen when they are selected.
- You can not use playlists as part of combined titles.

DVD-Video finalizing process

The recorder processes recorded data in a DVD-R/RW disc so that it can be played on other compatible devices.

Important

- You cannot rewrite data onto a disc after you execute the DVD-Video finalizing process. However, the disabled rewritability of a DVD-RW disc can be restored by canceling the process of the disc. (➡ page 111) On DVD-R discs, canceling of the DVD-Video finalizing process is not available.

■ Preparation

- Load a DVD-R/RW disc you want to execute the finalizing process.



1 During playback or stop, press EDIT MENU.

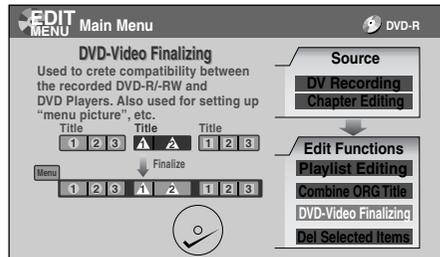


The "EDIT MENU Main Menu" appears.

2 Press ▲ / ▼ to select "DVD-Video Finalizing".



e.g.

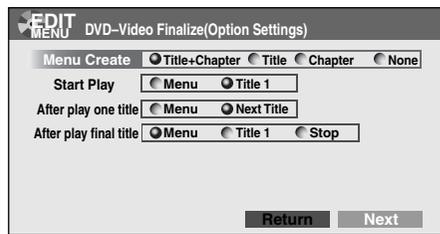


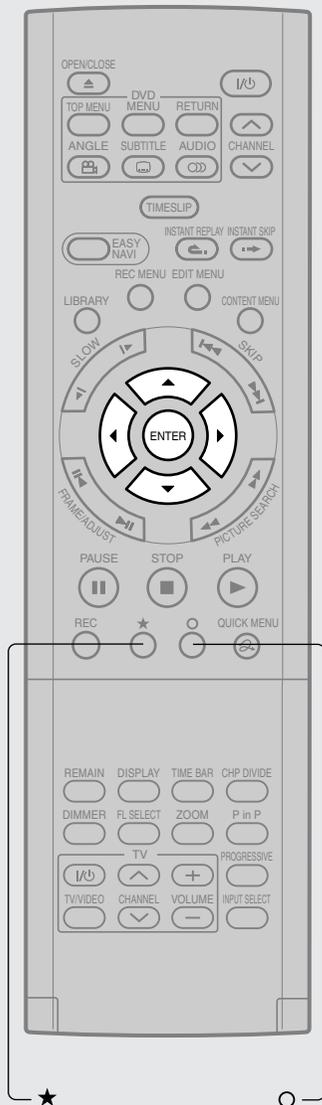
3 Press ENTER.



A display of option settings appears.

e.g.





4 Press ▲ / ▼ / ◀ / ▶ to select.



As you select each item, its function is explained.

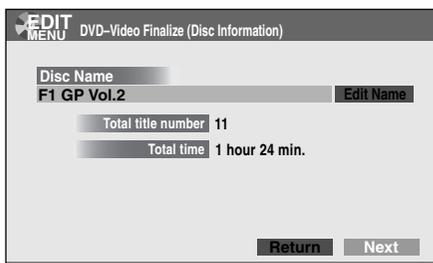
When “Menu Create” is set to “None”:
“Start Play” and “After play one title” are automatically omitted.

5 Press ▲ / ▼ to select “Next”, then press ENTER.



Information on data to be processed appears.

e.g.



If you press the ▲ button to select “Edit Name” then press the ENTER button, a keyboard appears so that you can enter a title name.

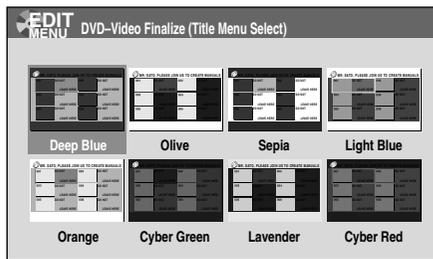
When “Menu Create” is set to “None”:
Select “Writing” at the right bottom by the ▲ / ▼ / ◀ / ▶ buttons and press the ENTER button. Skip to step 10.

6 Press ▼ to select “Next”, then press ENTER.



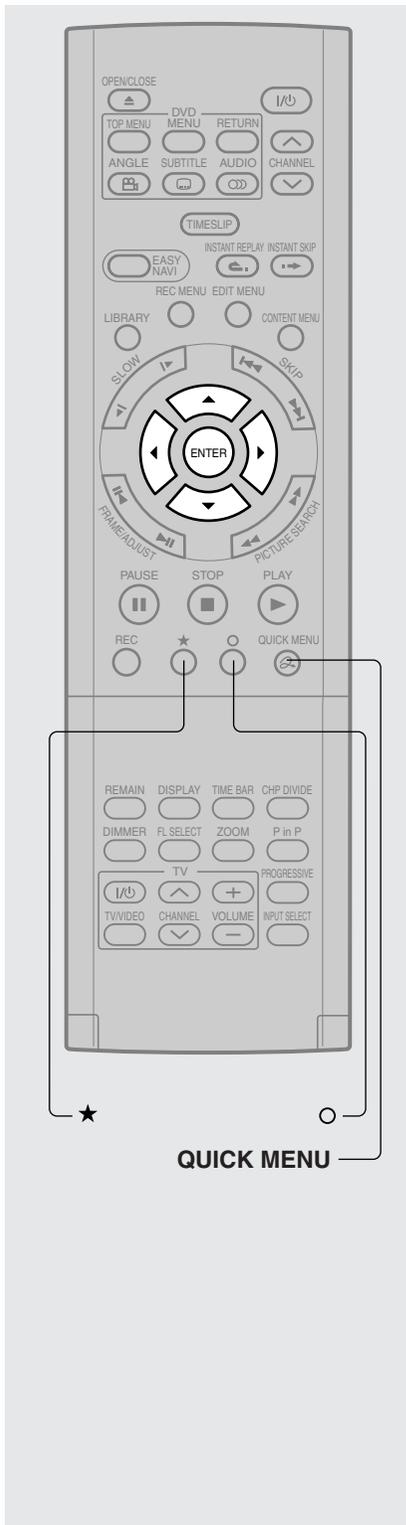
When “Menu Create” is set to “Title+Chapter” or “Title”, a display of title menu selection appears.

e.g.

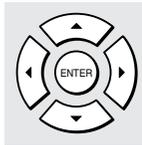


If you press the ★ button, you can preview the selected menu. To return, press the O button.

(Continued)

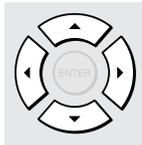


7 Press ▲/▼/◀/▶ to select the title menu, then press ENTER.



A display of menu selection for chapters appears.

8 Press ▲/▼/◀/▶ to select the chapter menu.



A selected menu is applied to all chapters. You cannot allocate a menu to each chapter. If you press the ★ button, you can preview the selected menu. To return, press the O button. If you press the ▼ button during preview, to select “Return” then press the ENTER button, you can go to the preview of the selected title menu. To return to preview of chapter menu, press the ▲/▼/◀/▶ buttons to select a number next to “Chapter Menu” then press the ENTER button.

9 While viewing the “EDIT MENU DVD-Video Finalize (Chapter Menu Select)”, press ENTER, and select “Yes” using ◀/▶, then press ENTER.



A message appears to ask you if you want the power to turn off automatically or not when the process is completed.

10 Press ◀/▶ to select “Yes” or “No” then press ENTER.



A message disappears and the finalize process starts. The progress is displayed on the screen and in the front panel display on the recorder.

Notes

- DVD-R/RW discs recorded on this recorder may not be recognized on other devices unless you execute DVD-Video finalizing process to them.
- You can record onto a DVD-R disc additionally to the limit of the disc capacity, unless you execute the DVD-Video finalizing process to it. Deleting of recorded titles is also possible, however, the disc space cannot be restored.
- You can record additional content onto a DVD-RW disc additionally to the limit of the disc capacity unless you execute the DVD-Video finalizing process to it. Deleting of recorded titles is also possible, however, the disc space can be restored only by the volume of the title last recorded.
- On DVD-RW discs, it is possible to cancel the DVD-Video finalizing process or to initialize for a new use.

■ To cancel the finalize process DVD-RW

You can cancel the DVD-Video finalizing process executed to a DVD-RW disc so that the disc can be recordable again.

1) During stop, press QUICK MENU.

A quick menu appears.

2) Press ▲ / ▼ to select “Disc management” then press ENTER.**3) Press ▲ / ▼ to select “Cancel finalization” then press ENTER.****4) Read the message, and press ◀ / ▶ to select “Yes”, then press ENTER.**

The process starts.

Notes

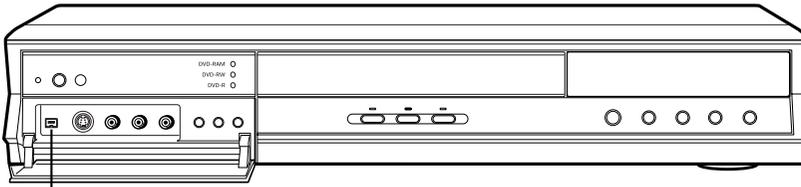
- While the recorder is ready to start a programmed recording, you cannot cancel the DVD-Video finalizing process.
- You cannot cancel the DVD-Video finalizing process executed on a DVD-RW disc recorded on other device.
- You cannot cancel the DVD-Video finalizing process executed on a DVD-RW disc if the disc is protected.
- Canceling the DVD-Video finalizing process may shift the thumbnails of titles/chapters.

DV recording (Recording from a digital video camera)

You can connect a DV format digital video camera to the DV terminal to record from it.

■ Preparation

- Connect a DV format digital video camera to the DV terminal on the front panel.



DV terminal



1 During playback or stop, press EDIT MENU.

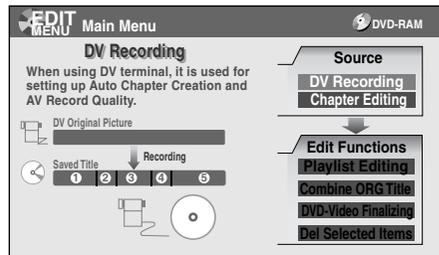


The “EDIT MENU Main Menu” appears.

2 Press ▲ / ▼ to select “DV Recording”.



e.g.

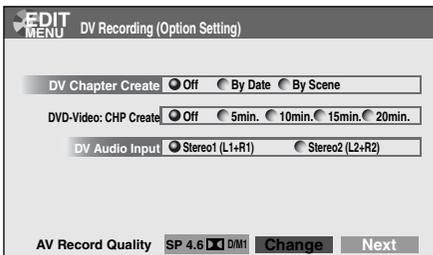


3 Press ENTER.

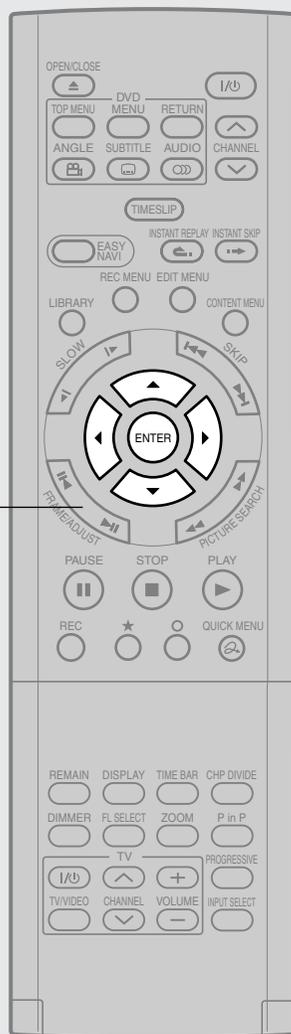


The “EDIT MENU DV Recording (Option Setting)” appears.

e.g.



This display appears also when a DV format digital video camera connected to the DV terminal is turned on.



ADJUST

4 Press ▲ / ▼ / ◀ / ▶ to make the settings.

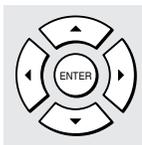


As you select each item, an explanation is provided.

To change the picture and sound rates:

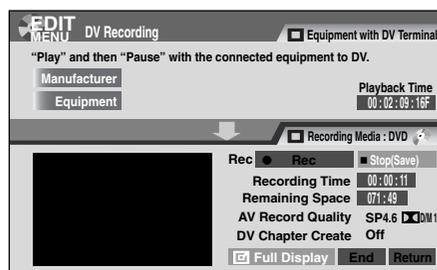
- 1) Press the ▲ / ▼ buttons to select "Change" then press the ENTER button.
- 2) On the "AV record quality" display, press the ADJUST button to select a setting number.
- 3) Press the ENTER button.

5 Press ▲ / ▼ / ◀ / ▶ to select "Next", then press ENTER.



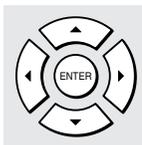
Details on the recording appears.

e.g.



6 Play the connected DV format digital video camera and pause the play at a desired scene.

7 Press ▲ / ▼ / ◀ / ▶ to select "Rec", then press ENTER.



Recording starts.

- To pause the recording, select "Pause" by the ▲ / ▼ / ◀ / ▶ buttons then press the ENTER button.
- To stop the recording, select "Stop (Save)" by the ▲ / ▼ / ◀ / ▶ buttons then press the ENTER button.

Notes

- The DV terminal of this recorder supports only input from a DV format digital video camera. It cannot output to a connected device. Some models of DV format digital video cameras may be not compatible.
- At step 5, you can enlarge the video image by selecting “Full Display”, then pressing the ENTER button.
- If “DV Chapter Create” is set to “Off” and you record onto a DVD-R/RW disc, chapters are automatically made according to the “DVD-Video:CHP create” setting (➡ page 134). The number of chapters has the limit. Chapters are divided with a margin of about 0.5 second or less according to the DVD-Video standard.
- DV recording does not start in the following cases:
 - While recording or in the time slip mode.
 - While operating a REC MENU, CONTENT MENU or LIBRARY MENU.
 - If the recorder’s clock is not set yet.
 - Within 5 minutes before a programmed recording starts, or during a programmed recording.
- If a DV recording overlaps with a programmed recording, the DV recording will stop 5 minutes before the programmed recording starts, and the programmed recording will be executed.
- DV recording does not work if the DV terminal is connected equipment other than DV format digital video camera, such as a PC.
- Depending on the connected DV format digital video camera, the display at step 5 may not show “Manufacturer” or “Equipment”.
- If the DV terminal is connected to more than one DV format digital video camera, DV recording may not work properly. For proper functioning of DV recording, connect only one device to the DV terminal.
- Do not keep the DV terminal connected unless you record from a DV format digital video camera, as it may give influence on the recorder if operated.
- If you start a recording and do not operate for about 15 minutes, the display switches to the full mode, when “Screen protector” (➡ page 131) is set to “On.” Pressing the ENTER button while “Detail Display” is selected can restore the previous display.
- When you want to record both stereo 1 and stereo 2 sounds from a DV format digital video camera, additionally make a connection to the audio input jacks on this recorder using cables such as audio/video cables supplied with the DV format digital video camera. (➡ page 36)
- If a DV format digital video camera is not recognized, pull out the plug and connect it again.
- Some models of DV format digital video cameras may support a different compression format. From such equipment, recording is not possible.
- Depending on the models of DV format digital video cameras, recording may not work properly or some functions may be disabled.
- On an input source from a DV tape which is partly recorded over, “DV Chapter Create” may not work properly.

Library

To facilitate your collecting.

- **Using Library data**

Using Library data

The recorder has a database called “Library”. This database provides a list of numbers, names and remaining spaces of all registered DVD-RAM discs. On this list, you will easily find a desired or available disc.

You can utilize Library data as follows.

- To check or change information of disc.
- To check the remaining space of a DVD-RAM disc.

Basic operation of the Library system



1 Press LIBRARY.



The “LIBRARY MENU DVD All Disc No. Summary” appears.

e.g.

No.	Disc Name	Estimated
001	BASEBALL GAMES	2h02m
002	CARTOONS	45m

2 Press QUICK MENU.



A Quick Menu appears.

e.g.

AV record quality	Default data rate : SP	4.6	D/NT
Specific page jump	Disc Name	Estimated	
Library management	BASEBALL GAMES	2h02m	
Exit	CARTOONS	45m	

3 Press ▲ / ▼ to select an item, then press ENTER.



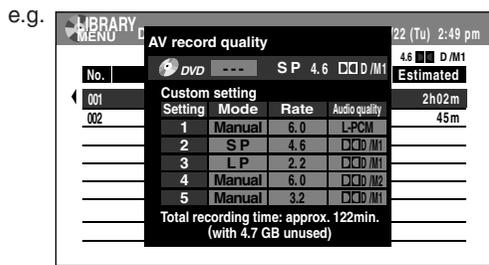
For details on each item, see from the next page.

Notes

- To cancel this procedure, press the LIBRARY button.
- The Library system does not support DVD-R/RW discs.
- For proper function of the Library system, use DVD-RAM discs that shows a statement on its package such as “This disc can copy images that permit copying once.” If you use a DVD-RAM disc without such a statement, and then operate it on other device, the library data of the disc may not function properly.
- The capacity of the database is 60 discs.
- The LIBRARY MENU may not display all characters of a registered name of a disc.

Checking remaining space on discs

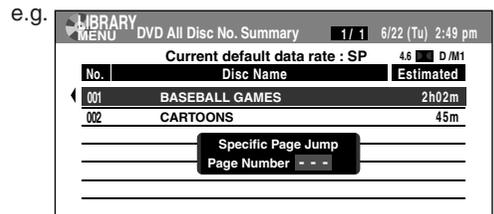
- 1) Load a DVD-RAM disc and press LIBRARY.
- 2) Press QUICK MENU.
- 3) Press ▲ / ▼ to select “AV record quality” then press ENTER.



- 4) Press ADJUST and select the setting (➡ page 133).
- 5) Press ENTER.
Remaining space is estimated on the condition that you record with the selected setting.

Searching for a disc

- 1) Press LIBRARY.
- 2) Press QUICK MENU.
- 3) Press ▲ / ▼ to select “Specific page jump”, then press ENTER.



- 4) Press ▲ / ▼ or ADJUST to enter the page number.
- 5) Press ENTER.
The designated page appears.

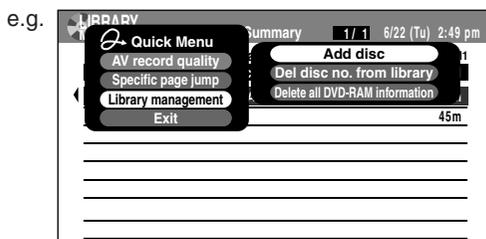
Maintenance of Library data

The recorder usually controls the Library Management system automatically. However, in the following cases, you must maintain and create data manually.

- When you want to add information about a disc, (for example **when you use a DVD-RAM disc recorded on another device, etc.**), to the Library Management system of the recorder.
→ “Registering a disc manually” (➡ page 118).
- When you restart the “Library” database.
→ “Erasing Library data” (➡ page 119).

■ Registering a disc manually

- 1) Load a DVD-RAM disc that contains information you want to add.
- 2) Press **LIBRARY**.
- 3) Press **QUICK MENU**.
- 4) Press **▲ / ▼** to select “Library management”, then press **ENTER**.



- 5) Press **▲ / ▼** to select “Add disc”, then press **ENTER**.
- 6) Press **◀ / ▶** to select “Yes”, then press **ENTER**.
Disc information is registered.
To cancel, select “No”.

Notes

- To use disc information in a DVD-RAM disc recorded on another device, as the Library Management data of the recorder, be sure to follow the procedure of “Registering a disc manually” to add the data to the Library Management system.
- If you record content on a DVD-RAM disc on the recorder and edit the content on the other device, Library data of the disc may be lost or the disc may not function properly.
- When you manually register a disc, several discs in same number consequently may be registered. In such a case, it is recommended to change the disc number (➡ page 57).

■ Forced deletion of disc numbers

A number of an inactive disc can be deleted from the Library Management, so that it can be assigned to a new disc.

- 1) Press **LIBRARY**.
- 2) Press **QUICK MENU**.
- 3) Press **▲ / ▼** to select “Library management”, then press **ENTER**.
- 4) Press **▲ / ▼** to select “Del disc no. from library”, then press **ENTER**.
- 5) Press **ADJUST** to select a number to delete, then press **ENTER**.

■ Erasing Library data

You can erase all Library data stored in the recorder to restart the database.

- 1) Press **LIBRARY**.
- 2) Press **QUICK MENU**.
- 3) Press **▲ / ▼** to select “Library management”, then press **ENTER**.
- 4) Press **▲ / ▼** to select “Delete all DVD-RAM information”, then press **ENTER**.
- 5) Press **ENTER**.
- 6) Press **◀ / ▶** to select “Yes”, then press **ENTER**.

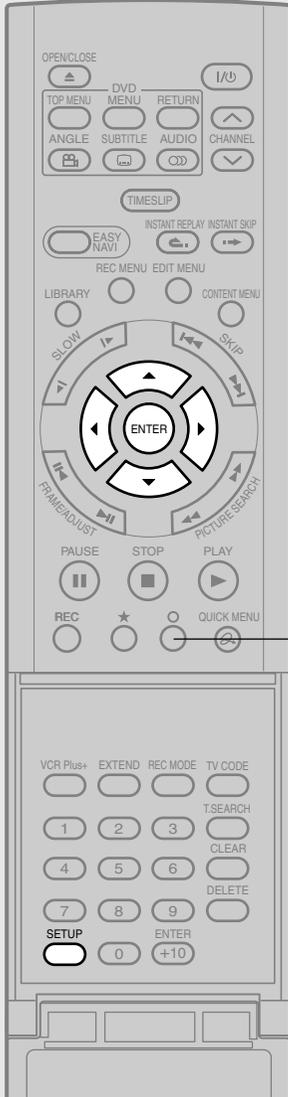
Function Setup

You can change the default settings to customize performance to your preference.

- **Customizing the function settings**

Customizing the function settings

You can change the default settings to customize performance to your preference.



Open the lid.

Notes

- The SETUP button can function even during normal playback. However some items may be grayed out and they cannot be selected. In this case, try again after playback is stopped.
- The SETUP button does not function during recording, Recorded Title Play, Chase Play or Pause TV modes.

1 During stop, press SETUP.



The following setup display appears.

e.g.

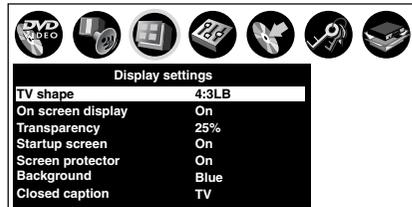


2 Press ◀/▶ to select the icon of a group that contains a desired item, then press ENTER.



For details on each setting, see the next page.

e.g. When "Display settings" is selected:



3 Press ▲/▼ to select a desired item, then press ENTER.



4 Refer to the explanations on pages beginning from 126, to change the selection by ▲/▼ or other buttons, then press ENTER.



- To select another item in the same group, repeat steps 3 to 4.
- To shift to another group, press the O button then repeat steps 2 to 4.

5 Press SETUP.



The setup display disappears and the setting is completed.

Setting	Details	Page
DVD player settings		
DVD disc menu language DVD-VIDEO	To select a preferred language for disc menus.	126
DVD audio language DVD-VIDEO	To select a preferred language for the sound track.	126
DVD subtitle language DVD-VIDEO	To select a preferred language for subtitles.	126
DVD dynamic range control DVD-RAM DVD-RW DVD-R DVD-VIDEO	To turn on or off a function that makes faint sounds easier to hear even if you lower the volume during late-hour playback.	127
Karaoke vocal DVD-VIDEO	To turn on or off the vocal output during DVD KARAOKE disc playback.	127
DVD parental lock DVD-VIDEO	To turn the parental lock function on or off.	127
DVD title stop DVD-RW DVD-R DVD-VIDEO	To turn on or off a feature that automatically stops playback after a title has been viewed.	128
PBC VCD	To use the menu screen when playing a PBC-controllable VIDEO CD.	128
Picture/Audio settings		
Pause/Still DVD-RAM DVD-RW DVD-R DVD-VIDEO	To select the resolution of still pictures. (Field/Frame)	129
Black level DVD-VIDEO VCD	To select the black level of playback pictures.	129
Custom picture select DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD	To select from standard or three customized picture settings.	129
Custom picture setting DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD	To customize picture quality settings and store them.	129
Progressive conversion DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD	To select the system of output signal. (Only when connected to a PROGRESSIVE TV.)	129
Play DNR DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD	To select a setting for playback at a reduced noise level.	130
Audio out select DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD CD	To select an output sound format corresponding to your system connection.	130
Virtual surround DVD-RAM DVD-RW DVD-R DVD-VIDEO	To turn on or off expansive virtual surround sound effects from just two speakers.	130
SAP	To monitor and record SAP broadcast.	130

(Continued)

Setting	Details	Page
Display settings		
TV shape DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD	To select a picture size according to the aspect ratio of your TV.	131
On screen display DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD CD	To turn on or deactivate the operational status display (e.g., ►) on the TV screen.	131
Transparency DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD CD	To select the transparency of the GUI relative to background pictures.	131
Startup screen	To turn on or off the Start-up Screen setting that makes the background picture appear automatically when turning on the power.	131
Screen protector DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD CD	To turn the screen saver on or off.	131
Background	To select a display status when no video signals are present.	131
Closed caption	To select where you turn on or off closed caption.	131
Operational settings		
Operation beep DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD CD	To turn on or off the confirmation beeper announcing when each remote command is received.	132
Recording complete beep DVD-RAM DVD-RW DVD-R	To select whether or not a buzzer sounds when dubbing and so forth is finished.	132
IR code	To switch the codes that operate the recorder.	132
Instant skip interval DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD CD	To set the width to skip when the INSTANT SKIP button is pressed once.	132
Instant replay interval DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD CD	To set the width to go back when the INSTANT REPLAY button is pressed once.	132
Title thumbnail point DVD-RAM DVD-RW DVD-R	To select the position of the thumbnail image counting from the beginning of the title that has been recorded.	132
Title playback DVD-RAM	To activate resume play per title or continuous play.	132
Still group interval DVD-RAM	To select an interval of still picture display.	132
Priority contents	To select the playback priority between JPEG (picture) files and MP3/WMA (audio) files.	132

Setting	Details	Page
DVD recorder operation		
AV record quality DVD-RAM DVD-RW DVD-R	To select a set of picture and sound quality settings for manual programme recording.	133
Picture record mode DVD-RAM DVD-RW DVD-R	To make further setting when you cannot adjust the image quality with “Custom Picture Setting” of the “Picture/Audio Settings”.	133
Audio input level DVD-RAM DVD-RW DVD-R	To adjust the level of recording sound.	133
Aspect ratio(Video mode) DVD-RW DVD-R	To set the aspect ratio for DVD-R/RW recording.	134
DVD compatible mode DVD-RAM DVD-RW DVD-R	To set the audio for DVD-R/RW recording.	134
DVD-Video:CHP create DVD-RW DVD-R	To set whether or not chapters are to be automatically created at a specified interval for DVD-R/RW recording.	134
Rec DNR DVD-RAM DVD-RW DVD-R	To activate or deactivate the 3D digital noise reduction.	134
3D Y/C separation DVD-RAM DVD-RW DVD-R	To activate or deactivate the 3D digital filter to execute Y/C (Brightness/Color) separation.	134
Management settings		
Genre setting DVD-RAM DVD-RW DVD-R	To register the frequently used genre in the menu.	135
Eco. mode	To set the front panel display to turn on/off in the standby mode.	135
DVD-RAM physical format DVD-RAM	To perform physical formatting of a DVD-RAM disc.	29
Software version	To display the version of the software. The version is only displayed and cannot be set.	
DVD drive software	To display the version of the DVD drive software. The version is only displayed and it cannot be set.	
Initial settings	See ⇨ page 28, “INSTALLATION GUIDE”.	

DVD player settings

DVD disc menu language

DVD-VIDEO

English:

To display disc menus in English.

French:

To display disc menus in French.

Spanish:

To display disc menus in Spanish.

Others:

To make a further language choice.

After pressing the ENTER button, follow steps 1) – 4) below.



- 1) Obtain the language code of the preferred language from the Language code list (⇒ page 143).
- 2) Select the first character by pressing ▲ / ▼ (or ADJUST).
- 3) Press ◀ / ▶ to shift. Select the second character by pressing ▲ / ▼ (or ADJUST).
- 4) Press ENTER.

Note

- Some DVD video discs may not include your preset language. In this case, the recorder automatically displays disc menus consistent with the disc's initial language setting.

DVD audio language

DVD-VIDEO

English:

To play sound tracks recorded in English.

French:

To play sound tracks recorded in French.

Spanish:

To play sound tracks recorded in Spanish.

Others:

To make further choices.

After pressing the ENTER button, follow steps 1) - 4) below.



- 1) Obtain the language code of the preferred language from the Language code list (⇒ page 143).
- 2) Select the first character by pressing ▲ / ▼ (or ADJUST).
- 3) Press ◀ / ▶ to shift. Select the second character by pressing ▲ / ▼ (or ADJUST).
- 4) Press ENTER.

Note

- Some DVD video discs may be played in a different language from that you selected. A prior language may be programmed by the disc.

DVD subtitle language

DVD-VIDEO

English:

To display subtitles in English.

French:

To display subtitles in French.

Spanish:

To display subtitles in Spanish.

No Subtitle:

To disable subtitles.

Others:

To make a further choice.

After pressing the ENTER button, follow steps 1) – 4) below.



- 1) Obtain the language code of the preferred language from the Language code list (⇒ page 143).
- 2) Select the first character by pressing ▲ / ▼ (or ADJUST).

3) Press ◀/▶ to shift. Select the proceeding character by pressing ▲/▼ (or ADJUST).

4) Press ENTER.

Notes

- Some DVD video discs may be set to display subtitles in a different language from that you selected. A prior subtitle language may be programmed by the disc.
- Some DVD video discs allow you to change subtitle selections only via the disc menu. In this case, press the MENU button and choose the appropriate subtitle language from the selection on the disc menu.

DVD dynamic range control

DVD-RAM DVD-RW DVD-R DVD-VIDEO

Turns on or off a function that makes faint sounds easier to hear even if you lower the volume during late-hour playback.

Off:

The DVD dynamic range control does not function.

On:

The DVD dynamic range control functions.

Notes

- This function is available only for a disc recorded in Dolby Digital format.
- Depending on the disc you play back, the actual effect of this function differs.

Karaoke vocal

DVD-VIDEO

Off:

The main vocal sound is not output.

On:

The main vocal sound is output.

Notes

- This function is available only for a DVD KARAOKE disc recorded in Dolby Digital Multi Channel format.
- If you want to enjoy the KARAOKE function, connect an amplifier or other such device to this recorder.

DVD parental lock

DVD-VIDEO

DVD video discs equipped with the Parental Lock function have a predetermined limitation level. The limitation level or limitation method may differ depending on the disc. For example the total disc may not be played back, or an extreme violent scene maybe cut or replaced automatically by another scene.

Important

- Depending on discs, it may not be evident whether the disc is compatible with the Parental Lock function. Make sure that the Parental Lock function you set is activated correctly.

On:

Select this to activate the Parental Lock function or to change the setting.

After pressing the ENTER button, follow steps 1) – 3) below.

Off:

Deactivate the Parental Lock function.

After pressing the ENTER button, follow steps 1) below.

1) Enter a 4-digit password by using the number buttons, then press ENTER.

If you make a mistake entering your password, press the CLEAR button before pressing the ENTER button, and re-enter the correct password.

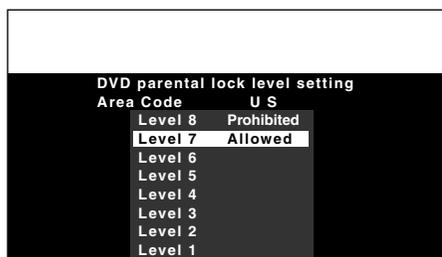
2) Press ▲/▼/◀/▶ to move the cursor. Then press ADJUST to enter the code of a country/area whose standards were used to rate the DVD video disc, referring to the list below.

(Continued)

Country/Area	Code
AUSTRALIA	AU
BELGIUM	BE
CANADA	CA
CHINA	CN
CHINA HONG KONG	HK
DENMARK	DK
FINLAND	FI
FRANCE	FR
GERMANY	DE
INDONESIA	ID
ITALY	IT
JAPAN	JP
MALAYSIA	MY
NETHERLANDS	NL
NORWAY	NO
PHILIPPINES	PH
RUSSIAN FEDERATION	RU
SINGAPORE	SG
SPAIN	ES
SWEDEN	SE
SWITZERLAND	CH
TAIWAN	TW
THAILAND	TH
UNITED KINGDOM	GB
UNITED STATES	US

3) Select the desired limitation level by pressing ▲ / ▼, and then press ENTER.

e.g.



Unless the Parental lock function is set to “Off”, a disc that has a higher limitation level than your selected limitation level cannot be played back. For example, if you select level 7, discs exceeding level 8 are locked and cannot be played back.

When “US” is selected, its limitation level corresponds to the following settings.

- Level 7 : NC-17 Level 3 : PG
- Level 6 : R Level 1 : G
- Level 4 : PG13

■ To change the limitation level of the Parental Lock function

Follow step 1) - 3) above.

■ To change the password

1) Press STOP 4 times after selecting “On” and “Off” in order, and then press ENTER.

The password is cleared.

2) Enter a new 4-digit password by using the number buttons.

3) Press ENTER.

DVD title stop



Off:

Plays back all following titles on the disc after the current title has been viewed.

On:

Recorder is stopped after playback of current title being viewed is completed.

PBC



Off:

Selects normal playback without using the menu screen of a PBC-controllable VIDEO CD.

On:

Selects playback using the menu screen of a PBC-controllable VIDEO CD.

Picture/Audio settings

Pause/Still

DVD-RAM DVD-RW DVD-R DVD-VIDEO

Auto:

Normal setting. Pause the moving image without blurring.

Frame:

Displays high resolution still image.

Black level

DVD-VIDEO VCD

Normal:

Normal black level.

Enhanced:

To display deeper, richer black than in "Normal" setting.

Custom picture select

DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD

Select from between 4 picture settings (Normal, Setting 1-3) you stored in the memory.

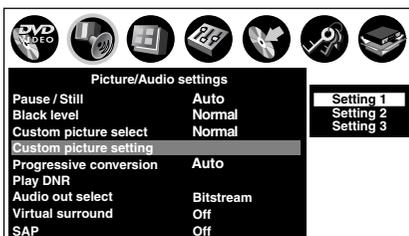
Custom picture setting

DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD

You can adjust fine picture quality and store up to 3 custom picture settings in the memory of the recorder.

- 1) Press **▲ / ▼** to select a desired setting from 3 settings, and then press **ENTER**.

e.g.



- 2) Press **▲ / ▼** to select adjustable items, and then press **◀ / ▶** to select each parameter.

Brightness

(0) Darker ⇔ Brighter (7)

Contrast

(-7) Lower ⇔ Higher (0)

Color

(-7) Duller ⇔ Brighter (0)

Edge enhance

(OFF) Soft ⇔ Sharp (ON)

- 3) After adjusting the items, press **ENTER**.

Progressive conversion

DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD

There are two types of source content in pictures recorded in DVD video discs: film content (pictures recorded from films at 24 frames per second) and video content (video signals recorded at 30 frames per second). Make this selection according to the type of content being viewed.

Auto:

Select this position normally.

The DVD player automatically detects source content, film or video, of playback source, and converts that signal in the progressive output format in an appropriate method.

Video:

The DVD player filters video signal, and converts it in the progressive output format appropriately. Suitable for playback of video content pictures.

Film:

The DVD player converts film content pictures in the progressive output format appropriately. Suitable for playback of film content pictures. The progressive output feature will be most effective under this selection.

Note

- Depending on the disc, pictures may be cut off or doubled.

Customizing the function settings (Continued)

Play DNR

DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD

Selects a setting for playback at a reduced noise level. Press the ▲ / ▼ buttons to select an item then select “On” or “Off” using the ◀ / ▶ buttons.

3D-DNR:

Off:
Not activated.

On:
Reduces the noise levels of brightness signals and color signals present in the video signal during playback.

Mosquito NR:

Off:
Not activated.

On:
Reduces mosquito (flicker) noise occurring in the contour sections of images.

Block NR:

Off:
Not activated.

On:
Reduces noise that appears in the form of blocks (block noise) in a portion of the screen during playback of images with rapid movement.

DNR is the abbreviation for Digital Noise Reduction.

Notes

- DNR effects vary depending on the disc.
- Detailed images may no longer be visible depending on the scene due to the effects of DNR.
- Depending on the disc or scene, “On” may produce undesirable picture artifacts or increase noises on contours. In this instance, select “Off.”
- While you are using the zoom feature, “DNR” does not function.

Audio out select

DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD CD

Selects an output sound format corresponding to your audio system connection.

For details about output sound selection, see ➡ page 73.

Bitstream:

Select this when an amplifier equipped with built-in Dolby Digital, DTS or MPEG1 decoder is connected to this recorder.
When you play back a disc recorded in Dolby Digital, DTS or MPEG1 format, digital audio signal is output.

Analog 2ch:

Select this when a TV or other audio device is connected to this recorder via the ANALOG output connectors.

PCM:

Select this when a 2ch digital stereo amplifier is connected to this recorder. When you play back a disc recorded in Dolby Digital or MPEG1 format, the sound is converted to the PCM (2ch) format and output.

Virtual surround

DVD-RAM DVD-RW DVD-R DVD-VIDEO

This lets you playback discs with acoustic effects having greater depth and presence even when using only two speakers.

Off:
Virtual surround effect not activated.

On:
Virtual surround effect activated.

Notes

- This function is only activated when playing back a disc recorded with Dolby Digital.
- This function is only activated when “Audio out select” is set to “PCM” if the BITSTREAM/PCM jack of this DVD recorder is connected to an amplifier or similar device.
- When the virtual surround effect is activated, Dolby Progressive Sound may be deactivated or sound differently than usual.
- When the virtual surround effect is activated, the volume may sound differently than usual.
- Set “Virtual surround” to “Off” if the audio sounds distorted.

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SAP

SAP (Second Audio Program broadcast) is separate audio program, usually broadcast in a second language with the main language.

Off:
The main sound is received.

On:
SAP sound (second language) is received.

Display settings

TV shape

DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD

Select a picture size according to the aspect ratio of your TV.

For details on this setting, see “TV shape setting” (➡ page 44, “INSTALLATION GUIDE”).

On screen display

DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD CD

Off:

Deactivates the operational status display (e.g., ▶) on the TV screen.

On:

Activates the operational status display (e.g., ▶) on the TV screen.

Transparency

DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD CD

Selects the transparency of the GUI and its relationship to the background image.

0% : 25% : 50%

Startup screen

Off:

The startup screen is not displayed.

On:

The startup screen appears automatically when turning on the power.

Screen protector

DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD CD

To reduce TV screen damage (image burn), this function disengages the pause mode of a playback image. The display returns to the normal TV screen when the recorder remains idle for more than 15 minutes. In time slip mode, the playback pause is released.

If this function is set to “On”, the recorder, if freezes, may return to the normal by leaving it for about 15 minutes or longer.

Off:

Deactivates the Screen Protector function.

On:

Activates the Screen Protector function.

Note

- Toshiba does not guarantee that this function protects the TV screen by all means.

Background

Selects a screen color when receiving no video signals such as selecting a non-broadcasting channel.

Off:

No color.

Black:

Black is displayed.

Blue:

Blue is displayed.

Important

- Depending on signal reception, the Background setting may be cleared. To prevent this, set this function to “Off”.

Closed caption

To select where you turn on or off closed caption.

Off:

To disable closed caption.

TV:

Closed caption data is decoded on the connected TV. To turn on or off closed caption, operate the connected TV.

Recorder:

Closed caption data is decoded on this recorder. You cannot turn off closed caption on the connected TV.

Notes

- While the recorder is sending signals in the progressive output format, closed caption is disabled regardless of this setting.
- Depending on the signal condition, closed caption may not be displayed properly. In this case, select “Off.”

Operational settings

Operation beep

DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD CD

Turn on or off a confirmation beeper announcing when a command is received.

Off:

Turns off the beep sound.

On:

Turns on the beep sound.

Note

- You cannot turn off beeps for alerts irrespective of this setting.

Recording complete beep

DVD-RAM DVD-RW DVD-R

This is used to set whether or not a buzzer sounds when dubbing and so forth is finished.

Off:

Buzzer does not sound.

On:

Buzzer sounds.

Note

- You cannot turn off beeps for alerts irrespective of this setting.

IR Code

Switches the codes to operate the recorder. If you use the second and third TOSHIBA DVD video recorders, set the different remote codes for each recorder to avoid confusion in the response of the recorders.

For details about this setting, refer to "Operating the second and third TOSHIBA DVD video recorders with the remote control of this recorder" (➡ page 48, "INSTALLATION GUIDE").

DR 1 : DR 2 : DR 3

Instant skip interval

DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD CD

Sets how much time is skipped when the INSTANT SKIP button is pressed.

5 sec. : 10 sec. : 30 sec. : 5 min.

Instant replay interval

DVD-RAM DVD-RW DVD-R DVD-VIDEO VCD CD

Sets how far back is replayed when the INSTANT REPLAY button is pressed.

5 sec. : 10 sec. : 30 sec. : 5 min.

Title thumbnail point

DVD-RAM DVD-RW DVD-R

For recorded titles, sets how far a scene from the start is set as the title thumbnail.

0 sec. : 3 sec. : 10 sec. : 35 sec. : 1 min. : 5 min.

Note

- Thumbnails can also be changed to other scenes. See ➡ page 99.

Title playback

DVD-RAM

Sets the resume play per title.

Title resume:

Remembers the point where you stop playback. Allows you to resume the playback from that point.

Serial playback:

You can play back titles (Original, Playlist) stored in the DVD-RAM continuously. Because there is no division between titles, the recorder remembers only the last point where you stopped playback.

Still group interval

DVD-RAM

Sets an interval for display of still pictures (in seconds) when playing back a collection of still images.

1 sec. : 2 sec. : 3 sec. : 5 sec. : 10 sec. : Default

Priority contents

To select the playback priority between JPEG (picture) files and MP3/WMA (audio) files.

Photo: JPEG files take priority over MP3/WMA files.

Audio: MP3/WMA files take priority over JPEG files.

Note

- If this selection does not correspond to disc contents, the recorder will take a longer time to start playback of the disc.

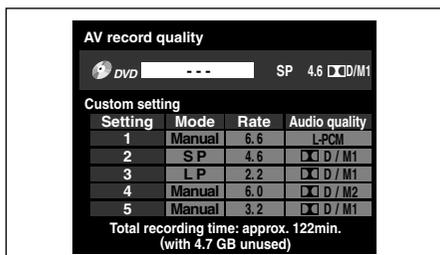
DVD recorder operation

AV record quality

DVD-RAM | DVD-RW | DVD-R

You can select from 5 combined picture and sound quality recording settings prior to actual recording. Actual selection applied becomes the default setting for the normal recording or programmed recording.

e.g.



• To make a combination of picture and sound quality settings.

- 1) Press the ▲ / ▼ / ◀ / ▶ buttons to select the desired item (“Mode”, “Rate”, or “Audio quality”).
- 2) Press the ADJUST button to change the setting of each item.

• To apply the combination of picture and sound quality settings.

- 1) Press the ADJUST button to change the setting.
You can confirm the available recording time for the selected setting on the bottom screen.
- 2) Press the ENTER button.

Notes

- You can change the combination of picture and sound quality settings also by displaying the Quick Menu on a LIBRARY MENU or during stop mode, then selecting “AV record quality”. Either of the above methods updates the setting of this recorder.
- If you set “SP” or “LP”, you cannot select “L-PCM”.
- Depending on the sound quality settings, the upper limit for the picture quality setting differs.
- You can adjust the manual rate for picture quality by 0.2 Mbps from 2.0 to 9.2. (You cannot set the rate from 1.4 to 2.0.)

Picture record mode

DVD-RAM | DVD-RW | DVD-R

Adjusts problems with the brightness of video signals of TV broadcasts or other external input. (Only use this setting when you cannot adjust the brightness satisfactorily with the Custom picture setting in the Picture/Audio settings (➡ Page 129) of this recorder.)

Important:

- This setting changes the video signal to record and the recorded signal is not returned to the original state even when this setting is changed after recording. When duplicating from VHS tape, if you can check the video recording state beforehand, we recommend first playing back for a while and checking the overall brightness tendency, then setting an appropriate mode.

Standard:

The brightness of signals received with this recorder and external input signals is adjusted automatically. This is normally the setting to use.

Mode 1:

This setting is used to record the signals darker when the screen is too bright.

Mode 2, 3, 4:

As the number rises, the signals are recorded brighter. Use these modes to adjust the brightness.

Audio input level

DVD-RAM | DVD-RW | DVD-R

Sets the audio input level of recorded sound. Press the ▲ / ▼ buttons to select the desired item, and then press the ◀ / ▶ buttons to adjust the input level.

TV/Cable (L):

Sets the input level for the left channel.
(R):

Sets the input level for the right channel.

Line1, 2, 3(L):

Sets the input level for the left channel of the external input connectors.
(R):

Sets the input level for the right channel of the external input connectors.

Customizing the function settings (Continued)

Aspect ratio(Video mode)

DVD-RW DVD-R

To set the aspect ratio when recording onto a DVD-R/RW disc.

4:3:

Fixes the aspect ratio at 4:3.

16:9:

Fixes the aspect ratio at 16:9.

Note

- When the bit rate on "AV record quality" is set to "1.4(Mbps)", pictures are recorded in 4:3 aspect ratio even if "16:9" is selected.

DVD compatible mode

DVD-RAM DVD-RW DVD-R

To set whether or not recording is to be performed in the format for which recording is allowed by the DVD-Video standard (video, audio and other data) during recording.

Off:

When recording on a DVD-RAM disc, both the main and SAP sounds are recorded.
When recording on a DVD-R/RW disc, this is ineffective. The recorder will automatically regard this as "Main," and record sound of the main channel only in stereo. Select "Main" or "SAP" for a DVD-R/RW recording.

Main:

Records sound of the main channel only in stereo.

SAP:

Records sound of the SAP channel only in stereo.

Notes

- When you select the manual rate of the picture quality between 3.0 and 3.8 and set this mode to "Main" or "SAP", the picture quality may become lower than when you set this mode to "Off".
- You can change the setting from the Quick Menu.

DVD-Video:CHP create

DVD-RW DVD-R

To set whether chapters are to be automatically created at a selected interval during DVD-R/RW recording.

Off:

Chapters are not set.

5 min. : 10 min. : 15 min. : 20 min.

To set the interval at which chapters are automatically created to 5, 10, 15 or 20 minutes.

Note

- The number of chapters has the upper limit, which varies depending on the disc condition. If the number reaches it, no more chapters are created.

Rec DNR

DVD-RAM DVD-RW DVD-R

Selects the level of 3D digital noise reduction that can reduce noises of a picture with many noise, depending on pictures.

Off:

Deactivates the 3D digital noise reduction.

On:

Sets the normal level.

Expanded:

Increases digital noise reduction.

Notes

- When you set "Rec DNR" to "On" or "Expanded" and set "3D Y/C Separation" to "On", the priority changes depending on the input selection. If you select the S-video input, "Rec DNR" has priority. When you select the built-in tuner or composite input, "3D Y/C Separation" has priority.
- If you want to avoid an afterimage, set this setting to "Off".

3D Y/C separation

DVD-RAM DVD-RW DVD-R

The 3D digital comb filter executes Y/C (Brightness/Color) separation to reduce the color irregularity or cross color interference.

Off:

Deactivates this function. In an area where the broadcast reception is poor, select this mode.

On:

Activates this function. In normal conditions, select this.

Note

- Refer to the "Notes" in the above "Rec DNR".

Management settings

Genre setting

DVD-RAM DVD-RW DVD-R

This registers a frequently used genre name onto the menu. Genre names registered here are displayed in the “Genre” on the Quick Menu.

- 1) Press **▲ / ▼** to select a position in the “Current Genre List” you want to change, then press **ENTER**.

A list of genres appears.

You can turn the pages using the **▶** button.

- 2) Press **▲ / ▼** to select a genre, then press **ENTER**.

A list of genre names appears.

- 3) Press **▲ / ▼** to select a genre name, then press **ENTER**.

The selected genre name replaces the previous one of the position you selected at step 1).

- 4) Repeat steps 1) to 3) to register genre names.

- 5) When genre names are registered, press the **O** button to return to the “Management settings” menu.

Eco. mode

To set the front panel display to turn on/off in the standby mode.

Off:

Sets the front panel display to turn on in the standby mode.

On:

Sets the front panel display to turn off in the standby mode.

DVD-RAM physical format

DVD-RAM

See  page 29.

Setting of picture and sound quality for recording

Picture quality setting	Sound setting		
	 D /M1	 D /M2	L-PCM
SP	Yes	Yes	No
LP	Yes	Yes	No
MN	Yes	Yes	Yes
Auto	Yes	Yes	Yes

Others

- Before calling service personnel
- Error codes on the display window
- Recording duration
- Language code list
- Specification

Before calling service personnel

If you experience any of the following difficulties while using this unit, check the list below before consulting your nearest Toshiba dealer.

Power

- **The power is not turned on.**
 - The power cord is not connected securely.
→ Connect the power cord securely.

Connection to your TV

- **There is no TV picture.**
 - The video cable to this recorder and your TV is not connected securely.
→ Connect the video cable to this recorder and your TV securely.
 - The input select on your TV is not set properly.
→ Select the input to which this recorder is connected.

TV reception

- **There is no picture.**
 - The antenna cable is not connected securely.
→ Reconnect the antenna cable securely.
- **There is poor reception.**
 - Channel settings are not completed.
→ Set the channels.
 - The antenna cable is not connected securely.
→ Reconnect the antenna cable securely.
 - Antenna signal is poor.
→ Consult your dealer for adjustment.

Playback

- **A DVD or CD does not play.**
 - The format of the recorded data does not correspond to this recorder, or the region number is neither "1" nor "ALL".
→ Check the disc.
 - A defective or dirty disc is inside.
→ Change the disc.
- **During playback, picture noise appears.**
 - Picture noise may appear in the following cases. It is not a malfunction.
 - There is picture noise in the original recording.
 - Weather, reception conditions may cause noise.
 - The data transmission rate is set to low.
 - The image data processing of this recorder cannot follow dynamic movement on the screen. (Low video data rate)
 - A physical error has occurred on the DVD disc.

If an error occurs during reading data of a disc, block-noises may be produced there. Repeated reading of this location where the error occurred (retry) can decrease the generation of block noise. However, it can also raise the possibility of unintended delays or stops of playback. In order to prevent them, the recorder limits the number of times of retry.

Recording

■ Data cannot be recorded on a DVD-RAM disc.

- The disc is protected from deleting data.
→ Set the write-protect tab to the opposite of "PROTECT" (➡ page 8).
- The disc is protected by a PC or the recorder.
→ Disable the protection on the device which protected the disc.
- The disc space is not sufficient.
→ Delete unwanted data (➡ page 49) or prepare a new disc.
- The disc is not initialized.
→ Initialize the disc (➡ page 28).
- The disc may contain errors.
→ Complete the physical format on the disc (➡ page 29).
- The physical format on the disc is not completed.
→ Complete the physical format on the disc (➡ page 29).

Program

■ Timer programming cannot be completed.

- Clock setting has not been completed.
→ Complete the clock setting (➡ page 31, "INSTALLATION GUIDE").
- The programs list is full.
→ Cancel unwanted programs (➡ page 43).

■ VCR Plus+ recording does not work properly.

- Guide channel setting is not completed.
→ Complete the guide channel setting (➡ page 40, "INSTALLATION GUIDE").
- TV/Cable setting is not completed.
→ Complete TV/Cable setting (➡ page 34, "INSTALLATION GUIDE").

Remote control

■ The remote control does not work.

- The batteries in the remote control are exhausted.
→ Replace all the batteries in the remote control (➡ page 12, "INSTALLATION GUIDE").
- The light emitter of the remote control is not pointed at the receptor of this recorder.
→ Point the emitter of the remote control at the receptor of this recorder.
- The receptor of this recorder is located too far away from the remote control.
→ Operate the remote control within 7 meters (23 ft) from the receptor of this recorder.
- There are obstacles between the remote control and this recorder.
→ Remove any obstacles.
- The receptor is disturbed by sunlight or fluorescent light.
→ Change the place of this recorder or shield the light.
- The remote mode is not appropriate.
→ Adjust the remote mode of the remote control and this recorder (➡ page 48, "INSTALLATION GUIDE").

Clock

■ The clock blinks.

- Complete the initial setting again (➡ page 28, "INSTALLATION GUIDE").

■ The clock does not keep time.

- Set the time and date manually (➡ page 31, "INSTALLATION GUIDE").
- Set "Summer time" or "Time zone" correctly (➡ page 32, "INSTALLATION GUIDE").

Error codes on the display window

The recorder display shows error codes in addition to the message screen.

Main examples are as follows.

The "***" in the "ERR - **" message indicates an error code. To delete this display, press the DISPLAY button on the remote control.

Error code	Description	
ERR-01	Error detected in the physical format.	
ERR-04	Failure detected in reading/recording of Library data.	
ERR-14	DVD disc access error detected.	• When creating a DVD-video.
ERR-15	Other errors detected.	
ERR-2E	Error detected in encoding or creating of menu	• During recording onto DVD-R/RW discs.
ERR-2F	Overflow of the menu size detected.	
ERR-30	Exceeded maximum number of menus detected.	
ERR-31	Recovery of writing executed, depending on conformity of disc and drive.	
ERR-32	No compatibility of disc format detected.	
ERR-33	Write-protection information on a disc detected.	
ERR-34	Copy-restricted data or control information error detected.	
ERR-35	Exceeded volume detected before recording.	
ERR-36	Failure in recording. (title not saved)	
ERR-37	Failure in recording. (title saved)	
ERR-38	Failure in copying. (title not saved)	
ERR-39	Failure in copying. (title saved)	
ERR-3A	Unexpected error.	

Note

- If you find an error code other than listed above, consult your nearest TOSHIBA dealer.

Recording duration

Sound rate Picture quality rate	D/D /M1(192kbps)		D/D /M2(384kbps)		L-PCM		Remarks
	DVD-RAM		DVD-RAM		DVD-RAM		
	Hour	Minute	Hour	Minute	Hour	Minute	
1.4	06	07	05	28	03	21	
2.0	04	22	04	02	02	44	Picture quality rate for LP with D/D /M2.
2.2	04	01	03	44	02	36	Picture quality rate for LP with D/D /M1.
2.4	03	43	03	28	02	28	
2.6	03	27	03	14	02	21	
2.8	03	14	03	02	02	14	
3.0	03	02	02	52	02	08	
3.2	02	51	02	42	02	03	
3.4	02	42	02	34	01	58	
3.6	02	33	02	26	01	53	
3.8	02	26	02	19	01	49	
4.0	02	19	02	13	01	45	
4.2	02	13	02	07	01	41	
4.4	02	07	02	02	01	38	Picture quality rate for SP with D/D /M2.
4.6	02	02	01	57	01	35	Picture quality rate for SP with D/D /M1.
4.8	01	57	01	52	01	32	
5.0	01	52	01	48	01	29	
5.2	01	48	01	44	01	26	
5.4	01	44	01	41	01	24	
5.6	01	40	01	37	01	21	
5.8	01	37	01	34	01	19	
6.0	01	34	01	31	01	17	
6.2	01	31	01	28	01	15	
6.4	01	28	01	26	01	13	
6.6	01	26	01	23	01	11	
6.8	01	23	01	21	01	09	
7.0	01	21	01	19	01	08	
7.2	01	18	01	16	01	06	
7.4	01	16	01	14	01	05	
7.6	01	14	01	13	01	03	
7.8	01	12	01	11	01	02	
8.0	01	11	01	09	01	00	Manual maximum setting for L-PCM.
8.2	01	09	01	07			
8.4	01	07	01	06			
8.6	01	06	01	04			
8.8	01	04	01	03			
9.0	01	03	01	01			
9.2	01	01	01	00			Maximum value for the manual mode.

- The recording duration listed above is reference only. Not guaranteed.
- This recording duration applies to the DVD-RAM disc in its initialized condition. The display may vary depending on the disc.
- If you subtract the actual recording duration from the duration listed in this table, the calculated time period does not represent the remaining time.
- The consumption of space may vary depending on the picture and sound conditions of the recorded content.
- Use the remaining disc space display feature to see the remaining space in the DVD-RAM disc.

For D/D /M1 and D/D /M2, the digital recording technology for consumer products of Dolby Laboratories is used. Setting 1 (D/D /M1) records in Dolby Digital at 192 kbps, and Setting 2 (D/D /M2) records at 384 kbps.

Language code list

Table of languages and their abbreviations

Abbreviation	Language	Abbreviation	Language	Abbreviation	Language
---	No alternate language	GN	Guarani	PT	Portuguese
CHI (ZH)	Chinese	GU	Gujarati	QU	Quechua
DUT (NL)	Dutch	HA	Hausa	RM	Rhaeto-Romance
ENG (EN)	English	HI	Hindi	RN	Kirundi
FRE (FR)	French	HR	Croatian	RO	Rumanian
GER (DE)	German	HU	Hungarian	RU	Russian
ITA (IT)	Italian	HY	Armenian	RW	Kinyarwanda
JPN (JA)	Japanese	IA	Interlingua	SA	Sanskrit
KOR (KO)	Korean	IE	Interlingue	SD	Sindhi
MAY (MS)	Malay	IK	Inupiak	SG	Sango
SPA (ES)	Spanish	IN	Indonesian	SH	Serbo-Croatian
AA	Afar	IS	Icelandic	SI	Singhalese
AB	Abkhazian	IW	Hebrew	SK	Slovak
AF	Afrikaans	JI	Yiddish	SL	Slovenian
AM	Amharic	JW	Javanese	SM	Samoan
AR	Arabic	KA	Georgian	SN	Shona
AS	Assamese	KK	Kazakh	SO	Somali
AY	Aymara	KL	Greenlandic	SQ	Albanian
AZ	Azerbaijani	KM	Cambodian	SR	Serbian
BA	Bashkir	KN	Kannada	SS	Siswati
BE	Belorussian	KS	Kashmiri	ST	Sesotho
BG	Bulgarian	KU	Kurdish	SU	Sundanese
BH	Bihari	KY	Kirghiz	SV	Swedish
BI	Bislama	LA	Latin	SW	Swahili
BN	Bengali, Bangla	LN	Lingala	TA	Tamil
BO	Tibetan	LO	Laotian	TE	Telugu
BR	Breton	LT	Lithuanian	TG	Tajik
CA	Catalan	LV	Latvian, Lettish	TH	Thai
CO	Corsican	MG	Malagasy	TI	Tigrinya
CS	Czech	MI	Maori	TK	Turkmen
CY	Welsh	MK	Macedonian	TL	Tagalog
DA	Danish	ML	Malayalam	TN	Setswana
DZ	Bhutani	MN	Mongolian	TO	Tongan
EL	Greek	MO	Moldavian	TR	Turkish
EO	Esperanto	MR	Marathi	TS	Tsonga
ET	Estonian	MT	Maltese	TT	Tatar
EU	Basque	MY	Burmese	TW	Twi
FA	Persian	NA	Nauru	UK	Ukrainian
FI	Finnish	NE	Nepali	UR	Urdu
FJ	Fiji	NO	Norwegian	UZ	Uzbek
FO	Faroese	OC	Occitan	VI	Vietnamese
FY	Frisian	OM	(Afan) Oromo	VO	Volapük
GA	Irish	OR	Oriya	WO	Wolof
GD	Scottish Gaelic	PA	Panjabi	XH	Xhosa
GL	Galician	PL	Polish	YO	Yoruba
		PS	Pashto, Pushto	ZU	Zulu

Specification

■ Power requirement during operation

34W

■ Power requirement at standby

2.7W or below (Eco mode: off)

0.8W or below (Eco mode: on)

■ Power supply

120V AC, 60 Hz

■ Mass

4.2kg

■ External dimension

Width 430 x Height 78 x Depth 325mm

■ Incoming channels

TV: 2-69CH, Cable:1-125CH

■ Antenna input/output terminal

VHF/UHF: 75Ω, F Connector

■ Signal system

Standard NTSC Color TV system

■ Laser

Semiconductor laser, Wavelength: 650nm/780nm

■ Format

DVD-VR format

DVD-Video format

■ Image recording system

MPEG2

■ Sound recording system

Dolby digital M1, M2, Linear PCM

■ VIDEO input

1.0Vp-p (75Ω), Sync signal negative,
Pin jack x 3 systems, 2 at rear, 1 in front

■ VIDEO output

1.0Vp-p (75Ω), Sync signal negative,
Pin jack x 1 systems, 1 at rear

■ S-VIDEO input

(Y) 1.0Vp-p (75Ω), Sync signal negative,
(C) 0.286Vp-p (75Ω), 2 at rear, 1 in front
Mini DIN4 Pin x 3 systems

■ S-VIDEO output

(Y) 1.0Vp-p (75Ω), Sync signal negative,
(C) 0.286Vp-p (75Ω), 1 at rear
Mini DIN4 Pin x 1 system

■ COMPONENT output (Y, P_B, P_R)

Y output (green), 1.0Vp-p (75Ω),
Sync signal negative, Pin jack x 1 system
P_B, P_R output (blue, red), 0.7Vp-p (75Ω),
Pin jack x 1 system each

■ AUDIO input

2.0V (rms), 50kΩ or below, pin jack
(L, R) x 3 systems
2 at rear, 1 in front

■ AUDIO output

2.0V (rms), 200Ω or above, pin jack
(L, R) x 1 system
1 at rear

■ DIGITAL AUDIO OUTPUT BITSTREAM/PCM (OPTICAL terminal)

Optical connector x 1 system

■ CHANNEL CHANGE IR jack

This is for connection of the supplied IR control cable only.

■ DV input

4-pin x 1 in front

■ Remote control

Wireless remote control (SE-R0123)

■ Operating conditions

Temperature: 41°F ~ 95°F (5°C ~ 35°C),

Position: Horizontal

■ Clock display

12 hour digital display

■ Clock accuracy

Quartz (monthly deviation: approximately ± 30 seconds)

- The design and specifications may change without prior notice.
- The Illustrations and screens described in this manual may be exaggerated or simplified for easy recognition and may be slightly different from the actual unit.

Limited Warranty DVD PLAYER/RECORDER

Toshiba America Consumer Products, L.L.C., ("TACP") makes the following limited warranties to original consumers in the United States. THESE LIMITED WARRANTIES EXTEND TO THE ORIGINAL CONSUMER PURCHASER OR ANY PERSON RECEIVING THIS DVD PLAYER/RECORDER AS A GIFT FROM THE ORIGINAL CONSUMER PURCHASER AND TO NO OTHER PURCHASER OR TRANSFEREE.

PRODUCTS PURCHASED IN THE U.S.A. AND USED IN CANADA ARE NOT COVERED BY THESE WARRANTIES.

PRODUCTS PURCHASED IN CANADA AND USED IN THE U.S.A. ARE NOT COVERED BY THESE WARRANTIES.

Limited Ninety (90) Day Warranty on Labor*

TACP warrant this DVD PLAYER/RECORDER and its parts against defects in materials or workmanship for a period of ninety (90) days after the date of original retail purchase. DURING THIS PERIOD, TACP WILL, AT TACP'S OPTION, REPAIR OR REPLACE A DEFECTIVE PART WITH A NEW OR REFURBISHED PART WITHOUT CHARGE TO YOU FOR PARTS OR LABOR. YOU MUST DELIVER THE ENTIRE DVD PLAYER/ RECORDER TO AN AUTHORIZED TACP SERVICE STATION. YOU MUST PAY FOR ALL TRANSPORTATION AND INSURANCE CHARGES FOR THE DVD PLAYER/RECORDER TO AND FROM THE SERVICE STATION.

Limited One (1) Year Warranty on Parts*

TACP further warrant the parts in this DVD PLAYER/ RECORDER against defects in materials or workmanship for a period of one (1) year after the date of original retail purchase. DURING THIS PERIOD, TACP WILL, AT TACP'S OPTION, REPAIR OR REPLACE A DEFECTIVE PART WITH A NEW OR REFURBISHED PART WITHOUT CHARGE TO YOU FOR THE PART, PROVIDED THAT IF A DEFECTIVE PART IS REPAIRED OR REPLACED **AFTER NINETY (90) DAYS FROM THE DATE OF ORIGINAL RETAIL PURCHASE, THE CONSUMER PAYS ALL LABOR CHARGES INVOLVED IN THE REPAIR OR REPLACEMENT.** YOU MUST DELIVER THE ENTIRE DVD PLAYER/RECORDER TO AN AUTHORIZED TACP SERVICE STATION. YOU MUST PAY FOR ALL TRANSPORTATION AND INSURANCE CHARGES FOR THE DVD PLAYER/ RECORDER TO AND FROM THE SERVICE STATION.

*Rental Units

The warranty for rental units begins with the first rental or thirty (30) days from the date of shipment to the rental firm, whichever comes first.

*Commercial Units

DVD PLAYER/RECORDER(s) sold and used for commercial purposes have a limited ninety (90) day warranty.

Owner's Manual and Demographic Card

You should read this owner's manual thoroughly before operating this DVD PLAYER/RECORDER. You should complete and mail the enclosed Demographic card within ten days after you, or the person who has given you this product as a gift, purchased this DVD PLAYER/ RECORDER. This is one way to enable TACP to provide you with better customer service and improved products. Failure to return the Demographic card will not affect your rights under this warranty.

Your Responsibility

THE ABOVE WARRANTIES ARE SUBJECT TO THE FOLLOWING CONDITIONS:

- (1) You must provide your bill of sale or other proof of purchase.
- (2) All in-warranty servicing of this DVD PLAYER/ RECORDER must be made by a specified Authorized TACP Service Station.
- (3) The warranties from TACP are effective only if the DVD PLAYER/RECORDER is purchased and operated in the U.S.A. or Puerto Rico.
- (4) Labor service charges for set installation, set up, adjustment of customer controls and installation or repair of hook up related items and/or antenna systems are not covered by these warranties. Reception problems caused by inadequate antenna systems are your responsibility.
- (5) Warranties extend only to defects in materials or workmanship as limited above and do not extend to any DVD PLAYER/RECORDER or parts which have been lost or discarded by you or to damage to DVD PLAYER/RECORDER or parts caused by misuse, accident, Acts of God, such as lightning or fluctuations in electric power, improper installation, improper maintenance or use in violation of instructions furnished by TACP; or to units which have been modified or had the serial number removed, altered, defaced or rendered illegible.

How to Obtain Warranty Services

If, after following all of the operating instructions in this manual and checking the section “Before calling service personnel”, you find that service is needed:

- (1) For instructions on how to obtain warranty service for your DVD PLAYER/RECORDER, contact TACP Call Center's toll free number at 1-866-583-7353.
- (2) You must include a copy or original bill of sale or other proof of purchase along with the entire DVD PLAYER/RECORDER to the Authorized TACP Service Station specified by the Call Center. You must pay for all transportation and insurance charges for the DVD PLAYER/RECORDER to the Service Station.

For additional information, visit TACP's web site:
www.tacp.toshiba.com.

Time for Taking Action

ALL WARRANTIES IMPLIED BY THE LAW OF ANY STATE OF THE U.S.A., INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY LIMITED TO THE DURATION OF THE LIMITED WARRANTIES SET FORTH ABOVE. WITH THE EXCEPTION OF ANY WARRANTIES IMPLIED BY THE LAW OF ANY STATE OF THE U.S.A. AS HEREBY LIMITED, THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, GUARANTEES, AGREEMENTS AND SIMILAR OBLIGATIONS OF TACP WITH RESPECT TO THE REPAIR OR REPLACEMENT OF ANY PARTS. IN NO EVENT SHALL TACP OR BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES.

No person, agent, distributor, dealer or company is authorized to change, modify or extend the terms of these warranties in any manner whatsoever. The time within which action must be commenced to enforce any obligation of TACP arising under this warranty or under any law of the United States or of any state thereof is hereby limited to 90 days from the date you discovered or should have discovered, the defect. This limitation does not apply to implied warranties arising under the law of any state of the U.S.A.

HOW STATE LAW RELATES TO WARRANTY

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH MAY VARY FROM STATE TO STATE IN THE U.S.A. SOME STATES OF THE U.S.A. DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, WHEN AN ACTION MAY BE BROUGHT, OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU UNDER SUCH CIRCUMSTANCES.



- IMPORTANT - CANADIAN WARRANTY INFORMATION GARANTIE CANADIENNE

STANDARD WARRANTY
TYPE OF SET

DVD Player
DVD/VCR Combination
Home Theatre in a Box
DVD Recorder
Portable DVD

GARANTIE NORMALE
TYPE D'APPAREIL

Lecteur DVD
DVD/magnétoscope combo
Cinéma maison dans une boîte
Enregistreur DVD
DVD Portatif

WARRANTY PERIOD

12 MONTHS

DURÉE DE LA GARANTIE:

12 MOIS

CANADIAN WARRANTY

Toshiba of Canada Limited (TCL) makes the following limited warranties to original consumers in Canada. Please retain your "Bill of Sale" as proof of purchase. **To obtain a "Canadian Warranty" please register online at www.toshiba.ca.**

GARANTIE CANADIENNE

1) Toshiba du Canada Limitée (TCL) offre au Canada les garanties limitées suivantes aux consommateurs originiaux. Veuillez conserver votre « facture » comme preuve d'achat. **Pour obtenir une garantie canadienne, veuillez vous inscrire en ligne à www.toshiba.ca**

Canadian Warranty Information

Should service be required on this unit during the one year warranty period, TCL's option will be to repair or exchange the defective unit. It will be necessary to follow this procedure:

Contact: Toshiba of Canada Limited at the Consumer Electronics Group, customer support line.

Phone: 1-800-268-3404

Email: ceg_customer_support@toshiba.ca

Information sur la garantie Canadienne

Si vous avez besoin de service sur cet appareil au cours de l'année de garantie, Toshiba du Canada Limitée aura l'option de réparer ou échanger l'appareil défectueux. Vous devrez suivre la procédure suivante:

Contact: Toshiba du Canada Limitée au Groupe Électronique aux consommateurs, service à la clientèle.

Tél: 1-800-268-3404

Courriel: ceg_customer_support@toshiba.ca

All in-warranty repairs must be made by an authorized TCL service centre.

Toutes les réparations au cours de la garantie doivent être faites par un centre de service autorisé Toshiba.

For service exchange TCL will arrange to have the unit picked up by courier and a replacement unit will be returned via same courier. (Note: A major credit card number will be required as a charge of \$25.00 will apply if no fault is found with the unit.) During the first 3 months of ownership, a new unit will be supplied as a replacement. During the remainder of the warranty period a service-renewed unit will be supplied.

The original "Bill of Sale" must be provided as proof of purchase (it will be returned with the replacement unit.)

This 12-month warranty will be strictly adhered to.

Out of warranty units should be repaired by a TCL authorized service centre.

Note: It is the responsibility of the owner to ensure proper packaging. Should damage in shipping occur, due to poor packaging, a charge back for the repair will result.

This warranty applies to the original purchaser only and is not transferable.

This warranty does not apply to sets that have been subjected to misuse, neglect, accident, physical damage or acts of nature.

Sets with the serial number removed, altered, replaced or defaced will not be covered by this warranty.

The warranties from TCL are effective only if the product is purchased in Canada from an authorized TCL dealer and operated in Canada.

Products utilized for rental or commercial purposes are not covered by this warranty.

This warranty is in lieu of all other warranties, guarantees or agreements, whether expressed or implied, and no person, agent distributor, dealer, service centre or company is authorized to change, modify or extend its terms in any manner whatsoever.

Pour un échange TCL s'assurera qu'un service de courrier ramassera l'unité et qu'un appareil de remplacement soit expédié par le même service de courrier.

(Note: Un numéro de carte de crédit sera requis car une charge de 25,00\$ sera appliquée si toutefois l'appareil n'avait aucun problème de fonctionnement.)

Une nouvelle unité sera fournie comme remplacement durant les premiers 3 mois de propriété. Par contre durant la balance de la garantie une unité remise à neuf sera fournie.

La «facture» originale doit être fournie comme preuve d'achat (elle vous sera retournée avec l'unité de remplacement.)

Cette garantie de 12 mois sera strictement adhéree.

Les unités hors de garantie devraient être réparées par un centre de service autorisé Toshiba.

Note: C'est la responsabilité du propriétaire de s'assurer que l'emballage est adéquat. Vous serez facturé pour toutes réparations causées par des dommages encourus à cause d'un emballage non adéquat.

Cette garantie est octroyée à l'acheteur initial et n'est pas transférable. Cette garantie ne s'applique pas aux appareils qui ont été sujets aux abus, négligences, accidents, dommages physiques ou actes naturels.

Les appareils dont le numéro de série a été enlevé, altéré, remplacé ou barbouillé ne sont pas couverts par cette garantie.

Les garanties de TCL sont valides seulement sur les unités sont achetées et utilisées au Canada d'un marchand autorisé TCL.

Cette garantie ne couvre pas les produits de location ou à usage commercial. Cette garantie remplace toutes autres garanties ou ententes exprimées ou sous-entendues. Aucune personne, agent, distributeur, concessionnaire ou compagnie n'est autorisé à changer, modifier ou prolonger les termes de cette garantie de quelque façon que ce soit.

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