TOSHIBA

DVD RAM RAM4.7 · **DVD** R R4.7 · **DVD** VIDEO · COMPACT disc DIGITAL VIDEO · COMPACT disc DIGITAL AUDIO

HDD/DVD VIDEO RECORDER

RD-XS30B

OWNER'S MANUAL

SPATIALIZER® N-2-2™ · DOLBY DIGITAL · dts DIGITAL OUT

VIDEO Plus+

OPERATIONS

Read "INSTALLATION GUIDE" first.

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Digital AV equipment

This recorder is operated by sophisticated software and is different from other conventional AV equipment. Within the recorder, a DVD-RAM/R drive and a hard disc drive are connected by ATAPI, one of the standard connections used for personal computers (PCs). The hardware and software work by way of an operating system (OS), which requires some time to start up after turning on the power. Also, some commands, such as erasing recorded contents may take time to execute.

About the internal hard disc (HDD)

Generally, hard discs (HDD) are very fragile. Depending on the operating conditions, the internal HDD may partially fail, or in the worst cases, may completely stop functioning. Therefore, use the HDD as a temporal storage, not as a long-term archive. After watching the recorded contents once or copying it to a DVD-RAM disc, the contents should be erased from the HDD.
If the damaged part of the HDD is used for recording, block noise may occur. If you continue using the HDD, the noise may worsen, and you risk permanent damage to the entire HDD. When such noise is observed, copy the HDD's contents to a DVD-RAM disc immediately. Like a hard disc in a PC, the HDD can be easily damaged, and should be used cautiously with a backup.

Playback Restriction

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. Refer to the instruction notes of discs.

"⊘" may appear on the TV screen during operation.
"⊘" means that the operation is not permitted by the recorder or the disc.

Using different disc types for different purposes

Use 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 programmes. You can rewrite them about 100,000 times without any deterioration, erase unnecessary parts, divide a chapter, or specify playback area by frame. Its cartridge is suitable for a long-term storage and family use, and its large capacity of 9.4 GB double sided disc is space saving.

Use DVD-R discs when creating your own original discs for distribution
DVD-R discs 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 PC, and send them to your friends or relatives. The discs can be played on other DVD players. (Not all compatible DVD video players can play DVD-R discs recorded with this recorder.)
∗ This format is not suited for recording TV programmes. According to DVD-VIDEO format, recording and dividing into chapters must be by 15 frames. Possibly an unnecessary part may remain even after editing. Also, you cannot record programmes that include a scene with bilingual sounds, and programms that permit copying only once.

Compatible discs

You can enjoy recording and playback using the HDD of this recorder. When you want to play software or perform dubbing, load a disc into the recorder. There are many types and formats in discs. Confirm the compatibility of selected disc to insure proper performance.

Note
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. In such a case please contact the sales agency of the disc.

Disc	Mark	Specification	Remarks
For recording / playback			
DVD-RAM	DVD RAM RAM4.7	• Single sided 4.7GB (12cm (4³/₄ in.)) • Double sided 9.4GB (12cm (4³/₄ in.)) • Single sided 1.4GB (8cm (3¹/₄ in.)) • Double sided 2.8GB (8cm (3¹/₄ in.))	Read carefully the section "On DVD-RAM discs" (⇨ page 7). When using an 8cm (3¹/₄ in.) DVD-RAM disc, remove it from the cartridge. For details, refer to the instructions of the disc.
DVD-R	DVD R R4.7	• 4.7GB For General Ver.2.0 (12cm (4³/₄ in.))	Read carefully the section "On DVD-R discs" (⇨ page 7). Depending on the disc or the recording equipment, playback of the disc may not be possible on this recorder.
For playback only			
DVD-video disc	DVD VIDEO / DVD VIDEO	• 12cm (4³/₄ in.) / 8cm (3¹/₄ in.) • Region number 🌐 or 🌐 • Colour system: PAL (NTSC DVD-Video discs of the NTSC colour system can be played, if an appropriate setting is selected.)	The region number of this DVD recorder is 2. If region numbers, corresponding to a specific playable area, are printed on your DVD video disc and you do not find 🌐 or 🌐 , disc playback will not be allowed by the recorder.
VIDEO CD	COMPACT disc DIGITAL VIDEO	• 12cm (4³/₄ in.) / 8cm (3¹/₄ in.) • Colour system: PAL (NTSC VIDEO CDs of the NTSC colour system can be played, if an appropriate setting is selected.) • Version 1.0 and 2.0	
Audio CD	COMPACT disc DIGITAL AUDIO	• 12cm (4³/₄ in.) / 8cm (3¹/₄ in.)	
CD-R	COMPACT disc	• 12cm (4³/₄ in.) • CD-DA (audio CD) format	Depending on the disc, playback may not be possible.
CD-RW	COMPACT disc		

• This recorder uses the PAL colour system for recording and playback, and does not support the SECAM colour system for them. You can use the NTSC colour system for playback only, by selecting an appropriate setting. A disc may fail to play, if it has data in the PAL colour system and the NTSC colour system. You cannot add the PAL colour system data to the disc with the data recorded in the NTSC colour system even if they have region marks 🌐 or 🌐 .
• There may be some DVD discs designed for this market that cannot be played on this recorder. If you encounter please contact TOSHIBA customer service.

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 using the disc-format function of the 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.

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.

■ 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 and not removable. 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.
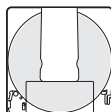
● To protect recorded contents
Slide the write-protect tab to "PROTECT" with something sharp. The disc can play, but cannot be edited or erased. Refer to the instructions that come with the disc.
• The resuming function (⇨ page 31) will not work if the write-protect tab is set to "PROTECT".
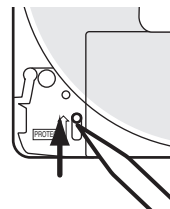
■ When using a disc without a cartridge (commercially available discs)
● Discs without cartridges can easily attract fingerprints and dust, which is the reason they are not recommended. If you cannot avoid using them, handle with proper care.
● When you write in a title column on a disc, use a pen with 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 type4 cartridge: Panasonic LM-AD240E
4.7 GB single-sided type4 cartridge: Panasonic LM-AB120E

On DVD-R discs

A 4.7 GB DVD-R disc can only be recorded from the HDD when the DVD-R Broadcast Record (⇨ page 143) is set to on; you cannot record directly on the disc. Only blank discs that have never been recorded are usable. Once recorded, you cannot add or delete content. Make sure that the disc is clean, as the discs are not covered with cartridges. Images that restrict or prohibit copying cannot be recorded. And not all compatible DVD Video players can play DVD-R discs recorded with this recorder.

Recommended discs
The following discs have been tested with this recorder:
Panasonic LM-RF120E (4.7 GB/120 minutes)
Other DVD-R discs may not work well.

Select a disc that shows a statement on its package, such as "This disc can copy images that permit single copying".
Some functions such as Library may not work with PC discs.
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).

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Compatible discs (Continued)

On handling discs

● Do not touch the playback side of the disc.

Playback side
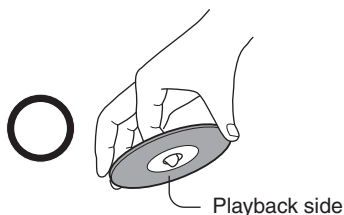
● Do not stick paper or tape to discs.

On cleaning discs

● Fingerprints and dust on the disc cause picture and sound deterioration. Wipe the disc from the centre 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, benzine, commercially available cleaners or antistatic spray for vinyl LPs. It may damage the disc.

On storing discs

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

■ **Marks on DVD video discs**

The following are examples of marks and the meanings.

Mark	Meanings
2)))	Number of audio streams recorded in the disc. (2 streams such as English and Japanese in this example.)
2	Number of subtitle languages recorded in the disc. (2 subtitle languages are recorded in this example.)
3	Number of camera angles recorded in the disc. (3 camera angles are recorded in this example.)
4:3	Pictures are recorded in the standard picture size (4:3 aspect ratio).
LB	Pictures are recorded in the letter box picture size (4:3 aspect ratio with horizontal black bars in the top and bottom of pictures).
16:9 LB	Pictures are recorded in the 16:9 wide picture size. TVs with 4:3 aspect ratio will display them in the letter box style.
16:9 PS	Pictures are recorded in the 16:9 wide picture size. TVs with 4:3 aspect ratio will display them in the pan scan style (one or both sides of pictures are cut). Actual picture size 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.
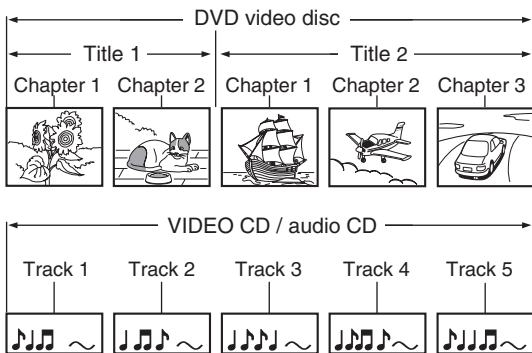
Title: Divided contents of a DVD video disc. Roughly corresponds to a story title in short stories.
Chapter: Divided contents of a title. This corresponds to a chapter in a story.
Track: Divided contents of a VIDEO CD or an audio CD.

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 the HDD or a DVD-RAM disc, one recording will always equal one title. You can divide a title into several chapters by marking borders in it to facilitate scene search.
You can also collect favorite scenes from the recorded titles/chapters, and rearrange them to create a Playlist (⇨ page 112).

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Index to Parts and Controls

See pages with arrows for details.

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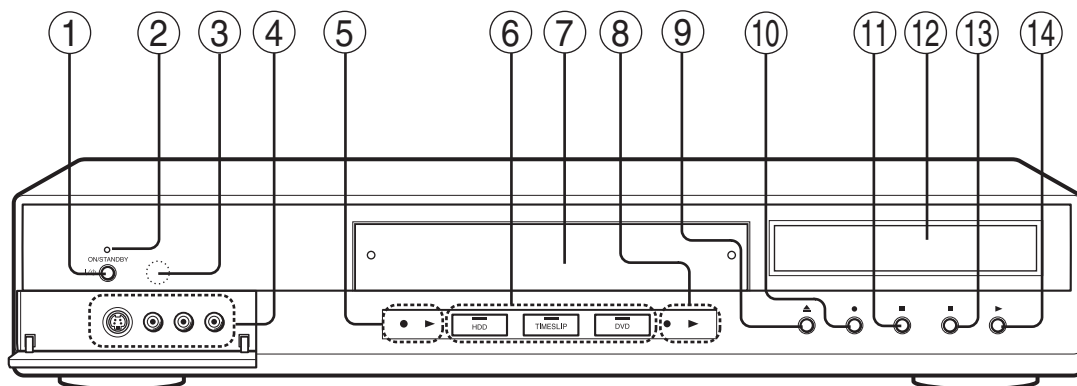
* The above illustration displays the front panel with the cover open. See the following page on how to open or close the cover.

① **ON/STANDBY button** ⇨ **pages 18, 19**
Turns the power on/restores the unit in the standby mode.

② **ON/STANDBY indicator** ⇨ **page 18, 19**
Displays the operational state of the recorder.

③ **Remote sensor** ⇨ **page 12 in "INSTALLATION GUIDE"**

④ **INPUT 2 jacks** ⇨ **page 78**
Use this when recording from other input source such as a VTR or a camcorder.

⑤ **Operation Status Indicator (HDD)**
Indicates the operation status of the HDD.
● **:** Recording
▶ **:** Playing
● ▶ **:** Copying within the disc

⑥ **Three mode button (HDD, TIMESLIP, DVD)** ⇨ **page 28, 30, 71**
Selects recording/playback media.

⑦ **Disc tray** ⇨ **page 18**
Place a disc to play or record.

⑧ **Operation Status Indicator (DVD)**
Indicates the operation status of the DVD.
● **:** Recording
▶ **:** Playing
● ▶ **:** Copying within the disc

⑨ **Open/Close (⏏) button** ⇨ **page 18, 19**
Opens and closes the disc tray.

⑩ **REC (●) button** ⇨ **page 79**
Starts recording.

⑪ **Pause (❚❚) button** ⇨ **page 28, 41**
Stops playback or recording momentarily.

⑫ **Front panel display** ⇨ **page 16**

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⑬ **Stop (■) button ⇨ page 28, 41**
Stops playback or recording.

⑭ **Play (▶) button ⇨ page 28**
Starts playback.

■ **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.
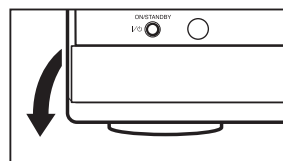
Note
• Do not place a heavy object on the cover while it is open. Doing so may damage the recorder.

Index to Parts and Controls (Continued)

Rear Panel
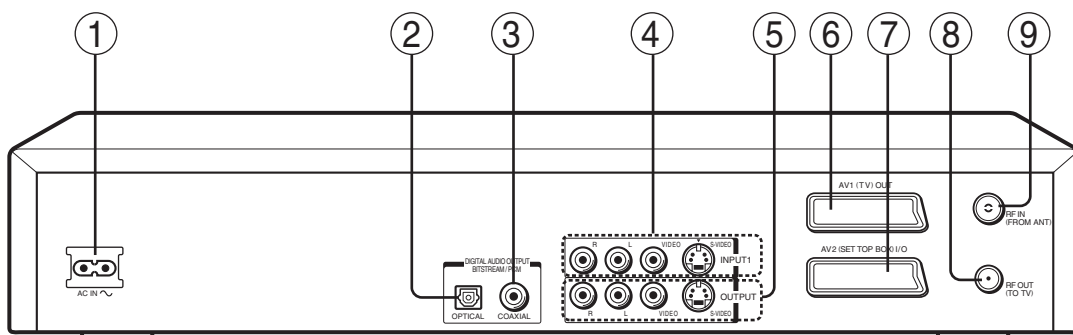
① **AC IN socket** ▷ **page 15 in "INSTALLATION GUIDE"**
Connects to the supplied power cord.

② **DIGITAL AUDIO OUT/OPTICAL jack** ▷ **page 21, 22, 23 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.
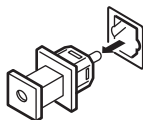
③ **DIGITAL AUDIO OUT/COAXIAL jack** ▷ **page 21, 22, 23 in "INSTALLATION GUIDE"**
Use this to connect the recorder to an audio receiver equipped with a coaxial digital audio input jack.

④ **INPUT 1 jacks** ▷ **page 78**
Use this to connect the recorder to output jacks of external devices such as another player or camcorder.

⑤ **OUTPUT jacks** ▷ **page 17, 21 in "INSTALLATION GUIDE"**
Outputs video and audio signals to a connected TV or amplifier.

⑥ **AV1 (TV) OUT jack** ▷ **page 15, 18, 19 in " INSTALLATION GUIDE"**
Use this jack when connecting the TV that has the terminal in this shape.

⑦ **AV2 (SET TOP BOX) I/O jack** ▷ **page 18 in "INSTALLATION GUIDE"**
Use this jack when connecting the video or other equipment that has the terminal in this shape.

⑧ **VHF/UHF RF OUT (TO TV) output socket** ▷
page 14 in "INSTALLATION GUIDE"
Connects the supplied coaxial cable to a TV.

⑨ **VHF/UHF RF IN (FROM ANT.) input socket** ▷
page 14 in "INSTALLATION GUIDE"
Connects to an antenna or cable signal.

Index to Parts and Controls (Continued)

Remote control

OPEN/CLOSE button ⇨ page 18, 19

TOP MENU button ⇨ page 29

ANGLE button ⇨ page 57

SUBTITLE button ⇨ page 60

HDD button ⇨ page 30, 71

TIMESLIP button ⇨ page 55, 56

V-REMOTE button ⇨ page 65

REC MENU button ⇨ page 36

LIBRARY button ⇨ page 81

PICTURE SEARCH button
⇨ page 30, 50

Direction buttons (▲ / ▼ / ◄ / ►)
⇨ page 30, 132

FRAME/ADJUST button ⇨ page 36, 52

PAUSE button ⇨ page 28, 52

REC button ⇨ page 73

★ button ⇨ page 30

STOP button ⇨ page 28

Buttons for TV operation
⇨ page 48 in "INSTALLATION GUIDE"

DISPLAY button ⇨ page 63

REMAIN button ⇨ page 69

SAT.MONI. button ⇨ page 80

DIMMER button ⇨ page 16

TV/DVR button ⇨ page 41

MENU button*1

Power button ⇨ page 18, 19

RETURN button*2

CHANNEL button ⇨ page 18, 72

AUDIO button ⇨ page 58

DVD button ⇨ page 28, 30, 71

INSTANT SKIP button ⇨ page 50

INSTANT REPLAY button ⇨ page 50

EDIT MENU button ⇨ page 94

CONTENT MENU button ⇨ page 30, 119

SKIP button ⇨ page 51

ENTER button ⇨ page 30

SLOW button ⇨ page 51

PLAY button ⇨ page 28

QUICK MENU button ⇨ page 44

○ button ⇨ page 132

FL SELECT button ⇨ page 16

CHP DIVIDE button ⇨ page 114

TIME BAR button ⇨ page 64

P in P button ⇨ page 62

ZOOM button ⇨ page 61

INPUT SELECT button ⇨ page 71, 78

*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 29)".
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.

Under the lid

VIDEO Plus+ button ➪ page 76

EXTEND button ➪ page 39, 42

Number buttons ➪ page 53, 76

SETUP button ➪ page 132

DELETE button ➪ page 43

REC MODE button ➪ page 77

TV CODE button ➪ page 48 in "INSTALLATION GUIDE"

T.SEARCH button ➪ page 53

CLEAR button ➪ page 53

To open, raise a lid toward you.
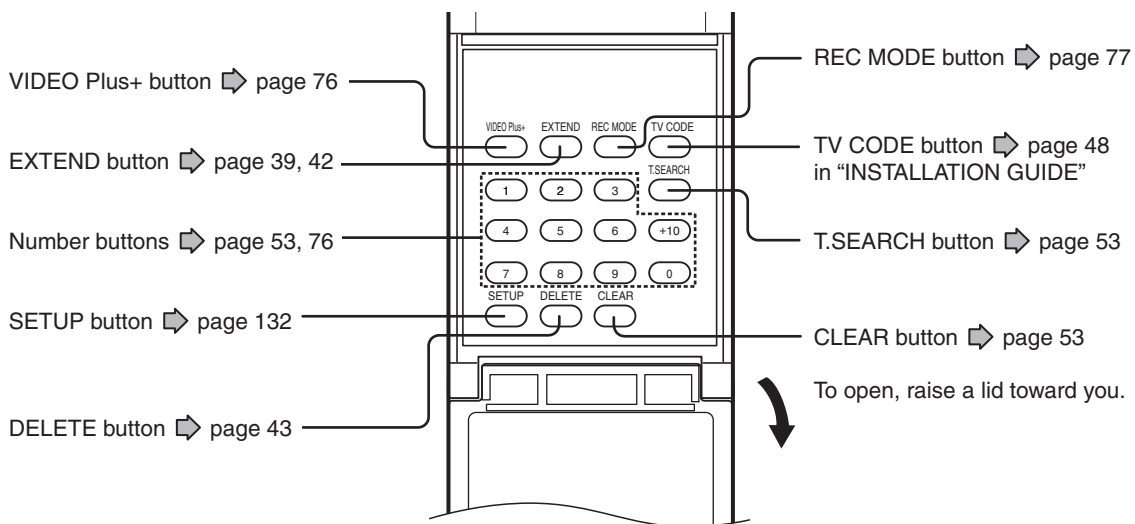
To open the lid, hold the upper sides to pull up.

Index to Parts and Controls (Continued)
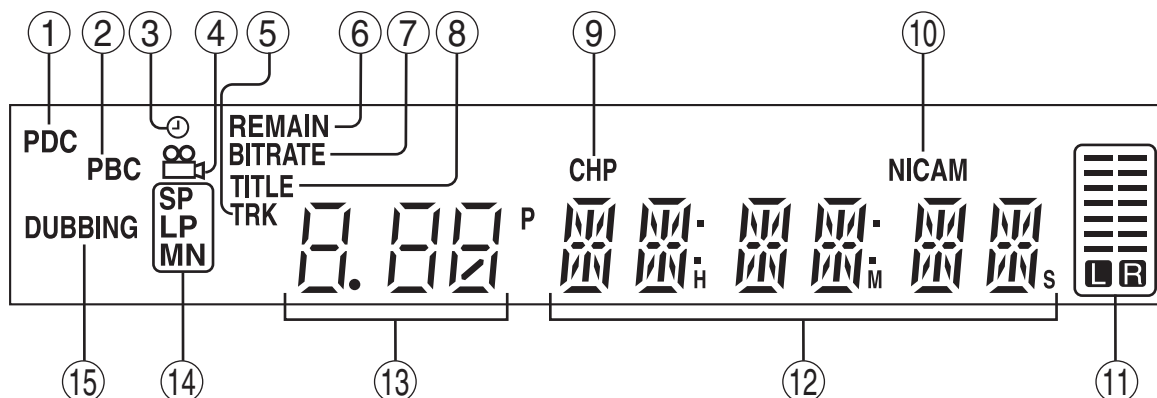
Display

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

① **PDC indicator (Programme Delivery Control System)**
Illuminates when setting a PDC controlled programme recording.

② **PBC indicator**
Illuminates when PBC function is "On" ▷ page 138 and a PBC-controllable VIDEO CD is loaded.

③ **Programmed recording icon**
Illuminates when programmed recording is set.

④ **Angle icon ▷ page 57**
Illuminates when playing a scene recorded with multi angles.

⑤ **Track indicator**
Illuminates when the track number is displayed.

⑥ **Remain icon**
Illuminates when the remaining time is displayed.

⑦ **Bit rate indicator**
Illuminates when displaying the bit rate value specified for recording or the actual bit rate value used for playback.

⑧ **Title indicator**
Illuminates when displaying the title number.

⑨ **Chapter indicator**
Illuminates when displaying the chapter number.

⑩ **NICAM indicator**
Illuminates when NICAM function is "ON" ▷ page 140 and while receiving stereo/mono programmes of NICAM broodcasts.

⑪ **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.

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⑫ **Multi display**
   Displays the current time, elapsed time, remaining
   time, scheduled recording time, chapter number,
   and message.

⑬ **Channel display**
   Displays the channel, external input, title number,
   track number, and bit rate.

⑭ **Picture quality mode indicator ▷ page 142**
   The current picture quality mode lights up.
   The modes are: MN (Manual)/SP (Standard Play)/
   LP (Long Play). The MN, SP and LP modes all
   illuminate at the same time when Auto is selected.

⑮ **Dubbing indicator**
   Illuminates when copying or moving a programme.

Before operating this recorder

■ Is your recorder ready?

Refer to the supplied "INSTALLATION GUIDE" manual and finish the necessary preparations.

■ 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 the ON/STANDBY button on the front panel of the recorder or the power button on the remote control.

ON/STANDBY indicator

ON/STANDBY button
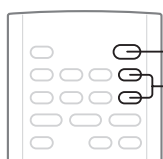
ON/STANDBY button
CHANNEL button

When the power is turned 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 DVD-RAM 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.

■ Loading a disc

Check disc compatibility beforehand (▷ page 6) and use a proper playable disc.

Caution
• Keep your fingers well clear of the disc tray. Neglecting this may causes 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
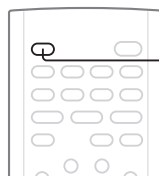
OPEN/CLOSE button

2 Insert a disc.

Disc without a cartridge

Insert with the playback side down.

Disc size varies depending on the disc. 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.
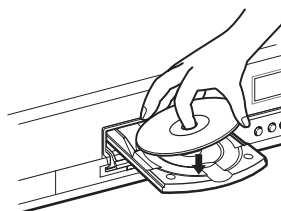
Place a disc in the inside hollow.

DVD-RAM disc with cartridge
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 a desired recording/playback side up, and insert the cartridge into the tray frame until it clicks the knob at the end of the tray, following the direction of the arrow on the cartridge.
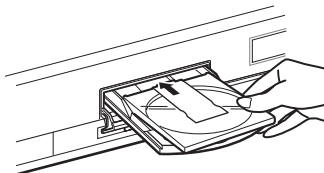
3 Close the disc tray.

Press the ▲ button 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 before it is completely closed, it automatically comes out again with the protection function. Do not force to close the tray when it stops, or it may be damaged.

■ **Turning the power off**

Press the ON/STANDBY button on the front panel of the recorder or the power button 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 is turned off.

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 HDD or a DVD-RAM 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 be able to work.
• 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. (This 15-minute measure is available only when "Screen Protector" is set to "On." (▷ page 140)) If the recorder is still inoperable after more than 15 minutes have passed, press and hold the ON/STANDBY button on the front panel 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.
Important: This is an emergency measure, which may cause losses and/or damages of data. Avoid casual use of this measure. If you try this while the recorder is working properly, especially while the "Loading" or "Unloading" icon is flashing, it may result in initializing of the HDD.

Notes
• If there are any performance malfunctions of the HDD or the DVD-RAM 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.
• Titles of DVD-RAM or DVD-R discs that are recorded with another manufacturer's recorder may not correctly be indicated. And you may not be able to add or change title, or execute library recording.

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Before operating this recorder (Continued)

■ Using the GUI (Graphical User Interface)

The recorder provides you with a variety of GUI (Graphical User Interface) applications to assist your operation of most functions such as customizing of setting, playback or recording.

Refer to the operation guide on the bottom on each GUI. This will indicate proper button selection for desired action.
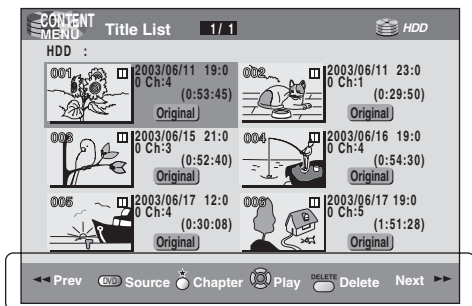
Operation guide

Example of the icon		**Function**
	Direction buttons	To select an item.
	ENTER button	To confirm (register) a selected item or setting.
DVD	DVD button	To switch the modes.
★	★ button	To change the category of contents
◄◄ **Prev**	PICTURE SEARCH ◄◄ button	To return to the previous page.
Next ►►	PICTURE SEARCH ►► button	To proceed to the next page.
FRAME/ADJUST	FRAME/ADJUST button	To enter numerical digits or change the value
123 456 789	Number butons	To enter numerical digits.
DELETE	DELETE button	To delete the selected programme.
SETUP	SETUP button	To display/exit the Setting menu.

■ If a message appears

The recorder will display messages related to operational status. Respond accordingly, as below:

Message

e.g.

e.g.
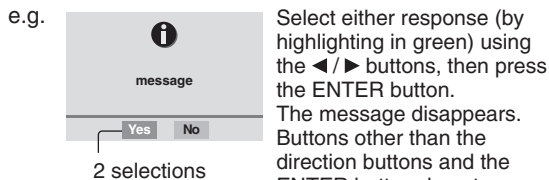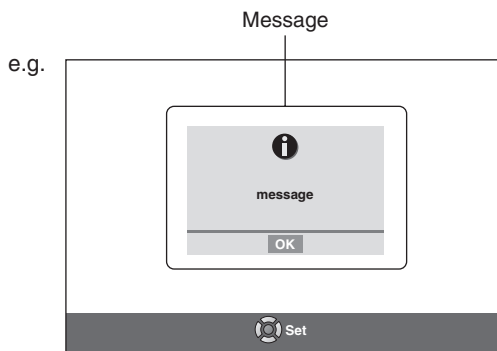
2 selections

Select either response (by highlighting in green) using the ◄ / ► buttons, then press the ENTER button. The message disappears. Buttons other than the direction buttons and the ENTER button do not function while a message is displayed.

e.g.

1 selection
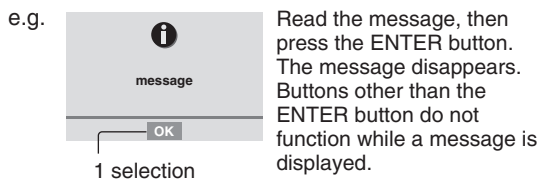
Read the message, then press the ENTER button. The message disappears. Buttons other than the ENTER button do not function while a message is displayed.

e.g.

No selection
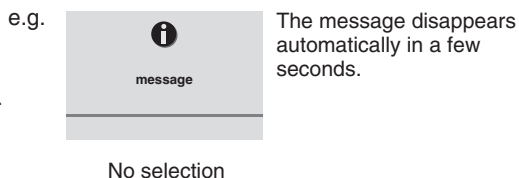
The message disappears automatically in a few seconds.

■ **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:

Loading
Start-up, reading a disc, finishing the recording

Un loading
Unloading a disc, finishing the operation

Open
Opening a disc tray

Close
Closing a disc tray

■ **System software update service**

Because of problems and errors that can occur during the creation of DVD software and/or the manufacture of DVD discs, Toshiba America Consumer Products cannot guarantee that this recorder will play every feature of every DVD bearing the DVD logo. As one of the creators of DVD technology, Toshiba DVD recorders are manufactured to the highest standards of quality and, as a result, such incompatibilities are very rare. If you have any questions, or if you happen to experience any difficulty playing a DVD on a Toshiba DVD recorder, please feel free to call our Customer Service Hotline at 1-800-319-6684.

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Before operating this recorder (Continued)

Initializing a DVD-RAM disc (Logical Format)

> **Be sure to read this section prior to using a DVD-RAM 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 new DVD-RAM 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 7)

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 18 for loading a disc.

1) During stop, press the QUICK MENU button.
The following menu appears. (The actual contents depend on the operational status of the recorder.)

e.g.

Quick Menu
- Bit rate
- Special Playback Mode
- Disc Information
- Disc format
- DVD-R Broadcast Record
- AV Record Quality
- Exit
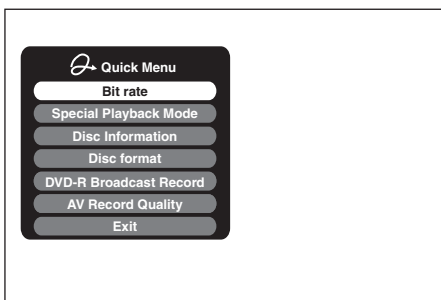
2) Press the ▲ / ▼ buttons to select "Disc format", then press the ENTER button.
A sub menu appears on the right side.

e.g.

Quick Menu
- Bit rate
- Special Playback Mode
- Disc Information
- Disc format
- DVD-R Broadcast Record
- AV Record Quality

DVD-RAM Format

3) Press the ENTER button.

e.g.

DVD-RAM Format

Disc Number 0 0 1 – Edit
Disc Name Edit
Unformat
Start Cancel

Disc format [ ] %

Select Set
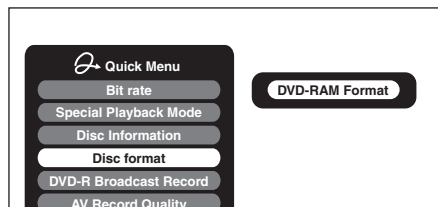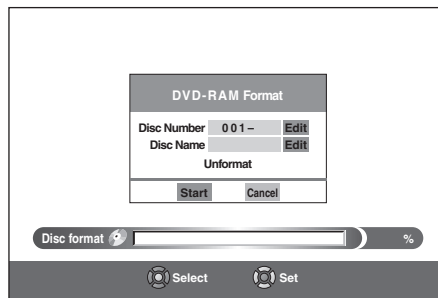
Numbering a disc
The recorder automatically numbers discs when initializing. However, you can assign a desired number (using 3 digits) and designate sides A and B on a double-sided disc.
(1) Press the ▲ / ▼ buttons to select "Edit" of "Disc Number" then press the ENTER button.
(2) Press the ▲ / ▼ buttons to select a digit.
(3) Press the ◄ / ► buttons to shift to the next place.
(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 24).
(3) Press the ★ button to eliminate the window.

4) Press the ◄ / ► buttons to select "Start", then press the ENTER button.

DVD-RAM Format

Entire disc contents excluding library data will be erased if disc is formatted. Proceed?

Start   Cancel

Disc format   %
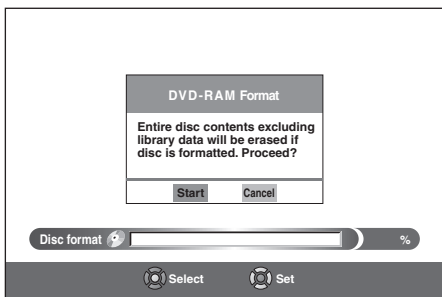
Select   Set

5) Press the ◄ / ► buttons to select "Start", then press the ENTER button.

Initialization starts.

DVD-RAM Format

DVD-RAM Formatting

Start   Cancel

Disc format   18%

Select   Set

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 programme recording or automatic recording of an external source will not work until the process is finished. Also this process erases all data stored on the disc.

1) During stop, press the SETUP button.

2) Press the ◄ / ► buttons to select "Management Settings", then press the ENTER button.

Management Settings
Genre Setting
Eco. Mode   off
HDD Auto Stop   off
All HDD Titles Delete   off
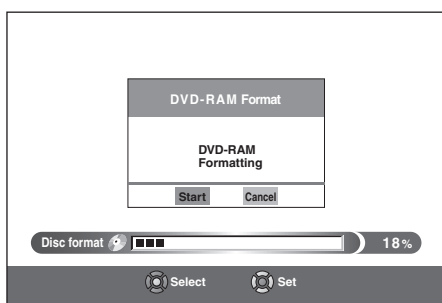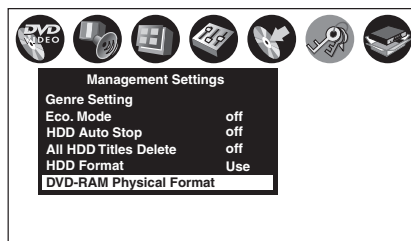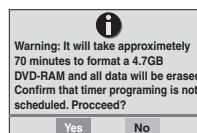HDD Format   Use
DVD-RAM Physical Format

3) Press the ▲ / ▼ buttons to select "DVD-RAM Physical Format", then press the ENTER button.

4) Press the ◄ / ► buttons to select "Yes", then press the ENTER button to execute.

Warning: It will take approximately 70 minutes to format a 4.7GB DVD-RAM and all data will be erased. Confirm that timer programing is not scheduled. Procceed?

Yes   No

To cancel, select "No", then press the ENTER button.

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 scars or dirt remains even after cleaning of the disc, do not execute the physical format.
- 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 void beyond 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 on the remote control.

Before operating this recorder (Continued)

Entering characters

Indicates the number of maximum characters of the first line on the CONTENT MENU.

Indicates the number of maximum characters on the CONTENT MENU.

The character being selected appears.

e.g.

Cursor
An entered character will appear here.

CONTENT MENU **Title Information**

🗐 **002 –**

Chapter 00:|

Language

| English | Spanish | French | Germany | Italian | etc... |

| 1 2 3 4 5 6 7 8 9 0 - = \ ' |
| q w e r t y u i o p [ ] |
| a s d f g h j k l :   BkSp |
| z x c v b n m , . /   Delete |

| Space | Space | Space | Clear All |

Select   Input   Direct(0-9)   DELETE BkSp   CLEAR All Clear

❚❚ Caps Lock ■ : ► Space

- / ; # ' : Cursor ★ Save Return

Operation guidance

■ Operation guidance of the remote control

To enter the character, normally use the ▲ / ▼ / ◄ / ► buttons on the remote control. About the other buttons to be used are shown on the operation guidance.

: Shifts a cursor.

: Enters the number.

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

CLEAR : 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.

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■ **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 input column
  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.

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Basic Operations

Record a TV programme and play it back.

- ● **Playing a DVD video disc**
- ● **Playing recorded contents (CONTENT MENU)**
- ● **Tips on playback**
- ● **Programming a recording (REC MENU)**
- ● **Tips on recording**
- ● **Quick Menu operation**

Hint on reading this manual

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

HDD : HDD

DVD-RAM : DVD-RAM disc

DVD-VIDEO : DVD video disc

VCD : VIDEO CD

CD : Audio CD

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.

DVD-VIDEO   VCD   CD

Playing a DVD video disc

You can also play VIDEO CDs, audio CDs or DVD-R discs in the same manner.
To play recorded contents on the HDD or a DVD-RAM disc, follow the instructions on ⇨ page 30.

■ 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 18)
- For playback of a DVD video disc in NTSC colour system, set "PAL/Auto" to "Auto". (⇨ page 139)

1 **Press DVD.**

DVD

The DVD indicator on the front panel illuminates.
This status indicates that the recorder is ready to play a disc in the disc tray (DVD mode).

2 **Press PLAY.**

PLAY

Playback starts.

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

STOP
PAUSE

■ To stop playback
Press the STOP button.

STOP

■ To pause playback (still playback)
Press the PAUSE button.

PAUSE

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

Note
- Sound is muted during still playback.

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 programme. 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-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 "DVD Disc Menu Language" (▷ page 136) or "DVD Parental Lock" (▷ page 137) in SETUP.
– you play a PBC-featured VIDEO CD while "PBC" (▷ page 138) is set to "On".
– you open the disc tray.
- 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-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.

TOP MENU

ENTER

▲ / ▼ / ◄ / ►
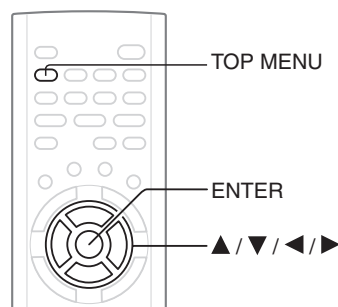
1) Press the TOP MENU button.
The top menu appears on the TV screen.

2) Press the ▲ / ▼ / ◄ / ► buttons 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.
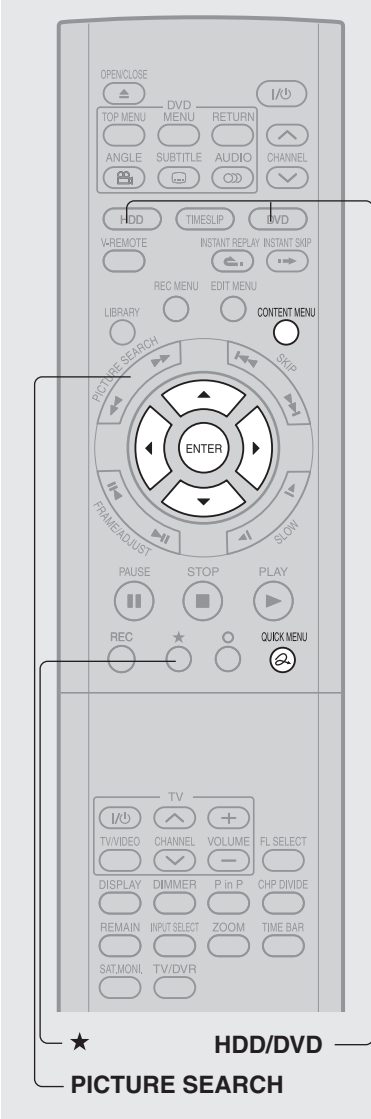
3) Press the ENTER button.
Playback starts from chapter 1 of the selected title.

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.

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■ **Resuming playback from the location last stopped (Title Resume)**

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

To use this function, set "HDD/RAM Title Play" (➡ page 141) 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 "HDD/RAM Title Play" (➡ page 141) to "Serial Playback".
• **To return to the beginning of the title**
Press the SKIP (|◀◀) button repeatedly until you reach the first title.
• **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.

■ **Digest Playback (Skip Search)**

This feature enables you to see the digest of a recorded content (title) by playing for three seconds and skipping one minute before next replay. The Skip Search starts from the beginning of a title and proceeds to the end.

1) **Perform steps 1 and 2 on ➡ page 30, and select a title that you want to see with Digest Playback.**
The Title List is displayed.

2) **Press the QUICK MENU button.**
The Quick Menu is displayed.

3) **Use the ▲ / ▼ buttons to select the Special Playback Mode, and press ENTER.**

4) **Use the ▲ / ▼ buttons to select Skip Search, and press ENTER.**
The Skip Search starts.

Notes
• This feature can be used only one title recorded on the HDD or DVD-RAM disc.
• While using this feature, you cannot use speed-related functions such as fast forward or fast reverse.
• If you press ENTER while using this feature, the recorder goes back to the normal playback.
• If you press the STOP button twice while using this feature, this feature stops.

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Playing recorded contents (CONTENT MENU) (Continued)

■ **Viewing the first scenes of titles (original) (Intro Scan)**

1) **During stop or after step 1 on ⇨ page 30, press the QUICK MENU button.**
   The Quick Menu appears.

2) **Press the ▲ / ▼ buttons to select "Special Playback Mode", then press the ENTER button.**

3) **Press the ▲ / ▼ buttons to select "Intro Scan", then press the ENTER button.**
   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 the ENTER button.**
   The selected title is played.

Note
• To stop Intro Scan, press the STOP button twice.

■ **Playing all titles (original/playlist ⇨ page 112) in a disc**
   Set "HDD/RAM Title Play" (⇨ page 141) to "Serial Playback". You can play all titles in the HDD or 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 (All ORG Title Play)**
   You can play all original titles in the HDD or 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 the QUICK MENU button.**
   The Quick Menu appears.

2) **Press the ▲ / ▼ buttons to select "Special Playback Mode", then press ENTER button.**
   e.g,

   ⤷ **Quick Menu**
   Bit rate
   Special Playback Mode
   Disc Information
   Disc format
   DVD-R Broadcast Record
   AV Record Quality
   Exit
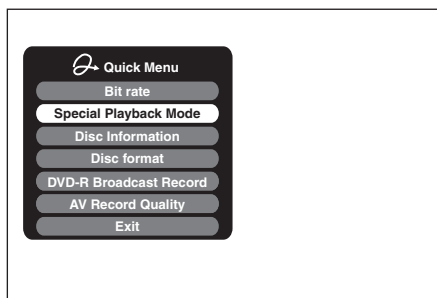
3) **Press the ▲ / ▼ buttons to select "Play All ORG Titles" and press the ENTER button.**

   ⤷ **Quick Menu**
   Bit rate
   Special Playback Mode   Intro scan
   Disc Information   Instant Digest Play
   Disc format   Repeat All ORG Titles
   DVD-R Broadcast Record   Play All ORG Titles
   AV Record Quality
   Exit
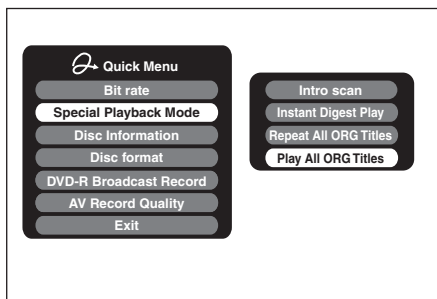
   Playback starts from the beginning of title 1.

Notes
• To stop All ORG Title Play, press the STOP button twice. (However, doing this when you are playing a title recorded in the HDD while recording on the HDD (⇨ page 42) 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, Play All ORG Titles stops.
• If you select "Repeat All ORG Titles" at step 3, Play All ORG Titles repeats.
• A location where you last stopped Play All ORG Titles is memorized. Playback will resume from there.

■ **Checking the detailed information on a selected title (Title Information ⇨ page 84)**

1) **At step 2 on ⇨ page 30, select a title (chapter) then press the QUICK MENU button.**
   The Quick Menu appears.

2) **Press the ▲ / ▼ buttons to select "Title Information", then press the ENTER button.**
   Detailed information of a selected title (chapter) appears. Press the ◄◄/►► buttons to change the chapter.

Notes
• If you press the QUICK MENU button on the Title Information screen, you can select "Edit Title Name", "Edit Chapter Name", "Genre", or "Record Date & Time". If you press the ▲ / ▼ / ◄ / ► buttons to access them and input characters, you can use Library function (⇨ page 81) more easily. When you select "Lock", you can protect recorded contents (⇨ page 43).
• By pressing the O button, you can return to the previous display.
• To exit these steps, press the CONTENT MENU button.

■ **Sorting the title list**

You can sort the title list or perform a search by genre.

1) **Press the CONTENT MENU button.**
   The Title List is displayed.

2) **Press the QUICK MENU button.**
   The Quick Menu is displayed.

3) **Use the ▲ / ▼ buttons to select the Display Changeover, and press ENTER button.**

```
⌐ Quick Menu
  Title Information          Arrange
  Create Thumbnail          Sort By Genre
  High Speed Dubbing
  Rate Conversion Dubbing
  Chapter Function
  Edit Function
  Special Playback Mode
  Disc Information
  Display Changeover
  Title Delete
  Exit
```
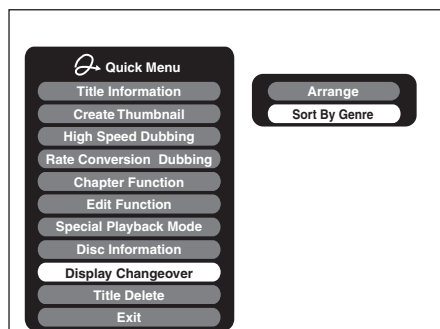
4) **Use the ▲ / ▼ buttons to select a display option, and press ENTER button.**
   • **Arrange**
   Titles are listed according to the specified sorting conditions.
   Use the ▲ / ▼ buttons to select a sorting option, and press ENTER button.
   • **Sort By Genre**
   Titles are sorted and listed according registered genre. Use the ▲ / ▼ buttons to select a genre, and press ENTER button.

Note
• The setting changed with Arrange or Sort By Genre, returns to the original setting when you exit the CONTENT MENU.

■ **Jumping to the page of title list**

1) **Press the CONTENT MENU button.**
The Title List is displayed.

2) **Press the QUICK MENU button.**
The Quick Menu is displayed.

3) **Use the ▲ / ▼ button to select Appointed Page Jump and press ENTER.**

4) **Use the direction button or number buttons to specify a page number.**

```
Appointed Page Jump
Page Number  -  -  8
```

• ▲ / ▼ buttons or ADJUST (▮◀/▶▮) button: Enters a page number.
• Clear: Cancels the page number that is entered.

5) **Enter the page number to specify and press ENTER.**
A Title List of the specified page is displayed.

Tips on playback

During playback, you can do the following:

Switch playback to another disc
Press the STOP button to stop playback.
Then press the HDD or DVD button to select a disc you want to play.

Switch the picture to view TV broadcasts
Press the STOP button to stop playback.

Start recording
Press the STOP button to stop playback. Then press the HDD or DVD button to select a disc on which you want to record, and 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.

Note
• If you pause playback for 15 minutes or more while the TIMESLIP indicator illuminates on the front panel, the recorder goes back to the playback mode. When reaching the end of a title, the still image at the end of a title is displayed until you press the TIMESLIP button.

■ Status display

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

Status display

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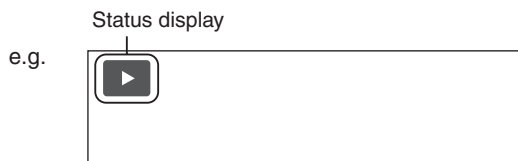
Main on-screen displays
(Depending on the disc, some of these may not appear.)

- ▶ : 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

* The following information is also displayed with the mark.
| HDD | DVD-RAM | : Title number/Title name and Chapter number/Chapter name
DVD-VIDEO : Title number/Chapter number
| VCD | CD | : Track number

Notes
• To disable the status display, set "On Screen Display" (⇨ page 140) to "Off".
• You can add the current status of the settings to this display. See ⇨ page 63.

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.

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HDD | DVD-RAM

Programming a recording (REC MENU)

Use the REC MENU to programme a recording. It will take less time to prepare, as it provides all necessary information for recording, including estimated disc space remaining. It will also be convenient when you programme the same contents again for serial shows.
For more information, see "Before Recording" (⇨ page 68).
Be careful when you programme a recording across the change-over of Daylight-saving time (⇨ page 69).
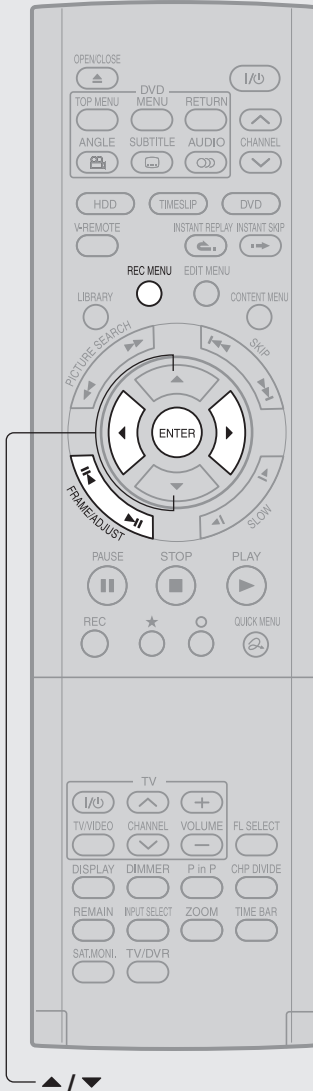
1 During stop, press REC MENU.
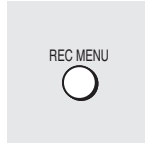
REC MENU

The REC MENU appears.
e.g.

REC MENU	Timer Programing	1/ 1						06/18(We) 19:25
Execution	CH	Date	Start	End	Media	Mode	Rate	Audio	Disc
	---	------	--:--	--:--	HDD	L P	2.0	D2

2 Press ENTER.

ENTER

"√" appears in "Execution" column.

REC MENU	Timer Programing	1/ 1						06/18(We) 19:25
Execution	CH	Date	Start	End	Media	Mode	Rate	Audio	Disc
✓	---	------	-- --	-- --	HDD	L P	2.0	D2

3 Select an item by pressing ◄ / ►, then press ADJUST (|◄/►|) to set the item.

REC MENU	Timer Programing	1/ 1						06/18(We) 19:25
Execution	CH	Date	Start	End	Media	Mode	Rate	Audio	Disc
✓	L1	------	-- --	-- --	HDD	L P	2.0	D2

• Refer to the setting items on the next page.
• You can also set the item by pressing the ▲ / ▼ buttons.

4 When complete, press ENTER.

ENTER

To programme another recording, press the ► button to move to the top of the next line, then repeat steps 2 to 4.

5 Press REC MENU to exit.

REC MENU

Your programme is entered.
• If you want to turn off the power, press the power button.

■ Setting items

* See ➡ page 150 for details.

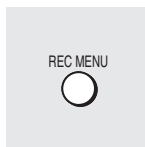| Execution	√	Records the broadcast programme that is set with programmed recording marked with a check (√).
CH	1-99, L1, L2, AV2	Select a channel you want to record.
Date	Every Sunday to Saturday, Monday to Thursday, Monday to Friday, Monday to Saturday, everyday.	Select a date of a TV programme you want to record.
Start		Enter a starting time of recording. (An initial setting is 10 minutes later.) You can also use the number buttons under the lid.
End		Enter an end time. (Set the timer to begin recording no sooner than 2 minutes past the current time. Recording must not exceed 8 hours.) You can also use the number buttons under the lid.
Media	DVD	When you record on a DVD-RAM disc.
	HDD	When you record on an HDD.
	AB	When you use A + B (double-side) recording (➡ page 74). The Mode is automatically set to Auto.
Mode (Picture Quality)	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.)
	Manual	Customized setting of rate (bit rate).
	Auto	To set a rate automatically according to the remaining volume of the disc. (If the disc does not have room for the TV programme, the programme cannot be recorded to the end.) When you select an HDD, the recorder records for a length of time corresponding to that of a blank DVD-RAM disc (4.7GB). Not applicable to a recording for 2.5 hours or longer.
Rate (Bit Rate)	1.4, 2.0-9.2	Not applicable when "SP", "LP" or "Auto" 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 "Sound Quality" setting.)
Audio	▣ D1*	Standard setting.
	▣ D2*	Superior to ▣ D1. It is recommended for recording music programmes.
	L-PCM	Best sound quality. Recommended for recording uncompressed original digital audio. High data rate of L-PCM may result in shorter programme length.

The digital recording technology for consumer products of Dolby Laboratories is used for ▣ D1 and ▣ D2. Dolby Digital is set at 192 kbps for ▣ D1 and 384 kbps for ▣ D2.

Notes
- See ➡ page 70, 157 for details on "Mode", "Rate", and "Audio".
- Other recording procedures are also available. See ➡ page 67.
- When you set the bit rate below about 4.0 Mbps, playback of some speed may not work correctly. 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 do not have to preserve the recorded content longer.**
  Select "LP". Inferior to "SP" in picture quality, but it can record longer.
- **To record a high picture quality**
  Select "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. For saving discs to make a collection of dramas or cartoons, 3.2 Mbps is also recommended. You can fill a double sided disc with about 14 progams of 30 minutes from which unnecessary portions are deleted.
- **To fill the disc**
  Select "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.
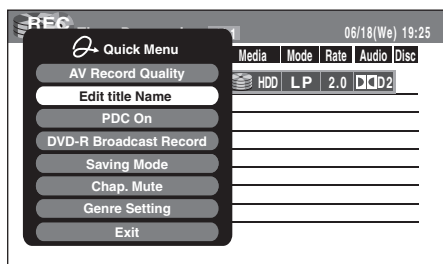
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Programming a recording (REC MENU) (Continued)

■ Setting the details for every programmed recording

You can specify detail items for each of your programmed recording.

1) Press the QUICK MENU button at step 3 on ▷ page 36.

The Quick Menu is displayed.

e.g.

2) Use the ▲ / ▼ buttons to select an item and press ENTER.

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 programmed recording.
Use the input screen to enter a name (▷ page 24).

PDC On :

Perform the programme PDC recording.

PDC (Programme Delivery Control System)

Programme PDC is a system of telling the recorder when a programme actually starts. Typically, when you want to record a programme you will tell the recorder to start recording, probably, five minutes before the advertised starting time of the programme and to finish ten minutes or so after the programme is due to finish. So even if the programme starts early or finishes late you will normally still get to see what you wanted to record. However when live programmes over-run or the day's television schedule is changed from that advertized, you may miss the desired programme which may have been delayed or even cancelled and the recorder will record the programme even if it is two or more hours late. With PDC, you enter the exact start time and the recorder will wait until the signal is sent to confirm the programme is starting and the recorder will record the programme even if it is two or more hours late.

PDC Off :

Perform the normal programmed recording.

DVD-R Broadcast Record :

Change the setting for writing on the DVD-R (▷ page 143) for each programmed recording.

Saving Mode :

Use this feature when you want to save space while using the best picture quality rate for recording. You can normally use 9.2 Mbps for recording and reduce the rate temporarily for the portion where the high rate is not required if the 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 On, you cannot change the mode or rate.
• The space availability may not change, depending on the picture contents.

Chap. Mute :

This feature automatically creates divisions for chapters when no audio (no audible sound) portion is found.
For example, when you have recorded a programme 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 programme 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.
• Divisions for chapters cannot be created during playback (including Chase Play and Title Playback by HDD) or while the CONTENT MENU is displayed.

Genre Setting :

You can set a genre before setting programmed recording.
To see the registered list, refer to Genre Setting (▷ page 143).
Set the genre according to recording contents.

3) Use the ▲ / ▼ buttons to make a selection, and press ENTER.

The selection you have made for programmed recording is shown under the REC MENU/Timer Programing.

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

If a prior TV programme extends beyond its scheduled time and into one that you programmed, you can shift the programmed start and end time of the recording.
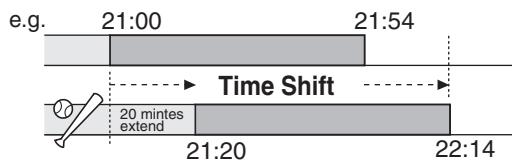
1) Press the REC MENU button.
The REC MENU appears.

2) Press the ▲ / ▼ buttons to select an entry you want to shift the time period.

3) Open the lid of the remote control and press the EXTEND button.
"Start Time" and "End Time" are ready to be input.

4) Press the EXTEND button 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 the ENTER button.

6) Press the REC MENU button to exit.

Note
• If you have shifted the start or end time when setting programmed recording for every week or every day, set them back to the original time.

■ Adding a programme entry

1) Press the REC MENU button.
The REC MENU appears.

2) Press the ▼ button to select a blank line, then press the ENTER button.

3) Press the ◄ / ► buttons to select the item, then press the ADJUST button to set the item.

4) When complete, press the ENTER button.

5) Press the REC MENU button to exit.

■ Deleting a programme entry

1) Press the REC MENU button.
The REC MENU appears.

2) Press the ▲ / ▼ buttons to select an entry you want to delete.

3) Press the QUICK MENU button.
The Quick Menu appears.

4) Press the ▲ / ▼ buttons to select "Program Cancel", then press the ENTER button.
Check the message, then delete the entry.

5) Press the REC MENU button to exit.

■ Changing an entry

1) Press the REC MENU button.
The REC MENU appears.

2) Press the ▲ / ▼ buttons to select an entry you want to change, then press the ENTER button.

3) Press the ◄ / ► buttons to select an item, then press the ADJUST button to set the item.

4) Press the ENTER button.
The modification is registered.

5) Press the REC MENU button to exit.

Important note
• You cannot change any entry within 5 minutes before recording start time. You can only delete the programming.

Note
• You can set a programme entry for the broadcast programme that the start time has passed when you do not have any programme entry specified within 10 minutes, but no recording is made during the period from the start time for programme entry until the actual start of recording.

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Programming a recording (REC MENU) (Continued)

■ **Using elapsed programming data (Make an entry of the same TV programme)**

1) **Press the REC MENU button.**
   The REC MENU appears.

2) **Press the QUICK MENU button.**
   The Quick Menu appears.

3) **Press the ▲ / ▼ buttons to select "Elapsed Programing", then press the ENTER button.**
   The list of the past entry records appears.

   The latest 9 entries are listed.

   You can access following and previous pages by pressing the PICTURE SEARCH (◄◄/►►) button.

4) **Press the ▲ / ▼ buttons to select an entry you want to use, then press the ENTER button.**
   Information corresponding to the selected programme appears on the Timer Programing list.

5) **Press the ◄ / ► buttons to select an item, then press the ADJUST button to modify the item.**

6) **When complete, press the ENTER button.**

7) **Press the REC MENU button to exit.**

Note
• The recorder stores the latest 36 entries. A new entry erases the oldest one when the number of entries is over 36.

■ **Remaining volume**

1) **Press the REC MENU button.**
   The REC MENU appears.

2) **Press the QUICK MENU button.**
   The Quick Menu appears.

3) **Press the ▲ / ▼ button to select "Disc Budget Calculation" then press the ENTER button.**
   The Disc Budget Calculation menu appears.

4) **Press the ▲ / ▼ buttons to select an entry, then press the ENTER button or press the ADJUST button.**
   The recorder calculates on a bar graph how much a specific programme (identified by a check mark) will occupy on the disc.

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

e.g.
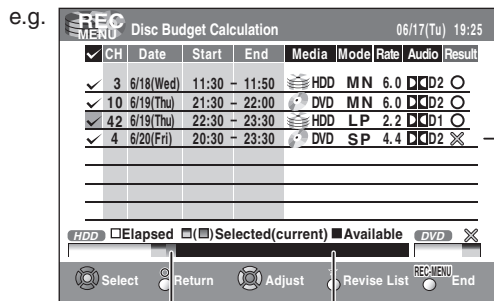
Selected entry   Available disc volume

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

5) **Correct the parameters of the entry if necessary.**
   (Skip to step 7 if you do not need this.)
   You can change "Media", "Mode", "Rate", 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.

6) **Press the ★ button.**
   Programme modification is registered.

7) **Press the REC MENU button to exit the GUI.**

Notes
• When a Reservation disc is inserted in the recorder (▷ page 75), you cannot check the remaining volume of other discs.
• You can calculate up to eight programmes at a time for remaining volume, starting from one closer to the start time of the programme entry.

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■ To stop recording
Press the STOP button.

■ To pause recording (to omit an unnecessary portion)
During recording, press the PAUSE button.
To resume recording, press it again.

Note
• Pausing recording automatically creates a new chapter at that point.

■ To stop a programmed recording
To finish,
Press the ■ button on the front panel twice.
When you press it once, a message appears. While the message is displayed, press the ■ button once again.
(This operation is not applicable while a menu is displayed.)

To pause recording,
Press the ❙❙ button on the front panel.
To resume recording, press it again.

■ To change a TV channel to be recorded
1) **During recording, press the PAUSE button.**
   Recording pauses.

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

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

■ To view a TV programme while recording another
1) **Start recording on this recorder.**

2) **Press the TV/DVR button on the remote control.**

3) **Using the channel selector of the TV, select a desired channel on the TV.**
   If you press the TV/DVR button again, you will go back to the display that you are recording.

Note
• If you start the GUI display while watching a TV programme, you will go back to the recording display.

■ To record and play at the same time
● **To start recording while playing a disc**
Stop playback, then select the other disc by pressing the HDD or DVD button, and start recording on that disc.

● **To play a disc while recording on another disc**
Select the disc that is not being recorded by pressing the HDD or DVD button, and start playback on the disc.

■ To set an end time while recording is in progress
1) **During recording, press the QUICK MENU button.**
   The Quick Menu appears.

2) **Press the ▲ / ▼ buttons to select "End Time" then press the ENTER button.**
   The display changes as follows:

e.g.

End Time	14:13

3) **Press the ◄ / ► buttons to select an item then press the ADJUST button to change the value.**

4) **Press the ENTER button.**

Note
• 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 keeps an entry of recording.
• You cannot change the end time, once the setting is completed.
• The programmed end time must be set for after 5 minutes from the current time.

■ To turn the power off automatically after completing a programmed recording
1) **While performing a programmed recording, press the QUICK MENU button.**
   The Quick Menu appears.

2) **Press the ▲ / ▼ buttons to select "Auto Power Off" then press the ENTER button.**

Tips on recording (continued)

■ **To delay the end time while executing a programmed recording**
Press the EXTEND button under the lid of the remote control.
When you press it once, the current end time appears. Each time you press the button, the end time (displayed in the front panel display) is delayed in 10 minutes increments, up to 60 minutes.

Notes
• Pressing any button other than the EXTEND button completes this procedure to determine the end time.
• This operation must be performed prior to 1 minute before the programmed end time.
• A recording automatically finishes when the disc is full or when the recording exceeds 8 hours regardless of whether or not you delayed the end time.

■ **To play a title recorded on the HDD while recording on the HDD (Recorded Title Play in HDD)** HDD
This function works only during HDD recording.
You cannot play a title recorded on a DVD-RAM disc simultaneously with DVD-RAM recording.

1) **While recording on the HDD, press the CONTENT MENU button.**
2) **Press the ▲ / ▼ / ◄ / ► buttons to select a desired title, then press the ENTER button.**
Playback of the selected title starts.

Pressing the STOP button stops playback, and the content that is being recorded appears on the display. If you press the PLAY button, playback resumes from the location you last stopped.

Notes
• 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)
• While performing relay recording (▷ page 74), this function is not available.

■ **Entering the recording format on the DVD-R**
When "DVD-R Broadcast Record" is set to "Off", make sure "NICAM" is set to "On" and "L-PCM" is selected for sound.

■ **To record broadcast programmes on DVD-R**
When recording, make sure that "DVD-R Broadcast Record" is set to "On" (▷ page 143).
For programmed recording, set "DVD-R Broadcast Record" to "On" for each programmed recording. (▷ page 38)

Notes
• You cannot close the disc tray automatically at the recording start time. If you want to record on a DVD-RAM disc, load it on the recorder beforehand.
• While recording, you cannot change the settings of a programme, such as the channel, mode, etc.
• The number of titles cannot exceed in any case 99 for a DVD-RAM and 198 for the HDD.
• You cannot record on both an HDD and a DVD-RAM disc at the same time (except relay recording).
• The maximum length of a recording is 8 hours. Recording automatically stops when length exceeds 8 hours.
• While performing a programmed recording, you cannot programme a new entry.
• You may not be able to start recording if there is too little time before a programmed recording begins.
• If a power failure occurs during a programmed recording, a recorded content between the power failure and power recovery is lost.
• If an HDD starts programmed recording while you are playing a disc in the DVD drive, the picture may pause momentarily.
• When you record monaural sound, the same sound is recorded to both left and right channel.
• To select NICAM, set "NICAM" to "On" (▷ page 140).
• When you set "DVD-R Broadcast Record" to "Mode I" or "Mode II" (▷ page 143), only the selected sound of the bilingual programme (main or sub) is recorded. When setting "DVD-R Broadcast Record" to "Off", you need to have set "NICAM" to "On". (If the NICAM setting is "Off", the NICAM sound will not be recorded.)

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■ **To delete recorded content**

Important note

Any deleted Original title or Original chapter (▷ page 112) cannot be restored.

Before deleting, be sure to check contents on the disc.

ENTER

▲ / ▼ / ◀ / ▶
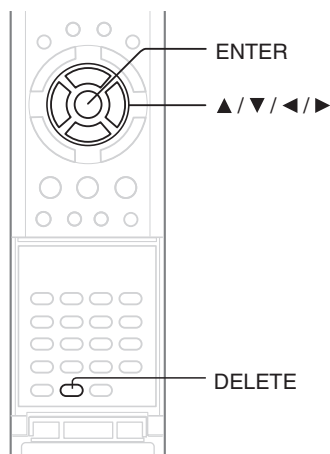
DELETE

1) **Perform steps 1 and 2 in "Playing recorded contents (CONTENT MENU)" (▷ page 30) to select a title (chapter).**

2) **Open the lid of the remote control and press the DELETE button.**
   Alternatively
   Press the QUICK MENU button, then press the ▲ / ▼ buttons to select "Title Delete" ("Chapter Delete") from the Quick Menu and press the ENTER button.

3) **Check the message and press the ◀ / ▶ buttons to select "Yes", then press the ENTER button.**

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 112) title/chapter does not affect the original title/chapter.
- Deleting an original (▷ page 112) title/chapter affects all the corresponding playlist title/chapters.
- Deleting all chapters in a title erases the title itself.
- Chapters in a title which contains still pictures cannot be deleted.

■ **To protect recorded content**

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 30) to select a title.**

2) **Press the QUICK MENU button, and press the ▲ / ▼ buttons to select "Title Information". Then press the ENTER button.**

3) **Press the QUICK MENU button in "Title Information" screen, and press the ◀ / ▶ buttons to select "Lock" from the Quick Menu. Then press the ENTER button.**
   The mark 🔒 appears.

Notes
- To cancel protection, repeat this procedure.
- Disc initialization erases all titles on a disc even if they are protected.
- If you perform All HDD Titles Delete, all titles are deleted from HDD including those protected.

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| HDD | DVD-RAM | DVD-VIDEO | VCD | CD |

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.

e.g.
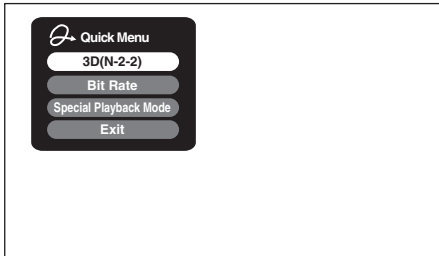
> **Quick Menu**
> **3D(N-2-2)**
> **Bit Rate**
> **Special Playback Mode**
> **Exit**

Opening a Quick Menu

1 **Press QUICK MENU.**

The Quick Menu appears.

QUICK MENU

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

ENTER

■ **To exit the Quick Menu**
Press the QUICK MENU button again.
Alternatively
Select "Exit" with the ▲ / ▼ buttons, then press the ENTER button.

Functions in a Quick Menu

Besides these examples, various other ones are introduced on respective pages for your convenience.

■ To play repeatedly (Repeat playback)

You can repeat a desired section.

Disc: HDD   DVD-RAM   DVD-VIDEO   VCD   CD
Status: Play

Item: Special Playback Mode

A sub menu appears. Use the ▲ / ▼ buttons and
ENTER button to make a selection.

 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.

Ⓐ Ⓑ Set A
repeat

To cancel the procedure, press the ○ button.

**1) Press the ENTER button 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 the ENTER button 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 :
To repeat the same track.

 Disc repeat :
To repeat the entire disc.

 Repeat All ORG Titles :
To repeat all original titles in a disc.

 Repeat All PL Titles :
To repeat all playlist titles in a disc.

 Cancel repeat : (in Repeat playback mode)
To resume normal playback.
Playback of an HDD or DVD-RAM stops.

Notes
- Some discs may not permit repeat operation.
- You cannot use repeat playback in conjunction with
Random play.
- If you press the STOP button during repeat playback, this
operation is canceled.
- While you are performing repeat playback on an HDD or a
DVD-RAM disc, other operations except pause play is not
available.

■ To play in random order (Random play)

You can play sections in random order.

Disc: DVD-VIDEO   VCD   CD
Status: Stop / Play

Item: Special Playback Mode

A sub menu appears. Use the ▲ / ▼ buttons and
ENTER button to make a selection.

 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.

 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 random operation
cancels random playback.

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Quick menu operation (Continued)

■ **To play in favorite order (Memory playback)**
You can select 30 titles, chapters, or tracks and play them in favorite order.
(To play contents in an HDD or DVD-RAM disc in favorite order, make a playlist. For details, see "Editing" on ▷ page 111.)

Disc: DVD-VIDEO   VCD   CD
Status: Stop / Play

Item: Special Playback Mode

A sub menu appears. Use the ▲ / ▼ buttons and ENTER button to make a selection.

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

e.g.

01 T	CT	11 T	CT	21 T	CT
02 T	CT	12 T	CT	22 T	CT
03 T	CT	13 T	CT	23 T	CT
04 T	CT	14 T	CT	24 T	CT
05 T	CT	15 T	CT	25 T	CT
06 T	CT	16 T	CT	26 T	CT
07 T	CT	17 T	CT	27 T	CT
08 T	CT	18 T	CT	28 T	CT
09 T	CT	19 T	CT	29 T	CT
10 T	CT	20 T	CT	30 T	CT

1) Input numbers of a titles, chapters, or tracks by using the number buttons, in favorite order.
Input each number.
To cancel the numbers, press the CLEAR button.
To input a chapter number, press the ◄ / ► buttons to shift the cursor.

2) Press the ▲ / ▼ buttons 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 programme up to 30 selections into memory.

3) Press the ENTER button.

Memory : (in normal playback mode)
To display an entry box for one programme 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 programme/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**

Disc: `HDD` `DVD-RAM` `DVD-VIDEO`
Status: Stop / Play

Item: **Bit rate**

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

■ **To use virtual surround sound effect**
You can obtain expansive virtual surround sound effects from just two speakers. (3-D sound)

Disc: `HDD` `DVD-RAM` `DVD-VIDEO` `VCD` `CD`
Status: Play

Item: **3D (N-2-2)**

A sub menu appears. Use the ▲ / ▼ buttons and ENTER button to make a selection.

Off :

3D effect is turned off.

On :

3D effect is activated.

Headphone :

A 3D effect designed especially for headphone sound is activated.

Notes
• You may notice a change in apparent volume level when using this function.
• This function may not work depending on the sound format and the setting (⇨ page 59).
• Dolby Surround Pro Logic may not work at all or correctly when using the 3D sound effect.

■ **To check information on a title**

Disc: `HDD` `DVD-RAM`
Status: Play, Displaying the CONTENT MENU or LIBRARY, or selecting parts in the EDIT MENU screen.

Item: **Title Information**

■ **To programme the recorder to turn itself off automatically after an operation is finished**

Disc: `HDD` `DVD-RAM`
Status: During timer programme recording, dubbing, creating DVD-R, setting Block Delete, or performing Physical Format.

Item: **Auto Power Off**

Note
• This function will be canceled if the initial operation was not completed properly, e.g., canceled or interrupted.

■ **To playback each title from the beginning**

Disc: `HDD`
Status: Play

Item: **Restart Title**

■ **To exit the Quick Menu**

Disc: `HDD` `DVD-RAM` `DVD-VIDEO` `VCD` `CD`
Status: While the Quick Menu is displayed.

Item: **Exit**

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Playback

GUI (Graphical User Interface) will help you to make
more easier and entertaining playback.

- ● **Playing at various speeds**
- ● **Locating by entering the number**
- ● **Pausing a TV broadcast to resume later**
- ● **Playing a TV programme currently being recorded**
- ● **Selecting the camera angle**
- ● **Selecting the Sound**
- ● **Selecting Subtitles**
- ● **Zooming a picture**
- ● **Watching a TV broadcast in the sub window (P in P Playback)**
- ● **Checking the current status and settings**
- ● **Using the graphic remote control (Virtual Remote)**

HDD | DVD-RAM | DVD-VIDEO | VCD | CD

Playing at various speeds

Playing in fast reverse or fast forward | HDD | DVD-RAM | DVD-VIDEO | VCD | CD
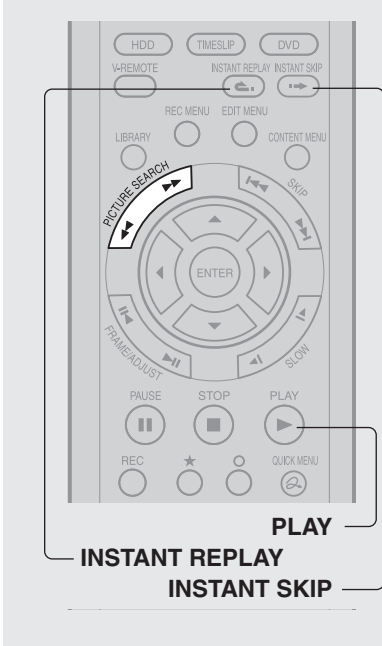
1 During normal playback, press PICTURE SEARCH.
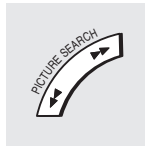
►► : Fast forward playback
◄◄ : Fast reverse playback

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

PLAY
INSTANT REPLAY
INSTANT SKIP

Notes
• The sound is muted and the subtitles are turned off during fast reverse and fast forward operation.
• The playback speed may vary depending on the disc.

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

■ **To skip the contents for a while**
HDD | DVD-RAM

During playback, press the INSTANT SKIP button.
Every time you press the button, the specified time period is skipped.
To specify the time period to skip, use the Instant Skip Interval under Operational Settings. (➡ page 141)

■ **Time bar display**
Fast-forward or fast-reverse playback automatically displays a time bar.

e.g.

Pause TV		x1
12:57:43	Location 19:57:48	22:57:43
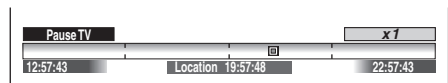
For details, see ➡ page 64.

■ **To skip back momentarily**
HDD | DVD-RAM | DVD-VIDEO | VCD | CD
During normal playback, press the INSTANT REPLAY button.
Every time you press the button, the recorder goes backward for the specified time period and resumes playback.
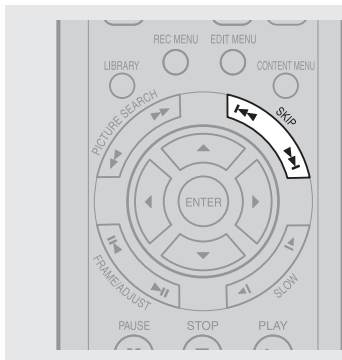To specify the time period to go back, use the Instant Replay Interval under Operational Settings.
(➡ page 141)

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.

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

1 **Press SKIP (⏮/⏭) repeatedly until the chapter or track number you want appears.**
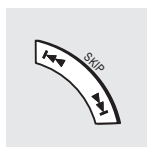
Playback starts from the selected chapter or track.

⏭ : 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 the HDD or a DVD-RAM disc, you can access chapters only in the current title if "HDD/RAM Title Play" (⇨ page 141) is set to "Title Resume". To access chapters in other titles, set to "Serial Playback".
- When playing a DVD video disc, you can locate chapters only in the current title if "DVD Title Stop" (⇨ page 138) 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   HDD   DVD-RAM   DVD-VIDEO   VCD
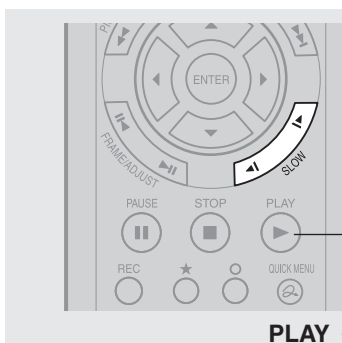
PLAY

1 **Press SLOW during playback.**

|▶ : Forward slow-motion
◀| : Reverse slow-motion

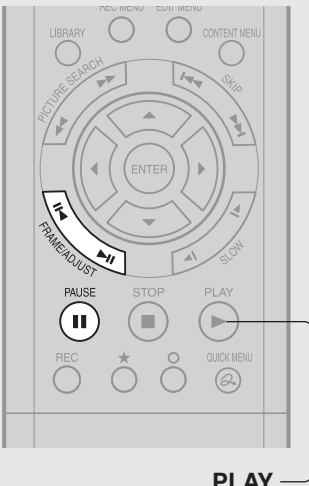Each time you press the SLOW button, the slow-motion speed changes.

Notes
- Slow-motion does not provide smooth playback.
- When playing contents recorded in "Pause TV" or "Chase Play", reverse slow-motion playback is not available.
- When playing a VIDEO CD, reverse slow-motion playback is not available.
- The speed level displayed is approximate.

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

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Various speed playback (Continued)

Playing frame by frame | HDD | DVD-RAM | DVD-VIDEO | VCD |

1 **During playback, press PAUSE.**

PAUSE

A still picture is displayed.

2 **Press FRAME (▐◀/▶▐).**

FRAME/ADJUST

▶▐ : 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.
• Pressing the FRAME button may advance the picture more than 1 frame at a time.
• Depending on the scene, some frames may not be played.
• When playing contents in the "Pause TV" mode or the "Chase Play" mode, frame by frame playback is not available.
• When playing a VIDEO CD, frame by frame playback is not available.

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

1 **Press PLAY.**

PLAY

The first still picture on a disc is displayed.

2 **Press FRAME (▐◀/▶▐).**

FRAME/ADJUST

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

HDD	DVD-RAM	DVD-VIDEO	VCD	CD

Locating by entering the number

Locating by entering the number of a desired section | HDD | DVD-RAM | DVD-VIDEO | VCD | CD |

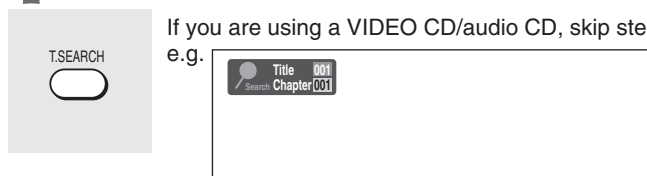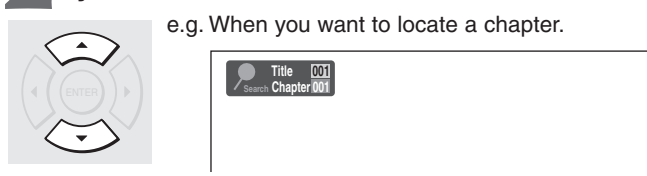Normally titles, chapters, and tracks are numbered. By entering these numbers, you can access a desired section.

Open the lid.

CLEAR
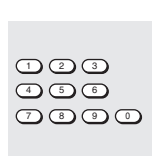
1 Press T.SEARCH.

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

	Title	001
Search	Chapter	001

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

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

	Title	001
Search	Chapter	001

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 recorded on the HDD or a DVD-RAM is erased, the numbers of the following titles decrease respectively.
- When you record a new title (Original), it is added prior to current Playlist titles, and each following Playlist title reference number will advance by a factor of 1.

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Locating by entering the number (Continued)

Locating a specific point by entering its elapsed time (Time Search) `HDD` `DVD-RAM` `DVD-VIDEO` `VCD` `CD`

1 Press T.SEARCH.

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

T.SEARCH

e.g.

| Title | 001 |
| Search Time | 00:00:00 |

2 Press the number buttons and ◄ / ► to enter the desired time location on the disc.
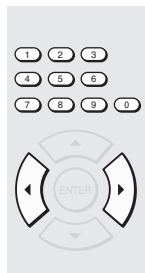
e.g. To enter 1 hour, 25 minutes, and 30 seconds

"1" → "►" → "2" → "5" → "►" → "3" → "0"
hour   minute   second

3 Press ENTER.

Playback starts from the selected location.

Open the lid.

CLEAR

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 an HDD/DVD-RAM/DVD video disc or within a current track of a VIDEO CD/audio CD.
• Pressing the CLEAR button resets the numbers.

HDD

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 the HDD.

1 While viewing a TV broadcast via this recorder, press TIMESLIP.

TIMESLIP

The current picture pauses.
The recorder begins to store the broadcast on the HDD 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.
• Resume playback may not start 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.
Slow-motion:
Press the SLOW |► button.
Forward frame by frame play:
First press the PAUSE button then press the FRAME ►II button.

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

4 Press TIMESLIP to exit this mode.

TIMESLIP

The recorder stops storing the broadcast on the HDD.
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 ►II

TIME BAR

PICTURE SEARCH

SLOW |►

Notes
• This function is not available during recording.
• While using this pause TV recording, reverse slow-motion playback and reverse frame by frame playback are not available.
• Pause TV recording stops when the HDD is filled up. It will not begin if the HDD is full.
• While using this pause TV recording, you cannot programme the recorder.
• Pause TV recording does not start to work automatically at turning–on of the power. Every time you want to use this function, perform the steps 1 to 4 above.

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`HDD`

Playing a TV programme currently being recorded

You can begin playback from the beginning of a programme currently being recorded. (Time slip recording/playback)
You will find this function of great advantage on long programmes, as you do not have to wait for the end of recording to begin playback.
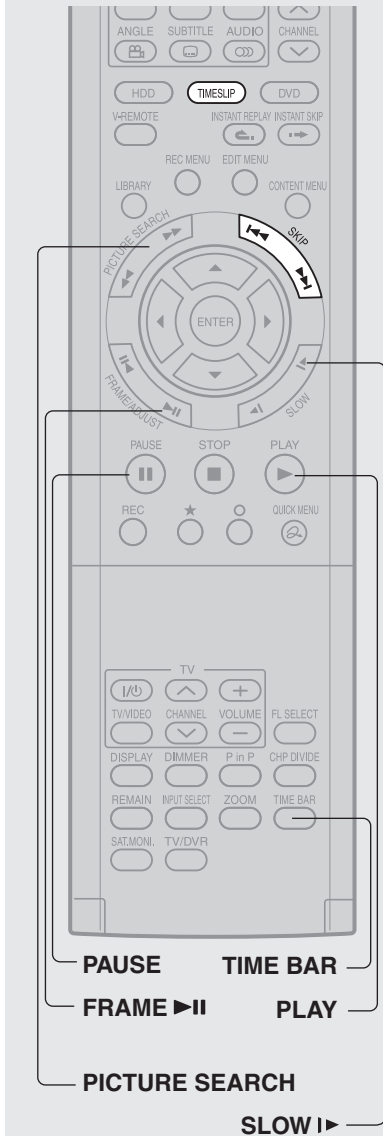
1 **While recording a TV programme on the HDD, press TIMESLIP.**

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

TIMESLIP

2 **Go back to the beginning of the TV programme 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.
Slow-motion:
Press the SLOW ❙► buttons.
Forward frame by frame play in:
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.
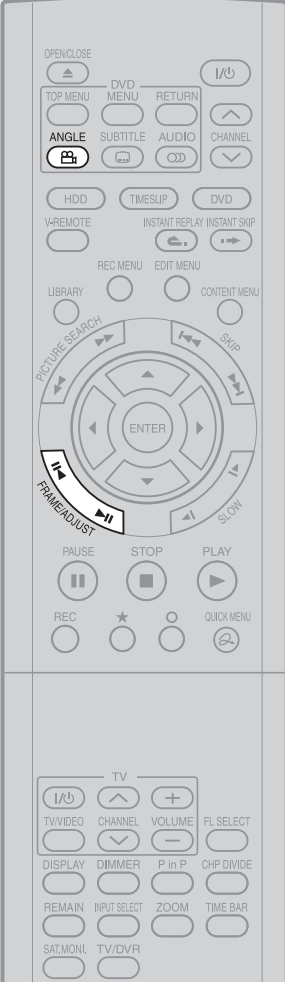
4 **Press TIMESLIP to exit.**

The current broadcast returns.

TIMESLIP

PAUSE   TIME BAR
FRAME ►❙❙   PLAY
PICTURE SEARCH
SLOW ❙►

Notes
• While using time slip recording/playback, reverse slow-motion playback and reverse frame by frame playback operations are not available.
• Time slip recording/playback is not available when recording on a DVD-RAM disc.
• Time slip recording/playback stops when the HDD is filled up. You can play up to a location where the recorder stopped the recording. The time slip recording/playback cannot begin if the HDD is full.
• Time slip recording/playback is not available immediately after a recording starts.
• The playback location will never be identical to the record location in the programme. It will always trail the record location by a few seconds.
• While using time slip recording/playback, you cannot programme the recorder.
• If you want to turn off the power at the end time of recording, finish the setting prior to engaging this function. Auto power off setting is not available in time slip recording/playback mode.
• If you set the auto power off function for the end of recording, the recorder turns off automatically after you exit the mode by pressing the TIMESLIP button, not after the recording is complete.

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DVD-VIDEO

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 flashing.

e.g.

Angle icon

Angle 1 / 6

└─ Total number of angles

Current selection

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

FRAME/ADJUST

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 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 140).
While the angle icon is flashing on the front panel display, you can change the camera angle.

HDD   DVD-RAM   DVD-VIDEO   VCD

Selecting the Sound

You can select a preferred language and a sound format.

1 Press AUDIO during playback or while receiving a broadcast.

AUDIO

The current audio setting appears.

The language code appears instead of the language name. Refer to the list of languages and their codes. (▷ page 158)

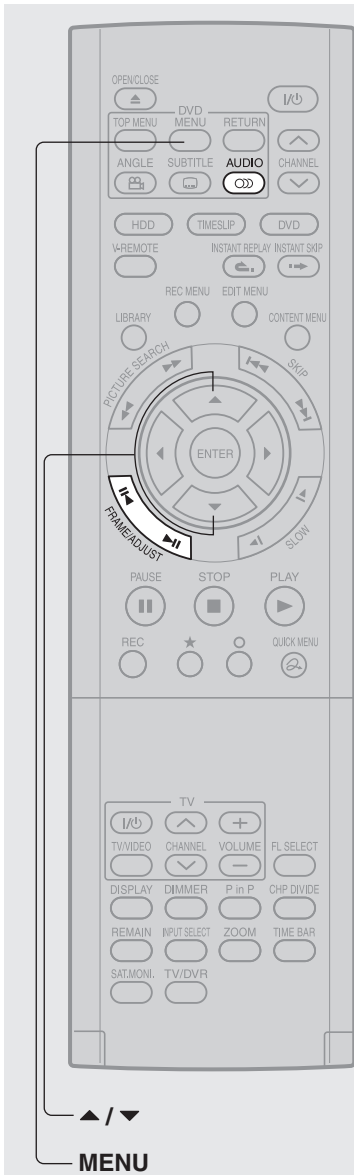## 2 Press ADJUST while the audio setting is displayed on the TV screen.

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

• HDD   DVD-RAM

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

Dual Mono sound (NICAM)

Dual L → Dual R → Dual LR (→ Back to Dual L)
(You can change the mode when Dual broadcasting is on.)

• DVD-VIDEO

Language name / sound recording system / No. of channels

e.g.

Sound	1 English PCM 2ch
Output	Bitstream

• 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 139) by using the ADJUST button.

▲ / ▼

MENU

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Sounds recorded on the HDD/DVD-RAM disc

According to your setting of "NICAM" on the setup menu screen, (⇨ page 140), the sound is recorded onto different channels of the disc below. Set "NICAM" to "On" or "Off" appropriately.

Setting on the setup screen		Type of receiving broadcast	Contents of recorded sound		Type of record
DVD-R Broadcast Record	NICAM		Lch	Rch	
Off	Off	Mono + NICAM L, R	Mono	Mono	Stereo
		Mono + NICAM M1, M2	Mono	Mono	Stereo
		Mono + NICAM M1	Mono	Mono	Stereo
		Mono	Mono	Mono	Stereo
	On	Mono + NICAM L, R	L	R	Stereo
		Mono + NICAM M1, M2	M1	M2	Dual Mono*
		Mono + NICAM M1	M1	M1	Stereo
		Mono	Mono	Mono	Stereo
On (Mode I)	Off	Mono + NICAM L, R	Mono	Mono	Stereo
		Mono + NICAM M1, M2	Mono	Mono	Stereo
		Mono + NICAM M1	Mono	Mono	Stereo
		Mono	Mono	Mono	Stereo
	On	Mono + NICAM L, R	L	R	Stereo
		Mono + NICAM M1, M2	M1	M1	Stereo
		Mono + NICAM M1	M1	M1	Stereo
		Mono	Mono	Mono	Stereo
On (Mode II)	Off	Mono + NICAM L, R	Mono	Mono	Stereo
		Mono + NICAM M1, M2	Mono	Mono	Stereo
		Mono + NICAM M1	Mono	Mono	Stereo
		Mono	Mono	Mono	Stereo
	On	Mono + NICAM L, R	L	R	Stereo
		Mono + NICAM M1, M2	M2	M2	Stereo
		Mono + NICAM M1	M1	M1	Stereo
		Mono	Mono	Mono	Stereo

Notes
- Some discs allow you to change audio selections only via the disc menu. In this case, press the MENU button and choose the appropriate audio 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 136) Depending on the disc, the sound that is specified the disc is played back.
- When you change the audio selection, the display and the audio may mismatch for an instance.
- When you use the bitstream/PCM audio output terminal for connection to an amplifier, you may not be able to change the bilingual audio selection. In this case, set the "Audio Out Select" to "PCM". (⇨ page 139)
- You cannot change a sound when recorded with "DVD-R Broadcast Record" function set to "On". (⇨ page 143)

■ Output sound conversion table

Disc	SOUND FORMAT		Setting of "Audio Out Select" (⇨ page 139) in the Initial Settings menu and output jack					
			BITSTREAM		ANALOG 2CH		PCM	
			BITSTREAM/PCM DIGITAL AUDIO OUTPUT JACK	ANALOG 2CH JACK	BITSTREAM/PCM DIGITAL AUDIO OUTPUT JACK	ANALOG 2CH JACK	BITSTREAM/PCM DIGITAL AUDIO OUTPUT JACK	ANALOG 2CH JACK
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/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/20 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	48 kHz/24 bit
		96 kHz/16 bit	48 kHz/16 bit	48 kHz/16 bit	—	96 kHz/16 bit	48 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	48 kHz/20 bit
		96 kHz/24 bit	48 kHz/16 bit	48 kHz/24 bit	—	96 kHz/24 bit	48 kHz/16 bit	48 kHz/24 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)
HDD	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
DVD-RAM	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

3D (N-2-2) playback is possible (⇨ page 140)

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

HDD DVD-RAM DVD-VIDEO

Selecting Subtitles

You can display subtitles on the TV screen and select a subtitle language from those included on the DVD video disc.
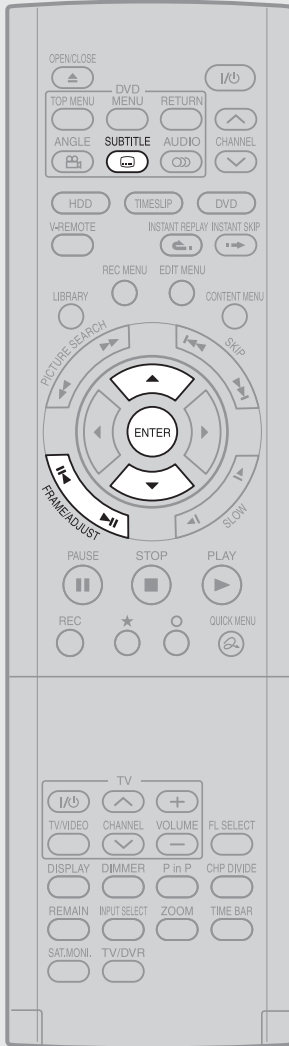
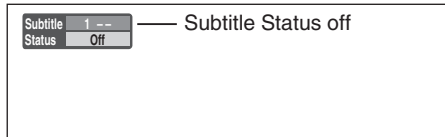## 1 Press SUBTITLE during playback.

SUBTITLE

The current subtitle setting is appears.

e.g.

| Subtitle | 1 -- | — Subtitle Status off |
| Status | Off | |

The language code appears instead of the language name. Refer to the list of languages and their codes. (<span>page 158)

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.

Good evening!   Bonsoir!   • • •

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.