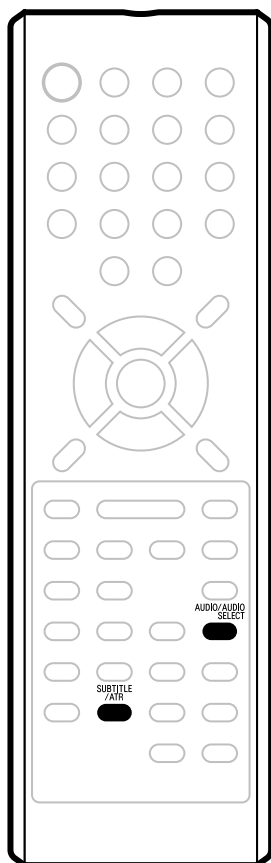


Changing soundtrack language / Subtitles

DVD-Video



Changing soundtrack language

You can select the language when you play a multilingual disc.

1 Press AUDIO during playback.

The current soundtrack language will appear.

2 Press AUDIO repeatedly until the desired language is selected.

The on-screen display will disappear after a few seconds.

Turning the subtitles On and Off

When playing back a disc recorded with subtitles, you can turn the subtitles on or off.

Press **SUBTITLE** during playback until "Subtitle OFF" appears.

Changing the subtitle language

You can select the language when playing back a disc recorded with multilingual subtitles.

Press **SUBTITLE** repeatedly during playback until your desired language appears.

The on-screen display will disappear after a few seconds.



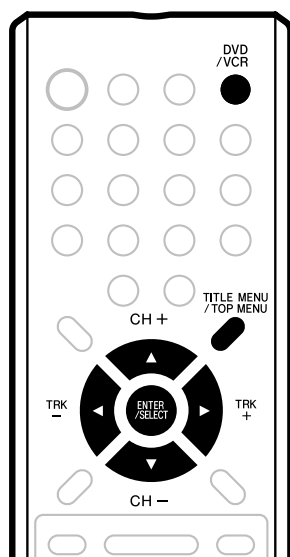
Note

- If the desired language is not heard after pressing the button several times, the language is not recorded on the disc.
- Changing soundtrack or subtitle language is cancelled when you open the disc tray. The initial default language or available language will be heard and seen if the disc is played back again.
- Depending on the DVD you may be unable to turn on, turn off, or change the subtitles, even if they are recorded on the disc. While playing the DVD, the subtitles may change while opening or closing the disc tray, or while changing the title.
- In some cases, the subtitles language is not changed to the selected one immediately.

The CD Track Info screen

CD

This section describes the TRACK INFO screen where music CDs can be played back using the various operations.



Note

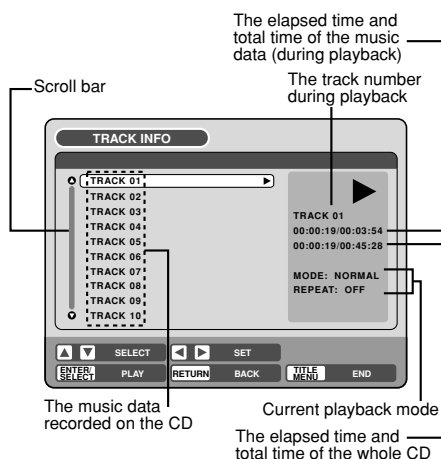
- In case the disc includes more than 10 tracks, you can turn to the next or the previous page. Press ◀, then press ▼ or ▲ to display next/previous page. To return to normal use, press ▶.
- You cannot switch to the VCR mode when the TRACK INFO screen is showing. Press **TITLE MENU/TOP MENU** to clear the TRACK INFO screen, then press **DVD/VCR** to switch to the VCR mode.

Preparation:

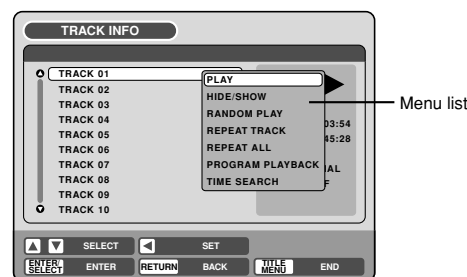
- Turn ON the TV and set to the video input mode.
- Load the music CD.
- Press **DVD/VCR** to select the DVD mode. (The DVD indicator will light.)

Press **TITLE MENU/TOP MENU**.

The TRACK INFO screen will appear.



Press ▶. The menu list will appear.



Playing back a selected track

- Press ▲ or ▼ to select the track number you want to playback and press ▶.
- Press ▲ or ▼ to select "PLAY" from the menu list and press ENTER.

The selected track will be played back.

Excluding specified track

- During stop, press ▲ or ▼ to select the track number you do not want to playback and press ▶.
- Press ▲ or ▼ to select "HIDE/SHOW" from the menu list and press ENTER.

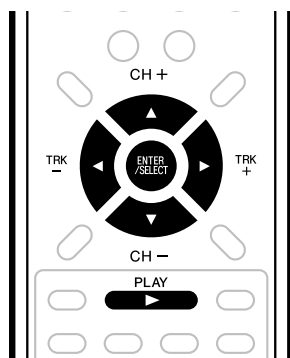
The selected track will not be played back. ("H" appears at the side of the track number.)

When you want to cancel the exclusion, press ▲ or ▼ to select the track number with "H" and press ▶.

Press ▲ or ▼ to select "HIDE/SHOW" from the menu list and press **ENTER**, "HIDE" will be cancelled.

Random, repeat and program play

CD



Note

- "RANDOM PLAY" and "TIME SEARCH" will not appear in the menu list for CD-R/CD-RW discs containing MP3 or WMA files.

Random playback

1 Press ▲ or ▼ to select "RANDOM PLAY" from the menu list and press ENTER.

2 Press PLAY.

Music is played back in random order.

To cancel random playback, select "RANDOM PLAY" from the menu list again, and press ENTER.

Repeat playback of selected track

1 Press ▲ or ▼ to select the track number you want to repeat and press ►.

2 Press ▲ or ▼ to select "REPEAT TRACK" from the menu list and press ENTER.

3 Press PLAY.

The selected track will be played back repeatedly.

To cancel repeat track playback, select "REPEAT TRACK" from the menu list again, and press ENTER.

Repeat playback of all tracks

1 Press ▲ or ▼ to select "REPEAT ALL" from the menu list and press ENTER.

2 Press PLAY.

All tracks on CD will be played back repeatedly.

To cancel the repeat all playback, select "REPEAT ALL" from the menu list again, and press ENTER.

Playing back programs

You can specify the playback order yourself.

1 Press ▲ or ▼ to select "PROGRAM PLAYBACK" from the menu list and press ENTER.

2 Press ▲ or ▼ to select to the track number that you want to change the order of and press ENTER. The "►" mark will appear at the right side of the track number.

3 Press ▲ or ▼ to select to the track number that you want to specify and press ENTER.

The track number that you select in step 2 moves to the position that you specified.

4 Repeat steps 2 and 3 to change the playback order.

5 Press PLAY.

The tracks will be played back in the changed order.

To cancel program playback, select "EXIT PROGRAM MODE" from the menu list and press ENTER.

Playing back track by specifying the time

1 Press ▲ or ▼ to select "TIME SEARCH" from the menu list during playback and press ENTER.

2 Press ▲ / ▼ or ◀ / ▶ to specify the elapsed time of the track (this will be the starting point of playback) and press ENTER.

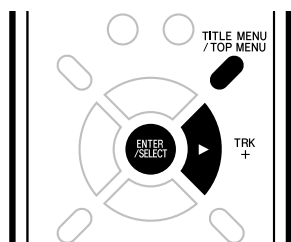
Playback will start from the specified elapsed time.

MP3/WMA/JPEG playback

CD

MP3 and WMA files can be played back. Also, you can display JPEG files on the TV screen and enjoy them as a slide show.

Some discs may not play due to the condition of the recording.



Limitations on MP3/WMA/JPEG CD playback:

- MP3/WMA/JPEG CD is a disc that is standardized by ISO9660.
- The directory and file names of the MP3/WMA/JPEG CD must correspond to the ISO standardized file names.
- This unit can read 200 files per disc. If one directory has more than 200 files, it reads up to 200 files, the remaining files will be omitted.
- The unit is able to recognize up to a maximum of 50 directories per disc.
- MP3/WMA CDs cannot be used for playback for the purpose of recording.
- MP3/WMA/JPEG CDs may be used for playback, but not for recording.
- If the CD has both audio tracks and MP3/WMA/JPEG files, only audio tracks are played.
- It may take more than one minute for this unit to read MP3/WMA/JPEG files depending on its structure.
- Music recorded by "Joliet Recording Specification" can be played back. Long file names will be cut.
- Discs recorded using the "Hierarchical File System" (HFS) cannot be played.

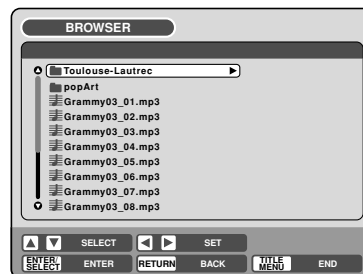
Preparation:

- Turn ON the TV and set to the video input mode.
- Load the disc storing MP3, WMA or JPEG.
- Press **DVD/VCR** to select the DVD mode. (The DVD indicator will light.)

Using the BROWSER screen

1 Press TITLE MENU.

The BROWSER screen will appear.



2 The MP3, WMA and JPEG files and folders stored in the disc are displayed on the BROWSER screen.

- Select a folder and press **ENTER**. The files in the folder appear.

When the file to be displayed is selected

You can select the file types to be displayed on the BROWSER screen.

1 Press ► to select "SELECT FILES" and press ENTER.

The following list will appear.



MUSIC ONLY:

Only the MP3 and WMA files appear.

PICTURES ONLY:

Only the JPEG files appear.

ALL:

All files and folders appear.

2 Select one item in the above list and press ENTER.

The display will be changed to the selected display type.

Playing back MP3/WMA files

MP3 CD

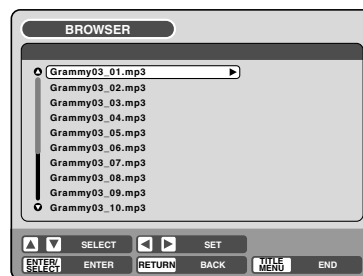
- MP3 files must have the extension letters ".mp3".
- Standard, sampling frequency, and the bit rate:
MPEG-1 Audio
32kHz, 44.1kHz, 48kHz
32kbps to 320kbps (constant bit rate or variable bit rate)
- The recommended recording setting for high quality sound is 44.1kHz sampling frequency and 128kbps of constant bit rate.

WMA CD

- When creating a WMA disc, make sure that the copyright function is off. DRM (Digital Rights Management) files cannot be played back.
- WMA files must have the extension letters ".wma".
- Standard, sampling frequency, and the bit rate:
WMA version 7 and 8
32kHz, 48kbps
44.1kHz, 48kbps to 192kbps
48kHz, 128kbps to 192kbps
- Music files recorded as mono, 48kHz, 48kbps cannot be played back in this unit.

1 Press ▲ or ▼ to select MP3 or WMA file.

- In case the disc includes more than 11 files, you can turn to the next or the previous page. (See page 42.)

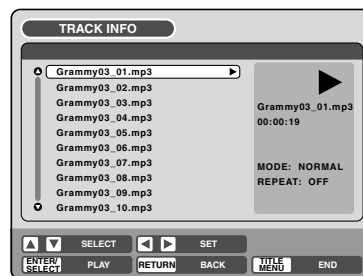


2 Carry out either of the item a or b below.

a: Press **ENTER**.

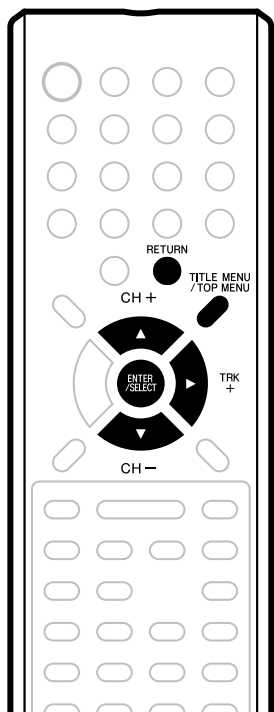
b: Press ► to select "PLAY" and press **ENTER**.

The TRACK INFO screen appears to playback the selected file. For the details of the TRACK INFO screen, see "The CD Track Info screen" on page 42.



3 To return to the BROWSER screen, press **RETURN**.

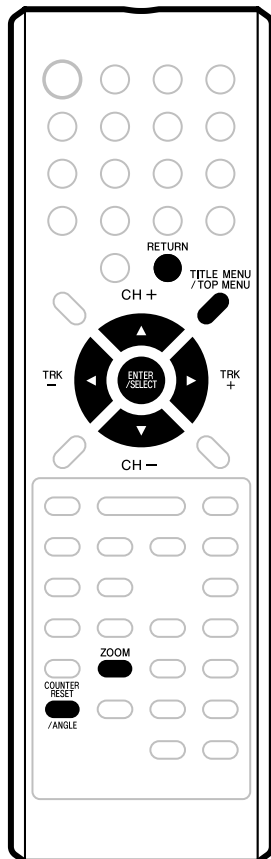
- To stop playback of the MP3 or WMA files, press **TITLE MENU**.



Playing back JPEG files

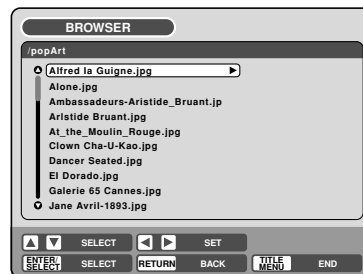
JPEG CD

JPEG files must have the extension letters ".jpe", ".jpeg" or ".jpg".



1 Press ▲ or ▼ to select JPEG file.

- In case the disc includes more than 11 files, you can turn to the next or the previous page. (See page 42.)



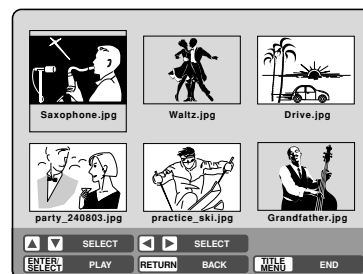
2 Carry out either of the item a or b below.

a: Press **ENTER**.

b: Press ► to select "PLAY" and press **ENTER**.

The thumbnail images of the JPEG files stored in the route directory or the folder appear.

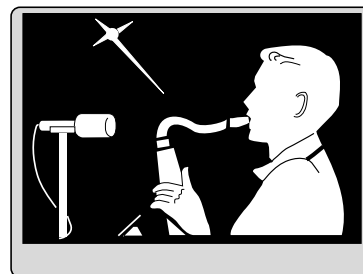
Press ▲, ▼, ◀ or ▶ to select the pages of the thumbnail images, or select the JPEG file to be displayed at first for the slide show.



3 Press ENTER to play the selected picture.

If you have set the interval time for JPEG slide show, the pictures will be played back one after another automatically. (See page 32.)

- Press **ZOOM** to enlarge the displayed image.
- Press **ANGLE** to rotate the image by 90 degrees each time.



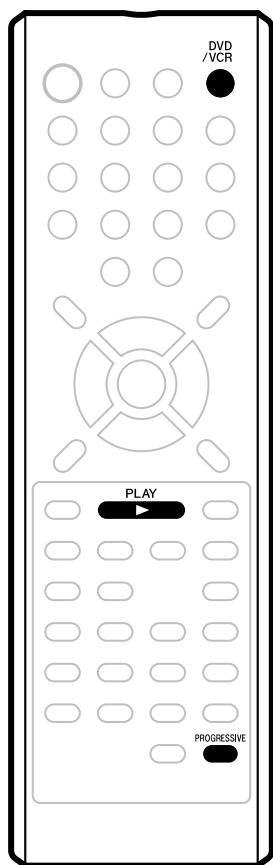
4 To return to the thumbnail screen, press RETURN.

- To stop the slide show, press **TITLE MENU**.

Progressive scan

DVD-Video VR mode Video mode DVD-R

The unit supports the progressive scanning system as well as the conventional interlaced scanning system. If your TV is equipped with component video input jacks which support the progressive video input, you can enjoy higher picture quality by making the progressive scanning mode active.



Preparation:

- Connect to a TV equipped with component jacks which support progressive video input.
- Turn ON the TV and set it to the corresponding video input mode.
- Press **DVD/VCR** to select the DVD mode. (The DVD indicator will light.)

1 Press **PROGRESSIVE** in the stop mode. The **PROGRESSIVE** indicator "**P**" on the display window will light.

- The unit recognizes the picture source (film or video) of the current disc according to the disc information.

2 Press **PLAY** to start playback.



- To make the progressive scanning mode inactive, press **PROGRESSIVE** in the stop mode. The **PROGRESSIVE** indicator "**P**" on the display window will go off.

Different scanning modes

Interlaced scan

Technology that alternately displays odd-numbered scanning lines and even-numbered scanning lines. Also called "480i", "i" meaning "interlace".

Progressive scan

Technology that simultaneously displays odd-numbered scanning lines and even-numbered scanning lines from top to bottom. Also called "480p", "p" meaning "progressive".



Note

- Some discs may not be played back with the progressive scan mode correctly because of the disc characteristics or recording condition.
- There are some progressive TV and High-Definition TV sets that are not fully compatible with the unit, resulting in an unnatural picture when playing back a DVD disc in the progressive scan mode. In such a case, use the interlaced scanning mode.
- You cannot activate the progressive scan mode when:
 - the unit is in the VCR mode.
 - a DVD disc is currently playing. You must stop playback first.

Compatibility of this unit with progressive-scan TVs

Consumers should note that not all high-definition television sets are fully compatible with this product and may cause artifacts to be displayed in the picture. In case of 525 progressive scan picture problems, it is recommended that the user switch the connection to the 'standard definition' output (Interlace). If there are questions regarding our TV set compatibility with this model, please contact our customer service center.

This recorder is compatible with the following Pioneer displays and monitors

Plasma display

PDP-505HD, PDP-5030HD, PDP-4330HD, PDP-5040HD, PDP-4340HD, Pro-1000HD, Pro-800HD, Pro-1000HDI, Pro-800HDI, Pro-1110HD, Pro-910HD, PDP-4300, PDP-5031, PDP-502MX

Projection monitor receiver

SD-641HD5, SD-582HD5, SD-532HD5, SD-533HD5, SD-643HD5, Pro-710HD, Pro-610HD, Pro-510HD, Pro-720HD, Pro-620HD, Pro-520HD, Pro-730HD, Pro-630HD, Pro-530HD, Pro-730HDI, Pro-530HDI, Pro-700HD

Loading and unloading a cassette tape

VCR

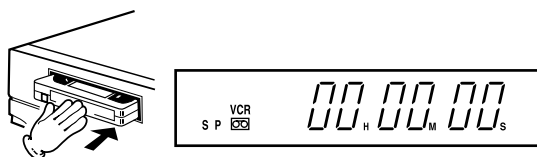
Use only video cassette tapes marked **VHS** and **S-VHS**.

SQPB

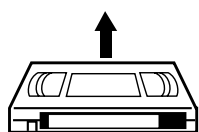
- Cassettes marked "VHS" (or "S-VHS") can be used with this video cassette recorder. However, S-VHS recording is not possible with this model.
- This model is equipped with SQPB (S-VHS QUASI PLAYBACK) that makes it possible to playback S-VHS recordings with regular VHS resolution.
- HQ VHS is compatible with existing VHS equipment.

Loading

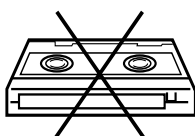
Push the center of the tape until it is automatically inserted.



Insert the cassette tape with its labeled side facing up and the erase prevention tab positioned at your left. An inverted cassette tape cannot be inserted.



Erase prevention tab



Automatic power ON

When you insert a cassette tape the VCR power will turn ON automatically.

Automatic playback

When loading a cassette tape without an erase prevention tab, playback will start automatically.

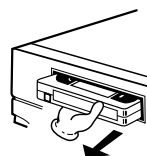
Tape speed and maximum recording time

Tape Speed	Video cassette tape				
	T-160	T-120	T-90	T-60	T-30
SP (Standard Play)	2-2/3 hours	2 hours	1-1/2 hours	1 hour	30 minutes
SLP (Super Long Play)	8 hours	6 hours	4-1/2 hours	3 hours	1-1/2 hours

Unloading

You can eject the video tape while the unit is turned off.

- 1 Press **EJECT** on the unit or the remote control.
- 2 Remove the cassette tape.



Automatic tape eject

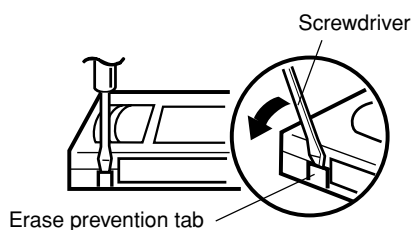
This VCR will automatically rewind the tape when the tape has ended. And when the tape is rewound to its beginning, the cassette tape will be ejected automatically.

To prevent accidental erasure

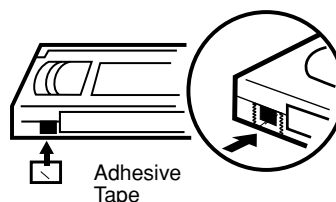
Remove the erase prevention tab with a screwdriver.

To record again

Cover the hole with a piece of adhesive tape.



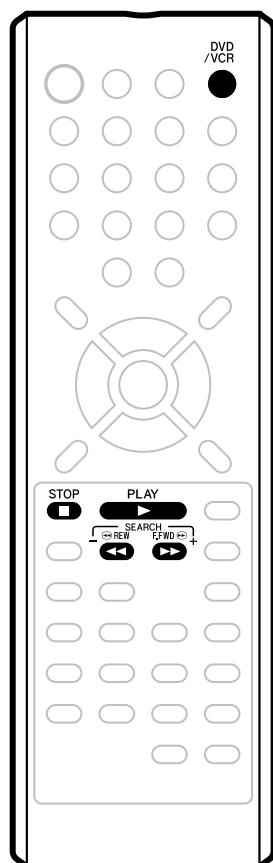
Erase prevention tab



Adhesive Tape

Cassette tape playback

VCR



1 Load a prerecorded tape

(When loading a cassette tape without the erase prevention tab, playback will start automatically).



2 To start playback

Press **PLAY**. Playback will start. "▶" will appear on the screen for about 4 seconds.

To stop playback

Press **STOP** once. The tape will stop but remain fully loaded and ready to play. "■" will appear on the screen for about 4 seconds.

To rewind the tape or forward it rapidly

Press **STOP**.

To rewind the tape:

Press **REW**.

To forward the tape:

Press **F.FWD**.

To stop the tape-winding, press **STOP**. To switch to playback directly (without **STOP**), press **PLAY**.

Forward/Reverse picture search mode

When the tape is being wound, you can switch to picture search mode (see next page). To do this, press **REW** or **F.FWD** and hold it down. The unit will resume the tape winding as soon as the button is released.



Note

- This VCR selects the playback tape speed SP, LP or SLP automatically.
- A cassette tape and DVD disc can be played back simultaneously. If you press **DVD/VCR**, the tape playback and DVD playback alternate with each other on the screen.

Preparation:

- Turn ON the TV and set to the video input mode.
- Press **DVD/VCR** to select the VCR mode. (The VCR indicator will light.)

Special playback

VCR

Picture search

Reverse picture search function

Press **REW** x 1 or x 2 during the playback.

Forward picture search function

Press **F.FWD** x 1 or x 2 during the playback.

To return to playback: Press **PLAY**.

SPEED SEARCH TIMES

TAPE SPEED	PICTURE SEARCH SPEED	
	PRESS ONCE	PRESS TWICE
SP (Standard Play)	3 X	5 X
LP (Long Play)	7 X	9 X
SLP (Super Long Play)	9 X	15 X

Still picture

Press **PAUSE** during playback.

To resume normal playback: Press **PLAY** or **PAUSE**.

Slow motion

During playback press **SLOW**.

To return to playback: Press **PLAY** or **SLOW**.

Slow tracking and vertical lock adjustment

If noise bars appear in the picture during slow motion, press the **TRK +** or **-** to reduce the noise bars.

If the still picture jitters excessively, press **TRK +** or **-** to stabilize the still picture.

Frame by frame picture

Press **PAUSE** during playback.

Press **SLOW** one by one: The picture advances frame by frame.

To return to playback: Press **PLAY** or **PAUSE**.

Adjusting tracking condition

Automatic tracking adjustment

Whenever you insert a tape and start playback, automatic tracking starts working and continuously analyzes the signal to enable optimum picture quality during playback.

Manual tracking adjustment

If automatic tracking cannot eliminate noises well during playback, press **TRK + / -** to eliminate the noises. "MANUAL TR." will appear. Press it briefly for a fine adjustment, or press and hold for a coarse adjustment.

- Press **ATR** to reactivate automatic tracking again. "AUTO TR." will appear.

Note

- The audio output is muted during SPEED SEARCH, STILL, FRAME ADVANCE and SLOW MOTION.
- During picture search mode there will be noise bars which are caused by the system.
- The Special Playback will automatically change to playback after approx. 5 minutes to protect the video tape against excessive wear.

Repeat playback

The entire video tape will be played until its end. The tape will then automatically rewind to the beginning and the playback will be repeated.

1 Press REPEAT while the VCR is playing back.

2 By pressing REPEAT each time, "REPEAT ON" or "REPEAT OFF" is selected in turn.

3 When "REPEAT ON" is selected, the tape is played back to the end, and then, it is automatically rewound to the starting point and played back again.

The display "REPEAT ON" goes out in about 3 seconds. To cancel repeat playback: Press **REPEAT** to select "REPEAT OFF".

Commercial skip

Press **CM SKIP** during playback.

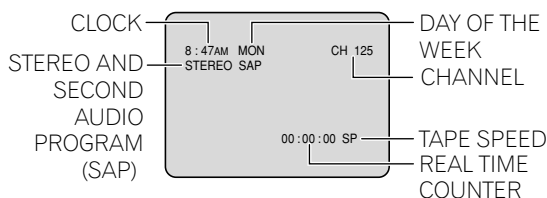
The video is rapidly forwarded for approx. 30 seconds and playback resumes.

You may press the button up to six times in a row to move 180 seconds ahead.

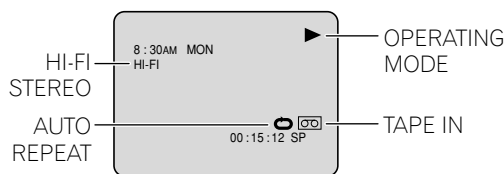
To display VCR operation status

Press **DISPLAY/CALL**. The clock, day of the week and more information will be indicated.

While watching TV



While operating a tape



To cancel the display:

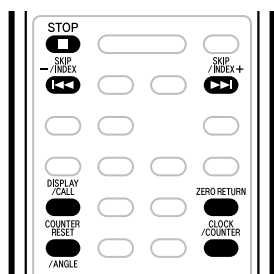
Press **DISPLAY/CALL** until all indicators disappear.

ZERO RETURN function / Video index search system

VCR

ZERO RETURN function

This function makes tape rewinding stop at the counter "00:00:00" position automatically.



Note for Counter Display:

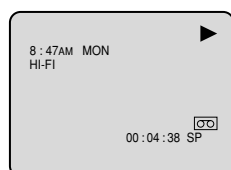
- If you rewind the tape beyond "00:00:00", a minus sign ("-") will be displayed in front of the time.
- When you load a tape, the counter will reset to "00:00:00".
- The counter does not function on nonrecorded (blank) sections of the tape. When you rewind, fast forward or play tapes through blank sections, the counter stops.

Note for Video index search system:

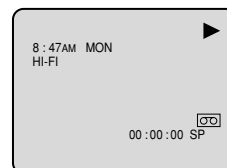
- When you record an INDEX mark at the very beginning of the tape, the mark may not be found.
- During INDEX search, the tape may stop and begin to play at a slightly different location.
- INDEX may not function properly with old or worn out video tapes.
- INDEX marks may not be found if it is extremely close to the point where the search began.
- In recording, if you stop recording temporarily, the INDEX mark is not recorded on the tape.

1 Press DISPLAY/CALL.

The counter display shows the tape running time during playback or recording.



2 Press COUNTER RESET at the desired tape position. The counter display will be reset to the "00:00:00" position (e.g. the beginning of recording).

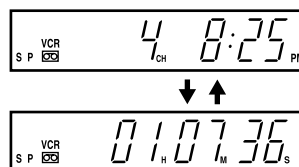


3 Press STOP when playback or recording is finished. Press ZERO RETURN.

The tape will be rewound or fast forwarded and automatically stop at the "00:00:00" position.

Switching the display between clock and counter

Press CLOCK/COUNTER. The clock and tape counter alternate with each other in the display.

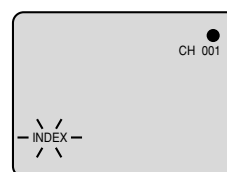


Video index search system

This function enables you to locate the beginning of any recording made on the VCR.

Recording an INDEX MARK

The Index search function automatically records an INDEX mark on the tape whenever a recording is initiated.



Index search

Press INDEX >>> or <<< during stop or play mode.

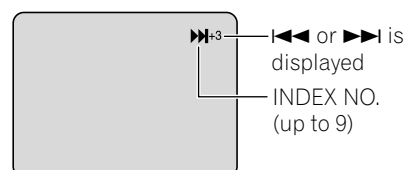
For Succeeding programs: Press INDEX >>>.

For Preceding programs: Press INDEX <<<.

(Additional press increases the INDEX NO. up to 9.)

When the INDEX INDEX >>> or <<< is pressed, the unit starts searching the INDEX NO. selected and finds the portion, then playback starts automatically.

To stop the Index Search, press STOP.



Chapter 6

Recording

About DVD recording

This recorder can record on both DVD-R and DVD-RW media. The main difference between the two is that DVD-R discs can only be recorded once, while DVD-RW can be recorded, erased and re-recorded many times.

A further difference between the two disc types is that only DVD-RW can be initialized for VR mode recording, which offers much more comprehensive editing functions compared to Video mode recording.

The big advantage, however, of Video mode is its compatibility with standard DVD players, most of which will not play VR mode DVD-RW discs (see also the notes below).

While DVD-R discs can only be recorded using the Video mode, you can initialize a DVD-RW disc for Video or VR mode recordings. Once initialized (any previous content is erased in this operation), all recordings on that disc will be in the chosen recording mode.

**Important**

- You cannot play, edit or record on unfinalized DVD-R/RW discs recorded in Video mode on other DVD recorders. (Likewise, unfinalized Video mode discs recorded on this recorder are not playable on other players/recorders.)
- This recorder cannot record onto CD-R or CD-RW discs.
- Pioneer takes no responsibility for recording failure due to power cuts, defective discs, or damage to the recorder.
- Fingerprints and small scratches on a disc can affect playback and/or recording performance. Please take proper care of your discs.

**Note**

- Some DVD players, such as some Pioneer models, are compatible with VR mode DVD-RW discs. Check the operating instructions for your player for VR mode compatibility information.
- The maximum number of titles that can be recorded on a DVD-R/RW disc is 99.
- The maximum number of chapters recordable on a DVD-R/RW disc is 999.

Recording modes

There are 4 modes for recording on disc. Recording time and quality vary according to mode.

Recording mode	Recording time	Quality
XP	Approx. 60 min	Can record high quality images.
SP	Approx. 120 min	Can record normal quality images.
LP	Approx. 240 min	Quality deteriorates slightly, but recording time is longer.
SLP	Approx. 360 min	Recording time is prioritized over quality.

- Recording time above is based on a 4.7GB disc.

Since DVD recording is performed using VBR (Variable Bit Rate), recording time varies according to the recorded content.

To know the correct recording time, stop recording and check the media information. (See page 35.)

**Note**

- Recording time can change for the following reasons.
- When image quality is poor as during poor TV reception.
- When recording on a disc that has been edited before.
- When the video is followed with recordings of still images or just audio.

Disc remaining time

VR mode

- Recording is possible as long as there is available space on the disc. (Finalized discs can be recorded by cancelling the finalization, see "UNDO FINALIZE" on page 28.)
- Erasing unnecessary title frees up available space on the disc. (Titles can be erased from finalized discs by first undoing the finalization. See "UNDO FINALIZE" on page 28.)

Video mode

- Up until the disc is finalized, recording is possible as long as there is available space on the disc. (Once the disc has been finalized, additional recording and erasing are not possible.)
- The remaining time cannot be increased, nor can recorded title be overwritten.
- Titles cannot be erased nor can recorded titles be overwritten.

Restrictions on video recording

- You cannot record copy-protected video using this recorder. Copy-protected video includes DVD-Video discs and some satellite broadcasts. If copy-protected material is encountered during a recording, recording will pause automatically and an error message will be displayed on-screen.
- Video that is 'copy-once only' can only be recorded on a DVD-RW disc in VR mode (see below).
- When recording a TV broadcast or through an external input, you can display copy control information on screen. (see Displaying disc information on-screen on page 35).

CPRM

CPRM is a copy protection system with scramble system regarding the recording of 'copy once' broadcast programs. CPRM stands for *Content Protection for Recordable Media*.

This recorder is CPRM compatible, which means that you can record copy-once broadcast programs, but you cannot then make a copy of those recordings. CPRM recordings can only be made on CPRM-compatible DVD-RW (ver. 1.1 or higher) discs formatted in VR mode.

DVD CPRM recordings can only be played on players that are specifically compatible with CPRM.

Recording equipment and copyright

You may use this product only to reproduce or copy materials for which you own the copyright or have obtained permission to copy from the copyright owner or for which you otherwise have a legal right to reproduce or copy. Unless you own the copyright or have obtained permission from the copyright owner or otherwise have a legal right to reproduce or copy, you may be violating the law, including copyright law, and may be subject to payment of damages and other remedies.

- This product incorporates copyright protection technology that is protected by method claims of certain U. S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision corporation. Reverse engineering or disassembly is prohibited.



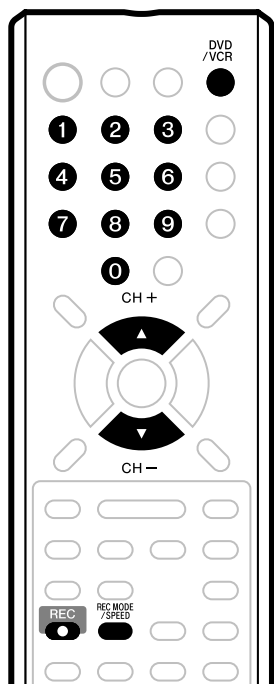
Note

- When using one touch timer recording to record on a DVD disc, it takes some time from when you press **REC** until recording actually starts. Press **REC** a little before your preferred starting point.
- Even if **STOP** is pressed during recording, recording does not stop instantly. Recording may continue for as long as 5 seconds maximum in the VR mode or 30 seconds maximum in the Video mode.
- Because of characteristics peculiar to digital video compression technology, scenes with fast motion may appear as a matrix of larger blocks.

Recording a TV program

VR mode **Video mode** **DVD-R** **VCR**

You can record programs you watch on TV onto video tapes or DVDs.



Note

- When recording onto a DVD, it takes some time from when you press **REC** until recording actually starts. Press **REC** a little before your preferred starting point. With a video tape, recording starts almost at the same time you press **REC**.
- If the erase prevention tab of video tapes is removed, the tape will eject when **REC** is pressed for recording.

Preparation:

- Turn ON the TV and set it to the video input mode.
- Load a recordable DVD or video tape into the unit.
- Press **DVD/VCR** to select the appropriate mode.

1 Press REC MODE/SPEED to select the recording mode.

The recording mode will appear on the TV monitor and change every time **REC MODE/SPEED** is pressed.

Video recording modes: SP/SLP

DVD recording modes: XP/SP/LP/SLP

SP is the normal recording mode for video tapes. SLP offers 3 times the recording time as SP. For more information on DVD recording modes, see page 52.

2 Set the TV/CATV option to the appropriate position (page 32).

TV	- VHF/UHF channels
CATV	- CABLE TV channels

3 Press the numeric keys or CH +/- to select the channel to be recorded.

- 1-9 Press **0** twice and then **1-9** as required. Example: To select 2, Press "**002**".
- 10-12 Press **0** first and then the remaining 2 digits in order from left to right. Example: Press **012** for "12".
- 13-99 Press 2 digits in order. Example: Press **22** for "22".
- 100-125 Press the 3 digits in order. Example: Press **110** for "110".

VHF/UHF/CATV CHANNELS

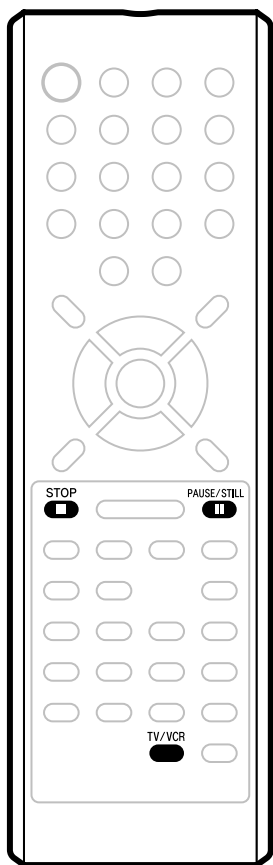
TV	CATV
VHF 2-13	VHF 2-13
UHF 14-69	STD/HRC/IRC 14-36 (A) (W) 37-59 (AA) (WW) 60-85 (AAA) (ZZZ) 86-94 (86) (94) 95-99 (A-5) (A-1) 100-125 (100)(125) 01 (5A)

4 Press REC.

When recording starts, "●" appears on the screen for about 4 seconds.

Recording a TV program

VR mode Video mode DVD-R VCR



To stop recording

Press **STOP** to stop recording.

"■" will appear on the screen for about 4 seconds.



Note

- When recording onto a DVD, even if **STOP** is pressed during recording, recording does not stop instantly. Recording may continue for as long as 5 seconds in the VR mode or 30 seconds in the Video mode.

To stop recording temporarily

Press **PAUSE/STILL** to avoid recording unwanted material.

"●||" will appear on screen for about 4 seconds.

Press again to resume recording.



Note

- In video recording, the pause function will be released after 5 minutes to prevent damage the video tape. The unit will change to the STOP mode.
- When recording onto a video tape, you can select a recording channel in the recording pause mode (You cannot change a recording channel in the DVD recording pause mode.).

Recording one program while watching another

While the unit is recording, press **TV/VCR** to select the TV position.

The "VCR" will go off and recording will continue.

Select the TV channel you want to watch by using the TV channel selector.



Note

- Some CATV hookups do not permit viewing one channel while recording another. See pages 18, 19.

Auto Rewind feature

This VCR will automatically rewind the tape when the tape has ended (except during OTR and TIMER REC). It will also eject the tape.



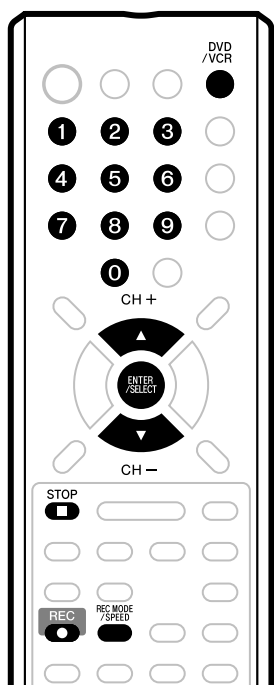
Note

- If the disc space become full, the recording is stopped and "RECORDING INTERRUPTED" will appear on the screen.

One-touch Timer Recording (OTR)

VR mode Video mode DVD-R VCR

The One-touch Timer Recording feature provides a simple and convenient way to make a timed recording.



Example:

One-touch Timer Recording for 30 minutes.

1 Press REC MODE/SPEED to select the recording mode.

For the recording mode, see the step **1** on page 54.

2 Set the TV/CATV option to the appropriate position (See page 32).

TV	- VHF/UHF channels
CATV	- CABLE TV channels

3 Press numeric keys or CH +/- to select the channel to be recorded.

4 Press REC. Each additional press of REC will increase recording time as shown in the chart below, up to a maximum of 6 hours. The OTR and recording time will appear on the screen for about 4 seconds.

Press	Recording time	Press	Recording time
once	NORMAL REC	7 times	OTR 3:00
twice	OTR - : - -	8 times	OTR 4:00
3 times	OTR 0:30	9 times	OTR 5:00
4 times	OTR 1:00	10 times	OTR 6:00
5 times	OTR 1:30	11 times	NORMAL REC
6 times	OTR 2:00		

To cancel OTR

Press **STOP** or turn off the power.

"■" will appear on screen for about 4 seconds.



Note

- If you wish to watch the DVD playback during the VCR OTR, press **DVD/VCR** to change to DVD mode and perform the DVD playback. You can also playback the VCR during DVD OTR.

Preparation:

- Turn ON the TV and set to the video input mode.
- Load a recordable DVD or video tape into the unit.
- Press **DVD/VCR** to select the appropriate mode.

VCR Plus+ programming system

What is the VCR Plus+ programming system?

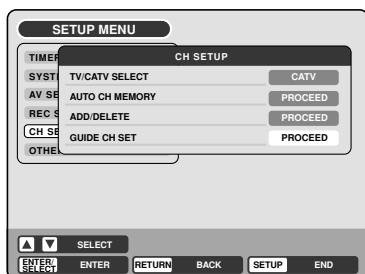
VCR Plus+ system is a timer programming system which simplifies timer recording programming. Instead of entering the date, channel and recording time, you simply enter a PlusCode® programming number that you can find in your TV listings.

Checking the channel setup to use the VCR Plus+ system

Before you can use the VCR Plus+ system you need to set up the channel mapping. This ensures that the VCR Plus+ system uses the correct channels for recording by matching up the preset channels in the recorder with 'guide channels'. You can find these guide channel numbers in your local TV guide or newspaper TV listings.

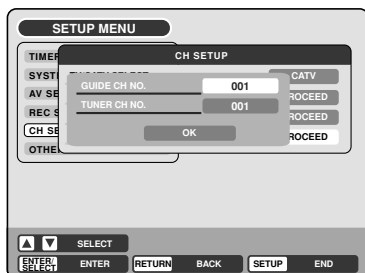
1 Press **SETUP** and select **CH SETUP** from the menu.

The Channel Setup menu appears.

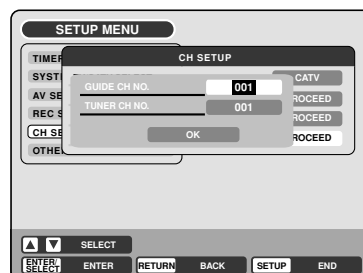


2 Select **GUIDE CH SET**.

A window appears to set a guide channel number and the corresponding tuner channel number.



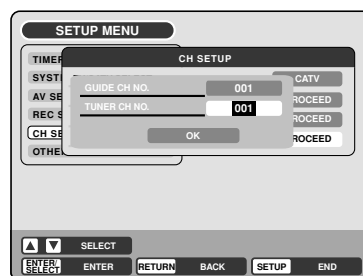
3 Enter a **GUIDE CH NO.** (guide channel number).



There are two ways to do this:

- To select numbers you can either use the number buttons and then ENTER, or you can press ENTER first then use the UP/DOWN buttons to select a number, followed by ENTER.
- When using the number buttons, enter using three digits—use leading zeros for numbers less than 100.

4 Press **DOWN** to highlight **TUNER CH. NO.**, then enter the corresponding tuner channel number.



- Select a tuner channel number in the same way as you selected the guide channel number.
- You can also select one of the LINE inputs (LINE 1 or LINE 2) instead of a channel number if some channels are received via an external receiver.

5 Press **DOWN** to highlight **OK** and press **ENTER**.

6 Repeat steps 3 – 5 to input the rest of the channel list.

7 When you're done, press **SETUP** to exit.

Setting the timer program using the VCR Plus+ system

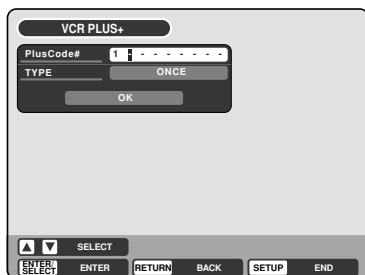
The VCR Plus+ system simplifies timer recording so that you just enter a PlusCode number (which you can find in your TV listings guide) for the program you want to record, tell the recorder whether you want to record it just once or regularly, and then select the DVD or the VCR for recording.

Note that for the VCR Plus+ system to work correctly, the clock must be set to the right time and the guide channels must be setup (see *Checking the channel setup to use the VCR Plus+ system* above).

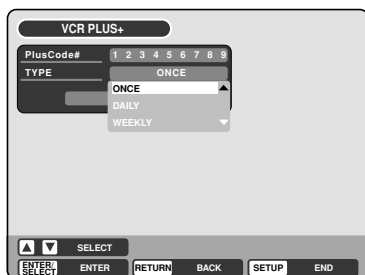
1 Press VCR Plus+.

- If a PROGRAM FULL message appears then you'll need to delete one of the existing timer programs before continuing. Select a timer program from the list and press CANCEL.

2 Use the number buttons to enter the PlusCode number.

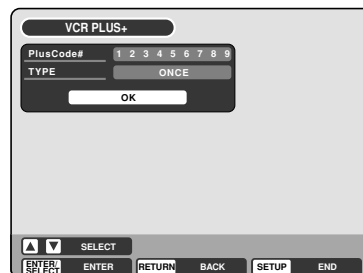


3 Press DOWN and select the TYPE.

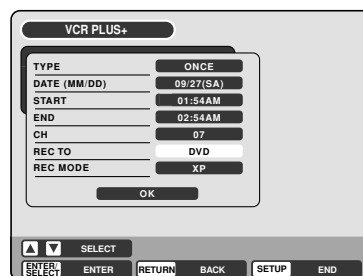


Here you can set whether you want to record the program ONCE, DAILY or WEEKLY. If you want to change it, press ENTER then use the UP/DOWN buttons to select, then press ENTER again.

4 Press DOWN to highlight OK, then press ENTER.



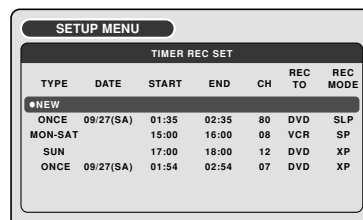
If you've entered a valid PlusCode number, a summary of the timer recording appears. You can edit any of this information as necessary. Use the UP/DOWN buttons to select the item you want to edit, press ENTER, then use the LEFT/RIGHT or UP/DOWN buttons as appropriate to select, then press ENTER again.



- TYPE – select the frequency of the recording (more options available here than in the previous screen, such as every weekday)
- DATE (MM/DD) – the recording date
- START – recording start time
- END – recording end time
- CH – the channel to be recorded, or one of the external inputs (L1 or L2)
- REC TO – record to the DVD or the VCR
- REC MODE – recording quality
- Note that If you haven't set a guide channel for the selected TV channel, the CH field will be blank (—). In this case, set the channel number manually.

5 Highlight OK and press ENTER.

The TIMER REC SET screen appears and you should see the new timer recording in the list.



6 Press SETUP to exit.

7 Press **TIMER REC**. The timer indicator “” will appear on the display and the unit stands by for recording.

- If the program is DVD recording only, the unit will change to VCR mode automatically. (The DVD mode cannot be selected.)
- If the program is VCR recording only, the unit will change to DVD mode automatically. (The VCR mode cannot be selected.)
- If the programs are DVD and VCR recording, the unit will turn off. If you want to use the unit, press **TIMER REC** again to deactivate the timer.

Checking or changing the timer recording

When you want to check the selected timer recording, follow the steps **1** and **2** of “Setting timer recording” and display the **TIMER REC SET** screen.

To change the timer recording, select the program to be changed and press **ENTER** then set again in the normal way.

Cancelling the timer recording

Display the **TIMER REC SET** screen.

Select the program you want to cancel and press **CLEAR/CANCEL**, then the selected program will be erased from the timer recording list.

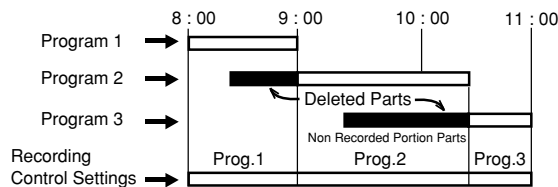
In case timer programs-overlap

Do not overlap timer programs as portions of the conflicting programs will be lost. The first recording time has priority over the next recording time as shown in the diagram below.



Note

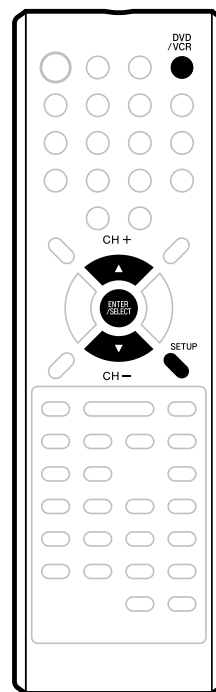
- Recording starts a few seconds before the preset starting time.
- You cannot use the timer recording for the both DVD and VCR at the same time.
- You can playback the DVD during the VCR timer recording, and you can playback the VCR during the DVD timer recording.



Timer recording

VR mode **Video mode** **DVD-R** **VCR**

The timer recording system allows you to select the date, time and channel and record the desired programs. Up to 8 timer programs within a month can be stored in this unit.



Note

- If a recordable tape is not inserted or no disc space is available, the timer record indicator “” flashes. Replace the tape or disc to allow recording.

Setting timer recording

Preparation:

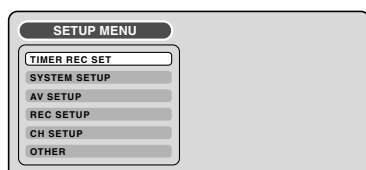
- Turn ON the TV and set to the video input mode.
- Load a recordable DVD or video tape.
- Press **DVD/VCR** to select the appropriate mode.
- Confirm that the clock is indicating the correct time.

Example:

Set the recording mode to LP; the TV program is on channel 12 starting at 8:00 PM and stopping at 9:30 PM on a date of 20th.

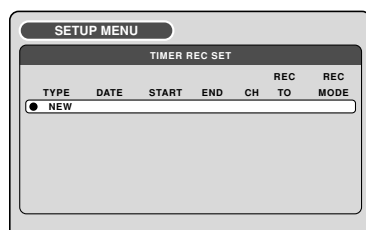
1 Press **SETUP**.

The **SETUP MENU** screen appears.



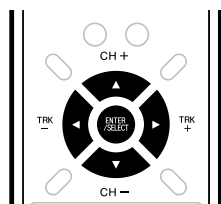
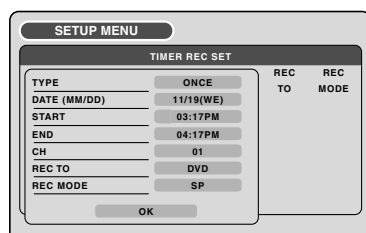
2 Press **▲** or **▼** to select **"TIMER REC SET"** and press **ENTER**.

The **TIMER REC SET** screen will appear.



3 Press **▲** or **▼** to select **"NEW"** and press **ENTER**.

The program screen will appear.



Note

- If you select timer recording on a specified date only one time, select **"ONCE"** in the **"TYPE"** for recording. You can record same days of every week or from Monday to Friday using the item **"TYPE"**. The items you can select are as follows:
ONCE: Recording on the selected **"DATE"**
EVERY SUN: Recording every Sun.
EVERY MON: Recording every Mon.

EVERY TUE: Recording every Tue.

EVERY WED: Recording every Wed.

EVERY THU: Recording every Thu.

EVERY FRI: Recording every Fri.

EVERY SAT: Recording every Sat.

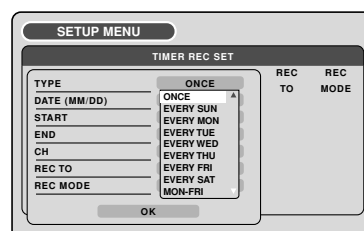
MON-FRI: Recording from Mon. to Fri.

MON-SAT: Recording from Mon. to Sat.

EVERYDAY: Recording everyday.

- The starting and stopping times for the recording are displayed on the 12-hour (am/pm) clock. Twelve o'clock midnight is displayed as **"12:00AM"**, whereas twelve o'clock noon is displayed as **"12:00PM"**.
- The initial setting of **"REC TO"** and **"REC MODE"** can be changed using **"Setting the recording"**. (See page 31.)

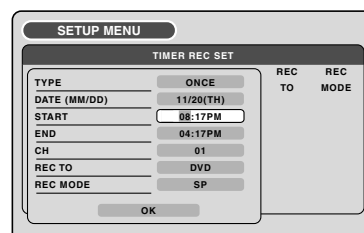
4 Press **▲** or **▼** to select **"TYPE"** and press **ENTER**. Press **▲** or **▼** to select **"ONCE"** from the list and press **ENTER**.



5 Press **▲** or **▼** to select **"DATE"** and press **ENTER**. Press **▲** or **▼** to select the date to be recorded from the list and press **ENTER**.

6 Press **▲** or **▼** to select **"START"** and press **ENTER**. Set the time when the recording is started.

- To switch over the selection item (hour or minute), press **◀** or **▶**, then press **ENTER**.
- Press **▲** or **▼** to adjust the time.
- After setting the time, press **ENTER**.



7 Press **▲** or **▼** to select **"END"** and press **ENTER**. Set the stopping time in the same manner for setting the starting time of timer recording.

8 Press ▲ or ▼ to select "CH" and press ENTER.

- Press ▲ or ▼ to select the channel to be recorded.
- You can select the external input (L1 or L2) by pressing ◀ or ▶.

9 Press ▲ or ▼ to select "REC TO" and press ENTER.

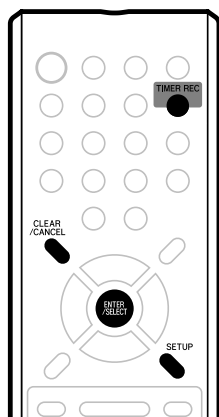
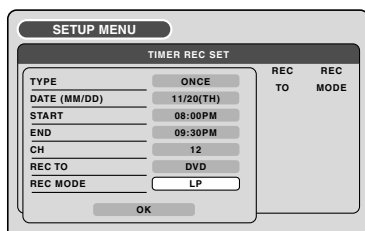
Select the media (DVD or VCR) to be recorded from the list and press **ENTER**.

10 Press ▲ or ▼ to select "REC MODE" and press ENTER.

The recording modes for the media selected in "REC TO" item are listed.

Select the recording mode and press **ENTER**.

For the recording modes in VCR, see page 48, and for the recording modes in DVD, see page 52.

**Note**

- Recording starts a few seconds before the preset starting time.
- You cannot use the timer recording for the both DVD and VCR at the same time.
- You can playback the DVD during the VCR timer recording, and you can playback the VCR during the DVD timer recording.

11 Select "OK" and press ENTER.

The timer program is determined and the TIMER REC SET screen appears again.

12 When you enter the other program for the timer recording, repeat the steps 3 to 11.**13 Press SETUP.**

The TIMER REC SET screen disappears and the display will return to the normal screen.

14 Press TIMER REC. The timer indicator "⏏" will appear on the display and the unit stands by for recording.

- If the program is DVD recording only, the unit will change to VCR mode automatically. (The DVD mode cannot be selected.)
- If the program is VCR recording only, the unit will change to DVD mode automatically. (The VCR mode cannot be selected.)
- If the programs are DVD and VCR recording, the unit will turn off. If you want to use the unit, press **TIMER REC** again to deactivate the timer.

Checking or changing the timer recording

When you want to check the selected timer recording, follow the steps **1** and **2** of "Setting timer recording" and display the TIMER REC SET screen.

To change the timer recording, select the program to be changed and press **ENTER** then set again in the normal way.

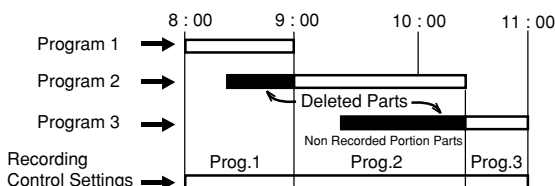
Cancelling the timer recording

Display the TIMER REC SET screen.

Select the program you want to cancel and press **CLEAR/CANCEL**, then the selected program will be erased from the timer recording list.

In case timer programs-overlap

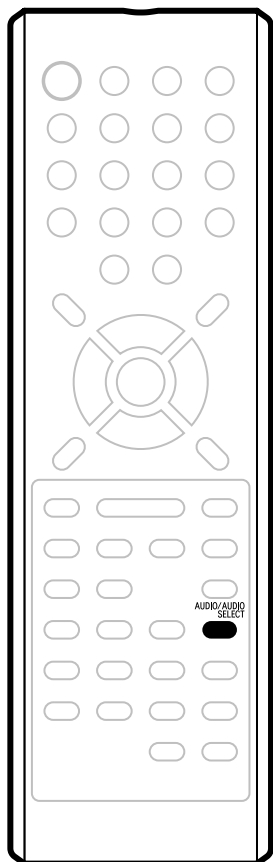
Do not overlap timer programs as portions of the conflicting programs will be lost. The first recording time has priority over the next recording time as shown in the diagram below.



Stereo recording and playback

VCR

The VHS Hi-Fi audio system permits high fidelity recording of MTS STEREO TV broadcasts.



When a MTS STEREO broadcast is received, the word "STEREO" will appear on the screen and the program can be viewed or recorded in stereo.

The Hi-Fi STEREO recording procedure is the same as for normal recordings.



Note

- When using a CATV system, stereo TV programs may be transmitted over a mono cable channel. In this case the word "STEREO" will not appear and the sound will be in mono.

Output selection

When viewing an MTS STEREO TV program, or playing a prerecorded Hi-Fi STEREO on video tape or disc, press **AUDIO SELECT** to select how the audio will be heard through the speakers. Normally set to the Hi-Fi STEREO position, this button can be set to the MONO position if the stereo audio is of poor quality. The "R" and "L" positions allow the audio from the Right or Left Hi-Fi channel to be heard over both TV speakers. This button has no effect when viewing a monaural audio program. Each time when you press the button, output selection display appears on the screen for several seconds. Refer to the chart below.

OUTPUT SELECTION	SOUND HEARD ON BOTH SPEAKERS
STEREO	STEREO
L ch	LEFT CHANNEL AUDIO
R ch	RIGHT CHANNEL AUDIO
MONO	MONO



Note

- When playing back a video tape or disc that is not recorded in Hi-Fi stereo mode, the audio will automatically be monaural.
- When listening to a Hi-Fi video tape, disc or MTS broadcast through the RF OUT (UHF/VHF) jack (Audio/Video cord not connected), the sound will be monaural.

Chapter 7

Editing

Editing the disc

This section explains how to edit the recorded contents on DVD-RWs. However, the items that you can edit vary with the recording formats. In VR mode, you can edit various title menus, whereas in Video mode, you can edit only a few items.

Title menu

For the disc in VR mode, when the content is recorded, a title name that includes the date, time, channel number and other information is created automatically. For the disc in Video mode, when you record a content first time on the disc where nothing is recorded, the recorded content is automatically set to Title 1. Then, the second recorded content is set to Title 2, and so on. Therefore, the title is numbered according to the recording order. The maximum number of titles per disc is 99. The title menu lists these titles.

The title menu can be used when you playback after confirming the contents (see page 34), or when you check the contents recorded on the disc.

Original title

The titles explained above are called original titles; these will be added with every recording. In VR mode you can do various editing operations – renaming titles, adding chapter marks, etc. In addition, you can erase the unnecessary titles to increase the disc space.

Playlist

You can create a playlist based on the original titles. You can combine or erase undesired scenes.

If you create a playlist it will become the primary list used by the disc.

If you create a playlist to customize your viewing preferences, and choose to delete it, the original titles will not be affected. It is recommended to create and edit the playlist to prevent important titles from being erased accidentally.

If you create a playlist, both the original title and playlist will be displayed on the title menu.

Editable items

The items that can be edited are different between original title and playlist. For the disc in Video mode, only the title name can be edited.

The items can be edited in each are as follows:

Editing items	VR mode		Video mode
	Original	Playlist	Original
Playback	Y	Y	Y
Adding chapter mark	Y	N	N
Combining chapters	Y	N	N
Erasing scenes	Y	Y	N
Erasing titles	Y	Y	N
Renaming titles	Y	Y	Y
Creating playlist	Y	N	N
Combining titles	N	Y	N

If you finalize the disc in Video mode, the title list will be created and you cannot use the title menu.



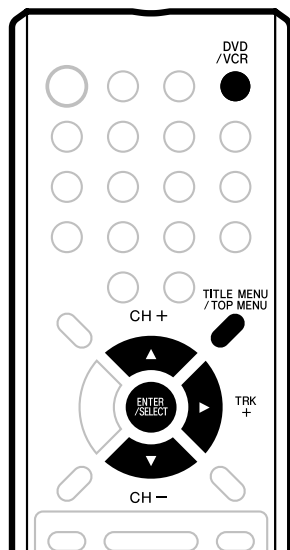
Note

- This unit can not record or edit a disc which was recorded or edited using another DVD recorder.
- You cannot edit or record the disc on which disc protection is set. In such a case, be sure to cancel the disc protection (see page 28) before starting the operation.
- When a scene has been erased, the selected position for erasing may vary slightly from the actual erased position.

Editing a playlist

VR mode

You can create and edit the playlist based on the original title.



Note

- A playlist can only be created with a DVD-RW in VR mode. You cannot create a playlist with a DVD-RW in Video mode, nor with a DVD-R.
- In case the disc includes more than 10 titles, you can turn to the next or the previous page. (See page 34.)
- You cannot switch to the VCR mode when the title menu is showing. Press **TITLE MENU** to clear the title menu, then press **DVD/VCR** to switch to the VCR mode.

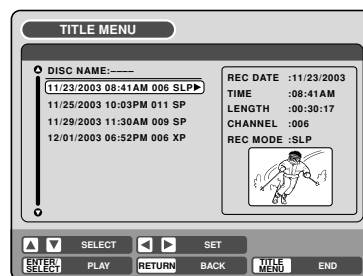
Preparation:

- Turn ON the TV and set to the video input mode.
- Load the recorded DVD-RW (VR).
- Press **DVD/VCR** to select the DVD mode. (The DVD indicator will light.)

Creating a playlist

1 Press TITLE MENU.

The title menu will appear.



2 Press ▲ or ▼ to select the original title which will be used as the base of a playlist.

3 Press ►.

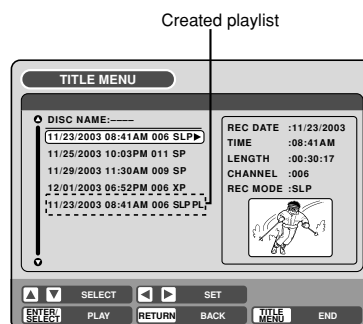
The editing menu of original title will appear.

4 Press ▲ or ▼ to select "NEW PLAYLIST".



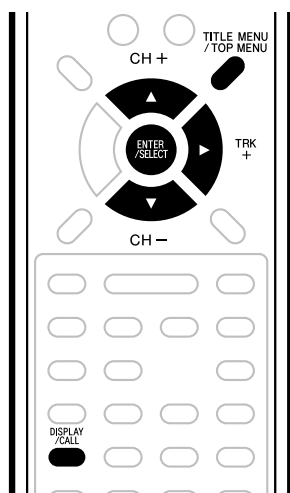
5 Press ENTER.

The editing menu closes and the created playlist appears at the bottom of the list.



Changing a title name

VR mode



Note

- The title name can be a maximum of 64 characters. Long names will be shortened in the title menu.
- For using the keyboard screen, see "Changing a disc name" (page 75).

1 Press TITLE MENU to display the title menu.

2 Select the playlist where you want to change the title name.

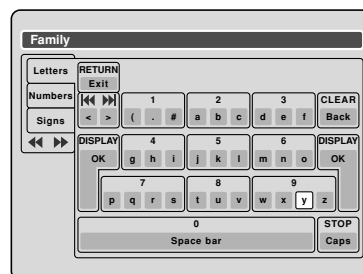
- Press ▲ or ▼ to select the playlist.
- Press ► to display the editing menu of the playlist.
- Press ▲ or ▼ to select "RENAME TITLE".



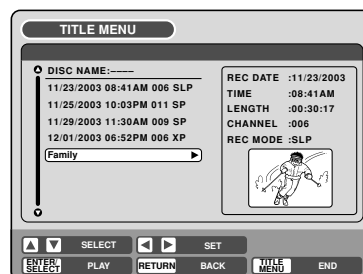
3 Press ENTER.

The keyboard screen will appear.

4 Use the keyboard screen to enter the title name.



5 Press DISPLAY/CALL to return to the title menu.

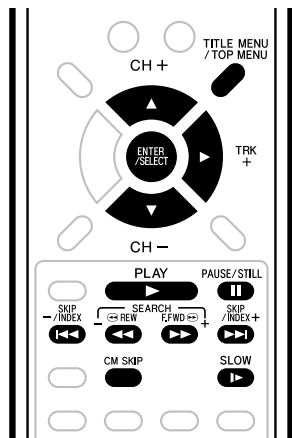


Erasing a scene (Edit title)

VR mode

You can erase an unnecessary scene from the created playlist.

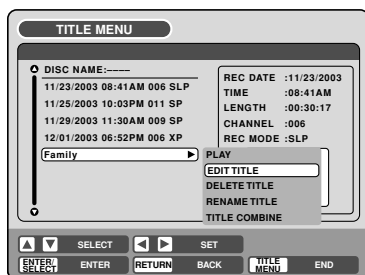
When you erase the scene from the playlist, the scene is not erased from the original title.



1 Press **TITLE MENU** to display the title menu.

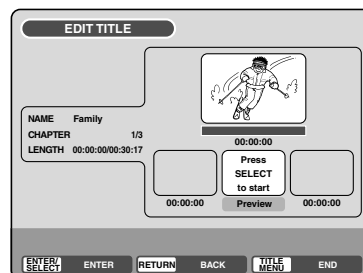
2 Select the playlist where a scene you want to erase is included.

- Press ▲ or ▼ to select the playlist.
- Press ► to display the editing menu of the playlist.
- Press ▲ or ▼ to select "EDIT TITLE".



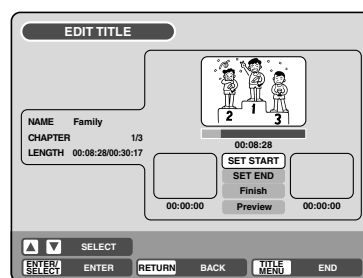
3 Press **ENTER**.

The EDIT TITLE screen appears.



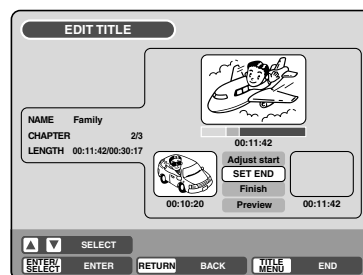
4 Press **ENTER** to playback the playlist on the EDIT TITLE screen.

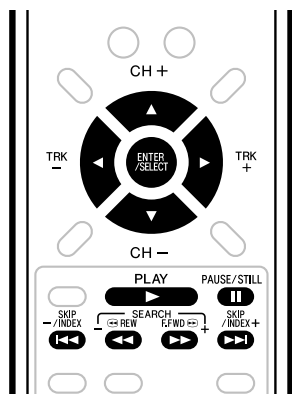
- Use each operation button (**F.FWD**, **REW**, **SKIP +**, **SKIP -**, **PLAY**, **PAUSE/STILL**, **SLOW**, **CM SKIP**) for the playback to search the starting point of the scene you want to erase.



5 Press ▲ or ▼ to select "SET START" at the start point of the scene that you want to erase and press **ENTER**. (To set the start point easily, search the start point while "SET START" is selected)

The still image at the start point appears at the left small screen.

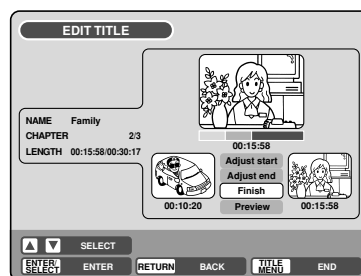


**Note**

- It is no problem to omit the procedures for confirming the scene or adjusting start and end points.

6 Press ▲ or ▼ to select “SET END” at the end point of the scene you want to erase and press ENTER.

The still image at the end point appears at the right small screen.



7 Check the erased scenes.

- Select “Preview” and press **ENTER**. Then the video where the scenes between the start and end points are erased is played back.
- Each operation button (**F.FWD**, **REW**, **SKIP +**, **SKIP -**, **PLAY**, **PAUSE/STILL**) for playback also can be used.

8 Adjust the start and end points.

- To adjust the start point, select “Adjust start” and press **ENTER**. You can change the start point every one frame by pressing ◀ or ▶.
- To adjust the end point, select “Adjust end” and press **ENTER**. You can change the end point in the same way as the start point.

9 If you determine the scene to be erased, press ▲ or ▼ to select “Finish” and press ENTER.

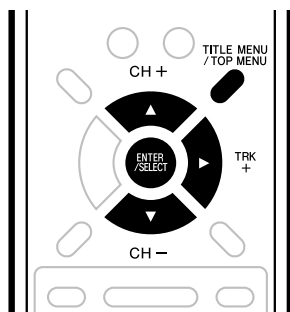
- A chapter mark is automatically added at the location of the erased scene.

Combining the title

VR mode

You can create a playlist by combining the several original titles or playlists.

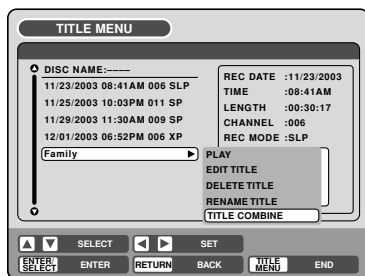
To combine the titles, it is necessary to create a playlist at first. By combining the titles in the playlist, a playlist where several titles are combined is created.



1 Press TITLE MENU to display the title menu.

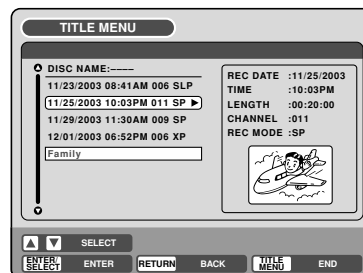
2 Select the playlist where you want to combine the titles.

- Press ▲ or ▼ to select the playlist.
- Press ► to display the editing menu of the playlist.
- Press ▲ or ▼ to select "TITLE COMBINE".



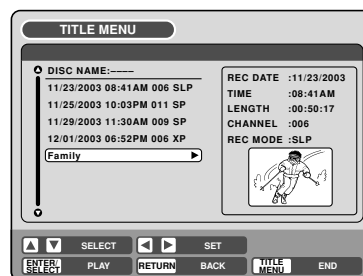
3 Press ENTER.

Select the title that you want to combine from the title menu.



4 Press ENTER.

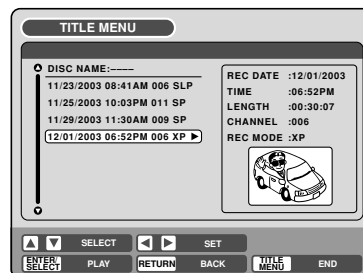
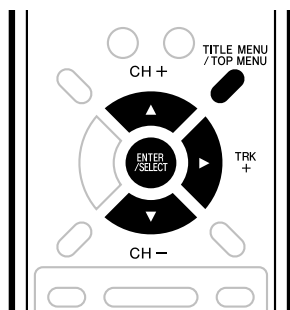
Following the playlist, the selected title is combined. The several titles were combined so that the total recording time is displayed.



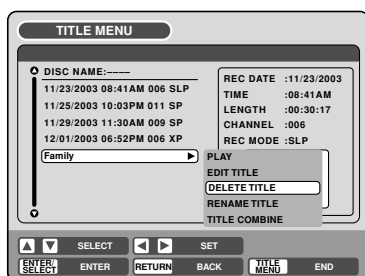
Erasing a playlist

VR mode

You can erase the created playlist. Even if you erase the playlist, the original title will not be erased.



- 1 Press **TITLE MENU** to display the title menu.
- 2 Select the playlist that you want to erase.
 - Press ▲ or ▼ to select the playlist.
 - Press ► to display the editing menu of the playlist.
 - Press ▲ or ▼ to select "DELETE TITLE".



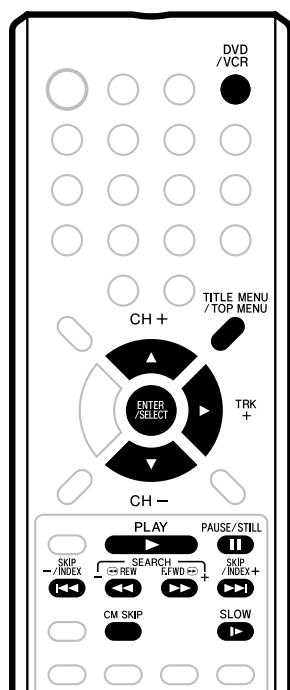
- 3 Press **ENTER**.

The selected playlist will be erased.

Editing an original title

VR mode

In VR mode, you can edit various items, whereas in Video mode, you can edit the title names only.



Note

- You can automatically add a chapter mark in recording. For more information, see page 31.
- In case the disc includes more than 10 titles, you can turn to the next or the previous page. (See page 34.)

Preparation:

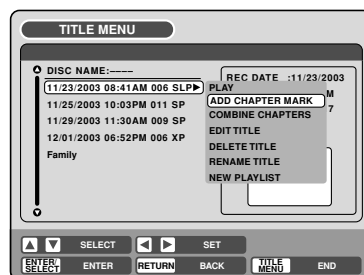
- Turn ON the TV and set to the video input mode.
- Load the recorded disc.
- Press **DVD/VCR** to select the DVD mode. (The DVD indicator will light.)

Adding a chapter mark

VR mode

You can add a chapter mark to the original title. You can add up to 999 chapter marks to one disc.

- Press **TITLE MENU** to display the title menu.
- Select the original title where a chapter mark is added.
 - Press **▲** or **▼** to select the original title.
 - Press **▶** to display the editing menu of the original title.
 - Press **▲** or **▼** to select "ADD CHAPTER MARK".



3 Press ENTER.

The ADD CHAPTER MARK screen will appear.

