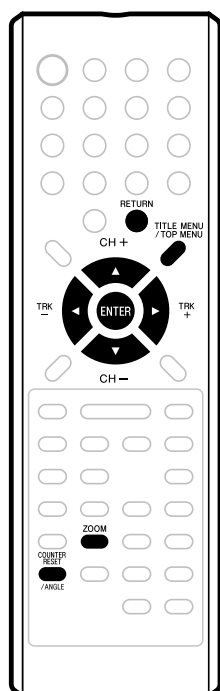


Playing back JPEG files

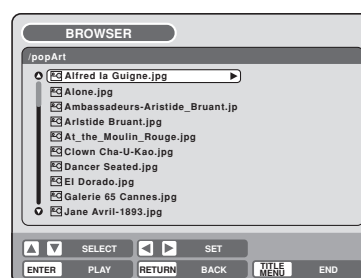
JPEG CD

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 10 files, you can turn to the next or the previous page. (See page 42.)



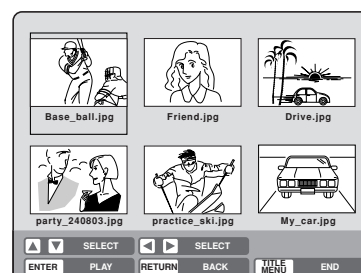
2 Carry out either of the item a or b below.

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.

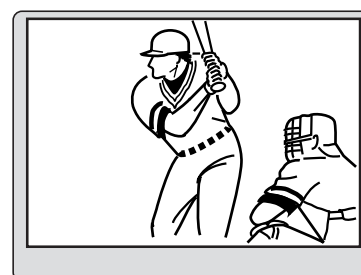
Press ▲, ▼, ◀ or ▶ to select the pages of the thumbnail images, or select the JPEG file to be displayed at first for the slide show.



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**.

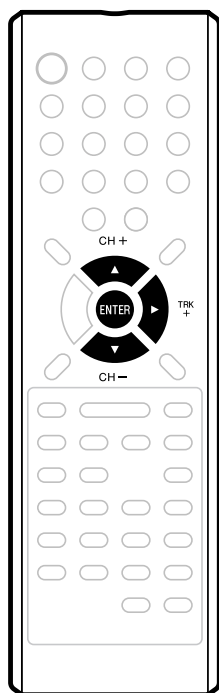
- To stop the slide show, press **TITLE MENU**.



Playing back DivX® video files

DivX® video specifications

- DivX® file must have the extension letters ".avi" ".div" or ".divx"
- DivX® version: DivX® 3, 4, 5, and 6 (specifically 3.1.1, 4.1.2, 5.0.2, 5.0.5, 5.1.1, 5.2.1, 6.0 at Home Theater profile).
Audio format:
MPEG1 Layer2 (MP2), MPEG1 Layer3(MP3)
Bit rate: 8kbps - 320kbps
Sampling frequencies: 32kHz, 44.1kHz, 48kHz
Resolution: Max 720 x 576 (at 25fps)
Max 720 x 480 (at 30fps)

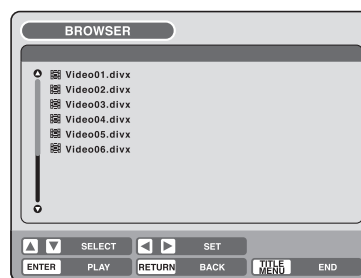


Note

- Character setting for external subtitle setting corresponds ISO8859-1 (Latin1) only. Other character code cannot be displayed.
- For external subtitle files the following subtitle format filename extensions are supported (please note that these files are not shown within the disc navigation menu): ".sub" ".smi" ".srt" ".ssa" ".txt" ".ass" ".rt" ".aqt" ".psb"
- The filename of the movie file has to be repeated at the beginning of the filename for the external subtitle file.

1 Press ▲ or ▼ to select DivX® file.

- If the disc includes more than 10 files, you can move to the next or previous page. (See page 42.)



2 Carry out the item a or b listed below.

- a: Press **ENTER**.
- b: Press ► and then press ▲ or ▼ to select "PLAY" and press **ENTER**.

The selected title is played back.

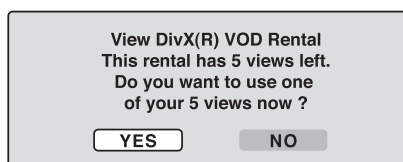
- You can use Fast forward, Review, Still, Frame advance, SKIP ◀◀/▶▶, and Slow motion playback (See page 36).



Note

- It may take a while to start to play DivX® video. Please wait until picture appears on screen.

If the incorrect DRM file is loaded, "Authorization Error This player is not authorized to play this video." will appear on the screen.



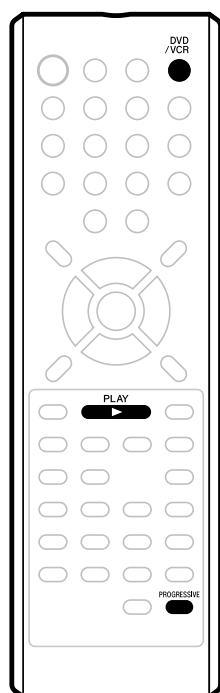
When you attempt to play DivX® VOD, the number of plays is limited and the following message will appear on the screen. If you wish to play it, select "YES".

- If the number of plays goes over the limit, then "Rental Expired" will be displayed, in which case the file will not be played.

Progressive scan

DVD-Video RAM 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**. The **PROGRESSIVE** indicator "P" on the display window will light. And "COMPONENT: 480p" will appear on the display.
- 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**. The **PROGRESSIVE** indicator "P" on the display window will go off, and "COMPONENT: 480i" will appear on the display.

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 in the following cases:
 - the unit is in the VCR mode.
- S-Video and the Video out jack cannot output at the same time when progressive scanning mode is appeared.



Playback

05

Loading and unloading a cassette tape

VCR

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

SQPB

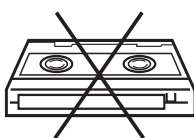
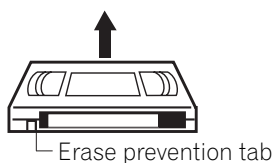
- Cassettes marked "VHS" (or "S-VHS") can be used with this video cassette recorder. However, S-VHS recording is not possible with this model.
- This model is equipped with SQPB (S-VHS QUASI PLAYBACK) that makes it possible to playback S-VHS recordings with regular VHS resolution.
- HQ VHS is compatible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



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

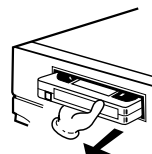
We do not recommend using video tapes longer than 160 minutes.

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
EP (Expanded 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.

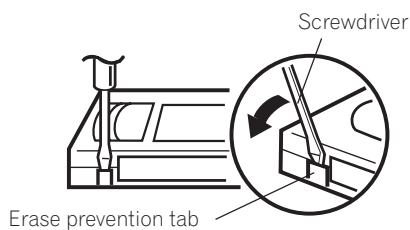


Automatic tape eject

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.

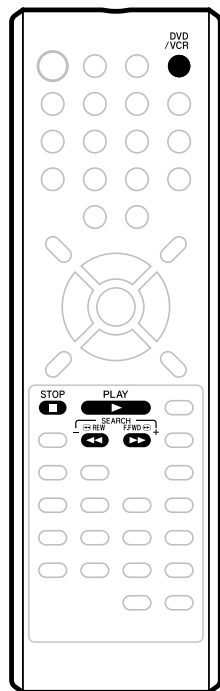


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En



Cassette tape playback

VCR**Note**

- This VCR selects the playback tape speed SP, LP or EP automatically.
- It is impossible to switch to the VCR mode while DVD is played back

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.)

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.



Playback

05

Special playback

VCR



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.

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
EP (Expanded 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.

Each time you press **SLOW**, 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.

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.

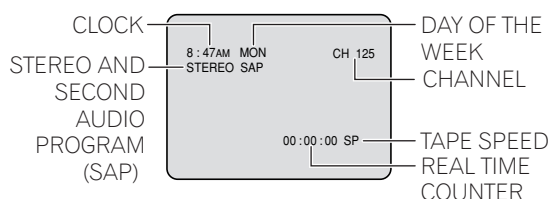
The video is rapidly forwarded for approx. 30 seconds and playback resumes.

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

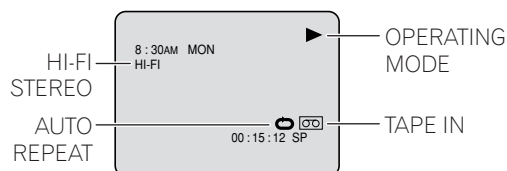
To display VCR operation status

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

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En

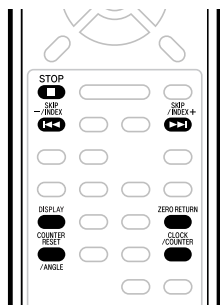


ZERO RETURN function / Video index search system

VCR

ZERO RETURN function

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

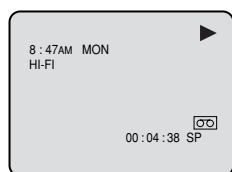


Note

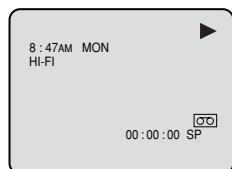
- If you rewind the tape beyond "00:00:00", a minus sign ("–") will be displayed in front of the time.
- When you load a tape, the counter will reset to "00:00:00".
- The counter does not function on nonrecorded (blank) sections of the tape. When you rewind, fast forward or play tapes through blank sections,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

1 Press DISPLAY.

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).

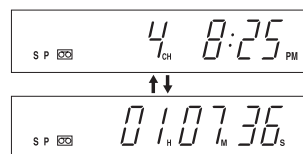


3 Press STOP when playback or recording is finished. Press ZERO RETURN.

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.

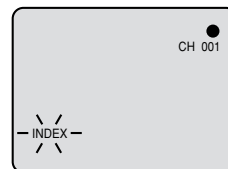


Note

- 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.

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.

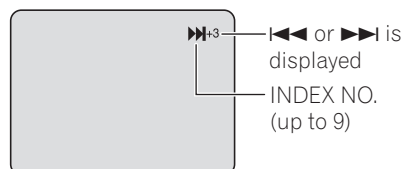
For Succeeding programs: Press **INDEX** **▶▶▶**.

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

Read this before recording on disc

This section explains what you must know to record onto a disc. Read it before attempting to record.

Types of disc

You can use DVD-RAM, DVD-RW and DVD-R discs to record video.

DVD-RAM

- This mode involves multiple editing functions.
- Various editing options using a created Playlist.

DVD-RW discs

- Ver 1.1/1.2 discs can be formatted for recording in either of the two modes: the VR mode or the Video mode. Ver.1.0 discs can only be formatted for recording in the VR mode.
- High quality images and sound can be repeatedly recorded about 1,000 times.
- A disc formatted in the VR mode can have as many as 99 original titles and playlist titles each. Discs formatted in the Video mode can have up to 99 original titles.

DVD-R discs

- Discs can only be recorded in the Video mode.
- Discs can be recorded only once.
- Up to 99 titles can be created.

For more information on recording format, see "Recording format" (page 10).



Notes on recording in the Video mode

- The Video mode cannot be selected for Ver. 1.0 DVD-RW discs.
- The remaining available area on the disc decreases as recording progresses. Additional contents can be recorded in the remaining time area, but it cannot be overwritten into the recorded area.
- To format a new DVD-RW in the Video mode, set the automatic format feature to the Video mode. (See page 27.)



Note

- Should a power failure occur or should the AC cord plug be disconnected while recording, editing, initializing, finalizing or any other function, the

program being recorded will be lost or the disc may not be playable. Manufacturer cannot guarantee against loss of program or disc should this occur.

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.
EP	Approx. 360 min	Recording time is prioritized over quality.

Recording modes

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

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

Please note that there is a trade-off between recording time and quality. The longer the possible recording time, the lower the recorded picture quality. You may wish to try recording different kinds of program in different modes to determine the combination of picture quality and recording time that suits your needs.

We recommend that the **XP** mode be used for recording fast moving or action programs.

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.

Images that cannot be recorded

Some DVD-Video and broadcasts contain copy-restriction signals to protect copyrights. There are 3 types of copy-restriction signals: "Copy Free", "Copy Never" and "Copy Once".

"Copy Free" (unrestricted recording)

Land-based TV broadcasts and images you record yourself with a video camera allow unrestricted recording. There are no restrictions on recording.

"Copy Never" (recording prohibited)

- Images that contain the recording prohibited signal cannot be recorded.
- If the recording prohibited signal appears halfway through an image you are recording, recording is paused at that instant. When the recording prohibited signal ends, recording resumes.
- This unit incorporates a built-in copy guard. It cannot record software or broadcasted programs that contain copy restriction signals designed to protect copyright, etc.

"Copy Once" (one-time recordable)

Programs (images) that contain the one-time recordable signal can be recorded only in the VR mode using a DVD-RW disc that supports CPRM Ver. 1.1 and Ver. 1.2.

CPRM

CPRM is a copy protection/scrambling system developed for 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 or DVD-RAM discs.

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



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. It takes a maximum of 1 minute for the information needed for the disc to be compiled after pressing **STOP**.
- Because of characteristics peculiar to digital video compression technology, scenes with fast motion may appear as a matrix of larger blocks.



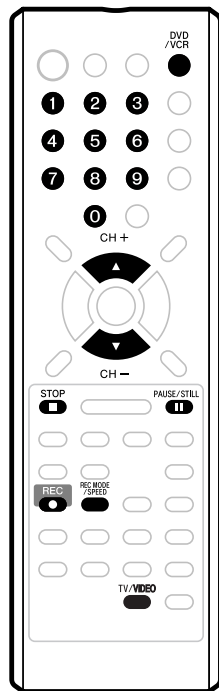
Recording

06

Recording a TV program

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

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



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.

VCR recording modes: SP/EP

DVD recording modes: XP/SP/LP/EP

SP is the normal recording mode for video tapes. EP offers 3 times the recording time as SP. For more information on DVD recording modes, see page 53.

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

TV - VHF/UHF channels
CABLE - 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/CABLE CHANNELS

TV	CABLE
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)

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En

4 Press REC.

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



Note

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

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 "NO SPACE ON THE DISC." will appear on the screen.

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. It takes a maximum of 1 minute for the information needed for the disc to be compiled after pressing **STOP**.

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.).
- Chapter marks are made when recording to a DVD in the VR Mode.

Recording one program while watching another

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

The "TV" will go on and recording will continue.

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



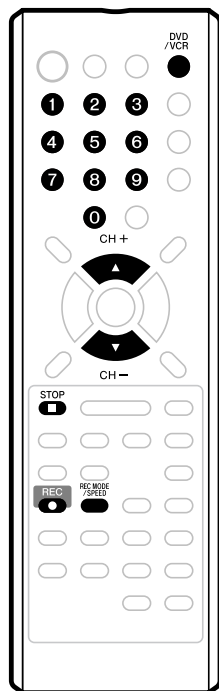
Note

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

One-touch Timer Recording (OTR)

RAM VR mode Video mode DVD-R VCR

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



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.

Example:

One-touch Timer Recording for 30 minutes.

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

For the recording mode, see step **1** on page 55.

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

TV - VHF/UHF channels
CABLE - 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.

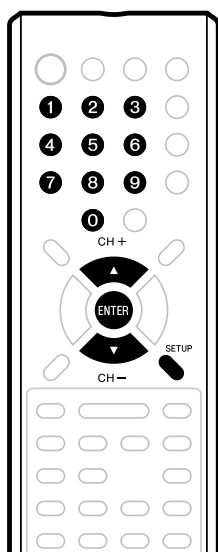
"■" will appear on screen for about 4 seconds.

VCR Plus+® programming system

RAM VR mode Video mode DVD-R VCR

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.

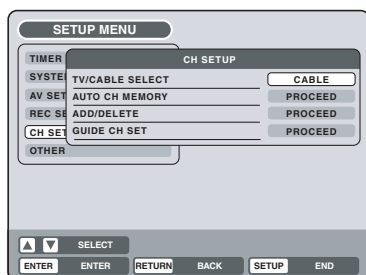


Checking the channel setup to use the VCR Plus+ system

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.

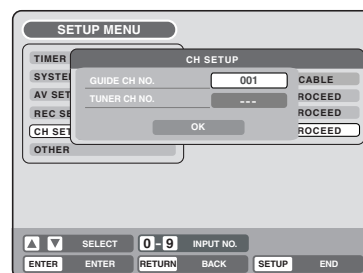
1 Press **SETUP** and press **▲** or **▼** to select "**CH SETUP**" and press **ENTER**.

The Channel Setup menu will appear.

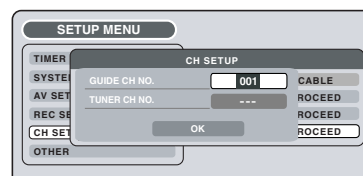


2 Press **▲** or **▼** to select "**GUIDE CH SET**" and press **ENTER**.

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



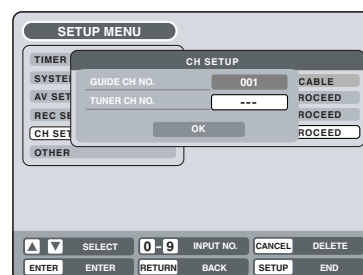
3 Enter a **GUIDE CH NO.** (guide channel number).



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 **▲/▼** 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 **▼** 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 Repeat steps 3 – 4 to input the rest of the channel list.

6 Press **▼** to highlight **OK** and press **ENTER**.

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

Setting the timer program using the VCR Plus+ system

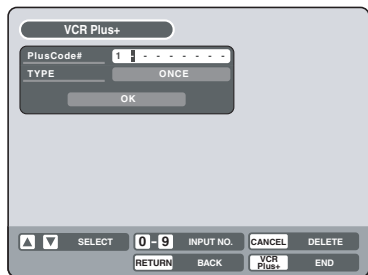
The VCR Plus+ system simplifies timer recording so that you just enter a PlusCode number (which you can find in your TV listings guide) for the program you want to record, tell the recorder whether you want to record it just once or regularly, and then select the DVD or the VCR for recording.

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).

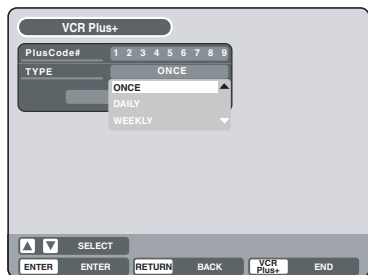
1 Press VCR Plus+.

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.

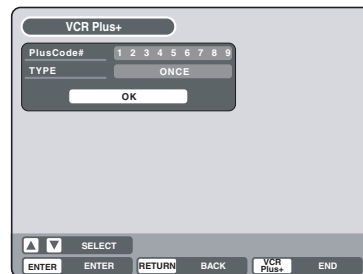


3 Press ▼ to select "TYPE".

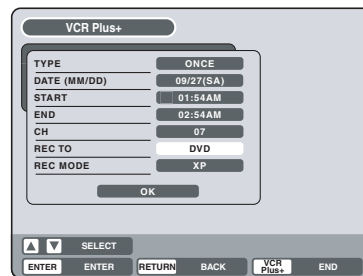


Here you can set whether you want to record the program ONCE, DAILY or WEEKLY. If you want to change it, press **ENTER** then use the ▲/▼ buttons to select, then press **ENTER** again.

4 Press ▼ to highlight OK, then press ENTER.



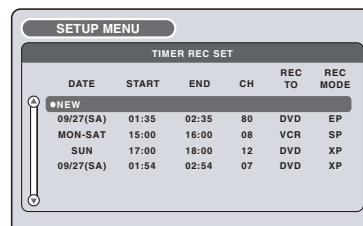
If you've entered a valid PlusCode number, a summary of the timer recording appears. You can edit any of this information as necessary. Use the ▲/▼ buttons to select the item you want to edit, press **ENTER**, then use the ◀/▶ or ▲/▼ buttons as appropriate to select, then press **ENTER** again.



- 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. In five minutes before your Timer Recording starts, the CH will change to the programmed CH automatically and the unit stand by recording.

To extend the timer recording time

Press **TIMER REC** for 2 seconds while it is timer recording. (You may also use normal recording or OTR).



Note

- If you press **STANDBY/ON** and it goes into the **STANDBY** mode, if you then press **TIMER REC**, the timer recording will end.

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**. The changing method is the same as that for the recording a program for the first time.

Cancelling the timer recording

Display the **TIMER REC SET** screen.

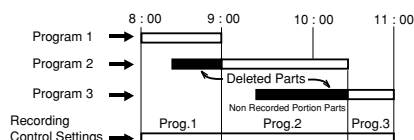
Select the program you want to cancel and press

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.

In this case, the next recording time is delayed a maximum of about 1 minute.



Note

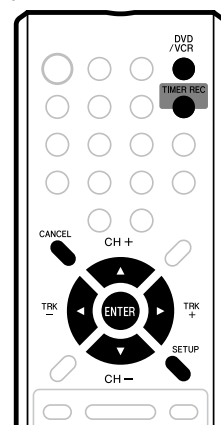
- Recording starts a few seconds before the preset starting time.
- You cannot use the timer recording for the both **DVD** and **VCR** at the same time.
- The timer recording program is stopped during timer recording, the stopped program is not erased from the timer recording list. In this case, please cancel the program, otherwise the stopped program will be activated if the unit returns to timer recording standby mode.

- If a recordable tape is not inserted or no disc space is available, the timer record indicator "  " flashes, and "TIMER RECORDING ERROR. PLEASE CHECK THE DISC OR TAPE." appears on the screen. Replace the tape or disc to allow recording.
- If you perform any operation during timer recording, the power will not go OFF when timer recording finishes. To turn the power OFF, press **STANDBY/ON**.
- From about 6 minutes before timer recording starts, some operations cannot be done.
- If you set recording to start less than 6 minutes ahead of time, the power will not turn OFF after recording finishes.
- If the recording media fills up during timer recording, "  " will flash and the power will not turn OFF. Also, any timer recording scheduled for later is cancelled.
- When the **PROGRESSIVE** indicator " **P** " appears in the display window (progressive scanning mode) and the **VCR** mode is selected, you cannot display the **PlusCode** input screen. Switch to the **DVD** mode when entering **PlusCode**.

Timer recording

RAM 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 12 timer programs within a month can be stored in this unit.



Setting timer recording

Preparation:

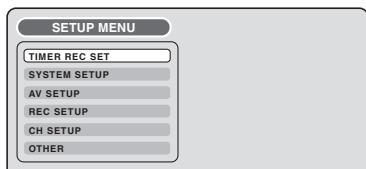
- Turn ON the TV and set to the video input mode.
- Load a recordable DVD or video tape.
- Press **DVD/VCR** to select the appropriate mode.
- Confirm that the clock is indicating the correct time.

Example:

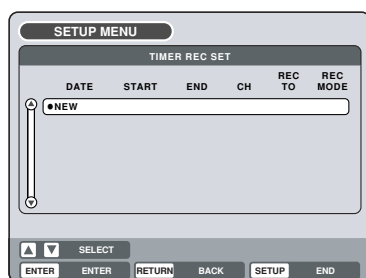
Set the recording mode to **LP**; the TV program is on channel 12 starting at 8:00 PM and stopping at 9:30 PM on a date of 20th.

1 Press SETUP.

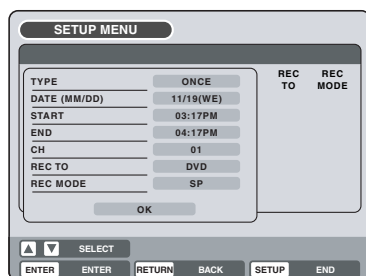
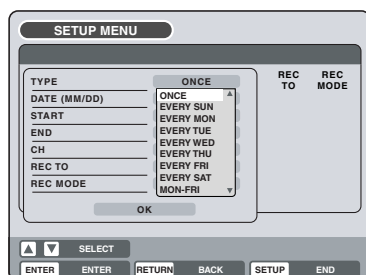
The SETUP MENU screen will appear.

**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.

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

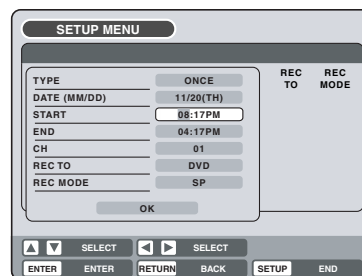
MON-SAT: Recording from Mon. to Sat.

EVERYDAY: Recording everyday.

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 recording start time.

- 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.



- 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".

7 Press ▲ or ▼ to select "END" and press ENTER.

Set the recording end time in the same manner as in step 6.

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.

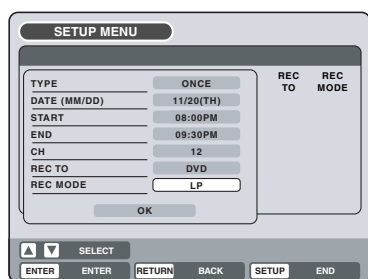
- The initial setting of "REC TO" and "REC MODE" can be changed using "Setting the recording". (See page 31.)

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 49. For the recording modes in DVD, see page 53.



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. In five minutes before your Timer Recording starts, the CH will change to the programmed CH automatically and the unit stand by recording.

To extend the timer recording time

Press **TIMER REC** for 2 seconds while it is timer recording. (You may also use normal recording or OTR).



Note

- If you press **STANDBY/ON** and it goes into the STANDBY mode, if you then press **TIMER REC**, the timer recording will end.

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**. The changing method is the same as that for the recording a program for the first time.

Cancelling the timer recording

Display the TIMER REC SET screen.

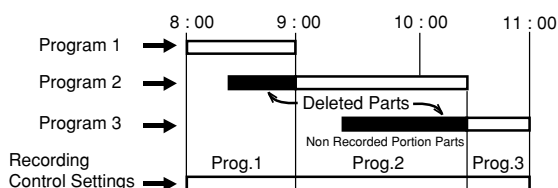
Select the program you want to cancel and press

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.

In this case, the next recording time is delayed a maximum of about 1 minute.



Note

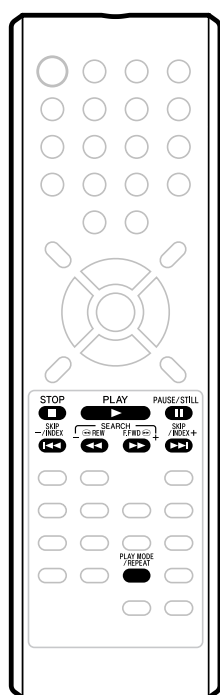
- Recording starts a few seconds before the preset starting time.
- You cannot use the timer recording for the both DVD and VCR at the same time.
- The timer recording program is stopped during timer recording, the stopped program is not erased from the timer recording list. In this case, please cancel the program, otherwise the stopped program will be activated if the unit returns to timer recording standby mode.
- If a recordable tape is not inserted or no disc space is available, the timer record indicator "⏏" flashes, and "TIMER RECORDING ERROR. PLEASE CHECK THE DISC OR TAPE." appears on the screen. Replace the tape or disc to allow recording.
- If you perform any operation during timer recording, the power will not go OFF when timer recording finishes. To turn the power OFF, press **STANDBY/ON**.
- From about 6 minutes before timer recording starts, some operations cannot be done.
- If you set recording to start less than 6 minutes ahead of time, the power will not turn OFF after recording finishes.
- If the recording media fills up during timer recording, "⏏" will flash and the power will not turn OFF. Also, any timer recording scheduled for later is cancelled.



Chase Playback

RAM

You can begin playback from the beginning of a program currently being recorded. You will find this function of great advantage on long programs, as you do not have to wait for the end of recording to begin playback.



Note

- Chase playback is not available when recording a DVD-RW/R disc and video tape.
- Chase playback is not available when recording in XP mode.
- Slow, Commercial skip, One touch replay, A-B repeat, and Frame advance will not work during chase playback.
- Chase playback does not work until 30 seconds of recording have elapsed.
- If you press **DISPLAY** during chase playback, the information screen is displayed (see page 35).
- Chase playback will stop when the recording ends.
- Chase playback will only function when a program is being recorded.

- 1 While recording a TV program onto the DVD-RAM disc, press **PLAY** to start chase playback.

The TV program as it is being recorded will played back.

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

Still playback:

Press **PAUSE/STILL**.

- To resume chase playback, press **PLAY**.

Fast forward/Review playback:

Press **SEARCH** ◀◀/▶▶. Every press **SEARCH**, it switches the speed of the search.

- To resume chase playback, press **PLAY**.
- If the playback position catches up to within about 60 seconds, chase playback resumes. It may differ depending on the recording condition and search speed.

Locating a chapter:

Press **SKIP** ◀◀◀/▶▶▶ to locate a chapter that you want to watch.

- If you press **SKIP** (▶▶▶) while playing back the newest chapter, it starts playing back from about 15 seconds before the recording position.

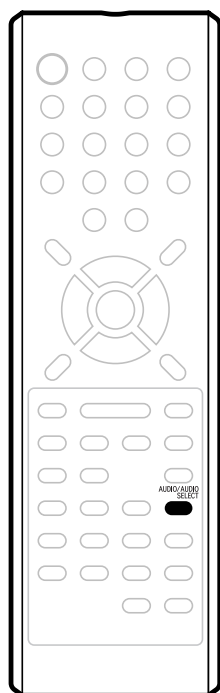
Locating a specific scene:

Press **PLAY MODE** enables you to do a Time Search or a Chapter Search. (See page 37.)

- 3 Press **STOP** to end chase playback. If you press **STOP** again, the recording stops.

Stereo recording and playback

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



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.

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

Output selection for VCR **VCR**

When viewing an MTS STEREO TV program, or playing a prerecorded Hi-Fi STEREO on video tape, 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

Output selection for DVD **RAM** **VR mode** **Video mode**

DVD-R

You can switch between the left or right channel and stereo only when playing a disc on which a bilingual broadcast was recorded in the DVD-RW VR mode. It is not possible to switch between channels otherwise as only the channel selected in the setting of SAP (Second Audio Program; ON or OFF) is recorded in the DVD-RW Video mode or DVD-R (see page 31).



Note

- When a stereo or monaural broadcast is recorded, either stereo or monaural, respectively, is played back and it is not possible to switch between channels.



Chapter 7

Editing

Editing the disc

This section explains how to edit the recorded contents on DVD-RAMs and 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

When the content is recorded, a title name that includes the date, time, channel number and other information is created automatically.

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.



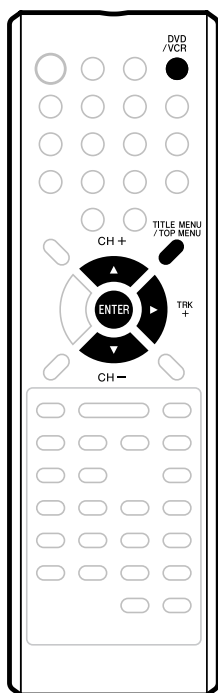
Note

- This unit cannot 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

RAM **VR mode**

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



Note

- A playlist can only be created with a DVD-RAM or 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 9 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.

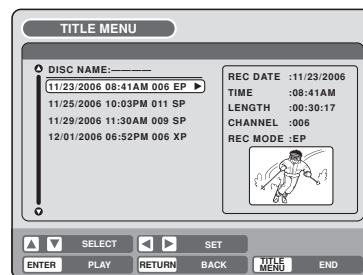
Preparation:

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

Creating a playlist

RAM **VR mode**

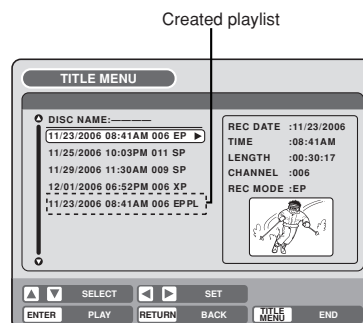
- 1 Press **TITLE MENU**.
The title menu will appear.



- 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".

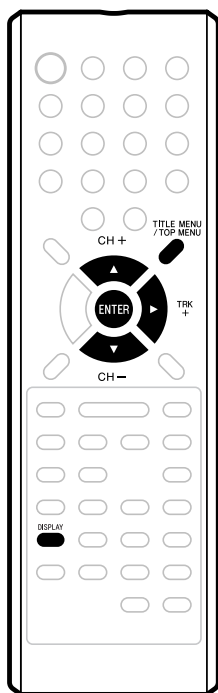


- 5 Press **ENTER**.
The editing menu closes and the created playlist appears at the bottom of the list.



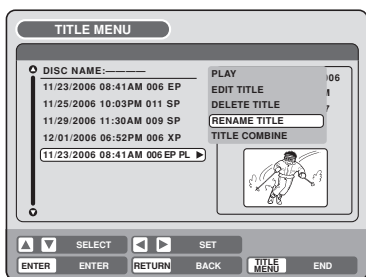
Changing a title name

RAM VR mode



- 1 Press **TITLE MENU** to display the title menu.
- 2 Select the playlist where you want to change the title name.

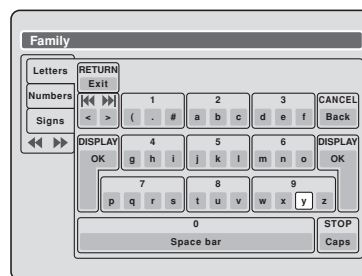
- Press **▲** or **▼** to select the playlist.
- Press **▶** to display the editing menu of the playlist.
- Press **▲** or **▼** to select "RENAME TITLE".



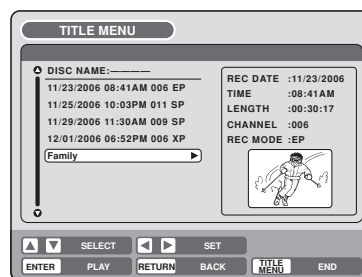
- 3 Press **ENTER**.

The keyboard screen will appear.

- 4 Use the keyboard screen to enter the title name.



- 5 Press **DISPLAY** to return to the title menu.



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 "Using the keyboard screen" (page 78).