

Video Cassette Recorder

Operating Instructions





WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.





This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Owner's Record

The model number is located at the rear and front of the unit and the serial number on the top. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony service dealer regarding this product.

Model No. SLV-373UC Serial No. _____

For the Customers in the U.S.A.

INFORMATION

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Recrient the receiving antenna

Relocate the equipment with respect to the receiver Move the equipment away from the receiver

Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits. If necessary, the user should consult the dealer or an experienced radio/television technician for additional

suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference

"How to Identify and Resolve Radio-TV Interference Problems".

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specified that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

For the Customers in Canada

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

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Precautions

On Safety

- Operate the unit only on 120V AC, 60 Hz.
- Should anything fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- One blade of the plug is wider than the other for the purpose of safety and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- Unplug the unit from the wall outlet if it will not be used for an extended period of time. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

On Installation

- Allow adequate air circulation to prevent internal heat build-up.
- Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation slots.
- Do not install the unit near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- The unit is designed for operation in a horizontal position. Do not install it in an inclined position.
- Keep the unit and cassette tapes away from equipment with strong magnets, such as microwave ovens or large loud speakers.
- . Do not place any heavy object on the unit.

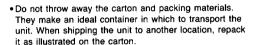
On Operation

- When the unit is not in use, turn the power off to conserve energy and to extend the life of the unit.
- Remove and store video cassettes after recording or playback.
- Store the cassettes in their cases and keep them in an upright position to prevent intrusion of dust and uneven winding.

On Cleaning

- Clean the cabinet, panel and controls with a dry, soft cloth, or a soft cloth slightly moistened with a mild detergent solution.
- Do not use any type of solvent, such as alcohol or benzine, which might damage the finish.

On Repacking



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If you have any questions about this unit, contact your Sony dealer or a qualified technician.

How to Use This Manual

This manual is arranged to help you quickly find the information you need for the operation of the SLV-373UC.

This manual consists of the following four sections.

Preliminaries

2 Preparations

3 Operations

4 Other Information

First, look through the Table of Contents. If you are already familiar with VCR operation, read starting from the "Preparations" section. If you are new to VCR operation, start with "Identifying the Operational Parts" (page 6) to familiarize yourself with this unit. To have a quick overview of the operation of this unit, refer to "Playing a Tape" (page 29), "Recording TV Programs" (page 36), and "Timer Recording" (page 40).

Before You Begin

- Check that the following accessories are in the carton with your unit:
 - Remote Commander RMT-V373A (1)
 - Size AA (R6) batteries (2)
 - External antenna connector (1)
 - 75-ohm coaxial cable with F-type connectors (1)
 - AC power cord (1)
- In the text of this manual, buttons and switches are shown in capital letters:

Example: Press PLAY.

- The buttons on the Commander and the unit with the same mark have the same functions.
- Notes are enclosed in boxes.

Overview of the SLV-373UC

■ For Editing

• DUAL MODE SHUTTLE ring

Allows easy operation and quick access to the desired scene.

. CONTROL S INPUT jack

Allows remote control of this VCR by other Sony video equipment with a CONTROL S OUTPUT jack.

Input connectors on the front panel
 Offers easy connection to a video camera recorder.

■ On-screen displays

Data screen

Tape counter, tape speed, operation mode, and remaining tape length are displayed on the TV screen.

AUTO MENU display

Allows selection of an automatic tape operation on the TV screen.

• TIMER SET/CHECK display

Timer recording settings can be set and checked by referring to the TV screen.

■ Convenient Functions

Auto tracking function

Automatically adjusts the tracking condition for maximum picture quality.

Timer recordings of 8 programs over a month
Recording of up to eight TV programs can be preset as
much as one month in advance.

Index function

The beginning of a desired scene can be located easily with the index mark/index search function.

 SWING SHUTTLE dial on the Commander Allows playback in various speeds in forward and reverse directions.

Auto Head Cleaner

The video heads will automatically be cleaned each moment the power is turned on, the tape is loaded or ejected, for at least 50,000 times.

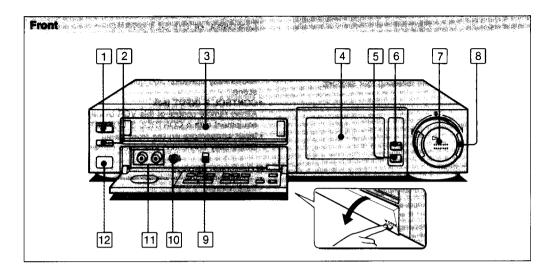
■ High quality picture

· High quality (HQ) picture

The SLV-373UC provides sharp, finely detailed pictures through High Quality (HQ) picture technology.

HQ A video cassette recorder (VCR) with this marking incorporates VHS high-quality picture technology and is compatible with any video cassette recorder bearing the VHS mark.

Identifying the Operational Parts Refer to the pages indicated for details.



1 POWER ON/OFF switch and indicator

Press to turn on and off the power of the unit. The indicator lights when power is supplied.

3 Cassette compartment

Display window and function mode display Various displays appear. See "Indications in the Display Window." (page 57)

5 STOP button Press to stop the tape.

6 ■ II/► PAUSE/STILL button (page 33) In the playback mode: Press to obtain a still picture. In the recording mode: Press to pause recording temporarily.

7 PLAY button Press to playback the tape.

8 DUAL MODE SHUTTLE ring (page 33)

In the stop mode	Turn to the right (►►) to advance the tape rapidly, and to the left (◄) to rewind the tape.
in the playback mode	Turn to the right (FORWARD) to advance and to the left (REVERSE) to reverse the picture in various speeds including a still picture when the ring is released.
In the fast- forward mode	Turn to the right (FORWARD) to view the picture in fast speed. The unit will return to fast-forward when the ring is released.
In the rewind mode	Turn to the left (REVERSE) to view the picture in fast speed reverse. The unit will return to rewind mode when the ring is released.

9 COMMAND MODE selector (page 9)

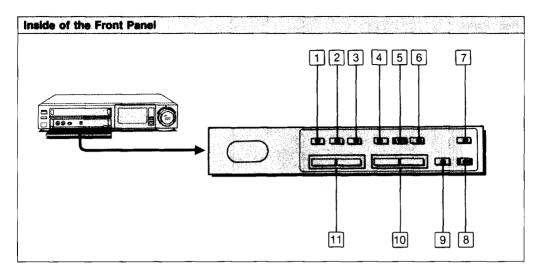
To remotely control this VCR with the supplied wireless Commander, set this selector to the same position as that on the Commander. Usually set to VTR 3.

10 SHARPNESS SOFT/SHARP control (page 35) Use to adjust the sharpness of the picture if necessary. Normally set this control at the center position.

11 LINE IN 2 VIDEO and AUDIO jacks (phono type) (page 54)

Connect to the video/audio output jacks of another VCR or a video camera recorder.

Point the supplied Commander here.

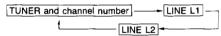


1 ANT TV/VTR button (page 37)

When connecting the VCR and a TV via the VHF antenna terminal, press this button so that VTR indicator lights in the display window. When you wish to watch one TV program while recording another, press this button again so that the VTR indicator is turned off.

2 INPUT SELECT button (page 36)

Press so that the desired input mode indicator appears in the display window to select the program to be recorded. The indicator changes as follows:



3 REC MODE (SP/EP) button (page 28)

Press to select the recording tape speed, SP or EP. When playing back, the tape speed will be automatically detected regardless of the setting of this button.

4 EDIT ON/OFF button (page 53)

Normally keep this button at OFF (i.e. the EDIT indicator turned off). When using this VCR for editing, press this button so that the EDIT indicator lights.

5 TIMER REC ON/OFF button (page 41)

Press this button to enter the timer recording standby mode. Press it again to release the timer recording standby mode before changing or canceling a timer recording or to operate the unit before a timer recording starts.

6 QUICK TIMER button (page 48)

Press to start quick timer recording and to set the recording duration.

7 444 HIGH SPEED REWIND button (page 30)

- 8 REC button (page 36)
- 9 TRACKING AUTO/MANUAL button (page 35)

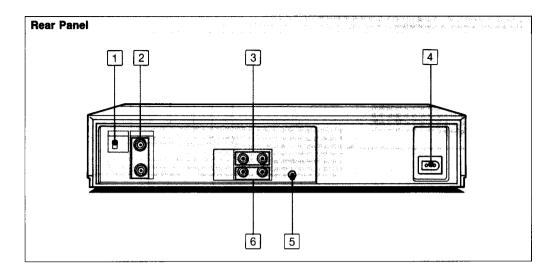
Press to re-activate the automatic tracking function after using the manual tracking adjustment.

10 TRACKING NORMAL/SLOW and STILL ADJUST ▼/▲ buttons (page 34)

Press to clear streaks if they appear on the screen in normal and slow playback (= normal/slow tracking). Press to reduce picture shaking in the still mode (= still adjust).

11 CHANNEL +/- buttons (page 36)

Press to select the TV channels. Press + to advance and - to go back.

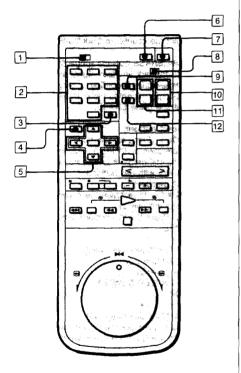


- T RF UNIT selector (page 19)
 Use to select the channel for VCR playback, 3 CH or 4 CH, whichever is not active in your area.
- 2 VHF/UHF IN/OUT connectors (F-type) (page 13)
 Connect to the VHF/UHF connectors on your TV
 referring to the "Connections" section.
- 3 LINE IN 1 VIDEO and AUDIO jacks (phono type)
 Connect to the video/audio output jacks of another
 VCR.
- AC IN jack
 Connect the supplied AC power cord. Then connect the AC power cord to the wall outlet.
- 5 CONTROL S IN jack (mini type) (page 56)
 Connect to the CONTROL S output jack of another
 Sony product for systematic operations such as
 synchronized editing.

6 LINE OUT VIDEO and AUDIO jacks (phono type) (page 17, 55)
Connect to the video/audio input jacks of another VCR.

Remote Commander

- The buttons on the Commander with the same name or mark as those on the unit have the same function.
- The buttons on the Commander with a red dot is operable to control the TV even when the TV / VTR selector is set to TV.



1 COMMAND MODE selector (page 6)

To remotely control the VCR with the Commander, set this selector to the same position as that on the unit. Normally set to VTR 3. Change the position as shown below to control other Sony VCRs:

VTR 1: For Sony Betamax format VCRs

VTR 2: For Sony 8mm format VCRs

VTR 3: For Sony VHS format VCRs

2 Channel number buttons

3 ENTER button

Used to enter channel numbers. For example, to select channel 10, press 1, 0, and then ENTER.

4 MENU button (page 20)

Press to enter the MENU mode. Press again to get out of the MENU mode.

EXECUTE button and cursor shift ▲/▼/◄/▶

Use to preset items in various menu operations.

6 ANT TV/VTR (Antenna TV/VTR) button (page 37) When connecting the VCR and a TV via the VHF antenna terminal, press this button so that VTR

indicator lights in the display window. When you wish to watch one TV program while recording another, press this button again so that the VTR indicator is turned off.

7 POWER switch

8 TV / VTR remote control selector

Set to VTR to use the Commander to control the VCR. Set to TV to use the Commander to control the TV.

9 INPUT SELECT button (page 36)

Press to select the source to be recorded. The selected input mode indicator will appear in the display window.

10 CHANNEL +/- buttons (page 36)

Press to change the channel. When the TV/VTR remote control selector is set to TV, the channels on the TV can be changed. When the TV/VTR remote control selector is set to VTR, the channels on the VCR can be changed.

11 VOL +/- buttons

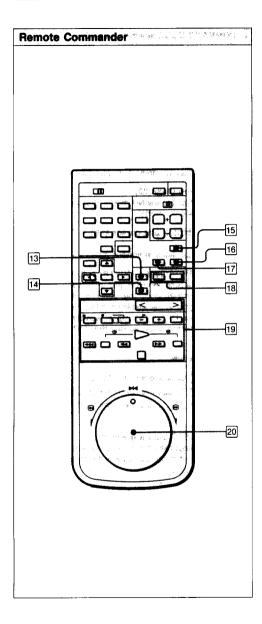
Press to control the TV's volume.

12 REC MODE button (page 28)

Press to select the recording tape speed, SP or EP. When playing back, the tape speed will be automatically detected regardless of the setting of this button.

Function of buttons 10 and 11

These buttons can be used to remotely control Sony TVs with the mark.



- 13 TIMER CLEAR button (page 45)
 Use to clear timer settings.
- 14 TIMER REC (ON/OFF) button (page 41)
 Press this button to enter the timer recording standby mode. Press it again to release the timer recording standby mode before changing or canceling a timer recording or to operate the unit before a timer recording starts.
- 15 INDEX button (page 51)
 Press to enter the index mode.
- 16 DATA SCREEN button (page 30)
 Press to turn on and off the on-screen display.
- 17 COUNTER RESET button (page 38)
 Press to reset the counter to 0H00M00S.
- 18 INDEX MARK/ERASE buttons (page 50, 52)

 Press MARK to mark an index signal at the desired point on a tape during recording or playback. To erase a previously recorded index signal, locate the index signal and press ERASE.
- Tape transport buttons

 <DIRECTION > (Press to determine the direction of ▷PLAY, x 2, and ▮▶ SLOW.

 During still mode, frame-by-frame picture is available with this button.)
 - x 2 (double-speed)

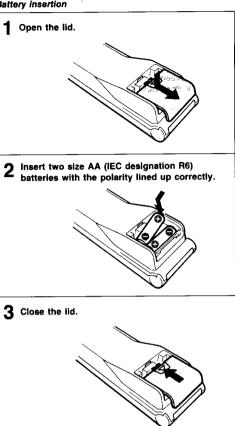
 SLOW (+: to increase the speed, -: to reduce the speed)
 - REC (Press the two buttons simultaneously)
 PAUSE
 - PLAY

 PLAY

 SEARCH (rev
 - ➡/ SEARCH (reverse/forward)➡ FF (fast-forward)
 - REW (rewind)
 HIGH SPEED REWIND
 - STOP
- 20 SWING SHUTTLE dial (page 33)

Turn the dial to playback the tape in various speeds. The available speeds are reverse search, -X2, -X1, -X1/5, still ($\blacktriangleright \blacktriangleleft$), X1/5, X1, X2, and forward search.

Battery insertion



Notes on the handling of batteries

- With normal operation, the batteries will last for approximately 6 months.
- If the Commander will not be used for a long period of time, remove the batteries to avoid possible damage from battery leakage.

Connections

In order to watch the playback picture on the TV screen and to receive TV programs on this VCR, the VCR and the TV receiver must be connected properly. The connection between the two units varies depending upon the type of TV receiver and antenna that you have. We will show you some typical ways to make connections with the supplied accessories. Before operating the unit, go through this section and make the correct connections.

Before You Begin...

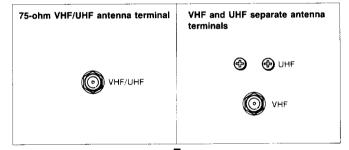
- Turn off the power to the VCR and the TV.
- Do not connect the AC power cords until all of the connections are completed.
- Make connections firmly. Loose connections may cause picture distortion.
- If your TV does not match the three examples below...

Consult your nearest Sony dealer or qualified technician.

First Check Your TV

If your TV does not have video and audio input jacks Check the antenna terminals on your TV

If your TV has video and audio input jacks



Yellow VIDEO

Black AUDIO

Go through "Connection Examples 1 to 5" to find the appropriate connections.

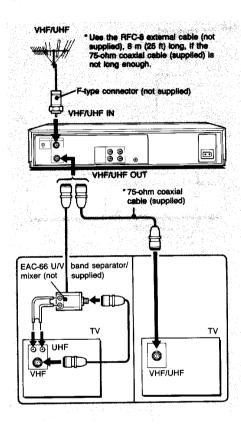
You can enjoy a better quality picture by connecting the VCR and TV via these jacks. Go to "Connection Example 6."

Then read "Setting the RF Unit" to view the playback picture of the VCR on the TV.

Caution

Connections between the recorder VHF/UHF OUT connector and the antenna terminals of a TV receiver should be made only as shown in the instructions. Failure to do so may result in operation that violates the regulations of the Federal Communications Commission regarding the use and operation of rf devices. Never connect the output of the recorder to an antenna or make simultaneous (parallel) antenna and recorder connections at the antenna terminals of your receiver.

Connection Example 1 — To Connect a Combination VHF/UHF Antenna



- 1 Disconnect the TV antenna cable from the TV receiver and connect it to the VCR.
- Connect the VCR and the TV.
 If the TV has a single terminal for the VHF/UHF antenna:

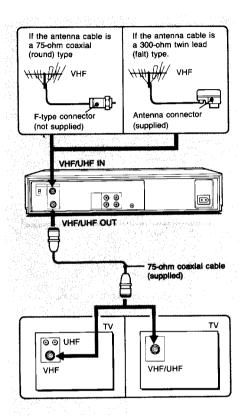
Use the 75-ohm coaxial cable (supplied). If the TV has separate antenna terminals for VHF/UHF:

Use the EAC-66 U/V band separator/mixer (not supplied).

How to attach the U/V band separator/mixer and the F-type connector

See pages 18 and 19.

Connection Example 2 — To Connect a VHF Antenna Only



- 1 Disconnect the TV antenna cable from the TV and connect it to the VCR.
 - If the antenna cable is a 75-ohm coaxial (round) type:

Use the F-type connector (not supplied).

If the antenna cable is a 300-ohm twin lead (flat)

Use the antenna connector (supplied).

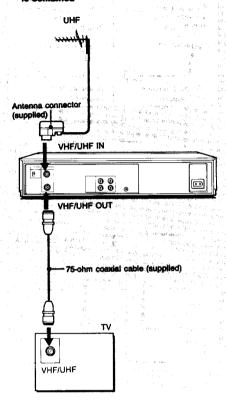
Connect the VHF/UHF OUT on the VCR and the VHF IN terminal on the TV with the 75-ohm coaxial cable (supplied).

How to attach the antenna connector and the F-type connector

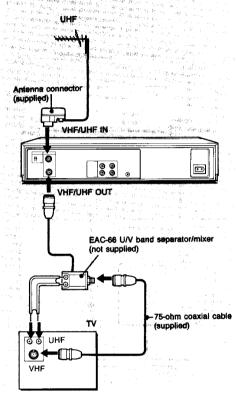
See pages 18 and 19.

Connection Example 3 — To Connect a UHF Antenna Only

When the VHF/UHF antenna terminal on the TV is combined



When the VHF/UHF antenna terminal on the TV are separated



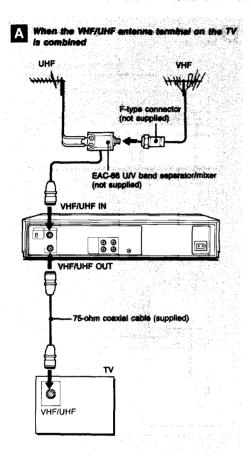
- Connect the antenna connector (supplied) to the antenna cable.
- 2 Connect the antenna connector to VHF/UHF IN on the VCR.
- 3 Connect VHF/UHF OUT on the VCR and the VHF/UHF antenna terminal on the TV.

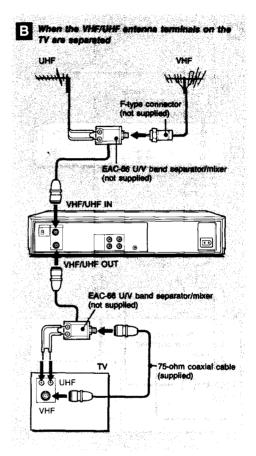
How to attach the antenna connector See page 19.

- Connect the antenna connector (supplied) to the antenna cable.
- 2 Connect the antenna connector to VHF/UHF IN on the VCR.
- Connect the EAC-66 U/V band separator/mixer (not supplied) to the VHF/UHF OUT on the VCR.
- 4 Connect the EAC-66 U/V band separator/mixer to the VHF and UHF antenna terminals on the TV.

How to attach the antenna connector and the U/V band separator/mixer See page 19.

Connection Example 4 — To Connect both VHF and UHF Antennes





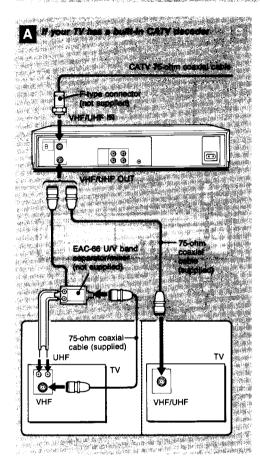
- Connect the EAC-66 U/V band separator/mixer (not supplied) to the VHF and UHF antennas.
- 2 Connect the EAC-66 U/V band separator/mixer to the VHF/UHF IN on the VCR.
- Connect VHF/UHF OUT on the VCR and the VHF/UHF antenna terminal on the TV.

How to attach the U/V band separator/mixer and the F-type connector See pages 18 and 19.

- 1 Connect the EAC-66 U/V band separator/mixer (not supplied) to the VHF and UHF antennas.
- 2 Connect the EAC-66 U/V band separator/mixer to the VHF/UHF IN on the VCR.
- 3 Connect the EAC-66 U/V band separator/mixer to the VHF/UHF OUT on the VCR.
- 4 Connect the EAC-66 U/V band separator to the VHF and UHF antenna terminals on the TV.

How to attach the U/V band separator/mixer and the F-type connector See pages 18 and 19.

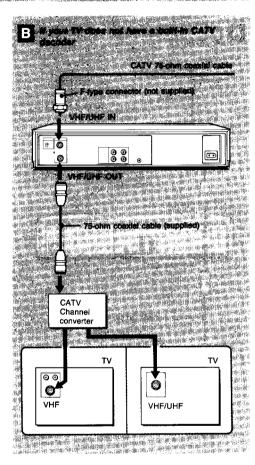
Connection Example 5 - To Connect a Cable TV System



A connection example is given above, but we recommend that you consult your cable company to make sure that the cable is properly connected.

How to attach the U/V band separator/mixer and the F-type connector

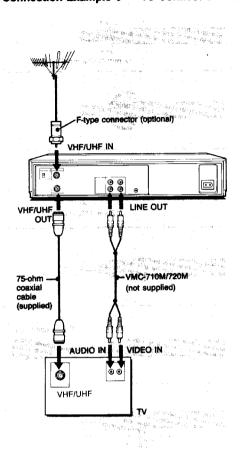
See pages 18 and 19.



Connect the cable TV channel converter between the TV and the VCR. By setting the ANT TV/VTR switch to TV, you can watch a cable TV program while playing back or recording video sources using the VIDEO LINE IN jack on the VCR.

How to attach the F-type connector See page 18.

Connection Example 6 — To Connect a TV Equipped with Video/Audio input Jacks



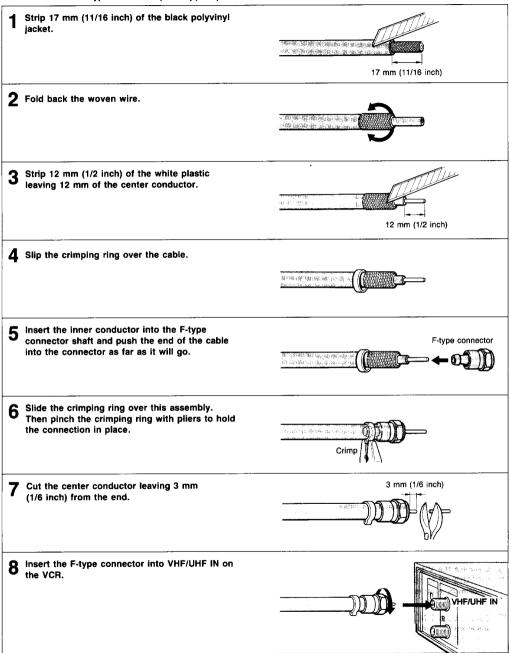
How to attach the F-type connector See page 18.

If your TV is a stereo type
Use the VMC-910MS/920MS connecting cable (not supplied).

For a high-quality picture, connect a color monitor or a TV equipped with video/audio input jacks.

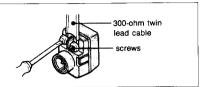
- 1 Connect the VHF/UHF antenna to the VHF/UHF IN on the VCR.
- Connect the VHF/UHF OUT on the VCR and the VHF/UHF IN terminal on the TV with the supplied 75-ohm coaxial cable.
- 3 Connect the LINE OUT jacks on the VCR and the video/audio input jacks on the TV with the video connecting cable and audio connecting cable.

How to attach the F-type connector (not supplied)



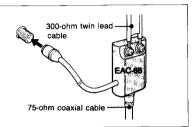
How to attach the external antenna connector (supplied)

- 1 Loosen the screws on the antenna connector.
- 2 Fit the 300-ohm twin lead cable on the UHF antenna under the screws on antenna connector.
- Tighten the screws again.

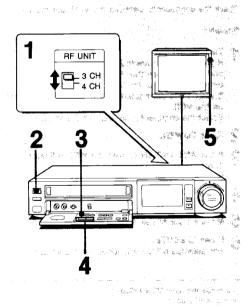


How to attach the EAC-66 U/V band separator/mixer (not supplied)

- Loosen the screws on the U/V band separator/mixer.
- 2 Fit the 300-ohm twin lead cable on the UHF antenna under the screws.
- 3 Connect the 75-ohm coaxial cable to the U/V band separator/mixer.
- 4 Connect the U/V band separator/mixer to the VHF/UHF IN on the



Setting the RF Unit



Why this setting is necessary

Your TV receiver must be set to receive the signal from your VCR. To get the proper RF signal, set the RF UNIT selector switch on the rear panel of the VCR. If channel 4 is active in your area, set the switch to 3 CH, and vice versa. If you connect a color monitor or a TV equipped with video/audio input jacks, you do not need to make this adjustment.

- 1 Set the RF UNIT at the rear to 3 CH or 4 CH, whichever is not active in your area.
- 2 Press POWER.
 The indicator will light.
- 3 Press ANT TV/VTR so that the VTR indicator lights.
- Check that the TUNER indicator appears in the display window, then select an active channel in your area by pressing CHANNEL +/-.
- 5 Turn on the TV and set the TV to the channel selected in step 1.
 The TV program selected on the VCR will appear on the screen.

Your TV is now tuned to the VCR. Whenever you use the VCR, set the TV to the channel selected above.

Note

For details about TV channel adjustment, see the instruction manual of the TV.

About the MENU Display

The SLV-373UC is equipped with a menu display function. Menu display enables you to perform certain operations which are displayed on the TV or the monitor.

First display the main MENU, and select the item to be operated or preset.

Main MENU Display

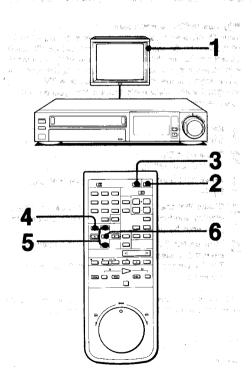
MENU

AUTO MENU
TIMER SET/CHECK
TUNER PRESET
CLOCK SET

Note

The position of the cursor is retained as long as the power cord is connected.

How to Display the Main MENU



Before you begin

Check the connections between the VCR and the TV.

The same of the same

Operation

1 Turn on the TV.
If your TV is connected to both VHF/UHF OUT and LINE OUT on the VCR.

Select the input for the VCR.

If your TV is connected only to the VHF/UHF OUT on the VCR.

Select the channel for the VCR (3 CH or 4CH).

- Press POWER.
- Press ANT TV/VTR so that the VTR indicator lights.

(Only for TVs without video/audio input jacks.)

- Press MENU.
- The main MENU will appear on the screen.
- 5 Move cursor to the desired menu by ▲ or ▼.
- Press EXECUTE.
 - The selected MENU will appear on the screen.

To erase the main MENU display Press MENU again.

To display other MENU displays

- 1 Press MENU to erase the present display.
- 2 Press MENU again to display main MENU.
- 3 Move cursor to the desired menu.
- 4 Press EXECUTE.

Details of Each Menu

Here is a list of the menus in the main MENU. For details, refer to the sections indicated.

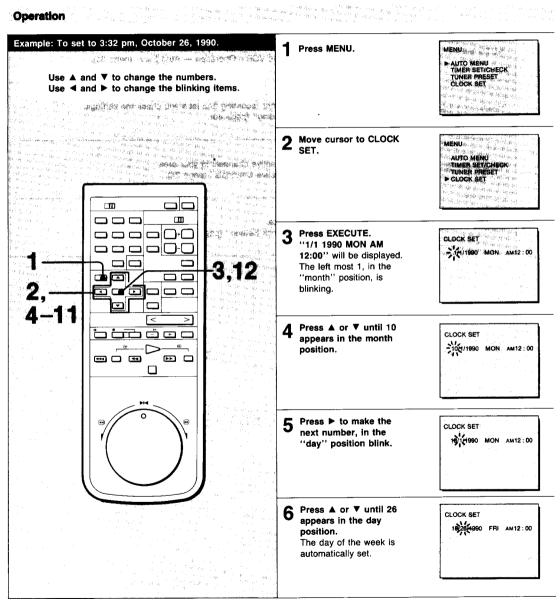
AUTO MENU	Use to select an automatic tape operation. See "Presetting the VCR's Operation — Auto Play" (page 31).
TIMER SET/CHECK	Use to preset a timer recording and let's you check the settings. See "Timer Recording" (page 40).
TUNER PRESET	Use to preset the active channels in your area. See "Presetting Active Channels" (page 24).
CLOCK SET	Use to set the clock. See "Date and Clock Setting" (page 22).

The sum of the sum of

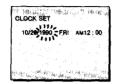
Date and Clock Setting

You can set the date and clock on the TV screen with the Commander, Note that AM 12:00 is midnight and PM 12:00 is noon.

Operation



Press ➤ to make the year blink and press ▲ to change the year if necessary.



Press > to make the time blink.



9 Press ▲ or ▼ until PM 3 appears.



10 Press ► to make the minute blink.



11 Press ▲ or ▼ until 32 appears in the minute position.



12 Press EXECUTE simultaneously with a time signal.

Press of EXECUTE will set the clock to 3:32 pm 00 seconds.

To recall the date and clock on the screen Select CLOCK SET in the main MENU and press EXECUTE.

Notes

- You can set the clock except during timer recording, timer recording standby, quick timer recording.
- When the date and clock are called up on the screen, the clock keeps running as long as no modification is made.
 The seconds will not be reset to 00 when you return to the original screen.

Presetting Active Channels

This VCR is capable of receiving VHF channels 2 to 13, UHF channels 14 to 69, and CATV channels 1 to 125. These channels can be preset on the TV screen using the Commander and the TUNER PRESET display. First, we recommend that you preset the active channels in your area using the automatic preset mode. Then, if there are any unwanted channels, delete them manually. If you've already decided which channels you wish to preset on the VCR, set them directly by using the channel number buttons.

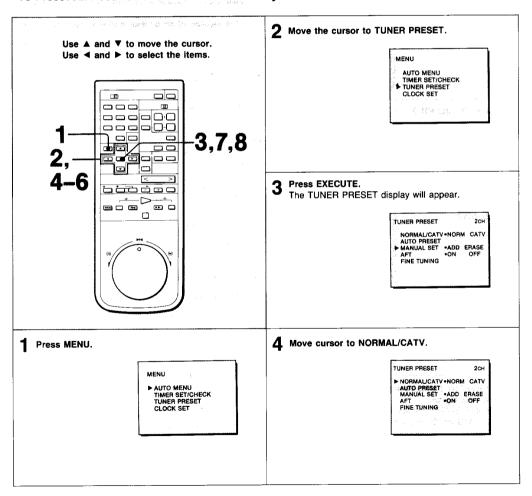
Before Presetting Channels

• Turn on the VCR and the TV.

VIII SOMETHING

- If you've connected the TV and the VCR using the VHF/UHF OUT on the VCR only, make sure that the TV is set to the correct channel (3 or 4) for the VCR.
- Press ANT TV/VTR to display the VTR indicator.
- Press INPUT SELECT so that the TUNER indicator and channel number appear in the display window.

To Preset All Receivable Channels Automatically



Select NORM to preset VHF and UHF channels.
Select CATV to preset cable TV channels.
The lowest channel number, 2 for NORM and 1 for CATV will appear on the screen.

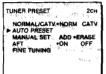
TUNER PRESET TON

NORMALICATY NORM •CATY
AUTO PRESET
MANUAL SET •ADD ERASE
AFT •GN OFF
FINE TUNING

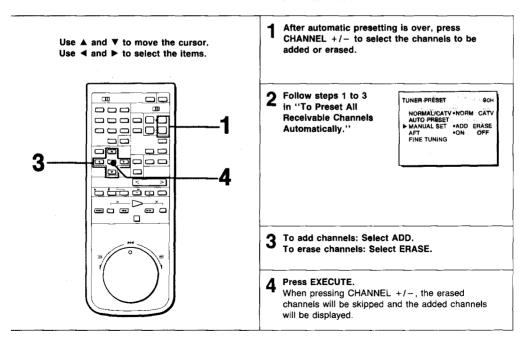
Press EXECUTE.
Receivable channels will be preset in numerical sequence. When no more channels can be found, the presetting will stop and the picture of the lowest numbered channel will be displayed with the tape counter.

TUNER PRESET 20H
NORMALICATY-NORM CATY
LAUTO PRESET
MANUAL SET ADD ERASE
AFT ON OFF
FINE TUNING

6 Move cursor to AUTO PRESET.



To Preset Only the Desired Channels or to Erase Unnecessary Channels



Fine-tuning

Normally the AFT (Auto Fine Tuning) setting is set to ON and the AFT function fine-tunes the picture. If the picture of a particular channel is not acceptable, fine-tune manually.

Operation

- 1 Call up the TUNER PRESET display referring to steps 1 to 3 in "To Preset Desired Channels Automatically."
- Press A or V to move the cursor to FINE TUNING.
 The fine tuning indicator will appear.

TUNER PRESET	2сн
NORMAL/CATY AUTO PRESET MANUAL SET	ON OFF
FINE TUNING	-ON OFF

3 Press ◀ or ▶ to get a clearer picture.
The AFT ON/OFF will automatically be

switched to OFF.

TUNER PRESET	2CH
NORMAL/CAT	-NORM CATY
AUTO PRESET MANUAL SET	ADD ERASE
AFT	ON OFF
P FINE TOTAL	

Press ▲ to move the cursor to AFT and select ON if you cannot get a better picture.

TUNER PRESET	- 2СН
NORMALICATY AUTO PRESET MANUAL SET AFT FINE TUNING	ERASE

5 Press EXECUTE.

About the FINE TUNING indicator

The FINE TUNING indicator shows the operable finetuning range. When the VCR's tuner is receiving a broadcast signal in the best condition, the indicator will be at the center position or within one space right or left of the center position. However, even when a broadcast is received in the best condition, there may be cases when the indicator will not be at the position explained above.

Cable TV Channel Assignment

Cable TV systems use letters or numbers to designate the channels. To tune-in a CATV channel, refer to the chart below which shows the CATV channel numbers on this VCR and the corresponding CATV channel. Note that the channel number assignment shown in the chart may not correspond to the channel number used by your local cable company. Check with your local cable TV company for more information on the available channels.

Number on this VCR	1	2	 13	14	15	16	17	18
Corresponding CATV chananel	A-8	2	 13	A	В	С	D	E

	19	20	21	22	23	24	25	26	27	28	29	30	31	32
ſ	F	G	Н	ı	J	К	L	М	N	0	Р	Q	R	s

	33	34	35	36	37	 94	95	96	97	98	99
ĺ	Т	U	٧	w	W + 1	 W + 58	A-5	A-4	A-3	A-2	A-1

100	 125
W + 59	 W + 84

This VCR is designed to correspond to the Standard cable system. However, the cable TV services may vary from area to area. Your local cable TV company may adopt either the HRC*1 or IRC*2 cable system. Even in these cases, this VCR is capable of receiving either of these cable systems in the best condition.

*1 HRC (Harmonic Related Carriers)

All channels except for 5 and 6 are 1250 kHz lower than the Standard cable system. Channels 5 and 6 are 750 kHz higher than the Standard cable system.

*2 IRC (Incremental Related Carriers)

All channels except for 5 and 6 are the same as the Standard cable system. Channels 5 and 6 are 2000 kHz higher than the Standard cable system.

FINE TUNING indication when receiving HRC or IRC cable systems

Even when the signals are received in the best condition, the FINE TUNING indicator will not stay at the center position for channels higher or lower than the Standard cable system because of the difference in the frequency.

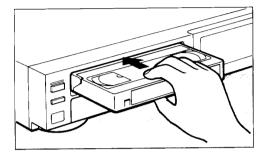
Note

Pay cable TV systems use scrambled or encoded signals and require special converters (decoders) in addition to the normal cable connection.

Handling Video Cassettes

inserting a Cassette

Insert the cassette fully into the compartment by slowly pressing its center with the arrow indication facing upwards. If the AC power cord is connected to the wall outlet, the power will be automatically turned on.



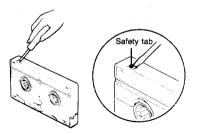
Eiecting a Cassette

Press \(\begin{align*}{l} \) EJECT to eject the cassette. As long as the AC power cord is connected to the wall outlet, the cassette can be ejected even when the power of the unit is turned off.

To Avoid Erasing Previously Recorded Video Cassette

When a new recording is made on a previously recorded cassette, the previous recording will be automatically erased. To avoid unintentional erasure, break off the safety tab on the cassette.

To re-record on the cassette, cover the slot where the safety tab used to be with plastic tape.



Maximum Recording Time of a Tape

Recording in the SP or EP mode is possible with this unit. When recording, select the desired recording mode (SP or EP) with REC MODE on the Commander or the unit. During playback, the unit automatically detects the recording format, and then plays back the tape in the appropriate mode. A tape recorded in the EP mode runs three times as slowly as a tape recorded in the SP mode. Refer to the chart below for the recording/playback time available in each mode.

Cassette	Recording/Playback Time					
tape	SP mode	EP mode				
T-160	2 hr. 40 min.	8 hr.				
T-120	2 hr.	6 hr.				
T-60	1 hr.	3 hr.				
T-30	30 min.	1 hr. 30 min.				

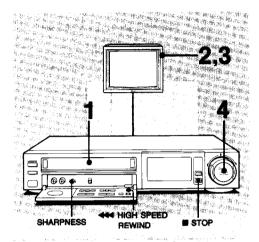
Tapes Recorded in LP Mode

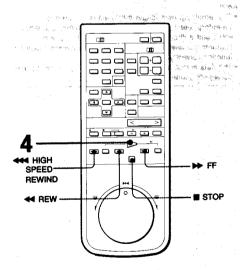
Playback of tapes recorded in LP mode is also possible with this VCR. However, playback in modes other than normal speed forward is not guaranteed. Note that recording in LP mode is not possible. Also, note that the AUTO TRACKING function will not function.

Playing a Tape

In this section, we will explain the operations and functions related to tape playback.

Basic Playback





- 1 Insert a cassette.
- 2 Turn on the TV.
- If your TV is connected to both VHF/UHF OUT and LINE OUT on the VCR.

 Select the input for the VCR.

 If your TV is connected only to the VHF/UHF OUT on the VCR.

 Select the channel for the VCR (3 CH or 4 CH).

1 Press ▷ PLAY.

To stop playback Press ■ STOP.

To advance the tape rapidly

During stop mode:

Turn the DUAL MODE SHUTTLE ring to the right (►►). Press ►► FF on the Commander.

To rewind the tape

During stop mode:

Turn the DUAL MODE SHUTTLE ring to the left (◄).
Press ◄ REW on the Commander.



To rewind the tape at high speed Press ◀◀◀ HIGH SPEED REWIND.

To get a sharper picture

Turn the SHARPNESS control toward SHARP.

To get a softer picture

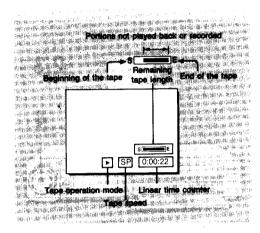
Turn the SHARPNESS control toward SOFT.

When the tape is played back to the end

The tape will be automatically rewound to the beginning (auto rewind). The power will remain on.

About the Data Screen

To erase or call up the data screen on the display, press DATA SCREEN on the Commander.

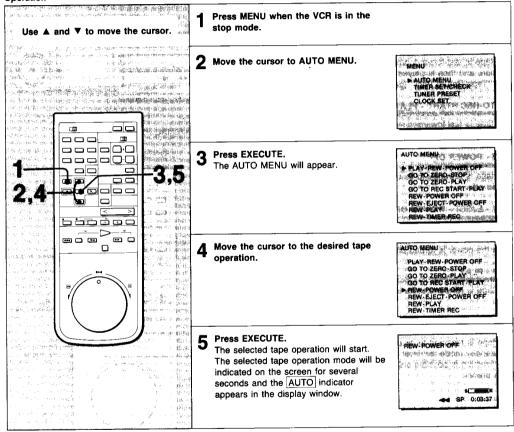


Notes

- The remaining tape length displayed is not precise.
 Therefore, use it only as an approximate reference. When you insert a short tape such as T-20, T-30 or a non-standard commercially available tape, this indicator may not function correctly.
- The data screen display cannot be called up on the screen during still mode or slow motion playback.

By selecting the desired operation in the AUTO MENU and pressing EXECUTE, an operational sequence of several steps can be started automatically.

Operation



To return to the previous screen without making any selection from the AUTO MENU Press MENU.

When the power is turned off

The cursor will stay at the last position it was set to.

Note on the auto play operation

You can preset the auto play operation only when the VCR is in the stop mode.

What does each operation indicator mean?

PLAY - REW - POWER OFF

The tape is played back to its end and rewound to its beginning.

Then the power is turned off.

GO TO ZERO - STOP

The tape is fast-forwarded/rewound to the counter zero position, and stops.

See "Tape Return" (page 38) for detailed operation.

GO TO ZERO - PLAY

The tape is fast-forwarded/rewound to the counter zero position, and then is played back.

See "Tape Return Play" (page 38) for detailed operation.

GO TO REC START - PLAY

The tape is fast-fowarded/rewound to the starting point of the recording and is played back.

REW - POWER OFF

The tape is rewound to its beginning and the power is turned off.

REW - EJECT - POWER OFF

The tape is rewound to its beginning and the cassette is ejected.

Then the power is turned off.

REW - PLAY

The tape is rewound to its beginning and then is played back

REW - TIMER REC

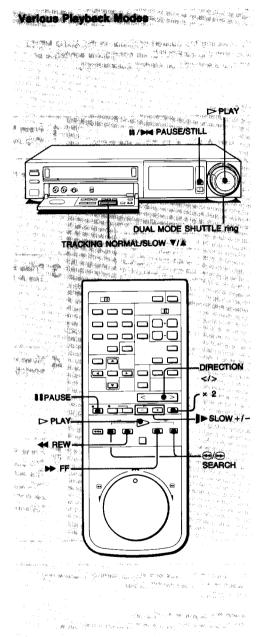
The tape is rewound to its beginning and the VCR enters the standby mode for timer recording.

This function is possible only when a timer recording has been preset.

Notes on "GO TO REC START - PLAY"

The memory of the recording start position will be erased and "GO TO REC START - PLAY" will not be operable in the following cases:

- You pressed COUNTER RESET.
- · You ejected and inserted the cassette.
- You pressed ◄◄ HIGH SPEED REWIND.



To obtain a still picture

During playback mode, press ■1/► PAUSE/STILL on the unit or ■1 PAUSE on the Commander. To resume normal playback, press ▷ PLAY, ■1/► PAUSE/STILL, or ■1 PAUSE. When the pause mode lasts for more than 5 minutes, the unit will re-enter the playback mode automatically.

To search for a particular scene - Picture search
During playback or still mode, press ◀◀ REW or ▶▶ FF.
While the button is pressed, a high speed picture without
sound will appear on the TV screen. When the button is
released, the unit will return to the previous mode.

To watch the picture during high speed playback -Locked picture search

During the playback or still mode, press ⊕ SEARCH or ⊕ SEARCH on the Commander. A high speed picture in forward or reverse will appear on the screen even when the button is released. To resume normal playback, press ▷ PLAY.

To watch slow motion playback

During playback or still mode, press ▶ SLOW + or - on the Commander. Change the slow motion speed with the + or - buttons. Press + to increase the playback speed, and - to decrease the playback speed.

To see the picture momentarily while the unit is in the fast-forward or rewind mode

During fast-forward mode, turn the DUAL MODE SHUTTLE ring to the right (▶▶) or press ▶▶ FF on the Commander.

During rewind mode, turn the DUAL MODE SHUTTLE ring to the left (◄◄) or press ◄◄ REW on the Commander.

The high speed playback picture can be seen as long as the ring is held in that position, or the button is pressed. Release the ring or button to return to the previous mode.

To watch a playback picture at 2 times the normal speed

During playback or still mode, press \times 2 on the Commander.

To watch reverse direction playback, slow and $\,\times\,$ 2 picture

During forward playback of the desired mode, press < on the Commander. Press > or ▷ PLAY to resume forward playback.

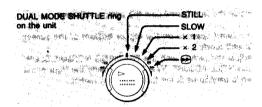
To watch a frame-by-frame picture

During still mode, press > to advance the picture one frame. Press < to reverse the picture one frame. Each press of </p>
l> will move the picture one frame. Press ▷
PLAY to resume normal playback.

To enjoy various playback mode using the DUAL MODE SHUTTLE ring

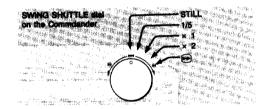
Various playback modes as illustrated can be selected with DUAL MODE SHUTTLE ring from any playback mode. The same speed is available in the reverse direction. Releasing the DUAL MODE SHUTTLE ring makes a still picture.

To resume normal playback, press ▷ PLAY.



To enjoy various playback modes using the SWING SHUTTLE dial on the Commander

Various playback modes as illustrated can be selected with the dial from any playback mode. The same speed is available in the reverse direction. Releasing the dial makes a still picture. To resume normal playback press PLAY.



How to Adjust the Picture Manually in Various Playback Modes

If streaks or noise appear on a slow motion picture
Adjust the picture with the TRACKING NORMAL/SLOW
and STILL ADJUST ▼/▲ buttons inside the front panel.
The picture can be adjusted more easily by changing the
speed closer to normal playback by pressing ▶ SLOW
+.

if the picture appears to shake in the still mode
Adjust the picture with the STILL ADJUST ▼/▲ buttons inside the front panel until the picture stabilizes.

If a band appears on the top or bottom of the screen in still mode

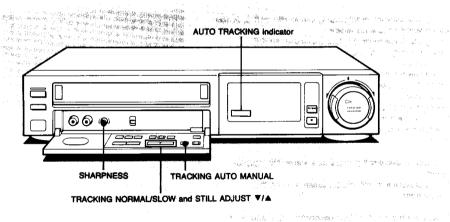
Adjust the picture with the TRACKING NORMAL/SLOW and STILL ADJUST ▼/▲ buttons inside the front panel while playing back the tape in a slow motion.

Note

Streaks or noise cannot be completely eliminated in the reverse direction playback or in reverse slow modes.

Playing Back a Tape Recorded on Another VCR

When playing back a tape recorded on another VCR, we recommend that you make the following adjustments to obtain a better picture.



Adjusting the sharpness

Turn the SHARPNESS control toward SHARP to obtain a sharper picture. Turn it toward SOFT to obtain a softer picture.

Adjusting the tracking

Automatic tracking adjustment

The tracking condition is automatically adjusted on this VCR. The AUTO TRACKING indicator blinks while the VCR is searching for the best tracking condition and lights when maximum playback picture is obtained. The automatic tracking control is activated in the following conditions:

- when the cassette is inserted for the first time.
- when the recording mode on the playback tape is switched between SP and EP.
- when the picture is distorted by scratches on the tape.
- when the AUTO TRACKING indicator is turned on by pressing TRACKING AUTO/MANUAL after the picture is adjusted manually.



Manual tracking adjustment

When the playback picture proves to have streaks or snow during normal playback, adjust the picture manually with TRACKING NORMAL/SLOW and STILL ADJUST

▼/▲.

Press either ▼ or ▲ to obtain the best possible picture. The tracking meter will appear on the TV screen and the AUTO TRACKING indicator will be turned off. When the manual adjustment proves unsatisfactory, press both of the TRACKING NORMAL SLOW and STILL ADJUST ▼/▲. The tracking condition will return to the center position.

Notes

- Auto tracking adjustment is not possible for tapes recorded in LP mode.
- Auto tracking adjustment may be impossible and the tracking indicator may not appear on the TV screen when the recording condition of the tape is poor.
- During auto tracking adjustment, streaks or noise may appear.
- When DATA SCREEN on the Commander is pressed, the tracking indicator will not appear on the TV screen.

Recording TV Programs

Before You Begin

Check the following points:

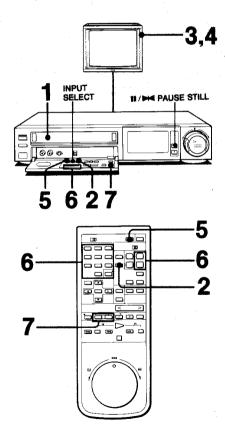
Check the connections

Make sure that the connections have been made correctly.

Check the input mode indicator

Press INPUT SELECT to light TUNER in the display window.

Operation



Caution

10-50% (6k) .

Television programs, films, video tapes and other materials may be copyrighted. Unauthorized recording of such material may be contrary to the provisions of the copyright laws. Also, use of this recorder with cable television transmission may require authorization from the cable television transmission and/or program owner.

The most of the second of the

THE PROBLET WAS TOUCHER

- Insert a cassette.
 - The VCR will turn on automatically (Auto power on).

Among the state of the state of

week your property and property and the

- 2 Select the recording tape speed, SP or EP. with REC MODE.
- 3 Turn on the TV.
- 4 If your TV is connected to both VHF/UHF OUT and LINE OUT on the VCR.

Select the input for the VCR.

If your TV is connected only to the VHF/UHF OUT on the VCR.

Select the channel for the VCR (3 CH or 4 CH).

5 Press ANT TV/VTR so that the VTR indicator lights.

Skip this step if your VCR is not connected via the VHF/UHF antenna terminal.

- 6 Select the channel to be recorded with CHANNEL +/- or channel number buttons and ENTER.
- Press the two REC buttons on the Commander simultaneously or the REC button only on the unit.

To stop recording Press ■ STOP.

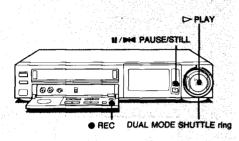
To stop the tape for a moment

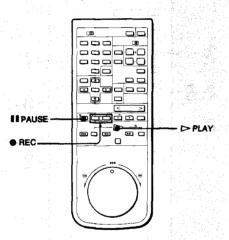
Press III/► PAUSE/STILL on the unit or III PAUSE on the Commander. To resume recording, press III/► PAUSE/STILL or III PAUSE. When the recording pause mode lasts for more than approximately 5 minutes, the unit will enter the stop mode.

When the tape reaches its end

The tape will be rewound to the beginning and the power of the unit is remains on.

Temporarily Stopping Recording at a Particular Point





Technique 1

You can stop recording when unwanted scene appears and resume recording smoothly.

- 1 Press II/M4 PAUSE/STILL or II PAUSE when an unwanted scene appears.

 Recording will stop and the VCR will enter the
 - Recording will stop and the VCR will enter the recording pause mode.
- Press II/► PAUSE/STILL or II PAUSE at the desired point to release the pause mode.

 Recording will resume from the point set in step 1.

Technique 2

When an unwanted scene has already started to be recorded, you can return the tape to the desired point, have the VCR standby in the recording pause mode, and resume recording at the desired scene smoothly.

- Set the VCR to the recording pause mode.
- 2 Turn the DUAL MODE SHUTTLE ring to the left and search for the point from which you wish to continue recording.
- 3 Release the DUAL MODE SHUTTLE ring at the desired point.

After an instant of STILL mode, the VCR will automatically enter the recording pause mode.

4 Press II / ► PAUSE/STILL or II PAUSE. Recording will resume.

Watching One TV Program While Recording Another

- Press ANT TV/VTR so that the VTR indicator is turned off.
- 2 Select the channel you want to watch on the TV.

What the VTR indicator in the display window

VTR indicator	Picture on the TV screen
Lit	Channel selected by the VCR or the playback picture of the VCR
Unlit	Channel selected by the TV

To Record a Program without Watching the TV

Turn off the power of the TV or color monitor. There will be no interference to the recording.

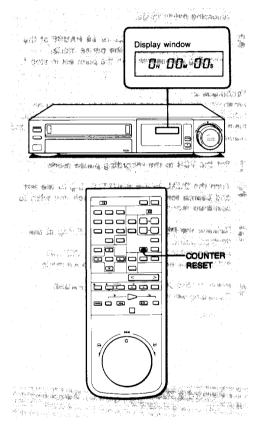
Note

If you are using a color monitor, you cannot watch another program during recording unless the monitor has an internal TV tuner.

Use of the Tape Counter

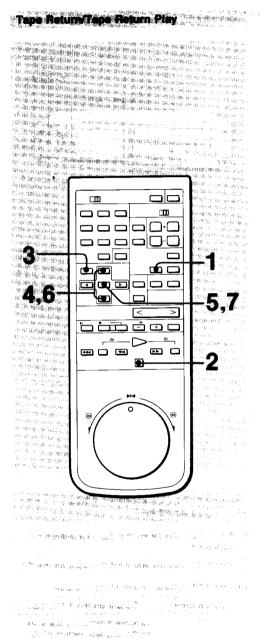
Indexing the Tape Contents

Before starting recording or playback, press COUNTER RESET to reset the counter to zero. By noting the counter reading at the desired point, you can easily find that point later by referring to the counter. Use the label on the cassette to list the programs and their counter readings.



Note on counter reading

After a cassette is ejected, the counter reading is retained, however when a cassette is inserted again, the counter will return to "0H00M00S."



Tape return

To stop the tape at a particular point.

- 1 During playback or recording, press COUNTER RESET at the point you want to locate later. The tape counter will display "0H00M00S."
- **2** When recording or playback is completed, press STOP.
- 3 Press MENU.



4 Move the cursor to AUTO MENU.

MENU

MENU

TIMEF SET/CHECK

TUNER PRESET

OLOCK SET

Press EXECUTE. AUTO MENU display will appear. AUTO MENU

PLAY-REW POWER OFF
GO TO ZERO-SILAY
GO TO ZERO-SILAY
GO TO REC START-PLAY
REW-POWER OFF
REW-EJECT-POWER-OFF
REW-PLAY
REW-HIMER REC

6 Move the cursor to GO TO ZERO - STOP.

PLAY REW POWER OFF

GO TO ZERO-STOP

GO TO ZERO-BLAY

GO TO REC START-PLAY

REW POWER OFF

REW PLAY

AUTO MENU

Press EXECUTE. The tape will be rewound or advanced close to the counter zero point and stop.

GO TO ZERO STOP

Tape return play

The second of th

To start playback automatically from the counter zero point.

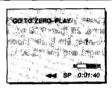
Follow steps 1 to 5 in "Tape return."

5

6 Move the cursor to GO TO ZERO - PLAY.

AUTO MENU
PLAY REVI POWER OFF
BO TO ZERO STOP
GO TO ZERO STOP
GO TO REC START PLAY
REVI POWER OFF
REVI PLAY
REVI TIMER REC

7 Press EXECUTE.



Notes

- The tape counter does not work when the inserted tape has no recordings.
- There may be a difference of several seconds between the COUNTER ZERO position and the position detected by the VCR.

Timer Recording

You can preset up to eight recordings as much as one month in advance. The recordings can be preset with the Commander while only referring to the TIMER SET/CHECK display on the TV screen.

Before You Begin

- The date and clock must be set correctly. (See "Date and Clock Setting" on page 22.)
- Make sure that the cassette tape is long enough to record all the programs.
- Make sure that the safety tab on the cassette is not broken off. If you insert a cassette without its safety tab and press TIMER REC (ON/OFF), the cassette will automatically be ejected.
- Turn on the VCR and the TV.

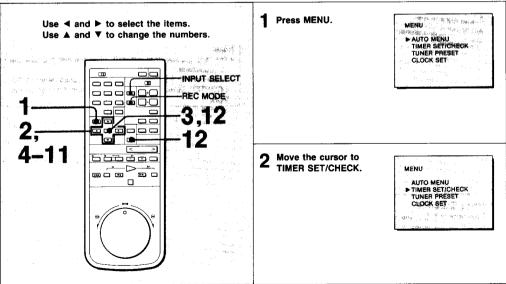
Recording from today to one month later

If today is August 31st, you can set the timer to record a program broadcast between today and September 30 (for 31 days). If today is January 31st, you can set the timer to record a program broadcast between today and February 28th (for 29 days). A leap year is automatically considered.

Timer Setting Example

Suppose you want to record a program broadcast on channel 26 from 9:00 pm to 10:55 pm on Thursday November 8th in SP mode. Note that AM 12:00 is midnight and PM 12:00 is noon.

Operation



Press EXECUTE. The TIMER SET/CHECK display will appear on the screen. When the clock is not set properly, a short beep alerts you. Return to 'Date and Clock Setting' page 22) to reset the clock.

	ER SE	T/CHI	ECK)() ()	26,	FA H	1
13	-			3.	in in	Ξ.	- - -
1 00 100 100 70	[[-≠ [ni d ni d sasi		- 1. - 1. - 1.	 	2	= -
	Sec.		15.77.	-,-	31.0	-	-,

8 Press >.
The on-time will blink under "OFF". Set the turn-off time referring to steps 6 and 7.



4 Press ▶. Make sure that today's date is flashing. If not, re-set the correct time. See "Date and Clock Setting" (page 22).

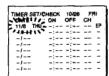


9 Press' ➤ to flash the CH position then press ▲ or ▼ until 26 appears.
Only the channels set in the

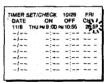
VCR will appear. The CHANNEL +/- and ENTER or channel number buttons can also be used.

TIMER SET	CHECK	10/26	FRÍ
DATE 11/8 TH	ON: UPM 9:001		264
-1	:	-:	-
-4-2-	6 H	122	
- Adding	986		and J
-/		-:	
-1	-:	-:	

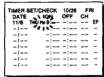
Fress ▲ to set the month and date to 11/8 THU. The day of the week is automatically set.



10 Press ➤ to flash the recording speed position then ▲ or ▼ until SP appears. REC MODE can also be used.



6 Press ► to flash the hours section under "ON" then ▲ or ▼ until PM 9 appears.



11 Press ➤ to store the setting.

When all of the settings stop flashing with a ➤ on the left most position indicates that this setting

has been completed.

TIMER SET/CHECK 10/28 FRI
DATE ON OFF CH
1/18 THO 9:00 Pai 10:50 28 SP

7 Press ➤ to flash the minute section under "ON" then ▲ or ▼ until 00 appears.

	T/CHECK			
DATE	QN.	OFF	CH	
11/8 T	HU PM 9:00.	-:		EP
-1	200	-:		-
-1	-:	-:		-
-1	-:	-:		
-1	-1	-:		~~
-1	-:	-:		
-1	-:	-:		
-1	-:	-:		_

12 Press EXECUTE. Press TIMER REC (ON/OFF) to enter the timer recording standby mode. To change or correct the setting before completing it Press ◀ to return to the item to be changed.

To preset another program

Move the cursor to the second line after step 11 and repeat steps 4 to 11.

To record video sources from LINE IN 1 or 2 jacks
Press INPUT SELECT in step 4 to 10 to call up LINE 1
or 2 under the "CH" position. The indication will return
to channel numbers on the third press.

Problem when TIMER REC (ON/OFF) is pressed

The cassette is ejected automatically.	The safety tab on the inserted cassette has been removed.
The TIMER indicator does not appear.	No cassette has been inserted. The tape is at its end.

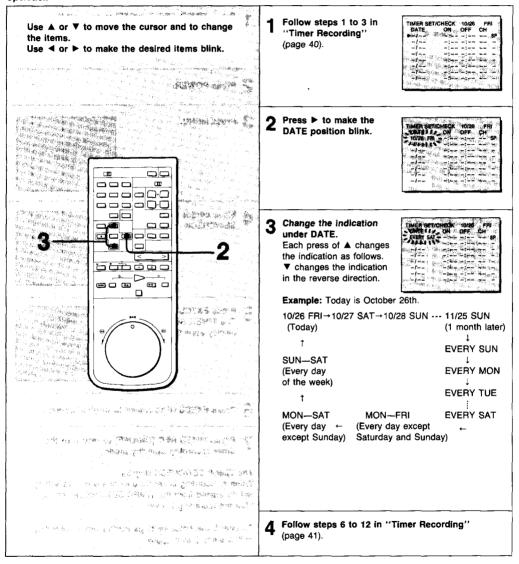
If a power interruption occurs

- If a power interruption lasting less than approximately one hour occurs while the VCR is waiting for the preset time, the VCR will re-enter the timer recording standby mode.
- If a power interruption lasting more than approximately one hour occurs before a timer recording, the memory will cleared. Reset the date and time for timer recording.
- If a power interruption lasting less than approximately one hour occurs during a timer recording, the VCR will start recording again and the tape counter will indicate "OHOOMOOS."

Every Week and Every Day Recording

Weekly or daily timer recording can be set on this VCR. This function is convenient if, for example, you wish to record the same program on the same day of the week.

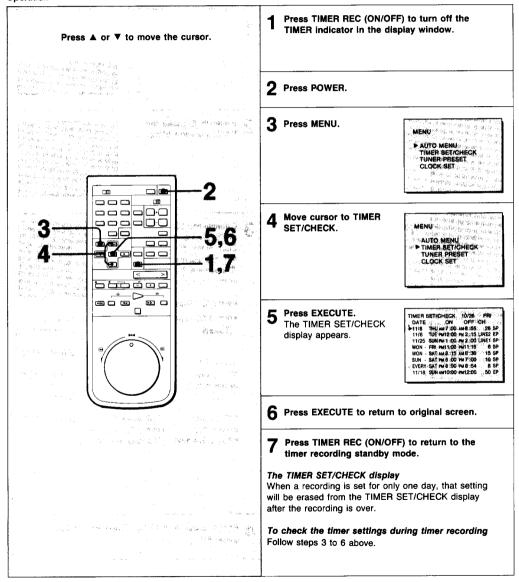
Operation



To Check Timer Settings

You can display all of the timer settings on the TV screen to check the settings.

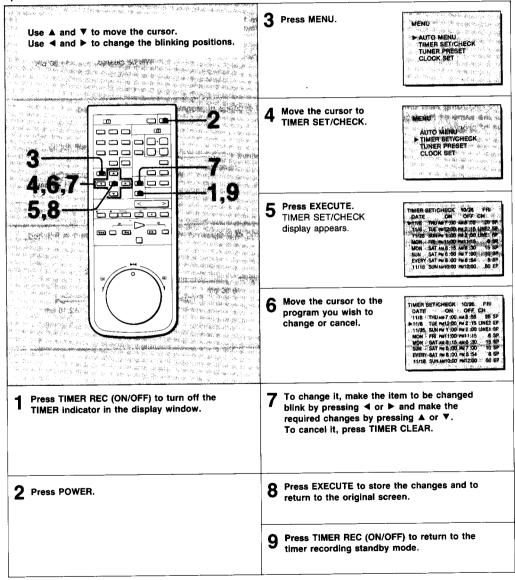
Operation



To Change or Cancel the Timer Settings

The timer settings can be changed or canceled by referring to the TIMER SET/CHECK display.

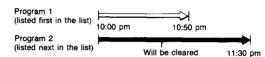
Operation



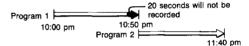
When Preset Timer Recordings Overlap

If the turn-on time of two programs are the same

The program listed first on the TIMER SET/CHECK display has priority over the other programs. The timer recording parameters of lower priority programs will be erased from the TIMER SET/CHECK display when recording starts.

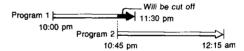


If the recording start time of program 2 is the same as the recording end time of program 1 The last 20 seconds of program 1 will not be recorded.



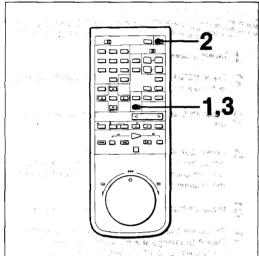
If the recording start time of program 2 comes before recording of program 1 is over

The recording of program 2 will begin before program 1 is finished.



Using the VCR before Timer Recording Starts

If you want to use the VCR when it is in the timer recording standby mode, you must first turn off the TIMER indication in the display window and get out of the timer recording standby mode.



1 Press TIMER REC (ON/OFF) so that the TIMER indicator in the display window is turned off.

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- 2 Turn on the power of the VCR.
 Now the VCR is ready to be used.
- 3 After using the VCR, press TIMER REC (ON/OFF) to return to the timer recording standby mode and to light the TIMER Indicator.

After Entering the Timer Recording Standby Mode

Automatic power on

The VCR is automatically turned on when the set time comes and starts recording. When it completes recording, the power is automatically turned off.

To stop recording activated by the timer Press TIMER REC (ON/OFF).

Buttons which can be operated during timer recording

- TIMER REC (ON/OFF)
- COUNTER RESET (See "Use of the Tape Counter" page 38.)
- ANT TV/VTR (See "Watching One TV Program While Recording Another" page 37.)
- DATA SCREEN (See "Playing a Tape About the Data Screen" page 30.)
- INDEX MARK (See "Index Function" page 50.)
- MENU (For checking the programs only.
 See "To Check Timer Settings" page 44.)

Quick Timer Recording

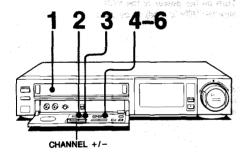
This function is convenient when, for example, you want to set the VCR to start recording immediately without going through the whole timer setting procedure. However, the quick timer recording function only provides a very rough setting for the desired program.

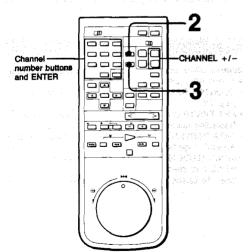
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Before You Begin

- Press TIMER REC (ON/OFF) if the TIMER indicator is turned on.
- If you are currently recording, perform step 6 only.

Operation





- 1 Insert a cassette.
- Press INPUT SELECT so that the TUNER indicator is turned on.

- 3 Press REC MODE to decide the tape speed, SP or EP.
- Press QUICK TIMER on the VCR. Select the channel for recording with CHANNEL +/- or channel number buttons and ENTER while the channel display is blinking.
- 5 Press QUICK TIMER again to start recording.
- 6 To decide the recording duration, press QUICK TIMER to change the duration indicator.

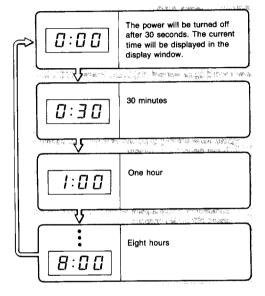
 Every press of QUICK TIMER increases the recording duration in units of 30 minutes.

You can leave your VCR after turning off the TV. The VCR will automatically be turned off when the recording is finished.

If a cassette without its safety tab is inserted
The cassette will be ejected automatically when you press QUICK TIMER.

Recording Duration Indicator

Every time you press QUICK TIMER, the recording duration indicator will change as shown in the illustration. The recording duration can be changed by pressing QUICK TIMER even during quick timer recording. The duration indicator counts down the recording time, minute by minute, during recording.



Buttons Operable during Quick Timer Recording

TIMER REC (ON/OFF)	To stop quick timer recording.		
QUICK TIMER	To change recording duration.		
COUNTER RESET	To reset the tape counter to zero.		
INDEX MARK	To record an index signal.		
ANT TV/VTR	To watch the picture broadcast on another channel.		
MENU	Only operable to check the timer recording settings. (See "To Check Timer Settings.")		

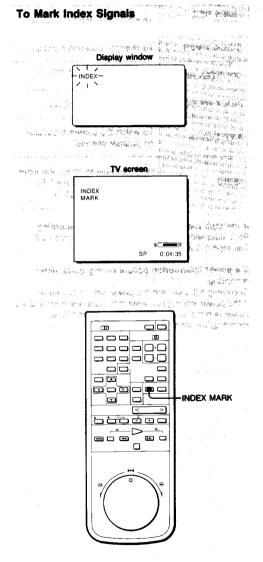
If the tape runs out during quick timer recording Recording will stop and the power will be turned off. The tape will not be rewound automatically.

If a power interruption occurs during quick timer recording

Recording will stop and the power will be turned off. If the power interruption lasts less than one hour and the power is restored before the recording end time, recording will start again from that point.

Index Function

A particular program can be easily located by an index signal marked on the tape.



The INDEX indicator blinking in the display window and the INDEX MARK display on the TV screen show that an index signal has been marked.

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Automatic index mark

An index signal is automatically marked at the beginning of recording.

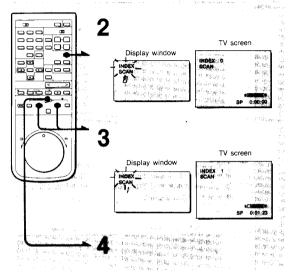
Manual index mark

Index signals can be marked at any desired point during any recording or normal playback. Press INDEX MARK to mark an index signal.

Notes

- · Leave an interval of more than 2 minutes between index signals when marking them one after the other so that the VCR can detect them correctly.
- · While an index signal is being marked during playback, the recorded sound will not be heard, but it will not be erased.
- · You cannot mark an index signal in the following cases:
 - On a tape without its safety tab.
 - On an unrecorded portion of a tape.
 - Immediately before a point on the tape where the tape speed (EP or SP) changes.
 - When playing back a tape recorded in LP mode.

Index Scen



The beginning of each program can be found and played back by using the index signals.

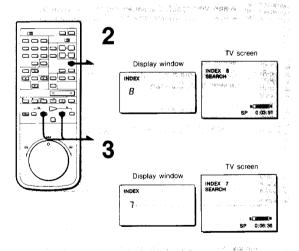
Insert a cassette with index signals.

- Press INDEX once. The INDEX and SCAN indicator blinks alternately.
- 3 To scan the previous programs, press ◀ REW. To scan the programs ahead, press ► FF.

The INDEX SCAN indicator will blink continuously while scanning. The tape will be rewound or rapidly advanced to the next marked index signal. The tape will be played back for approximately 10 seconds from the index signal, and then be rewound or advanced to the next index signal. Every time an index signal is detected and playback begins, the displayed index number will increase.

4 When the desired program is detected, press ▷ PLAY.
Playback will start from that point.

Index Search



A particular program can be located and be played back by designating how many index signals ahead or behind that program is from the current position. Up to 19 indexes can be searched for.

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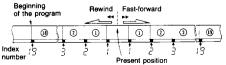
- 1 Insert a cassette with index signals.
- Press INDEX until the index number of the desired program is displayed.

 The INDEX indicator and the INDEX number.

The INDEX indicator and the INDEX number will be displayed.

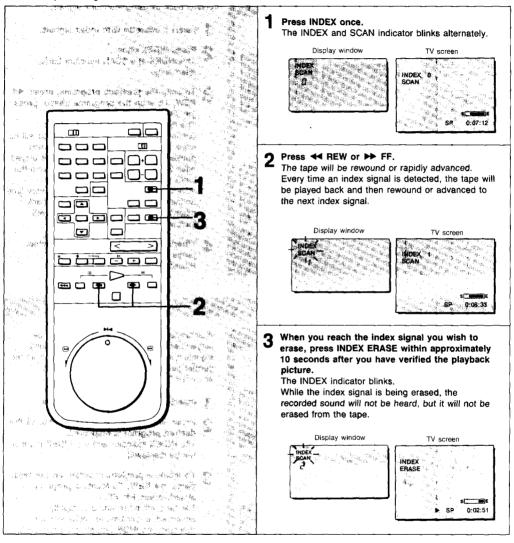
3 To locate a previous program on the tape, press ◀ REW. To locate a program ahead, press ➤ FF.

The tape will be rewound or rapidly advanced. Every time an index signal is detected, the INDEX number will decrease. When the number reaches 0, playback of your desired program will begin.



Erasing Index Signals

Unnecessary index signals can be erased.



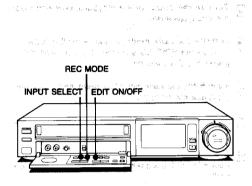
Notes

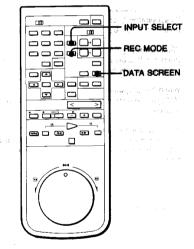
- Index signals marked on a portion of tape just before or after the recording modes, SP and EP, are switched cannot be erased.
- Index signals marked on an LP mode tape cannot be erased.

Editing with Another VCR

Using an additional VCR, you can create your original video program tapes.

Before You Begin





When using the SLV-373UC as the recording VCR Before editing, check these settings:

the significant of a state for the state of the state of

- INPUT SELECT: Select LINE 1 or LINE 2, whichever the playback VCR is connected to.
- REC MODE: Select SP or EP.
- EDIT indicator: Press EDIT ON/OFF to light the EDIT indicator.

When using the SLV-373UC as the playback VCR Before editing, check these settings:

- EDIT indicator: Press EDIT ON/OFF to light the EDIT indicator.
- DATA SCREEN: Press to erase the on-screen displays.

Caution

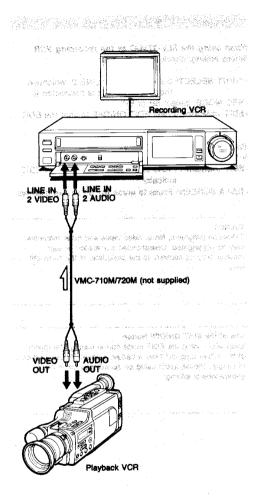
Television programs, films, video tapes and other materials may be copyrighted. Unauthorized duplication of such material may be contrary to the provisions of the copyright laws.

Use of the EDIT ON/OFF button

Even when using the EDIT mode during editing, the quality of the edited tape will have a certain amount of deterioration in picture. Please avoid using an edited tape for multiple generations of editing.

Editing with a VCR without a Sony Control Terminal

Using this VCR as the Recording VCR and an 8 mm Video Camera Recorder as the Playback VCR



- Insert a cassette for recording into the recording VCR.
- 2 Turn on the power of the playback VCR and insert a source cassette.
- 3 Activate the EDIT mode on the recording VCR. Activate the EDIT mode on the playback VCR if the player has this function.
- 4 Search for the playback start point and enter the playback pause mode.
- 5 Search for the recording start point and enter the recording pause mode.
- 6 Press the PAUSE button on both of the units. Recording of the signals from the playback VCR will start.

When editing is completed

Press the STOP button on both of the VCRs.

When pressing PAUSE

Press the PAUSE button on the playback VCR a little before pressing the one on the recording VCR.

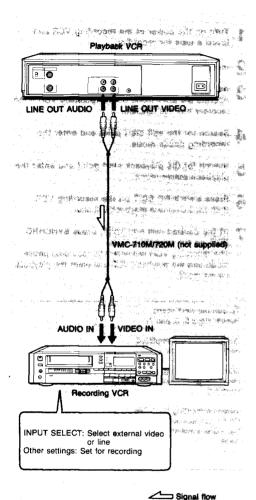
When the playback VCR is a stereo unit

Make connections with the VMC-910MS/920MS cable (not supplied).

When connecting the VCRs

Do not connect both LINE IN and LINE OUT jacks on the two VCRs simultaneously. Doing so may cause a humming noise.

Using this VCR as the Playback VCR and a Setamer VCR as the Recording VCR



- 1 Turn on the power of the recording VCR and insert a cassette for recording.
- Insert a source cassette into the playback VCR.
- 3 Activate the EDIT mode on the playback VCR. Activate the EDIT mode on the recording VCR if the recorder has this function.
- 4 Search for the playback start point and enter the playback pause mode.
- 5 Search for the recording start point and enter the recording pause mode.
- 6 Press the PAUSE button on both of the units. Recording of the signals from the playback VCR will start.

When editing is completed

Press the STOP button on both of the units.

When pressing PAUSE

Press the PAUSE button on the playback VCR a little before pressing the one on the recording VCR.

When the recording VCR is a stereo unit

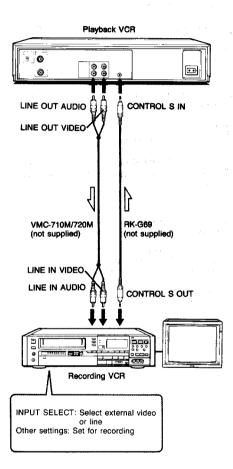
Make connections with the VMC-910MS/920MS cable (not supplied).

When connecting the VCRs

Do not connect both LINE IN and LINE OUT jacks on the two VCRs simultaneously. Doing so may cause a humming noise.

Editing with a VCR with a Control S Out Terminal

Using this VCR as the Playback VCR and Another VCR with a Control S OUT Terminal and the Synchro Edit Function as the Recording VCR



Signal flow

- 1 Turn on the power of the recording VCR and insert a tape for recording.
- 2 Insert a source tape into the playback VCR.
- 3 Activate the EDIT mode on the playback VCR. Activate the EDIT mode on the recording VCR if the recorder has this function.
- 4 Search for the edit start point and enter the recording pause mode.
- 5 Search for the playback start point and enter the playback pause mode.
- 6 Press SYNCHRO EDIT on the recording VCR.
 Both recording and playback will start.
- 7 At the desired edit end point, press SYNCHRO EDIT on the recording VCR.

 The recording VCR will enter the recording pause mode and the playback VCR will enter the playback pause mode.

To edit the next scene Repeat steps 5, 6, and 7.

riepeat steps 5, 6, and 7.

When editing is completed Press STOP on both of the units.

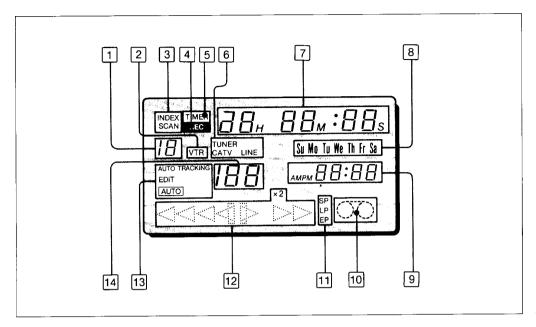
When the recording VCR is a stereo unit

Make connections with the VMC-910MS/920MS cable (not supplied).

When connecting the VCRs

Do not connect both LINE IN and LINE OUT jacks on the two VCRs simultaneously. Doing so may cause a humming noise.

Indications in the Display Window



- 1 Index number indicator
- 2 VTR indicator
- 3 INDEX, INDEX SCAN indicator
 Appears while the VCR is scanning the index point.
- REC (recording) indicator
 Appears while the VCR is performing normal recording, timer recording, or quick timer recording.
- 5 TIMER recording indicator
 Appears while the VCR is performing timer recording, waiting for the turn-on time of timer recording, or performing quick timer recording.
- 6 Input mode indicators
- 7 Linear time counter

- 8 Day of the week indicator
- Current time and quick timer recording duration indicator
- 10 Cassette indicator
- 11 Tape speed indicator LP is only for playback.
- 12 Tape operation indicator
- 13 Various function indicators
 - AUTO TRACKING (Automatic tracking, see page 35)
 - EDIT (see page 53)
 - AUTO (Automatic tape operation, see page 31)
- 14 Channel number/input mode indicators

Troubleshooting

If any difficulty should arise during operation, first check the power cord connection, then go through the following list. Should the difficulty persist, unplug the unit, and contact your Sony dealer or local authorized Sony service facility.

Power

The POWER switch does not function. The power cord is disconnected. • The VCR is in the timer standby mode. The safety device on the VCR has activated. Turn the power off. The power is turned on but the VCR does disconnect the power cord from the wall outlet and leave the unit for not operate. more than 1 hour. Clock and Timer The clock has stopped and "AM 12:00" is There has been a power interruption. Reset the date, clock time, and blinkina. timer setting. TV Reception TV program is not clearly displayed on the • The channel for the VCR is not correctly tuned on the TV. • The TV signal is weak. Adjust the direction of the antenna. TV screen. Recording and Playback • The TV's channel is not set to the one preset for the VCR. Noisy picture during recording • The TV signal is weak. Adjust the direction of the antenna. · Press ANT TV/VTR so that the VTR indication appears in the display No picture on the TV screen • The TV's channel is not set to 3 CH or 4 CH, or the video input has not been selected at the monitor. No cassette has been inserted. Recording cannot be made. The tape is at its end. INPUT SELECT is not set correctly. • The channel for the VCR is not correctly tuned on the TV. The playback picture is not clear. · A tape recorded on another VCR is being played back. Adjust the tracking with the TRACKING NORMAL/SLOW and STILL ADJUST ▲/▼. The video heads are dirty. Clean the heads using the Sony T-25CL video head cleaning cassette. For details on cleaning, refer to the instructions furnished with the cleaning cassette. If the cleaning cassette is not available in your area, have the heads cleaned at your nearest Sony facility. (Do not use a commercially available wet-type cleaning cassette. It may damage the video heads.) The video heads are worn out. Adjust SHARPNESS.

The picture moves vertically during picture search mode.	Adjust the vertical hold control on the TV or color monitor.		
Sound drop-out	The tape is defective. Use a new video cassette tape.		
Timer Recording			
Timer setting cannot be made.	•The current time has not been preset.		
The TIMER indicator is not lit even though you've pressed TIMER REC (ON/OFF).	No cassette has been inserted. The tape is at its end. No setting for timer recording.		
The cassette is ejected when you press TIMER REC (ON/OFF).	•The safety tab of the cassette has been removed.		
Timer recording was not made.	There has been a power interruption of one hour or more. TIMER REC (ON/OFF) was not pressed.		
Data Screen			
The data screen does not appear on the screen.	Press DATA SCREEN.		
Others	•		
Cassette cannot be inserted	• A cassette has already been inserted.		
The Commander cannot be operated.	The COMMAND MODE switch has not been set correctly. The batteries are exhausted.		
A short beep sounds repeatedly	An illogical operation has been made.		
The tracking indicator does not appear on the screen.	 Press DATA SCREEN. The recording condition of the tape is very poor and tracking cannot b adjusted. 		

Specifications

System

Format VHS NTSC standard

Video recording system Rotary two-head helical

scanning FM system

Video signal Tape speed

EIA standard, NTSC color

SP: 33.35 mm/sec. (1 3/8 inches/second)

EP: 11.11 mm/sec. (7/16 inches/second)

LP: 16.67 mm/sec.

(11/16 inches/second) Playback only

Maximum recording/ playback time Fast-forward and

8 hours in EP mode

(with T-160)

rewind time High speed rewind time Approx. 2 min. 30 sec.

Approx. 4 min. (with T-120)

(with T-120)

Tuner Section

VHF channels 2 to 13 Channel coverage

> UHF channels 14 to 69 CATV channels

A-8 to A-1, A to W, W+1 to

W + 8475 ohm antenna terminal for Antenna

VHF/UHF

Inputs and Outputs

LINE IN 1 and 2 VIDEO IN (phono jack) (1 each)

> Input signal: 1 Vp-p, 75 ohms, unbalanced, sync negative AUDIO IN (phono jack) (1 each)

Input level: - 7.5 dBs (0 dBs = 0.775 Vrms)

input impedance: more than 47

kilohms

LINE OUT VIDEO OUT (phono jack) (1)

Output signal: 1 Vp-p, 75 ohms, unbalanced,

sync negative

AUDIO OUT (phono jack) (1) Standard output: - 7.5 dBs at load impedance 47 kilohms Output impedance: less than

10 kilohms

CONTROL S IN Minijack (1)

Timer Section

Clock Quartz locked Time indication

12-hour cycle Timer setting Only for recording

8 program in one month at

max.

Power back up Built-in self-charging capacitor

Back-up duration: Up to one

hour at one time

General

Dimensions

Weight

Power requirements Power consumption

120V AC, 60 Hz 28 W

Operating temperature Storage temperature

5°C to 40°C (41°F to 104°F) -20°C to 60°C (-4°F to 140°F) 430 × 87 × 358 mm (w/h/d)

 $(17 \times 3^3)_8 \times 14 \text{ inches}$

5.6 kg (12 lb 6 oz)

Wireless Commander RMT-V373A

Remote control system Infrared control Command mode Power requirements

VTR 1/2/3 switchable 3V DC, 2 size AA batteries

(IEC designation R6)

75 × 200 × 36.6 mm (w/h/d) **Dimensions** $(3 \times 7^7/_8 \times 1^1/_2 \times \text{ inches})$

Weight 177 g (6.2 oz)

(excluding batteries)

Accessories Supplied

Wireless Commander RMT-V373A with

75-ohm coaxial cable with F-type connectors (1)

Design and specifications are subject to change without notice.