SONY

3-752-668-24 (1

Video Cassette Recorder

Operating Instructions

SLV-585HF/686HF

VHS Hi-Fi

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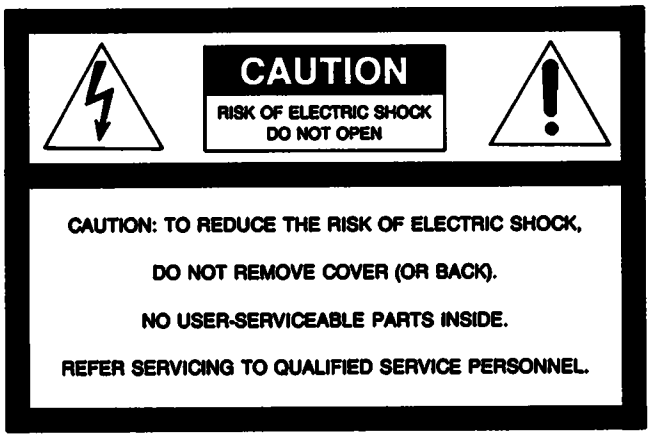
WARNING

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-585HF Serial No. _____
Model No. SLV-686HF 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:

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

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

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Precautions

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 you will not use it for an extended period of time. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

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.
- Do not install it in an inclined position. The unit is designed for operation in a horizontal 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 kind of heavy object on the unit.

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.

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.

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

Introduction

How to Use This Manual

This manual includes information on two Video Cassette Recorder (VCR) models: SLV-585HF and SLV-686HF. The model name is indicated on the rear and front panels of your VCR. Any difference between two models is clearly indicated in the manual, for example, "For SLV-686HF only".
This manual is divided into five chapters. The chapters and their contents are as follows.:

Introduction (page 5)
Getting Started (page 6)
Basic Operations (page 24)
Advanced Operations (page 41)
Additional Information (page 56)

For information about the VCR's basic operations, such as Playback (page 24), Recording a TV program (page 30), or Timer Recording (page 34), see the chapter **Basic Operations**. If you are already familiar with the basic operations, see the chapter, **Advanced Operations**. If you have any problems in operating the VCR, refer to the Troubleshooting section. If your unit is in need of repair, contact your local Sony service facility.

Conventions of this manual

This manual mainly explains operations using the VCR Remote Commander. However, the buttons on the VCR with the same name or mark as those on the Remote Commander function exactly the same as those on the Remote Commander.

When you are reading through the manual, remember that:

- In the text of this manual, buttons and switches are shown in capital letters:
  Example: Press PLAY.
- Numbers in the illustrations correspond to numbers in the text. Using the button on the VCR with the same name instead of the button of the Remote Commander, you can also control the VCR.
- The arrow ⏶ indicates signal flow.
- Notes are enclosed in boxes.

Unpacking

Check that the following accessories are in the carton with your unit:

- Remote Commander RMT-V102 (for SLV-585HF)/V102A (for SLV-686HF) (1)
- Size AA (R6) batteries (2)
- External antenna connector (1)
- 75-ohm coaxial cable with F-type connectors (1)
- AC power cord (1)
- Audio/video connecting cable (3 phono to 3 phono) (1)

Overview of the VCR

Editing

- **DUAL MODE SHUTTLE ring**
  Allows easy operation, quick access to the desired scene and playback in various speeds in forward and reverse directions.
- **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.
- **Insert editing** (for SLV-686HF only)
  You can easily insert a new picture and /or sound onto a prerecorded tape.

On-screen displays

- **Data screen**
  Tape counter, tape speed, operation mode, and remaining tape length are displayed on the TV screen.
- **TIMER SET/CHECK display**
  Timer recording settings can be set and checked by referring to the TV screen.
- **ON SCREEN HELP** (caution indication) message
  The VCR gives a message on screen with a beep tone to warn that you have tried an illogical operation.

Convenient functions

- **Auto tracking function**
  Automatically adjusts the tracking condition for maximum picture quality.
- **Timer recordings of eight 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.
- **Auto head cleaner**
  Cleans the video heads each time a cassette is loaded or unloaded.

High quality picture

- **High quality (HQ) picture**
  The SLV-585HF/686HF 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.

Connecting a TV

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 tape of TV receiver and antenna that you have. We will show you some typical ways to make connections. Before operating the unit, classify your TV for a connection by using the flow chart below, then make the correct connections.

Before making connections, check the following points

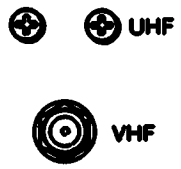
- Turn off the power to the VCR and the TV.
- Do not connect the AC power cords until all of the connections are completed.
- Make connections firmly. Loose connections may cause picture distortion.
- **If your TV does not match the three examples below...** Consult your nearest Sony dealer or qualified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

First Check Your TV For Connections

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

75-ohm VHF/UHF antenna terminal

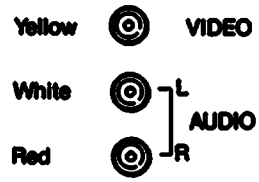
VHF and UHF separate antenna terminals



Go through "Connection Examples 1 to 4" on page 7 to 9 to find the appropriate connections.
For a cable TV connection, go to "Connection Example 5 on page 10".

Then read "Setting the RF Unit" to view the playback picture of the VCR on the TV on page 13.

If your TV has video and audio input jacks

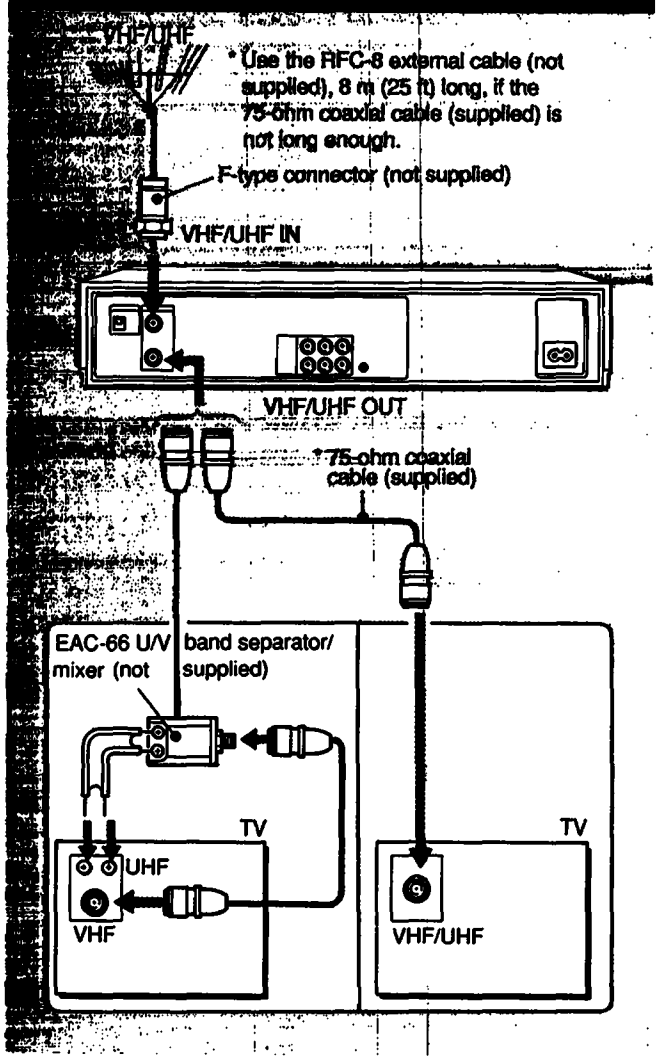


You can enjoy a better quality picture by connecting the VCR and TV via these jacks.
Go to "Connection Example 6" on page 11.

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.

To be continued ►

Connecting a Combination VHF/UHF Antenna — Connection Example 1

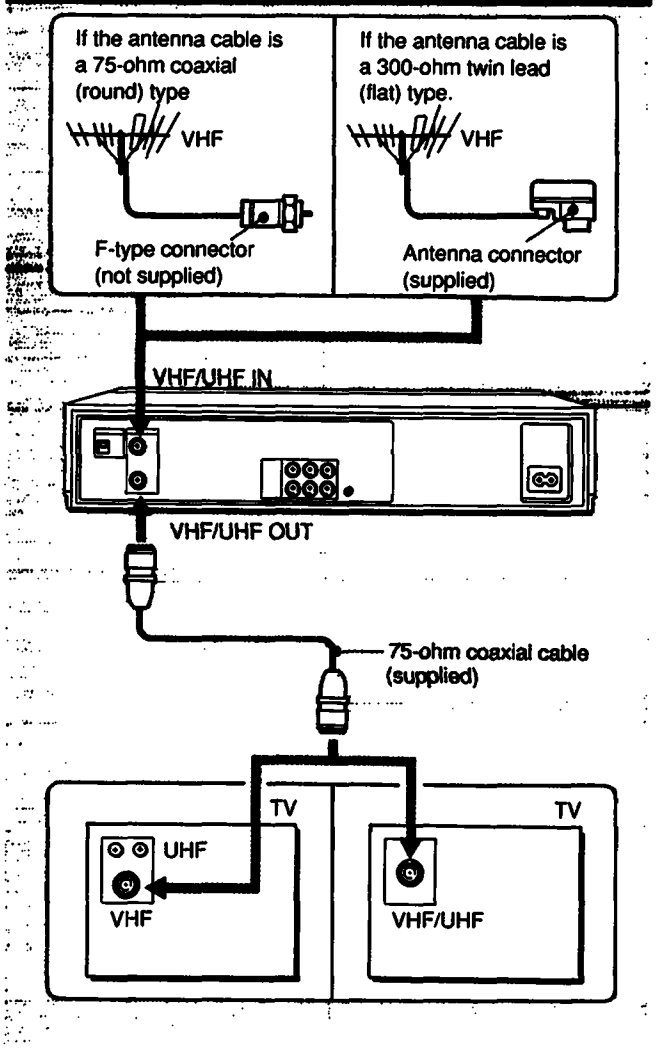


1 Disconnect the TV antenna cable from the TV receiver and connect it to the VCR.

2 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 12 and 13.

Connecting a VHF Antenna Only — Connection Example 2



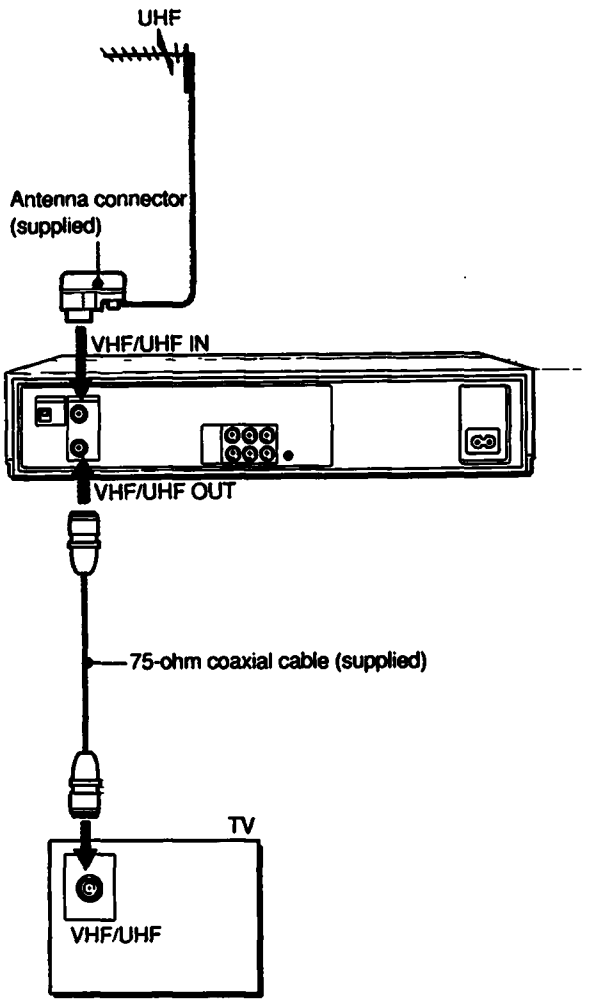
1 Disconnect the TV antenna cable from the TV and connect it to the VCR.
If the antenna cable is a 75-ohm coaxial (round) type:
Use the F-type connector (not supplied).
If the antenna cable is a 300-ohm twin lead (flat) type:
Use the antenna connector (supplied).

2 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 12 and 13.

Connecting a UHF Antenna Only — Connection Example 3

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



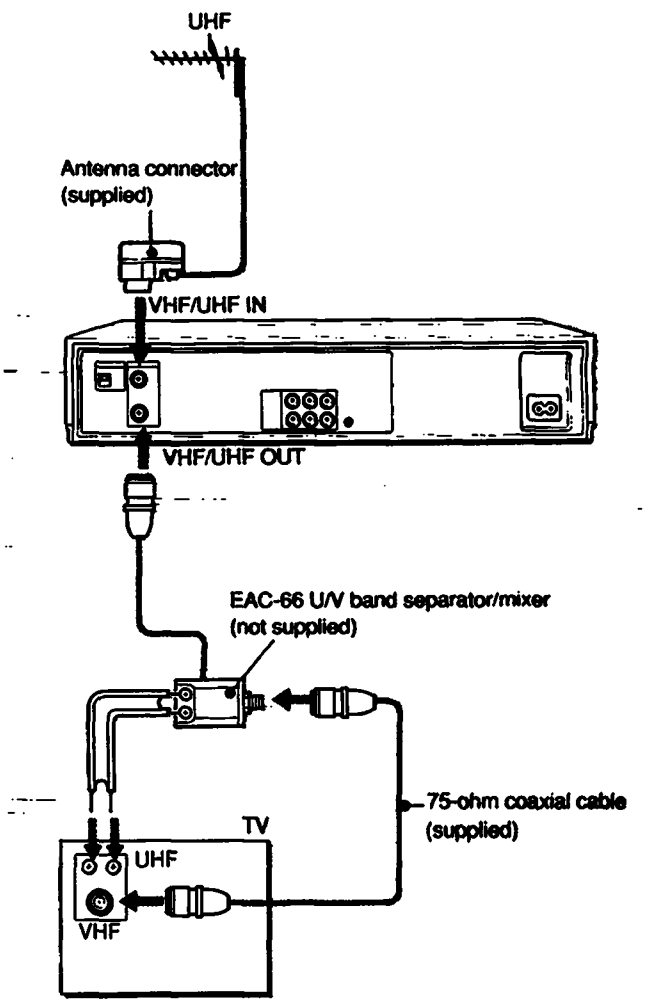
1 **Connect the antenna connector (supplied) to the antenna cable.**

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 pages 12 and 13.

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



1 **Connect the antenna connector (supplied) to the antenna cable.**

2 **Connect the antenna connector to VHF/UHF IN on the VCR.**

3 **Connect the EAC-66 U/V band separator/mixer (not supplied) to the VHF/UHF OUT on the VCR.**

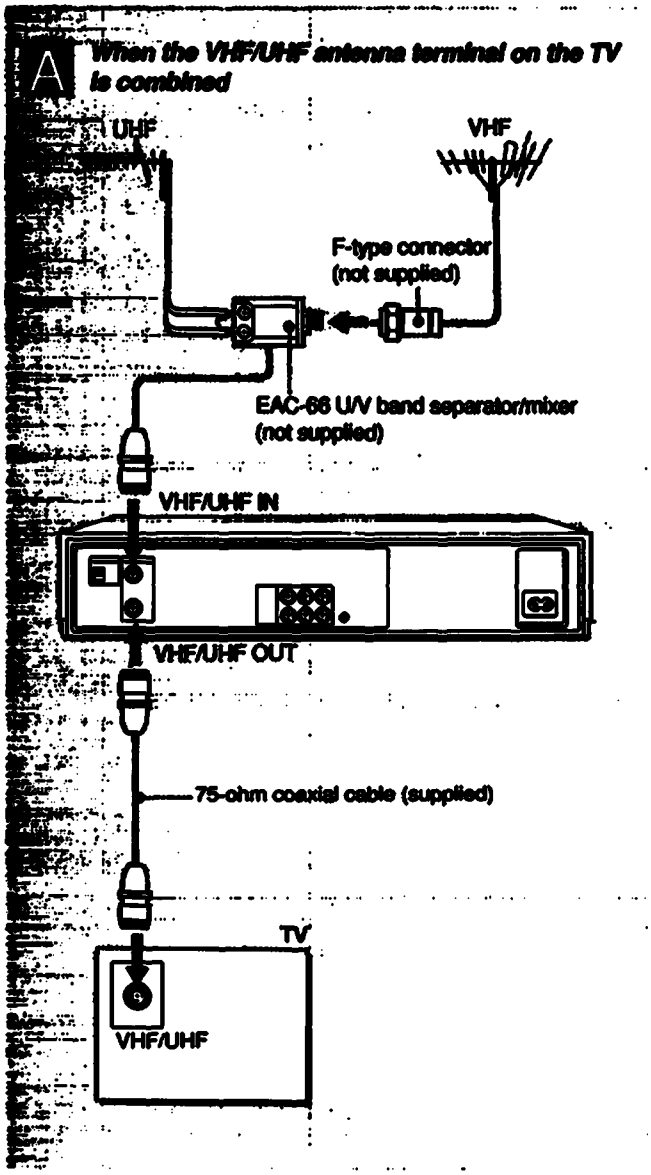
4 **Connect the EAC-66 U/V band separator/mixer to the VHF and UHF antenna terminals on the TV.**

How to attach the antenna connector and the U/V band separator/mixer
See pages 12 and 13.

To be continued ▶

Connecting both the VHF and UHF Antennas — Connection Example 4

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



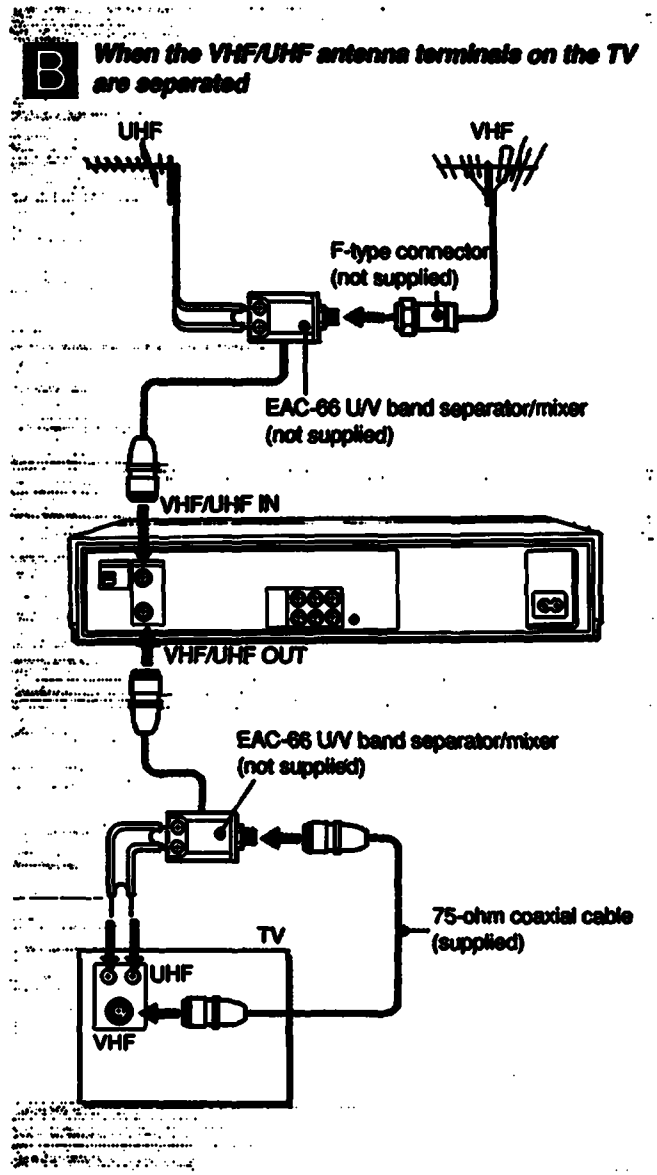
1 Connect the EAC-66 U/V band separator/mixer (not supplied) to the VHF and UHF antennas.

2 Connect the EAC-66 U/V band separator/mixer to the VHF/UHF IN on the VCR.

3 Connect 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 12 and 13.

B When the VHF/UHF antenna terminals on the TV are separated



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.

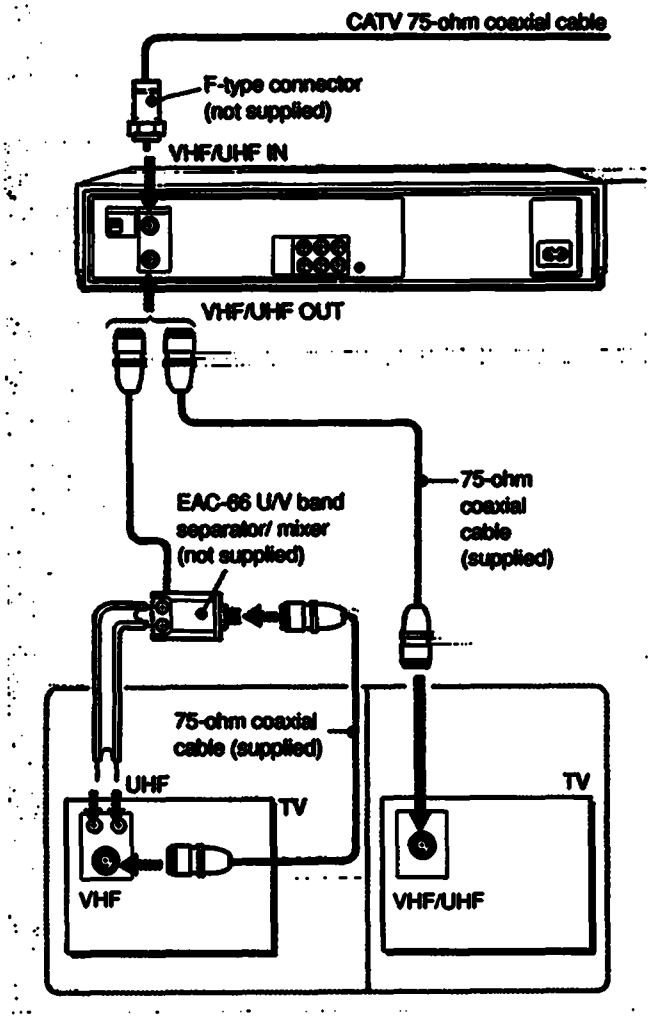
3 Connect the EAC-66 U/V band separator/mixer to the VHF/UHF OUT on the VCR.

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 12 and 13.

Connecting a Cable TV System - - Connection Example 5

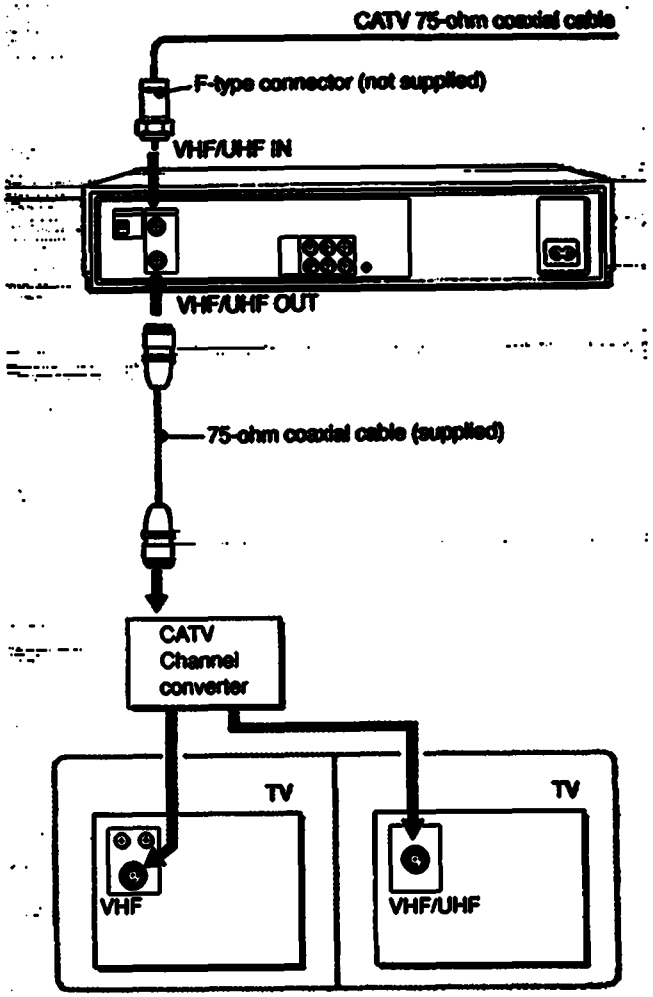
A *If your TV has a built-in CATV decoder*



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 12 and 13.

B *If your TV does not have a built-in CATV decoder*



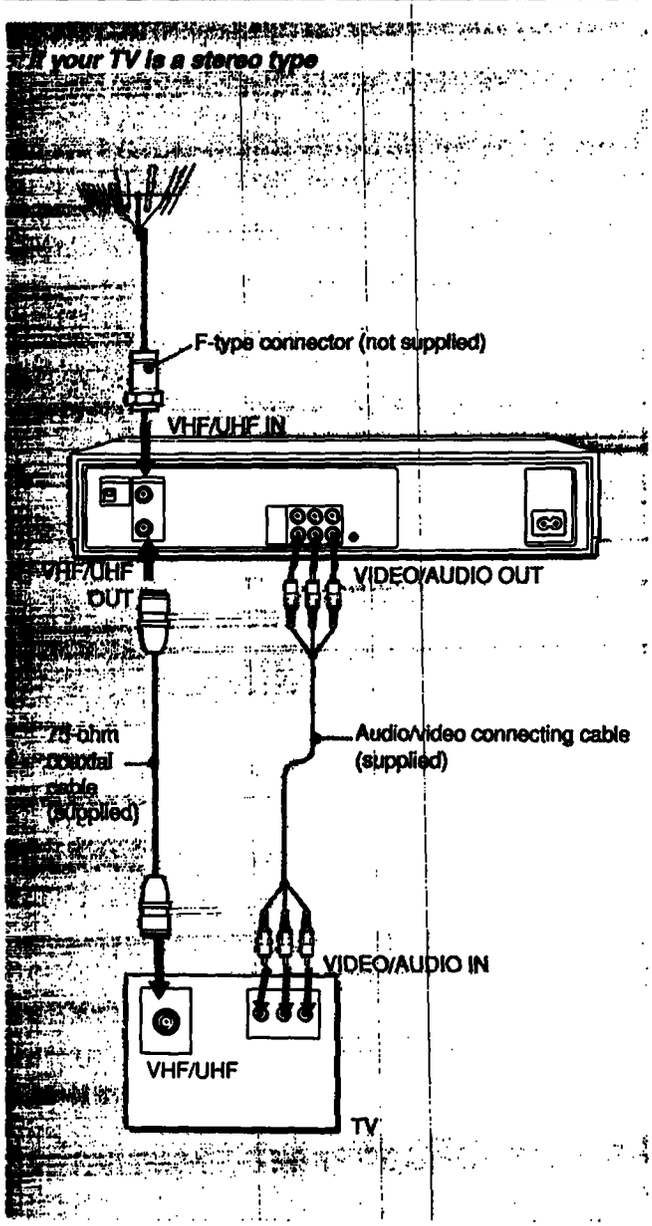
Connect the cable TV channel converter between the TV and the VCR. By setting the ANT TV/VTR switch to TV, you can watch a cable TV program while playing back or recording video sources using the VIDEO LINE IN jack on the VCR.

How to attach the F-type connector
See page 12.

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

To be continued ▶

Connecting a TV Equipped with Video/Audio Input Jacks — Connection Example 6



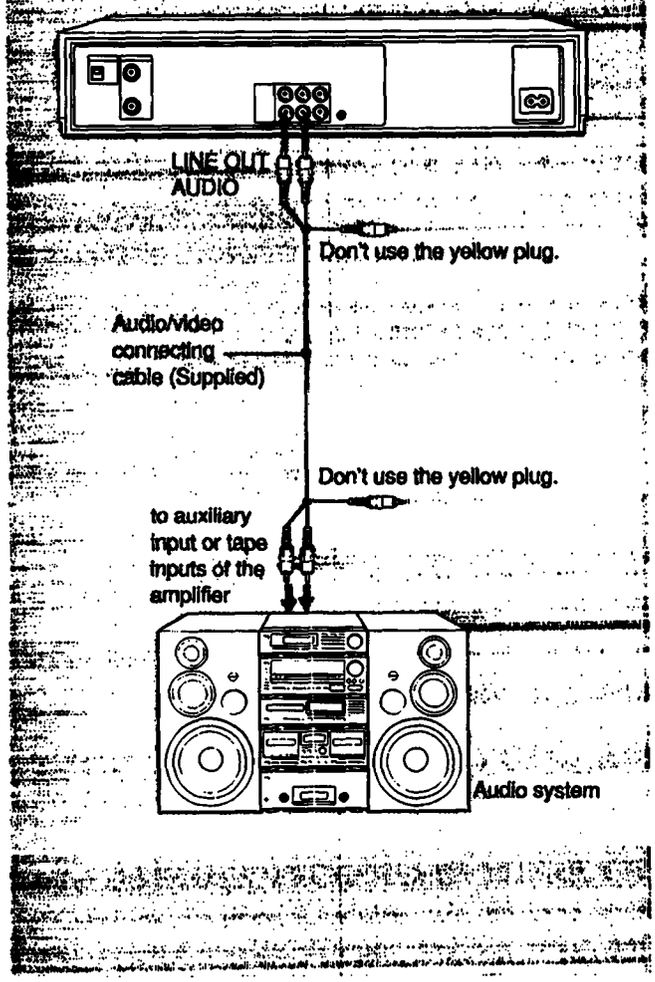
For a higher quality picture, connect a color monitor or a TV equipped with video/audio input jacks.

1 **Connect the VHF/UHF antenna to the VHF/UHF IN on the VCR.**
2 **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 to the video/audio line input jacks on the TV with the supplied audio/video connecting cable.**

How to attach the F-type connector
See page 12.

Listening to the hi-fi stereo sound of the tapes from your audio system

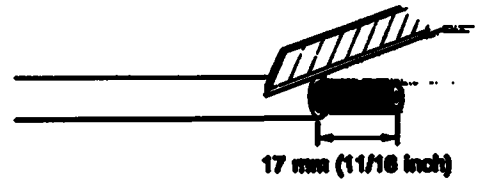
When you connect a TV following connection examples 1 through 5, you can listen to the hi-fi stereo sound of the tapes from your audio system by connecting the VCR to an audio system.



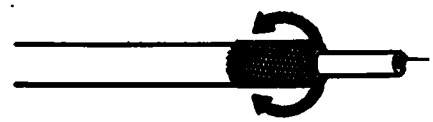
Notes
If the VCR is installed near a tuner or a radio, noise may be heard in AM reception. In this case, move the VCR away from the tuner or the radio, adjust the AM antenna for minimum noise, or connect an external AM antenna to the tuner.
- Before connecting or disconnecting the power cord of the VCR, be sure to turn off the connected amplifier.

How to Attach the F-type Connector (not supplied)

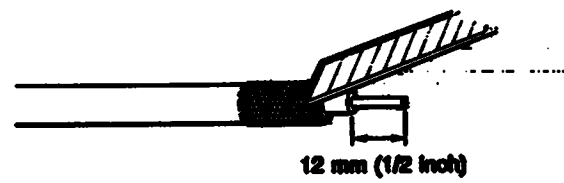
1 Strip 17 mm (11/16 inch) of the black polyvinyl jacket.



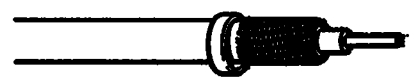
2 Fold back the woven wire.



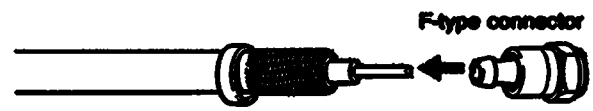
3 Strip 12 mm (1/2 inch) of the white plastic leaving 12 mm of the center conductor.



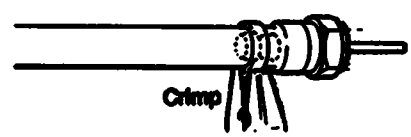
4 Slip the crimping ring over the cable.



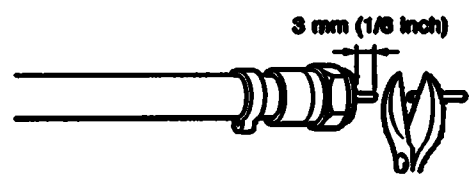
5 Insert the inner conductor into the F-type connector shaft and push the end of the cable into the connector as far as it will go.



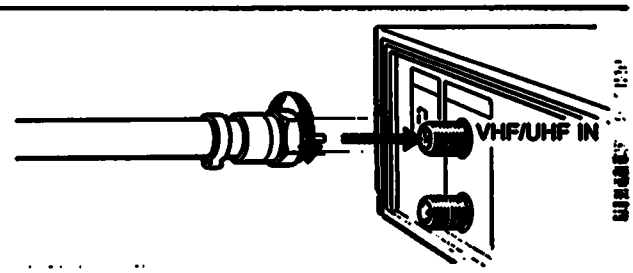
6 Slide the crimping ring over this assembly. Then pinch the crimping ring with pliers to hold the connection in place.



7 Cut the center conductor leaving 3 mm (1/6 inch) from the end.



8 Insert the F-type connector into VHF/UHF IN on the VCR.

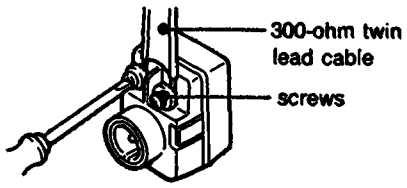


How to Attach the External Antenna Connector (supplied)

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.

3 Tighten the screws again.



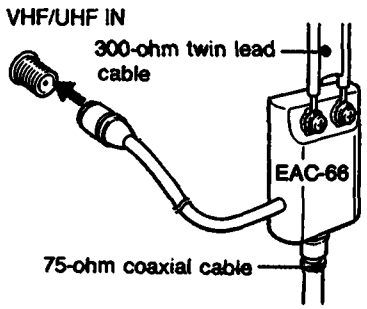
How to Attach the EAC-66 U/V Band Separator/Mixer (not supplied)

1 Loosen the screws on the U/V band separator/mixer.

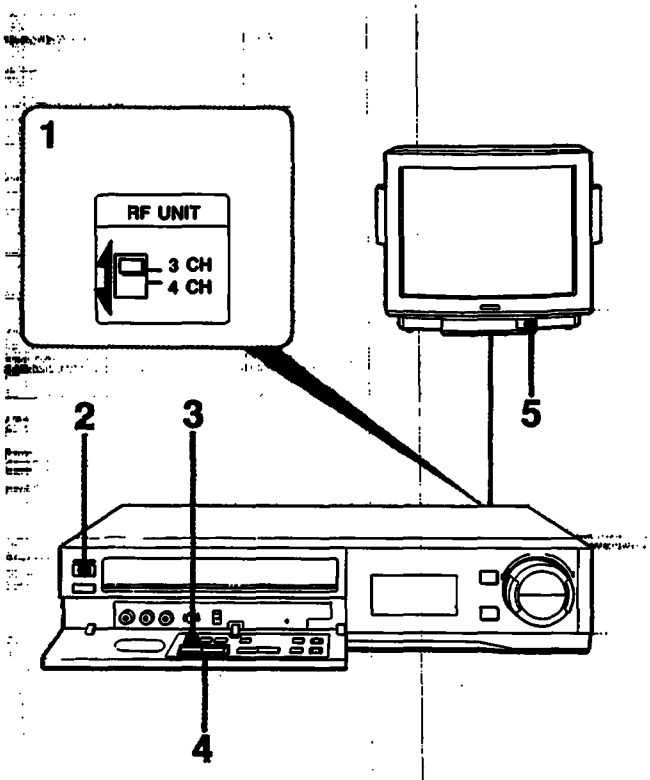
2 Fit the 300-ohm twin lead cable on the UHF antenna under the screws.

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 VCR.



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 setting.

1 Set the RF UNIT at the rear of the VCR 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.

4 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 selectd on the VCR will appear on the screen.

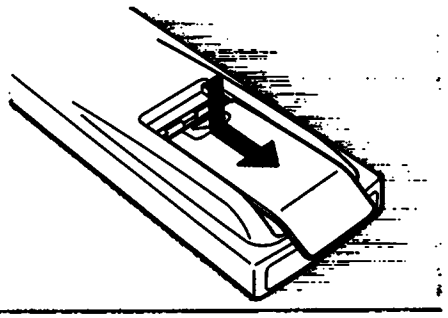
Your TV is now tuned to the VCR. Whenever you use the VCR, set the TV to the channel selected above.

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

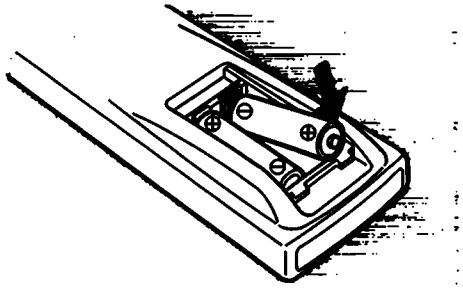
Preparing the Remote Commander

Inserting Batteries

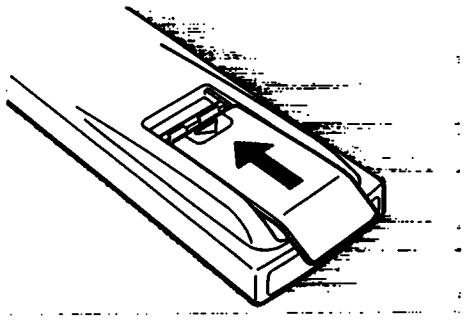
1 Open the lid.



2 Insert two size AA (IEC designation R6) batteries with the polarity lined up correctly.



3 Close the lid.

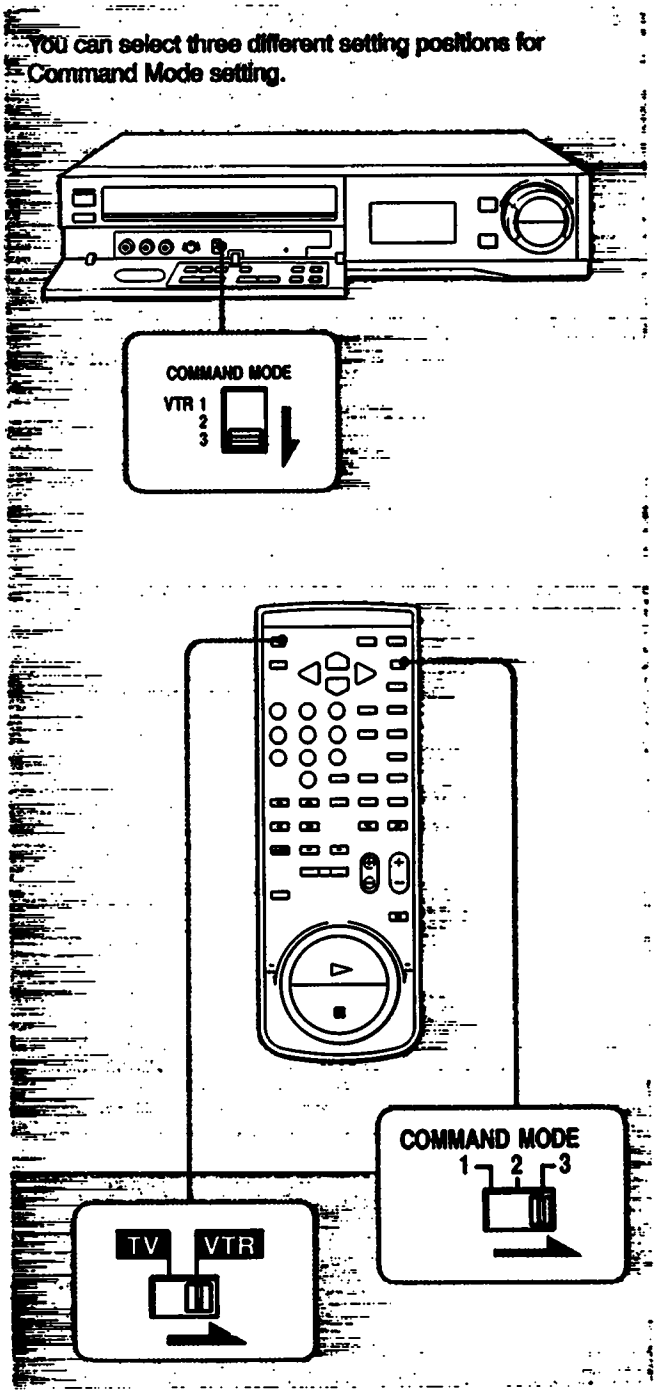


Notes on the handling of batteries

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

Setting the Command Mode

You can select three different setting positions for Command Mode setting.



1 Set the COMMAND MODE VTR 1/VTR 2/VTR 3 selector on the VCR to the "VTR 3" position.

2 Set the COMMAND MODE 1/2/3 selector on the Remote Commander to the "3".

3 Set the TV/VTR remote control selector to VTR.

Controlling Other Sony Video Equipment

If other Sony video equipment has a COMMAND MODE selector

1 With the COMMAND MODE 1/2/3 selector on the Remote Commander, select a setting position (for instance, VTR 1) different from the position you have selected for this VCR.

2 Set the COMMAND MODE selector of other video equipment to the same position that you have selected in step 1.

If other Sony video equipment does not have a COMMAND MODE selector

You can control other Sony video equipment by changing the setting of the COMMAND MODE 1/2/3 selector on the Remote Commander as follows:

Infrared remote controlled Sony Betamax VCRs (Some of them may not be controlled in this mode.) :1

Sony 8 mm format VCRs :2

Sony VHS format VCRs :3

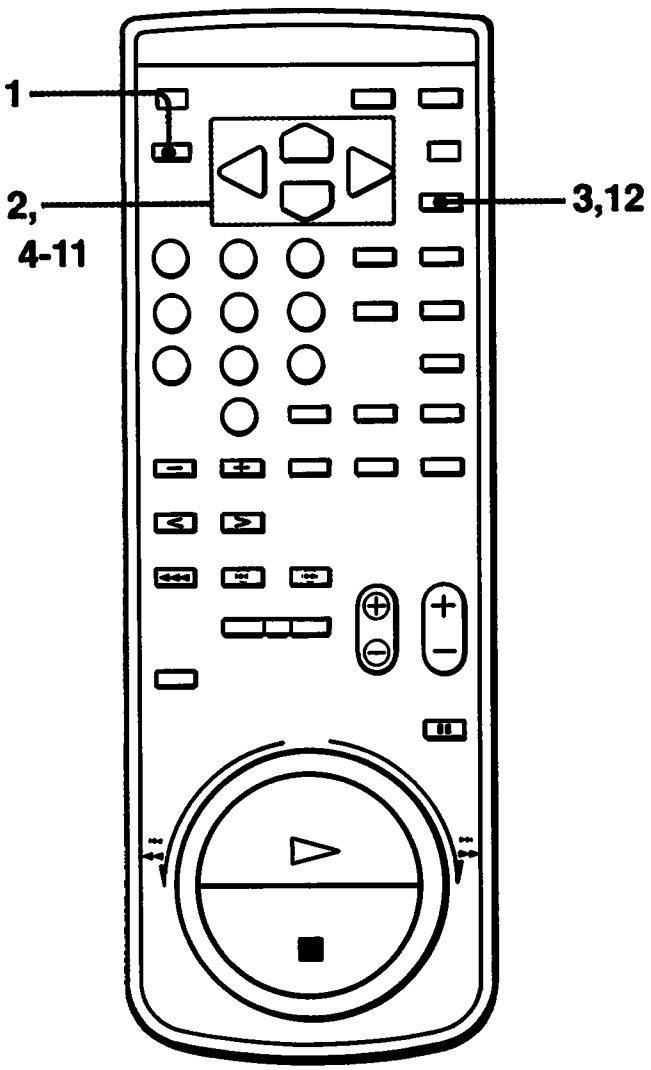
Setting the Time and Date Clock

You can set the time and date clock on the TV screen with the Commander.

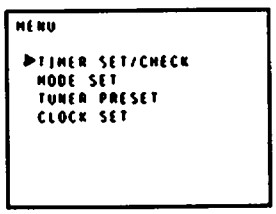
Time and Date Setting Example

Example: To set to 3:32 pm, July 4, 1991

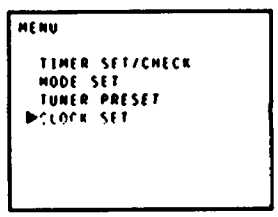
Use ▲ and ▼ to change the numbers.
Use ◀ and ▶ to change the flashing items.



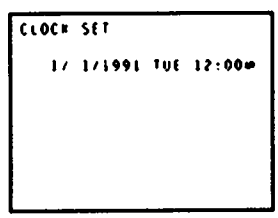
1 **Press MENU.**
The main menu appears.



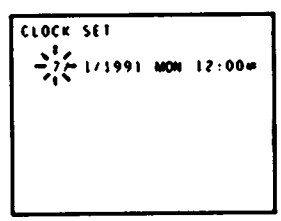
2 **Press ▲ or ▼ to move cursor (▶) to CLOCK SET.**



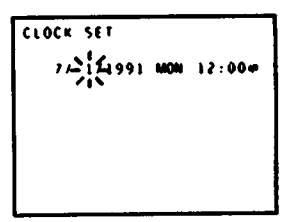
3 **Press EXECUTE.**
"1/1 1991 TUE 12:00 AM" is displayed.
The left most 1, in the "month" position, flashes.



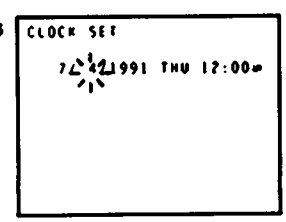
4 **Press ▲ or ▼ until 7 appears in the month position.**



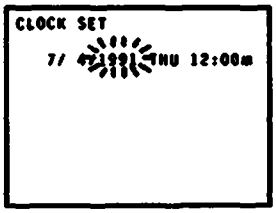
5 **Press ▶ to make the next number, in the "day" position flash.**



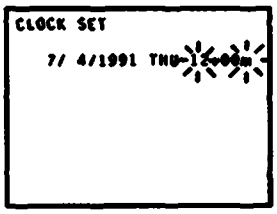
6 **Press ▲ or ▼ until 4 appears in the day position.**
The day of the week is automatically set.



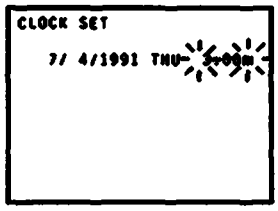
7 Press ▶ to make the year flash and press ▲ to change the year if necessary.



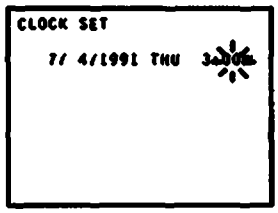
8 Press ▶ to make the time flash.



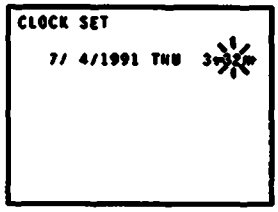
9 Press ▲ or ▼ until 3 PM appears.



10 Press ▶ to make the minute flash.



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



12 Press EXECUTE simultaneously with a time signal.
Pressing 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

- Set the clock except during timer-activated recording, timer-activated 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 do not be reset to 00 when you return to the original screen.

Presetting the Active Channels

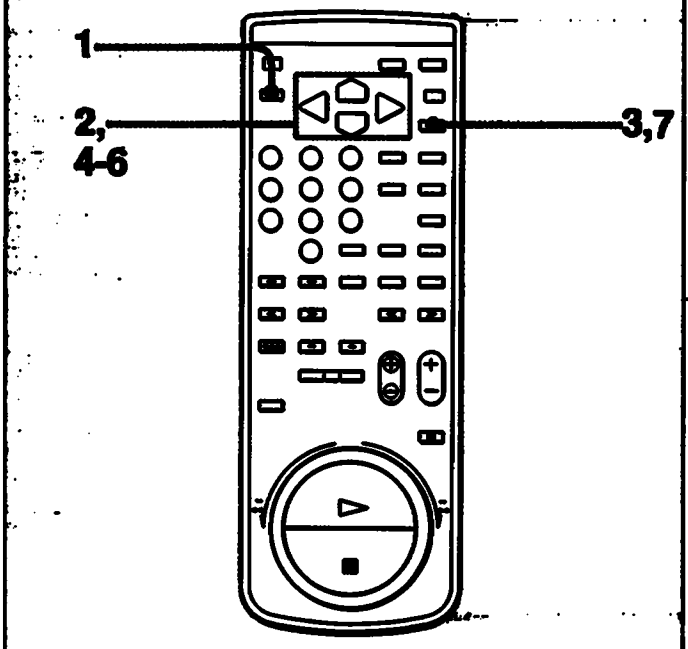
This VCR is capable of receiving VHF channels 2 to 13, UHF channels 14 to 69, or CATV channels 1 to 125. These channels can be preset using the Commander and the TUNER PRESET display. First, we recommend that you preset the active channels in your area using the automatic preset mode. Then, if there 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, check the following points.

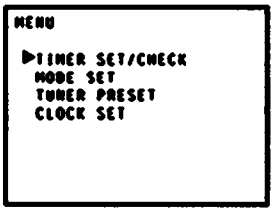
- Turn on the VCR and the TV.
- If you've connected the TV and the VCR using the VHF/UHF OUT on the VCR only, make sure that the TV is set to the correct channel (3 or 4) for the VCR.
- Press ANT TV/VTR to display the VTR indicator.
- Press INPUT SELECT so that the TUNER indicator and channel number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

Presetting All Receivable Channels Automatically

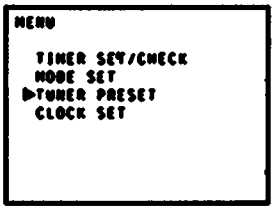
... Use ▲ and ▼ to move the cursor.
Use ◀ and ▶ to select the items.



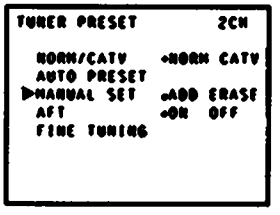
1 **Press MENU.**
The main menu appears.



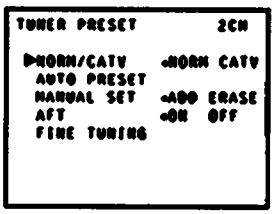
2 **Press ▲ or ▼ to move the cursor (▶) to TUNER PRESET.**



3 **Press EXECUTE.**
The TUNER PRESET display appears.

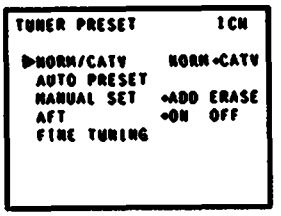


4 **Press ▲ or ▼ to move the cursor to NORMAL/CATV.**

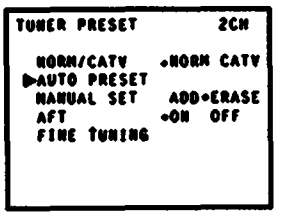


To be continued ▶

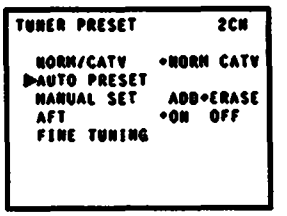
5 Use ◀ or ▶ to select NORM to preset VHF and UHF channels.
Select CATV to preset cable TV channels.
The lowest channel number, 2 for NORM and 1 for CATV will appear on the screen.



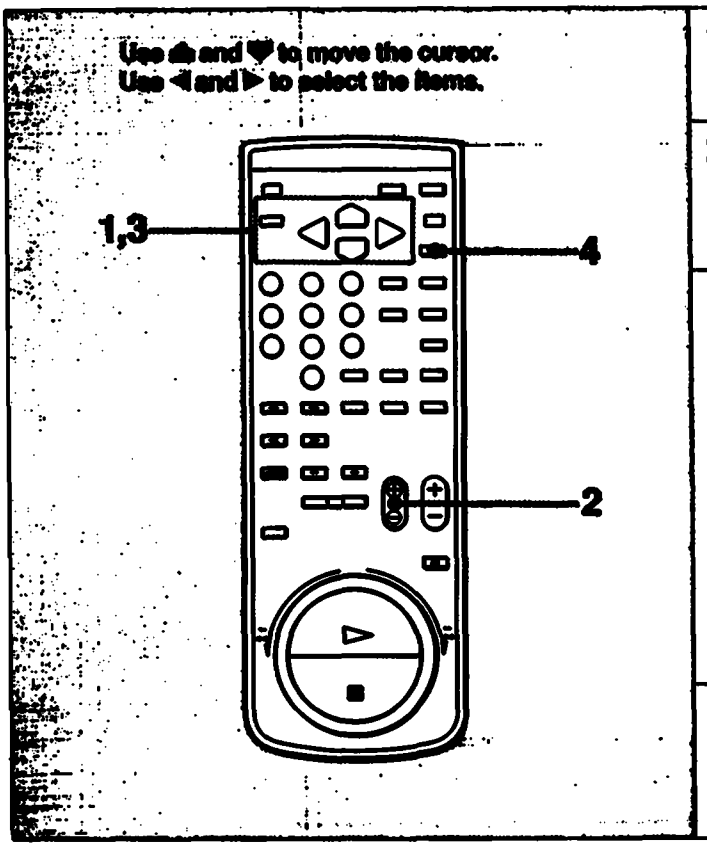
6 Press ▼ or ▲ to move the cursor to AUTO PRESET.



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



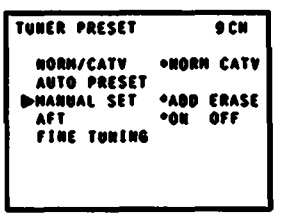
Presetting Desired Channels or Erasing Unwanted Channels



1 Follow steps 1 to 3 in "To Preset All Receivable Channels Automatically."

2 After automatic presetting is over, press CHANNEL +/– to select the channels to be erased and press channel number buttons to select the channels to be added.

3 To add channels:
Select channel using 0 to 9 and ENTER keys then select ADD.
To erase channels:
Select ERASE.



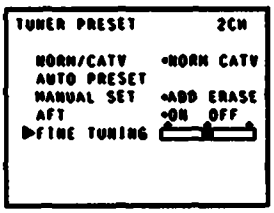
4 Press EXECUTE.
When pressing CHANNEL +/–, the erased channels are skipped and the added channels are displayed.

Fine-tuning

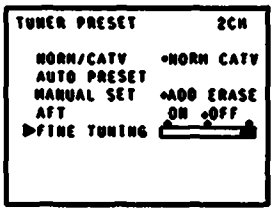
Normally the AFT (Auto Fine Tuning) setting is set to ON, and the AFT function fine-tunes the picture. If the picture of a particular channel is not acceptable, fine-tune it manually.

1 **Call up the TUNER PRESET display referring to steps 1 to 3 in "To Preset Desired Channels Automatically." See page 18.**

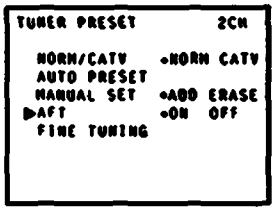
2 **Press ▲ or ▼ to move the cursor to FINE TUNING.** The fine tuning indicator appears.



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



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



5 **Press EXECUTE.**

About the FINE TUNING indicator

The FINE TUNING indicator shows the operable fine-tuning 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 avaiable channels.

Number on this VCR	1	2	...	13	14	15	16	17	18
Corresponding CATV channel	A-8	2	...	13	A	B	C	D	E

19	20	21	22	23	24	25	26	27	28	29	30	31	32
F	G	H	I	J	K	L	M	N	O	P	Q	R	S

33	34	35	36	37	...	94	95	96	97	98	99
T	U	V	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.

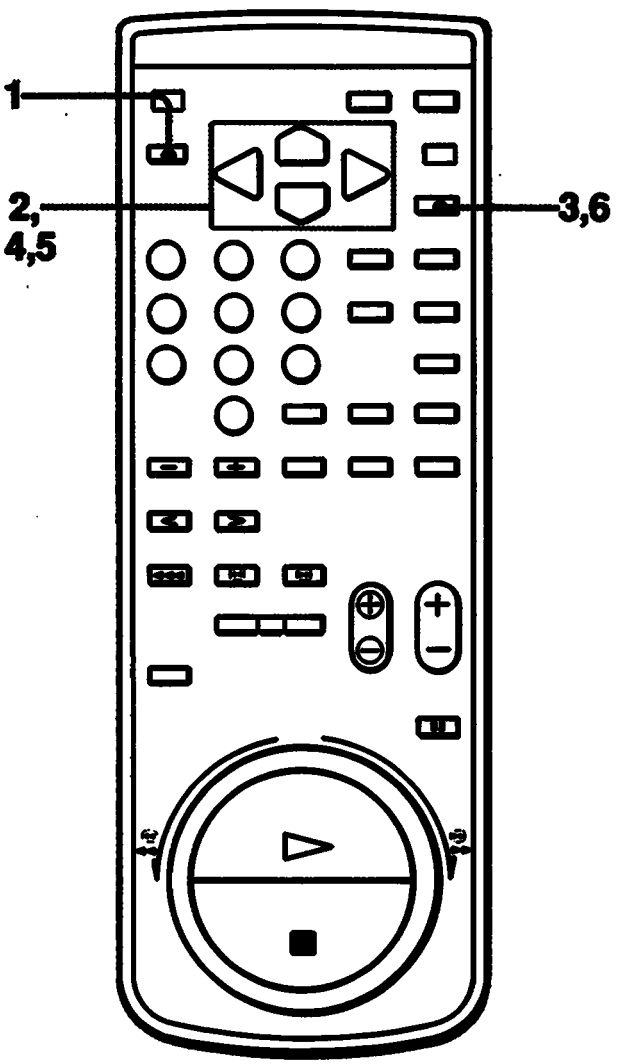
FINE TUNING indication when receiving HRC or IRC cable systems
Even when the signals are received in the best condition, the FINE TUNING indicator will not stay at the center position for channels higher or lower than the Standard cable system because of the difference in the frequency.

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

Changing the Mode Setting

Before operating the VCR, change various mode settings, if necessary.

Use ▲ and ▼ to move cursor.
Use ◀ and ▶ to move dot.



1 **Press MENU.**
The main menu appears.

2 **Press ▲ or ▼ to move cursor (▶) to MODE SET.**

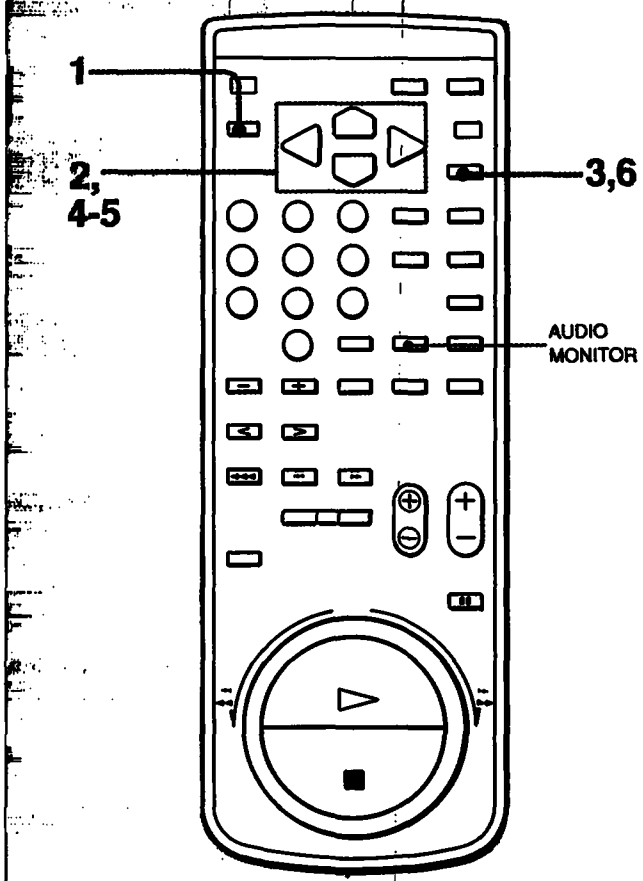
```
MENU

  TIMER SET/CHECK
▶MODE SET
  TUNER PRESET
  CLOCK SET
```

3 **Press EXECUTE.**
The MODE SET menu appears.

```
MODE SET

  LANGUAGE•ENGLISH FRENCH

▶AUTO ANT SEL    •ON  OFF
  AUTO STEREO    •ON  OFF
  CLOCK DISPLAY  •ON  OFF
  AUDIO MIX       ON •OFF
  NORMAL AUDIO   •MAIN SAP
  BACK COLOR     •BL GR PK
```

To record SAP (Second Audio Program) broadcast
Normally, set NORMAL AUDIO to MAIN in the MODE SET menu. The main sounds is recorded on the normal track. To record the SAP sound on the normal audio track, set NORMAL AUDIO to SAP in the MODE SET menu.

Use ▲ and ▼ to move the cursor.
Use ◀ and ▶ to move the dot.



1 Press MENU.
The main menu appears.

```
MENU

▶TIMER SET/CHECK
  MODE SET
  TUNER PRESET
  CLOCK SET
```

2 Press ▲ or ▼ to move the cursor (▶) to MODE SET.

3 Press EXECUTE.
The MODE SET menu appears.

```
MODE SET

 LANGUAGE•ENGLISH FRENCH

▶AUTO ANT SEL    •ON  OFF
 AUTO STEREO     •ON  OFF
 CLOCK DISPLAY   •ON  OFF
 AUDIO MIX        ON •OFF
 NORMAL AUDIO    •MAIN SAP
 BACK COLOR      •BL GR PK
```

4 Press ▲ or ▼ to move the cursor to NORMAL AUDIO.

5 Press ◀ or ▶ to move the dot to SAP.

```
MODE SET

 LANGUAGE•ENGLISH FRENCH

 AUTO ANT SEL    •ON  OFF
 AUTO STEREO     •ON  OFF
 CLOCK DISPLAY   •ON  OFF
 AUDIO MIX        ON •OFF
▶NORMAL AUDIO    MAIN•SAP
 BACK COLOR      •BL GR PK
```

6 Press EXECUTE to return to the original screen.

Notes
- When there is not SAP broadcast, select MAIN in step 5. If the SAP is selected, no sound will be recorded on the normal audio track.
- When the VCR and the TV are connected via the VHF antenna terminal, you cannot hear a program in stereo.

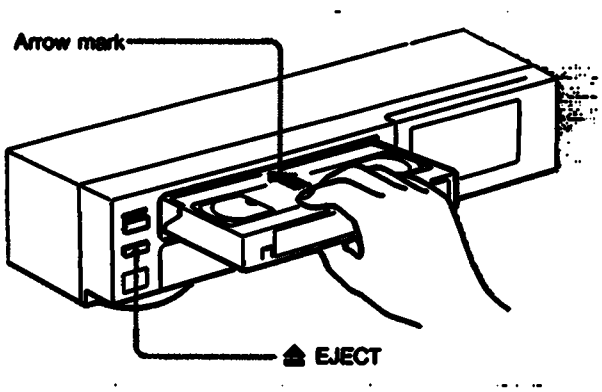
To monitor the SAP sound being recorded
Press AUDIO MONITOR to light the SAP indicator in the display window.

Playback

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

Inserting a Video Cassette

1 Insert a video cassette with the arrow mark facing upwards.

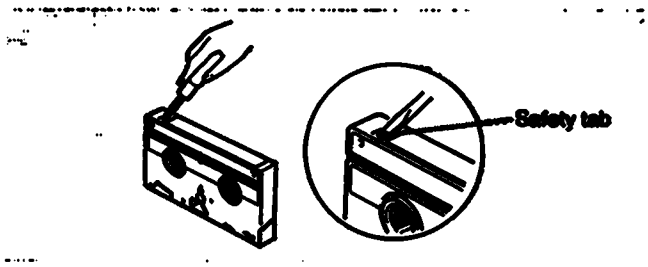


2 Gently press the center of the front side of the cassette until the mechanism draws it into the compartment.
When the cassette has been inserted, the cassette indicator ( ) lights in the display window of the VTR and the VTR turns on automatically.

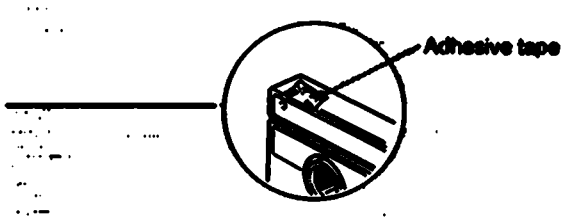
Note
If you insert a cassette without a safety tab, playback starts automatically (AUTO PLAYBACK function).

Ejecting the cassette
Press ⏏ EJECT on the VTR.
You can eject the cassette when the power is off.
When you press ⏏ EJECT, the power is turned on. After ejecting the cassette, the power is off again.

Protecting your cassette against accidental erasure
The cassette is provided with a safety tab to protect against accidental recording.
Break off the safety tab with a screwdriver or other suitable tool.
If the safety tab is removed, the cassette will be ejected when you try to record on the cassette.



To record on a cassette with the safety tab broken off, simply cover the tab hole with adhesive tape.



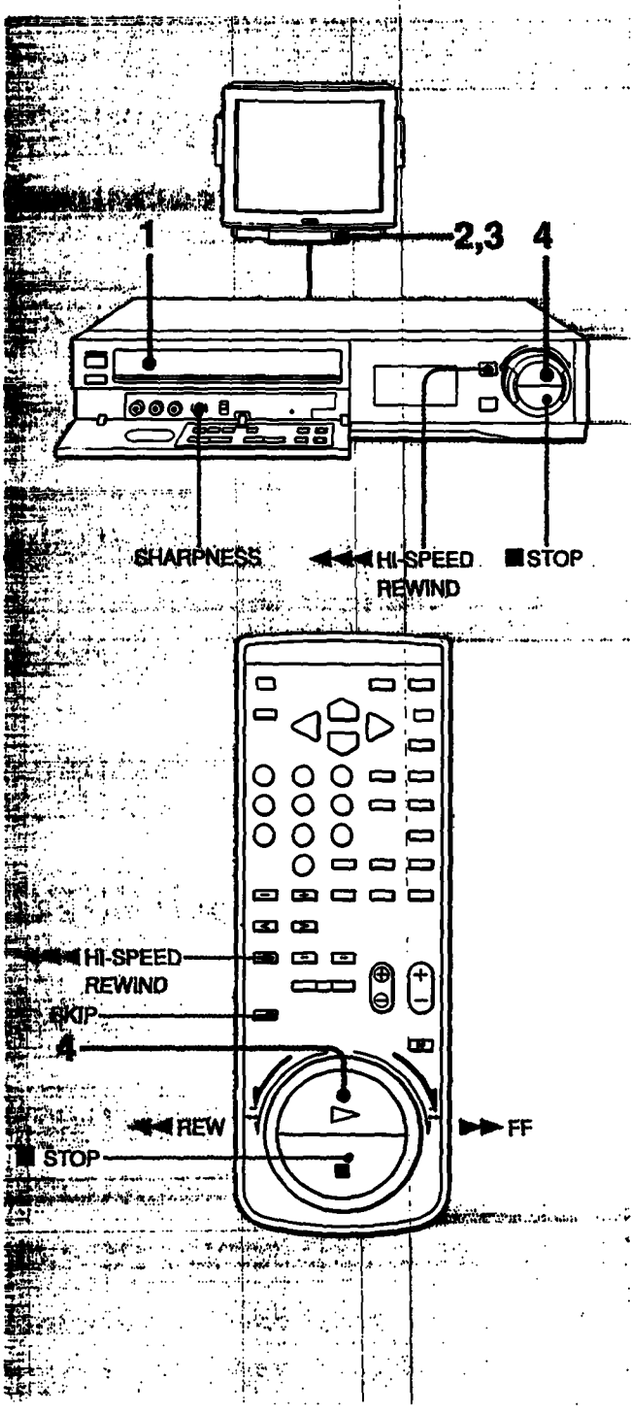
Maximum recording time of a tape
Recording in the SP or EP mode is possible with this unit. When recording, select the desired recording mode (SP or EP) with REC MODE on the Commander or on the VCR. During playback, the unit automatically detects the recording format, and then plays back the tape in 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 tape	Recording/Playback time	
	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 forward speed is not guaranteed.
This VCR is not designed to record in the LP mode.

To be continued►

Playing Back a Cassette



1 **Insert a cassette.**

2 **Turn on the TV.**

3 **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).

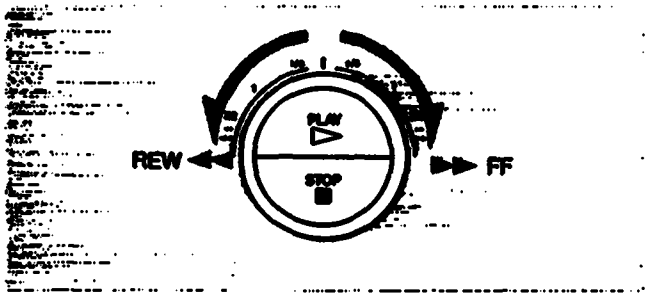
4 **Press ▷ PLAY.**

To stop playback
Press ■ STOP.

To stop playback for a moment
Press ❚❚ PAUSE. To resume playback, press ❚❚ PAUSE.

To advance the tape rapidly
During stop mode:
Turn the DUAL MODE SHUTTLE ring to the right (►►).

To rewind the tape
During stop mode:
Turn the DUAL MODE SHUTTLE ring to the left (◄◄).



To rewind the tape at high speed
Press ◄◄◄ HI-SPEED REWIND.

To rewind the tape to its beginning and to playback automatically (Auto Playback Function)
Press ▷ PLAY while turning the DUAL MODE SHUTTLE ring to the left (◄◄).
Or press ▷ PLAY while depressing ◄◄◄ HI-SPEED REWIND.
You cannot use the remote commander for the auto playback function.

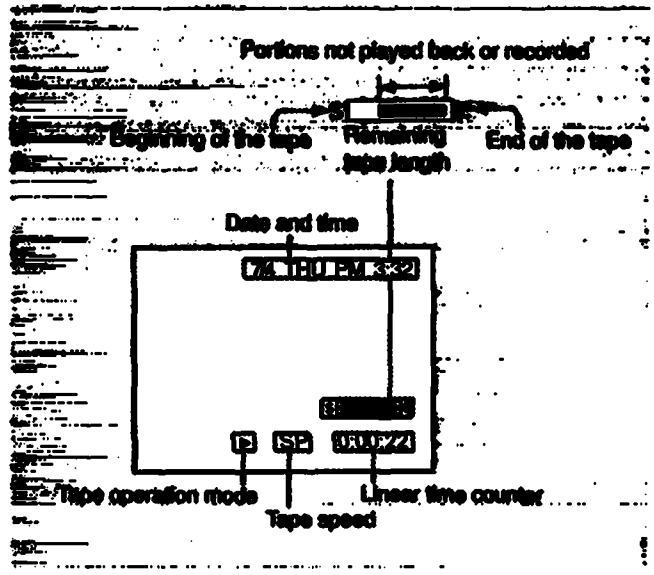
To get a sharper picture
Turn the SHARPNESS control toward SHARP.

To get a softer picture
Turn the SHARPNESS control toward SOFT.

When the tape is played back to the end
The tape is automatically rewound to the beginning (auto rewind). The power remains on.

About the Data Screen

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

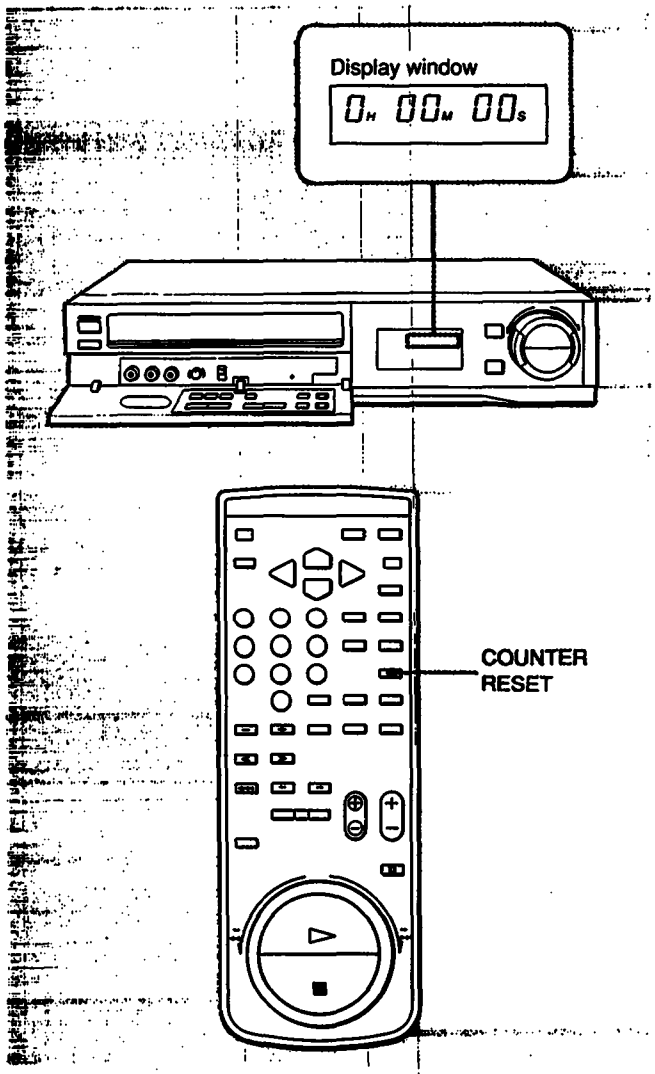


Notes
- The remaining tape length displayed is approximate. Therefore, use it only as an approximate reference. When you insert a short tape such as T-20, T-30 or a non-standard commercially available tape, this indicator may not function correctly.
- The data screen display cannot be called up on the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

To be continued ▶

Indexing the Tape Contents

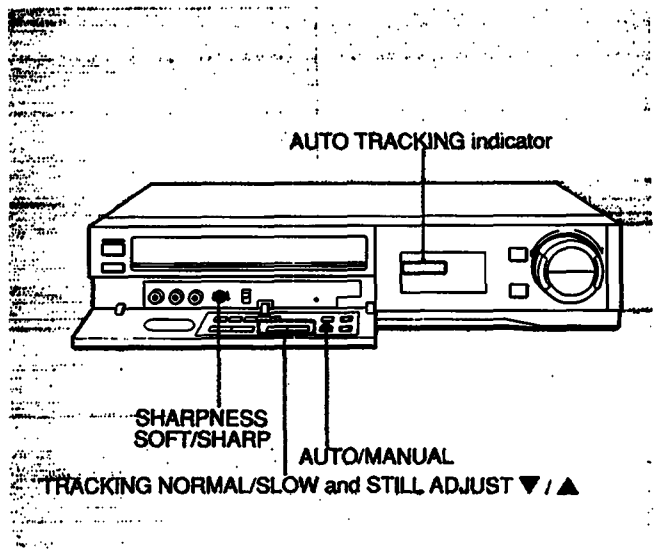
Before starting to record or playback, press COUNTER RESET to reset the counter to zero. By noting the counter reading at the desired point, you can easily find that point later by referring to the counter. Use the label on the cassette to list the programs and their counter readings.



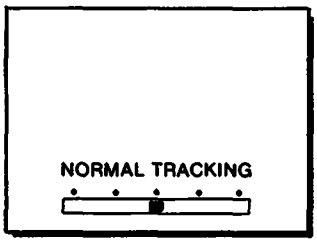
Note on counter reading
After a cassette is ejected, the counter reading is retained, however when a cassette is inserted again, the counter returns to "0H00M00S."

Playing Back a Tape Recorded on Another VCR

When playing back a tape recorded on another VCR, the tracking condition is automatically adjusted on this VCR. You can also adjust the tracking condition and the sharpness manually according to the following instructions.



Adjusting the tracking manually
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.



Automatic tracking adjustment function
The tracking condition is automatically adjusted on this VCR. The AUTO TRACKING indicator flasher while the VCR is searching for the best tracking condition and lights when optimum 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 from SP to EP and back again.
— 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.

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

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.
- The tracking indicator will only appear on the TV screen if DATA SCREEN is in the on position.

Selecting the Monitor Sound

You can play back tapes on which stereo sound programs or bilingual programs are recorded on the VCR.

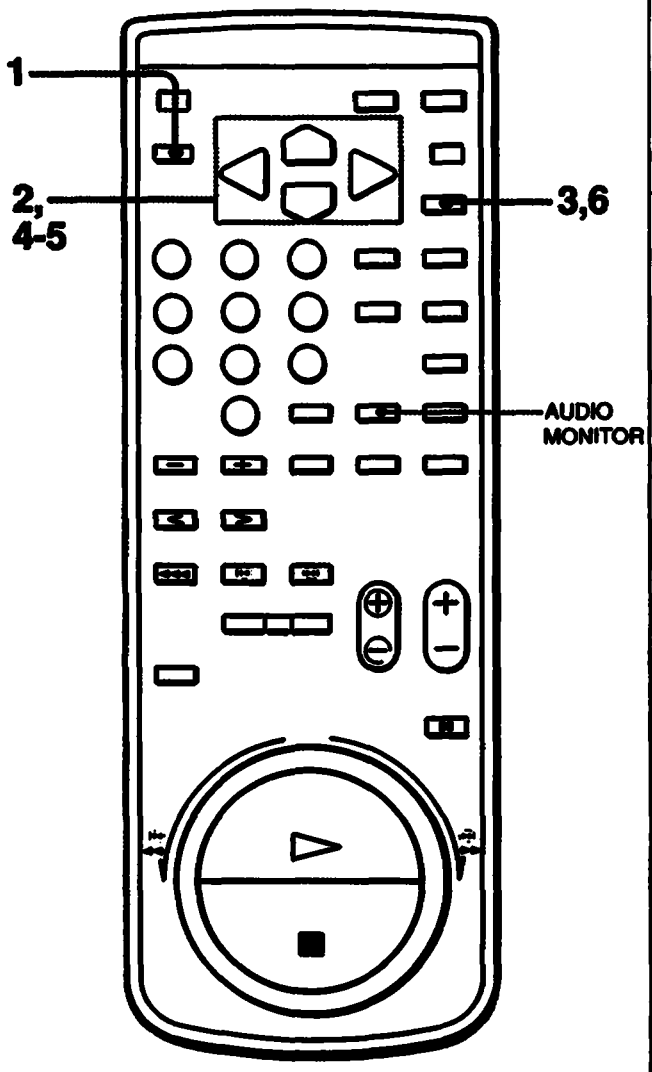
Note
When you play back a tape recorded in monaural, the sound is heard in monaural regardless of the setting of AUDIO MONITOR.

Press AUDIO MONITOR to select the desired sound. Each press of the button changes the display.

Display	Sound to be heard	
	Stereo tape	**Bilingual tape**
STEREO	Stereo	Left and right channels
MAIN/L	Left channel	Left channel
SUB/R	Right channel	Right channel
None	Monaural (on normal audio track)	Sound on normal audio track (SAP)

You can hear the sounds recorded on the Hi-Fi video track and the normal audio track simultaneously. This allows you to listen to an audio-inserted tape.

Use ▲ and ▼ to move the cursor.
Use ▶ and ◀ to move the dot.



1 **Press MENU.**
The main MENU appears.

2 **Press ▲ or ▼ to move the cursor (▶) to MODE SET.**

```
MODE SET

 LANGUAGE •ENGLISH FRENCH

▶AUTO ANT SEL    •ON  OFF
 AUTO STEREO     •ON  OFF
 CLOCK DISPLAY   •ON  OFF
 AUDIO MIX        ON •OFF
 NORMAL AUDIO   •MAIN SAP
 BACK COLOR     •BL GR PK
```

3 **Press EXECUTE.**
The MODE SET menu appears.

```
MODE SET

 LANGUAGE •ENGLISH FRENCH

▶AUTO ANT SEL    •ON  OFF
 AUTO STEREO     •ON  OFF
 CLOCK DISPLAY   •ON  OFF
 AUDIO MIX        ON •OFF
 NORMAL AUDIO   •MAIN SAP
 BACK COLOR     •BL GR PK
```

4 **Press ▲ or ▼ to move the cursor to AUDIO MIX.**

5 **Press ◀ or ▶ to move the dot to ON.**

```
MODE SET

 LANGUAGE •ENGLISH FRENCH

 AUTO ANT SEL    •ON  OFF
 AUTO STEREO     •ON  OFF
 CLOCK DISPLAY   •ON  OFF
▶AUDIO MIX       •ON  OFF
 NORMAL AUDIO   •MAIN SAP
 BACK COLOR     •BL GR PK
```

6 **Press EXECUTE to return to the original screen.**

Note

- When you set AUDIO MIX to ON, the AUDIO MONITOR button does not function.
- Reset to OFF after listening to the sound in AUDIO MIX mode.

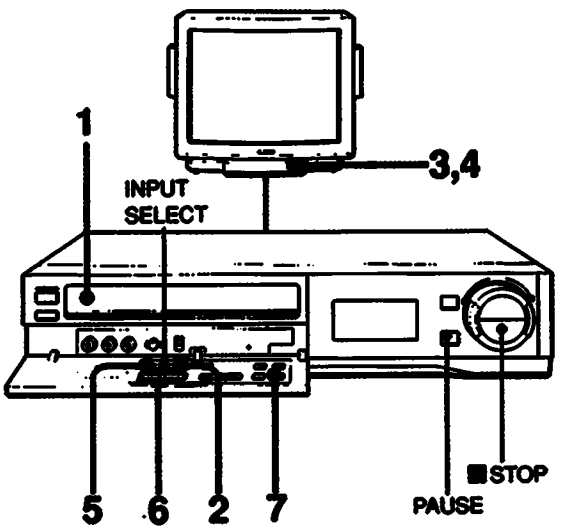
Recording TV Programs

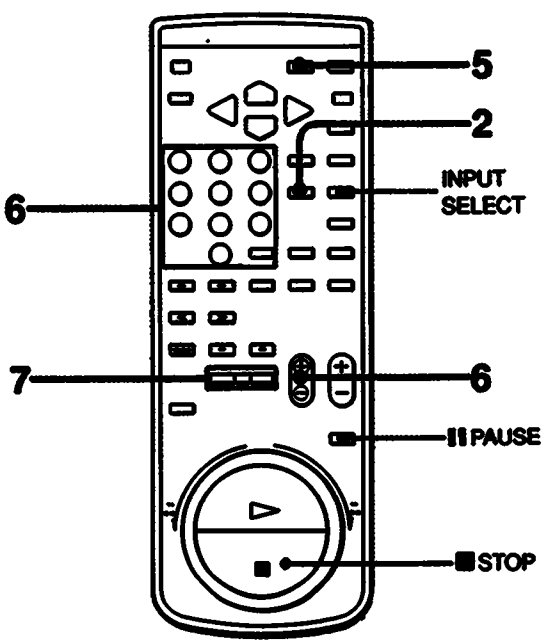
Before you begin, check the following points:

- 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.

Caution
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.

Recording TV Programs





1 **Insert a cassette.**
The VCR turns on automatically (Auto power on).

2 **Select the recording tape speed, SP or EP, with REC MODE (SP/EP).**

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.**

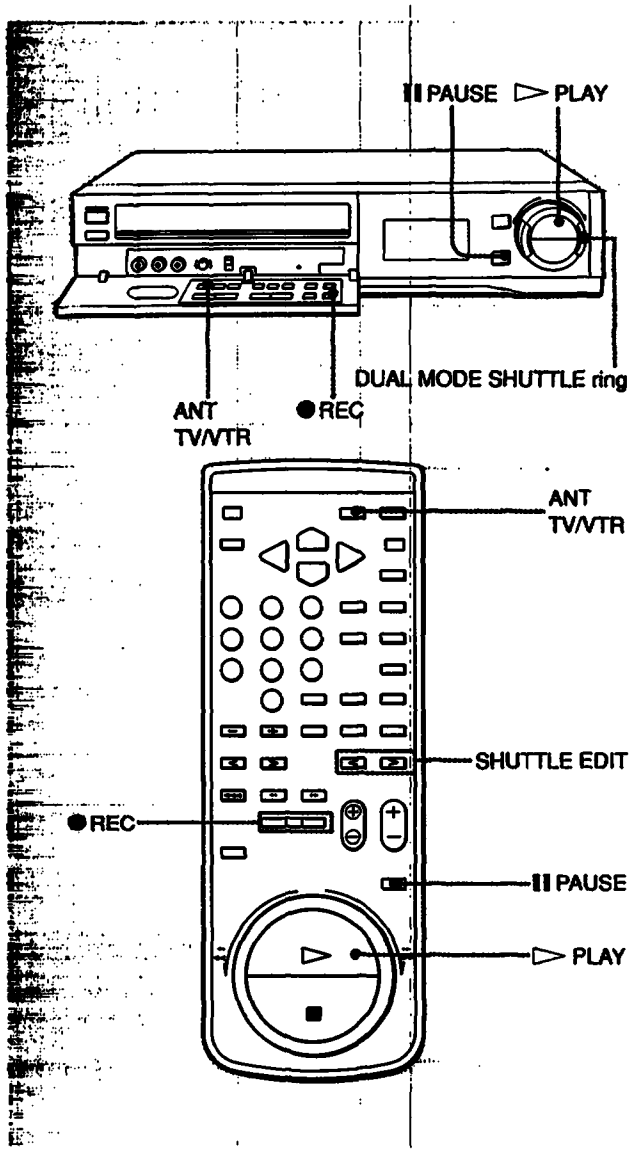
7 **Press the two ● REC buttons on the Commander at the same time, or the ● REC button on the unit.**

To stop recording
Press ■STOP.

To stop the tape for a moment
Press ❚❚PAUSE. To resume recording, press ❚❚PAUSE.
When the recording pause mode lasts for more than approximately 5 minutes, the unit enters the stop mode.

When the tape reaches its end
The tape rewinds to the beginning. The power will remain on.

Temporarily Stopping Recording at a Particular Point



Technique 1
You can stop recording when an unwanted scene appears and resume recording smoothly.

1 Press II PAUSE when an unwanted scene appears.
Recording will stop and the VCR enters the recording pause mode.

2 Press II PAUSE at the desired point to release the pause mode.
Recording resumes 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.

1 Set the VCR to the recording pause mode.

2 Turn the DUAL MODE SHUTTLE ring to the left or press SHUTTLE EDIT (for SLV-686HF only) </> to search for the point from which you wish to continue recording.
Each time you press SHUTTLE EDIT </>, the picture moves one frame. While pressing SHUTTLE EDIT </>, the frame-by-frame picture appears on screen.

3 Release the DUAL MODE SHUTTLE ring or SHUTTLE EDIT </> at the desired point.
After an instant of STILL mode, the VCR automatically *enters the recording pause mode.*

4 Press II PAUSE.
Recording resumes.

Watching One TV Program while Recording Another

1 Press ANT TV/VTR so that the VTR indicator goes off.

2 Select the channel you want to watch on the TV.

When the VTR indicator lights up

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

Recording a Program without Watching the TV

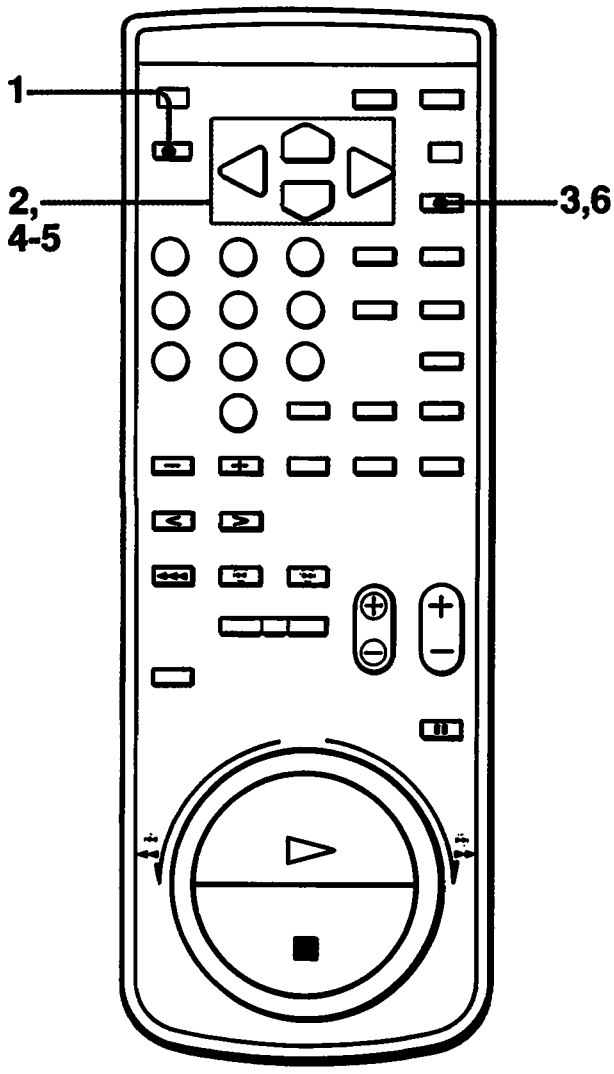
Turn off the power of the TV or color monitor.
There will be no interference with the recording.

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

Recording Multi-channel TV Sound (MTS) Broadcasts

To record a stereo broadcast
When a stereo broadcast program is received, the STEREO indicator appears in the display window. The stereo program is automatically recorded in stereo.
If a stereo program is noisy, set AUTO STEREO to OFF in the MODE SET menu. The sound is heard in monaural but the nosie is reduced.

Use ▲ and ▼ to move the cursor.
Use ◀ and ▶ to move the dot.



1 **Press MENU.**
The main menu appears.

2 **Press ▲ or ▼ to move the cursor (▶) to MODE SET.**

```
MENU

  TIMER SET/CHECK
▶MODE SET
  TUNER PRESET
  CLOCK SET
```

3 **Press EXECUTE.**
The MODE SET menu appears.

```
MODE SET

  LANGUAGE •ENGLISH FRENCH

▶AUTO ANT SEL     •ON  OFF
  AUTO STEREO     •ON  OFF
  CLOCK DISPLAY   •ON  OFF
  AUDIO MIX        ON •OFF
  NORMAL AUDIO    •MAIN SAP
  BACK COLOR      •BL GR PK
```

4 **Press ▲ or ▼ to move the cursor to AUTO STEREO.**

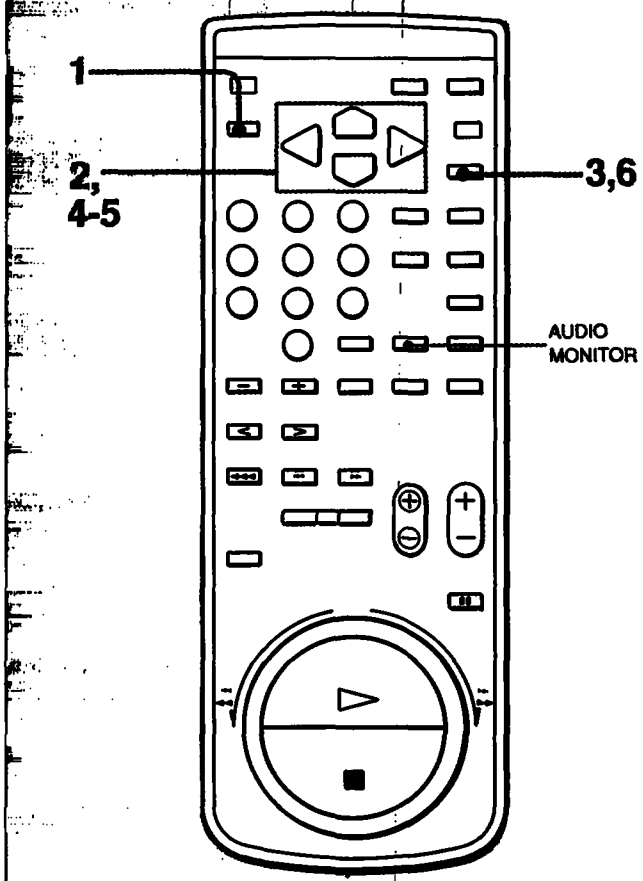
5 **Press ◀ or ▶ to move the dot to OFF.**

```
MODE SET

  LANGUAGE •ENGLISH FRENCH

  AUTO ANT SEL     •ON  OFF
▶AUTO STEREO        ON •OFF
  CLOCK DISPLAY   •ON  OFF
  AUDIO MIX        ON •OFF
  NORMAL AUDIO    •MAIN SAP
  BACK COLOR      •BL GR PK
```

6 **Press EXECUTE to return to the original screen.**

To record SAP (Second Audio Program) broadcast
Normally, set NORMAL AUDIO to MAIN in the MODE SET menu. The main sounds is recorded on the normal track. To record the SAP sound on the normal audio track, set NORMAL AUDIO to SAP in the MODE SET menu.

Use ▲ and ▼ to move the cursor.
Use ◀ and ▶ to move the dot.



1 Press MENU.
The main menu appears.

```
MENU

▶TIMER SET/CHECK
  MODE SET
  TUNER PRESET
  CLOCK SET
```

2 Press ▲ or ▼ to move the cursor (▶) to MODE SET.

3 Press EXECUTE.
The MODE SET menu appears.

```
MODE SET

 LANGUAGE•ENGLISH FRENCH

▶AUTO ANT SEL    •ON  OFF
 AUTO STEREO     •ON  OFF
 CLOCK DISPLAY   •ON  OFF
 AUDIO MIX        ON •OFF
 NORMAL AUDIO    •MAIN SAP
 BACK COLOR      •BL GR PK
```

4 Press ▲ or ▼ to move the cursor to NORMAL AUDIO.

5 Press ◀ or ▶ to move the dot to SAP.

```
MODE SET

 LANGUAGE•ENGLISH FRENCH

 AUTO ANT SEL    •ON  OFF
 AUTO STEREO     •ON  OFF
 CLOCK DISPLAY   •ON  OFF
 AUDIO MIX        ON •OFF
▶NORMAL AUDIO    MAIN•SAP
 BACK COLOR      •BL GR PK
```

6 Press EXECUTE to return to the original screen.

Notes
- When there is not SAP broadcast, select MAIN in step 5. If the SAP is selected, no sound will be recorded on the normal audio track.
- When the VCR and the TV are connected via the VHF antenna terminal, you cannot hear a program in stereo.

To monitor the SAP sound being recorded
Press AUDIO MONITOR to light the SAP indicator in the display window.

Timer Recording

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

Before you begin, check the following points.

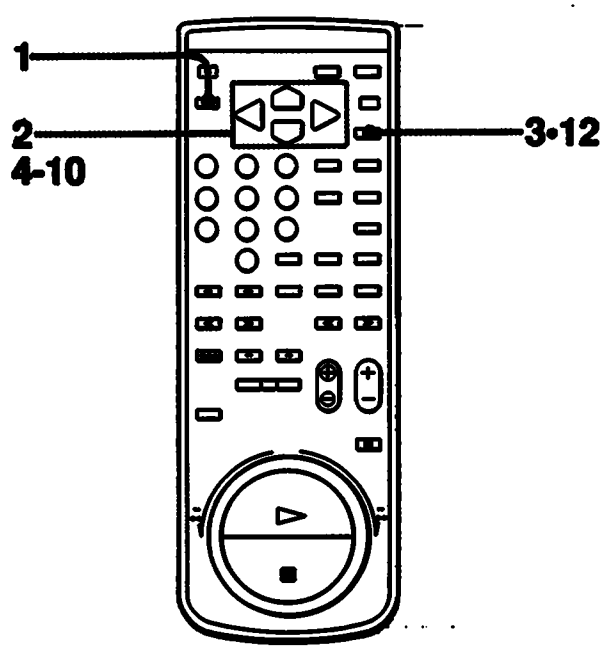
- The date and clock must be set correctly. (See "Setting the Date and Time" on page 16.)
- Make sure that the cassette tape is long enough to record all the programs.
- Make sure that the safety tab on the cassette is not broken off. If you put in a cassette without its safety tab and press TIMER REC (ON/OFF), the cassette automatically ejects.
- 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.

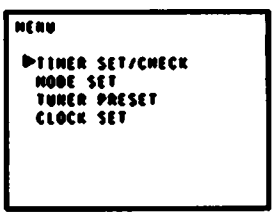
Setting the Timer

Example: Suppose you want to record a program broadcast on channel 26 from 9:00 pm to 10:55 pm on Wednesday July 10 in EP mode. Note that 12:00 AM is midnight and 12:00 PM is noon.

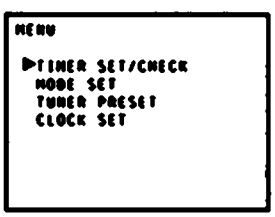
Use ◀ and ▶ to select the items.
Use ▲ and ▼ to change the numbers.



1 **Press MENU.**
The main menu appears.

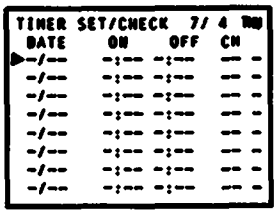


2 **Press ▲ or ▼ to move the cursor (▶) to TIMER SET/CHECK.**

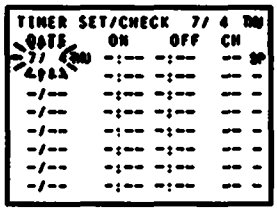


To be continued ▶

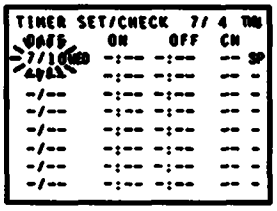
3 **Press EXECUTE.**
The TIMER SET/CHECK display appears on the screen. When the clock is not set properly, a short beep alerts you. Return to "Setting the Time and Date Clock" (page 16) to reset the clock.



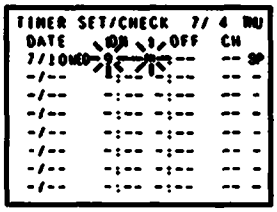
4 **Press ▶.**
Make sure that today's date is flashing. If not, re-set the correct time. See "Setting the Time and Date Clock" (page 16).



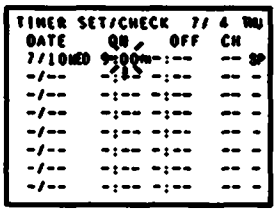
5 **Press ▲ to set the month and date to 7/10 WED.**
The day of the week is automatically set.



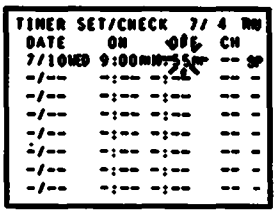
6 **Press ▶ to flash the hours section under "ON" then ▲ or ▼ until 9 PM appears.**



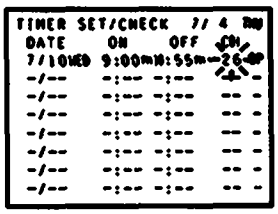
7 **Press ▶ to flash the minute section under "ON" then ▲ or ▼ until 00 appears.**



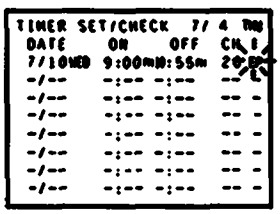
8 **Press ▶.**
The on-time flashes under "OFF". Set the turn-off time referring to steps 6 and 7.



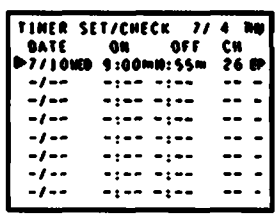
9 **Press ▶ to flash the CH position then press ▲ or ▼ until 26 appears.**
Only the channels set in the VCR will appear. The CHANNEL +/– and ENTER or channel number buttons can also be used.



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



11 **Press ▶ to store the setting.**
When all of the settings stop flashing with a ▶ on the left-most position, this indicates that this setting has been completed.



12 **Press EXECUTE.**
The message "Please push TIMER REC to set timer" appears in the display window.

13 **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 returns to channel numbers on the third press.

Problems when TIMER REC (ON/OFF) is pressed

The cassette ejects	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.

Daily/Weekly Recording
You can preset the timer-activated recording to the same program every day of the week (Daily recording), or one day of the week (Weekly recording).
Follow steps 1 through 4 in "Setting the Timer" (page 34).

You can select the following programs.

Each time you press ▼, the indication under DATE on screen changes in the following order:

SUN—SAT (Every day of the week)
↓
MON—SAT (Every day except Sunday)
↓
MON—FRI (Every day except Saturday and Sunday)
↓
EVERY SAT
⋮
EVERY TUE
↓
EVERY MON
↓
EVERY SUN

When your desired daily/weekly recording program is set and transmitted to the VCR, the corresponding indicator lights in the display window.

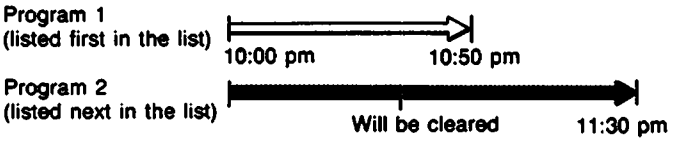
If a power interruption occurs
- If a power interruption lasting less than approximately three hours occurs while the VCR is waiting for the preset time, the VCR will re-enter the timer recording standby mode.
- If a power interruption lasting more than approximately three hours occurs before a timer recording, the memory clears. Reset the date and time for timer recording.
- If a power interruption lasting less than approximately three hours occurs during a timer recording, the VCR starts recording again and the tape counter indicates "0H00M00S."

To be continued ▶

When Preset Timer Recordings Overlap

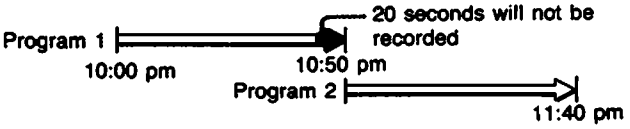
Case 1
If the turn-on time of two programs are the same

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.



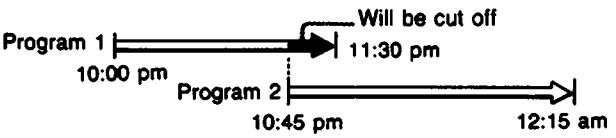
Case 2
If the recording start time of program 2 is the same as the recording end time of program 1

The last 20 seconds of program 1 will not be recorded.



Case 3
If the recording start time of program 2 comes before recording of program 1 is over

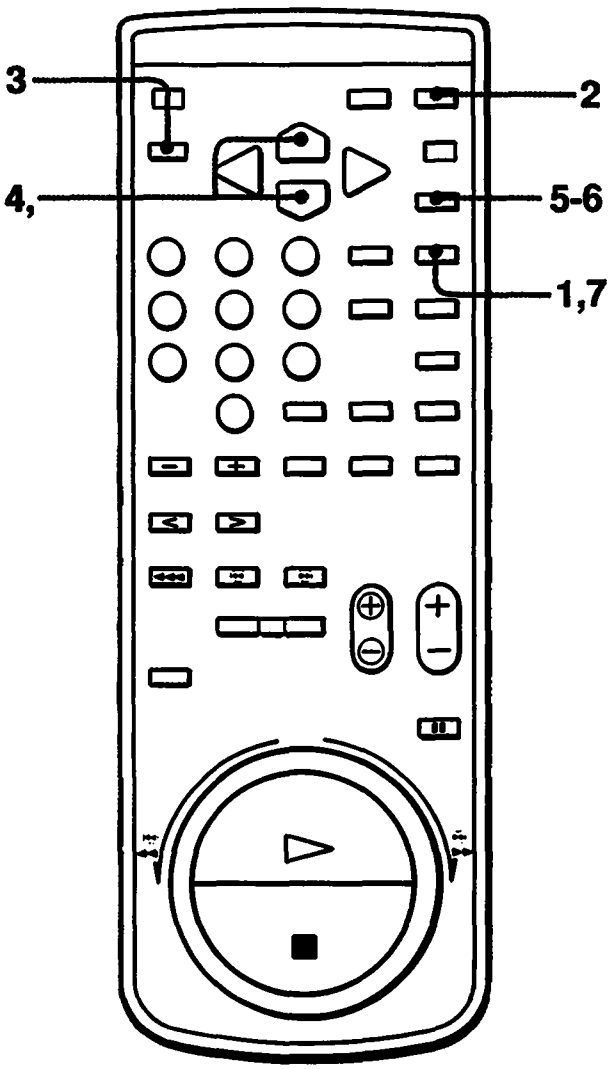
The recording of program 2 will begin before program 1 is finished.



Checking the Timer Settings

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

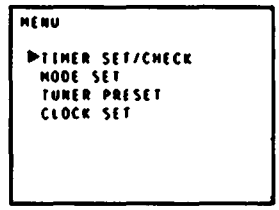
Press ▲ or ▼ to move the cursor.



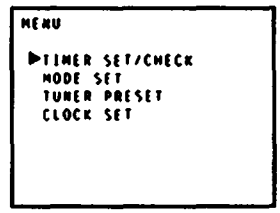
1 Press TIMER REC (ON/OFF) to turn off the TIMER indicator in the display window.

2 Press POWER.

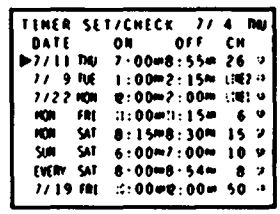
3 Press MENU.
The main menu appears.



4 Press ▲ or ▼ to move the cursor (▶) to TIMER SET/CHECK.



5 Press EXECUTE.
The TIMER SET/CHECK display appears.



6 Press EXECUTE to return to original screen.

7 Press TIMER REC (ON/OFF) to return to the timer recording standby mode.

The TIMER SET/CHECK display
When a recording is set for only one day, that setting is erased from the TIMER SET/CHECK display after the recording is over.

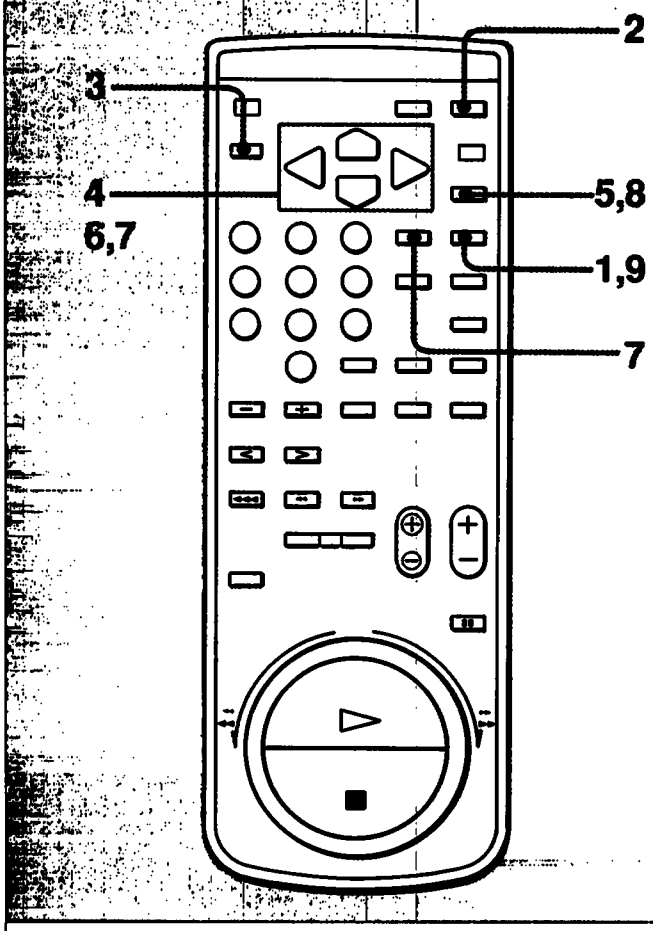
To check the timer settings during timer recording
Follow steps 3 to 6 above.

To be continued ▶

Changing or Canceling the Timer Settings

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

Use ▲ and ▼ to move the cursor.
Use ◀ and ▶ to change the flashing positions.



1 Press TIMER REC (ON/OFF) to turn off the TIMER indicator in the display window.

2 Press POWER.

3 Press MENU.
The main menu appears.

```
MENU

▶TIMER SET/CHECK
  MODE SET
  TUNER PRESET
  CLOCK SET
```

4 Press ▲ or ▼ to move the cursor (▶) to TIMER SET/CHECK.

```
MENU

▶TIMER SET/CHECK
  MODE SET
  TUNER PRESET
  CLOCK SET
```

5 Press EXECUTE.
TIMER SET/CHECK display appears.

```
TIMER SET/CHECK   7/ 4  THU
 DATE      ON      OFF    CH
▶7/11 THU  7:00AM8:55AM  26  SP
 7/ 9 TUE  1:00PM2:15PM  LINE2 EP
 7/22 MON  12:00PM2:00PM  LINE1 SP
 MON  FRI  11:00AM11:15AM   6  SP
 MON  SAT  8:15PM8:30PM  15  SP
 SUN  SAT  6:00PM7:00PM  10  SP
 EVERY SAT  8:00PM8:54PM   8  SP
 7/19 FRI  10:00AM12:00AM  50  EP
```

6 Press ▲ or ▼ to move the cursor to the program you wish to change or cancel.

```
TIMER SET/CHECK   7/ 4  THU
 DATE      ON      OFF    CH
 7/11 THU  7:00AM8:55AM  26  SP
▶7/ 9 TUE  1:00PM2:15PM  LINE2 EP
 7/22 MON  12:00PM2:00PM  LINE1 SP
 MON  FRI  11:00AM11:15AM   6  SP
 MON  SAT  8:15PM8:30PM  15  SP
 SUN  SAT  6:00PM7:00PM  10  SP
 EVERY SAT  8:00PM8:54PM   8  SP
 7/19 FRI  10:00AM12:00AM  50  EP
```

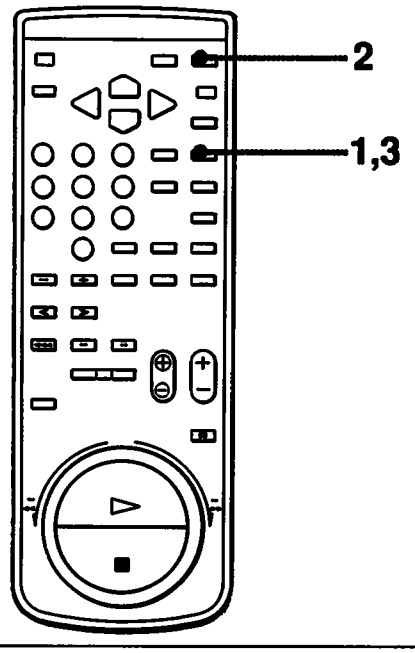
7 To change it, flash the item to be changed by pressing ◀ or ▶ and make the required changes by pressing ▲ or ▼.
To cancel it, press TIMER CLEAR.

8 Press EXECUTE to store the changes and to return to the original screen.

9 Press TIMER REC (ON/OFF) to return to the timer recording standby mode.

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 goes off.**

2 **Press POWER.**
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

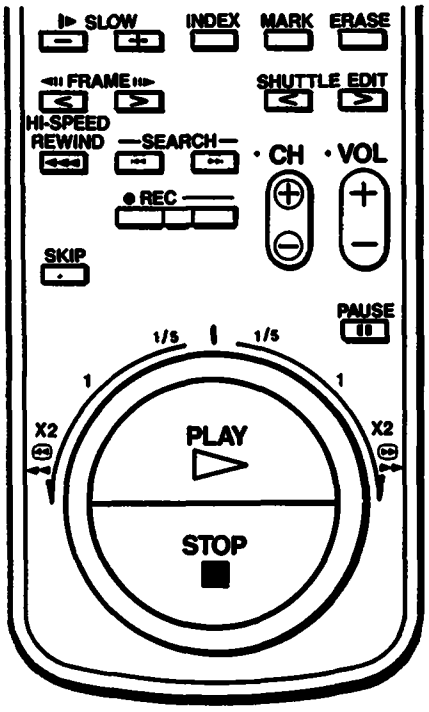
Automatic power on
The VCR goes on automatically when the set time comes on and starts recording. When it completes recording, the power automatically goes off.

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 "Indexing the Tape Contents" page 27.)
- ANT TV/VTR (See "Watching One TV Program While Recording Another" page 31.)
- DATA SCREEN (See "About the Data Screen" page 26.)
- MENU (For checking the programs only. See "Checking the Timer Settings" page 38.)

Variable Speed Playback — DUAL MODE SHUTTLE RING

You can enjoy playing back pictures in variable speeds on the VCR. Using the DUAL MODE SHUTTLE ring, you can obtain variable speed playback easily by turning the ring to the desired playback position and holding it at that position.



Still Picture

During playbak mode, press ❚❚ PAUSE. To resume normal playback, press ▷ PLAY, ❚❚ PAUSE. When pause mode lasts for more than 5 minutes, the VCR re-enters playback mode automatically.

Picture Search

During playback or still mode, turn the DUAL MODE SHUTTLE ring clockwise (forward direction) or counter-clockwise (reverse direction) until the double arrows ▶▶ or ◀◀ appear on the TV screen. Hold the ring at that position. While holding it, a high speed picture without sound appears on the TV screen.
If you release the ring, normal playback returns.

Note
The picture may turn to black and white during picture search depending on the TV connected to the VCR when you play back tapes recorded in LP recording tape speed.

Locked Picture Search

During playback or playback pause mode, press ⏩ SEARCH or ⏪ SEARCH on the Commander. A high speed picture in forward or reverse appears on the screen even when the button is released. To resume normal playback, press ▷ PLAY.

Skip Playback

The skip function allows you to scan ahead 30 seconds at high speed during the playback mode. Press SKIP on the Commander.
A high speed picture of the scene for about 30 seconds appears on the screen for each press and then normal playback resumes.

Slow Motion Playback

During playback or playback pause 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.

Viewing a Picture Momentarily during Fast-forward or Rewind

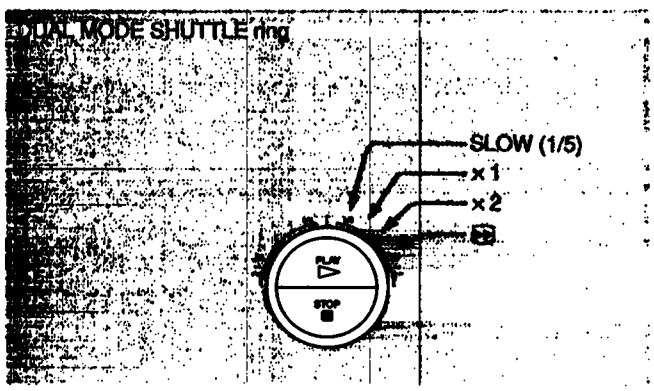
During fast-forward or rewind, turn the DUAL MODE SHUTTLE ring on the VCR clockwise (forward) or counter-clockwise (reverse direction).
You can view a picture at high speed while you hold the ring at that position.
If you release the ring, the VCR returns to the previous status (fast-forward or rewind).

Frame-by-Frame Picture

During playback pause mode, press ◀II FRAME II▶ > to advance the picture one frame or ◀II FRAME II▶ < to reverse the picture one frame. Each time you press the button, the picture moves one frame. To resume normal playback, press ▷ PLAY.

Variable Speed Playback

Various playback modes as illustrated below can be selected with DUAL MODE SHUTTLE ring during playback mode or playback pause mode. The same speeds are available in the reverse direction. If you release the ring, the VCR returns to the previous mode (playback mode or playback pause mode).
To resume normal playback, press ▷ PLAY.



Adjusting the Picture Manually in Variable Speed Playback

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 II▶ 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.

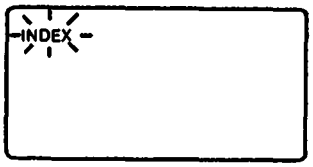
If a band appears on the top or bottom of the screen in still mode
Adjust the picture with the TRACKING NORMAL/SLOW and STILL ADJUST ▼ / ▲ buttons inside the front panel while playing back the tape in a slow motion.

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

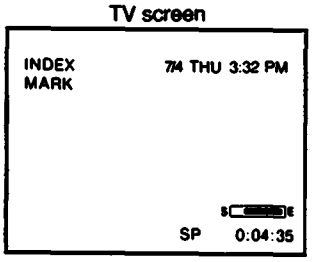
Index Function

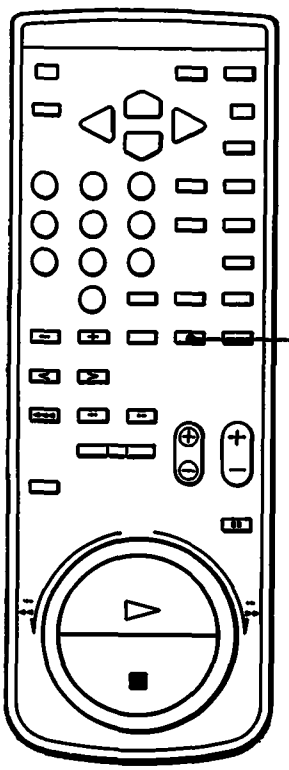
A particular program can be located easily using an index signal marked on the tape.

Marking Index Signals



TV screen





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

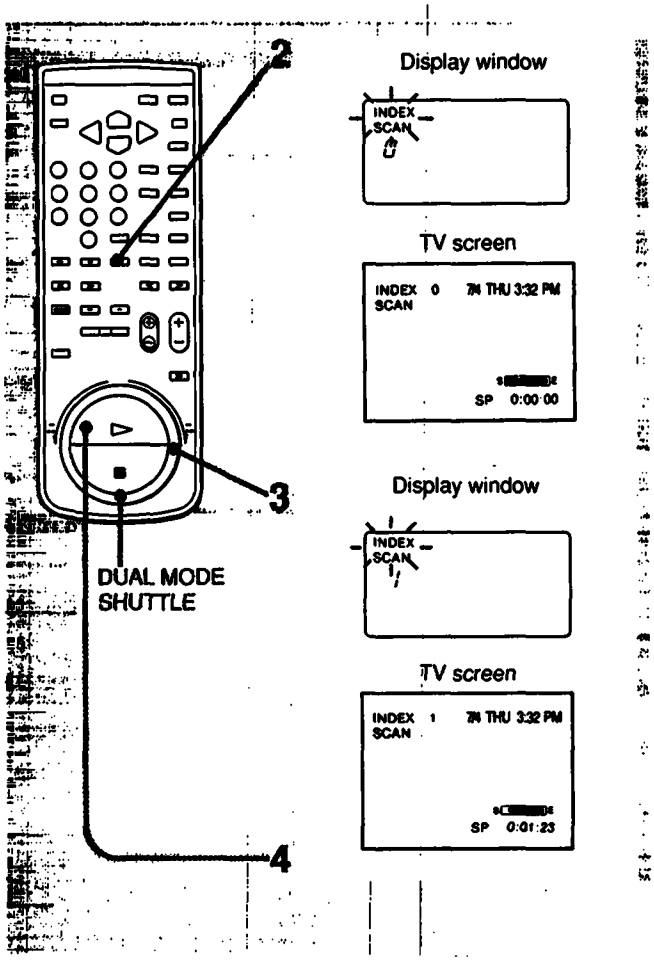
Automatic index mark
An index signal is automatically marked at the beginning of recording.

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.

Playing Back from the Index Point — Index Scan



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

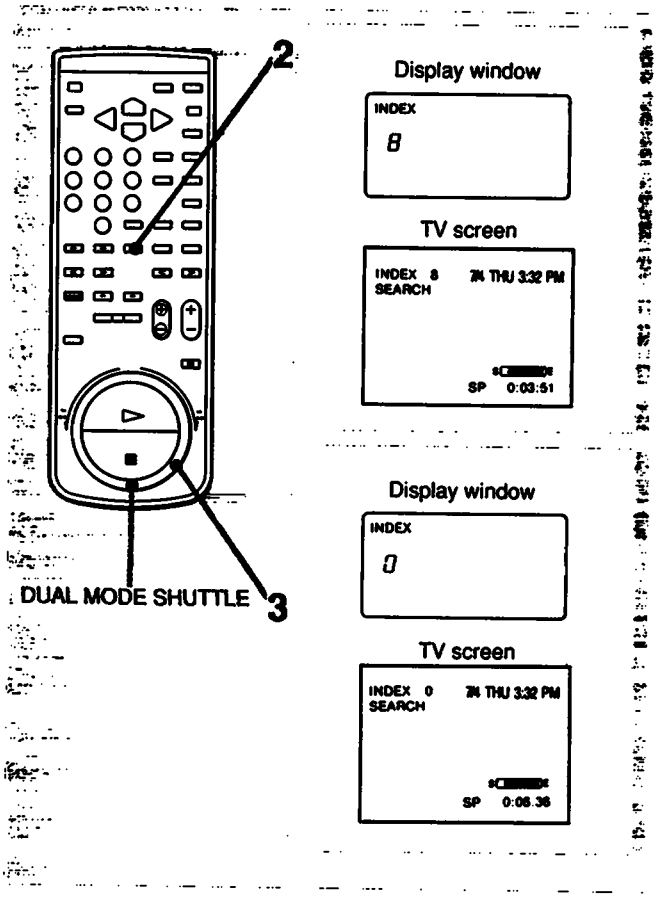
1 Insert a cassette with index signals.

2 Press INDEX once.
The INDEX and SCAN indicator flashes alternately.

3 Turn the DUAL MODE SHUTTLE ring clockwise to *locate the previous program* or counter-clockwise to locate the program ahead.
The INDEX SCAN indicator flashes continuously while scanning. The tape rewinds or rapidly advanced to the next marked index signal. The tape plays back for approximately 10 seconds from the index signal, and then rewinds or advances to the next index signal. Every time an index signal is detected and playback begins, the displayed index number increases.

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

Locating an Index — Index Search

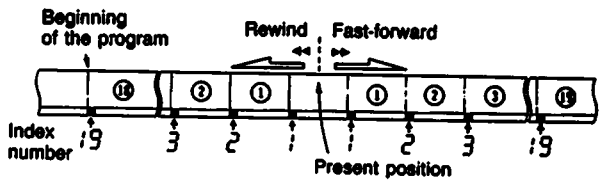


A particular program can be located and played back by designating how many index signals ahead or behind that program is from the current position. Up to 19 indexes can be searched for.

1 Insert a cassette with index signals.

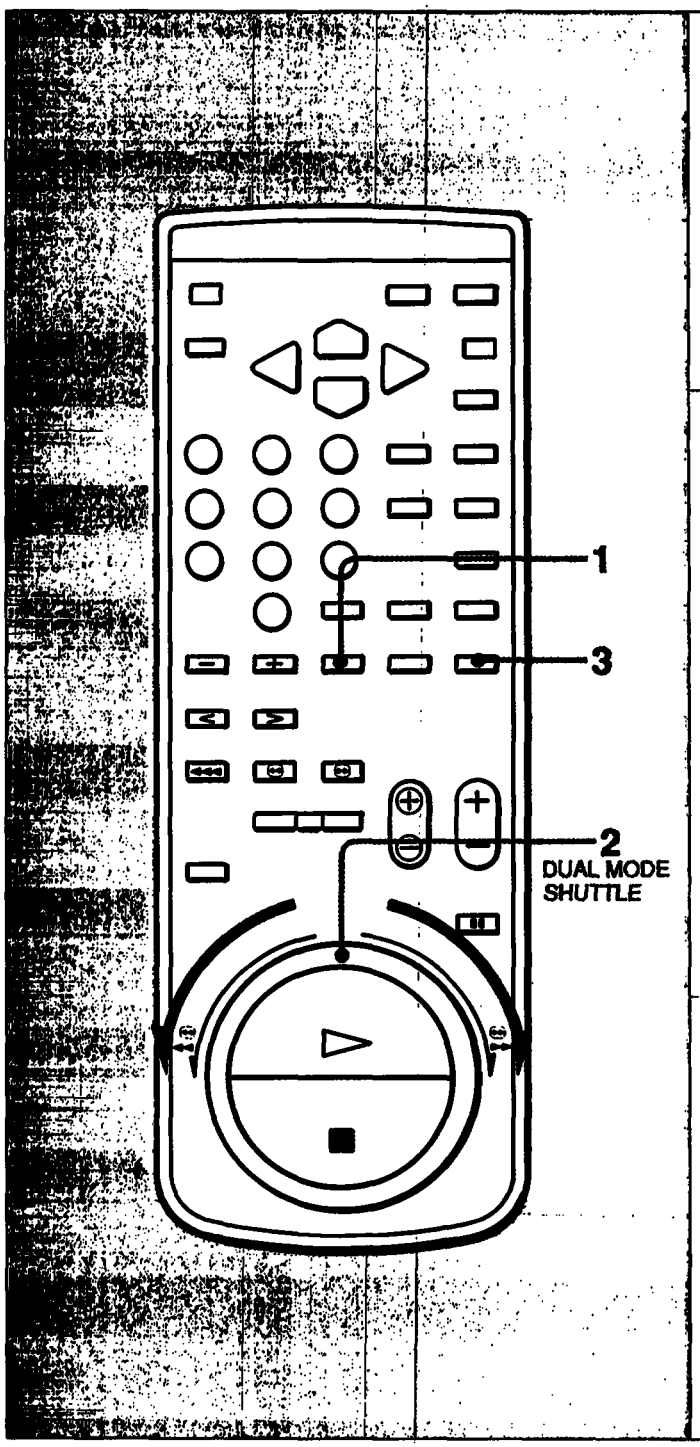
2 Press INDEX until the index number of the desired program is displayed.
The INDEX indicator and the INDEX number are displayed.

3 Turn the DUAL MODE SHUTTLE ring counterclockwise if the index is behind, or clockwise if the index is ahead of the current tape position.
The tape rewinds or rapidly advances. Every time an index signal is detected, the INDEX number decreases. When the number reaches 0, playback of your desired program begins.



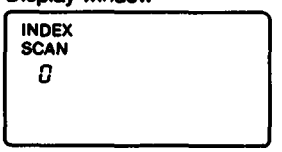
Erasing Index Signals

Unnecessary index signals can be erased.

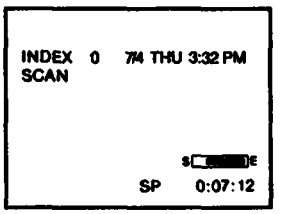


1 Press INDEX once.
The INDEX and SCAN indicator blinks alternately.

Display window

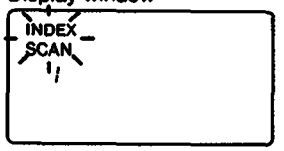


TV screen

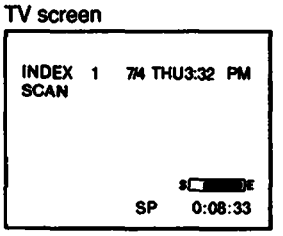


2 Turn the DUAL MODE SHUTTLE ring clockwise or counterclockwise to search for the index signal to be erased.
The tape rewinds or rapidly advances.
Every time an index signal is detected, the tape plays back and then rewinds or advances to the next index signal.

Display window

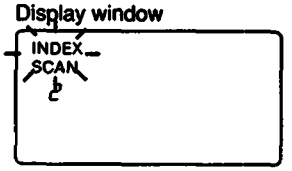


TV screen

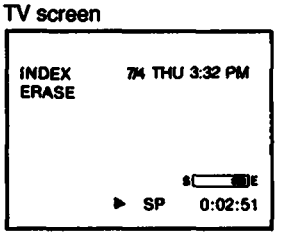


3 When you reach the index signal you wish to erase, press INDEX ERASE within approximately 10 seconds after you have verified the playback picture.
The INDEX indicator flashes.
While the index signal is being erased, the recorded sound is not be heard, but it is not erased from the tape.

Display window



TV screen



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.

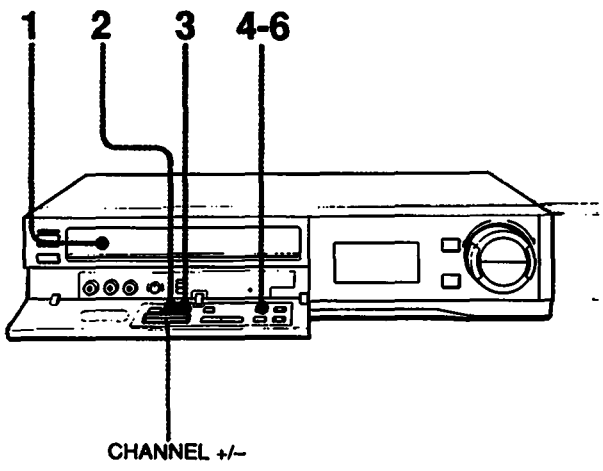
Quick Timer Recording

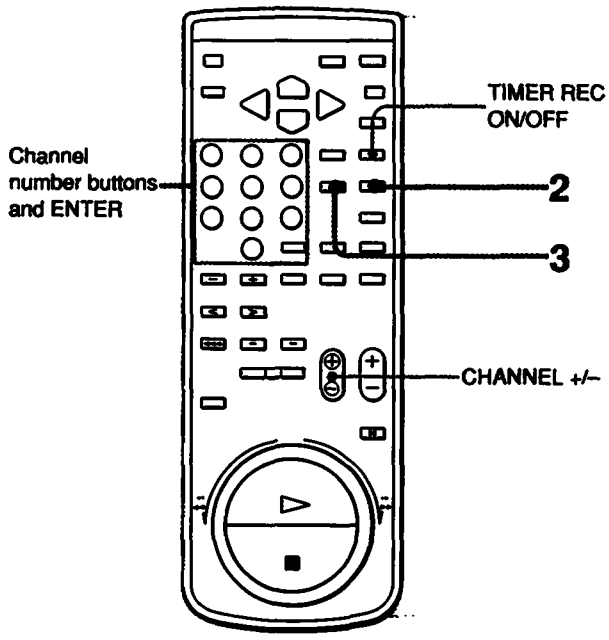
This function is convenient when, for example, you want to set the VCR to start recording immediately without going through the whole timer setting procedure.
However, the quick timer recording function only provides a very rough setting for the desired program.

Before you begin, check the following points.

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

Quick Timer Recording





1 Insert a cassette.

2 Press INPUT SELECT so that the TUNER indicator is turned on.

3 Press REC MODE (SP/EP) to decide the tape speed, SP or EP.

4 Press QUICK TIMER on the VCR.
Select the channel for recording with CHANNEL +/– or channel number buttons and ENTER while the channel display is flashing.

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.

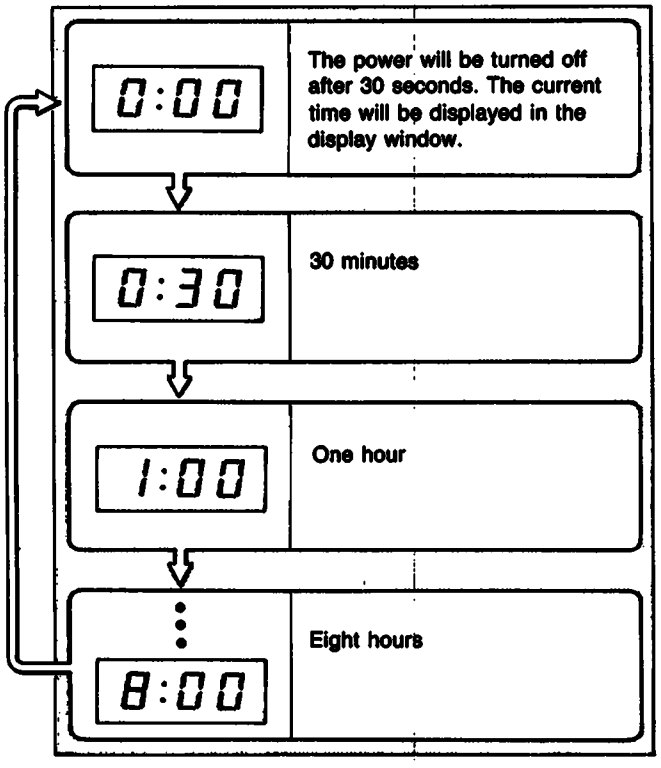
You can leave your VCR after turning off the TV. The VCR automatically goes off when the recording is finished.

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

To stop quick timer recording
Press TIMER REC ON/OFF.

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. (TV)
MENU	Only operable to check the timer recording settings. (See "Checking the Timer Settings"on page 38.)

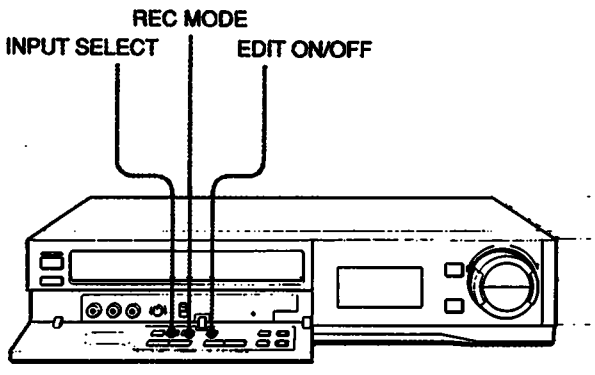
If the tape runs out during quick timer recording
Recording will stop and the power goes off. The tape will not rewind automatically.

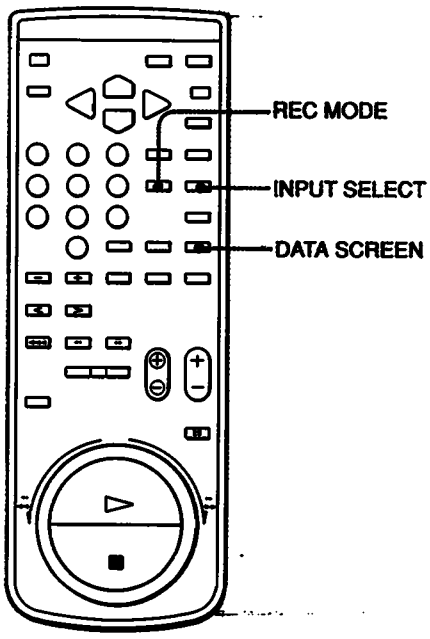
If a power interruption occurs during quick timer recording
Recording will stop and the power goes off. If the power interruption lasts less than three hours and the power is restored before the recording end time, recording will start again from that point.

Editing

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

Preliminary Setting for Editing





When using this VCR as the recording VCR
Before editing, check these settings:

- **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 this VCR as the playback VCR
Before editing, check these settings:

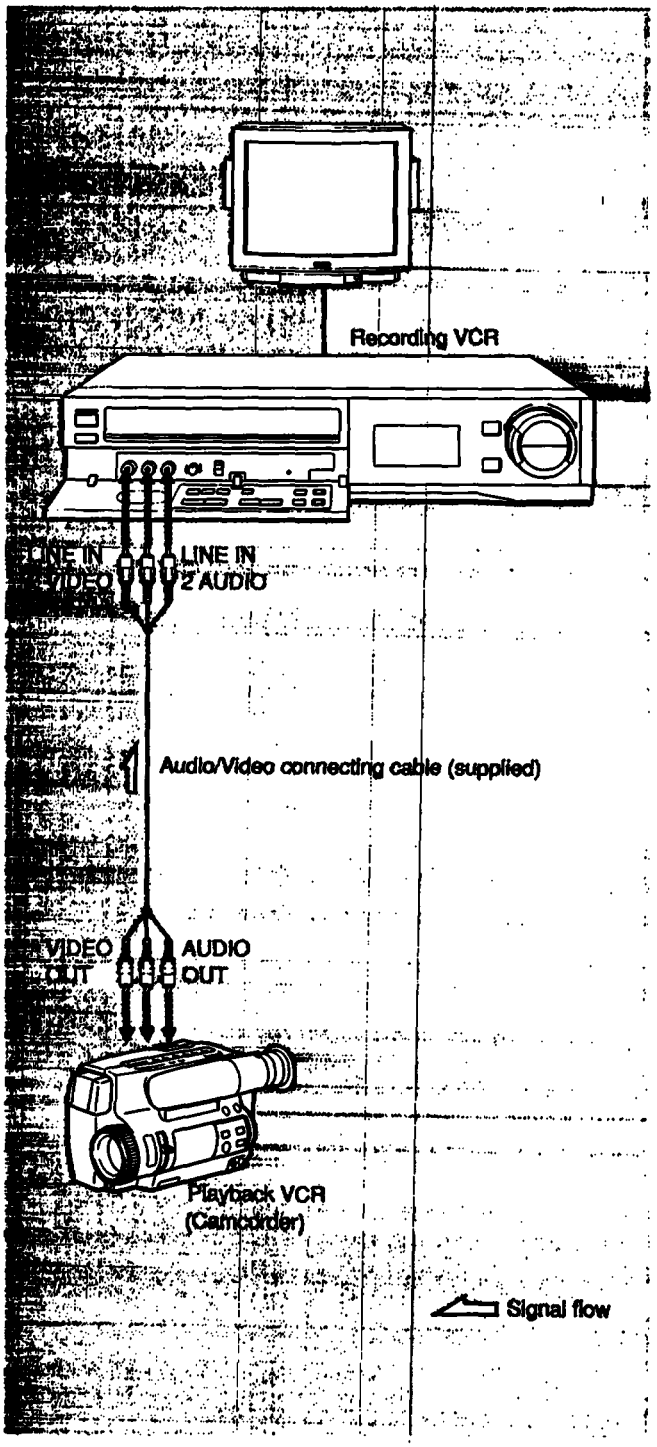
- **EDIT indicator:** Press EDIT ON/OFF to light the EDIT indicator.
- **DATA SCREEN:** Press to erase the on-screen displays.

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. Avoid using an edited tape for multiple generations of editing.

To be continued ▶

Editing from Another VCR

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



1 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.

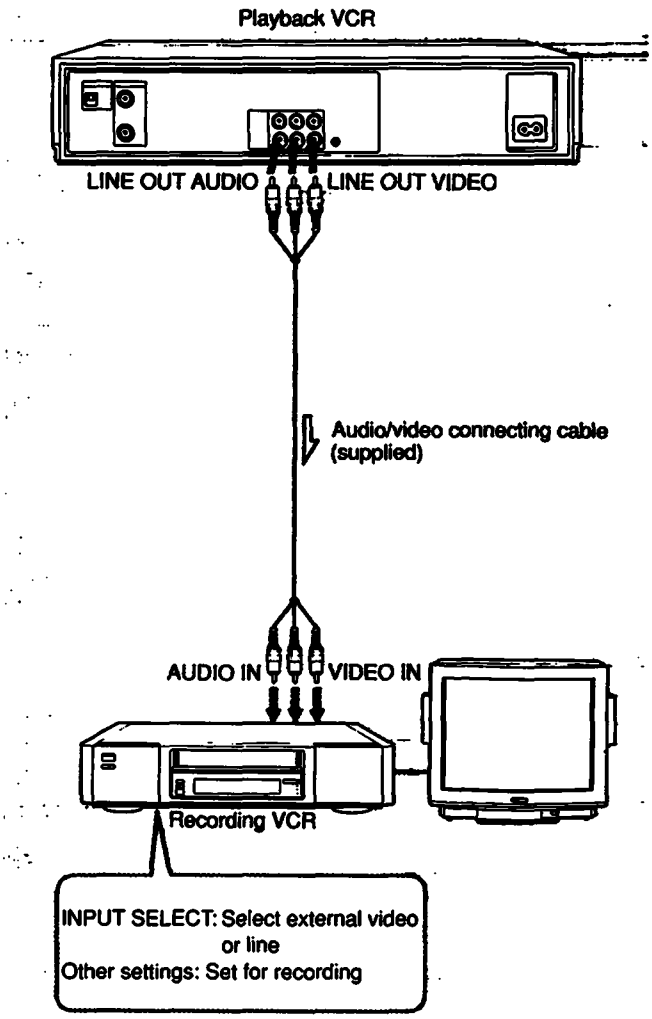
When the playback VCR is a stereo unit
Make connections with the supplied audio/video connecting cable.

When the playback VCR is a monaural unit
Connect the white plug to LINE IN 2 AUDIO L to record the sound of playback VCR on both channels of this unit. Do not connect to LINE IN 2 AUDIO R.

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 onto Another VCR

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



1 **Turn on the power of the recording VCR and insert a cassette for recording.**

2 **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.

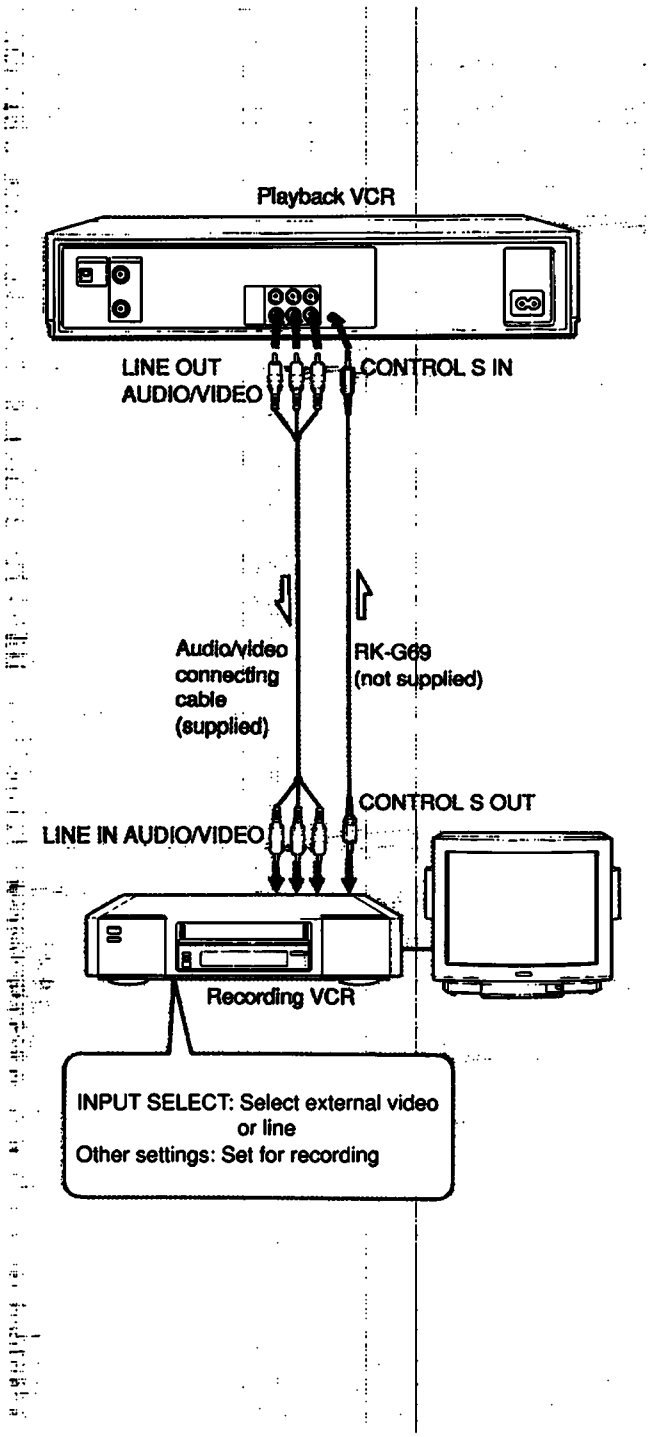
When pressing PAUSE
Press the PAUSE button on the playback VCR just before pressing the one on the recording VCR.

When the recording VCR is a monaural 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.

Synchronized Editing onto Another VCR

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



This section shows you how to use the synchronizing function of another VCR with SYNCHRO EDIT on this VCR while editing your tape. For synchronized editing, you can use this VCR as the playback VCR and another VCR with a CONTROL S OUT terminal and the synchro edit function as the recording VCR.

1 Turn on the power of the recording VCR and insert a tape for recording.

2 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 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 enters the recording pause mode and the playback VCR enters the playback pause mode.

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

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

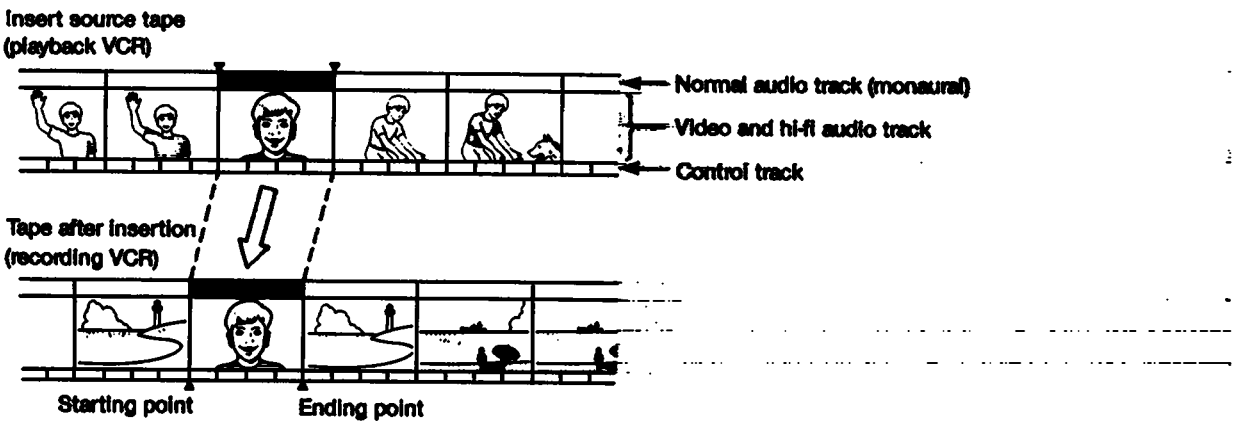
When the recording VCR is a monaural unit
Make connections with the VMC-910MS/920MS cable (not supplied).

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.

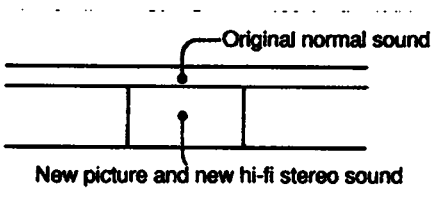
Insert Editing (SLV-686HF only)

You can easily insert a new picture and/or sound onto a pre-recorded tape. "Audio insert", "Video insert", or "Audio and video insert" can be selected with this operation. This editing is useful to replace an unnecessary scene (sound) with another scene (sound).

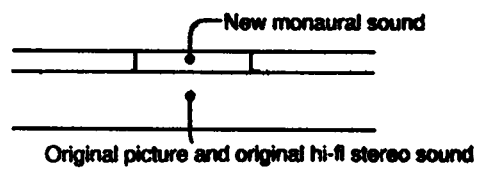
- For connection, see page 51 or 53. (The CONTROL S connections are not needed.)
- Select the insert source from the equipment connected to LINE IN 1 or 2.
- Connect the VCR to an audio system for "Audio insert."



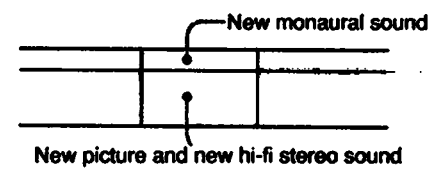
Video Insert
You can insert a new picture and a new hi-fi stereo sound from video and hi-fi audio track onto a pre-recorded tape. The normal sound of the normal audio track will be retained.

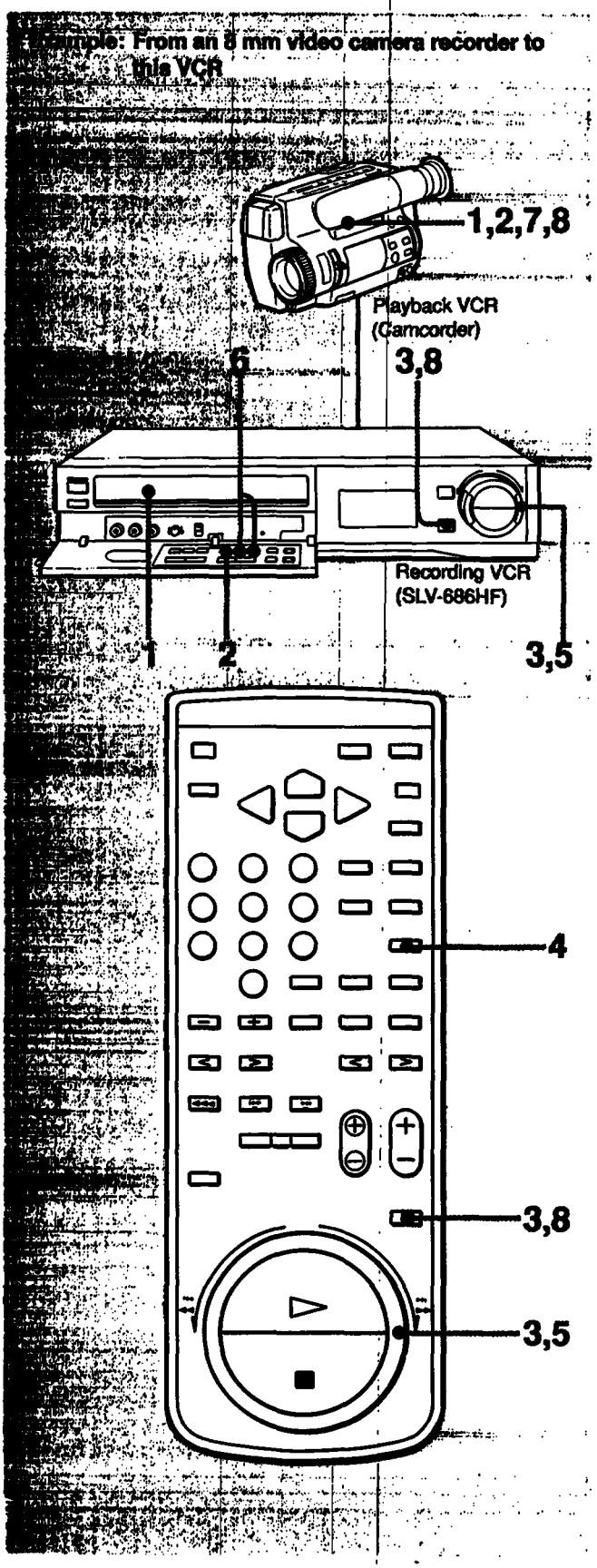


Audio Insert
You can insert the monaural part of a normal sound onto a pre-recorded tape. The picture and a hi-fi stereo sound of the video and hi-fi audio track will be retained.



Video and Audio Insert
You can insert a new picture, a new hi-fi stereo sound, and a new normal sound onto a pre-recorded tape.





1 **Insert a source cassette into the playback VCR and a tape for recording into this VCR.**

2 **Press EDIT ON/OFF.**
Activate the edit function if the playback VCR has it.

3 **On this recording VCR, locate the edit end point and put this VCR into the playback pause mode.**
DUAL MODE SHUTTLE is useful for locating a desired ending point.

4 **On the recording VCR, press COUNTER RESET.**
The counter shows "0H00M00S" and the ending point is memorized.

5 **On the recording VCR, rewind the tape to locate the starting point and set the VCR to the playback pause mode.**
DUAL MODE SHUTTLE is useful for locating a desired starting point.

6 **Press VIDEO/AUDIO INSERT.**
For audio insert, press AUDIO. The "A INSERT" lights in the display window.
For video insert, press VIDEO. The "V INSERT" lights in the display window.
For audio and video insert, press the AUDIO and then VIDEO. The "AV INSERT" lights in the display window.

7 **On the playback VCR, locate the starting point where you want to start the insertion and set the VCR to the playback pause mode.**

8 **Press the PAUSE button on both VCRs to start the insertion.**
At the ending point (0H00M00S), the insertion stops automatically. (To stop playback, press the STOP button.)

To stop the insertion temporally
Press ❚❚ PAUSE.

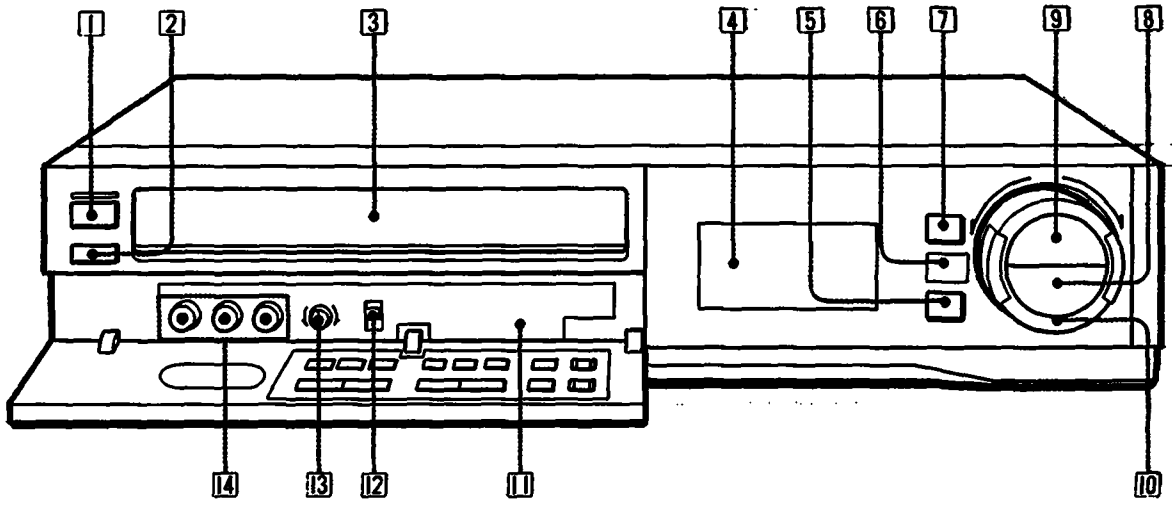
To stop on-going insertion
Press ■ STOP.

Notes
- The video/audio inserts cannot be made onto an unrecorded portion of a tape.
- After the insertion, the previous picture and/or sound will be erased.

Identifying the Parts and Controls

Refer to the pages indicated for details.

Front Panel



1 **POWER ON/OFF switch and indicator (page 13)**

2 **⏏ EJECT button (page 24)**

3 **Cassette compartment**

4 **Display window and function mode display (page 59)**

5 **PAUSE button (page 42)**

6 **Remote sensor**

7 **HI-SPEED REWIND button (page 26)**

8 **STOP button (page 26)**

9 **PLAY button (page 25)**

10 **DUAL MODE SHUTTLE ring**

11 **CL (clear) button (page 63)**

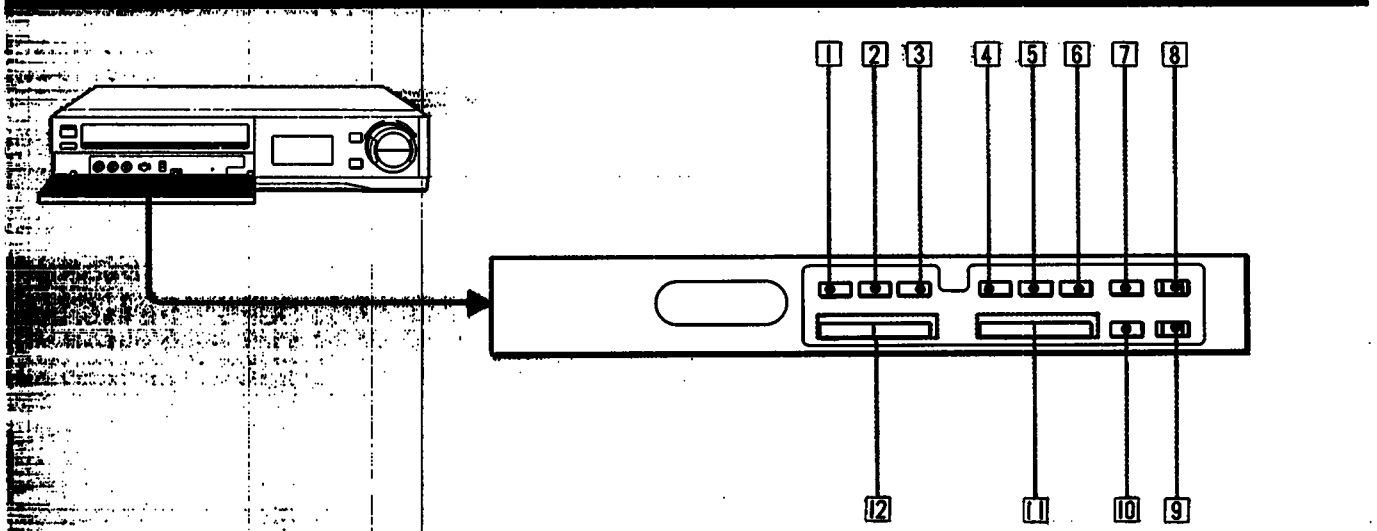
12 **COMMAND MODE VTR 1/VTR 2/VTR 3 selector (page 14)**

13 **SHARPNESS SOFT/SHARP control (page 27)**

14 **LINE IN 2 VIDEO and AUDIO jacks (phono type) (page 51)**

Refer to the pages indicated for details.

Inside of the Front Panel



This illustration shows the SLV-686HF.

[1] **ANT TV/VTR button (page 13)**

[2] **INPUT SELECT button (page 30)**

[3] **REC MODE (SP/EP) button (page 30)**

[4] **EDIT ON/OFF button (page 50)**

[5] **AUDIO INSERT button (SLV-686HF only) (page 55)**

[6] **VIDEO INSERT button (SLV-686HF only) (page 55)**

[7] **QUICK TIMER button (page 48)**

[8] **TIMER REC ON/OFF button (page 35)**

[9] **REC button (page 30)**

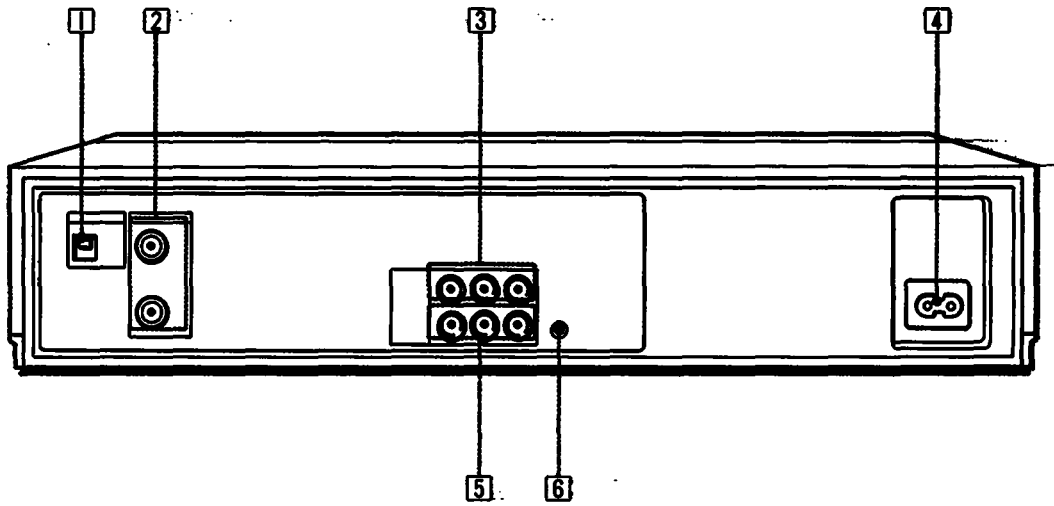
[10] **TRACKING AUTO/MANUAL button (page 27)**

[11] **TRACKING NORMAL/SLOW and STILL ADJUST ▼/▲ button (page 27)**

[12] **CHANNEL +/– buttons (page 30)**

Refer to the pages indicated for details.

Rear Panel



1 **RF UNIT selector (page 13)**

2 **VHF/UHF IN/OUT connectors (F-type) (pages 7-10)**

3 **LINE IN 1 VIDEO and AUDIO jacks (phono type)**

4 **AC IN socket**

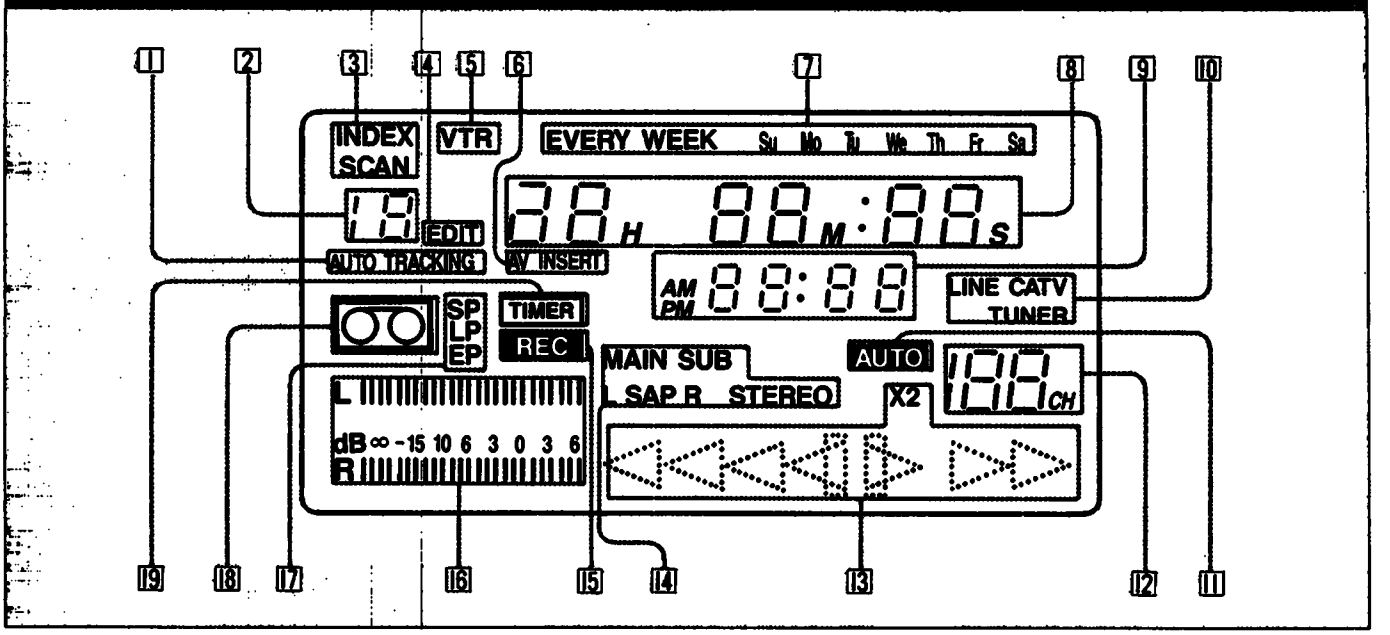
5 **LINE OUT VIDEO and AUDIO jacks (phono type) (page 11)**

6 **CONTROL S IN jack (mini type) (page 53)**

To be continued ▶

Refer to the pages indicated for details.

Indications in the Display Window



1 **AUTO TRACKING indicator (page 28)**

2 **Index number indicator (page 44)**

3 **INDEX, INDEX SCAN indicator (page 44)**

4 **EDIT indicator (page 50)**

5 **VTR indicator (page 31)**

6 **AV INSERT indicator (SLV-686HF only) (page 55)**
"A INSERT" lights for audio insert.
"V INSERT" lights for video insert.
"AV INSERT" lights for audio and video insert.

7 **Day of the week indicator, EVERY WEEK indicator for timer-activated recording (page 36)**

8 **Linear time counter (page 27)**

9 **Quick timer recording time/current time (page 48)**

10 **Input mode indicator**

11 **AUTO indicator (page 26)**

12 **Channel number/input mode indicator**

13 **Tape operation indicator (page 25)**

14 **Stereo program/SAP indicator (page 33)**

15 **REC (recording) indicator**

16 **Peak level meter**

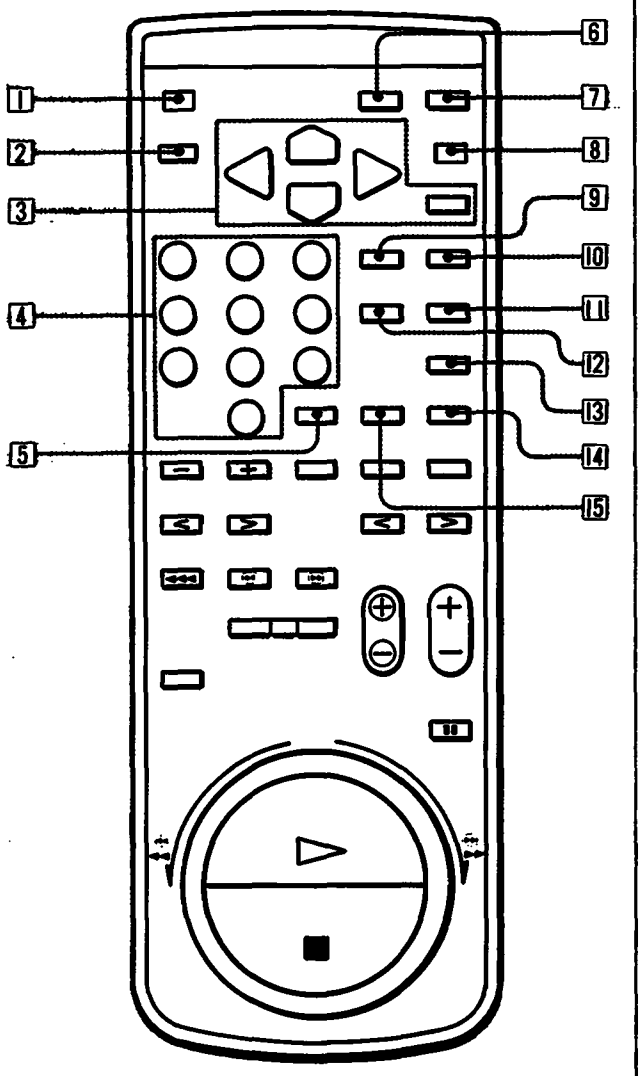
17 **Tape speed indicator (LP is for playback only.)**

18 **Cassette indicator (page 24)**

19 **TIMER recording indicator**

Refer to the pages indicated for details.

Remote Commander



This illustration shows the Wireless Remote Commander RMT-V102A (for SLV-686HF). The Wireless Remote Commander RMT-V102 (for SLV-585HF) is the same as the RMT-V102A except for control number 23 on page 61.

[1] TV/VTR remote control selector (page 14)

[2] MENU button

[3] EXECUTE button and cursor shift ▲/▼/◀/▶ buttons

[4] Channel number buttons (page 30)

[5] ENTER button

[6] ANT TV/VTR (Antenna TV/VTR) button (page 31)

[7] POWER switch (page 13)

[8] COMMAND MODE 1/2/3 selector (page 14)

[9] TIMER CLEAR button (page 39)

[10] TIMER REC ON/OFF button (page 35)

[11] INPUT SELECT button (page 30)

[12] REC MODE button (page 30)

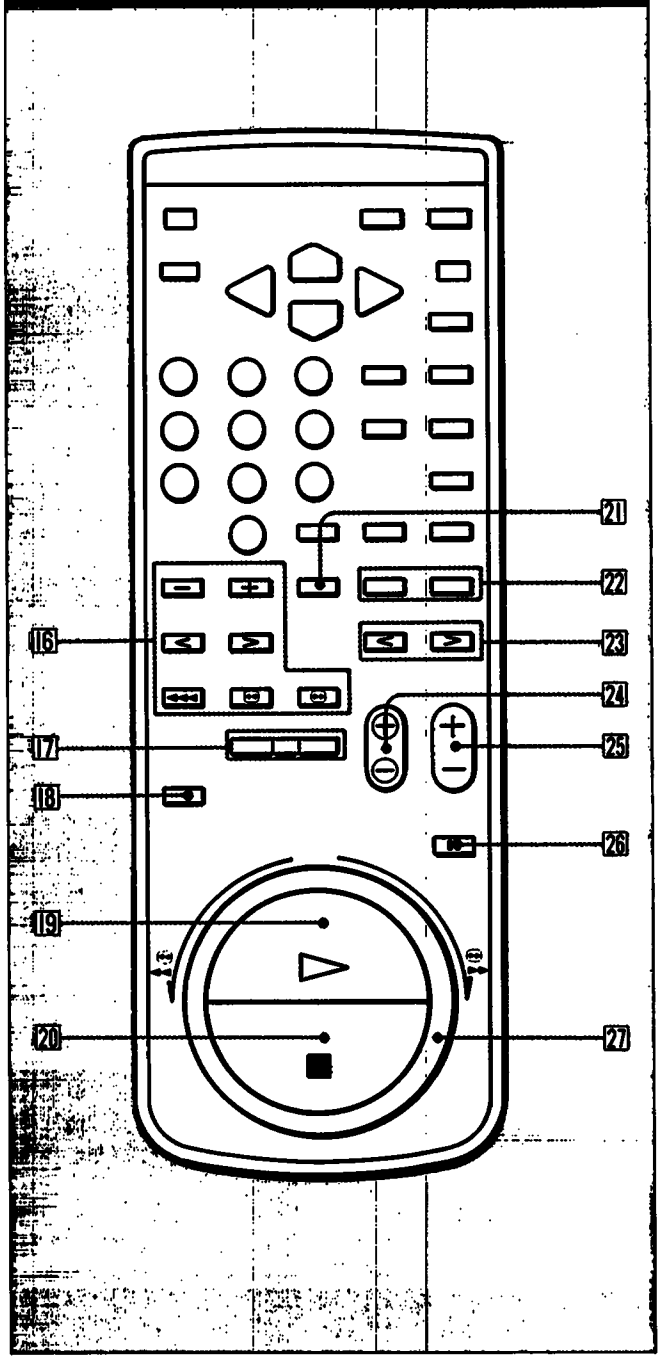
[13] COUNTER RESET button (page 27)

[14] DATA SCREEN button (page 26)

[15] AUDIO MONITOR button (page 28)

Refer to the pages indecated for details.

Remote Commander



This illustration shows the Wireless Remote Commander RMT-V102A (for SLV-686HF). The Wireless Remote Commander RMT-V102 (for SLV-585HF) is the same as the RMT-V102A except for control number 23 above.

16 **Tape transport buttons (pages 26,42-43)**
▮► SLOW (+: to increase the speed, –: to reduce the speed)
◄▮▮ FRAME ▮▮► (frame-by-frame picture and tape direction for slow motion playback; >: forward / <: reverse)
HI-SPEED REWIND ◄◄◄
SEARCH (reverse/forward) ⏪ / ⏩

17 **● REC buttons (Press the two buttons simultaneously) (page 30)**

18 **SKIP button (page 42)**

19 **PLAY button (page 25)**

20 **STOP button (page 26)**

21 **INDEX button (page 45)**

22 **INDEX MARK/ERASE buttons (page 44)**

23 **SHUTTLE EDIT buttons (RMT-V102A for SLV-686HF only) (page 31)**

24 **CHANNEL +/– buttons (page 30)**

25 **VOL +/– buttons**

26 **PAUSE button (page 42)**

27 **DUAL MODE SHUTTLE ring (pages 26,43)**

Other Information

Troubleshooting

If you have a problem with the VCR, 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.

	Symptom	Possible causes and remedies
Power	The POWER switch does not function.	• The power cord is disconnected. • The VCR is in the timer standby mode.
	The power is turned on but the VCR does not operate.	• The safety device on the VCR has activated. Turn the power off, disconnect the power cord from the wall outlet and leave the unit for more than 1 hour.
Clock and Timer	The clock has stopped and "12:00 AM" is flashing.	• There has been a power interruption. Reset the time, date, and timer setting.
TV Reception	TV program is not clearly displayed on the TV screen.	• The channel for the VCR is not correctly tuned on the TV. • The TV signal is weak. Adjust the direction of the antenna. • The AC power cord of the VCR is disconnected.
Recording and Playback	Streaks and/or snow appears during recording.	• The TV's channel is not set to the one preset for the VCR. • The TV signal is weak. Adjust the direction of the antenna.
	No picture on the TV screen	• Press ANT TV/VTR so that the VTR indication appears in the display window. • The TV channel is not set to 3 CH or 4 CH, or the video input has not been selected at the monitor.
	Recording cannot be done.	• No cassette has been inserted. • The tape is at its end. • INPUT SELECT is not set correctly.
	The playback picture is not clear.	• The channel for the VCR is not correctly tuned on the TV. • 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 a 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 the SHARPNESS.

To be continued ▶

	Symptom	Possible causes and remedies
	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.
	Stereo recording cannot be made.	• AUTO STEREO is set to OFF in the MODE SET menu.
	Both main and SAP sounds are heard when playing back a tape on which an MTS broadcast was recorded.	• AUDIO MIX is set to ON in the MODE SET menu.
	No sound is recorded on the normal audio track	• NORMAL AUDIO is set to SAP in the MODE SET menu when there is no SAP broadcast.
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 has been made.
	The cassette is ejected when you press TIMER REC (ON/OFF).	• The safety tab of the cassette has been removed.
	The timer activated 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. • The TV or color monitor is connected through the LINE OUT VIDEO jack.
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. Set COMMAND MODE switches on VCR and remote to the same number. • The batteries are exhausted.
	The tracking indicator does not appear on the screen.	• Press DATA SCREEN. • The recording condition of the tape is very poor and tracking cannot be adjusted.
	A short beep sounds repeatedly and a caution indication (ON SCREEN HELP) appears on the TV screen.	• An illogical operation has been tried. See the "On Screen Help". See the "List of the ON SCREEN HELP Messages (caution indication)". (page 64)
	The VCR does not operate to any button.	• The built-in microprocessor seems to work wrong. Pressing the CL (clear) button with pointed object, such as a ball point pen, may cause to resume. (All of the information such as the clock or the preset programs stored will be cleared.)

List of the ON-SCREEN HELP Messages (caution indication)

The VCR gives ON SCREEN HELP as a caution indication on the screen with a beep tone to warn that you have tried an illogical operation. The following is a list of ON SCREEN HELP messages.

Please put in a cassette.	No timer recording has been set.
Please stop the tape.	Programmed timer recorder will start in 5 minutes. Please push TIMER REC to set timer.
Please push INPUT SELECT to change.	VCR is recording.
Please set clock.	You cannot change channels, tape speed or input source during recording.
Please use a cassette with a safety tab.	The tape is rewound.
Please rewind or put in a new cassette.	Please push TIMER REC to set timer.

System

Format VHS NTSC standard
Video recording system
Rotary two-head helical scanning FM system
Video signal EIA standard, NTSC color
Tape speed 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
8 hours in EP mode (with T-160)
Fast-forward and rewind time
Approx. 4 min. 30 sec. (with T-120)
High speed rewind time
Approx. 2 min. 30 sec. (with T-120)

Tuner Section

Channel coverage VHF channels 2 to 13
UHF channels 14 to 69
CATV channel
A-8 to A-1, A to W, W+1 to W+84
Antenna 75 ohm antenna terminal for 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) (2 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) (2)
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 indicator 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 three hours at one time

General

Power requirements 120V AC, 60 Hz
Power consumption 30 W (max.)
6 W (in standby condition)
Operating temperature 5°C to 40°C (41°F to 104°F)
Storage temperature –20°C to 60°C (–4°F to 140°F)
Dimensions 430 × 86 × 362 mm (w/h/d) (17 × 3 1/2 × 14 3/8 inches)
Weight 5.7 kg (12 lb 9 oz)

Wireless Commander RMT-V102 (for SLV-585HF)/ V102A (for SLV-686HF)

Remote control system Infrared control
Command mode VTR 1/2/3 switchable
Power requirements 3V DC, 2 size AA batteries (IEC designation R6)

Accessories Supplied

Wireless Commander RMT-V102 (for SLV-585HF)/V102A (for SLV-686HF) .....(1)
Size AA (R6) batteries .....(2)
75-ohm coaxial cable with F-type connectors .....(1)
External antenna connector .....(1)
AC power cord .....(1)
Audio/video connecting cable (3 phono to 3 phono) .....(1)

Design and specifications are subject to change without notice.

Video Cassette Recorder

SLV-585HF/686HF