

# SONY®

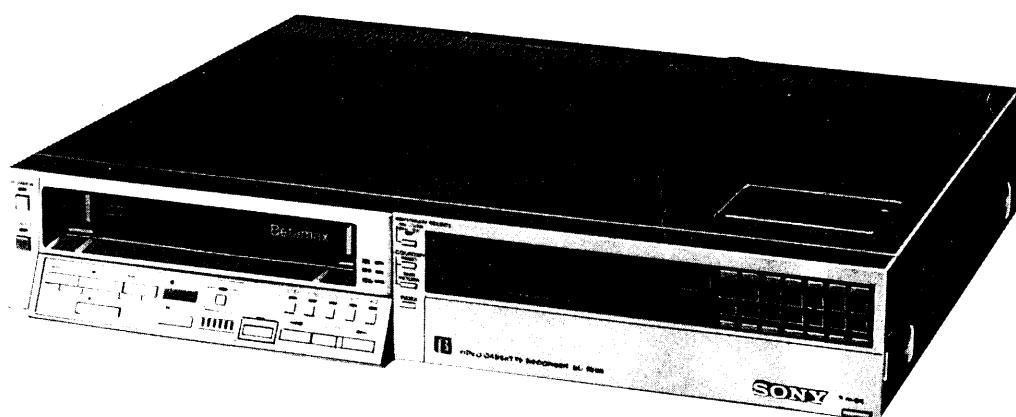
## VIDEO CASSETTE RECORDER

# SL-2500

### OPERATING INSTRUCTIONS

Before operating the unit, please read this manual thoroughly, and retain it for future reference.

You will find these operating instructions handy for everyday reference. For connections, clock setting and channel presetting, refer to the accompanying set-up guide.



This machine can be used with any video cassette tapes having the mark **B**.

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## OWNER'S RECORD

The model and serial numbers are located at the rear of the recorder. Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. SL-2500                      Serial No. \_\_\_\_\_

## WARNING

- To prevent fire or shock hazard, do not expose the unit to rain or moisture.
- To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

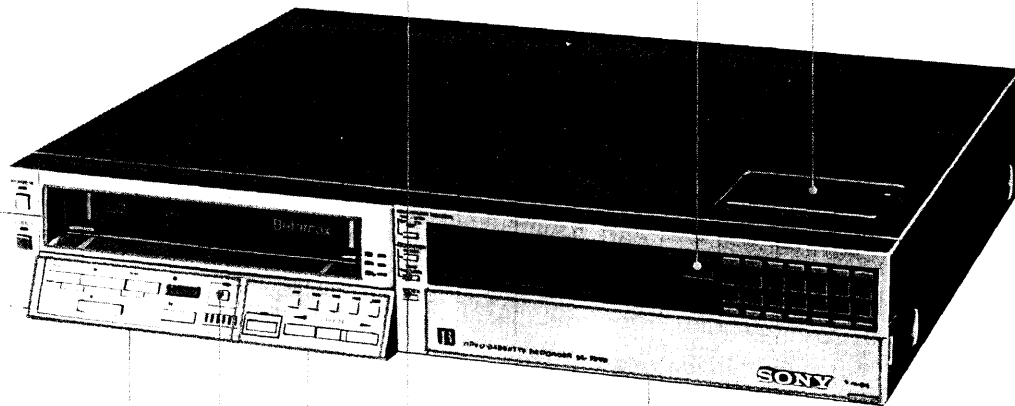
## YOUR NEW FULL FEATURE VIDEO CASSETTE RECORDER

Space-saving front loading design

You can easily locate any point on a tape  
for repeat viewing of a particular scene.

Wireless remote control  
Using the supplied control unit.

Easy channel rearrangement.



You are no longer restricted by the TV program schedule!  
Recording may be started at any time on any of the next fourteen days,  
and 4 pairs of turn-on and turn-off times can be set.

Timer display for simple timer setting  
All you have to do is set the indication in the timer display which  
is blinking.

You can easily locate the starting point of any recorded program  
with the INDEX function.

The picture can be played back at various speeds both forward  
and reverse.

You can add new audio to a previously recorded tape.

Feather touch function buttons

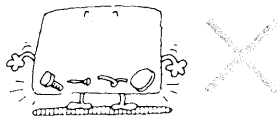
### Note:

This machine conforms to the **II** and **III** type recording and  
playback formats, and will play back tapes recorded in the **I** for-  
mat.

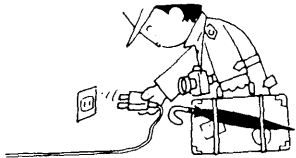
# PRECAUTIONS

## On safety

- Operate the unit only on 120 V ac, 60 Hz.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.



- Unplug the unit from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it out by the plug. Never pull the cord itself.



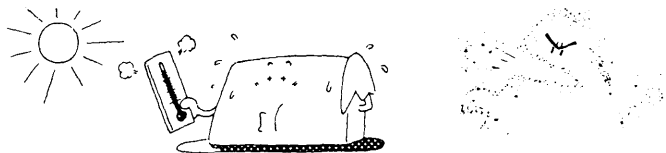
- This unit is equipped with a polarized AC power cord plug (one blade of the plug is wider than the other), which will fit into the power outlet only one way. Should you be unable to insert the plug fully into the outlet, try reversing the plug. Should the plug still fail to fit, contact your dealer for assistance. Do not defeat the safety purpose of the polarized plug.

## On installation

- Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation slots.



- Do not install the unit near heat sources such as radiators or air ducts or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.



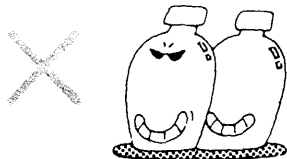
- The unit is designed for operation in a horizontal position. Do not install it in an inclined position.
- Keep the unit and cassette tapes away from equipment with strong magnets, as for example, a microwave oven or a large loudspeaker.

## On operation

- When the unit is not in use, turn the power off to conserve energy and to extend its useful life.
- Remove and store video cassettes after recording or playback.

## On cleaning

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



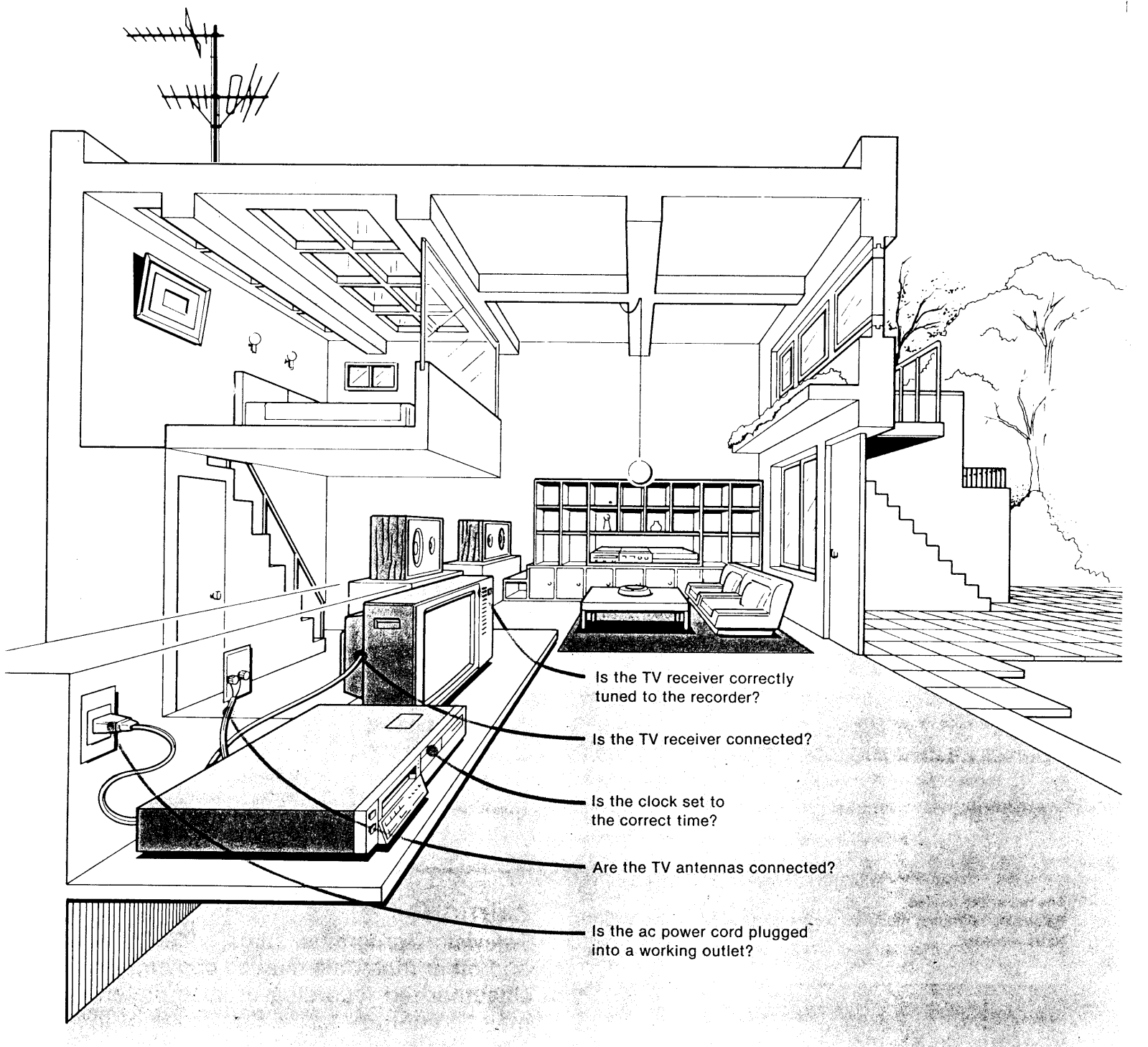
## On repacking

Do not throw away the carton and packing materials. They make an ideal container in which to transport the unit. When shipping the unit to another location, repack it as illustrated on the carton.

If you have any questions about this unit, contact your Sony dealer.

# IS YOUR RECORDER PROPERLY CONNECTED AND READY FOR USE?

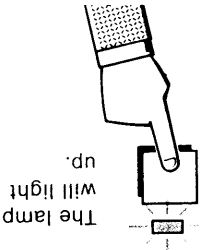
Before proceeding with any operation, check the following points.



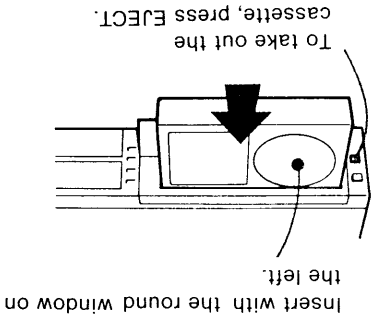
If any of these have not been done, refer to the accompanying "SET-UP GUIDE".

# BASIC OPERATION TV PROGRAM RECORDING

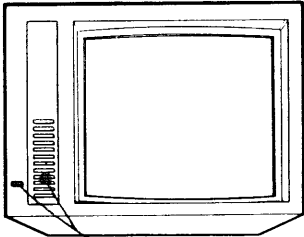
1 Turn on the TV and select the channel preset for the video recorder (channel 3 or 4).



2 POWER

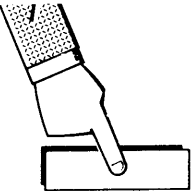
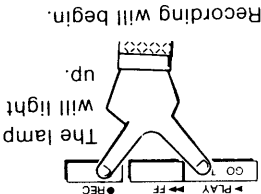


3



TV

While holding ● REC depressed, press ◀ PLAY.



To stop recording

■ STOP

If the tape reaches the end during recording .... The tape will be rewound to the beginning and stop.

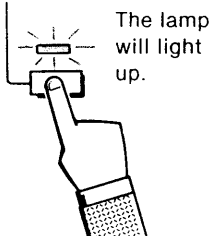
The recording modes Select the recording mode according to the length of the program to be recorded.

Mode	Cassette used				
	L-830	L-750	L-500	L-250	L-125
III	3 hr.	3 hr.	2 hr.	1 hr.	30 min.
III	5 hr.	4 hr.	3 hr.	1 hr.	30 min.
III	30 min.	30 min.	3 hr.	1 hr.	45 min.

Recording cannot be done in the III mode although tapes recorded in the III mode can be played back with this recorder.

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.

4

PROGRAM SELECT  
ON-VTR

5

## INPUT SELECT

TUNER



Set to TUNER.

6

## RECORD MODE

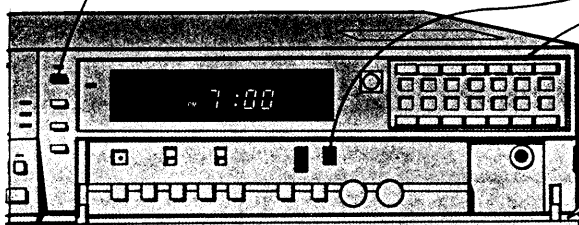
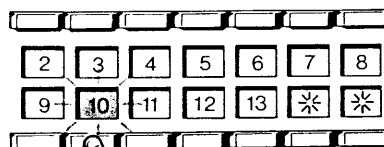
BII

BIII

Set RECORD MODE to the desired position.  
(See page 6.)

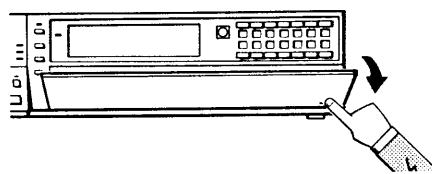
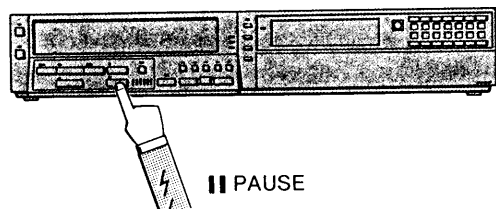
7

Select the channel to be recorded.



video cassette recorder

To open the lid.

To stop the tape momentarily  
Press the PAUSE button.

|| PAUSE

The TV program can be seen on the TV but the picture will not be recorded.

To resume recording, press the button again.

**Automatic release:** To protect the video heads and the tape, the pause mode will be automatically released after about 8 minutes and the recorder will revert to the record mode.

In case you want to record a tape which is to be played back on another recorder from the very beginning of the tape, run the tape for about 15 seconds before starting recording. Otherwise you may miss the starting point during playback on the other machine.

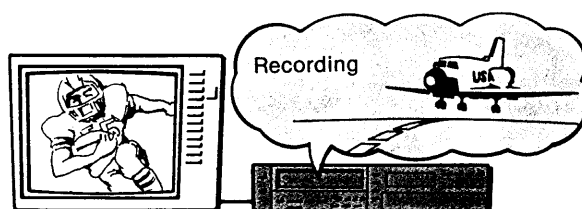
RECORDING ONE TV PROGRAM WHILE VIEWING  
ANOTHER

You can view one TV program while recording a different TV program which has been selected on the recorder.

- ① Start recording the desired TV program following the procedure above.
- ② Press the PROGRAM SELECT button so that the above lamp goes off.
- ③ Select the channel you want to view on the TV.

## TO VIEW A RECORDED PROGRAM

- ① Stop the tape by pressing the ■ STOP button and press the ◀◀ REW button to rewind the tape.
- ② Press the ▶▶ PLAY button at the desired point to start playback.



# PLAYBACK

## OPERATING PROCEDURE

1

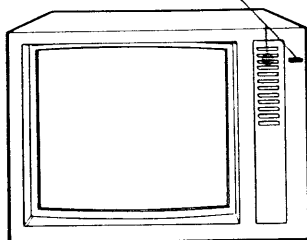
Turn on the TV and select the channel preset for the video recorder (channel 3 or 4).

2

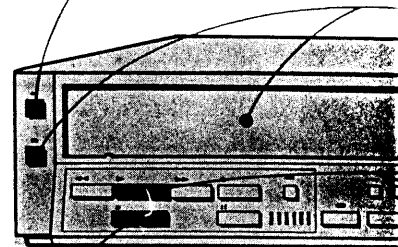
POWER



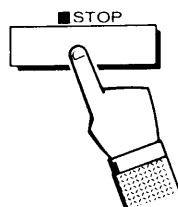
The lamp will light up.



TV



To stop playback,



If the tape reaches the end during playback, the tape will be rewound to the beginning, then stop.

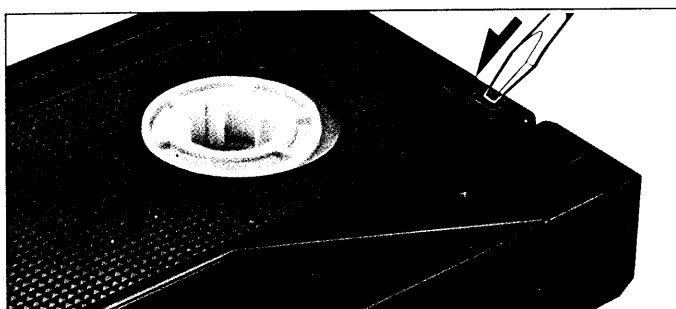
When the ■ STOP button is pressed, the program selected by the INPUT SELECT switch will appear on the TV screen.

## TO KEEP A RECORDED PROGRAM FROM BEING ACCIDENTALLY ERASED

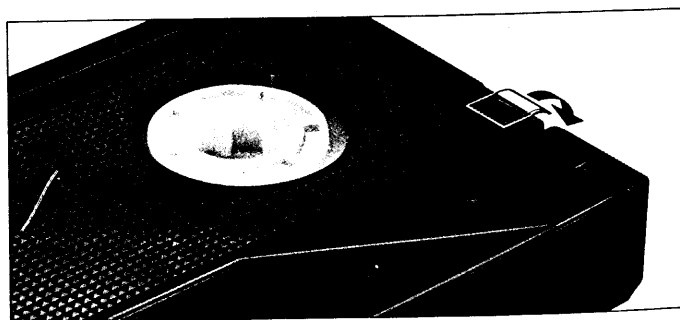
When a new recording is made on a previously recorded cassette, the previous recording will be automatically erased.

### To avoid erasing a recording

Break off the safety tab using a screwdriver or similar object.

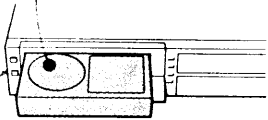


To re-record on a cassette which has had the safety tab removed  
Cover the slot with a piece of plastic tape.



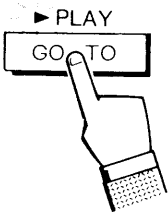


Insert a recorded cassette with the round window on the left.



To take out the cassette, press EJECT.

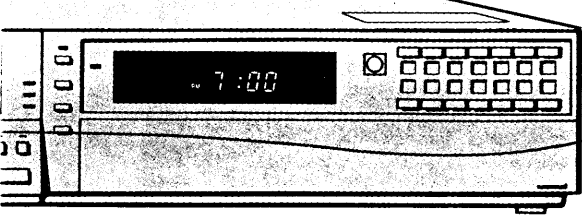
Press ► PLAY.



The lamp will light up.

Playback begins.

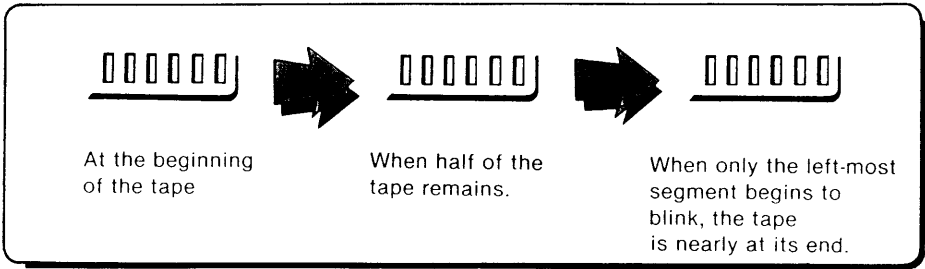
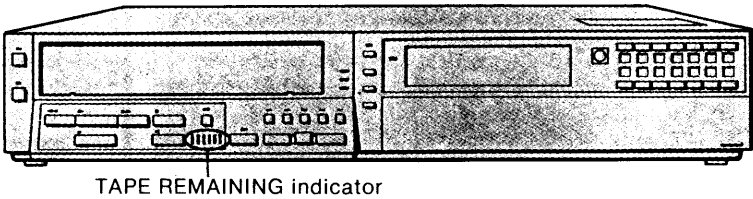
● The **BI**, **BI** and **BI** modes will be selected automatically in playback depending on the mode in which the tape was recorded.



Video cassette recorder

TO CHECK THE AMOUNT OF TAPE LEFT ON THE REEL

The TAPE REMAINING indicator shows the amount of tape remaining while the tape is moving.



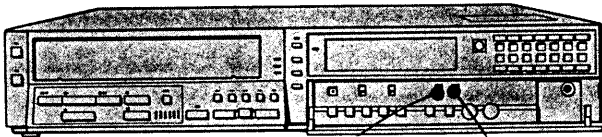
- For the first few seconds the indicator illuminations may fluctuate while the amount of tape is being determined.
- To know the amount of tape remaining during fast forward or rewind mode, play the tape back at normal speed until the illumination stabilizes, then rewind or advance the tape rapidly.
- The indicator only operates when tape on which a recording has been made is played back, rewound or advanced rapidly. It will not operate with a blank tape or with the unrecorded portion of a tape.

TIMER-ACTIVATED RECORDING

Using the built-in timer, recordings of up to any four programs occurring within the next fourteen days can be made automatically, even when you are not at home.

Check before setting the timer

- Is the clock set to the correct day and correct time?  
(For the clock setting, refer to the "SETTING THE CLOCK" of the accompanying set-up guide.)
- Is a cassette inserted in the recorder?
- Is the cassette long enough to record the programs?  
Check the setting of the RECORD MODE selector.
- Does the cassette have a safety tab on the bottom?
- Is the INPUT SELECT switch set to TUNER?

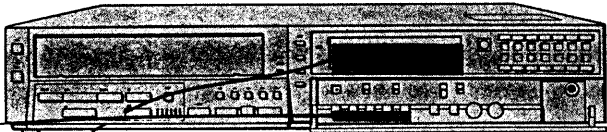


INPUT SELECT RECORD MODE

Note: The timer cannot be set during recording.

SETTING THE TIMER

Example: Suppose you want to set the timer to Program C above.



Button to be pressed	Time display The segment to be set will blink.
<p><b>TIMER SET</b></p>	<p>(The timer setting of Program A will be displayed if it has been set.)</p>
<p><b>Select the program.</b></p> <p>Indication changes in alphabetical order.</p> <p>To go back to the previous indication.</p> <p><b>NEXT</b></p>	
<p><b>3 Select the turn-on day.</b></p> <p>Indication changes as follows: every day→SUN→MON→... →SUN with 2ND WEEK→... SAT with 2ND WEEK→every day</p> <p>To go back to the previous indication.</p> <p><b>NEXT</b></p>	

To record a program at the same time everyday  
Press the NEXT button when all days of week indications are blinking.

If the day you want to record is more than 7 days ahead  
Press the NEXT button when the desired day of week with the "2ND WEEK" indication is blinking.



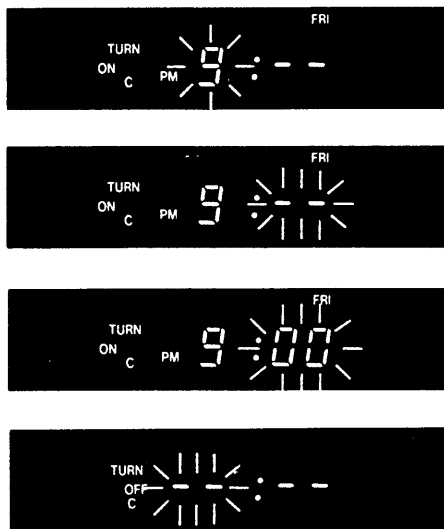
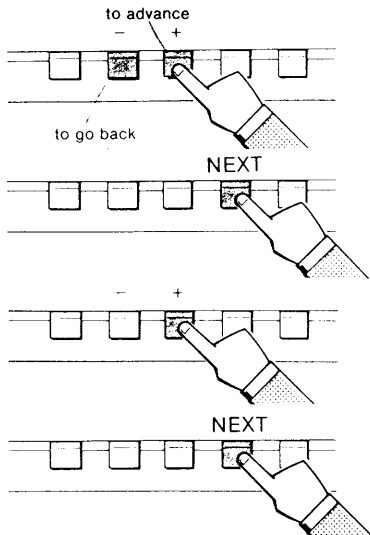
The 2ND WEEK in this case is different from next week on the calendar. The 2ND WEEK is the week which begins exactly seven days from the present day, at the present time.

Suppose you are setting the timer on this day at 10:00 a.m.

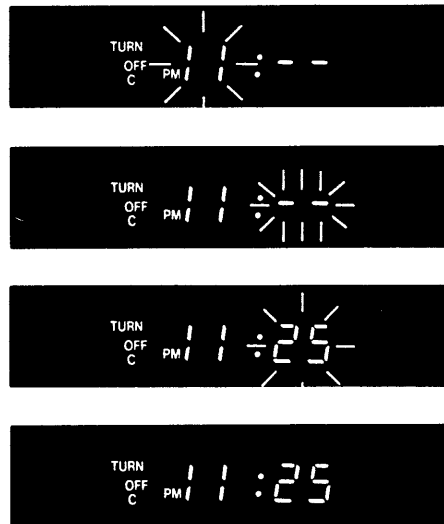
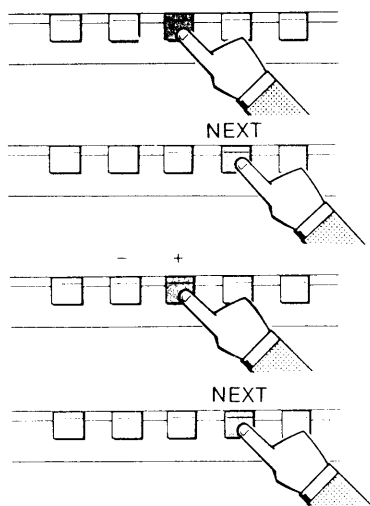
SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

2ND WEEK:  
from 10:01 a.m. on 16th to 10:00 a.m. on 23rd.

Set the turn-on time.



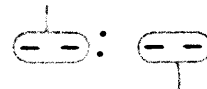
Set the turn-off time  
(within 24 hours from the turn-on time).



To record to the end of the tape

Set the turn-off time to a time after the tape will reach the end or to "---".

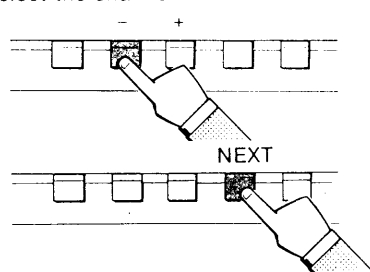
between PM 11 h. and AM 12 h.



between 59 min. and 0 min.

When the tape reaches the end during the timer recording, the recording stops and the unit will be turned off automatically after about 30 seconds. In this case the tape will not be rewound to the beginning.

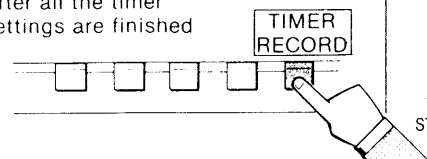
Select the channel to be recorded.



The present time is displayed and the unit is turned off.

Now Program C is set. To set Program A, B or D, repeat these steps. (The unit will be turned on when the TIMER SET button is depressed.)

After all the timer settings are finished



The red lamp will light up.



ONCE THE TIMER STANDBY LAMP HAS LIT UP, NO FUNCTION OF THE RECORDER CAN BE ACTIVATED, except for checking the timer setting.

At the preset turn-on time, recording will start automatically and will stop at the preset turn-off time.

TO OPERATE THE RECORDER AFTER THE  
TIMER HAS BEEN SET

Once the TIMER RECORD button has been pressed, the POWER switch on the recorder will not function. This is to safeguard the timer recording.

To operate the recorder after the timer has been set, press the TIMER RECORD button again so that the TIMER STANDBY lamp goes off.

Also to stop the tape during timer recording, press the TIMER RECORD button so that the TIMER STANDBY lamp goes off.

- The timer settings are kept in the memory even if you disengage the TIMER RECORD button, so you can easily restore the setting later by pressing the TIMER RECORD button.

TO CHECK THE TIMER SETTING

Press the TIMER CHECK button. Each time you press the button, the indication will change as follows:

turn-on day and time of Program A	→	turn-off time	→
turn-on day and time of Program B	→	turn-off time	→
turn-on day and time of Program C	→	turn-off time	→
turn-on day and time of Program D	→	turn-off time	→
present time*	(The unit will be turned off automatically). **		

The indicator of the channel preset for the recording will light up at the same time the turn-on time of each program is displayed, so that the channel can be checked. During timer recording, however, the channel for other timer programs cannot be checked.

**Note:** The timer setting cannot be checked during recordings other than a timer recording.

- \*To obtain a present time during the checking procedure, turn the unit off.
- \*\*During timer recording the unit will not be turned off even if you check the timer setting.

TO CLEAR THE TIMER SETTING

The memory of a timer program will be automatically erased when the recording of that program is finished. A setting for everyday will not be erased, of course.

If you want to skip the timer recording preset for everyday temporarily, press the TIMER RECORD button so that the TIMER STANDBY lamp goes off. To resume the timer standby mode of that program, press the button again.

If you want to erase the memory of a timer program, proceed as follows:

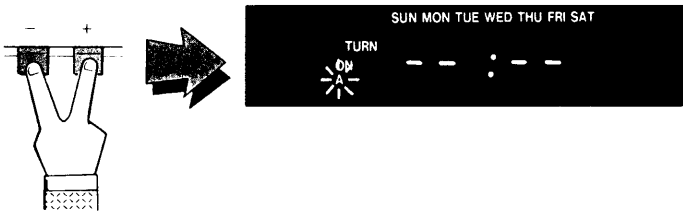
- 1 Press the TIMER SET button as many times as required until the turn-on time or turn-off time of the program to be erased is displayed.



- 2 Press the NEXT button.



- 3 Press the + and - SELECT buttons simultaneously. The entire memory of this program will be erased.

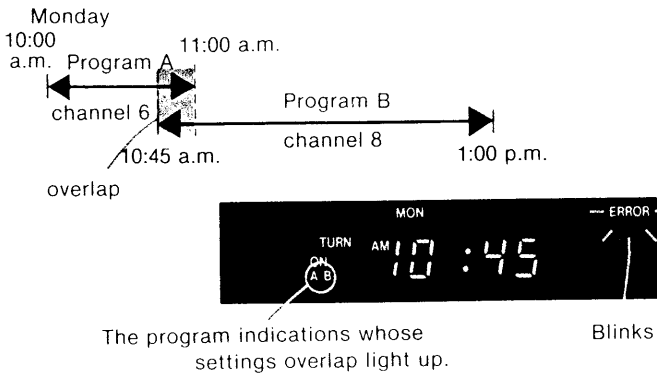


To display a present time, turn the unit off.

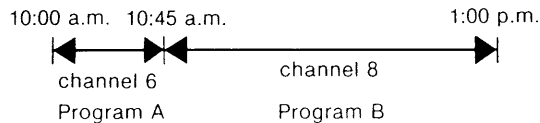
IF THE “ERROR” INDICATOR BLINKS

If the “ERROR” indicator blinks while the timer is being set It means that the settings for the programs overlap. Check the settings and eliminate the overlap.

Setting

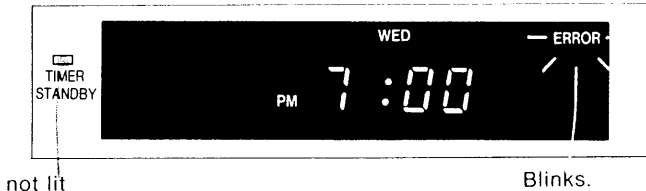


Realized recording



If the TIMER STANDBY lamp lights up, recording can be made even with the “ERROR” indicator blinking, but the program being recorded will change to the next one when the next turn-on time will come.

If the “ERROR” indicator blinks and the TIMER STANDBY lamp does not light when the TIMER RECORD button is pressed



Check the following points:

- Did you insert a cassette into the recorder?
- Does the cassette inserted have a safety tab on the bottom?
- Make sure that the tape is not at its end.

After correcting the above points, press the NEXT button, then the TIMER RECORD button again. Timer-activated recording cannot be activated if the TIMER STANDBY lamp does not light.

Notes on the “ERROR” indicator

The “ERROR” indicator does not light in the following cases, even if settings overlap.

— when the turn-off time of the program whose turn-on time is set earlier than the other one is set to “—:—”.

Example:

- Program A: Sun. 7:00 p.m. → “—:—” (to tape end)
- Program B: Sun. 8:00 p.m. → 9:00 p.m.

— when one of the overlapping programs is set for next week and brackets the present time.

Examples:

- Present time: Sun. 3:00 p.m.
- Program A: Sun. 2:00 p.m. → 4:00 p.m.  
(The program actually starts next Sunday.)
- Program B: Sun. of the 2nd week 3:30 p.m. → 5:00 p.m.

The ERROR indicator will light up and blink even if one timer program including the present time and another timer program do not actually overlap.

Examples:

- Present time: Sun. 3:00 p.m.
- Program A: Sun. 2:00 p.m. → 4:00 p.m.  
(The program will actually start next Sunday.)
- Program B: Sun. 3:30 p.m. → 5:00 p.m.  
(The program will start that day.)

We recommend that you check the preset timer programs whenever you set a new timer program.

WHEN A POWER INTERRUPTION OCCURS

If the clock shows “SUN AM 12:00” and does not advance all the timer settings have been erased. Reset the clock time and the timer settings.

If the clock still shows the correct time

the power has been interrupted for less than 10 minutes and the clock has been powered by the built-in self-charging battery so that the timer programs were kept in the memory. If the interruption occurs after the recording has begun, recording will be resumed when the power is restored.

- The built-in battery will be charged automatically when the ac power cord of the recorder is plugged into a wall outlet for at least 40 hours.

# ADVANCED OPERATION

## TO OBTAIN VARIABLE SPEED PLAYBACK PICTURES — "SWING SEARCH"

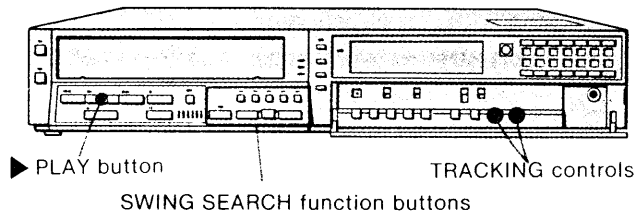
With this video cassette recorder, you can obtain a freeze, a slow motion, a double speed, a frame-by-frame or a reverse playback picture as well as a normal speed playback picture.

For example ....

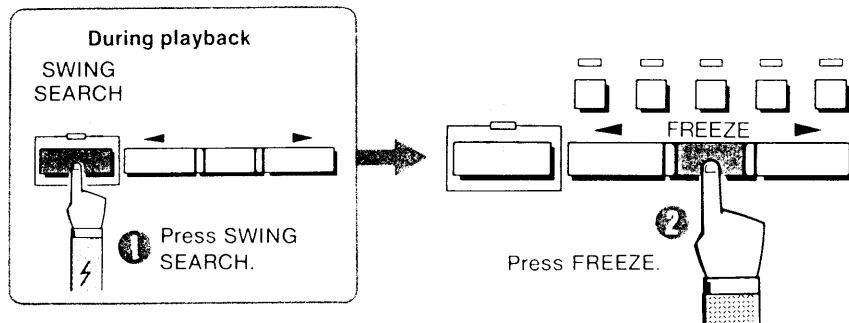
To closely inspect a particular frame → FREEZE PICTURE  
To study your golf or tennis form → FRAME-BY-FRAME PICTURE  
To watch a football play slowly unfold → SLOW-MOTION PICTURE  
To quickly review a program → DOUBLE-SPEED PICTURE

### Notes

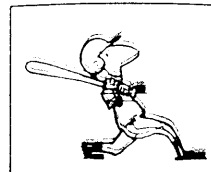
- The audio cannot be monitored in the "Swing Search" mode.
- Tapes recorded in the **[B]** mode cannot be played back in the "Swing Search" mode.
- To resume normal playback when the unit is in the "Swing Search" mode, press the ► **PLAY** button.



### FREEZE PICTURE



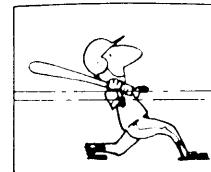
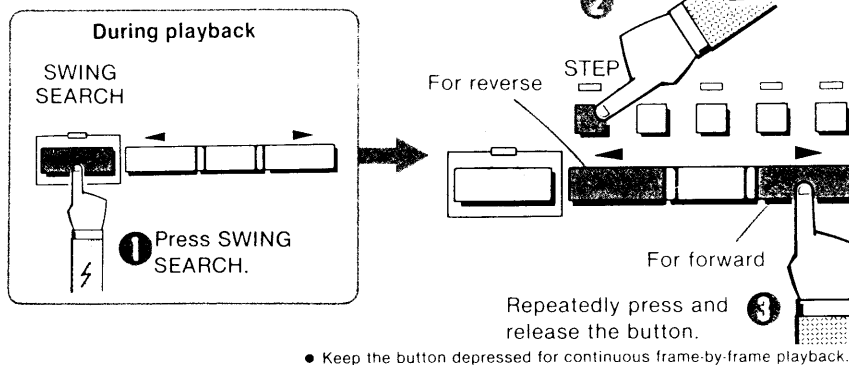
If a vertical jitter appears in the freeze, frame-by-frame or slow motion picture.



Obtain a freeze picture and adjust the TV VERT LOCK control at the rear of the recorder for the best possible picture. Then return the recorder to the previous mode.

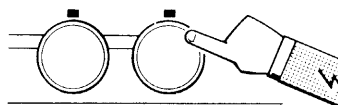
- Once you adjust this control, you do not have to adjust it again unless you change the connected TV receiver.

### FRAME-BY-FRAME PLAYBACK

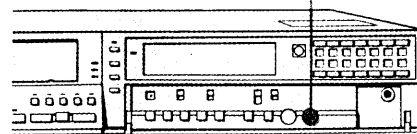


To remove the noise band in the freeze, frame-by-frame or slow motion picture.

### TRACKING SLOW MOTION

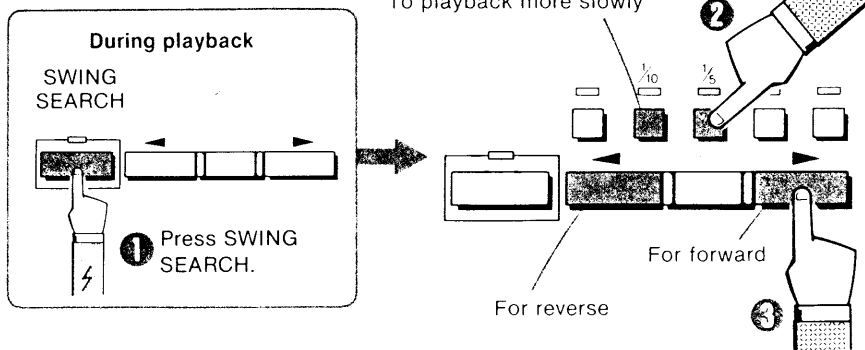


Obtain a slow motion picture and adjust the control. Return the recorder to the previous mode or continue in slow motion.

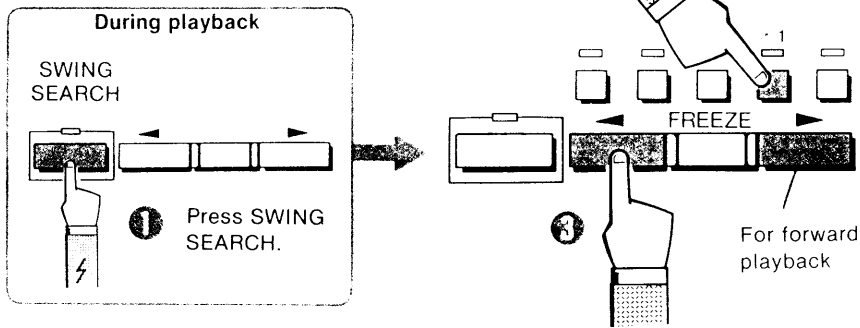


- Return the control to its original (dotted) position after the playback.

### SLOW MOTION

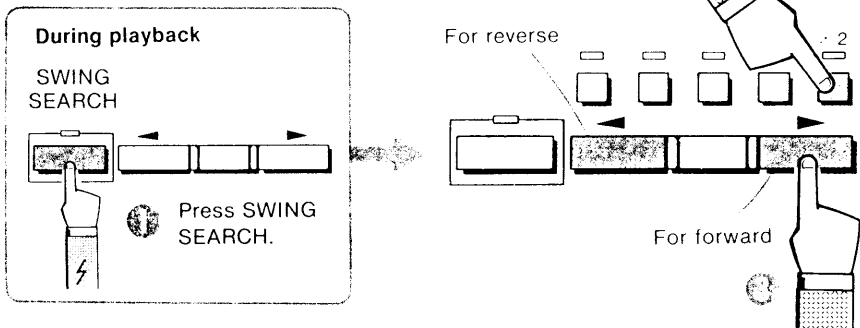


REVERSE PLAYBACK

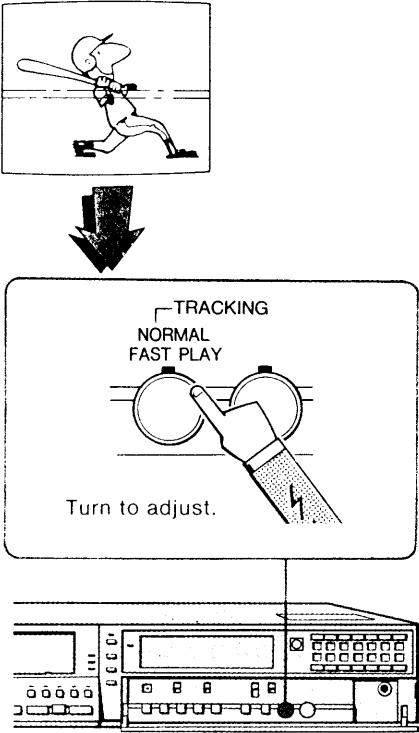


• The sound cannot be heard.

DOUBLE SPEED PICTURE



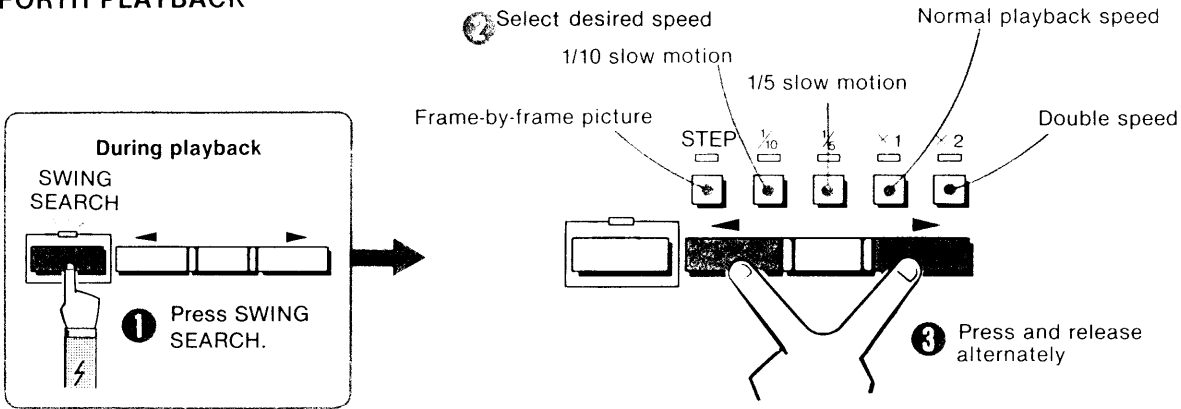
To remove the noise band in the reverse normal speed or the forward double speed picture



• The noise band in the reverse double speed picture cannot be removed.

Return the control to its original (dotted) position after the reverse normal speed or the forward double speed viewing.

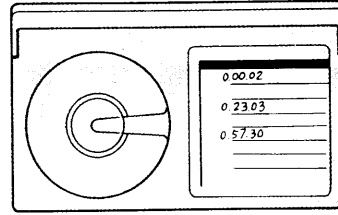
BACK AND FORTH PLAYBACK



## TO LOCATE A PARTICULAR SCENE

### To reference a recorded program numerically → TIME COUNTER

When the CLOCK/COUNTER selector is set to COUNTER, the display works as a time counter indicating how much the tape has advanced at normal speed in hours, minutes and seconds. Press the COUNTER RESET button to set the counter to "0H00M00s" before recording or playback. By noting the counter reading at a particular point, you can easily find that point later by referring to the time counter. When the tape runs in reverse from "0H00M00s", a minus sign "-" will be displayed to the left of the figures.



Write the counter readings you want to remember on the label of the cassette.

The counter reading is automatically reset to zero when the power is turned off.

During the time the power is turned off, the display shows the present time, regardless of the setting of the CLOCK/COUNTER selector.

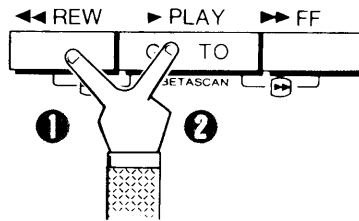
The time counter does not operate with brand-new tapes.

The time counter counts the CTL signals during playback or fast winding which are recorded on a tape at the same time the video signals are recorded, and the CTL signals being recorded during recording.

Because brand-new tapes have no CTL signals recorded on them, the time counter cannot operate with these tapes in playback, fast forward or rewind mode.

### To play from the beginning of the tape after rewinding → AUTO PLAY

Press the ► PLAY button while holding the ◀◀ REW button depressed while rewinding or in the stop mode. After the tape is completely rewound, it will automatically be played back.

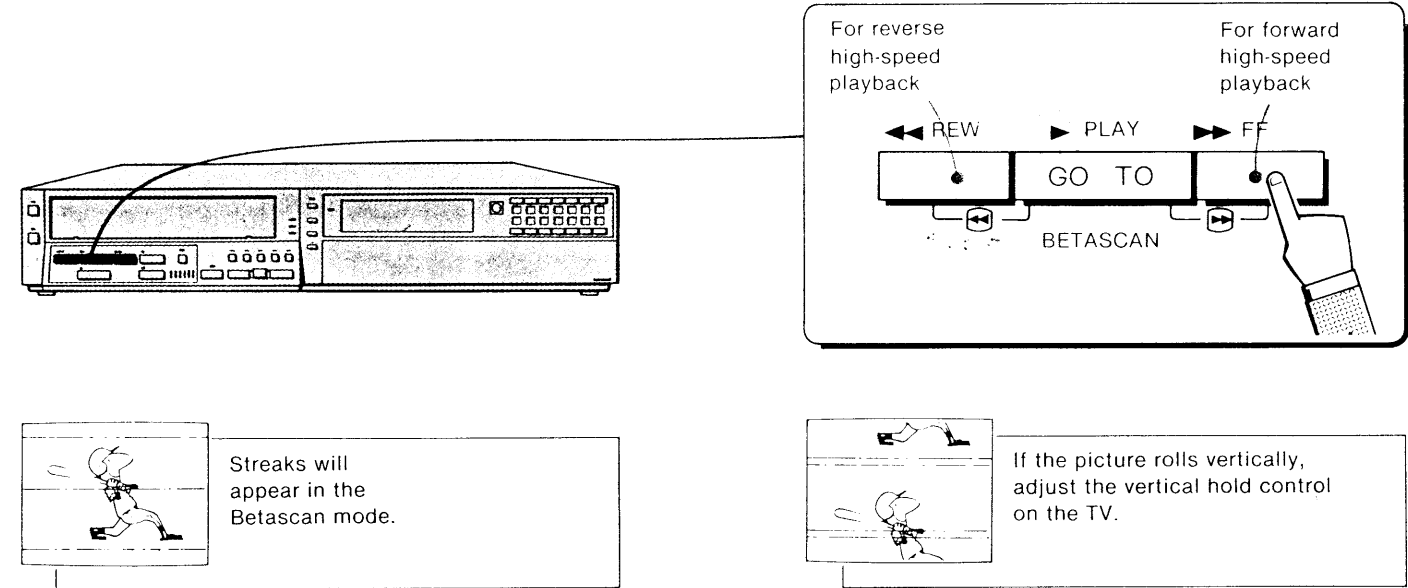


\* This operation cannot be done by the remote control



**To visually search for a particular point → BETASCAN**

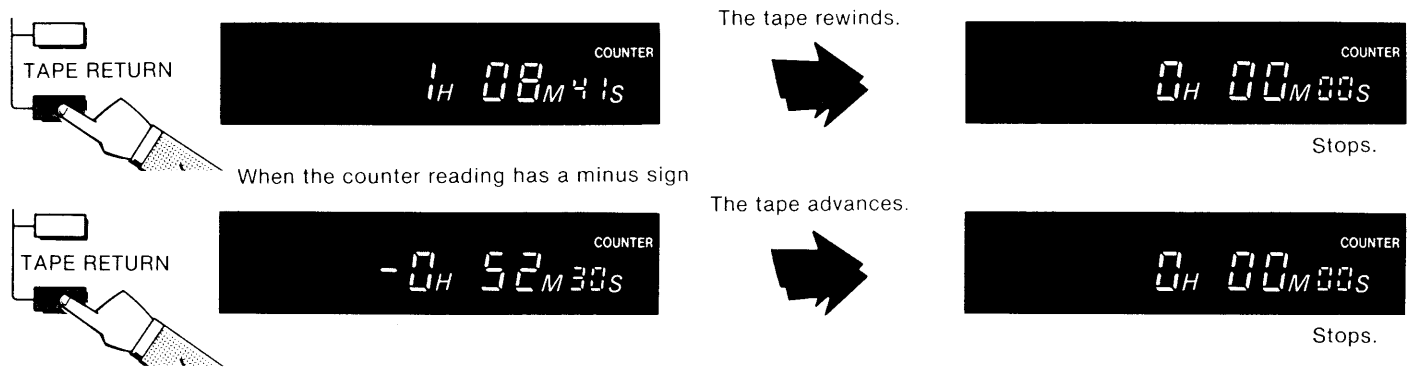
Press the ►► FF or ◀◀ REW button during playback.  
While the button is depressed, a high-speed playback picture in the forward or reverse direction can be seen.  
Release the button for normal playback.



- If you press and release the ►► FF or ◀◀ REW button repeatedly for a short time, the protection circuit may be activated and the tape will stop.

**To return to a pre-registered point → TAPE RETURN**

During recording or playback, press the COUNTER RESET button at the point you later want to locate.  
When the recording or playback is finished, stop the tape by pressing the ■ STOP button, then press the TAPE RETURN button. The tape will rewind or advance to the point where the COUNTER RESET button was pressed.



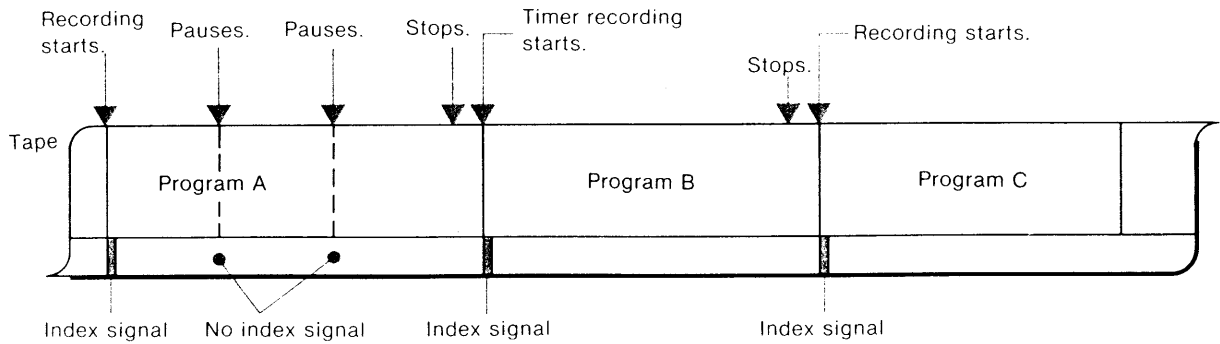
- The tape may stop a few seconds before or after 0H00M00S.

## To play from the start of a desired program → INDEX

The index function locates the program selection you desire and plays back the selection automatically.

The index function operates by ...

detecting the index signals which are automatically recorded on the tape when the ● REC button is pressed or when timer recording begins.



### Notes

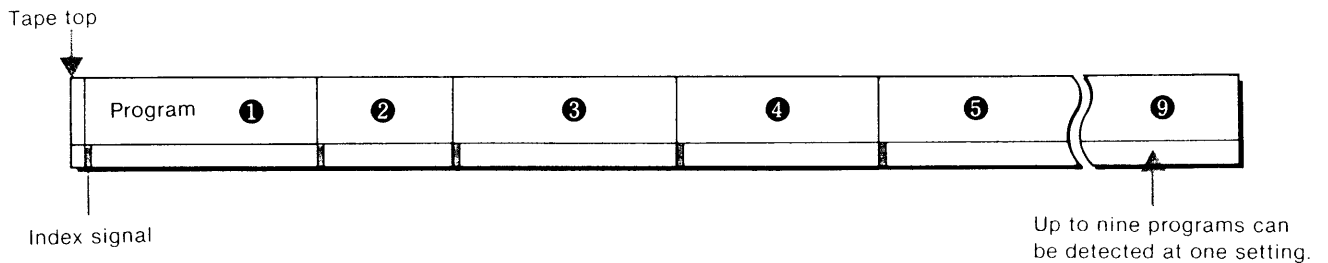
- There must be at least one minute of tape at normal playback speed between the index signal and the present point on the tape and between index signals. If the index signals are closer than one minute, the recorder cannot detect the signal and your program cannot be located.

- The index function operates with any tape recorded on machine with an index function, such as the Sony SL-5600 SL-5800.

How to actuate the mechanism ..... There are two ways.

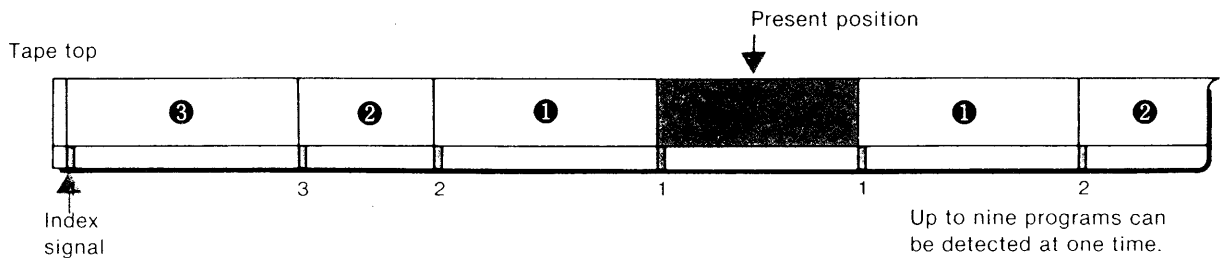
#### Method 1

You number each program on the tape from the beginning in sequence and find your desired program by designating the number.



#### Method 2

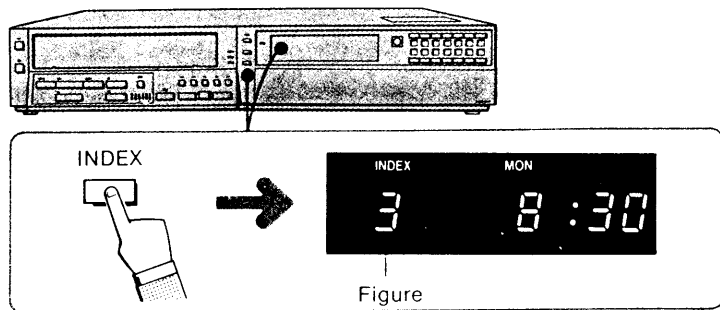
You number each program on the tape from the present position in sequence and find your program by designating the number.



## Method 1

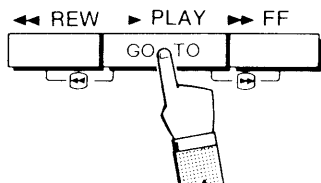
### Operation

- 1 Turn on the recorder and insert a recorded cassette.
- 2 Press the INDEX button so that the number of your desired program appears on the left of the time display.  
For example, if you want to locate the 3rd program, press the INDEX button three times. The figure "3" will appear.



Each time you press the INDEX button, the number in the time display will increase by 1, up to "9". If you press the button when "9" is displayed, "9" will disappear and the index function will not operate.

- 3 Press the ► PLAY button.



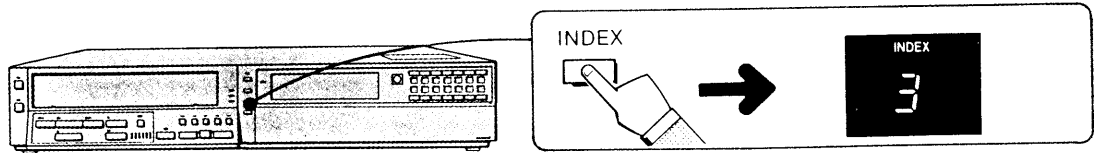
The tape will be rewound to the beginning and will run in the fast forward mode to the start point of your desired program. Then playback of the program will start automatically. During the fast forward operation, the figure number increases by one when an index signal is detected. When the figure becomes the one that you have selected, the playback starts.

**Method 2**

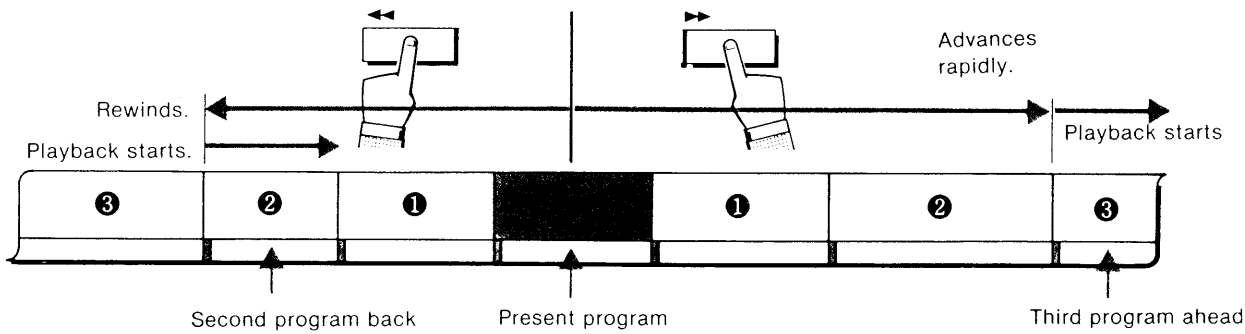
**Operation**

- ❶ Stop the tape by pressing the ■ STOP button.
- ❷ Press the INDEX button so that the number of your desired program appears on the left of the time counter.

Count how many index signals separate the beginning of the program you want to play from the program you are listening to and press the INDEX button that many times. For instance, to locate the second program ahead, two index signals will have to be detected, but to locate the second program back, three index signals will have to be detected.



- ❸ When locating the program ahead, press the ►► FF button. When locating the program back, such as in case of above example, press the ◄◄ REW button. The fast forward or rewind operation starts and the playback will begin from the top of your desired program.



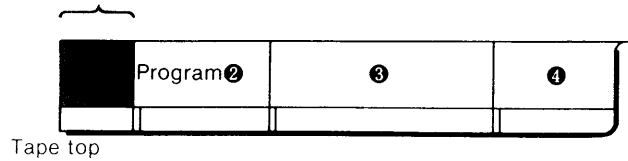
**Note**  
The index mechanism functions only in the stop mode.

**When the desired program cannot be played back with the index function, check the followings.**

- Is there a blank space of over one minute at the very beginning of the tape? If so, the first program will be counted as program number two.

- Is there a program of less than one minute? Such a program will not be counted as one program.
- Have you performed the index operation within one minute before or after an index signal? In this case, the first index signal to be detected cannot be counted.

Blank of more than one minute



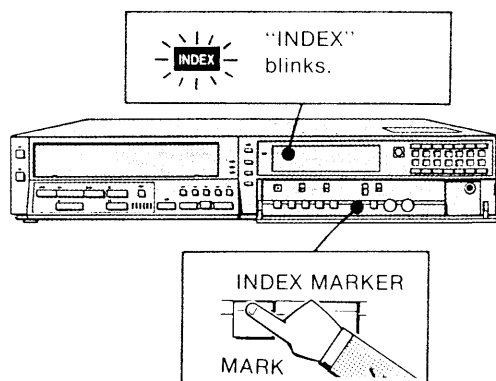
### To insert an index signal on a recorded tape

The index signal is automatically recorded on the tape when the

- REC button is pressed or when timer recording begins.

If two programs have been recorded without interruption, no index signal will be recorded between the programs so the beginning of the second program cannot be located. In this case, you can insert an index signal on the tape.

- ① Play the tape back.
- ② At the point where an index signal is to be recorded, press the INDEX MARKER/MARK button in the front compartment.

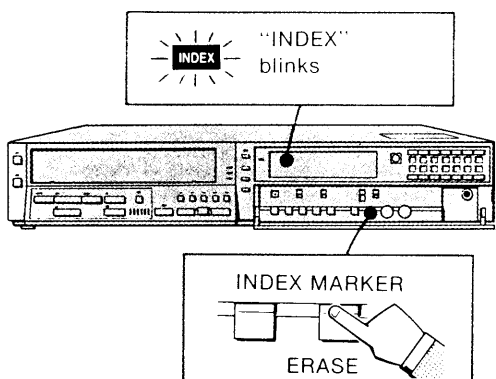


An index signal will be recorded when the button is pressed. The playback sound will be muted for about 10 seconds after the index signal has been recorded but the recording will not be affected.

**Note:** Do not insert an index signal less than 10 seconds before the tape speed (⏮ or ⏭) has been changed, or the inserted index signal may not be changed.

### To erase an index signal

- ① Stop the tape by pressing the ■ STOP button.
- ② Count the number of index signals from the top of the tape to the signal you want to erase and set that number on the left side of the time display with the INDEX button.
- ③ Press the INDEX MARKER/ERASE button.



The tape will be rewound or advanced rapidly to the index signal to be erased and playback will begin. The index signal will be erased and the tape will stop after about one minute. During erasing, the sound will be muted but the recording will not be affected.

### To prevent accidental erasure of the index signal

Locate the position of the index signal to be erased by the method 1 index function, make sure that the position is the right place and then proceed with the above operations.

**Note:** Index signals recorded on another video cassette recorder may not be erased.

## HOW TO RECORD WITH SMOOTHER TRANSITIONS BETWEEN SCENES

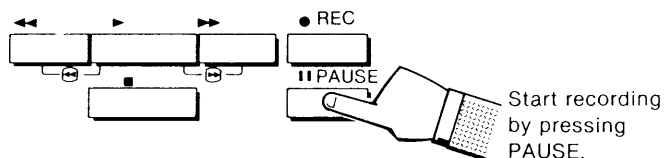
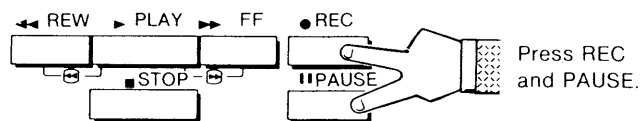
For a smooth transition between scenes, always start recording when the recorder is in the recording pause mode. Even if you use the ■ STOP button to stop recording or if you turn off the recorder, picture transition will be smoother if you start recording after first setting the recorder to the recording pause mode.

### When recording with a camera

The recorder will automatically enter the recording pause mode when the REC and PLAY buttons are pressed so that the transition between scenes will be smooth.

### When recording TV programs

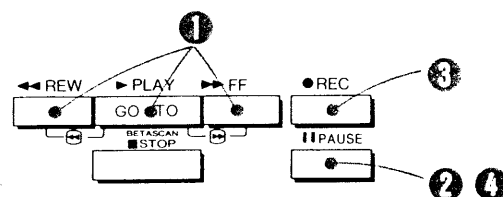
Press the REC and PAUSE buttons to set the recorder in the recording pause mode. When you want to start recording, press the PAUSE button again. Recording will start and the picture transition will be smooth.



## TO START RECORDING FROM A PARTICULAR POINT

You can start recording from any desired point by searching for that point using the Betascan (→page 17) and Swing Search (→page 14) functions.

- 1 Search for the point where you wish to start recording on the tape using the Betascan function.
- 2 Stop the tape at the point where you wish to start recording the next scene by pressing the PAUSE button. You will find it convenient to search for the point precisely using the slow motion playback.
- 3 Press the REC button. The recorder will enter the record pause mode.
- 4 Press the PAUSE button. Recording will start.



### Why is picture transition smoother when recording is started from the recording pause mode?

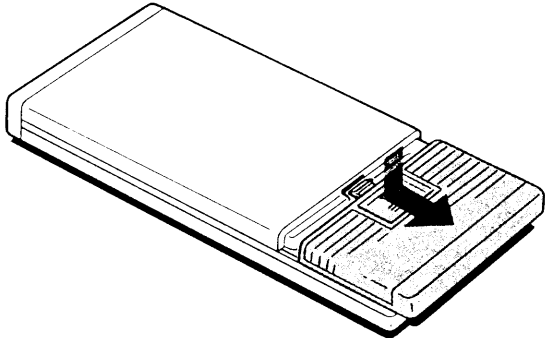
When the recorder enters the recording pause mode, the tape will be automatically rewound for about 0.5 second, then stop. When the pause mode is released to start recording, the tape runs in the playback mode to synchronize the segment to be recorded next with the last segment recorded. When the tape reaches the point where the recorder entered the recording pause mode, recording starts.

# REMOTE CONTROL OPERATION

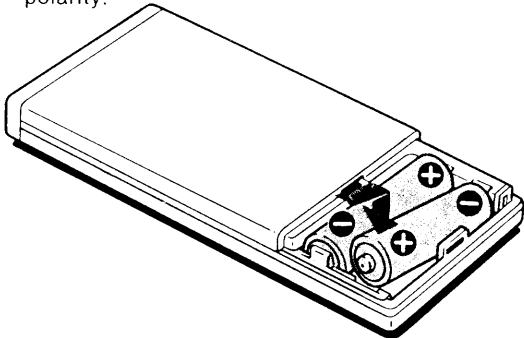
You can control almost all the functions of the SL-2500 video cassette recorder from you armchair using the supplied remote control unit.

## BATTERY INSERTION

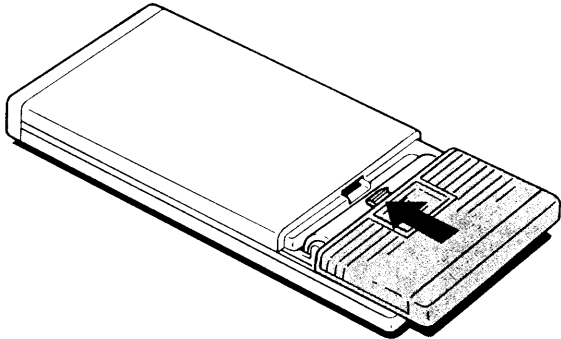
1 Open the lid.



2 Insert two size AA batteries (IEC designation R6) with correct polarity.



3 Close the lid firmly.



### Battery life

In normal operation, batteries will last for about six months. If the range of the remote control unit becomes noticeably shorter, replace the batteries with new ones. When the batteries are exhausted, the output indicator will not light when the buttons on the control unit are pressed.

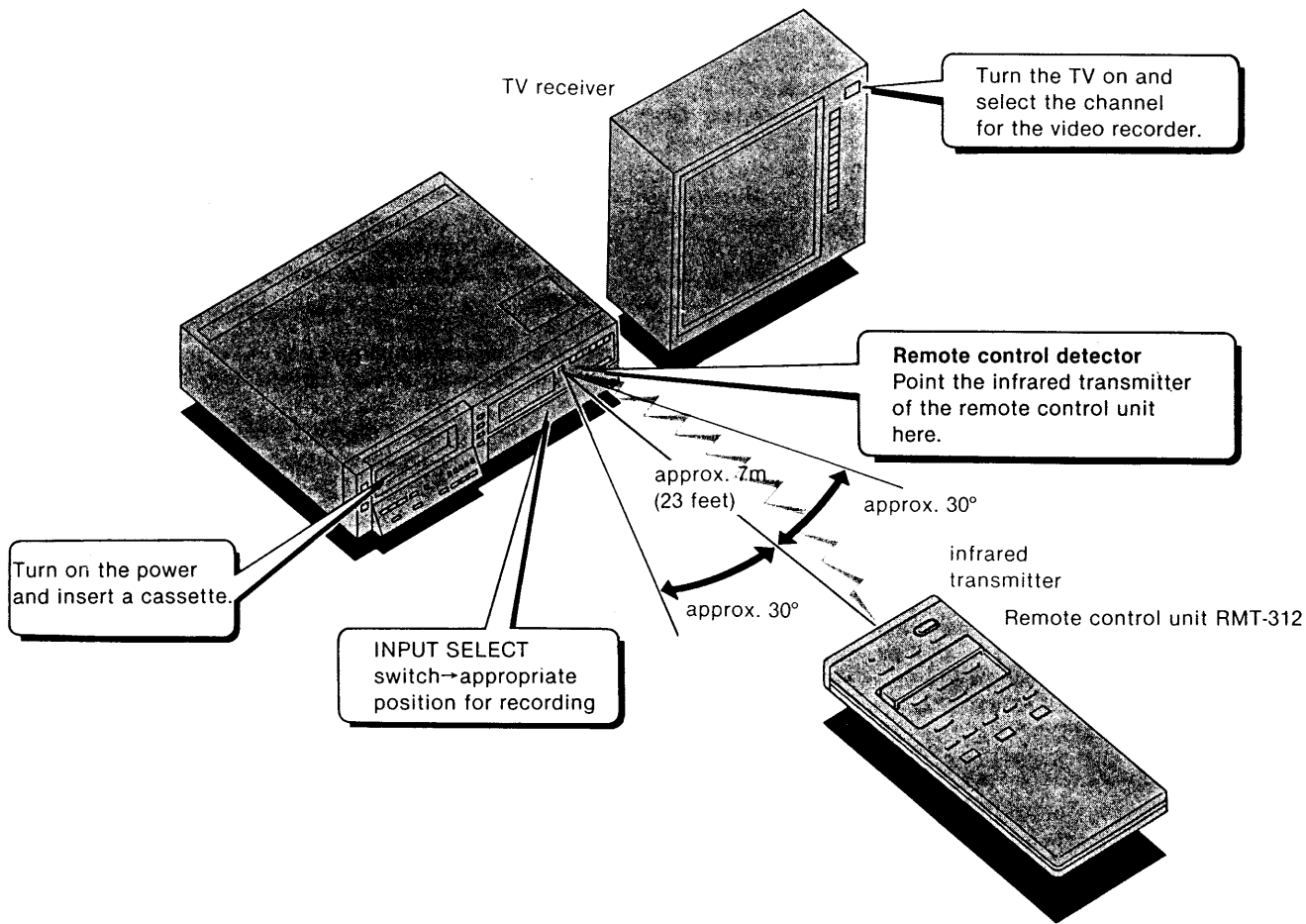
If the remote control unit is not to be used for a long period of time, remove the batteries to avoid possible damage from battery leakage.

### Notes on the remote control unit

- Avoid dropping foreign objects into the cabinet, particularly when replacing batteries.
- Keep the unit away from extremely hot or humid places.
- Avoid mechanical shock to the unit.
- This remote control unit may be used only with the SL-2500 video cassette recorder.

HOW TO USE THE REMOTE CONTROL UNIT

Preparation



Notes

- There should be no obstacles between the remote control unit and the remote control detector of the recorder.
- The shorter the distance between the remote control unit and the recorder, the wider the angle within which the recorder can be controlled.



Recording

**Remote function indicator**  
Lights up when any of the buttons on the remote control unit are pressed.

**VTR button**  
Functions in the same way as the PROGRAM SELECT button on the recorder.  
The ON-VTR lamp will indicate the selected mode.

**STOP button**  
Press to stop recording.

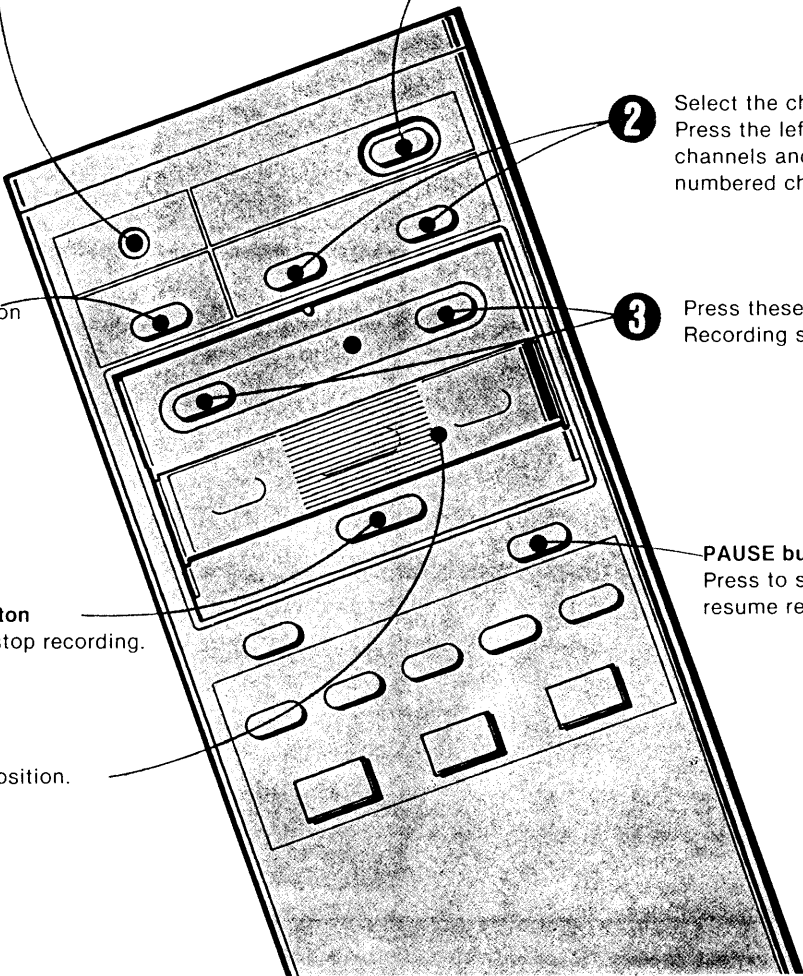
**POWER switch**  
Press to turn the power on. (To turn it off, press again.)

**2** Select the channel  
Press the left button for lower-numbered channels and the right button for higher-numbered channels.

**3** Press these two buttons simultaneously.  
Recording starts.

**PAUSE button**  
Press to stop the tape momentarily. To resume recording, press again.

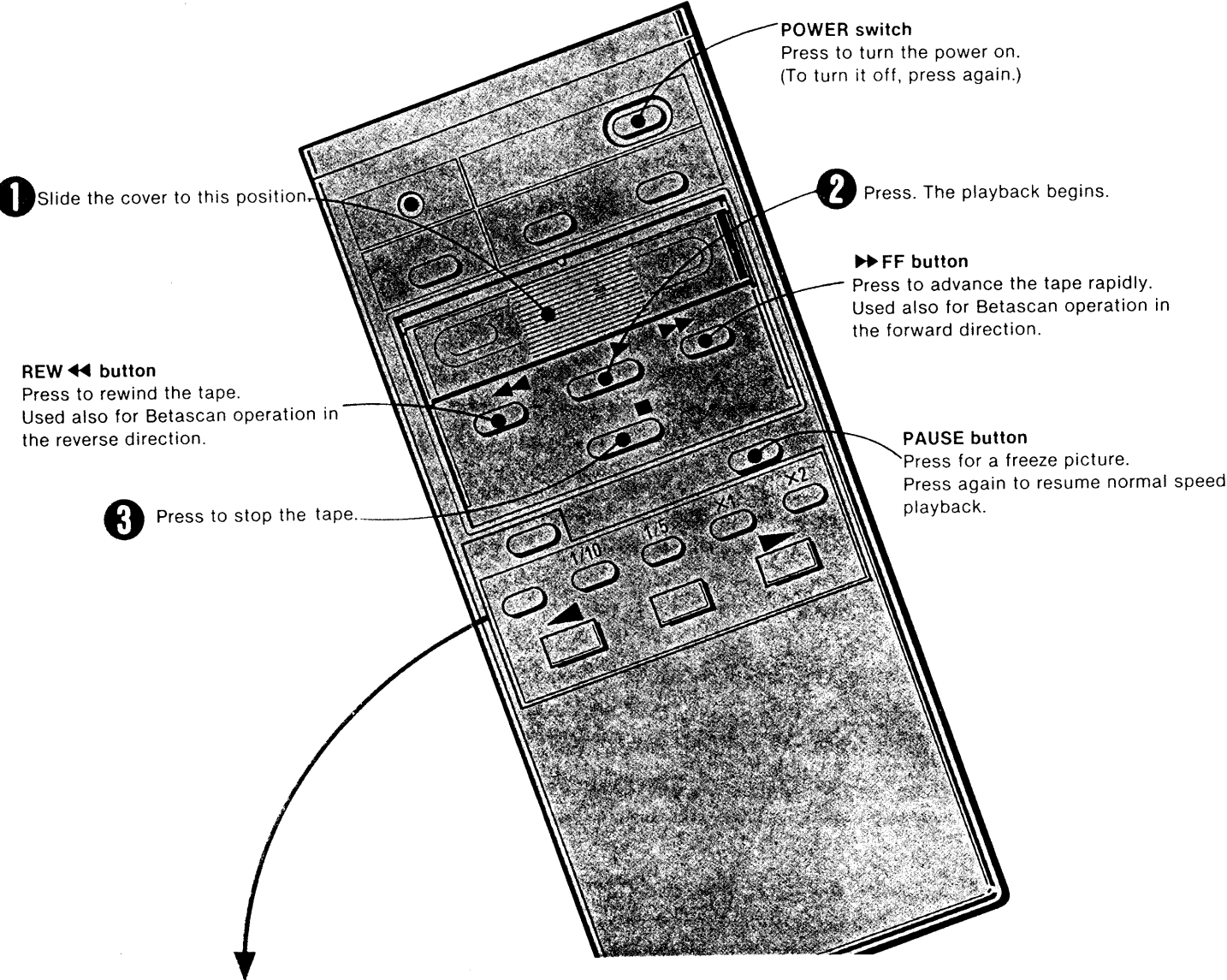
**1** Slide the cover to this position.



- The unused channels can be skipped during channel selection with the remote control unit if you have cleared the memory of these channels as described in "Clearing unused channels" on page 9 of the accompanying "SET-UP GUIDE".
- Recording will start immediately when the RECORD buttons on the remote control unit are pressed, even if a camera is connected to the recorder.

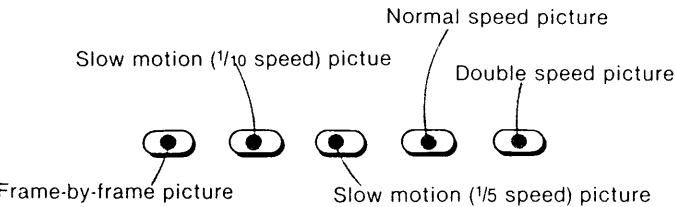
Playback

The buttons on the remote control unit perform the same function as the corresponding buttons on the video recorder.

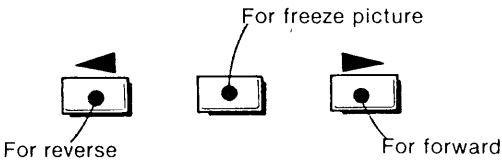


To see the playback picture at various speeds

- 1 Press the SWING SEARCH button during playback.
- 2 Select the playback speed.



- 3 Select the playback direction.

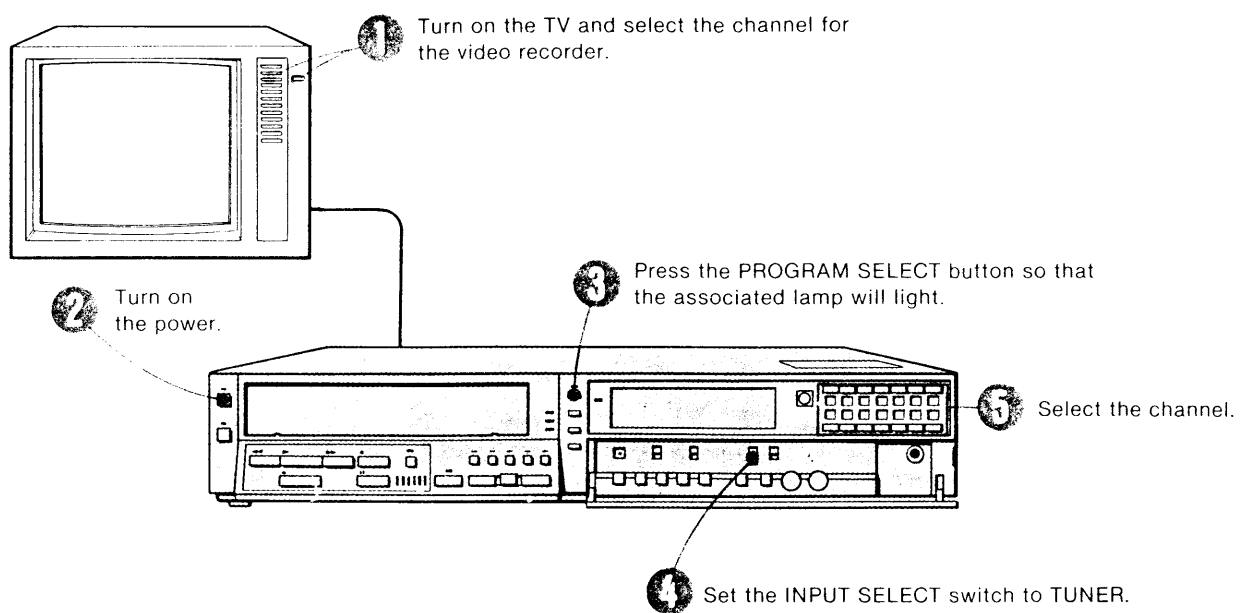


- For frame-by-frame playback, press and release the ◀ or ▶ button repeatedly. Keep the button depressed for continuous frame-by-frame playback.
- Back and forth playback is also possible in the same way as with the buttons on the recorder.

To resume normal playback, press the PLAY ► button.

## WATCHING TELEVISION

You can watch television in the usual way when recorder is turned off. You will find it convenient to use the recorder to remotely control TV channel selection.



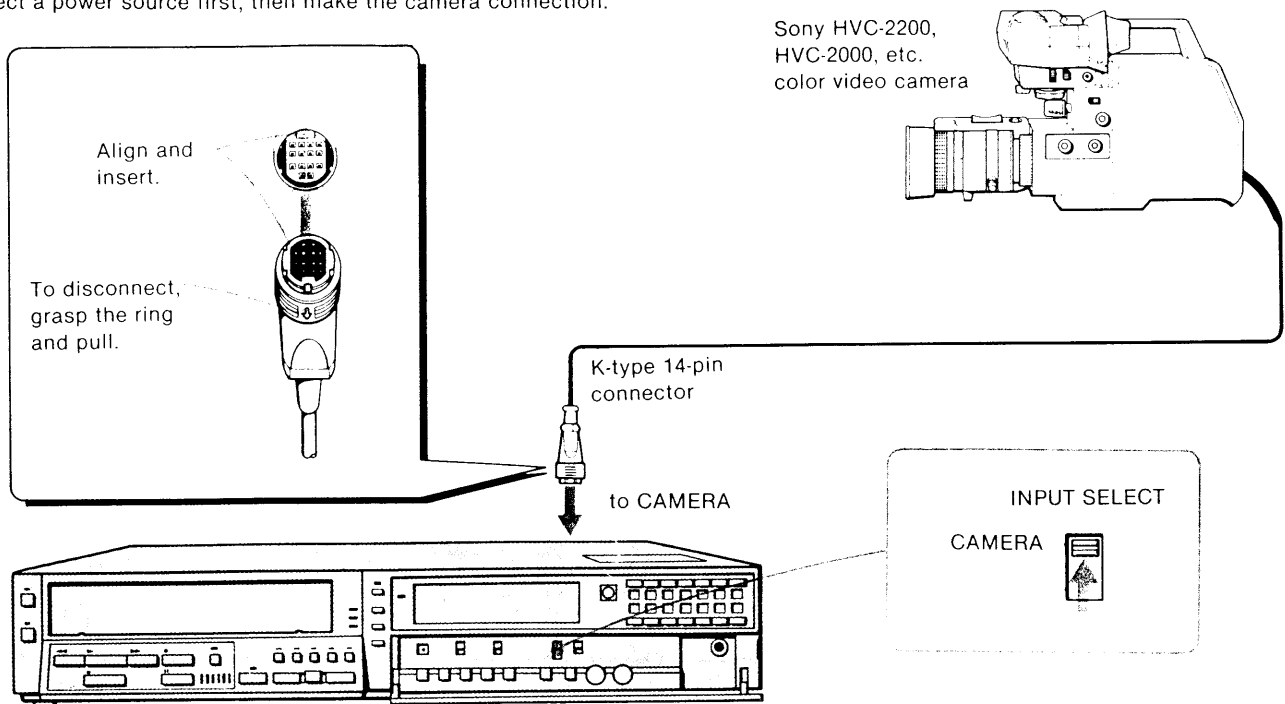
Channel selection is even easier when you use the supplied remote control unit.

# CAMERA RECORDING .....To produce your own programs

## CONNECTIONS

- The camera must conform to American TV (EIA) standards.

Connect a power source first, then make the camera connection.



**To connect a camera which is not equipped with a K-type 14-pin connector**

Use an ac adaptor. Connect the video output of the ac adaptor to the VIDEO/PCM IN jack of the recorder and the audio input of the ac adaptor to the AUDIO IN jack or the MIC jack of the recorder depending on the audio output level of the ac adaptor.

Set the INPUT SELECT switch to LINE/PCM.

**Note:**

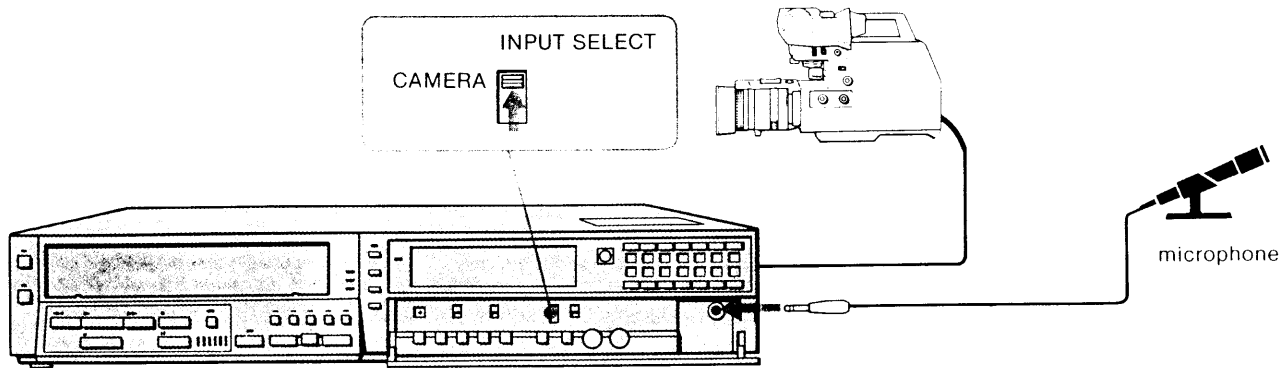
If you want to use a camera not recommended in this manual, make sure that the power requirement of the camera is DC 12V and power consumption is under 10W. Otherwise, the video cassette recorder will be damaged.

**To record the sound from an external microphone**

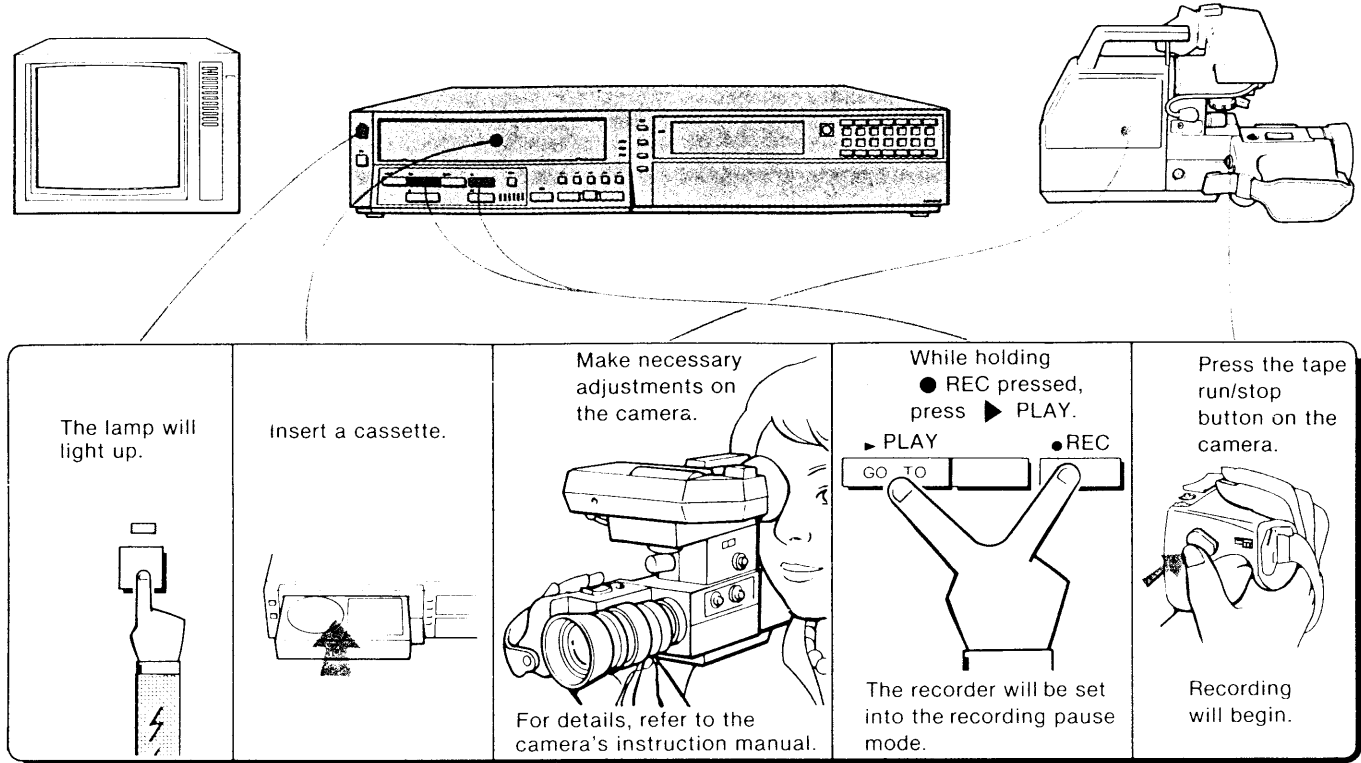
Plug a microphone into the MIC jack on the recorder. The microphone built into the camera will be disconnected automatically.

- If the microphone has a phone plug, use a plug adaptor such as the Sony PC-1A (optional).
- When a microphone is connected to the recorder, the sound from the camera is disconnected.

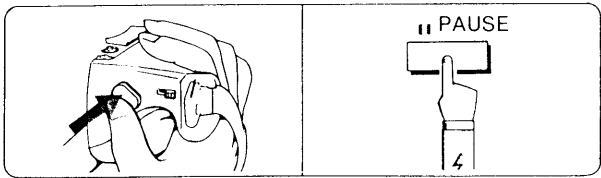
Do not move the INPUT SELECT switch during recording or playback when using a Sony HVC-2000 or HVC-2200 video camera. If you do, the recorder will be set into the pause mode. When the recorder stops, turn the power off and turn it on again.



OPERATING PROCEDURE



**To momentarily stop the recording**  
Press the tape run/stop button on the camera or the PAUSE button on the recorder. To restart the recording, press the same button again.



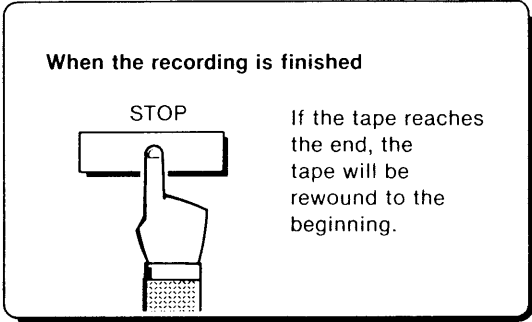
**Automatic release:** to protect the video heads and the tape, the pause mode will be automatically released after about 8 minutes. The recorder will revert to the record mode.

TO MONITOR THE PICTURE BEING RECORDED WITH A CAMERA

Turn on the TV, select the channel for the video recorder and press the PROGRAM SELECT button on the recorder to light up the associated lamp.

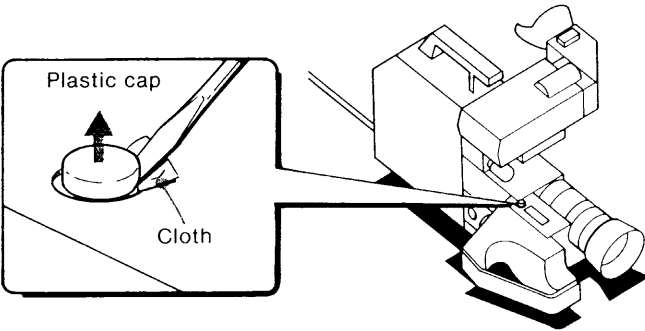
RECORDING REVIEW

**When a camera having a recording review function, such as the HVC-2200\*, is used**  
Press the recording review button in the recording pause mode. The last few seconds of recorded scene will be played back immediately so that you can check whether the recording has been made correctly.



The recorder will then enter the recording pause mode at the point where the recording review button was pressed. To continue recording, press the tape run/stop button on the camera.

**\* For customers who have a HVC-2200 camera**  
The small projection located near the zoom button is a recording review button. If this button is covered with a plastic cap, carefully peel off the cover over the button with a screwdriver or similar object.



**Caution:**  
Make sure that the plastic cap has not already been removed, and inadvertently attempt to pry up the button itself.

# DUBBING AUDIO

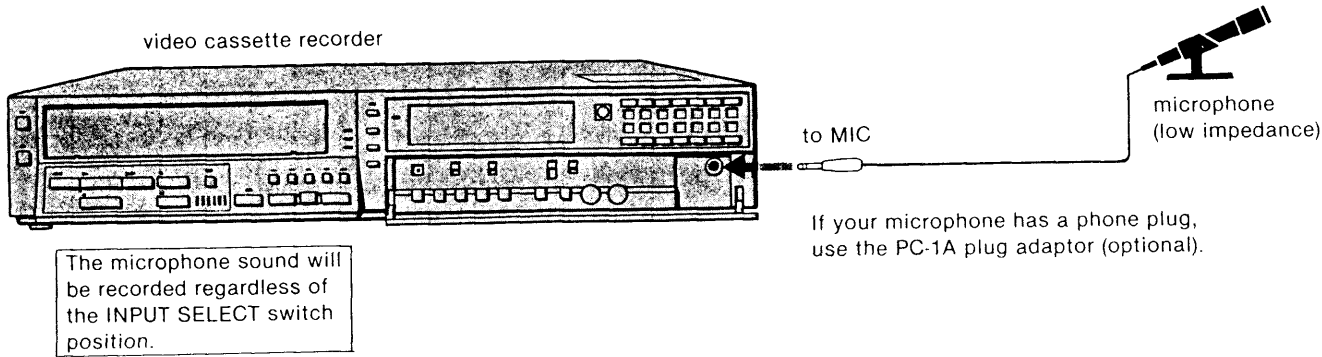
You can record a music or commentary track on any recorded tape.  
You can dub the audio while watching the recorded picture.

### Notes

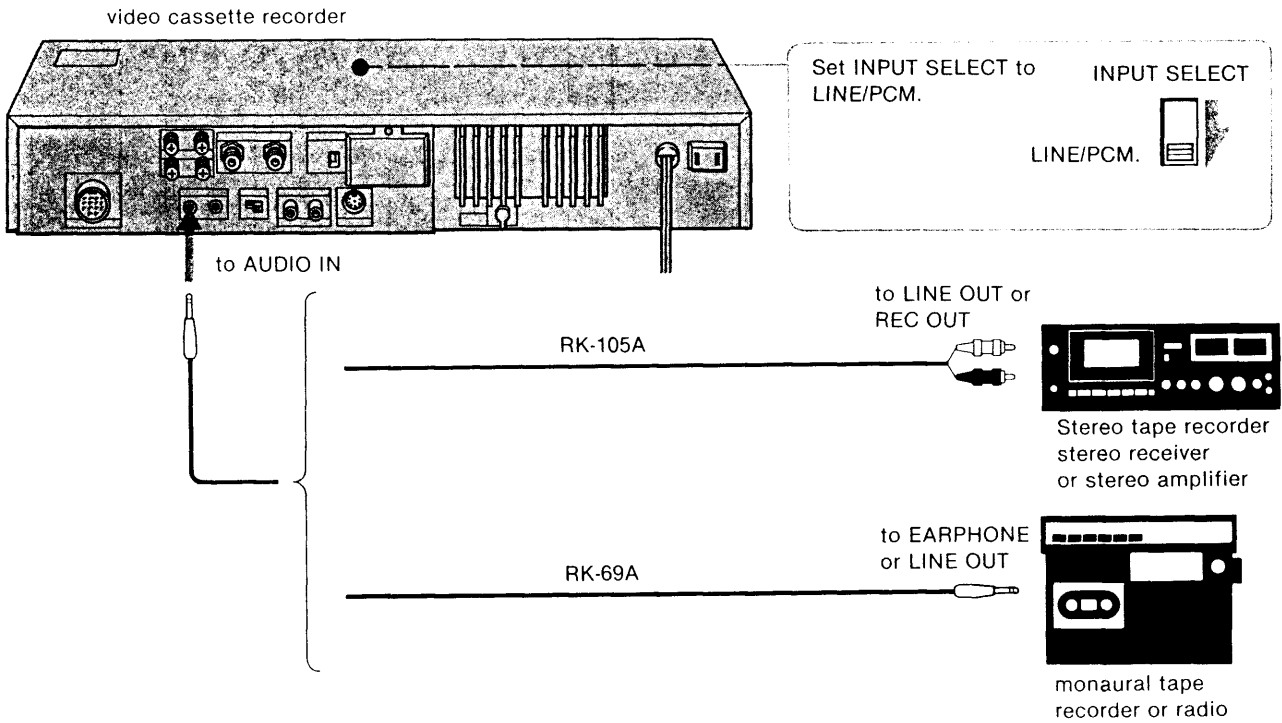
- When a new sound track is recorded, the previously-recorded sound track will be erased, but the picture will remain.
- Audio dubbing cannot be done on a blank tape.

## CONNECTIONS

To record microphone sound

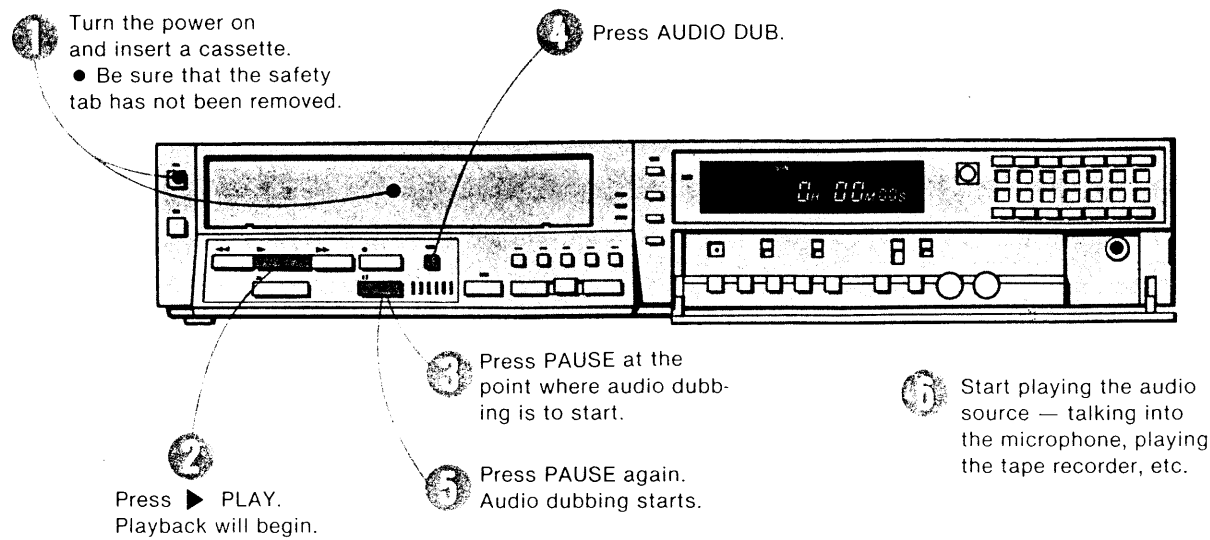


To record from an audio equipment



## How to dub

First, decide at which point on the tape you will start audio dubbing and make the necessary preparations for playing the audio source.



To stop dubbing, press ■ STOP button.  
To stop the tape momentarily during dubbing, press the PAUSE button.  
• When the audio dubbing is done on a tape recorded in the **BI** mode, the sound quality may be degraded.

**If a whistle-like sound is heard during microphone recording**  
Stop pointing the microphone in the direction of the TV or turn the TV volume down.

**To record from the beginning of the tape**  
While pressing the AUDIO DUB button, press the ► PLAY button.  
Audio recording and picture playback will start immediately.

## AUTOMATIC CASSETTE CHANGE

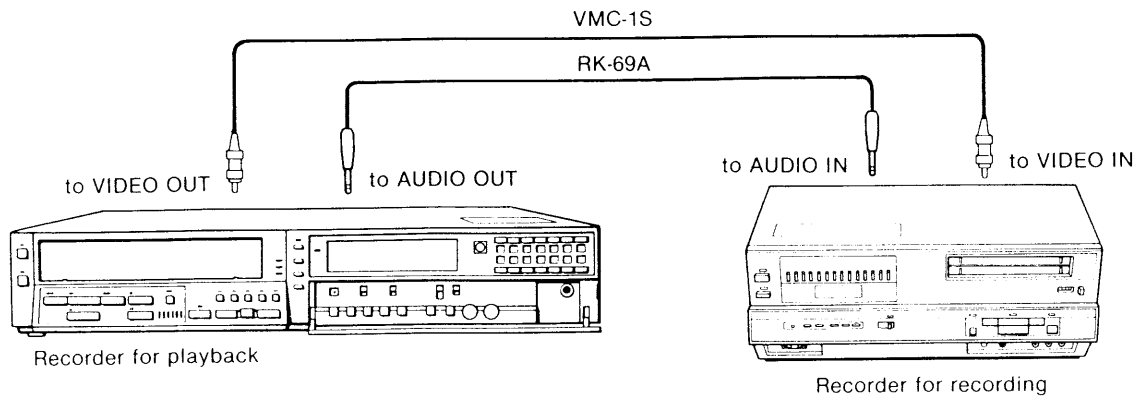
By using the optional Sony AG-400 cassette auto changer available in the near future, up to four cassettes can be recorded, played back or rewound automatically.  
Using the timer built into the recorder, you can record a long programme on four consecutive cassettes or four different programmes on four separate cassettes, all without your being there.

## TAPE COPY

To duplicate a tape, you will need two video recorders; one is to play back the original tape and the other is to record.

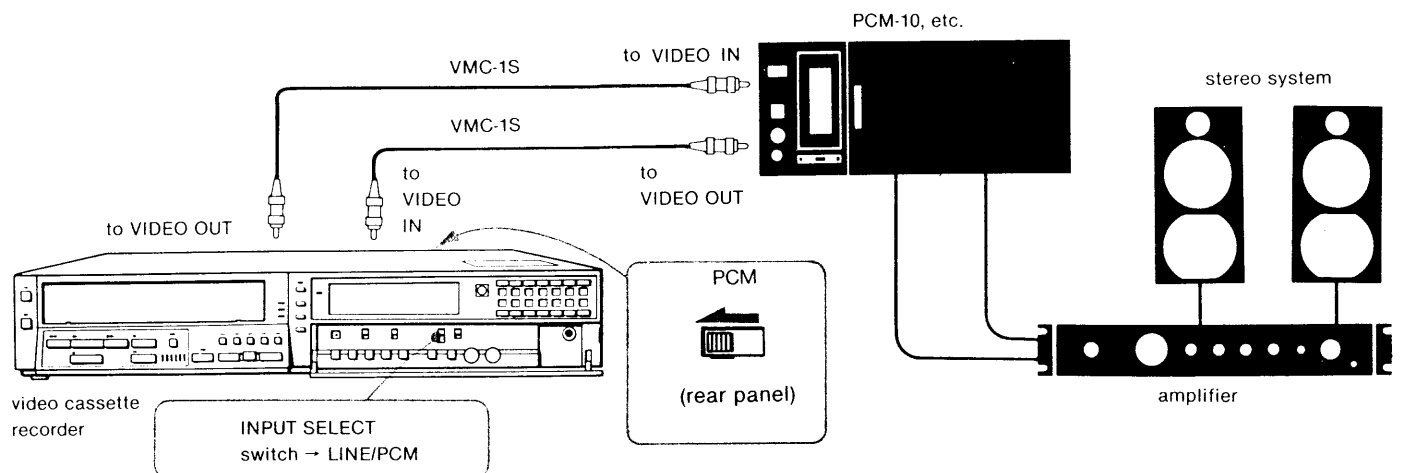
- ① Connect the recorders as illustrated.
- ② Turn on both recorders.
- ③ Insert the original cassette into the recorder for playback.

- ④ Insert a blank cassette into the recorder for recording.
- ⑤ Set the INPUT SELECT switch of the recorder for recording to LINE/PCM.
- ⑥ Set the recorder for playback into the playback mode.
- ⑦ Set the recorder for recording into the record mode.



## PCM RECORDING AND PLAYBACK

By connecting a PCM digital audio processor (Sony PCM-10, etc.) you can enjoy hi-fi sound reproduction with a wide dynamic range, minimal distortion and a flat frequency response.



- For optimum results, use a video cassette with a model number L-500 or less (L-250, L-125, etc.) and set the RECORD MODE selector to **II**.
- For details, refer to the instruction manual furnished with the digital audio processor.



## HOW IS THE PICTURE ON THE SCREEN?

Noisy picture ...

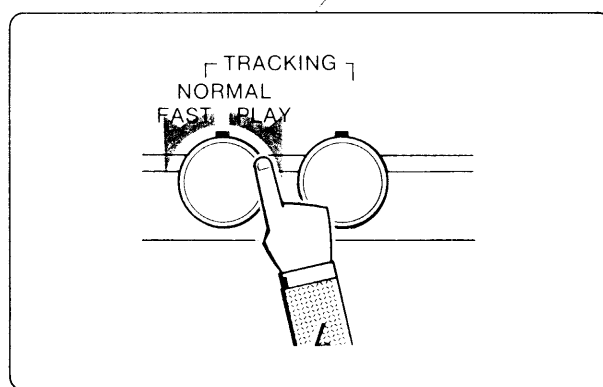
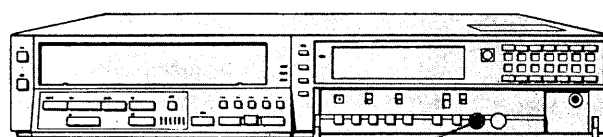


The video heads may become contaminated.  
Clean the video heads with the L-25CL video head cleaning cassette (optional). For details about cleaning, refer to the instructions furnished with the cleaning cassette.

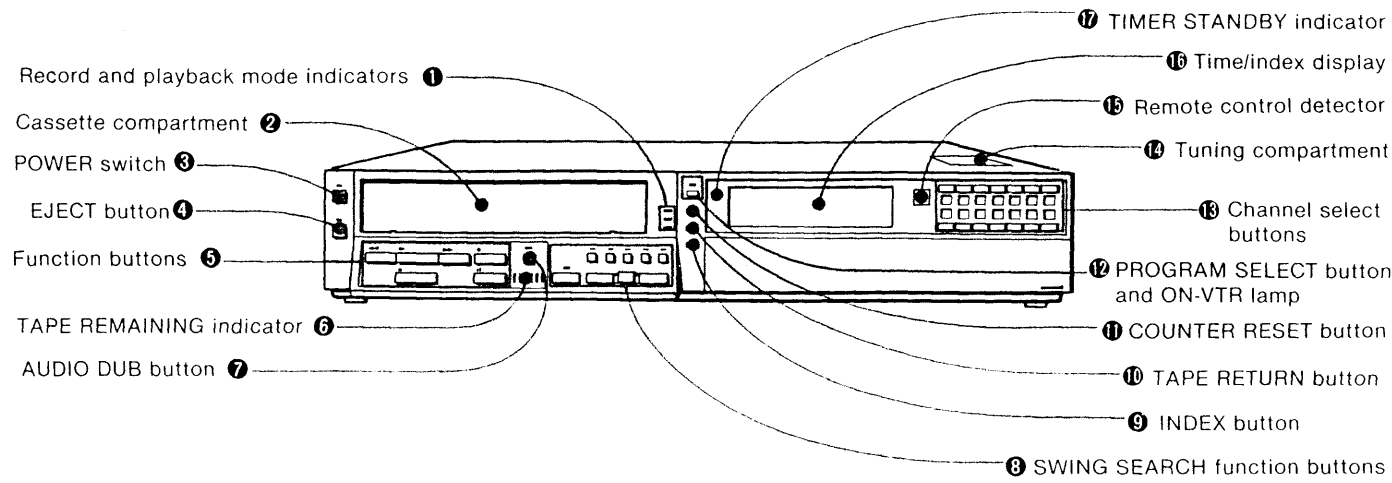
Streaks or snow appears ...



Has the tape been recorded on another video cassette recorder?  
If so, open the front compartment and adjust the NORMAL/FAST PLAY TRACKING control for the best possible picture.  
Return the control to the center position after viewing a tape recorded on another machine.



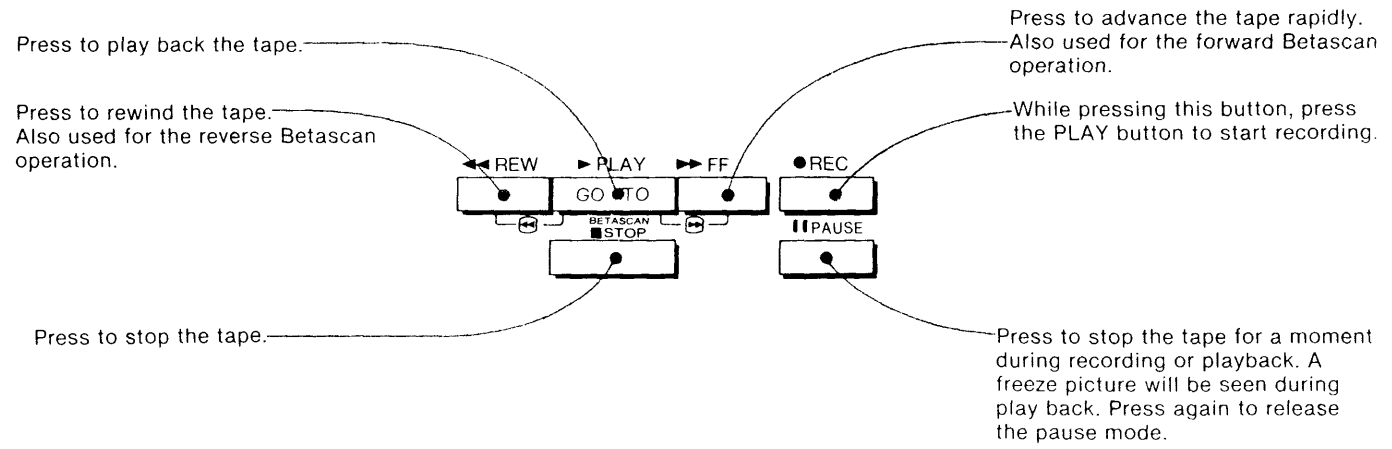
# LOCATION AND FUNCTION OF CONTROLS



- 1 Record and playback mode indicators**  
The lamp corresponding to the engaged record or playback mode lights up.
- 2 Cassette compartment**  
Insert a cassette to be recorded or played back after turning on the recorder.

- 3 POWER switch**  
Press to turn the power on. The lamp lights up. To turn the unit off, press the switch again. The timer section will continue to operate and the time will be displayed even if the POWER switch is off as long as the ac power cord is plugged into a working outlet.
- 4 EJECT button**  
Press to remove a cassette. This button does not function when the recorder is turned off.

## 5 Function buttons



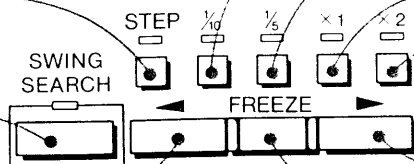
- 6 TAPE REMAINING indicator**  
Shows the amount of tape remaining.
- 7 AUDIO DUB button**  
Use this button to dub audio onto a previously recorded tape.

### 8 SWING SEARCH function buttons

Press to obtain a frame-by-frame picture.

Press this button during playback to activate the SWING SEARCH function. The lamp will light up. After pressing this button, select the playback speed and the tape direction.

Press for playback in the reverse direction.



Press to obtain a slow-motion (1/10 speed) picture.

Press to obtain a slow-motion (1/5 speed) picture.

Press to obtain a normal speed picture.

Press to obtain a double-speed picture.

Press for playback in the forward direction.

Press to obtain a freeze picture.

### 9 INDEX button

Press to activate the index function and set the number of the recorded program you want to view. The selected number will be displayed on the time/index display.

### 10 TAPE RETURN button

Press this button in the stop mode to return the tape to the "0H00M00s" point on the time counter.

### 11 COUNTER RESET button

Press to set the time counter reading to "0H00M00s".

### 12 PROGRAM SELECT button and ON-VTR lamp

To view a TV program selected by a channel select button on the recorder or to monitor the picture being recorded, press this button so that the ON-VTR lamp lights up. When the ► PLAY button on the recorder is pressed, the unit is automatically set in this mode. To view a TV program in the usual manner, press this switch so that the lamp goes off. When the recorder is turned off, the recorder is automatically set in this mode.

### 13 Channel select buttons

Press the button of the channel to be recorded or to be viewed. The selected channel number will light.

### 14 Tuning compartment

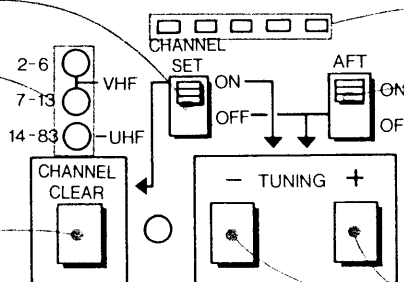
All the switches and buttons for channel presetting are in this compartment.

Set to ON to preset a channel.

Normally set this switch to OFF (the switch will be automatically set to OFF when the compartment lid is closed).

Band indicating lamps: One of these lamps lights to show the tuning band of the tuned channel.

To clear the preset channel, press this button while the CHANNEL SET switch set to ON.



Tuning indicator: Indicates the approximate position of the tuned channel within the tuning band scanned.

Set to OFF to fine tune a station manually. Normally set this switch to ON.

Press to tune in a station.

### 15 Remote control detector

Point the infrared transmitter of the supplied remote control unit here.

### 16 Time/index display

This indicates the present time when the CLOCK/COUNTER selector is set to CLOCK or when the recorder is turned off, and the tape running time at the normal playback speed when the CLOCK/COUNTER selector is set to COUNTER. Timer programs and the selected index number will also be shown.

#### When the CLOCK/COUNTER selector is set to COUNTER

Indicates how much the tape has advanced at normal speed.



Shows the index number selected with the INDEX button.

Indicates that the display functions as a time counter.

This display appears only when the recorder is turned on.

#### When the CLOCK/COUNTER selector is set to CLOCK

Lights when you are setting a day of the second week.

Lights when you are setting a turn-on time or a turn-off time.



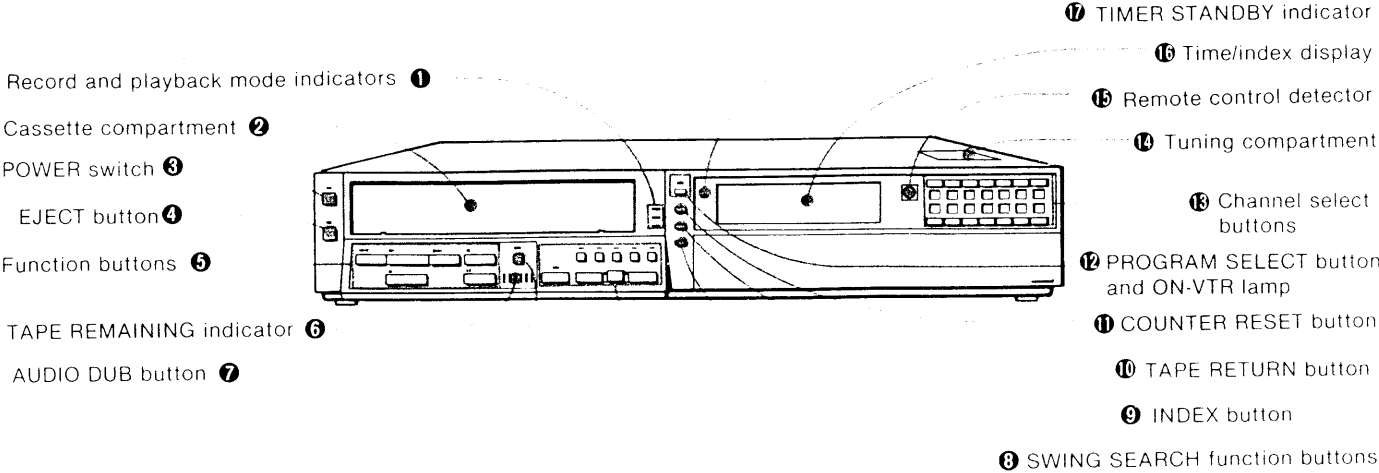
Shows a timer program.

Shows a day of the week.

Blinks when the settings for two or more programs overlap or when a timer recording cannot be made.

Shows the present time or the turn-on or turn-off time.

# LOCATION AND FUNCTION OF CONTROLS



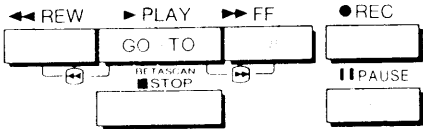
- ① Record and playback mode indicators**  
The lamp corresponding to the engaged record or playback mode lights up.
- ② Cassette compartment**  
Insert a cassette to be recorded or played back after turning on the recorder.

- ③ POWER switch**  
Press to turn the power on. The lamp lights up.  
To turn the unit off, press the switch again.  
The timer section will continue to operate and the time will be displayed even if the POWER switch is off as long as the ac power cord is plugged into a working outlet.
- ④ EJECT button**  
Press to remove a cassette.  
This button does not function when the recorder is turned off.

## ⑤ Function buttons

Press to play back the tape.

Press to rewind the tape.  
Also used for the reverse Betascan operation.



Press to stop the tape.

Press to advance the tape rapidly.  
Also used for the forward Betascan operation.

While pressing this button, press the PLAY button to start recording.

Press to stop the tape for a moment during recording or playback. A freeze picture will be seen during play back. Press again to release the pause mode.

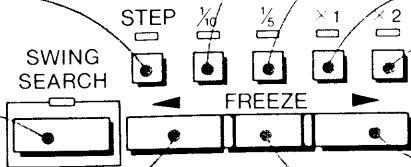
- ⑥ TAPE REMAINING indicator**  
Shows the amount of tape remaining.
- ⑦ AUDIO DUB button**  
Use this button to dub audio onto a previously recorded tape.

8 SWING SEARCH function buttons

Press to obtain a frame-by-frame picture.

Press this button during playback to activate the SWING SEARCH function. The lamp will light up. After pressing this button, select the playback speed and the tape direction.

Press for playback in the reverse direction.



Press to obtain a slow-motion (1/10 speed) picture.

Press to obtain a slow-motion (1/5 speed) picture.

Press to obtain a normal speed picture.

Press to obtain a double-speed picture.

Press for playback in the forward direction.

Press to obtain a freeze picture.

9 INDEX button

Press to activate the index function and set the number of the recorded program you want to view. The selected number will be displayed on the time/index display.

10 TAPE RETURN button

Press this button in the stop mode to return the tape to the "0H00M00s" point on the time counter.

11 COUNTER RESET button

Press to set the time counter reading to "0H00M00s".

12 PROGRAM SELECT button and ON-VTR lamp

To view a TV program selected by a channel select button on the recorder or to monitor the picture being recorded, press this button so that the ON-VTR lamp lights up. When the ► PLAY button on the recorder is pressed, the unit is automatically set in this mode. To view a TV program in the usual manner, press this switch so that the lamp goes off. When the recorder is turned off, the recorder is automatically set in this mode.

13 Channel select buttons

Press the button of the channel to be recorded or to be viewed. The selected channel number will light.

14 Tuning compartment

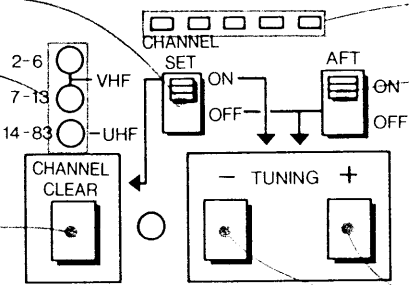
All the switches and buttons for channel presetting are in this compartment.

Set to ON to preset a channel.

Normally set this switch to OFF (the switch will be automatically set to OFF when the compartment lid is closed).

Band indicating lamps: One of these lamps lights to show the tuning band of the tuned channel.

To clear the preset channel, press this button while the CHANNEL SET switch set to ON.



Tuning indicator: Indicates the approximate position of the tuned channel within the tuning band scanned.

Set to OFF to fine tune a station manually. Normally set this switch to ON.

Press to tune in a station.

15 Remote control detector

Point the infrared transmitter of the supplied remote control unit here.

16 Time/index display

This indicates the present time when the CLOCK/COUNTER selector is set to CLOCK or when the recorder is turned off, and the tape running time at the normal playback speed when the CLOCK/COUNTER selector is set to COUNTER. Timer programs and the selected index number will also be shown.

When the CLOCK/COUNTER selector is set to COUNTER

Indicates how much the tape has advanced at normal speed.



Shows the index number selected with the INDEX button.

Indicates that the display functions as a time counter.

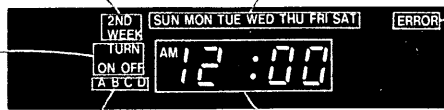
This display appears only when the recorder is turned on.

When the CLOCK/COUNTER selector is set to CLOCK

Lights when you are setting a day of the second week.

Shows a day of the week.

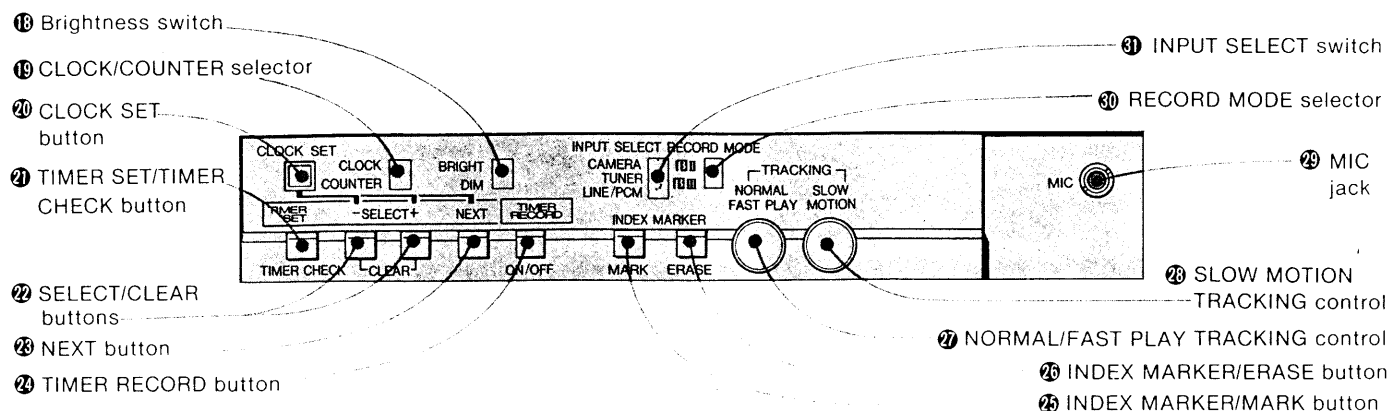
Lights when you are setting a turn-on time or a turn-off time.



Shows a timer program.

Shows the present time or the turn-on or turn-off time.

Blinks when the settings for two or more programs overlap or when a timer recording cannot be made.



#### 17 TIMER STANDBY indicator

This lamp lights up when the TIMER RECORD button is pressed after the timer program has been set.

#### 18 Brightness switch

Select the brightness of the time/index display, BRIGHT or DIMMER, with this switch.

#### 19 CLOCK/COUNTER selector

Select the display of the time display, either clock or time counter.

#### 20 CLOCK SET button

Press to set the clock.

#### 21 TIMER SET/TIMER CHECK button

Press to set the timer for recording.

To check the contents of a timer program, press this button.

#### 22 SELECT/CLEAR buttons

Used to set the clock time, day of the week and timer programs.

To erase the contents of a timer program, press these buttons simultaneously.

#### 23 NEXT button

Used for memorizing the clock time, day of the week and timer programs set by the SELECT buttons.

#### 24 TIMER RECORD button

Press to activate the timer recording stand-by mode. The TIMER STANDBY lamp will light up.

#### 25 INDEX MARKER/MARK button

Press to record an index signal at the desired point on the tape.

#### 26 INDEX MARKER/ERASE button

Press to erase the index signal recorded on the tape.

#### 27 NORMAL/FAST PLAY TRACKING control

Turn to eliminate the streaks or snow in a double speed or a reverse playback picture, or for playback of a cassette recorded by another video cassette recorder.

- Return the control to the dotted position after viewing the particular cassette.

#### 28 SLOW MOTION TRACKING control

Turn to eliminate the streaks or snow for a freeze, a frame-by-frame or slow motion playback.

- Return the control to the dotted position after playback.

#### 29 MIC jack (mini type)

Connect a microphone here. If your microphone has a phone-type plug, use a plug adaptor, such as the Sony PC-1A.

#### 30 RECORD MODE selector

This selects recording tape speed, **I**, **II** or **III**, so that you can take full advantage of the various cassettes available. The recording time of any given cassette in the **I** mode is 1.5 times that in the **II** mode.

- Do not change the position of the selector during recording, or the playback picture and sound will be distorted at that point.
- The playback speed is automatically selected regardless of this selector setting.

#### 31 INPUT SELECT switch

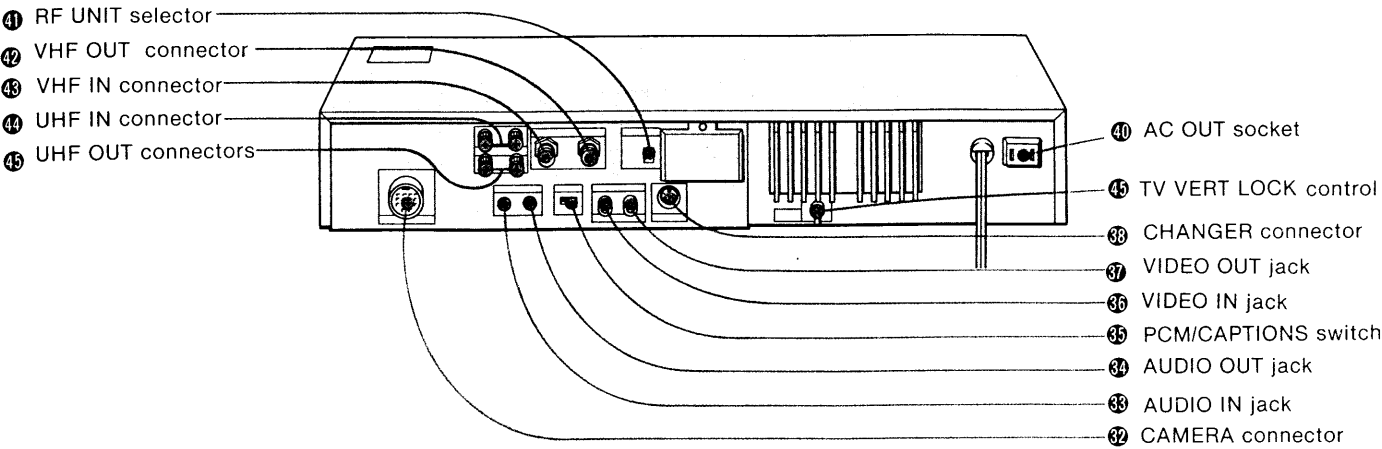
Select the program to be recorded.

LINE/PCM: for recording signals connected to the VIDEO IN and AUDIO IN Jacks.

TUNER: for recording TV programs.

CAMERA: for recording camera signals connected to the CAMERA connector.

Rear panel



**42 CAMERA connector** (14-pin K-type)  
Connect a video camera, such as a HVC-2200, etc.

**43 AUDIO IN jack** (mini type) ✓  
Connect to the line output of a sound source such as a cassette recorder or an audio amplifier, or to the audio output of a camera or another video cassette recorder.

**44 AUDIO OUT jack** (mini type) ✓  
Connect the audio input of another video cassette recorder, a video monitor, etc.

**45 PCM/CAPTIONS switch**  
Normally set to the right position. For receiving captioned TV programs or for PCM recording and playback using a PCM adaptor, set this switch to the left position.

**46 VIDEO IN jack** (phono type) ✓  
Connect the video output of a camera, another video cassette recorder, etc.

**47 VIDEO OUT jack** (phono type) ✓  
Connect the video input of another video cassette recorder or of a video monitor.

**48 CHANGER connector**  
Connect an AG-400 auto cassette changer which will be available in the near future.

**49 TV VERT LOCK (TV vertical lock) control**  
If a jitter appears in the freeze, frame-by-frame or slow motion picture, first obtain a freeze picture and turn this control until the picture is stable.

**40 AC OUT socket**  
This unswitched outlet supplies ac power to video or audio equipment whose power consumption is under 400 watts.

**41 RF UNIT selector**  
Select the output channel at the VHF OUT connector. Set the switch to 3 CH or 4 CH, whichever is not active in your area.

**42 VHF OUT connector**  
Connect to the VHF antenna connector of the TV receiver. The signal of a VTR program (which is converted into a VHF signal) and the VHF TV signal will be supplied to the TV receiver.

**43 VHF IN connector**  
Connect a VHF TV antenna here.

**44 UHF IN connectors**  
Connect an UHF TV antenna here.

**45 UHF OUT connectors**  
Connect to the UHF antenna terminals of the TV receiver to view UHF TV programs even when the recorder is turned off.

TROUBLE CHECKS

If any difficulty should arise during operation, check through this list of symptoms and possible causes. Should the difficulty persist, unplug the unit and contact the dealer from whom this unit was purchased, or a local Sony authorized service facility.

Before going through the check list below, first check to see whether the power cord is connected firmly to a working outlet and whether the POWER switch is turned ON.

	Symptom	Possible causes and corrections
POWER	POWER switch does not function.	<ul style="list-style-type: none"><li>● The power cord is disconnected.</li><li>● The recorder is in the timer standby mode.</li></ul> Press the TIMER RECORD button so that the TIMER STANDBY lamp goes off.
CLOCK AND TIMER	The clock has stopped at "SUN AM 12:00"	<ul style="list-style-type: none"><li>● There has been a power interruption.</li></ul> Reset the clock time and timer settings.
	Timer setting cannot be made.	<ul style="list-style-type: none"><li>● The clock time is not set.</li><li>● The timer cannot be set during recording.</li></ul>
TV RECEPTION	TV program is not clearly displayed on the TV screen.	<ul style="list-style-type: none"><li>● The channel for video recorder on the TV receiver is not correctly tuned.</li><li>● The channels on the recorder are not correctly preset (page 8 of the "Set-up guide").</li><li>● The antenna connections are not correct.</li><li>● The TV signal is weak. Adjust the direction of the antenna.</li><li>● The ac power cord of the recorder is disconnected.</li></ul>
RECORDING AND PLAYBACK	No picture on the TV screen during recording or playback.	<ul style="list-style-type: none"><li>● The TV's channel is not set to that preset for the video recorder.</li><li>● The channel preset for the video recorder has not been fine-tuned.</li></ul>
	Picture being recorded cannot be monitored on the TV screen.	<ul style="list-style-type: none"><li>● Press the PROGRAM SELECT button so that the ON-VTR lamp lights.</li></ul>
	No recording	<ul style="list-style-type: none"><li>● The safety tab on the cassette has been removed.</li></ul>
	The desired program has not been recorded.	<ul style="list-style-type: none"><li>● The INPUT SELECT switch has not been set correctly.</li><li>● When camera recording, the tape run/stop button on the camera has not been operated correctly.</li></ul>
	The displayed picture on the TV screen is not clear.	<ul style="list-style-type: none"><li>● The channel preset for the video recorder on the TV has not been fine-tuned.</li><li>● The video heads are contaminated.</li><li>● The cassette being played has been recorded on another video recorder.</li></ul> Adjust the NORMAL/FAST PLAY TRACKING control.
	Timer recording cannot be made correctly.	<ul style="list-style-type: none"><li>● The clock time is not set correctly.</li><li>● The turn-on day and the turn-on time have not been set correctly.</li><li>● The TIMER RECORD button has not been pressed.</li><li>● There has been a power interruption.</li><li>● The cassette inserted has had the tab removed or no cassette has been inserted.</li><li>● The INPUT SELECT switch is not set to TUNER.</li><li>● Two or more timer settings overlap.</li></ul>
REMOTE CONTROL	The recorder cannot be remotely controlled.	<ul style="list-style-type: none"><li>● The remote control unit is not pointed to the detector on the recorder.</li><li>● The remote control unit is too far away from the recorder.</li><li>● An obstacle between the remote control unit and the recorder.</li><li>● The batteries are exhausted.</li></ul>
OTHERS	The time counter does not operate even if the tape moves.	<ul style="list-style-type: none"><li>● The tape is brand-new.</li><li>● It will not operate with the unrecorded portion of a tape.</li></ul>
	The function buttons cannot be activated.	<ul style="list-style-type: none"><li>● The tape is at either end of its travel.</li></ul>
	Cassette cannot be inserted.	<ul style="list-style-type: none"><li>● The recorder is turned off.</li><li>● The cassette being inserted is reversed.</li><li>● Another cassette has already been inserted.</li></ul>
	The cassette cannot be ejected.	<ul style="list-style-type: none"><li>● The recorder is turned off.</li><li>● The tape is moving.</li></ul>
	Audio dubbing cannot be made.	<ul style="list-style-type: none"><li>● The cassette inserted has had its safety tab removed.</li><li>● The tape to be dubbed is blank.</li><li>● When the AUDIO IN jack is used, nothing should be connected to the MIC jack and the INPUT SELECT switch should be set to LINE/PCM.</li></ul>
	The tape stops suddenly during operation.	<ul style="list-style-type: none"><li>● The safety device which protects the video cassette tape and recorder has activated. Reactivate the previous tape transport mode.</li></ul>
	The function buttons cannot be activated with the EJECT lamp lit, immediately after the cassette has been inserted into the recorder.	<ul style="list-style-type: none"><li>● The safety device has activated.</li></ul> Press the EJECT button to remove the cassette and re-insert the cassette.