

**SONY**

**STEREO VIDEO CASSETTE RECORDER**

# SL-HF600

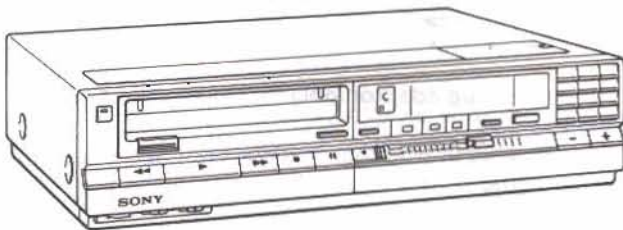
## OPERATING INSTRUCTIONS

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

## OWNER'S RECORD

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

Model No. SL-HF600 Serial No. \_\_\_\_\_



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This unit can be used with any video cassette tapes having the mark **II**. It is compatible with the **II** and **III** type recording and playback formats, and will play back tapes recorded in the **II** format.

## 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.

### CAUTION:

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

### 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.


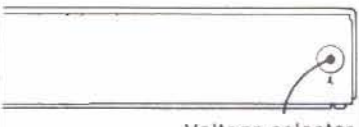
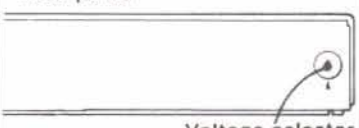
If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"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.

## NOTE ON OPERATING POWER VOLTAGE AND FREQUENCY

Depending on the area to be used, the SL-HF600 comes in three models to suit the local operating power voltage. Check which type your model is and be sure to follow **Caution** below before plugging the unit to the wall outlet.

	Voltage	Frequency
<b>Type 1</b> Rear panel 	120 V	50/60 Hz
<b>Type 2</b> Rear panel  Voltage selector	100/120/ 220/240 V	50/60 Hz
<b>Type 3 (available in Japan)</b> Rear panel  Voltage selector	120/220/ 240 V	50/60 Hz

### Caution

- For the type 1 model

Operate the unit only on 120 V AC.

- For the type 2 and 3 models

**Make sure to set the voltage selector in accordance to the power voltage of your area.** The unit may suffer **serious damage** if the voltage selector is not set correctly.



### AC power plug adaptor (only for the models available at the PX)

If the ac plug of your recorder does not fit the wall outlet when using it in a 220 V area, attach the supplied ac plug adaptor.



The photos and illustrations used in this manual are those of the type 1 model. The differences on the appearance and the operation of the type 2 and 3 models are clearly mentioned as required.

# PRECAUTIONS

## On safety

- Before operating, check that the operating power voltage and frequency of the unit are identical with those of your local power supply.
- 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.
- One blade of the plug is wider than the other for the purpose of safety and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- Unplug the unit from the wall outlet if it 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.

## 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.
- Do not place any heavy object on the unit.

## On operation

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

## On cleaning

Clean the cabinet, panel and controls with a dry soft cloth, or a soft cloth lightly moistened with a mild detergent solution.

Do not use 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.

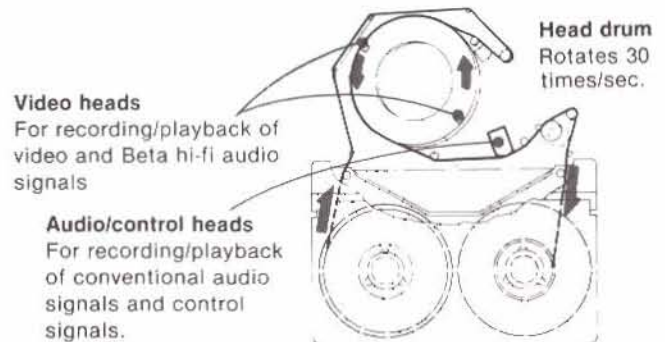
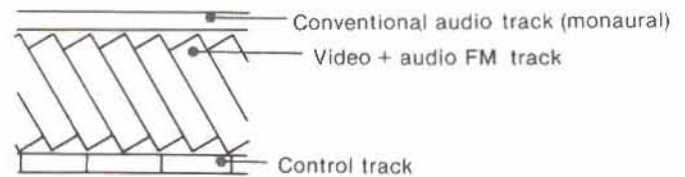
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## WHAT IS BETA HI-FI RECORDING?

In conventional recording, audio signals are recorded on the audio track and video signals on the video track. In Beta hi-fi recording, audio signals are recorded on the video track together with the video signals using 2 rotary video heads.

The Beta hi-fi audio signals are frequency-modulated and recorded on 2 channels, so that you can record a stereo or bilingual program with sound quality far superior to that of the conventional audio recording.

Beta hi-fi recording pattern on the video tape



When the BETA HI-FI selector is set to ON, this recorder records audio signals on the video track (Beta hi-fi recording) and on the conventional audio track at the same time, so that these tapes can also be played back on any ordinary video cassette recorder without a Beta hi-fi system.

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# CONNECTIONS

## Before making connections

- Turn off the TV.
- Connect the ac power cord after all the connections of the video cassette recorder and the TV have been completed.
- Make connections firmly. A loose connection may cause a distorted picture.

## ANTENNA/CABLE AND TV CONNECTION

Disconnect the TV antenna cables from the TV receiver and connect them to the recorder, then connect the recorder and the TV.

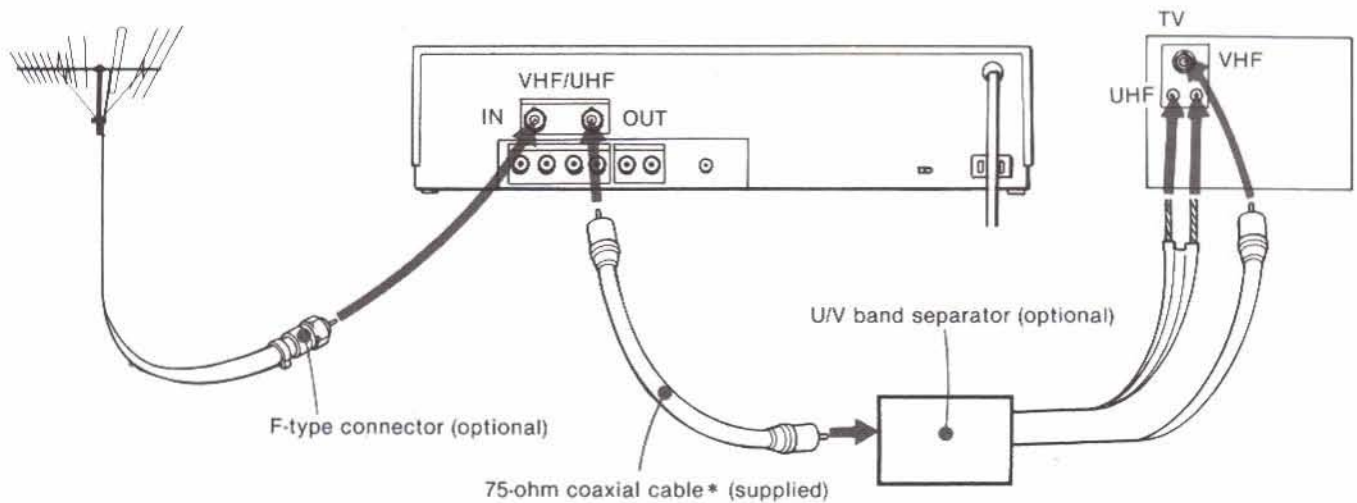
### Note

Keep the VCR away from the TV if the display or sound is affected.

#### Combination VHF/UHF antenna

Most combination antennas are equipped with a U/V band separator (signal splitter). Take off the separator and connect the cable directly to the recorder.

Use the removed separator to connect the recorder and the TV.



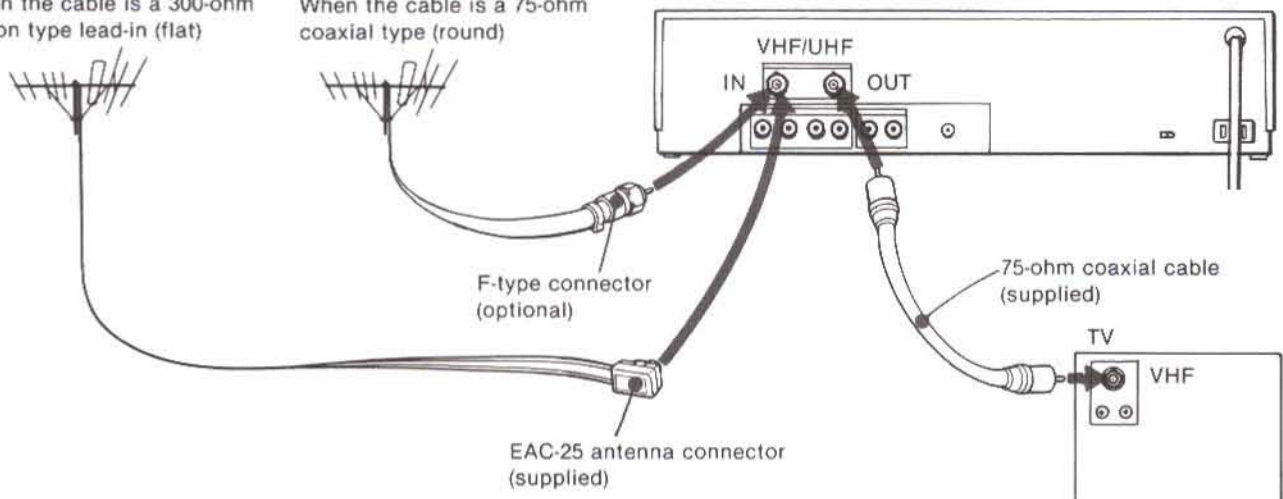
\*Use an optional RFC-8 extension cable (available in the U.S.A. and Canada), 8 m (25 ft) long, if the supplied 75-ohm coaxial cable is not long enough.

If you need a separator or a complete antenna system, see your Sony dealer or a qualified technician.

#### VHF antenna

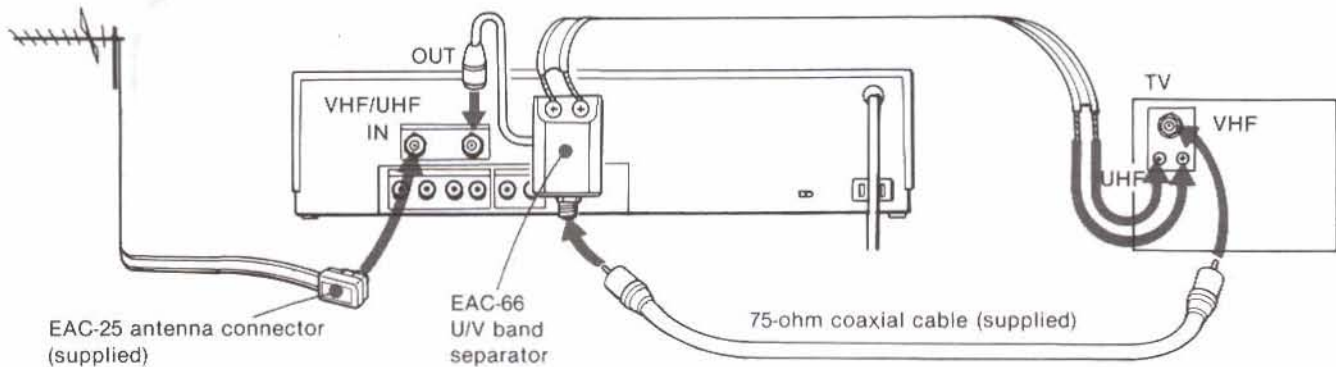
When the cable is a 300-ohm ribbon type lead-in (flat)

When the cable is a 75-ohm coaxial type (round)



### UHF antenna

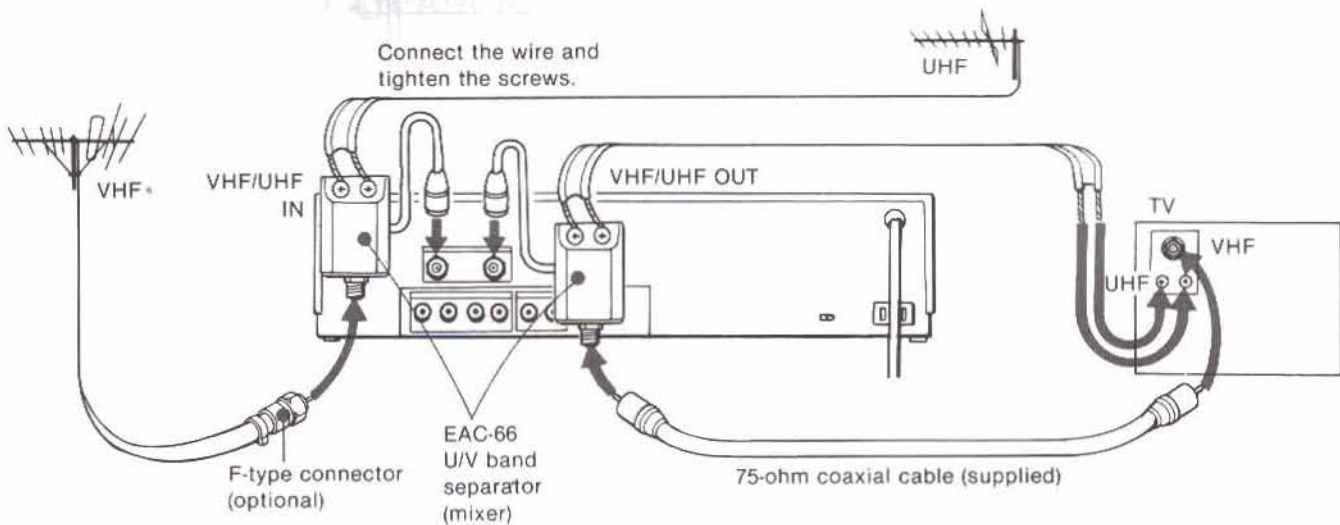
Attach an optional EAC-66 U/V band separator to the VHF/UHF OUT connector of the recorder, and connect to the VHF and UHF antenna terminals of the TV.



### When both VHF and UHF antennas are connected

Attach an optional EAC-66 U/V band separator (mixer) to the VHF/UHF IN connector of the recorder, and connect the antennas to the U/V band separator. Then attach another optional U/V band separator to the VHF/UHF OUT connector of the recorder, and connect to the VHF and UHF antenna terminals of the TV.

**When a TV has a 75-ohm UHF/VHF antenna terminal**  
Easy connection of the recorder to the TV can be made with the supplied 75-ohm coaxial cable regardless of the types of antenna.



### Caution

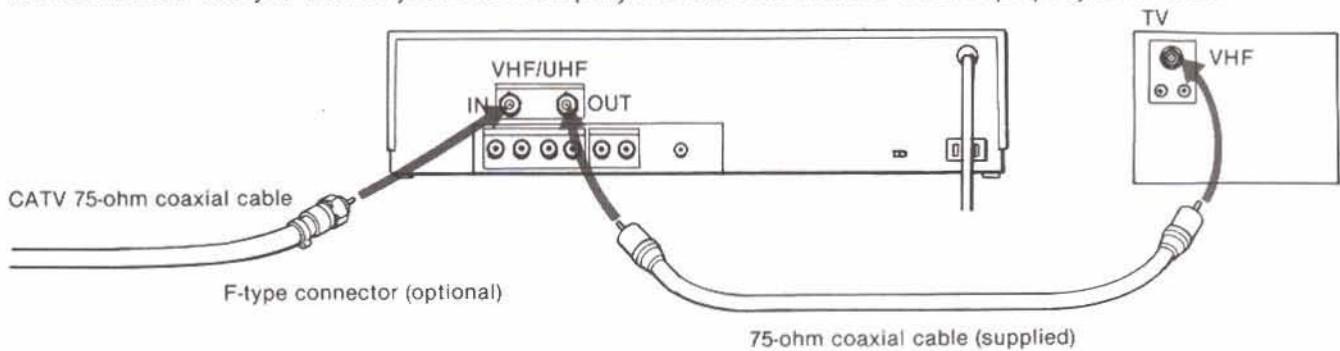
Connections between the recorder VHF/UHF OUT connector and the antenna terminals of a TV receiver should be made only as shown in these instructions. Failure to do so may result in operation that violates the regulations of the Federal Communications Commission regarding the use and operation of rf devices.

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.

Once the connections explained above have been made, the antenna TV signals, as well as the signal from the recorder, will be fed to the TV and you can view TV programs in the usual way.

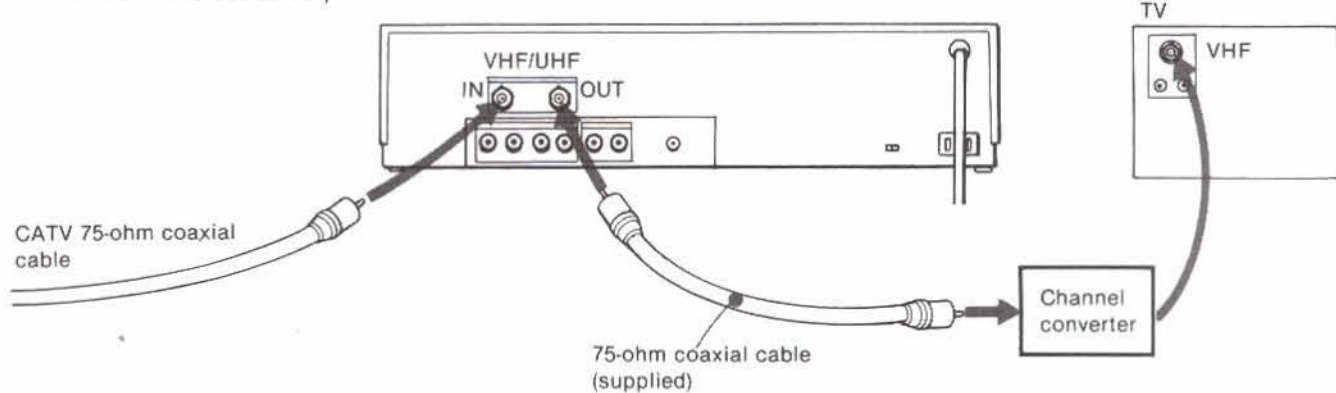
## CATV cable

We recommend that you consult your cable company to make sure that the cable is properly connected.



### When a TV is not a CATV compatible type

Connect the CATV channel converter between the recorder and the TV so that you can watch another CATV program while recording one CATV program. (The TV/VTR button is set to TV.)



### Note to CATV system installer in the U.S.A.:

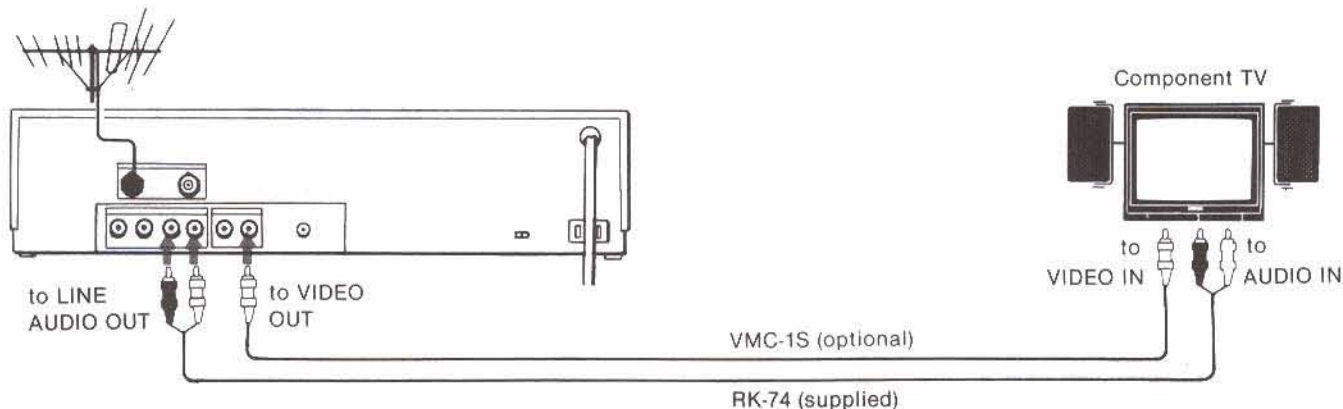
This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

<h4>How to attach an F-type connector</h4> <ol style="list-style-type: none"> <li>1  </li> <li>2  </li> <li>3  </li> <li>4  </li> </ol>	<h4>How to attach an EAC-25 external antenna connector</h4> <p>300-ohm twin lead Connect the lead-in wire. Plug into the VHF/UHF IN connector.</p> <h4>How to attach an EAC-66 U/V band separator (mixer)</h4> <p>300-ohm twin lead EAC-66 75-ohm coaxial cable</p>
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## CONNECTING A COLOR MONITOR

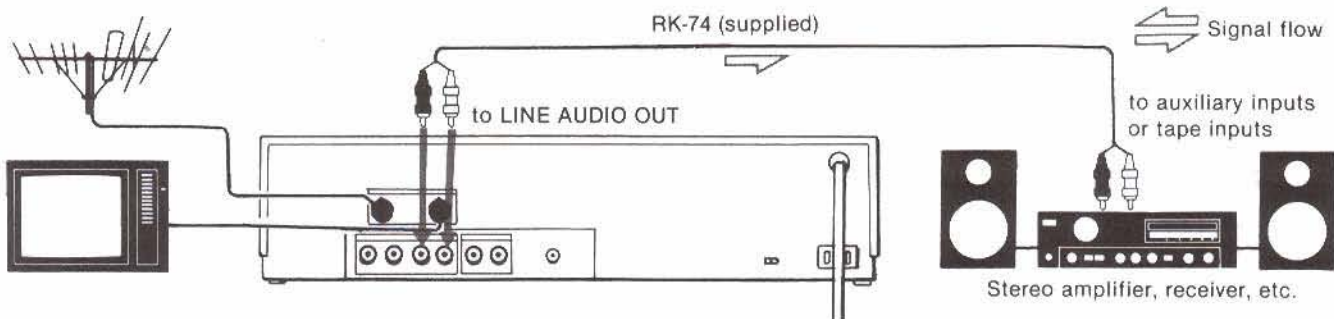
To obtain a better-quality picture, connect a color monitor, such as the Sony Profeel Trinitron Component TV, instead of a conventional TV receiver. When a component TV is combined with the speaker system as illustrated, you can enjoy tapes recorded with Beta hi-fi stereo.

If you use a component TV tuner together with the monitor, connect the recorder and the TV tuner in the same way as in the case of the recorder and the conventional TV receiver described on pages 4 and 5. For details on the connection of the TV tuner and the monitor, refer to the instruction manual of the TV tuner.



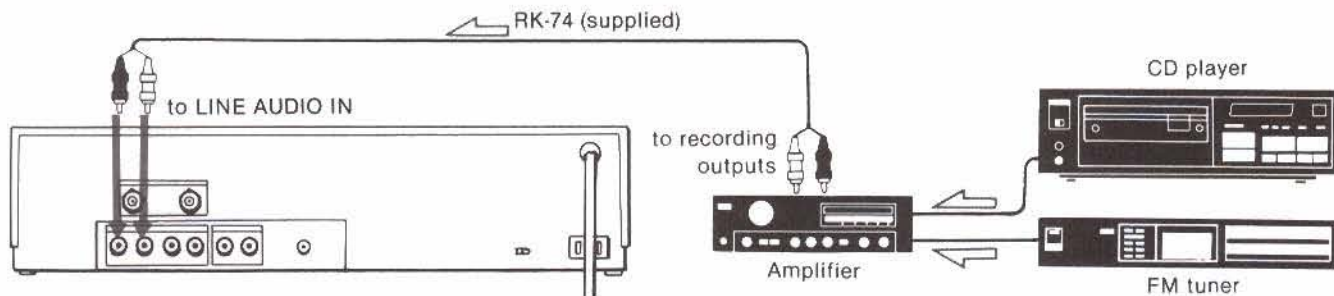
## CONNECTION TO AN AUDIO SYSTEM

You can enjoy tapes recorded with Beta hi-fi stereo when the recorder is connected to your audio system.

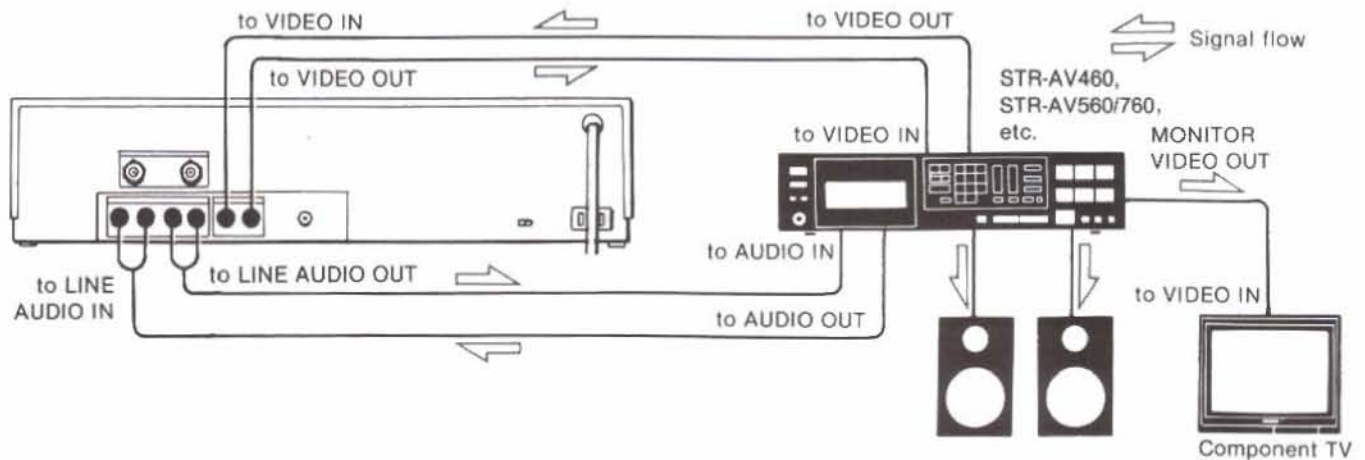


### To record audio signals only from your audio system

You can record audio source such as an FM tuner, CD player, with the Beta hi-fi system without recording video signals.



### Connection to a receiver equipped with VIDEO connectors

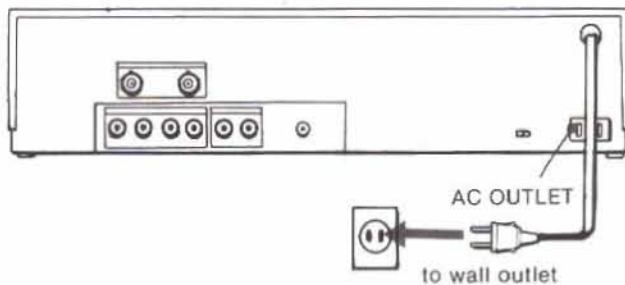


For details, see the instruction manual of the receiver.

#### Notes

- If the VCR is installed near a tuner or a radio, noise may be heard in AM reception. In this case, keep the VCR away from the tuner or the radio, adjust the AM bar 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 the connected amplifier off.

## POWER CONNECTION



When you insert the power plug into a wall outlet, all indicators in the display window will light up for about six seconds (and the tape loading mechanism may also run a little). All functions will not operate at this step, although the power indicator lights up. After these six seconds, the power is turned off. To supply power to the recorder, press the POWER switch.

### AC OUTLET

This socket provides a convenient ac power source for other video or audio equipment whose power consumption is under 400 watts. Power will be supplied to the connected equipment even if the recorder is turned off.

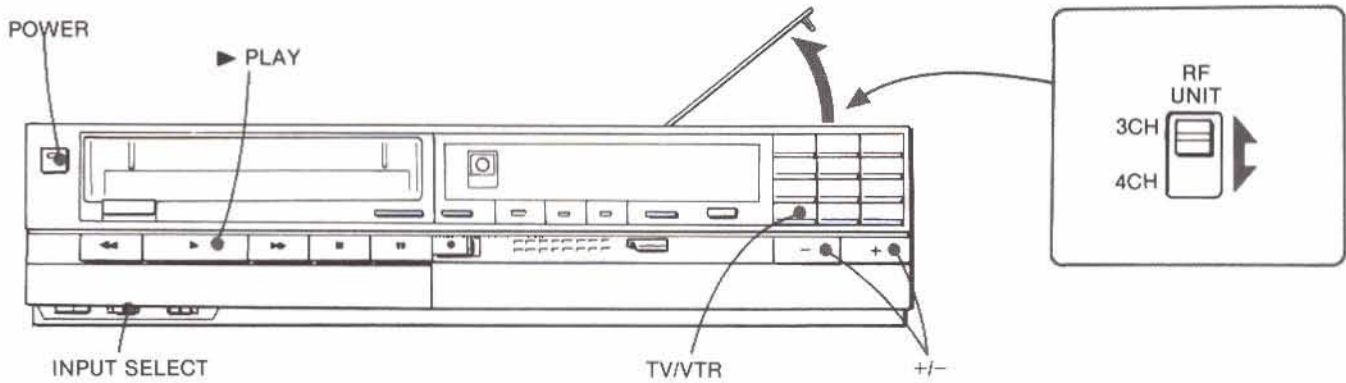
- Do not connect here any electrical home appliances whose power consumption exceeds 400 watts, such as an electric iron or fan.



# ADJUSTMENT

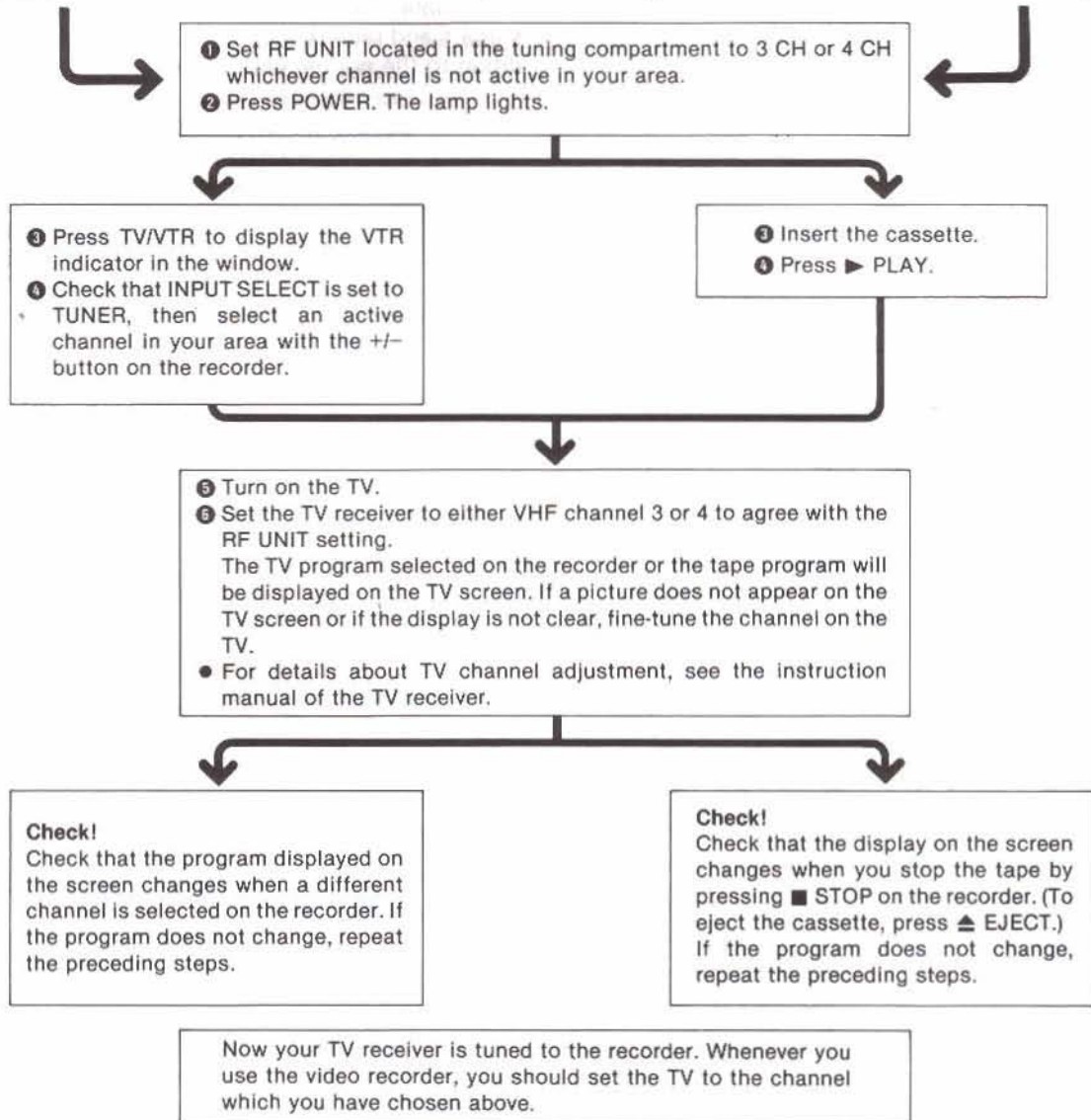
## ADJUSTING THE TV

Your TV receiver must be adjusted to receive the signal from your recorder. If you connect a color monitor, it does not need adjusting.



If you do not have a recorded video cassette tape

If you have a recorded video cassette tape

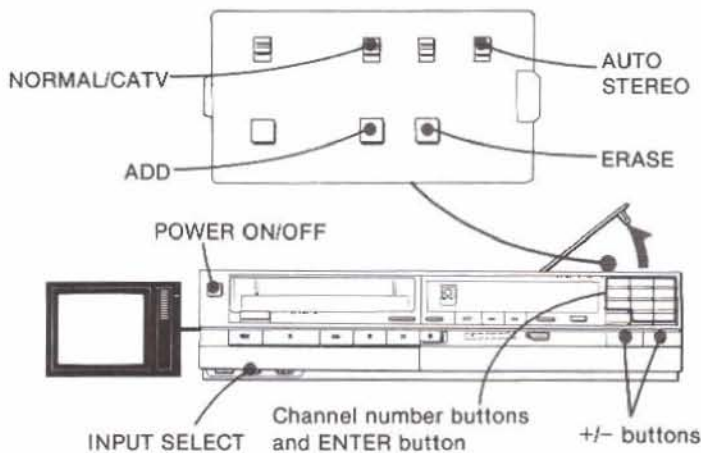


# HOW TO SELECT TV CHANNELS

Your recorder is capable of receiving VHF channels 2-13, UHF channels 14-69 and cable TV channels 1 to 125. (See cable TV channel chart below.)

You can select the desired channel by pressing the appropriate channel number buttons, or by scanning higher or lower among the preset channels with the +/- buttons.

To preset the desired channels, see page 11.



## Cable TV channel chart

Cable TV systems use letters or numbers to designate channels. To tune in a channel, refer to this chart.

Number on this VCR	1	5	6	14	15	16	17					
Corresponding cable TV channel	A-8	A-7	A-6	A	B	C	D					
18	19	20	21	22	23	24	25	26	27	28	29	30
E	F	G	H	I	J	K	L	M	N	O	P	Q
31	32	33	34	35	36	37	38	39	.....	93	94	
R	S	T	U	V	W	W+1	W+2	W+3	.....	W+57	W+58	
95	96	97	98	99	100	101	102	.....	123	124	125	
A-5	A-4	A-3	A-2	A-1	W+59	W+60	W+61	.....	W+82	W+83	W+84	

Check with your local cable TV company for more complete information on the available channels.

\*The designation of the cable TV channels conforms to the EIA/NCTA recommendation.

### Note

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

### Preparations

- 1 Turn on the recorder and set INPUT SELECT to TUNER.
- 2 Turn on the TV and select the channel to view the recorder (channel 3 or 4).
- 3 For cable TV programs, set NORMAL/CATV in the tuning compartment to CATV. For off-the-air programs, set to NORMAL.

Select the channel in one of the following two ways.

#### Using the channel number buttons

Press the numerals of the channel and then press ENTER.

Ex. To select channel 6



To select channel 98



If you pressed a wrong numeral, wait for a few seconds until the previous number is recalled. Then try again.

#### Using the +/- buttons

Press "+" for higher-numbered channels and "-" for lower-numbered channels. Preset channels will appear in sequence.

## CHANNEL PRESETTING

By adding and erasing channels, you can preset your recorder so that only the desired channels appear in sequence when the +/- buttons on the recorder or on the Remote Commander are pressed.

(For adding and erasing cable TV channels, be sure to set NORMAL/CATV to "CATV".)

### ADDING CHANNELS

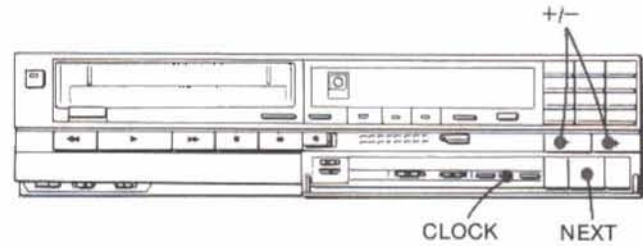
- 1 Select the channel to be added by pressing the channel number buttons and then ENTER.
  - 2 Press ADD in the tuning compartment.  
The channel indicator will momentarily show "---" and then the number of the channel added.
- Repeat steps 1 and 2 for other channels to be added. The added channels will appear in the proper numerical sequence when the + or - button is pressed.

### ERASING CHANNELS

- 1 Select the channel to be erased by pressing the channel number buttons and ENTER, or the +/- buttons.
  - 2 Press ERASE in the tuning compartment.  
The channel indicator will momentarily show "---" and then the number of the channel erased.
- Repeat steps 1 and 2 for other channels to be erased. The erased channels will be skipped over in the numerical sequence when the + or - button is pressed.

## SETTING THE CLOCK

When you connect the ac power cord to a wall outlet, the clock indicates "Su AM 12:00" after 6 seconds and will blink to show that it must be set.

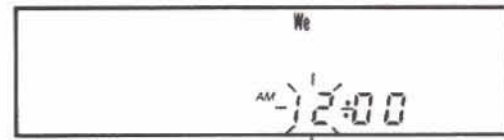


Example: To set for Wednesday afternoon at 3:56

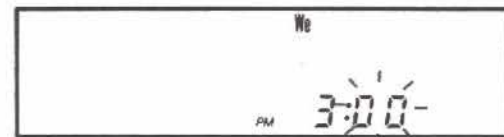
- 1 Press CLOCK.  
Set the day with the + or - button.



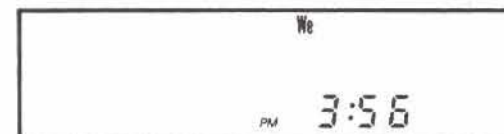
- 2 Press NEXT.  
Set hours with the + or - button.  
AM 12:00 = Midnight  
PM 12:00 = Noon



- 3 Press NEXT.  
Set the minutes with the + or - button.



- 4 For accurate setting, press NEXT at the same time with an announced time signal.  
The clock will now show the current time.



The dots of the colon (:) alternately blink every 30 seconds.

### +/- buttons

The + and - buttons can be used in two ways:

When you keep the button pressed, the digits will advance continuously until the button is released.



When you press and immediately release the button, the digits will advance by one.



# BASIC OPERATIONS

## TV PROGRAM RECORDING

**Note**

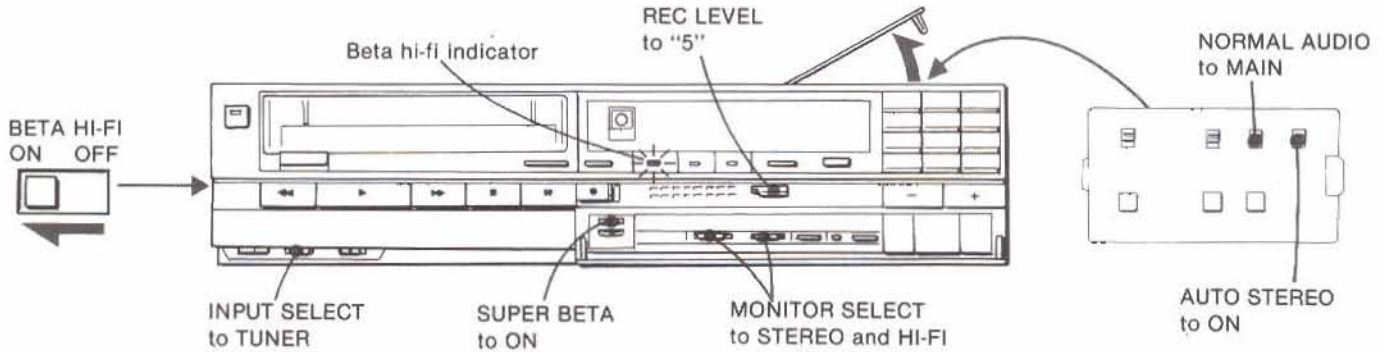
The power is automatically turned on when a cassette is inserted, even though POWER is not pressed. However, this is to protect the unit from damage due to the insertion of a cassette without first turning on the power. Always turn on the power by pressing POWER before inserting a cassette.

**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 transmitter and/or program owner.

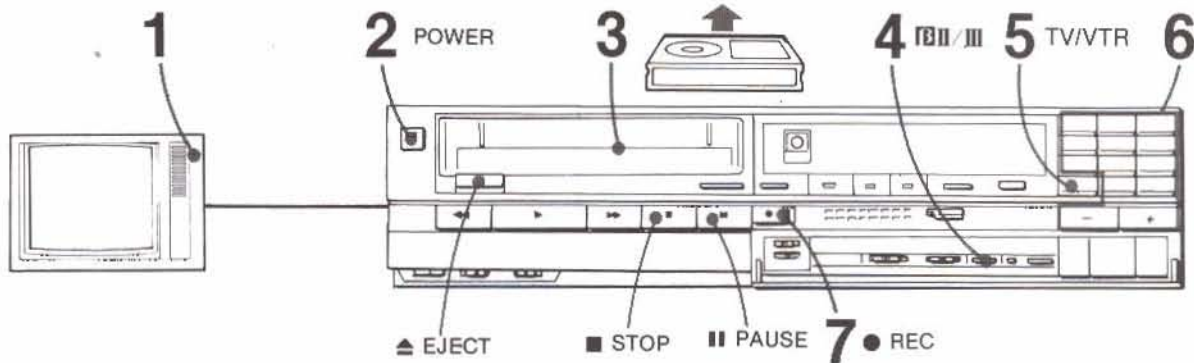
**Check before recording**



When BETA HI-FI is set to ON, recording is done both on the video track (Beta hi-fi recording) and on the conventional audio track.

**Recording**

Numbers in the illustration show the sequence of operation.



- 1 Turn on the TV and select the channel for the video recorder: channel 3 or 4.
- 2 Press POWER on the recorder to turn the power on.
- 3 Insert a cassette.
- 4 Select the recording mode with II/III. The length of recording time differs for each mode. Refer to the chart of the right column.
- 5 Press TV/VTR to select the VTR mode.
- 6 Select the channel to be recorded with the channel number buttons and ENTER button or the + or - button.
- 7 Slide ● REC to the right. Recording will start. If the tape reaches the end during recording, the tape will be rewound to the beginning automatically.

**Check in the window**



**Recording time available in each mode**

Cassette used	II mode	III mode
L-125	30 min.	45 min.
L-250	1 hr.	1 hr. 30 min.
L-500	2 hr.	3 hr.
L-750	3 hr.	4 hr. 30 min.
L-830	3 hr. 20 min.	5 hr.

To stop recording, press ■ STOP.

To eject the cassette, press ■ STOP, then ▲ EJECT.

To stop the tape momentarily, press ■ PAUSE.

To resume recording, press the button again. If you do not resume recording more than about 8 minutes, the pause mode will be automatically released.

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.

### TO RECORD MULTICHANNEL TV SOUND (MTS) BROADCASTS (STEREOCASTS)

Make sure AUTO STEREO in the tuning compartment is set to ON.

In the years to come, an increasing number of programs will be broadcast in stereo. Called Multichannel TV Sound or MTS, the new technology will greatly enhance TV viewing by bringing you programs with high fidelity stereo sound.

MTS also provides for an extra channel called the Second Audio Program or SAP which broadcasters can use to transmit a second language for bilingual transmissions or some other sound track.

#### To record a stereo broadcast

Set BETA HI-FI selector on the rear panel to ON. When the STEREO indicator lights up, a stereo broadcast is being received. The recording procedure is the same as usual.



#### To record a SAP (Second Audio Program) broadcast

Set NORMAL AUDIO to SAP. The SAP indicator will light up. If recording is made when there is a SAP broadcast, the SAP sound will be recorded on the conventional audio track while the MAIN sound is recorded on the video track in Beta hi-fi.

To listen to the SAP sound, set MONITOR SELECT to NORMAL.



#### To record a MAIN broadcast only

Set NORMAL AUDIO to MAIN. The MAIN sound will be recorded on the video track and the conventional audio track.

#### Notes

- When a SAP sound is not to be recorded, be sure to set NORMAL AUDIO to MAIN. If it is set to SAP and there is no SAP broadcast, no sound is recorded on the conventional audio track.
- You may find more noise in the reproduction of the audio of SAP than in that of the main sound.

### TO VIEW ONE TV PROGRAM WHILE RECORDING ANOTHER

Press TV/VTR so that the VTR indicator disappears from the display window. Select the channel you want to view on the TV.



### 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. The cassette will be ejected automatically even when you slide REC to the right.



#### To re-record on a cassette which has had its safety tab removed

Cover the hole with a piece of plastic tape.



## TO START RECORDING FROM A PARTICULAR POINT

You can decide the starting point for recording while watching the playback picture or by searching for the point using the Betascan and Beta SkipScan functions.

- 1 Search for the point where you wish to start recording on the tape by playing back the tape or using the Betascan or the Beta SkipScan function.
- 2 Press **II** PAUSE to stop the tape where you wish to start recording.
- 3 Slide **●** REC to the right. The recorder will enter the record pause mode and the picture selected by INPUT SELECT will appear on the monitor screen.
- 4 Press **II** PAUSE to release the pause mode. Recording starts.

- At the starting point of recording, the picture may be distorted or streaks may appear.

### NOTE

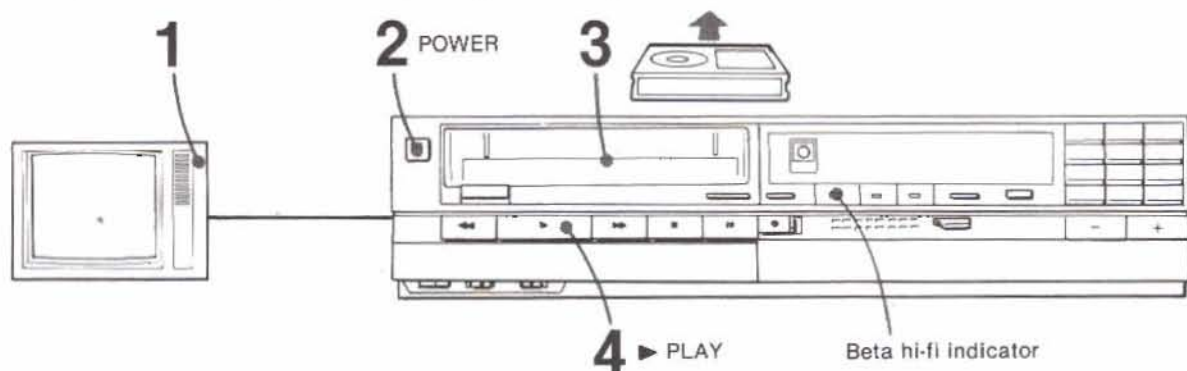
#### ABOUT THE SUPER BETA SWITCH

Normally, keep this switch in the "ON" position to obtain high picture quality recording and playback. Tapes recorded in other non-SuperBeta VCRs can be played on SuperBeta VCRs.

Tapes recorded in SuperBeta can be played on other non-SuperBeta VCRs: However, some over-modulation noise may appear in the picture during playback. If you intend to play back on other non-SuperBeta VCRs, then set the SUPER BETA switch to the "OFF" position when making your recordings.

## PLAYBACK

Numbers in the illustration show the sequence of operation.

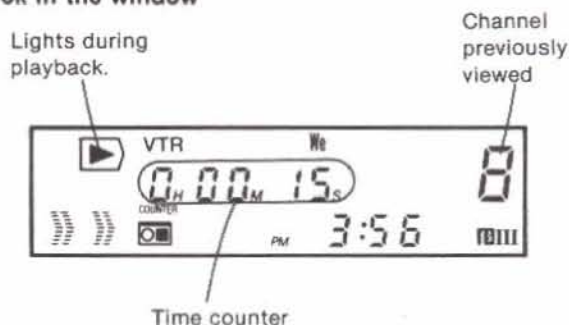


- 1 Turn on the TV and select the channel for the video recorder: channel 3 or 4.
  - 2 Press POWER on the recorder to turn the power on.
  - 3 Insert the cassette.
  - 4 Press **▶** PLAY. Playback will start.
- If the tape reaches the end during playback, the tape will be automatically rewound to the beginning.
  - The Beta hi-fi indicator will light up when a Beta hi-fi recorded tape is played back.

### Notes

- If you are playing back a tape that was recorded on another VCR or on this VCR with the SUPER BETA switch OFF, noise (if any) in the picture may be eliminated by setting the SUPER BETA switch to OFF. Normally, keep this switch at ON.
- To change to channel 3 or 2 on your TV from the channel on which you have been viewing something from the video recorder, be sure to press TV/VTR first and then change to channel 3 or 2 on your TV. If TV/VTR is pressed after channel 3 or 2 is set on your TV, you might not get a picture. In this case, change your TV channel to another channel and then come back to channel 3 or 2.

### Check in the window



## TO SELECT THE MONITOR SOUND



**Playback of Beta hi-fi stereo sound programs**  
Set the above selectors to HI-FI and STEREO.

When the recorder is connected to a Component TV or a stereo system you can enjoy stereo sound reproduction.

When a conventional (monaural) TV is connected, the sound of the left and right channels are mixed so that monaural sound comes from the TV speaker.

**To select the left or right channel of stereo programs**  
Set the above selectors to HI-FI and L or R.  
Select the position L or R to play back the channel you wish to listen to.

### Playback of SAP sound

To listen to the SAP sound that was recorded by setting the NORMAL AUDIO selector to the SAP position, set the MONITOR SELECT (HI-FI/NORMAL) selector to NORMAL.

## WHEN YOU PLAY BACK A TAPE RECORDED ON ANOTHER VCR

- If the VCR on which the tape was recorded is not equipped with the Beta hi-fi system, the recorder will play back the tape in the conventional way.
- If streaks or snow appear, adjust TRACKING for the best possible picture. Return the control to the center position after viewing that tape.



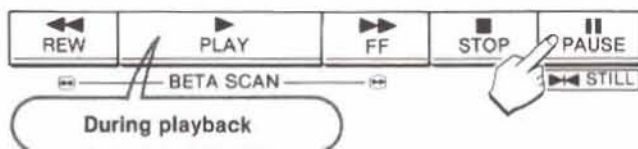
- To get a sharp picture, turn SHARPNESS toward SHARP.



## VARIOUS PLAYBACK MODES

### FREEZE PICTURE

Press **|| PAUSE** during playback.



Sound cannot be heard in the freeze picture or stop-action advance picture.

To resume playback, press **|| PAUSE** again or press **▶ PLAY**.

**If the freeze picture seems to shake**, press STILL ADJ in the tuning compartment until the picture stabilizes. As long as the same TV is used with this VCR, readjustment should not be necessary.

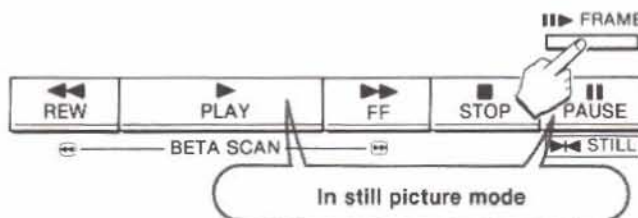
(If the power cord is disconnected or if the power is interrupted for more than a few seconds, this adjustment will be cleared and readjustment will be needed.)

### Automatic pause release

To protect the video heads and the tape, the pause mode will be automatically released after about 8 minutes and playback will resume.

### STOP-ACTION ADVANCE PICTURE

In still picture mode, press **||▶ FRAME**.



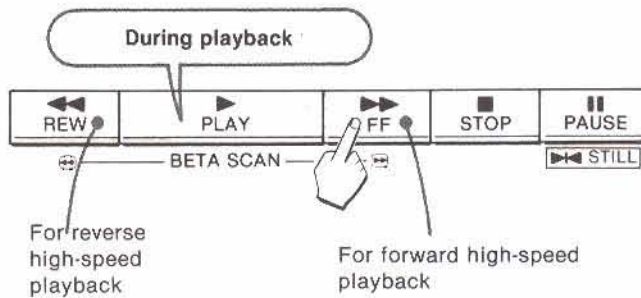
Each time the button is pressed momentarily, the picture advances by one frame. If **||▶ FRAME** is kept depressed, the picture advances frame by frame continuously.

To resume playback, press **|| PAUSE** or **▶ PLAY**.

## USE OF THE TIME COUNTER

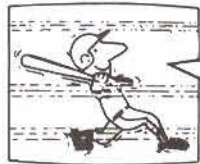
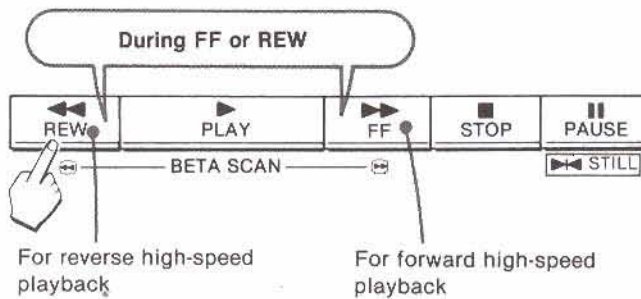
### BETASCAN Viewing the picture at a fast speed to find a particular scene

Press ►► FF or ◀◀ REW during playback. When you release the button, the normal playback will resume.



### BETA SKIPSCAN Viewing the picture momentarily during fast-forward or rewind

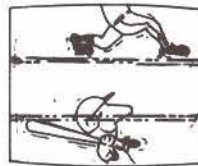
Press ►► FF or ◀◀ REW during fast-forward or rewind mode. When you release the button, the fast-forward or rewind mode will resume.



Streaks will appear and sound will be muted in the Betascan picture or Beta SkipScan picture.

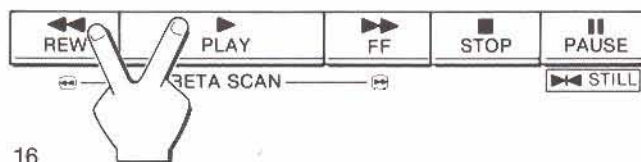
#### Notes

- If the picture rolls vertically, adjust the vertical hold control on the TV.
- During Betascan, the Beta hi-fi indicator may sometimes not light even when a Beta hi-fi recorded tape is played back.
- The pause, Betascan and Beta SkipScan functions cannot be activated with the **BI** recorded tape.



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

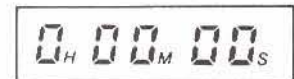
Press ► PLAY while holding ◀◀ REW depressed. After the tape is completely rewound, it will automatically be played back.



The time counter indicates the approximate running time of the tape and the relative position of programs on the tape.

## TO INDEX THE TAPE CONTENTS

Before starting recording or playback, press CLEAR/RESET to set the counter to "0H00M00s". By noting the counter reading at a 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.



#### Notes

- The counter reading is automatically reset to zero when a cassette is newly inserted.
- The counter reading will be retained in the memory even after the power is turned off, as long as the cassette is in the cassette compartment.
- The counter will not advance during any portion of a tape that is blank or unrecorded. So the counter can be used to find unrecorded portions on a tape.

## TAPE RETURN/TAPE RETURN PLAY

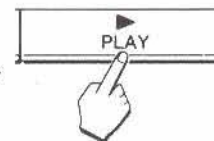
—To stop the tape at a particular point or play back from a particular point

- 1 During recording or playback, press CLEAR/RESET at the point you want to locate later.
- 2 When recording or playback is finished, stop the tape and press TAPE RETURN. The tape will be rewound or advance close to the point where the counter reads "0H00M00s".



To start playback automatically from the "0H00M00s" point

Press ► PLAY after pressing TAPE RETURN.



The **AUTO** and **▶** indicators light in the window during rewinding or fast-forward mode.

The tape return or tape return play can be activated also from the rewind or fast-forward mode.

#### Note

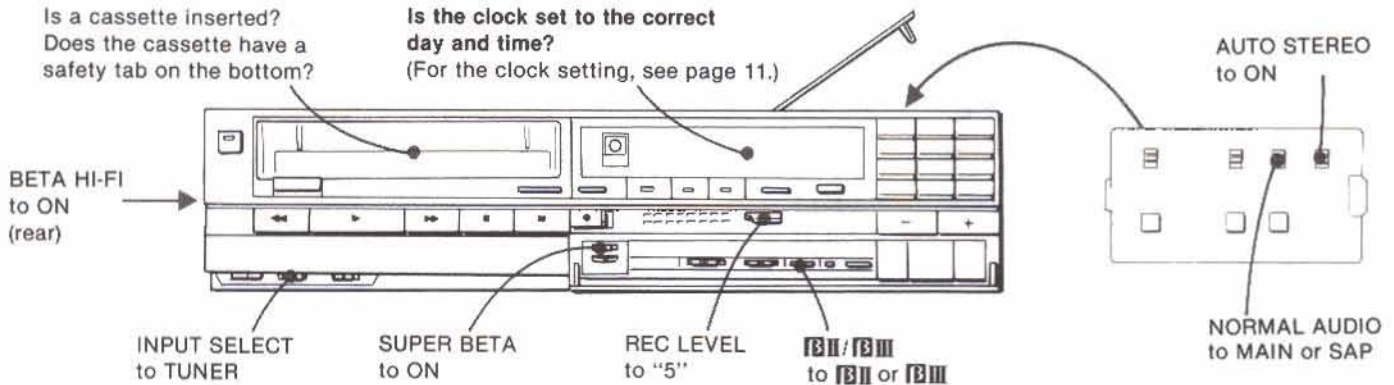
The tape return and tape return play cannot be activated when the counter reading is within  $\pm 0H00M29s$ ".



# TIMER-ACTIVATED RECORDING

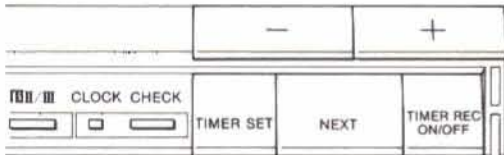
This timer can only be used to start and stop recording. The timer can be set to record up to six different programs on any day and time within following seven days, at the same time everyday or on the same day and time every week.

## Check before setting the timer



## SETTING THE TIMER

Suppose you want to make a recording of channel 6 from 7:10 to 11:15 on Friday evening.



### NEXT button

Every time you press the NEXT button, the item to be preset will blink and you will be setting the item.

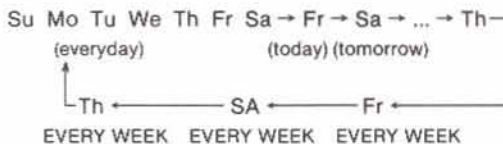
### +/- buttons

To set the day of the week, the time and the channel, press the + button to advance, and the - button to go back.

### Day indication

By pressing the + button, the day indication changes as follows:

Ex. Today is Friday.

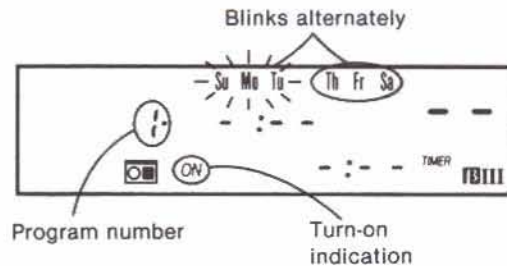


To record at the same time everyday, select "Su Mo Tu We Th Fr Sa".

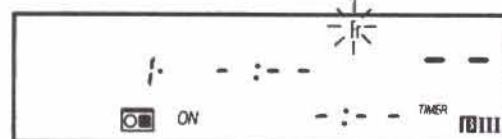
To record at the same time and day every week, select the desired day indication together with "EVERY WEEK" indication.

### 1 Press TIMER SET.

The program number (up to 6) appears. "1" indicates that you are making the first timer setting.



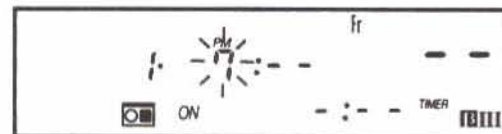
### 2 Set the day with the + or - button.



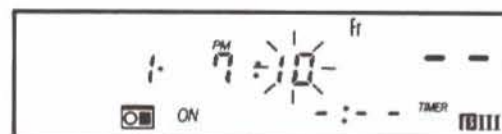
### 3 Press NEXT and set the turn-on hour with the + or - button.

Make sure that AM or PM is properly set.

AM 12:00 = midnight  
PM 12:00 = noon



### 4 Press NEXT and set the minute with the + or - button.



- 5 Press NEXT and set the turn-off time as in steps 3 and 4.



Turn-off indication

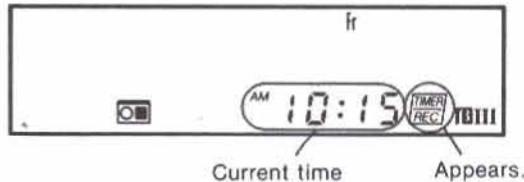
- 6 Press NEXT and set the channel to be recorded with the + or - button.



- 7 Press NEXT.  
The tape counter and the current time will reappear.

To preset another program, press TIMER SET again and repeat steps 2 to 7. Up to 6 program can be preset.

- 8 Press TIMER REC ON/OFF.  
The power will be turned off and the recorder will be in the standby mode.



Current time      Appears.

Recording will start automatically at the preset turn-on time and will stop at the preset turn-off time. The memory of the program except everyday or every week setting will be erased and the program positions preset in the timer will advance one by one.

**NOTICE:**

ONCE THE **TIMER REC** INDICATOR HAS LIT UP, only the functions of CHECK and TIMER REC ON/OFF on the recorder can be activated. To turn on the power again for the usual manual operations, press TIMER REC ON/OFF again so that the indicator turns off. This does "not" affect the memory of the timer. As long as you press it again, timer recording will be made exactly as preset.

**To stop timer recording momentarily**

Press **II** PAUSE.

To resume recording, press the button again within about 8 minutes.

**When the tape ends during timer recording**

The tape stops but will not be rewound to the beginning.

**To record the entire tape**

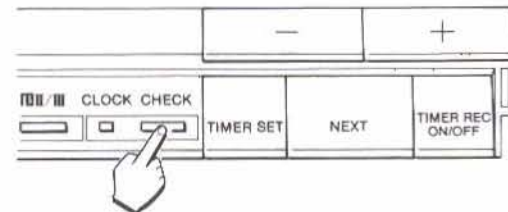
Set the turn-off time to exactly the same time as the turn-on time. Recording will continue to the end of the tape, after which the recorder will be turned off.

**To stop during a timer recording**

Press **TIMER REC ON/OFF**. The recording will stop and the power will be turned off.

**TO CHECK THE TIMER SETTING**

Press **CHECK**. Every time you press **CHECK**, successive preset timer programs will be displayed.



**TO CHANGE A TIMER SETTING**

- 1 Press **CHECK** until the program to be changed appears.
- 2 Press **TIMER SET**.
- 3 Press **NEXT** until the item to be changed blinks.
- 4 Change the setting with the + or - button.
- 5 Press **NEXT** until the time counter and the current time appear.

**TO ERASE THE MEMORY OF A PARTICULAR PROGRAM POSITION**

Press **CHECK** until the program to be erased appears and press **CLEAR/RESET**. The memory of the program will be erased.



## NOTES ON TIMER RECORDING

### Troubles when TIMER REC is pressed

**AUTO** indication blinks in the window and the cassette will be ejected automatically.



The cassette inserted has the safety tab removed.

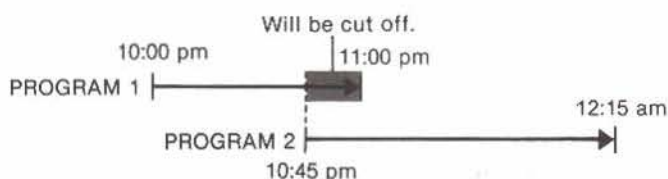
**TIMER REC** does not appear in the window.



The tape is at its end or no cassette is inserted.

### When the presettings of your timer-activated recordings overlap

There will be no error indication to inform you of the overlap. Even if there is an overlap, a recording will be made.



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

### If a power interruption occurs during timer recording

#### If the clock shows "AM 12:00" and blinks

All the timer settings have been erased. Reset the clock and timer setting.

If the interruption occurs during the actual timer-recording, the recording will stop.

#### If the clock goes slow

An interruption of less than a few seconds will not affect the memory of the timer.

The timer memory will be retained and timer recording will be performed although the clock remains as it goes slow by the amount of the interruption.

## QUICK TIMER RECORDING

Use this function to begin recording a program immediately and to turn off the power automatically. You can start timer recording immediately by pressing QUICK TIMER for up to 5 hours by 30 minutes. You can also use this function to extend the non-timer recording of a particular channel.

### TO USE QUICK TIMER FROM THE TAPE STOP MODE

**Make sure that the cassette is inserted.**

1 Press QUICK TIMER.

While the channel number blinks, you can change the channel. If you do not advance to the next step, the recorder will turn off after about 30 seconds.



Cassette is inserted.

Channel previously selected

2 Press QUICK TIMER again.

The recording will start instantly. Choose the recording duration.

Every time you press QUICK TIMER, the indication changes:

0:30→1:00→1:30→2:00.....5:00→0:00



When the recording starts, the time indication decreases minute by minute to 0:00 and the recorder turns off automatically.

### To stop a quick timer recording

Press TIMER REC ON/OFF. The power will be turned off as well.

### TO USE QUICK TIMER WHILE RECORDING

Press QUICK TIMER as many times as required to choose recording duration. Recording will continue within the selected time duration.

### Once the quick timer recording has started

No function button except for the following will activate:

QUICK TIMER.....to change the recording duration

TIMER REC.....to interrupt the quick timer recording

PAUSE.....to stop the quick timer recording momentarily

CHECK.....to check the timer programs preset

### When a power interruption occurs during quick timer recording

The recording stops.

It will start again if the power is supplied within few seconds.

### When the tape comes to an end before the preset turn-off time

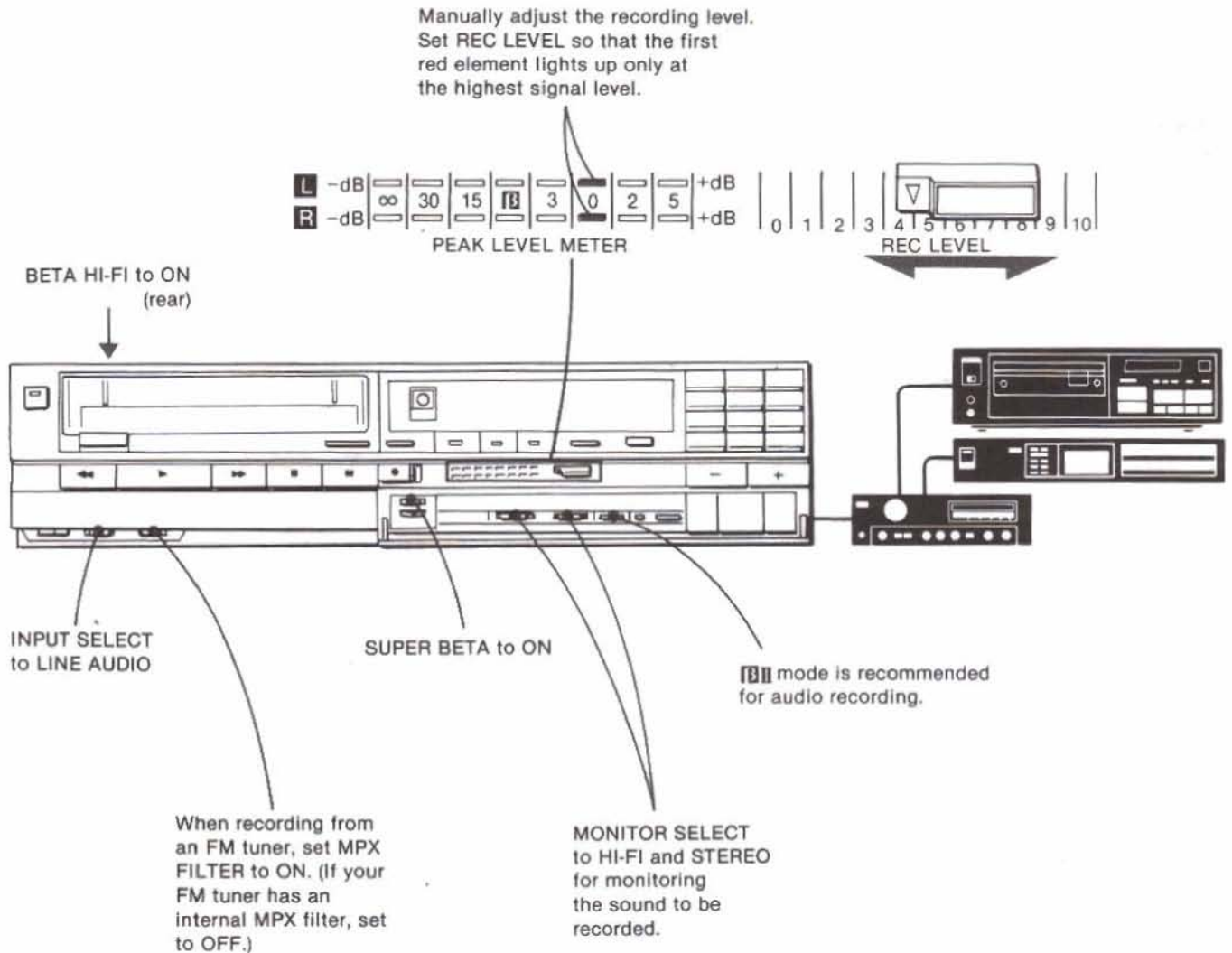
The recording stops and the recorder will be automatically turned off after about 30 seconds.

# ADVANCED OPERATIONS

## BETA HI-FI AUDIO RECORDING

### RECORDING FROM YOUR AUDIO SYSTEM

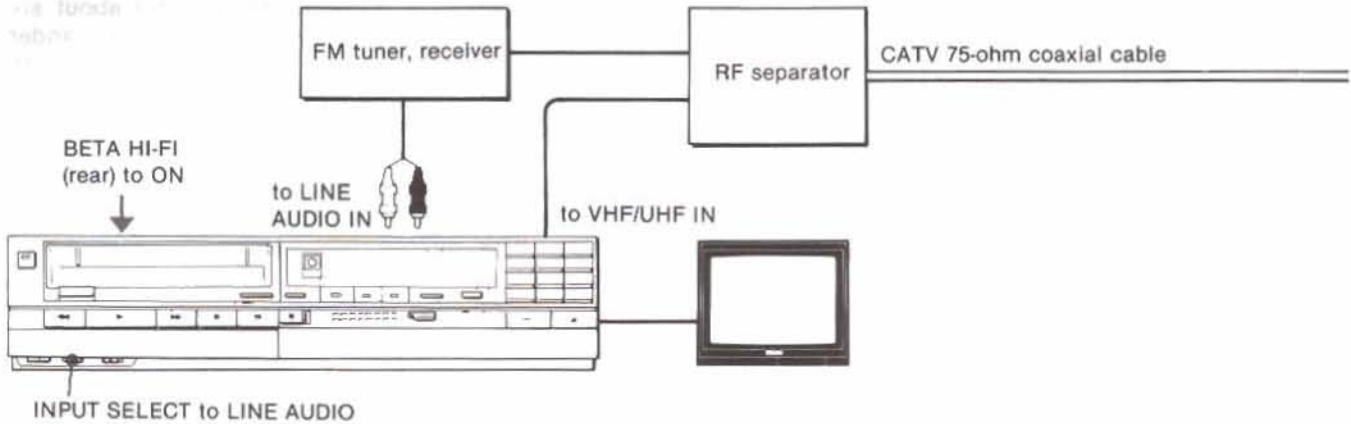
To connect the recorder to your audio system, see page 7.  
Set the switches as shown below. To start recording, insert a cassette and slide ● REC to the right.



## FM SIMULCAST RECORDING

By connecting an FM stereo tuner to the LINE AUDIO IN jacks besides the CATV cable connection, you can record a CATV program with stereo sound, such as MTV (music TV), whose audio signals are divided into the FM tuner from the cable.

For FM simulcast recording, set **INPUT SELECT** to **LINE AUDIO**. The sound from the FM tuner is recorded on the video track (Beta hi-fi recording), while the TV sound is recorded on the conventional audio track.



## TIMER-ACTIVATED FM RECORDING

Use an optional program timer to turn the audio system on and off.



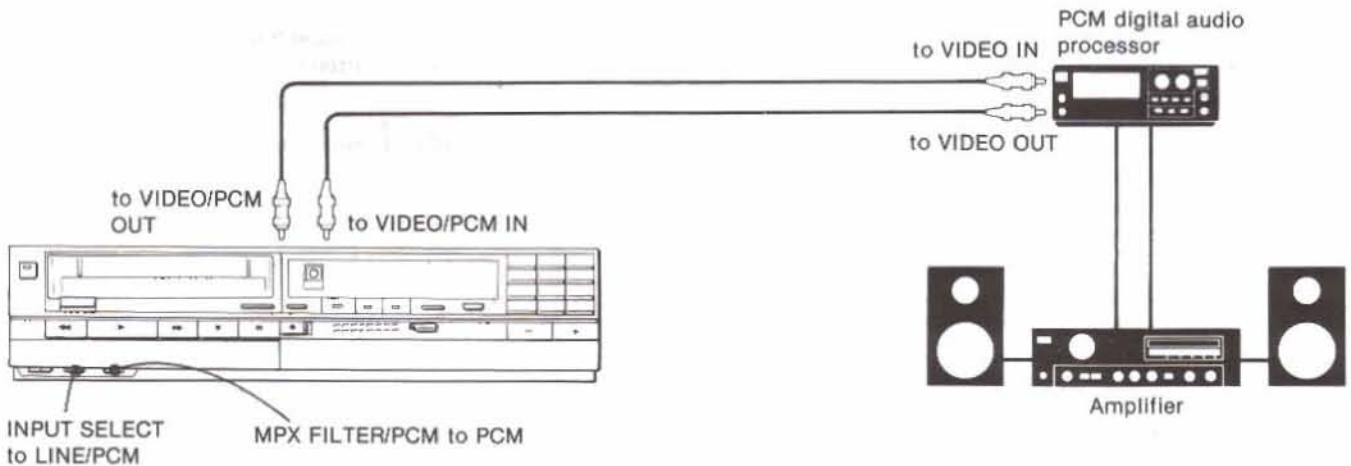
The settings of the controls is the same as in "RECORDING FROM YOUR AUDIO SYSTEM".

Set the recorder's timer and a program timer to the

same turn-on and turn-off time. The settings on the recorder's timer are the same as in "TIMER-ACTIVATED RECORDING" on page 17.

## PCM RECORDING AND PLAYBACK

Connect a PCM digital audio processor as shown below.



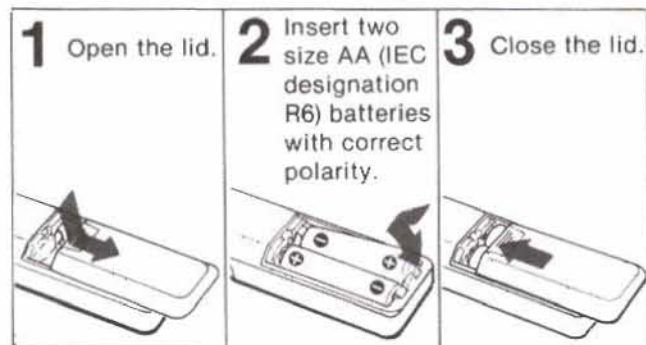
For PCM recording, set **INPUT SELECT** to **LINE/PCM** and **MPX FILTER/PCM** to **PCM**. For optimum results, use a video cassette with a model number of L-500 or

below (L-250, L-125, etc.) and select **II** recording mode. For details, refer to the instruction manual furnished with the digital audio processor.

# REMOTE CONTROL OPERATION

You can control almost all the functions of this video cassette recorder from your armchair using the supplied Remote Commander.

## BATTERY INSERTION



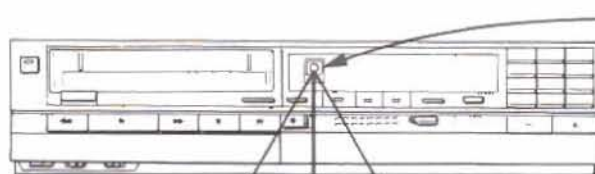
### Battery life

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

**If the Remote Commander is not to be used for a long period of time, remove the batteries to avoid possible damage from battery leakage.**

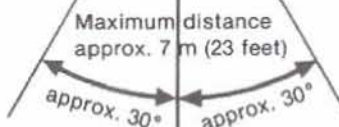
## OPERATION

The shorter the distance between the Remote Commander and the recorder, the wider the angle within which the recorder can be controlled.



**Remote sensor**  
Point the Commander here.

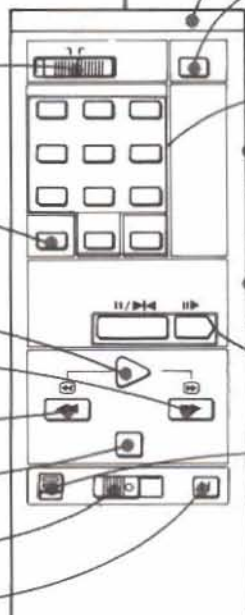
There should be no obstacle between the Commander and the remote sensor.



**Remote control TV/VTR selector**  
Normally set to VTR for operating the recorder. To operate the TV, set to TV.

**DISPLAY button\***  
Used for TV operation only.  
Press to retain or extinguish the on-screen display of the TV.

- ▶ (play)
- ▶▶ (fast forward)
- ◀◀ (rewind)
- (stop)
- (record)
- || (pause)



**Indicator**  
Lights up when any of the buttons on the Commander is pressed.

**POWER switch\***

**TV/VTR button\***

**Channel number buttons and ENTER button\***

**VOL +/- (volume) button\***  
Used for TV operation only.  
Press "+" to increase volume, and "-" to reduce volume.

**CH +/- (channel scan) button\***

||/|| PAUSE/STILL  
||▶ FRAME

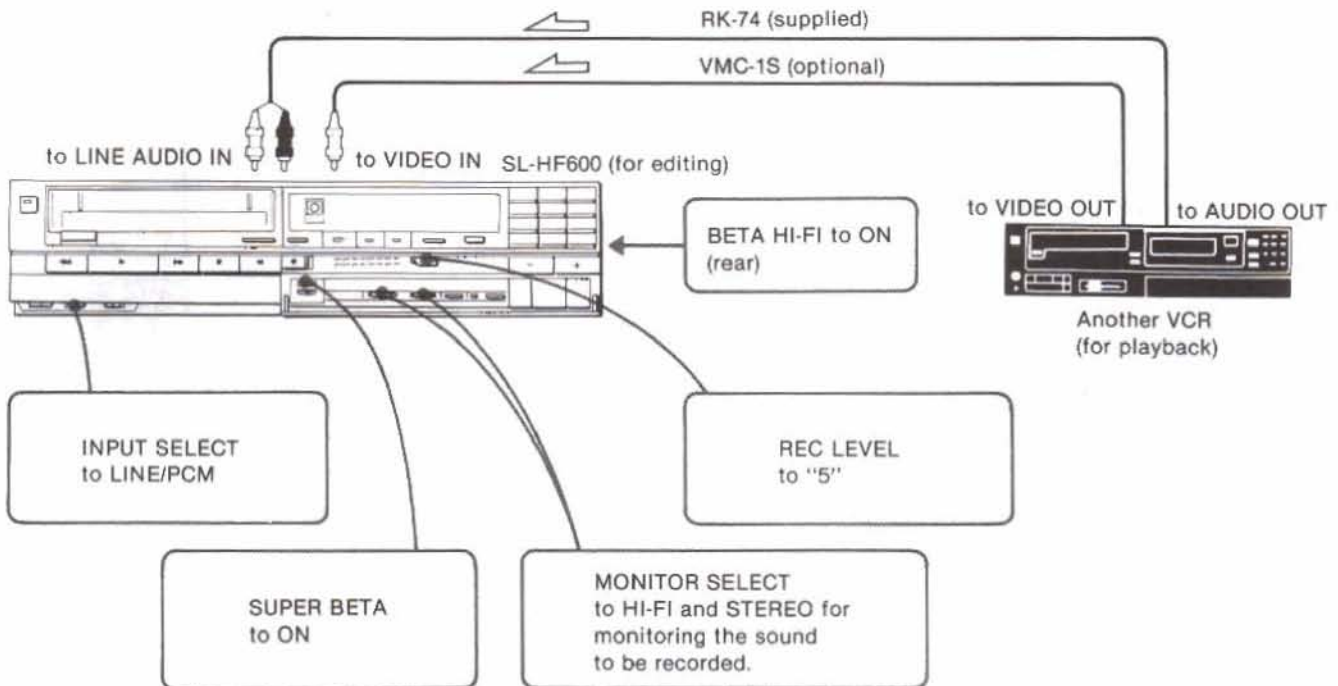
**REC HOLD (recording hold) switch**  
When this switch is slid downwards, ■ button on the Commander is not operable. This prevents accidental interruption of recording.

● The buttons with \* mark are functional also for/only for Sony remote control TVs. As the functions are limited depending on the TV, refer to the instruction manual of the TV for details.

## EDITING A TAPE

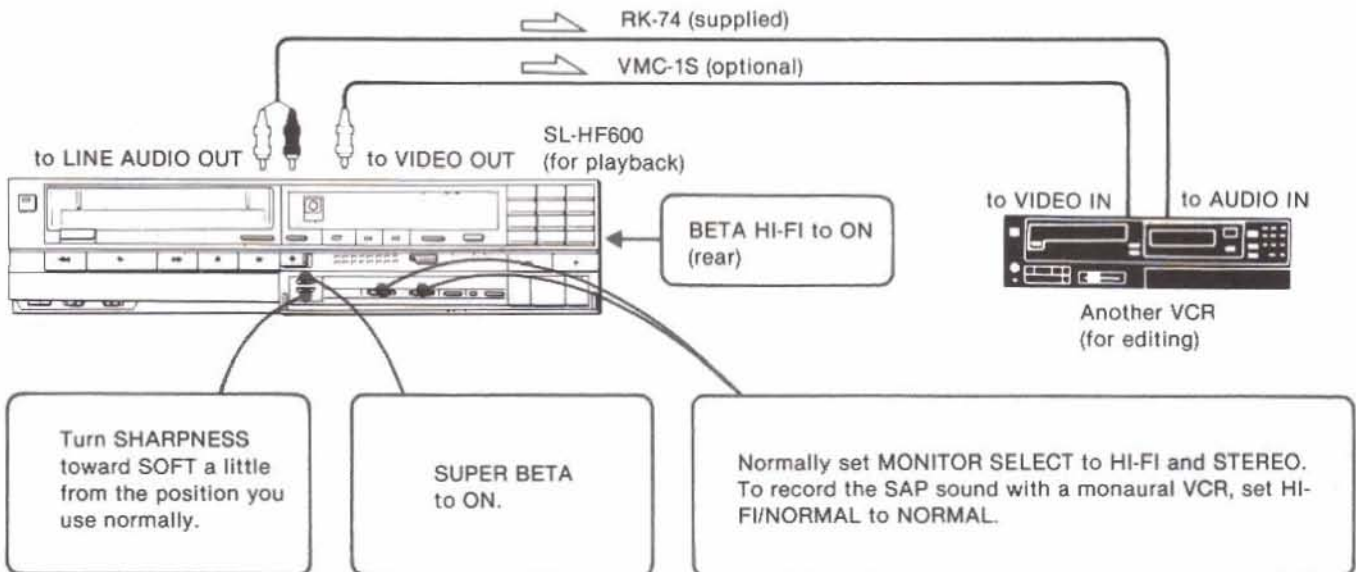
To edit a home movie tape, you will need two video cassette recorders. Set the controls as shown below.

### TO EDIT FROM ANOTHER VCR TO THE SL-HF600



To start editing, set the other VCR in playback mode and the SL-HF600 in recording mode.

### TO EDIT FROM THE SL-HF600 TO ANOTHER VCR



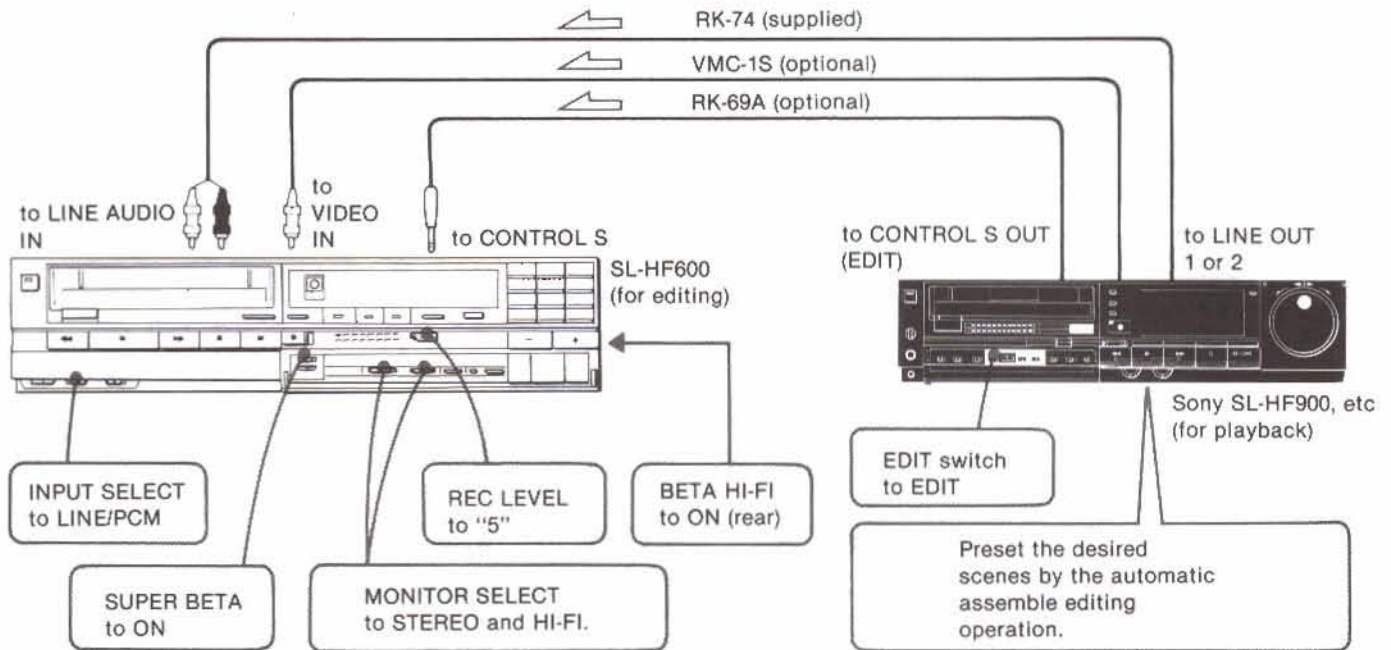
To start editing, set the SL-HF600 in playback mode and the other VCR in recording mode.

#### CAUTION

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

## TO EDIT FROM A VCR EQUIPPED WITH THE CONTROL S (EDIT) OUTPUT

Only the particular scenes preset on the playback VCR will be edited (automatic assemble editing). Recording start/stop on the SL-HF600 can be activated in synchronization with playback start/stop on the playback VCR.



**To start editing**, set the SL-HF600 in recording pause mode and then follow the instruction manual of the playback VCR for the automatic assemble editing.

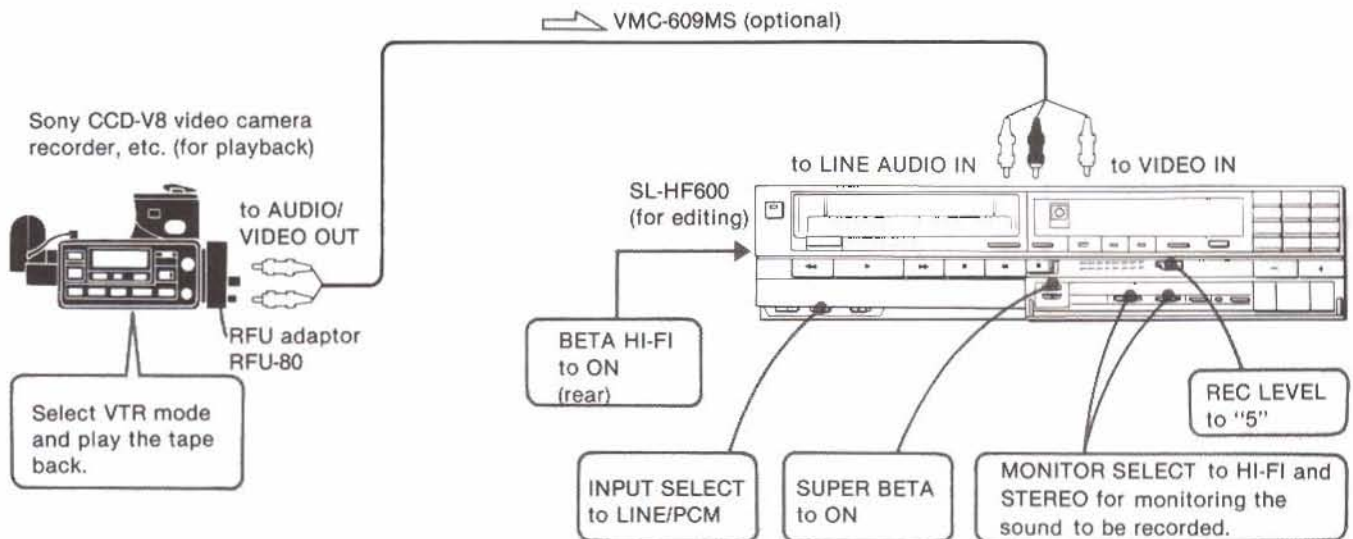
- The optional RM-E100 video editing controller allows easier editing between two VCRs.
- The required connecting cords may differ depending on VCRs. Refer to the instruction manual of the VCR.

### Note

Avoid repetition of editing tapes, as the picture and tone quality will be impaired noticeably for newly edited tapes.

## TO EDIT FROM A VIDEO CAMERA RECORDER

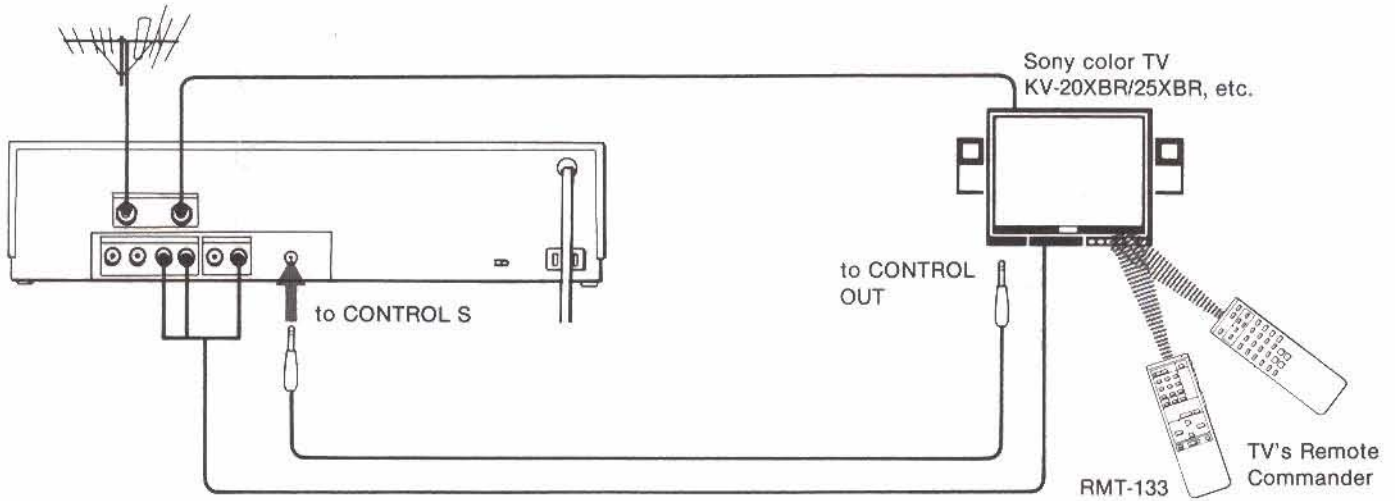
An 8 mm format cassette filmed with a video camera recorder can be edited to a **B** format cassette.





### Use of the CONTROL S input jack

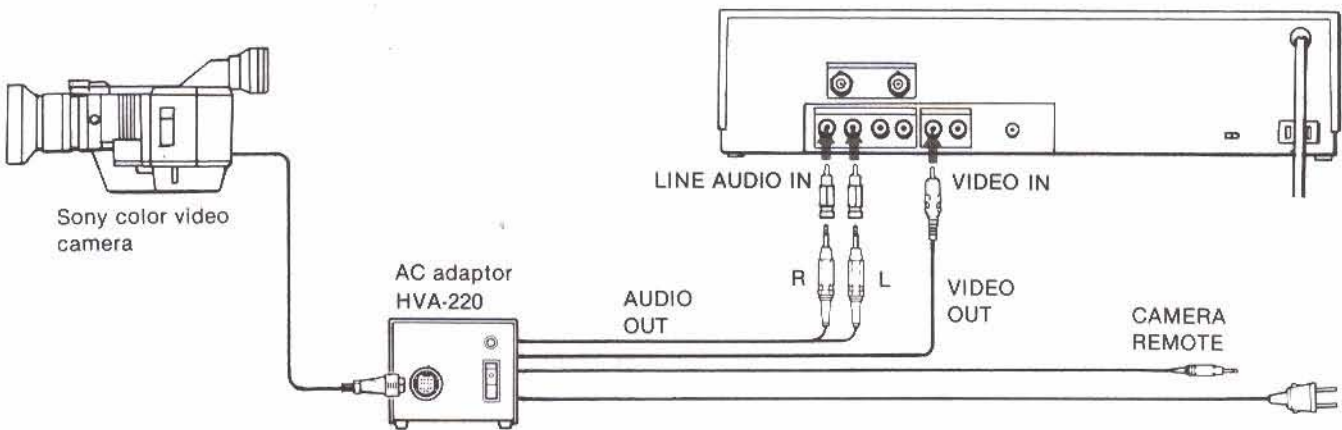
If this jack is connected to the CONTROL (S) OUT jack of a Sony color TV or TV tuner, this recorder can be controlled by pointing the supplied RMT-133 Remote Commander toward the remote sensor on the color TV or TV tuner.



## CAMERA RECORDING

### CONNECTIONS

- The camera must conform to American TV (EIA) standards.
- The use of a Sony HVA-220 ac adaptor is required.



### OPERATION

Set INPUT on the recorder to LINE/PCM.

To start recording, slide REC on the recorder or on the Remote Commander to the right.

To stop recording, press ■ STOP on the recorder or on the Remote Commander.

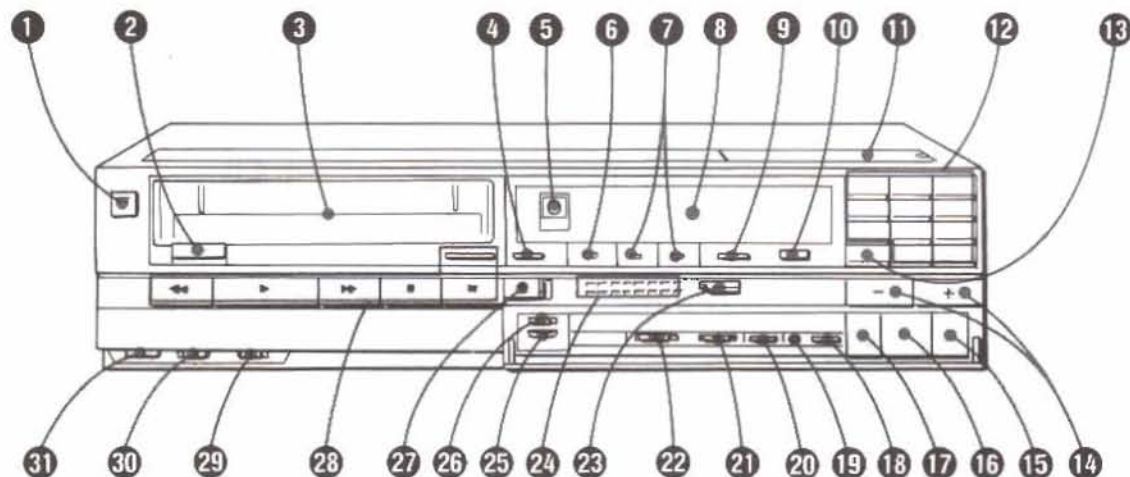
To stop recording momentarily, press ■ PAUSE on the recorder or on the Commander.

The tape run/stop button on your camera will not function with this recorder.

# GENERAL

## LOCATION AND FUNCTION OF CONTROLS

Front



### 1 POWER switch and indicator

Press to turn the power on. The indicator 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.

### 2 EJECT button

Press this button to eject the cassette. In playback, rewind and fast-forward operations, if EJECT is pressed, tape transportation will stop and the cassette will be ejected.

### 3 Cassette compartment

Insert a cassette here. To eject the cassette, press EJECT.

### 4 TAPE RETURN button

In stop mode, press to advance or rewind the tape to the counter "0:00:00s" point approximately. When PLAY is pressed after TAPE RETURN, playback will start automatically after rewinding or fast-forward mode.

### 5 Remote sensor

Detects the infrared transmitting signal from the supplied Remote Commander.

### 6 Beta hi-fi indicator

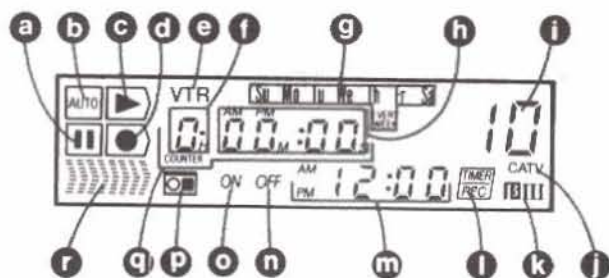
When recording with the BETA HI-FI switch at ON, this indicator lights up. When playing back a Beta hi-fi recorded tape, the indicator lights up regardless of the BETA HI-FI selector's position.

### 7 STEREOCAST indicators

**STEREO:** This indicator lights up when a stereo broadcast is received with the AUTO STEREO switch set to ON.

**SAP (Second Audio Program):** This indicator lights to show that the NORMAL AUDIO selector is set to SAP.

### 8 Display window



a Lights during pause.

b Lights when auto play, tape return, tape return play or automatic cassette eject is engaged.

c Lights during playback.

d Lights during recording.

e Indicates VTR mode.

f Indicates the timer program position during timer setting.

g Day-of-the-week indicators

h Indicates the turn-on time of the timer during timer setting.

i Channel number. When INPUT SELECT is set to LINE/PCM, this number will disappear.

j Lights when NORMAL/CATV is set to CATV.

k Recording mode indicator

l Lights when TIMER REC ON/OFF or QUICK TIMER is pressed.

m Clock display. During timer setting, the turn-off time is displayed.

n Turn-off indicator

o Turn-on indicator

p Lights when a cassette is inside.

q Time counter. Indicates the approximate tape running time.

r A sequence of arrows shows the speed and direction of tape movement.

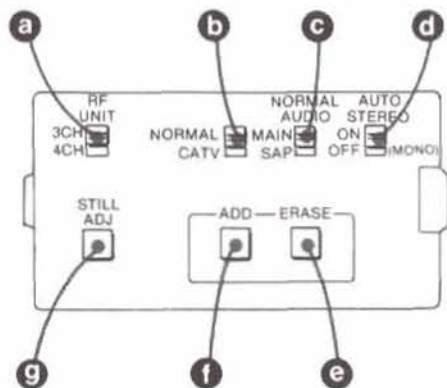
### 9 CLEAR/RESET button

Press the button to reset the time counter to "00:00:00s" and also to clear the timer setting.

### 10 QUICK TIMER button

Press to start the timer recording quickly. The recording time is selected in 30 minute intervals, from 0:30 to 5:00. Press this button as many times as required until the desired recording time is displayed.

### 11 Tuning compartment



#### a RF UNIT selector

Select the channel for the VCR program and the output from the VHF/UHF OUT connector. Set the selector to 3 CH or 4 CH, whichever is not active in your area.

#### b NORMAL/CATV selector

Set to NORMAL to view normal TV programs and to CATV to view cable TV programs.

#### c NORMAL AUDIO (MAIN/SAP) selector

Select the sound to be recorded on the conventional audio track. Normally set to MAIN. If a Multichannel TV Sound broadcast is received, the MAIN sound will be recorded. To record SAP sound, set to SAP.

#### d AUTO STEREO switch

Normally set to ON. A stereo broadcast will be received in stereo. When there is excessive noise in a stereo program due to a weak incoming signal, set the switch to OFF. The noise will be reduced but the sound will become monaural.

#### e ERASE button

Press to erase inactive channels.

#### f ADD button

Press to add desired channels when presetting channels.

#### g STILL ADJ. (adjust) button

If the freeze picture seems to shake, press this button until the picture stabilizes.

### 12 Channel number buttons and ENTER button

Press to select the TV channels directly. First press the numerals of the desired channel and then press ENTER.

### 13 TV/VTR button

Press this button to view the program selected on the recorder. The VTR indication appears in the display window.

To view a different TV program than the one being recorded, press the button again so that the VTR indication disappears.

When you press ► PLAY, the VTR indication reappears.

### 14 +/- buttons

Press to select the channels and to set the clock or timer programs.

### 15 TIMER REC ON/OFF button

Press to activate the timer recording. To deactivate the timer recording (including quick timer recording), press again.

### 16 NEXT button

Press to advance to the next item to be set during clock or timer setting.

### 17 TIMER SET button

Press this button as the first step in setting or resetting timer recording.

### 18 CHECK button

Press to check the contents of the timer presettings.

### 19 CLOCK button

Press this button as the first step in setting the current time.

### 20 II/III (recording mode) selector

This selects the recording mode, II or III. The recording time of any given cassette in the III mode is 1.5 times that in the II mode.

The playback speed is automatically set regardless of this selector's position.

### 21 MONITOR SELECT HI-FI/NORMAL selector

Select the sound to be played back.

HI-FI: Normally set to this position. The sound recorded on the video track in Beta hi-fi will be heard.  
NORMAL: To monitor the sound recorded on the conventional audio track.

### 22 MONITOR SELECT STEREO/L/R selector

Select the channel(s) of the Beta hi-fi sound to be played back.

STEREO: Usually set to this position. The stereo sound will be heard.

L: To monitor the L channel of a stereo program.

R: To monitor the R channel of a stereo program.

**24 REC LEVEL control**

Adjust the recording level when the BETA HI-FI selector is set to ON. Usually set to 5 (green position). When you record sound from other audio equipment, adjust manually to the proper position to get the optimum result.

**24 PEAK LEVEL METER**

This meter shows the peak input level of the right and left channels during Beta hi-fi recording. During playback, this meter shows the recorded level.

**25 SHARPNESS control**

Adjusts the sharpness of the picture if necessary. Usually set the control at the center detent position.

**26 SUPER BETA switch**

Normally keep this switch ON to obtain high quality recording/playback picture.

Only if by setting this switch to "OFF", over-modulation in the playback of tapes recorded or played back on other VCRs seems to be eliminated, set this switch to "OFF".

**27 ● REC (record) button**

Slide to the right to start recording.

**28 Tape transport buttons**

◀◀ **REW (rewind) button:** Pressing this button during playback enables you to view high-speed playback in reverse (Betascan).

▶ **PLAY button:** Press to play back a tape. Also used for auto play and tape return play.

▶▶ **FF (fast-forward) button:** Pressing this button during playback enables you to view high-speed playback (Betascan).

■ **STOP button:** Press to stop the tape running.

|| **PAUSE/▶◀ STILL button:** Press to stop the tape momentarily during recording or playback. A freeze picture will be seen during playback. Press again to release pause mode.

||▶ **FRAME button:** During pause of playback (freeze picture mode), press to advance the picture by one frame (stop-action advance picture).

**29 MPX FILTER/PCM selector**

MPX FILTER OFF: Usually set to this position.

MPX FILTER ON: for recording FM broadcast programs (Only if your FM tuner has an internal MPX filter, set to OFF.)

PCM: for PCM recording

The setting of this selector is not necessary for TV recordings.

**30 INPUT SELECT switch**

Select the program to be recorded.

TUNER: for recording TV programs

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

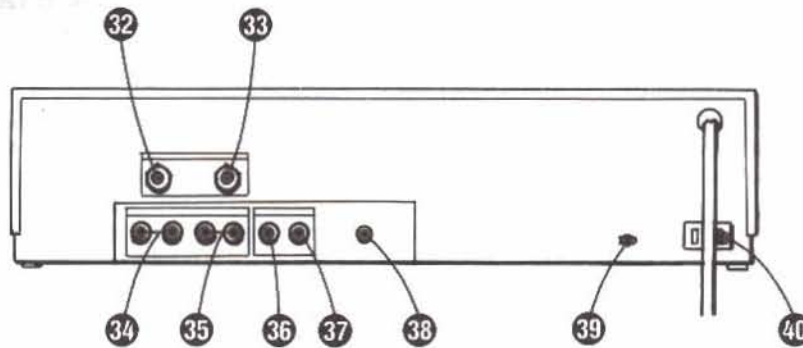
LINE AUDIO: for recording sound from LINE AUDIO IN and picture of TV program on FM simulcast recording

**31 TRACKING control**

If streaks or snow appears in the playback of a cassette which has been recorded on another video cassette recorder, turn this control to obtain the best possible picture. Return the control to the center position after viewing the cassette.

The center detent position provides the correct tracking for the cassettes recorded on this recorder.

Rear



**32 VHF/UHF IN connector (F-type)**

Connect the VHF and/or UHF antenna cable(s).

**33 VHF/UHF OUT connector (F-type)**

Connect to the VHF and/or UHF antenna terminal(s) of a TV receiver. The signal of a VCR program converted to channel 3 or 4 and the VHF/UHF TV signal will be supplied to the TV receiver.

**34 LINE AUDIO IN jacks (phono type)**

Connect to the line outputs of a sound source such as a tape recorder, an amplifier or a tuner, or the audio outputs of another video cassette recorder.

**35 LINE AUDIO OUT jacks (phono type)**

Connect to the audio inputs of a color monitor, TV or another video cassette recorder, or connect to the line inputs of a stereo system.

**36 VIDEO/PCM IN jack (phono type)**

Connect to the video output of another video cassette recorder, camera adaptor, etc. For PCM recording, connect a PCM digital audio processor here.

**37 VIDEO/PCM OUT jack (phono type)**

Connect to the video input of a color monitor, TV or another video cassette recorder. For PCM playback, connect a PCM digital audio processor here.

**38 CONTROL S input jack (mini type)**

Connect to the CONTROL S output jack of other Sony products for various systematic operations.

When this jack is connected to the CONTROL S OUT (EDIT) jack of the Sony SL-HF900 video cassette recorder, automatic assemble editing operation of the SL-HF900 can be activated with this recorder.

**39 BETA HI-FI selector**

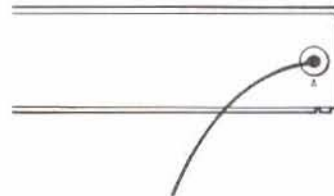
ON: Normally, set to this position. Recording will be done in Beta hi-fi. (A tape not recorded in Beta hi-fi will be played back conventionally.)

OFF: Set to this position when recording only in the conventional (not Beta hi-fi) system.

**40 AC OUTLET**

This unswitched outlet supplies ac power to video or audio equipment with power consumption under 400 watts.

**For the type 2 and type 3 models only**









**Voltage selector**

Turn this selector so that the arrow under the selector points to the operating voltage of your area.

# SPECIFICATIONS

## System

Video recording system	Rotary two-head helical scanning
Audio recording system	Beta hi-fi system (2 channels) (Recording on the conventional audio track is monaural.)
Video signal	EIA standard, NTSC color
Usable cassettes	Cassettes having the mark   : 1.33 cm/sec.  : 2.0 cm/sec.  : 4.0 cm/sec. (only for playback)
Maximum recording time	 : 5 hours  : 3 hours 20 min. (with sony L-830 cassette)
Fast-forward and rewind time	Approx. 3½ min.(L-500)
Audio frequency response	Beta hi-fi OFF  : 50–10,000 Hz  : 50–7,000 Hz Beta hi-fi MPX FILTER OFF  ,  : 20–20,000 Hz
Wow and flutter	Beta hi-fi ON Less than 0.005% WRMS
Dynamic range	Beta hi-fi ON More than 80 dB

## Tuner section

Channel coverage	VHF channels 2 to 13 UHF channels 14 to 69 Cable TV channels 1 to 125
VHF output signal	Channel 3 or 4 (selected) 75 ohms, unbalanced
Antenna	75-ohm antenna terminal for VHF and UHF

## Inputs and outputs

Video input	Phono jack (1) 1 V p-p ±0.5 V p-p, 75 ohms, unbalanced, sync negative
Video output	Phono jack (1) 1 V p-p ±0.5 V p-p, 75 ohms, unbalanced, sync negative
Audio input	Phono jack (2) –10 dBs (0 dBs = 0.775 V rms), more than 47 k ohms
Audio output	Phono jack (2) –10 dBs (at load impedance 47 k ohms) more than 10 k ohms
Control S input	Minijack (1)

## Timer section

Clock	Synchronized with the power frequency
Time indication	12-hour cycle
Timer setting	Only to start and stop recording 6 programs can be set over 7 days, or every week

## General

Power requirements	<b>Type 1:</b> 120V ac ±10%, 50/60 Hz ±0.5% <b>Type 2:</b> 100, 120, 220 or 240 V ac ±10%, 50/60 Hz ±0.5% <b>Type 3:</b> 120, 220 or 240 V ac ±10%, 50/60 Hz ±0.5%
Power consumption	44 W
AC outlet	Unswitched max. 400 W
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	Approx. 430 × 105 × 382 mm (w/h/d) (17 × 4¼ × 15⅞ inches) incl. projecting parts and controls
Weight	Approx. 10 kg (22 lb 1 oz) net
<b>Remote Commander RMT-133</b>	
Remote control system	Infrared control
Power requirements	3 V dc, 2 size AA batteries (IEC designation R6)
Dimensions	Approx. 57 × 20 × 175 mm (w/h/d) (2¼ × ¾ × 7 inches) incl. projecting parts and controls
Weight	Approx. 135 g (4.3 oz) incl. batteries

## Accessories supplied


Remote Commander RMT-133
EAC-25 external antenna connector (300-ohm to 75-ohm matching transformer) (1)
75-ohm coaxial cable with F-type connectors 2 m (6 feet) long (1)
Connecting cord RK-74 (1)
AC power plug adaptor (1) (only for the type 2 models available at the PX)
EAC-24 external antenna connector (1) (only for the type 1 models outside the U.S.A. and Canada)

Design and specifications subject to change without notice.

## TROUBLE CHECKS

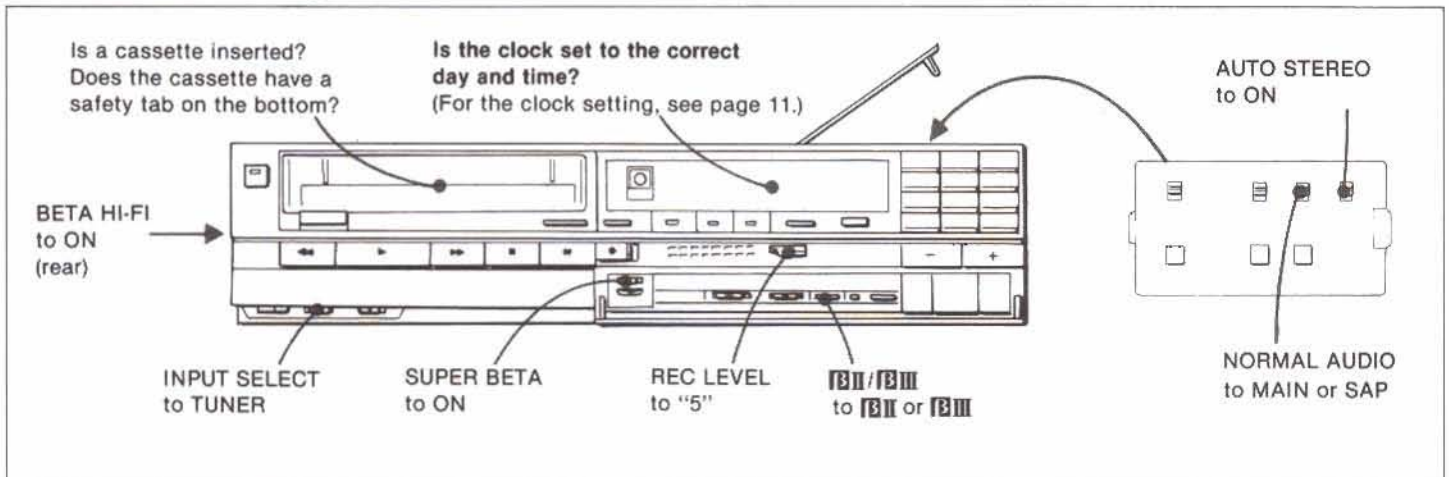
If any difficulty should arise during operation, first check the power cord connection, then go through the following list.

Should the difficulty persist, unplug the unit and contact your Sony dealer or local authorized Sony service facility.

	Symptom	Possible causes and corrections
POWER	POWER switch does not function.	<ul style="list-style-type: none"> <li>The recorder is in the timer standby mode. Press TIMER REC ON/OFF.</li> </ul>
	The clock has stopped at "Su AM 12:00".	<ul style="list-style-type: none"> <li>There has been a power interruption. Reset the clock time and timer settings.</li> </ul>
CLOCK AND TIMER	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 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 TV signal is weak. Adjust the direction of the antenna.</li> <li>The ac power cord of the recorder is disconnected.</li> </ul>
TV RECEPTION	Stereo programs are heard in monaural.	<ul style="list-style-type: none"> <li>AUTO STEREO is set to OFF.</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> </ul>
	Picture being recorded cannot be monitored on the TV screen.	<ul style="list-style-type: none"> <li>Press TV/VTR so that the VTR lights in the window.</li> </ul>
	Noisy picture	<ul style="list-style-type: none"> <li>The video heads may be contaminated. Clean the heads using the Sony L-25CL video head cleaning cassette. For details on cleaning, refer to the instructions furnished with the cleaning cassette. If the L-25CL cleaning cassette is not available in your area, have the heads cleaned at the nearest Sony service facility.</li> </ul>
	Distorted or noisy sound	<ul style="list-style-type: none"> <li>Recording level was not properly adjusted.</li> </ul>
	Sound drop-outs of a Beta hi-fi recorded tape	<ul style="list-style-type: none"> <li>The tape is defective. Use a new video cassette tape.</li> </ul>
	Timer recording cannot be made correctly.	<ul style="list-style-type: none"> <li>The clock time is not set correctly.</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 tape is at its end.</li> <li>Two or more timer settings overlap.</li> </ul>
	SAP sound cannot be recorded.	<ul style="list-style-type: none"> <li>Set NORMAL AUDIO to SAP. To listen to the SAP, set MONITOR SELECT (HI-FI/NORMAL) to NORMAL.</li> </ul>
	No sound was recorded in the conventional audio track.	<ul style="list-style-type: none"> <li>NORMAL AUDIO was set to SAP and there was no SAP broadcast.</li> </ul>
	SAP sound cannot be played back.	<ul style="list-style-type: none"> <li>Set MONITOR SELECT HI-FI/NORMAL to NORMAL.</li> </ul>
	No sound is heard during playback.	<ul style="list-style-type: none"> <li>A tape on which no sound is recorded on the conventional audio track is being played back with MONITOR SELECT HI-FI/NORMAL set to NORMAL. Set the switch to HI-FI.</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>
	Cassette cannot be inserted.	<ul style="list-style-type: none"> <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>Recording is being done.</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 immediately after the cassette has been inserted into the recorder.	<ul style="list-style-type: none"> <li>The safety device has activated. Press  EJECT to remove the cassette and re-insert the cassette.</li> </ul>

# TIMER SETTING GUIDE

## Check before setting



## Set the timer

