

SONY

3-751-853-23 (2)

Video TV Recorder **8**

GV-300

Operating Instructions

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

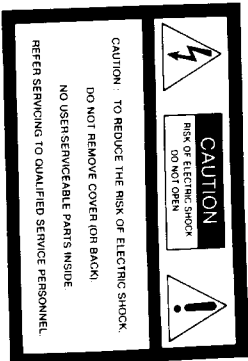
VIDEO
WALKMAN



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WARNING

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



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



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

Owner's Record

The model and serial numbers are located on the bottom. 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. GV-300

Serial No. _____

INFORMATION

This equipment generates and uses radio frequency energy and if not installed and used properly, 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 to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, 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.

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.

PCM recording/playback is not possible with this unit. The PCM sound recorded with another recorder cannot be played back with this unit.

For using this unit abroad, see page 72.

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The "Video Walkman" GX-300 is an 8mm video recorder with a LCD (Liquid Crystal Display), its compact and lightweight design allows you to watch TV programs and video tapes anywhere and anytime you like.

With this video TV recorder, you can:

- view the playback picture of 8 mm video tapes.
- view TV programs.
- record TV programs.

In addition, by connecting it to a video camera (not supplied), you can record pictures with the camera, and play back the recorded pictures on it immediately.

Other features

- **Hi-Fi stereo for high quality sound ***
- Stereo TV tuner for enjoying stereo programs
- Index function for finding the desired scenes quickly
- CRYSTAL CLEAR still/slowpicture search on LCD
- Timer-activated recording
- SLEEP timer for turning off the unit automatically
- MEGA BASS circuit for dynamic bass sound
- Playback of tapes recorded in Hi8 video system

* Hi-Fi Stereo System

On the 8 mm video standard track, the sound is recorded/played back in Hi-Fi monaural. The PCM digital stereo sound is recorded/played back on the PCM track as an option.

With this unit, Hi-Fi stereo sound can be recorded on the standard track.

To maintain compatibility with the conventional Hi-Fi monaural equipment, the Hi-Fi stereo sound is recorded as L — R sound using the 1.7 MHz carrier and L + R sound using the 1.5 MHz carrier as the FM audio signal.

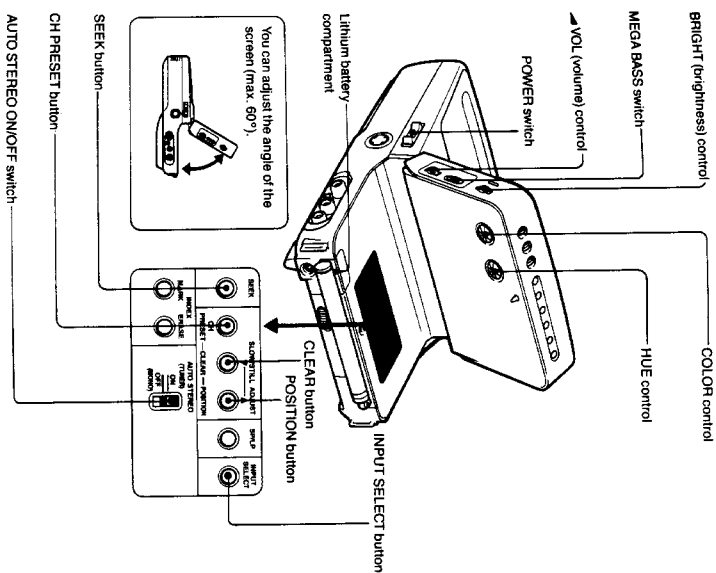
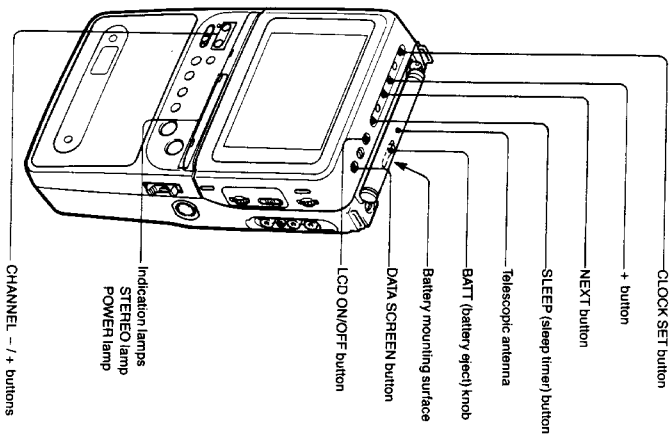
To play back the tape recorded by its Hi-Fi stereo system, this unit uses a matrix circuit to produce the L and R stereo sounds separately. When conventional Hi-Fi monaural equipment is used to play back a tape recorded in Hi-Fi stereo, it will produce the L + R monaural sound because it can reproduce only the 1.5 MHz carrier.

The Hi-Fi stereo system of this unit provides a live stereo sound atmosphere even when using the 8 mm video standard track.

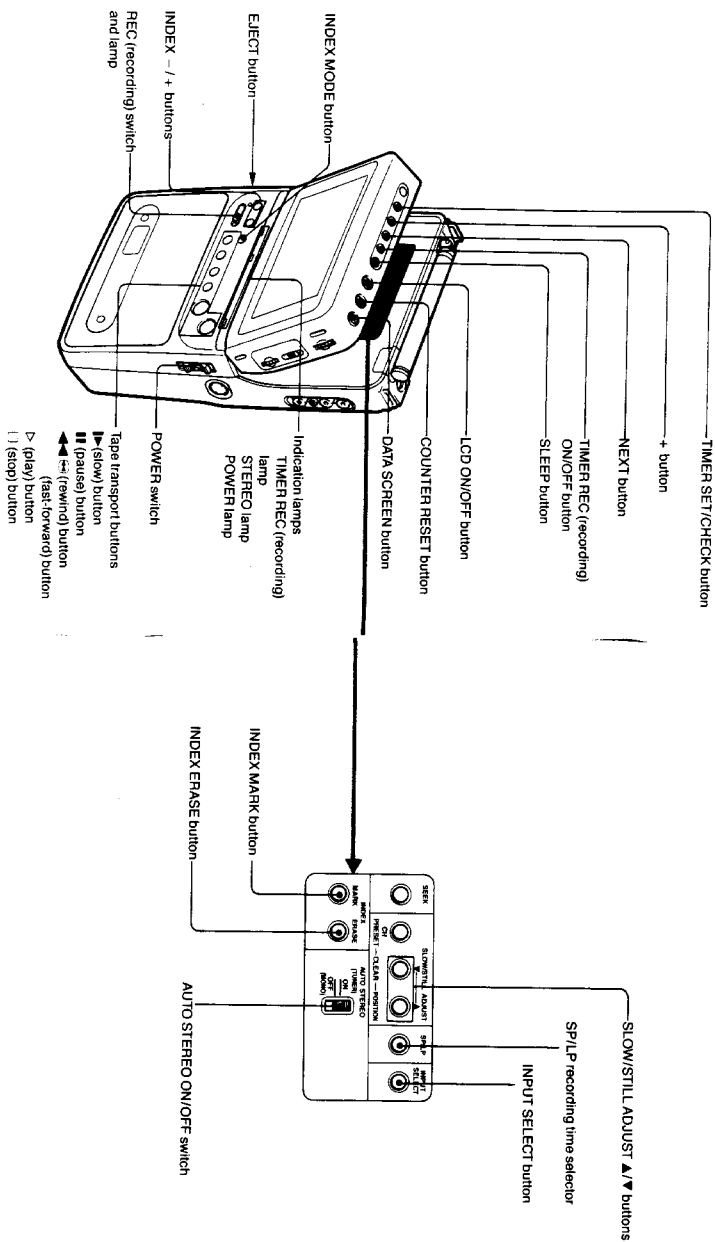
This unit uses 8 mm video format cassettes. It records in the SP mode (approximately 1.43 cm/second) and the LP mode (approximately 0.72 cm/second) and can play back in the SP mode and LP mode. The quality of the playback picture in the LP mode, however, will not be as good as that in the SP mode.

Location of Parts and Controls

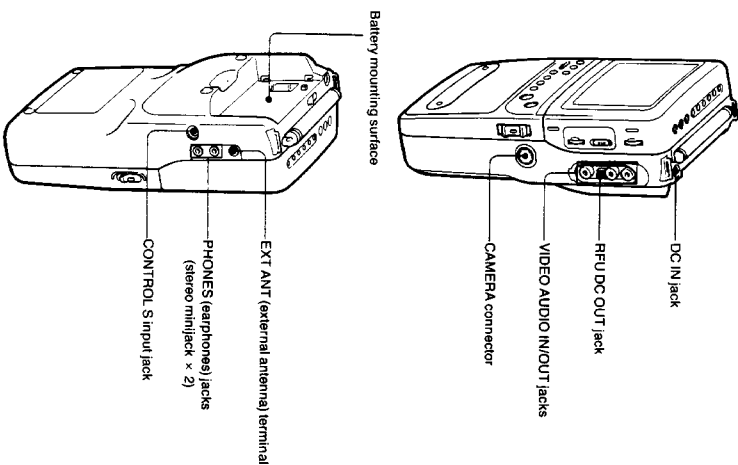
Parts used for watching TV programs



Parts used for VCR playback/recording



Parts used for connection



Selection of Power Sources

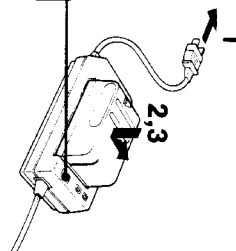
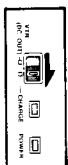
Place	Power sources	Page
Indoors	AC power adaptor AC-V50 (supplied)	16
Outdoors	Battery pack NP-77 (supplied), NP-66H, or NP-77H NP-55	12
In the car	DC pack DCP-77 Car battery charger DC-V30	17

The above accessories, except for the AC-V50 and NP-77, are not supplied.

Disconnecting the power source during recording or playback operations may damage the cassette tape. If this is done accidentally, supply the power again immediately and turn the power on.

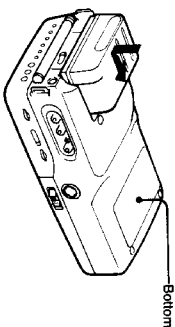
Using with Battery Pack — NP-77, NP-55, NP-66H, or NP-77H

- 1 First, charge the battery pack.
Use the supplied AC-V50 AC power adaptor.



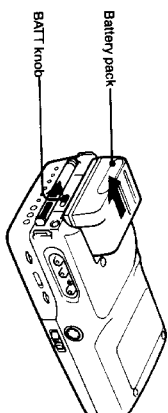
- 1 Connect the AC-V50 to a wall outlet.
- 2 Install the battery pack.
Align the right side of the battery pack with the line on the AC power adaptor.
- 3 While pressing the battery pack, slide it in the direction of the arrow.
The POWER lamp (green) and the CHARGE lamp (orange) on the AC-V50 light up.
The charging begins.
When the charging is completed, the CHARGE lamp goes out.
Unplug the unit from the wall outlet and the POWER lamp goes out.

- 2 Attach the battery pack to the video TV recorder.
Align the battery pack with the white line on the video TV recorder, then while pressing, slide the battery pack in the direction of the arrow.



- The charging time is about 120 minutes for an NP-77, 140 minutes for NP-77H, 100 minutes for NP-66H, and 60 minutes for an NP-55.
- The unit cannot be operated with the AC power adaptor when it is used for charging a battery pack, and the battery pack cannot be charged when the AC power adaptor is used to operate the unit.
- An NP-77, NP-55, NP-66H, or NP-77H can also be charged with the BC-55 or BC-77 battery charger.

To remove the battery pack



While sliding the BATT knob in the direction of the arrow, slide the battery pack as illustrated.

Operating time

A fully-charged battery pack can operate this unit as follows:

	LCD ON/OFF	NP-77H	NP-77	NP-66H	NP-55
Watching TV programs	ON	Approx. 125 min.	Approx. 100 min.	Approx. 90 min.	Approx. 50 min.
VCR playing back	ON	Approx. 120 min.	Approx. 100 min.	Approx. 90 min.	Approx. 50 min.
TV program recording	ON	Approx. 95 min.	Approx. 75 min.	Approx. 70 min.	Approx. 40 min.
TV program recording	OFF	Approx. 140 min.	Approx. 115 min.	Approx. 105 min.	Approx. 55 min.
Camera recording *	OFF	Approx. 100 min.	Approx. 80 min.	Approx. 75 min.	Approx. 40 min.

* When connecting the color video camera CCD-G1 (not supplied).

Getting the Battery Pack Efficiently

How to prepare the rechargeable battery packs

Have sufficient battery pack power to perform 2 or 3 times the amount of recording that you plan to do.

"Battery life" as indicated in the instruction manual or catalogue of the video TV recorder is measured by the continuous use of the video TV recorder, at room temperature, using a fully charged battery.

Fast winding or rewinding tape operations consumes much more battery power than normal tape transport operation. Consequently, battery life becomes shorter when these operations are performed frequently.

Battery life is shorter in a cold climate.

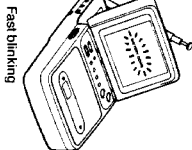
Cold climates reduce the efficiency of a battery and cause it to run out more quickly.

When to replace the rechargeable battery pack

When the battery pack is exhausted, the POWER lamp (during recording, the "BATTERY DOWN" indication on the screen as well) starts blinking slowly about five minutes before the battery pack is discharged.

Replace the battery when the blinking changes from slow to fast, and the "BATTERY DOWN" indication starts blinking rapidly.

Turn off the power of the video TV recorder before replacing the battery. While replacing the battery, keep the cassette inside the cassette holder. When the battery has been replaced, recording can be resumed smoothly without any picture distortion.



Fast blinking

Notes on battery exhaustion when a camera is connected
When the battery is exhausted, the tally lamp (red) displayed in the viewfinder of the camera starts blinking, and the power goes off automatically. Replace the battery pack with a fully charged one when the blinking starts.

Notes on charging

Before using the battery pack, charge it sufficiently. A brand-new battery pack is not charged. **Recharge the battery pack when it is fully exhausted.**

- If the operation is completed before the BATTERY DOWN indication on the screen or POWER lamp starts blinking, it is recommended that you discharge the battery pack by playing back a tape until the BATTERY DOWN indicator or the POWER lamp starts blinking rapidly.
- Do not recharge the battery pack before it has been discharged completely. Repeated charging while some capacity remains will reduce the battery capacity. However, the original battery capacity can be recovered if you fully discharge and fully charge the battery pack again.

Keep the terminals clean

If the terminals (metal parts on the back) are soiled, the battery life will become shorter. When the terminals are soiled, or when the battery pack has not been used for a long time, repeatedly attach and remove it several times. This will improve the contact of the battery pack and the video TV recorder. Also, wipe the + and - terminals with a soft cloth or paper.

Notes on the rechargeable battery pack

Battery pack care

- Remove the battery pack from the video TV recorder after use, and keep it in a cool place. When the battery pack is installed on a video TV recorder, a small amount of current flows to the recorder even if the POWER switch is turned off. This causes overdischarge and, consequently, shortens the life of the battery.
- The battery pack is always discharging - even when it is not in use. Thus, the battery should be charged before each use.

How to use the switch on the battery pack

Use this switch as a reminder of the charging condition. Set the switch to the "no mark" position when the charging is completed. Set the switch to the "red mark" position when the battery has been discharged.



How many times can the battery pack be recharged

It can be fully charged and discharged about 500 times under normal temperatures. If the BATTERY DOWN indication blinks rapidly just after turning on the recorder, even though a fully charged battery pack has been installed, replace the battery pack with a brand new one.

Charging temperature

Lower temperatures require a longer charging time. Charging under a temperature ranging from 10°C to 30°C (50°F to 86°F) is recommended.

Why the battery pack heats up

While the battery pack is being charged or used, a chemical change occurs inside the battery pack which generates electric energy. Consequently, the battery pack becomes warm, but this is not dangerous.

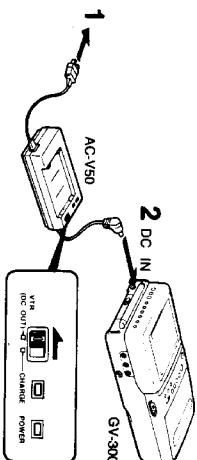
Carrying the battery pack

If the + and - terminals are short-circuited with a piece of metal, the battery heat up abnormally. This is very dangerous. Never put an uncovered battery pack in a pocket together with a key holder or other metal object.

If the battery pack is not used for a long time (about 1 year)

Charge it again, but in this case the battery life will be shorter than normal. After several charging and discharging cycles, the battery life will recover its original capacity.

Using this unit with the AC Power Adaptor — AC-V50



1 Connect the AC power adaptor to a wall outlet.

2 Insert the DC plug of the adaptor to the DC input jack of the video TV recorder.

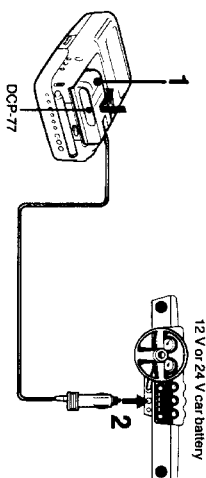
Note on the AC power adaptor

Use only the supplied AC-V50 AC power adaptor.
Do not use any other AC power adaptor.



- The unit is not disconnected from the AC power source as long as it is connected to the wall outlet.
- One blade of the plug is wider than the other for the purpose of safety and will fit into the wall outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- While the unit is in use, particularly during charging, keep it away from AM receivers and video equipment because it will disturb AM reception and video operation.

Using This Unit with a Car Battery — DCP-77



1 Attach the DC pack to the video TV recorder.

2 Connect the plug to the cigarette lighter socket.

- Connect the DCP-77 only to a car with a negative ground car batteries of 12 V or 24 V.
- Attach or remove the DC pack in the same way as the battery pack.
- DCP-55 is not recommended for this unit because the capacity of the DCP-55 is not enough to operate it.

Notes

- Be careful not to let any metal object touch the metal projection on the battery pack. When the battery pack is not used, keep it in its case.
- Keep the video TV recorder away from the power source. If not, noise may appear on the screen.

Notes on using this unit in a car

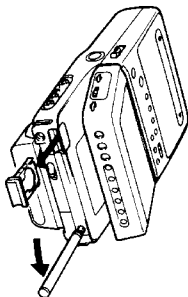
- For your safety, do not watch the TV or operate the controls while driving.
- Avoid leaving the unit in a place with very high temperatures. If you do, it may cause distortion of the cabinet or malfunction of the unit.
- If you use this unit while your car is not in use, the car battery will be consumed. Avoid using this unit in such condition for more than 12 hours.

Setting the Clock

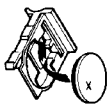
Before you set the clock, install a lithium battery. With a lithium battery installed, this unit powers the clock and keeps the last channel in memory when the power source is disconnected.

Installing a Lithium Battery

1 Pull out the lithium battery compartment.



2 Install the supplied CR2032 lithium battery with the + side facing out.



3 Reinsert the compartment.

To remove the lithium battery
Press the battery upward and remove it as illustrated.



Lithium battery life

Approximately 1 year in normal operation.

If the lithium battery becomes weak, the AM 12:00 indication appears on the screen when the DATA SCREEN button is pressed. In this case, replace the battery with a Sony CR2032 lithium battery. Use of a battery other than a Sony CR2032 may present a risk of fire or explosion. After replacing the battery, reset the clock.

Notes on lithium battery

- Keep the lithium battery out of the reach of children.
- Should the battery be swallowed, consult a doctor immediately.
- Before use, wipe the battery with a dry cloth to assure a good contact.
- Be sure to observe the correct polarity when installing the battery.
- Do not hold the battery with metallic tweezers, otherwise a short-circuit may occur.
- Do not break up the battery or throw it into a fire because it may explode. Carefully dispose of the used batteries.

Warning

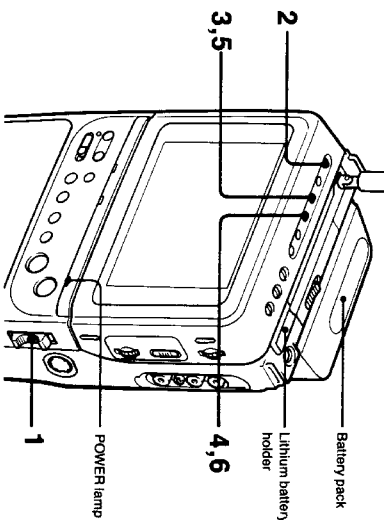
Battery may explode if mistreated. Do not recharge, disassemble or dispose of in fire.

Setting the Clock

Setting the Clock

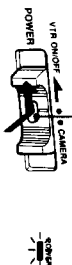
Before setting

- Make sure that the power source is connected correctly.
- The time indication "PM 12:00" means noon, and "AM 12:00" means midnight.



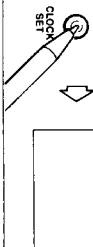
Example: Set to PM 1:15

- 1 Turn the power on.
The POWER lamp lights up.

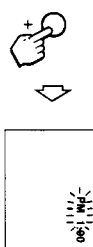


While pressing the green button, slide the POWER switch to the left to turn the power on!

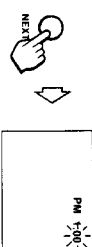
- 2 Press the CLOCK SET button with a pen or similar object.
The screen will enter the time setting mode.
The screen becomes dark.
The next item to be set blinks.



- 3 Set the hour.
Press the + button repeatedly until you get the desired setting.
If you keep the button pressed, the indication will advance continuously.



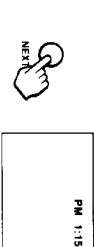
- 4 Press the NEXT button.



- 5 Set the minute.
Press repeatedly until you get the desired setting.
If you keep the button pressed, the indication will advance continuously.



- 6 Press the NEXT button.
The clock starts.
The screen goes back to the normal brightness.



Note

If the lithium battery is not installed, the clock will go back to "AM 12:00" each time the power source is disconnected.

Watching TV Presetting TV Channels

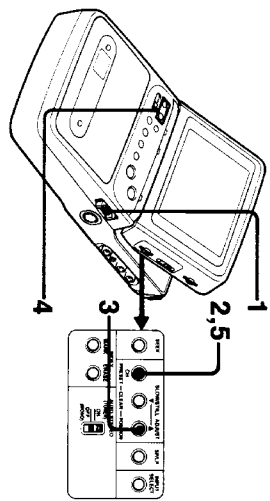
Your receiver is capable of receiving VHF channels 2-13, UHF channels 14-69 and cable TV channels 1 (A-8), 98 (A-2), 99 (A-1), 14-36 (A to W), 65-125 (W + 30 to V + 84). The channel numbers 1-99 will be displayed in the display window. This unit is preset at the factory to receive certain channels (see the chart on page 23.) If you want to receive other channels, you need to preset them.

Preset channels

Program position	1	2-13	14-36	37-42	43	44-69	69	70-97	98	99
Corresponding channel	CATV	VHF	CATV	—	*	—	*	—	CATV	CATV
Number displayed	1	2-13	14-36	37-42	43	44-69	69	70-97	98	99



* UHF channels are preset around this number.

1 Preset TV Channels

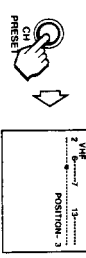


1 Turn the power on.
The POWER lamp lights up.
If the TV program is not displayed, press the INPUT SELECT button.

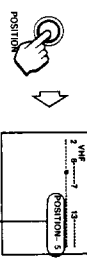
While pressing the green button, slide the POWER switch to the left.

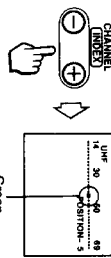
2 Press the CH PRESET button.



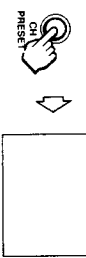
3 Press the POSITION button to select the desired program position where the channel is to be stored.



4 Press the CHANNEL -/+ buttons repeatedly to select the channel to be stored.
The UHF channel range is displayed after the VHF range.*
Repeat steps 3 and 4 for other channels to be preset.



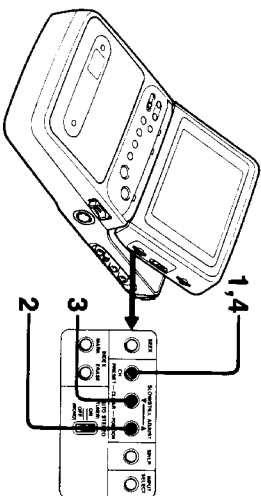
5 Press the CH PRESET button.
Channel presetting is completed.
The on-screen display disappears.



* After the channel range is displayed, wait for about 2 seconds before next operation.
To change the order of the channel to be stored
Follow the above steps.

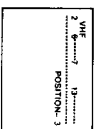
To Erase Channels

The erased program position is skipped when you press the CHANNEL +/- button.

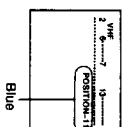


Example: To erase program position 11

1 Press the CH PRESET button.



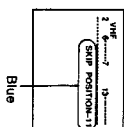
2 Press the POSITION button and select the program position to be erased.



3 Press the CLEAR button.
The SKIP indication appears.



Repeat steps 2 and 3 for other program position to be erased.



4 Press the CH PRESET button.
The on-screen display disappears.



To add the erased channels again
See "To Preset New Channels" on page 22.

Channel Allocation Chart

Frequency (MHz)	50	100	150	200	250	300	400	500	600	700	800
VHF/UHF channels	VHF 2-6			VHF 7-13						UHF 14-69	
CATV channels	A-6	A-2-1		J-W						W+20-W+84	
Band indicator			VHF							UHF	

When the CHANNEL + button is pressed, the above channels will be scanned from the lowest frequency to the highest in sequence. By pressing the CHANNEL - button, the channels will be scanned in reverse.

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 TV		1	96	99	14	15	16	17	18	19	20	21	22			
Corresponding CATV channel		A-8	A-2	A-1	A	B	C	D	E	F	G	H	I			
23	24	25	26	27	28	29	30	31	32	33	34	35	36			
J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z

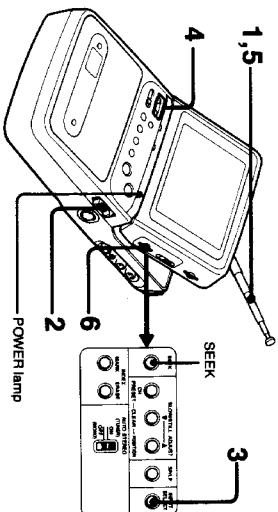
Check with your local cable TV company for more complete information on the available channels.

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

Note

Pay cable TV systems use scrambled or encoded signals and require special converters (decoders) besides the normal cable connections.

Watching TV Programs

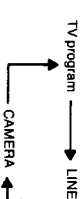


- 1 Pull out the antenna fully.**
Be sure to pull out the base of the antenna.
If you have connected an external antenna or CATV cable, be sure to hold in the telescopic antenna.

- 2 Turn the power on.**
The POWER lamp lights up.
While pressing the green button, slide the POWER switch to the left.



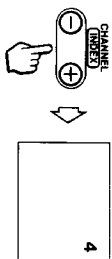
- 3 If a TV program is not displayed, press the INPUT SELECT button.**
The input mode will change as follows:



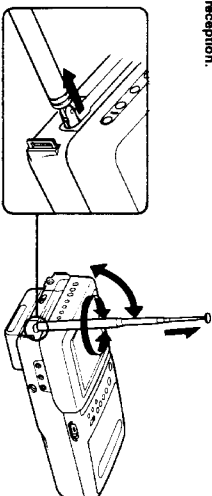
To be Continued

4 Select the desired channel.

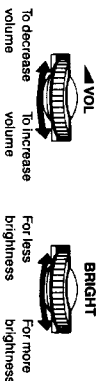
Press + for higher-numbered channels and - for lower-numbered channels. The channels will appear in numerical sequence. Press CHANNEL +/- repeatedly until you get the desired channel on the screen.



5 Adjust the antenna for the best reception.



6 Adjust the volume and brightness.



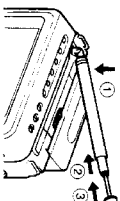
To turn off the TV

While pressing the green button, slide the POWER switch to the left. The POWER lamp goes out.



To put the antenna away

Slide in the base of the telescopic antenna first, then the center and the point.

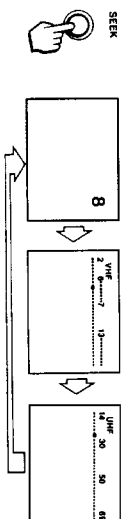


To view a TV program without Presetting Channels

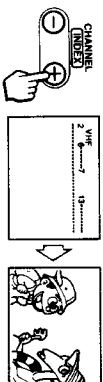
When you do not know the channel number of the TV program you wish to view or if you want to use the unit in the moving cat, search for the program as follows.

1 Press the SEEK button.

The channel range display appears. For VHF channels, press once. For UHF channels, press twice. To restore the normal display, press once more.



2 Press the CHANNEL +/- buttons to select the channel.

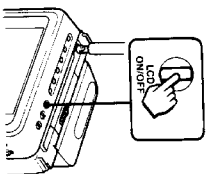


After selecting the channel, the channel range display goes out after a few seconds.

To mute (turn off) the picture

Press LCD ON/OFF button.
The screen will be muted.

It is recommended to mute the picture when you view the playback picture with another TV or monitor. The picture noise of the TV or monitor is reduced. Battery life will also last longer if you use the unit with the picture turned off. To restore the picture on this unit, press LCD ON/OFF again.

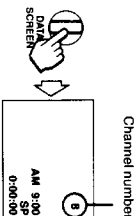


Note
When no picture is displayed and the volume is low, or the earphones are connected, the unit appears to be turned off even though it is not. Be sure to turn off the unit with the POWER switch when it is not in use.

To display the channel number

Press the DATA SCREEN button.

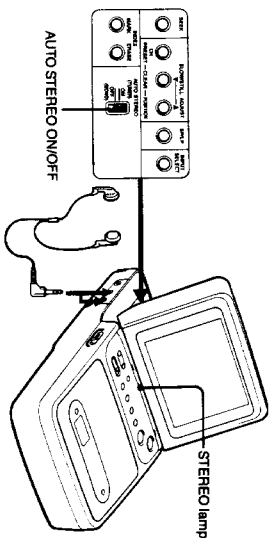
To make the on-screen display disappear, press the DATA SCREEN button again.
After the SEEK button is pressed, the VHF or UHF channel range is displayed instead of the channel number, then goes off after a few seconds.



"Last channel" memory function

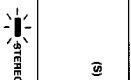
- While you are watching TV programs, if the power source is disconnected or the battery pack becomes exhausted, the unit turns off with the last channel being memorized.
When you turn on the unit again, the last channel appears on the screen.
- The lithium battery must be installed for this function.
- The last channel memory function also works when the TV signal is cut off, for example, when you go through a tunnel in a moving car.
- If the lithium battery becomes exhausted but the power source is connected, the last channel memory function will still operate.

Connect the supplied stereo earphones to the PHONES jack to listen to the stereo sound.
The speaker of this unit is monaural.



AUTO STEREO ON/OFF

Normally set the AUTO STEREO ON/OFF switch to ON.
The STEREO lamp lights up automatically whenever a stereo program is received.



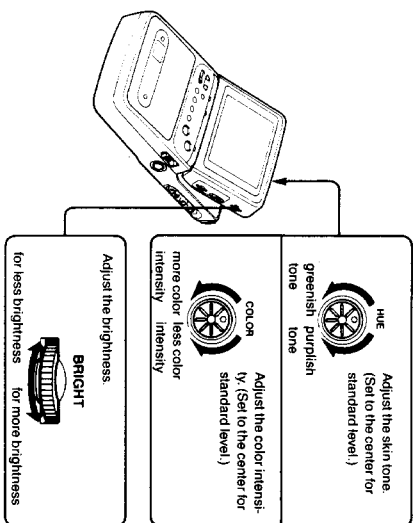
If excessive noise is heard when receiving a stereo program
Set the AUTO STEREO ON/OFF switch to OFF. The sound will be monaural, but the noise will be reduced. In this case, the STEREO lamp goes off. It is recommended to use monaural sound when using the unit in a moving car. To restore the stereo sound, set the switch to ON.



Adjusting the Picture and Sound

Adjust the picture and sound to your preference.

To adjust the picture



To listen to the dynamic bass sound

MEGA BASS function
Used for listening to the sound with the stereo earphones.
Bass sound increases as you set the MEGA BASS switch from NORM to MAX.



Using the SLEEP Timer

You can set the unit to turn off automatically after a certain amount of time, after as short as 30 minutes or as long as 5 hours, while viewing a TV program, video playback, or while recording.

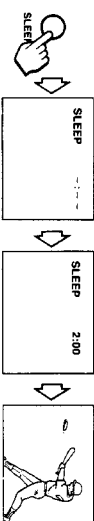
Each time you press the SLEEP button, the display will change as follows:

5:00 → 0:30 → 1:00 → 1:30 → 2:00 → 2:30
↑
5:00 ← 4:30 ← 4:00 ← 3:30 ← 3:00

Example: To turn off the TV after 2 hours

1 Make sure the clock is set correctly (page 20).
No indication will appear on the screen if the clock is not set.

2 Select the desired time interval by pressing the SLEEP button.



The screen becomes dark.
The normal display will be restored after a few seconds.

The TV will be turned off after 2 hours.
The procedure is the same for tape playback and recording. The tape will stop running after the selected time interval.

To cancel the SLEEP timer

Press the SLEEP button repeatedly until the "..." display appears.
The SLEEP timer can also be canceled by turning off the unit with the POWER switch.



To check the remaining time

Press SLEEP once.
The remaining time is displayed.
The indication will go off after a few seconds.

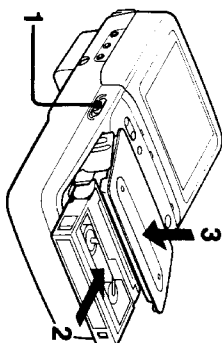
The unit will be turned off after about 1 hour and 52 minutes.

Note

When you use the unit with rechargeable batteries, the unit may turn off before the selected time because the batteries are exhausted.



Make sure that the power source is connected to the unit.



To insert a cassette

1 Open the cassette holder with the EJECT button.

While pressing, slide the button to the right.



2 Insert the cassette with the window side facing up.

3 Close the cassette holder.

When you slide the EJECT button, power is supplied and the cassette holder opens even if the power is turned off. When the cassette holder opens, the power goes off automatically. Slide POWER if you want to continue operation.

To eject a cassette

Slide the EJECT button. Make sure the tape is not running.

Note

Do not open the cassette holder while the unit is in the vertical position. If you do, the cassette may fall out of the holder and be damaged.

To Prevent Accidental Erasure

When a new recording is made on a previously recorded tape, the previous recording is automatically erased. To protect a recording, slide the red safety tab out to cover the opening.



Recording cannot
be made.

Recording can
be made.

Notes on opening and closing the cassette holder

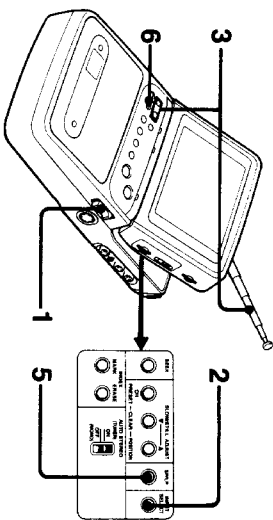
- Do not insert your finger into the cabinet when the cassette holder is open.
- Be careful not to get your finger caught in the cassette holder.

Notes on the cassette

- Store cassettes in their cases when they are not being used and keep them in an upright position to prevent intrusion of dust and uneven winding.
- Always insert the cassette in the correct position.
- Never insert anything in the small holes on the rear of the cassette.
- Remove the cassette from the video TV recorder when not in use.

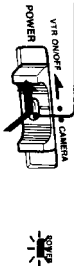
Recording TV Programs

You can record a TV program while viewing it. For optimal picture and sound quality, connecting an external antenna is recommended. (See page 54.)



1 Turn the power on.
The POWER lamp lights up.

While pressing the green button, slide the POWER switch to the left.



2 If the TV program is not displayed, press INPUT SELECT button repeatedly until the TV program is displayed.
The input mode will change as follows:
TV program → LINE
CAMERA



When the tape is recorded to the end
The tape stops automatically, but the unit is not turned off. If you are not going to continue operation, turn the power off with the POWER switch.

About the recorded sound
The VOL. control setting has no effect on the recording level.

3 Select the desired TV channel. (See page 28.)
Adjust the telescopic antenna for the best reception. (See page 28.)

4 Insert the cassette. (See page 34.)

5 Select the recording mode, SP or LP.
The recording time of a cassette in the LP mode is twice as long as that in the SP mode. For better picture and sound quality, set to SP.



6 Slide the REC switch to the right.
Recording starts.

For this on-screen display, see page 48.



To stop recording for a moment
Press II.

To resume recording
Press II again.

(If the PAUSE button is not pressed again for about 5 minutes, the pause mode will be released automatically and the unit will stop. This is to protect the video heads and recording will stop.)

To stop recording
Press I.

Changing the channel during recording

Set the unit in the recording pause mode and then select another channel. You cannot watch another program while recording.

When recording from the beginning of a tape

Run the video TV recorder for about 15 seconds at the beginning of a cassette before recording. This will prevent missing the starting point or having any previously recorded pictures appear when playing back on another video cassette recorder.

When recording starts

The starting point is marked on the tape automatically and "INDEX MARK" is displayed on the screen. The index mark helps you to find the point where recording begins on a tape.

Recording/playback time

Two tape speeds can be selected with the S/P/LP selector.

The recording time in the LP mode is twice as long as that in the SP mode. For better picture and sound, recording in the SP mode is recommended. During playback, the mode in which the tape was recorded is selected automatically.

Cassettes and their recording time

There are two formats for 8mm video recording, NTSC and PAL. Video cassette tapes are made to correspond to one of these formats. Use NTSC format cassette tapes for this unit. You will find "PB" on the package of NTSC cassettes.

In some countries, however, only PAL format cassette tapes with "PS" on the packages are available. If a PAL format cassette is used with this unit, the actual recording time may differ from the recording time indicated on the cassette.

Note

If you record with this unit on a tape that has been recorded in the PCM mode, and if you play back this tape on a VCR with PCM function, the sound may be cut off occasionally. In this case, set the audio monitor switch of the VCR to the standard position.

To stop recording automatically after a certain time — Quick timer

Press the SLEEP button during recording. You can leave the unit function when you go to bed or when you go out, etc.

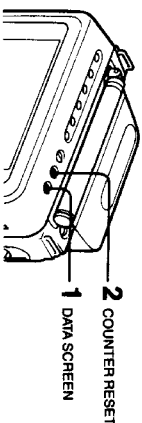
The unit will be turned off automatically at the preset time. For operation, see page 33.

Are you having trouble?

Symptom	Possible cause	Correction
"CASSETTE" indication is displayed when you slide the REC switch.	The safety tab on the cassette is slid out. The tape is at its end. No cassette is inserted.	Slide the tab in or use a new cassette. Rewind the tape or use a new cassette. Insert a cassette.

Using the tape counter

During recording or playback, the digits on the counter indicate the actual recording or playback time. By noting the counter reading at a particular point, you can easily find that point later by referring to the tape counter.



1 Press DATA SCREEN so that the counter is displayed.

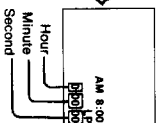


2 During recording or playback, press COUNTER RESET at the point you later want to locate.

The counter will be set to 0:00:00.



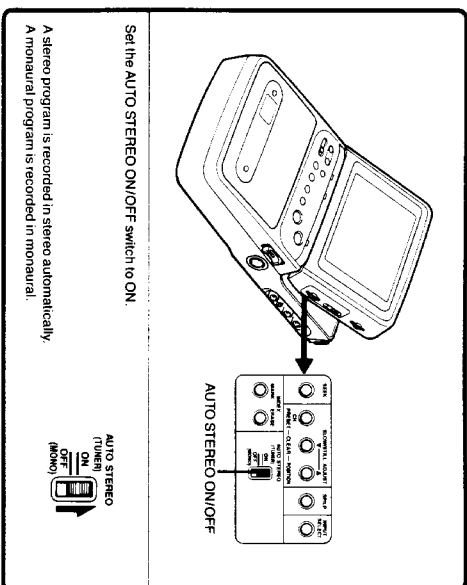
Use the counter to find this point later. For your convenience, use both the counter and the index marks.



Notes

- The counter reading and the point on the tape may not correspond exactly. Use the counter as a guide.
- There will be a time lag of several seconds on the counter reading after repeated fast-forward and rewind operations.
- There will also be a time lag of several seconds when a tape recorded in both the LP or SP modes or a tape having a blank portion between the recorded portions is played back.

Recording Stereo Programs



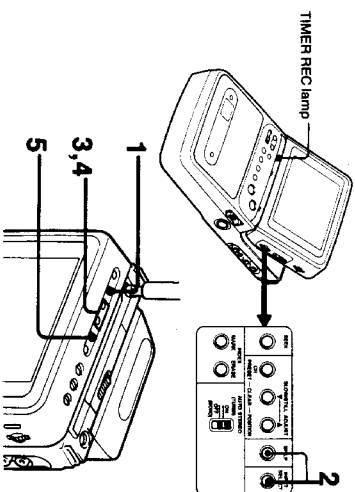
Using the Timer-Activated Recording Feature

By using the timer-activated recording feature, you can program this unit to automatically record a TV program that will be shown within 24 hours of activating the timer. For better recording of picture and sound, use of an external antenna is recommended. See page 54.

Before setting the timer

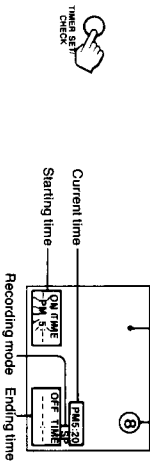
- Make sure that the power is supplied. (Is the battery pack fully charged? For long recording, use of the AC power source is recommended.)
- Set the clock (see page 20)
- Insert a cassette (see page 34.) Make sure that the safety tab is slid in.
- If recording a stereo program, set the AUTO STEREO ON/OFF switch to ON.

Example: To record the program from 8:30 pm to 8:45 pm.



1 Press the TIMER SET/CHECK button.

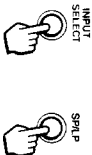
The screen becomes dark. Input mode/channel



1. To be Continued

2 Select the input mode with the INPUT SELECT button, and the recording mode with the SPLP button.

For TV program recording, select the desired channel.



3 Set the time for the recording to begin.

1) Press the + button to set the hour. Each time you press the + button, the hour indication increases by one. If you keep the button pressed, the indication will increase continuously.



ON TIME
PM 8:20
OFF TIME

2) Press the NEXT button.



ON TIME
PM 8:20
OFF TIME

3) Press the + button to set the minutes.

Each time you press the + button, the minutes indication increases by one. If you keep the button pressed, the indication will increase continuously.



ON TIME
PM 8:30
OFF TIME

4) Press the NEXT button.

The starting time is now set.



ON TIME
PM 8:30
OFF TIME
PM 8:45

4 Set the time for the recording to stop.

1) Set the hour with the + button.



ON TIME
PM 8:30
OFF TIME
PM 8:45

2) Press the NEXT button.



ON TIME
PM 8:30
OFF TIME
PM 9:30

3) Set the minute with the + button.



ON TIME
PM 8:30
OFF TIME
PM 9:45

4) Press the NEXT button.

The ending time is now set. The on-screen display disappears.



ON TIME
PM 8:30
OFF TIME
PM 9:45

If you have made a mistake
Turn the power off, then on again.
Repeat steps from 1 to 4.

5 Press the TIMER REC ON/OFF button.

The power goes off and the TIMER REC lamp lights up (timer recording standby mode). The recording starts automatically at the preset start time and the power goes off at the preset end time.



Notes

- During timer recording, both picture and sound will be muted. To listen to the sound and watch the picture, press the LCD ON/OFF button.
- When you press the TIMER REC button, the "CASSETTE" indication will appear if the safety tab on the cassette is slid out or if no cassette is inserted.

To stop the timer recording

Press the **TIMER REC ON/OFF** button again. The **TIMER REC** lamp goes out.

To check the setting

Press the **TIMER SET/CHECK** button while the **TIMER REC** lamp is lit. The power is turned on and the starting and ending time is displayed for a few seconds.



To change the timer setting after completing the setting

Press the **TIMER REC ON/OFF** button to cancel the timer recording mode, then turn the unit on and set the timer again.

To set the timer while the tape is running

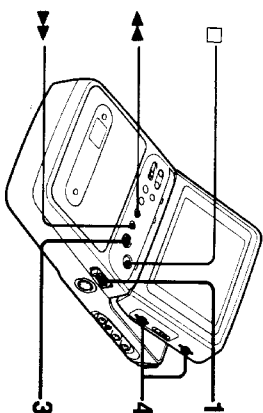
Only the starting and ending time can be set during playback or recording. After stopping the tape, set the recording mode (SP/LP) and channel, and then press the **TIMER REC ON/OFF** button.

If a power interruption occurs when the unit is connected to the AC power source

Recording stops. Recording starts again after the power is resupplied. When a power interruption occurs during the timer recording standby mode and the power is resupplied, the timer settings will not be affected as long as the lithium battery is installed.

To record to the end of the tape

Set the starting and ending time the same. When the tape reaches the end, recording will stop and the power goes off.



1 Turn the power on.
The **POWER** lamp lights up.

While pressing the green button, slide the **POWER** switch to the left.



2 Insert a recorded tape (see page 34.)

3 Press \triangleright to start playback.



4 Adjust the volume and the brightness.



To decrease volume
To increase volume



For less brightness
For more brightness

To stop playback: Press the \square button.
To rewind the tape: Press the \lll button.
To advance the tape: Press the \ggg button.

Playing Back the Recorded Tapes

To rewind the tape and play it back automatically — Auto play

While pressing the ◀ button, press the ▷ button. The "AUTO PLAY" indication appears.

To mute the picture

Press the LCD ON/OFF button. To restore the picture, press the LCD ON/OFF button again.

To adjust the picture

Adjust the BRIGHT, COLOR, and HUE controls (see page 32.)

To stop playback at the desired time

Use the SLEEP function.

The unit goes off at the preset time. (see page 33.)

When a tape recorded in stereo mode is played back

The "S" indication appears and the STEREO lamp lights up. To listen to the stereo sound, use the stereo earphones.

Playback of tapes recorded in Hi8 video system

This unit plays back tapes recorded in Hi8* video system. However, please note the following important conditions.







Hi8 recording will be played back with standard 8 mm picture quality.

This unit cannot record with Hi8 picture quality.

Noise may appear in the picture when you play back a tape recorded in Hi8 LP (long play) mode.

*Hi8 is the 8 mm recording option found on selected high end 8 mm camcorders and decks.

Various Playback Modes — CRYSTAL-CL-EAR still/slow/picture search on LCD

To stop the tape for a moment — Still picture	During playback  STILL	To resume normal playback, press ▷. These modes will be automatically released and playback will resume after the following time intervals: Still: 5 minutes Slow*: 1 minute.
To view the slow playback picture	During playback  SLOW 1/5	
To locate a particular point while viewing the picture — Picture search	During playback  During playback 	When you release the button, the unit will return to the previous mode.
To view the picture at high speed — FR picture search	While rewinding  While fast forwarding 	

* After normal playback is resumed, the 1P button will not function for about 5 seconds.

It should appear in the still and slow playback mode

Adjust the picture as follows:

- 1 Play back the slow motion picture.
- 2 Press the SLOW/STILL ADJUST ◀, ▲ buttons to adjust the picture so that the noise does not appear.



To adjust the upper portion of the picture, press the ▲ button. To adjust the lower portion of the picture, press the ▼ button. The still picture is adjusted at the same time.

When the playback picture is viewed on another TV or monitor

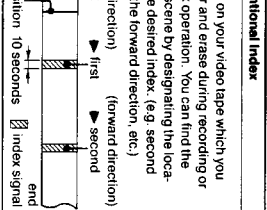
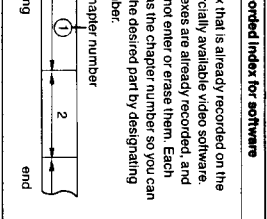
The horizontal bands appear in the still, slow, picture search and FR picture search modes. Noise appears in the still and slow modes. To reduce the horizontal bands, press LCD ON/OFF button to mute the picture of this unit.

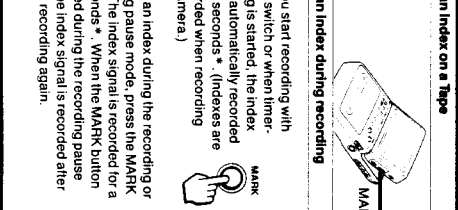
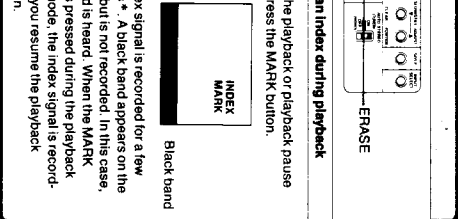
Notes on the CRYSTAL-CL-EAR still/slow/picture search on LCD

Noiseless pictures can be viewed in the still, slow and picture search modes, owing to the characteristics of the liquid crystal.

Using Indexes — to Find the Desired Scene Quickly

An index can be recorded on the tape. Using the index, you can find the desired scene quickly. There are two kinds of indexes as follows:

<p>A) Conventional index</p> <p>An index on your video tape which you can enter and erase during recording or playback operation. You can find the desired scene by designating the location of the desired index. (e.g. second index in the forward direction, etc.)</p> 	<p>B) Pre-recorded index for software</p> <p>An index that is already recorded on the commercially available video software. The indexes are already recorded, and you cannot enter or erase them. Each index has the chapter number so you can search the desired part by designating the number.</p> 
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<p>To Enter an Index on a Tape</p> 	<p>To enter an index during playback</p> 
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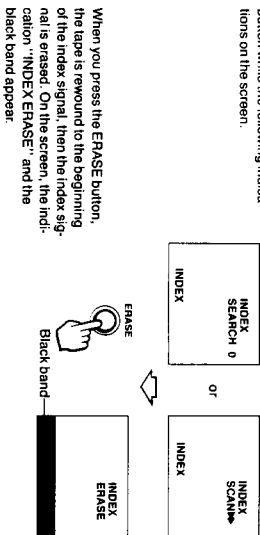
Note
 Leave at least two minutes between each index. If an interval is too short, you may not be able to find or scan indexes correctly.

- * For SP mode: about 10 seconds
- For LP mode: about 18 seconds

To Erase an Index

1 Search for the index to be erased. (See page 50, 52).

2 Press the ERASE button.
 After playback starts, press the button while the following indications on the screen.



When you press the ERASE button, the tape is rewound to the beginning of the index signal, then the index signal is erased. On the screen, the indication "INDEX ERASE" and the black band appear.

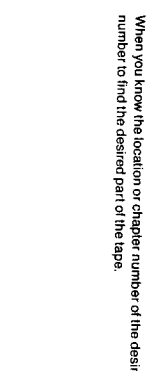

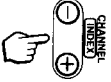


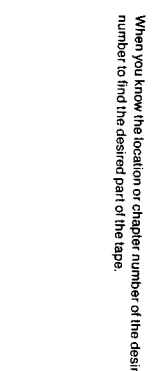
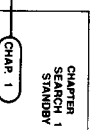
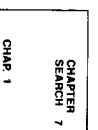
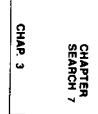
Note
 Do not press any of the tape transport buttons while entering/erasing an index. If it is done, entering/erasing will not be completed.

- Notes on the index signal**
- You cannot enter an index signal on a commercially available video software or on a cassette whose safety tab is slid out.
 - You cannot erase an index signal which is pre-recorded on a commercially available video software.
 - The index signal cannot be erased in the following cases:
 - When the index signal is recorded on a video camera recorder or other VCRs, and you wish to erase it on this unit.
 - When the index signal is recorded on this unit, and you wish to erase it on a video camera recorder or other VCRs.
 - To erase the index signal completely, use the equipment you used to enter the index signal.

Using Index — to Find the Desired Scene Quickly

To Find a Desired Index — Index Search

When you know the location or chapter number of the desired index, you can designate a number to find the desired part of the tape.

A Conventional Index	B Prerecorded Index for software
<p>Example: designating the second index in the reverse direction</p>  <p>1 Press the INDEX MODE button once during playback or the playback pause mode. The unit enters the index standby mode.</p>  <p>2 Press INDEX - / + button repeatedly until the desired index number appears on the screen. The tape is rewound or fast forwarded to the designated index number position, then playback starts.</p>  <p>Determining the number of indexes between the current position and the desired index. Select the appropriate number. Press + for F (forward) direction, - for < (reverse) direction.</p>  <p>When playback starts, the indication will disappear after about 10 seconds.</p> 	<p>Example: designating chapter number 7</p>  <p>current chapter number — CHAP 1</p>  <p>Select the chapter number referring to the number on the jacket of the cassette tape. Press + for a higher number, and - for a lower number.</p>  <p>When playback starts, the indication disappears after about 10 seconds.</p> 

To correct the chapter or index number
When the "CHAP" or "INDEX" indications are displayed, you can correct the number with the **INDEX - / +** button.

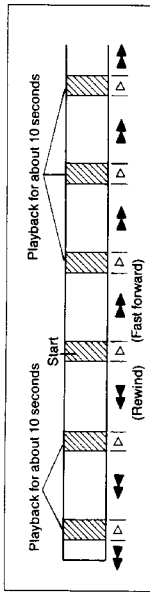
Note


Even with a video software which has pre-recorded indexes, the indication is "INDEX SEARCH" until the tape is played back.

Using Indexes — To Find the Desired Scene Quickly

Scan Each Index Sequentially

The beginning of each index/chapter is played back for about 10 seconds sequentially. Start playback at the desired index/chapter.



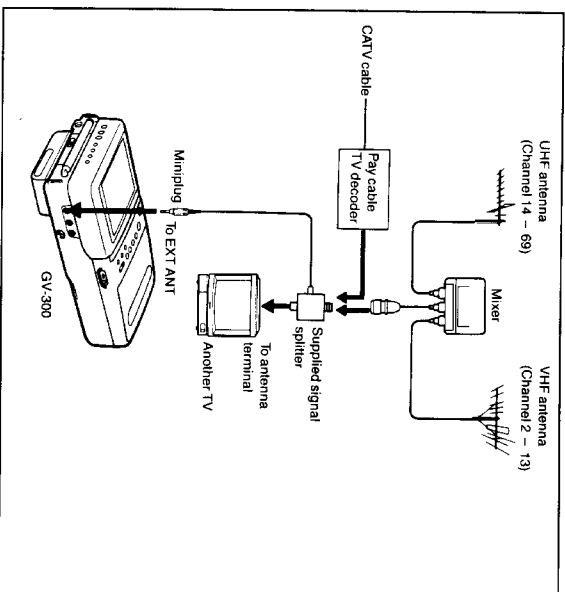
<p>INDEX</p>	<p>INDEX MODE</p> 	<p>INDEX</p>
<p>INDEX</p>	<p>INDEX SCAN</p>	<p>INDEX</p>
<p>CHAPTER SCAN</p>	<p>CHAPTER SCAN</p>	<p>CHAPTER SCAN</p>
<p>CHAPTER</p>	<p>CHAPTER</p>	<p>CHAPTER</p>

To correct the direction of index scan
Press INDEX - / + during index scanning.

Index scan does not function if an interval between indexes is less than two minutes. Leave an interval of at least two minutes between indexes.

If you do not press the > button during index scanning, the tape will be rewound or fast forwarded to the end of the tape.

If you cannot obtain satisfactory reception with the telescopic antenna, or when recording TV programs, use an outdoor antenna. For viewing CATV channels, connect the CATV cable.



For connection, you can also use the antenna connector EAC-40, the signal splitter EAC-45, the antenna cord CCD-6M, and CCD-2 (not supplied).

Notes

- Before connecting the antennas, turn off the unit.
- Make connections firmly. A loose connection may cause a distorted picture.
- When using the unit in a car, use the optional VCA-3W or VCA-4E car antenna, etc. For details, refer to the instruction manual of the car antenna.

Notes on the VIDEO/AUDIO IN/OUT Jacks

The VIDEO/AUDIO IN/OUT jacks are automatically set to the input or output jacks according to the operating condition of the unit.

Refer to the following diagram:

Mode selected with INPUT SELECT button	Stop or recording mode	Playback mode
TUNER (TV program)	output	output
LINE *	input	output
CAMERA	output	output

* When the LINE mode is selected with INPUT SELECT, the INPUT or OUTPUT indication appears with LINE.

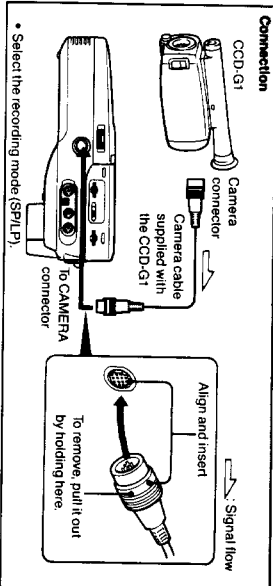


Note

When the LINE OUT jacks of other equipment are connected to the VIDEO/AUDIO IN/OUT jacks on this unit, and signals are output from the jacks of the other equipment to this unit, the picture and sound of the other equipment may be distorted. In such case, turn off the power of this unit or disconnect the other equipment.

Camera Recording Controlling from the Camera

By connecting an optional Video Camera CCD-G1, recording controlled from the camera is possible. You can hold the camera and keep this unit in a carrying case while recording. For details, refer to the instruction manual of the video camera.



Note

The sound will be recorded in monaural.

Recording with CCD-G1

1 Insert the cassette.

2 Set the POWER switch of this unit to CAMERA.

The power of this unit is turned on, and the POWER, STEREO lamp lights up. This unit automatically becomes in the recording pause mode. To have the picture on the screen of this unit, press the LCD ON/OFF button.



Note
Be sure that the POWER lamp lights up. If it does not, turn off the unit once by sliding the POWER switch to the left, then reset the switch to the CAMERA position.

3 Start recording.

Press the REC START/STOP button of the camera.

To index the recording starting point or the desired point, press the MARK button of this unit (see page 48).

To stop recording for a moment

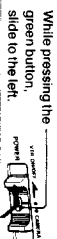
Press the REC START/STOP button. Press it again to start recording.

To stop recording

Turn the power off of this unit by setting the POWER switch to the center position.

Playing back the newly recorded pictures

1 Turn the power on of this unit.
The POWER lamp lights up.



2 Press ◀▶ button of this unit to rewind the tape.

3 Press [] button of this unit.

4 Press ▷ button of this unit.

Caution

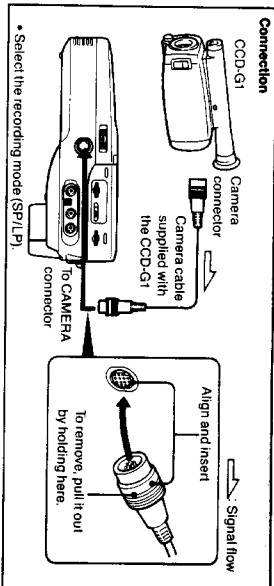
Do not operate this unit for a long time when it is in a carrying case like the one supplied. Internal heat build-up may occur which can cause this unit to malfunction.

When the POWER switch is set to CAMERA, the operable buttons are:

POWER switch, EJECT button, LCD ON/OFF button, DATA SCREEN button, COUNTER RESET button, INDEX mark button, and SP/LP button.

Camera Recording Controlling from This Unit

By connecting the optional video camera CCD-G1, it is possible to record with this unit while using the camera in a distant place. For details, refer to the instruction manual of the video camera.

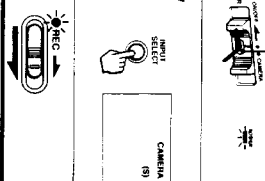


Note

The sound will be recorded in monaural.

Recording

- 1 Turn the power on of this unit. While pressing the green button, slide the POWER switch to the left.
- 2 Press the INPUT SELECT button of this unit to display "CAMERA" on the screen. The STEREO lamp lights up. The picture to be recorded appears on the screen. If the focus or color need adjustments, adjust them on the camera. To have the picture disappear, press the LCD ON/OFF button.
- 3 Slide the REC switch of this unit. Recording starts.



To stop recording for a moment
Press II button of this unit.

To stop recording
Press I button of this unit.

Playing back the newly recorded pictures

- 1 Press ◀ button to rewind the tape.
- 2 Press □ button.
- 3 Press ▶ button.

Recording with a camera from a distant place

Use the optional pan tiltter HVR-200 for camera recording from a distant place, a maximum distance of 5m.

To listen to the sound that is being recorded
While recording, no sound is heard from the speaker. Connect the supplied stereo earphones to PHONES jack to listen to the sound.

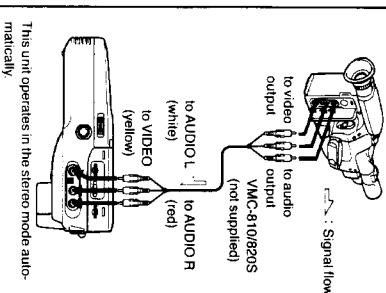
To use a camera with the timer-activated recording feature
This feature allows you to record a desired activity at a designated time, for example, a train passing by at a certain time. To set the timer, see page 41. The recording will start automatically at the time you set.

Using This Unit as a Stereo Video Camera Recorder Monitor

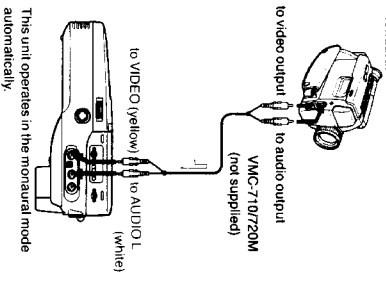
With the following connection, you can view pictures being recorded by the connected video camera recorder. Also you can view the playback pictures from the video camera recorder on this unit.

Connection

If the video camera recorder is stereo



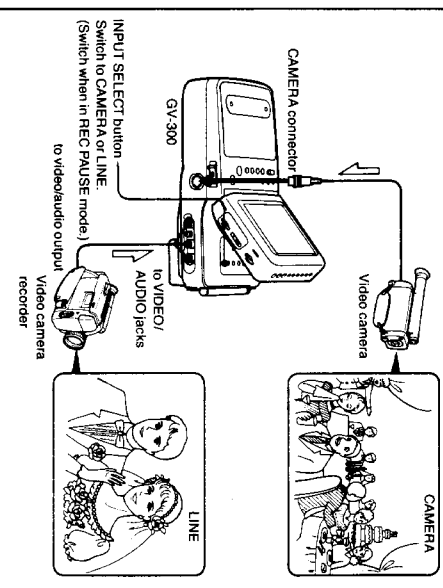
If the video camera recorder is monaural



When connecting both a video camera recorder and a video camera

Set each unit to different angles, then, using the INPUT SELECT button, switch the picture to be recorded on this unit.

Signal flow



Operation

1 Turn the power on.
The POWER lamp lights up.

While pressing the green button, slide the POWER switch to the left.

2 Press the INPUT SELECT button to display "LINE" on the screen.

3 Operate the video camera recorder.

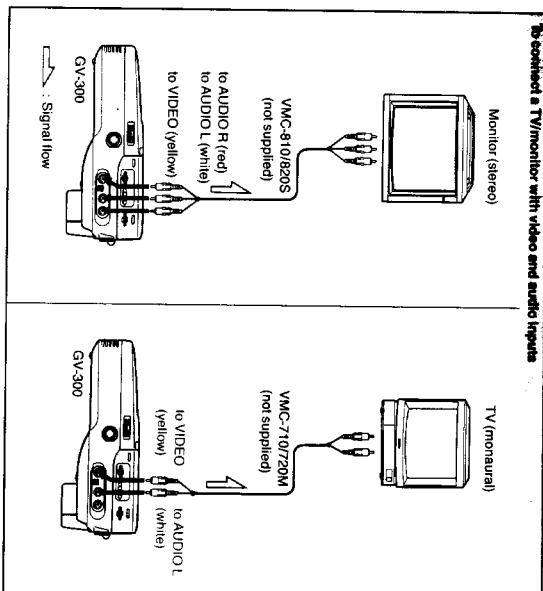


Connecting other VCRs or Monitors

To Connect Monaural TV or Color Monitor

If you connect this unit to another TV or color monitor, you can view the playback pictures or the selected TV program on a larger screen and listen to the dynamic sound. In this case, mute the picture of GV-300 by pressing the LCD ON/OFF button to reduce horizontal bands and noise in the picture of the TV or color monitor during various playback modes.

To Connect a TV/monitor with video and audio inputs

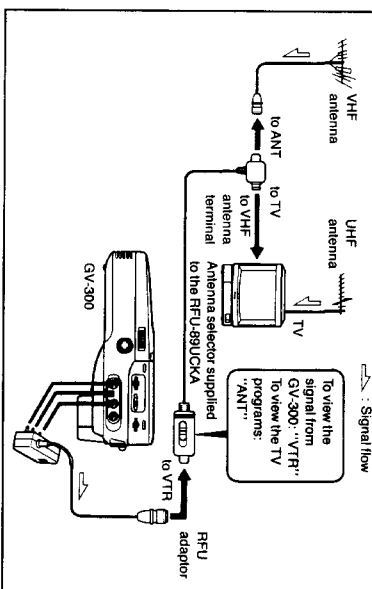


Note

When connecting only to the AUDIO L jack, the L and R sounds are automatically mixed and always output is monaural.

To Connect a TV without video and audio inputs

Use the RFU-89JUCKA RFU kit (not supplied).

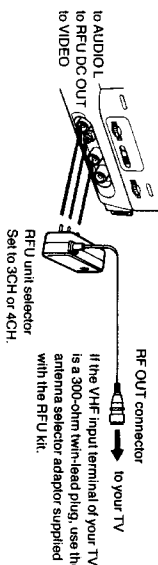


The RFU-89JUCKA includes the following accessories:

- RFU adaptor (1)
- Antenna selector (1)
- Antenna selector adaptor (1)

To view the playback picture of this unit, set the selector of the RFU adaptor to channel 3 or 4, whichever channel is not active in your area, and select the same channel on the connected TV.

To Connect the RFU Adaptor

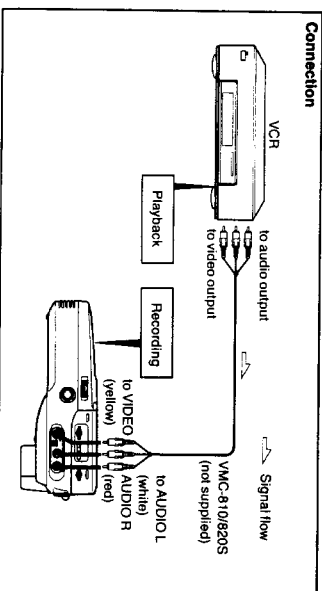


Editing Tapes

You can edit tapes by connecting another VCR (8mm, Beta or VHS format) with video/audio input.





To Edit from Another VCR to This Unit

Connection



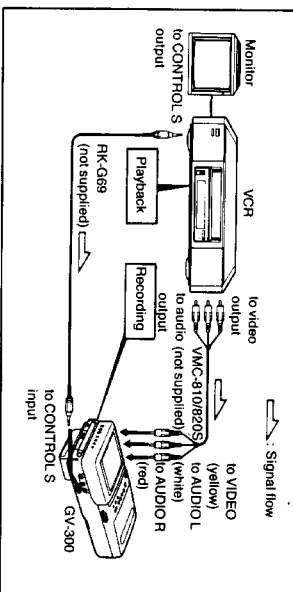
If the VCR to be connected has a monaural audio output only, use a commercially available connecting cord such as the VMC-710/720M. In this case, connect to the AUDIO L and VIDEO jacks.

Operation

- 1 Turn the power on. The POWER lamp illuminates. While pressing green button, slide the POWER switch to the left. 
- 2 Insert the cassette.
- 3 Press the INPUT SELECT button so that the "LINE" indication appears.  
- 4 Select the recording mode (SP/LP) by pressing the SP/LP button. 
- 5 Play back the tape on another VCR and press the II (PAUSE) button at the point you want to start playing back.
- 6 Set this unit in the recording pause mode.
- 7 Release the II (PAUSE) buttons on both units.
- 8 After editing is completed, press the □ (STOP) buttons on both units to stop recording.

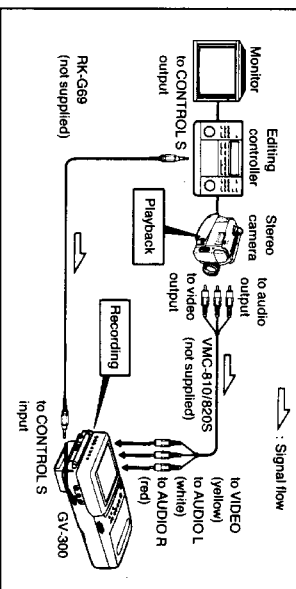
To edit from the VCR equipped with the CONTROL S output

Connect the CONTROL S input jack on this unit and the CONTROL S output jack on the other equipment. Playback/pause on the other VCR and recording/pause on this unit can be operated simultaneously.

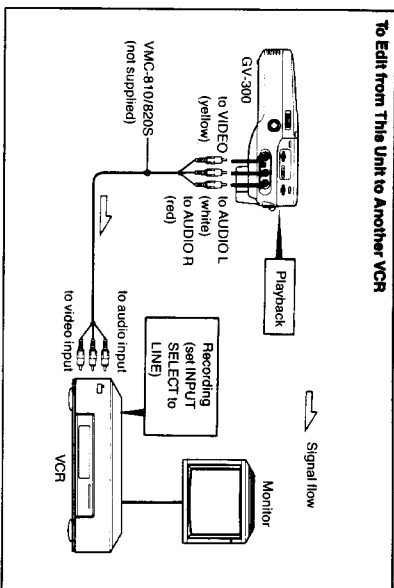


To edit with the editing controller

By connecting the editing controller, the recorder and player can be operated easily with the controller.



To Edit from This Unit to Another VCR



If the VCR to be connected has a monaural audio input only, use a commercially available connecting cord such as VMC-710/720M. In this case, connect to the AUDIO L and VIDEO jacks.

Operation

- Operate the unit on 60 V (battery pack)/75 V (AC power adaptor)/65 V (DC pack DCP-77).
- For DC or AC operation, use the accessories supplied or recommended in this manual.
- 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.
- Avoid rough handling or mechanical shock to the unit.
- Do not apply excessive force to the LCD.
- Remove and store video cassettes after recording or playback.
- Do not wrap up the unit and operate it because heat may build up internally.
- Avoid using and storing the recorder in the following locations:
 - Locations susceptible to vibration
 - Locations exposed to strong magnetic fields
 - Locations near TV or radio transmitters where strong radio waves are generated
- Do not place the unit on the sand.

Care

- When the unit is not used for a long period of time, periodically turn on the power, operate the recorder and play back a tape for about three minutes.
- Clean the recorder body with a dry, soft cloth, or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent which may damage the finish.

Maintenance

Video Head Cleaning

To ensure a clear picture, clean the video heads periodically. If playback pictures are noisy or hardly visible, the video heads may be contaminated. In this case, clean the video heads with the Sony V8-25CLH cleaning cassette (not supplied) according to the instructions.

Caution

Do not use commercially available wet-type cleaning cassettes. They may damage the video heads.



Note

If the V8-25CLH cleaning cassette is not available in your area, consult your Sony service facility.

If the Video Head is Damaged

When playback pictures are not clear even after using the cleaning cassette, the video head may be damaged. In this case, the video head needs to be replaced with a new one. Consult your Sony service facility for replacing the video head.

Note on the built-in lighting system

A built-in lighting system is assembled inside the liquid crystal screen of this unit. The life of the small fluorescent tube used for this built-in lighting system runs out over a period of use. If the lamp becomes dimmer or goes off immediately after you turn it on, even with new batteries, replace the lamp with a new one. To replace the lamp, consult the dealer where you purchased the unit, or a Sony service facility. The expected life of the small fluorescent tube is about three years if this unit is used for an hour each day. When you use this unit in a cold environment, the fluorescent tube will be dimmer at first. As soon as the temperature of the tube rises, it will regain its original brightness.

Note on the LCD

- Do not push the display forcibly.
- Do not operate the unit where the temperature is below 0°C (32°F) or above 40°C (104°F).
- If the unit is used in a cold place, a residual image may appear on the screen. This is not a malfunction of the unit.
- Constant bright points of light (red, blue, or green) may appear on the screen. This is not a malfunction of the unit.

Notes on Moisture Condensation

If this unit is brought directly from a cold place to a warm place, moisture may condense inside the unit or on the surface of the tape. If this happens, the tape may stick to the head drum, damaging both the tape and the unit. Although this unit is furnished with a moisture sensor to prevent possible damage from condensation, do not leave the tape inside the unit.

If moisture condenses inside the unit

The "DEW" indication appears on the screen.

In this case, no button will function except the EJECT button. (However, if you have been watching a TV program, you can continue to do so.)

Eject the cassette, turn off the unit and leave the cassette holder open at least for an hour.



The unit can be used again if the DEW indication does not appear when one of the tape transport buttons is pressed.

Using Your Video TV Recorder Abroad

Specifications

If you prepare fully charged battery packs and the supplied AC power adaptor (which can be used in all areas with a local power supply of 100 V-240 V), you can use your recorder in any country.

Each country has special TV color broadcast and electricity systems. This unit is designed to record and play back using the NTSC color video signals. Recording and playback of video sources based on other color systems cannot be guaranteed.

NTSC system countries
Bahama Islands, Canada, Central America, Japan, Korea, Mexico, Taiwan, the Philippines, U.S.A., etc.

System

Video recording system
Audio recording system
Video signal
Usable cassettes
Tape speed

Rotary two-head helical scanning FM system

Rolary head, FM system
EIA standard, NTSC color
8 mm video format cassettes
SP: approx. 1.43 cm/sec.
LP: approx. 0.72 cm/sec.

Recording time

Playback time

Fast forward/rewinding time

LP mode: 4 hours
(with Sony PB-120 cassette)
SP mode: 2 hours
LP mode: 4 hours
(with Sony PB-120 cassette)

Approx. 6 minutes
(with Sony PB-120 cassette)

LCD section

Picture

On-screen display

4 inches measured diagonally
8.2 x 6.2 cm (3 1/4 x 2 1/2 inches)
TN LCD/TFT active matrix method
Total picture-element number: 112,086 (479 x 234)

Tuner section

Channel coverage

Antenna input

VHF: 2 - 13 channels
UHF: 14 - 69 channels
Cable TV channels: A-8 - A-5, A-2 - W, W + 30 - W + 84
75-ohm minijack for VHF/UHF

Inputs/outputs

VIDEO/AUDIO IN/OUT

Video input

Video output

Audio input

Audio output

Speakers
Earphone
CONTROLS
Camera input

Selectable automatically according to the operation
Phono jack, 1 Vpp, 75 ohms, unbalanced, sync negative
Phono jack, 1 Vpp, 75 ohms, unbalanced, sync negative
Phono jack, -7.5 dBs (0 dBs = 0.775 Vrms), input impedance more than 47 kilohms
Phono jack, -7.5 dBs (330 mV) at load impedance 47 kilohms, output impedance less than 10 kilohms
16 ohms, 150 mW
Stereo minijack, 8 ohms x 2
Minijack
12-pin

Timer section

Clock
Time indication
Timer setting

Crystal lock
12-hour cycle
Only for recording, 1 event/24 hours

General

Power requirements
Power consumption
Operating temperature
Storage temperature
Dimensions

Battery mounting surface input: 6.0 V (battery pack)
DC jack input: 7.5 V (AC power adaptor), 6.5 V (DC pack DCP-77)
6.9 W (for continuous playback)
0°C to 40°C (32°F to 104°F)
-20°C to 60°C (-4°F to 140°F)
129 × 71 × 226 mm (w/h/d)
(5 1/8 × 2 7/8 × 9 inches)
Approx. 1.1 kg (2 lb 7 oz) incl. battery pack

Weight
Accessories supplied

Stereo earphones (1)
Signal splitter (1)
Carrying case (1)
Battery pack NP-77 (1)
AC power adaptor AC-V50 (1)
Lithium battery (1)

AC-V50

Power consumption
Power requirements
Output voltage
Battery charge terminal:
Operating temperature
Storage temperature
Dimensions

23 W
100 – 240 V AC, 50/60 Hz
DC OUT: 7.5 V, 2 A in operating mode
10 V, 1.3 A in charge mode
0°C to 40°C (32°F to 104°F)
-20°C to 60°C (-4°F to 140°F)
Approx. 71 × 45 × 144 mm (w/h/d)
(2 7/8 × 1 13/16 × 5 3/4 inches) including projecting parts and controls
Approx. 400 g (14 oz)

Weight

Design and specifications are subject to change without notice.

	Model name	Page
Battery pack	NP-77H, NP-66H, NP-55	11
Battery charger	BC-77	
Car battery charger	DC-V30	11
DC pack	DCP-77	17
Color video camera	CCD-G1	56
Antenna connector	EAC-40	54
Signal splitter	EAC-45	54
Antenna cord	CCD-6M, CCD-2	54
Car antenna	VCA-3W, VCA-4E	54
Pan tilter	HVR-200	59
Connecting cord	VMC-810S/820S (1 m/2m) VMC-710M/720M (1 m/2m)	60
Car connecting pack	GPA-2	
Video walkman hood	VCV-GV300	
Cleaning cassette	V8-25CLH	70
RFU adaptor kit	RFU-99UCKA	63

Troubleshooting


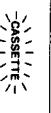









If you think you have a problem with this unit, double-check by using the troubleshooting suggestions below before calling the Sony service facility. You may have overlooked something relatively simple! If the problem persists, consult your Sony service facility.

Symptom	Possible causes and/or corrections
The unit is not operable even though the POWER switch is turned on.	<ul style="list-style-type: none"> The battery pack is not attached. The battery pack is exhausted. Charge it. (Page 12) AC power adaptor or car battery cord is disconnected.
Power turns off automatically during operation.	<ul style="list-style-type: none"> The battery pack is exhausted. The SLEEP timer has been set.
The battery pack is quickly discharged.	<ul style="list-style-type: none"> The ambient temperature is too low. The battery pack has not been charged fully.
The clock shows "AM 12:00".	<ul style="list-style-type: none"> Replace the lithium battery with new one. In this case, reset the clock (page 20), and if necessary, reset the timer recording.
The playback picture is not clear.	<ul style="list-style-type: none"> The video heads may be contaminated. Clean the heads using the Sony V8-25CLH cleaning cassette (not supplied). The video heads may be damaged. Have the video heads replaced with new one. The TV signal is too weak. Adjust the telescopic antenna or connect an external antenna.
During recording, the picture is not clear.	<ul style="list-style-type: none"> The safety tab on the cassette is slid out. Moisture condensation has occurred. The tape is at its end. A cassette is not inserted.
Recording cannot be made.	<ul style="list-style-type: none"> Timer recording setting has been made. Press the TIMER REC ON/OFF button and turn on the unit again. Moisture condensation has occurred.
The tape does not run even though the tape transport button is pressed.	<ul style="list-style-type: none"> The camera is not connected correctly. (Page 55) be made.
The camera recording cannot be made.	<ul style="list-style-type: none"> The camera is not connected correctly. (Page 55) be made.
The cassette cannot be ejected.	<ul style="list-style-type: none"> No power is supplied to the unit. The battery pack is exhausted. Use a charged battery. (Page 12)
An index cannot be entered.	<ul style="list-style-type: none"> The safety tab on the cassette is slid out. You are using a commercially sold pre-recorded video software.

Symptom	Possible causes and/or corrections
The picture is muted.	<ul style="list-style-type: none"> The LCD ON/OFF button has been pressed. To restore the picture on the screen, press the LCD ON/OFF button.
Both the picture and the sound are muted.	<ul style="list-style-type: none"> The unit is in the timer recording mode. Press LCD ON/OFF.
The picture appears but no sound is heard.	<ul style="list-style-type: none"> Adjust the VOL control. Disconnect the earphones.
No color	<ul style="list-style-type: none"> Adjust the COLOR control. (Page 32)
Snow and noise appear.	<ul style="list-style-type: none"> Check the external antenna.
Dotted lines or stripes appear.	<ul style="list-style-type: none"> This is often caused by local interference (e.g. cars, neon signs, hair dryers, etc.). Adjust antenna for minimum interference.
Double images or ghosts appear.	<ul style="list-style-type: none"> Reflections from nearby mountains or buildings often cause this problem. A highly directional antenna may improve the picture.
The timer setting indication does not appear.	<ul style="list-style-type: none"> Set the clock. (Page 18)
The timer recording feature failed to operate.	<ul style="list-style-type: none"> The safety tab on the cassette was slid out. (Page 35) The tape was not long enough. The TIMER REC ON/OFF button was not pressed. The clock was not set correctly. The battery pack was exhausted. There was a power interruption (for AC operation). Moisture condensation has occurred. (Page 71)

List of On-Screen Displays

The following indications appear on the screen indicating the operation condition and cautions.

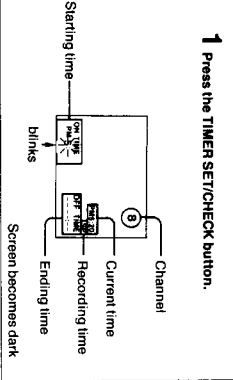
Indication	Meaning (reference page)	Indication	Meaning
	Channel (page 28)		Caution for the cassette (page 38)
	Current time Recording mode Counter (page 39)		Battery is exhausted (page 14)
	Stereo (page 31)		Moisture condensation (page 71)
	Index (page 48)		Input from VIDEO/AUDIO jack (page 55)
	Index operation (page 48 - 53)		Input from CAMERA connector (page 59)
	Tape transport operation (page 45 - 47)		

Quick Reference for Timer Recording and Using Indexes

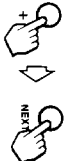
Quick Reference for Timer Recording

Refer to page 41 of this manual for details.

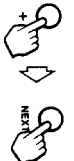
1 Press the TIMER SET/CHECK button.



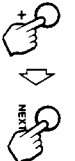
2 Set the hour.



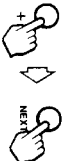
3 Set the minute.



4 Set the hour.



5 Set the minute.



6 Press TIMER REC/ON/OFF.
The power will go off. Recording will start at the time you set.

Quick Reference for Timer Recording

Stopping the timer recording operation

Press the TIMER REC ON/OFF button again.

Checking the setting

Press the TIMER SET/CHECK button while the TIMER REC lamp is lit.

The power is turned on and the starting/ending times appear.

If you have made a mistake in timer setting

Press the TIMER REC ON/OFF button to cancel the timer recording mode, then turn the unit on and set the timer again.

Monitoring the sound and picture being recorded

Press the LCD ON/OFF button.

Quick Reference for Using Indexes

Entering an index

During the recording/playback or recording/playback pause mode, press the MARK button.

Erasing an index

Search for the index to be erased, then press the ERASE button.

Finding the desired index

- 1 Press the INDEX MODE button once.
- 2 Search for the INDEX/CHAPTER number by pressing INDEX -/+ button.

Scanning each index sequentially

- 1 Press the INDEX MODE button twice.
 - 2 Press the INDEX -/+ button.
- Start playback at the desired part.

Cut along this line for outdoor use.