

SONY

English

Français

*Time Lapse
Video Cassette Recorder*

*Operating Instructions
Mode d'emploi*

(Tentative)

AS of JAN. 31, 1992

SVT-5000

English

Owner's Record

WARNING

The model and serial number of your set are located on 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. SVT-5000 Serial No. _____

CAUTION

The format used in the time lapse recorder SVT-5000 differs from the regular VHS video format. This unit cannot be used to play VHS video cassettes. However, cassettes recorded in two-hour mode on this unit may be viewed on a normal VHS video cassette recorder.

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

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF
ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED
SERVICE PERSONNEL.

3A1-

修理 (Repair)



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.

WARNING

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

For the customers in Canada

This apparatus complies with the Class A limits for radio

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Overview of the VCR

Field recording/field playback

Because single fields can be recorded one by one in time lapse mode and all fields can be viewed separately during playback, you can record more information.

Audio recording in 12-/24-mode

You can record audio information with video information in 12- or 24-hour mode and listen to it by selecting audio mode during playback.

Various recording functions

- **Autorepeat recording:** After the end of the tape is reached, the unit rewinds the tape and starts recording again from the beginning of the tape.
- **Timer recording:** You can set the timer on daily recording or weekly recording.
- **Alarm recording:** If an externally connected alarm sensor is triggered, you can make a complete recording of the situation that triggered the alarm.
- **One-shot recording:** Recording can be done on a single-field basis.

Series recording function

This function permits long-term continuous recording using two or more time lapse VCRs.

Mode settings on monitor

You can set the modes for all functions, such as the internal timer setting, the alarm recording mode settings, etc. on the monitor.

Multiple recording modes

The time lapse intervals for recording can be set in 11 steps. At the longest interval setting, available recording time is a full 960 hours (40 days) with one 120-minute tape.

Used time indicator

This unit has a built-in microprocessor equipped with a calendar function and shows used time of head drum and power on time on the monitor.

Time and date retrieval function

Because this unit uses a high-performance VASS, recordings made in time lapse mode can be searched by date and time, a valuable type of search function in time lapse VCRs.

Alarm search/scan function

Searches the alarm recording or plays if back for five seconds.

Connections

to be continued ▶

Forward/reverse field advance

This unit offers improved search functions with the ability to move both forwards and backwards between fields.

Automatic headcleaning function

The head is cleaned automatically each time a tape is loaded or unloaded.

Clock operation backup

When a power interruption occurs, the built-in rechargeable battery will provide backup power for the clock for up to 15 days.

Essential data, such as setting data, internal timer settings, recording time, mode settings, and alarm recording mode settings, are also retained.

Security lock

To guard against operation errors, this unit locks all of the buttons except the one in current operation mode.

Subhead selection function

If a problem develops with one head, the subhead is used to regain a good video image.

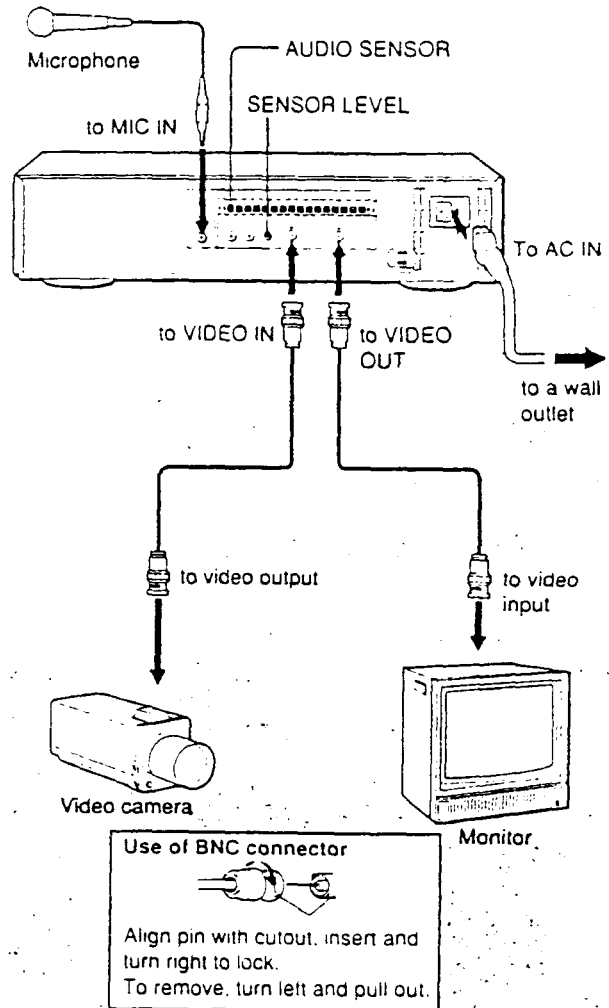
Recording check function

You can check the recorded image during recording by pressing a single button.

Turn all the power off before making connections.
Connect the power cord last.

Connecting a camera, monitor and microphone

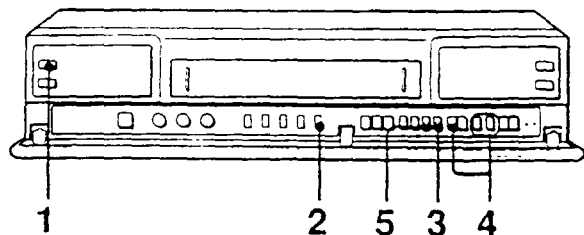
You can monitor the picture and sound.



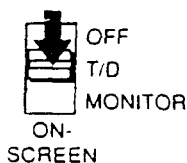
For alarm sensor connection, refer to page 20.

SENSOR LEVEL control is used to set the level from the MIC input at which the AUDIO SENSOR output switches on and off.

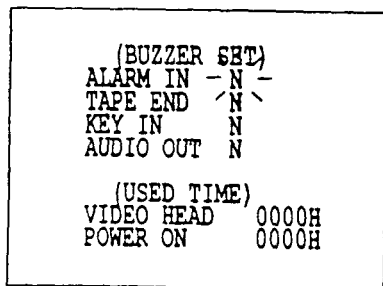
Setting the Buzzer



- 1 Turn on the power of the equipment to be used.
- 2 Set ON-SCREEN to T/D.



- 3 Press PAGE five times to display (BUZZER SET) on the monitor.



- 4 Press SHIFT ▼ so that the item to be set blinks and select Y (yes) or N (no) by pressing +/-.
 ALARM IN: Set to Y for getting sounds during alarm recording
 TAPE END: Set to Y for getting sounds when the end of the tape is reached.
 KEY IN: Set to Y for getting sounds when a button is pressed or switch is set.
 AUDIO OUT: Set to Y for output the beep signal on the AUDIO OUT jack when any of the above settings are set to Y.

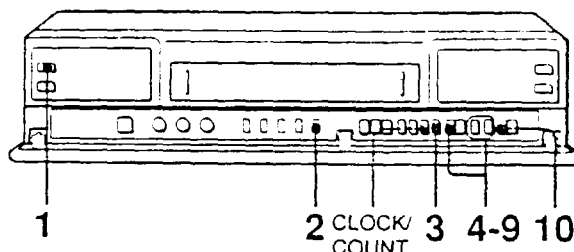
- 5 Press CLOCK/COUNT to display the normal picture.

Note

Even if KEY IN is specified, during the timer recording, security lock, moisture condensation, and alarm recording modes, the unit does not beep except for the buttons that can be used in those modes.

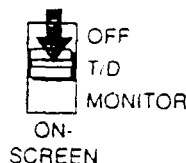
Setting Date and Clock

Set the clock to the current time and date on the monitor.

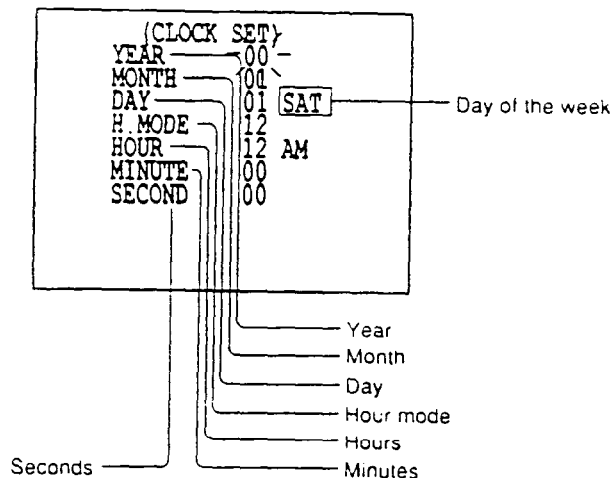


Example:
Set the date and clock to 3:20 p.m. on October 15, 1992.

- 1 Turn on the power of the equipment to be used.
- 2 Set ON-SCREEN to T/D.

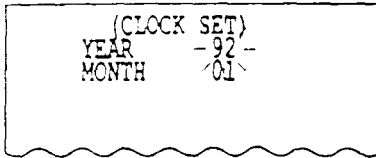


- 3 Press PAGE once to display (CLOCK SET) on the monitor.
The first screen shows January 1, 2000.



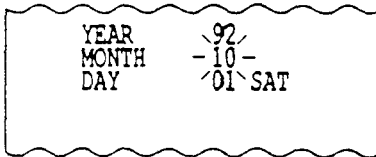
Setting Date and Clock

- 4 Set the year by pressing +/-.



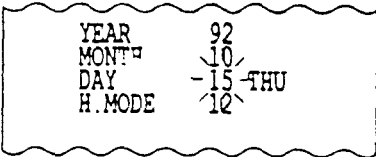
Press SHIFT ▼.

- 5 Set the month by pressing +/-.



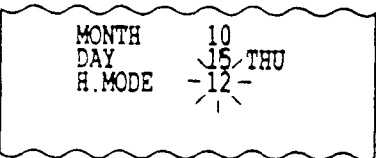
Press SHIFT ▼.

- 6 Set the day by pressing +/-.



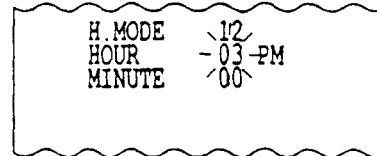
Press SHIFT ▼.

- 7 Set the hour mode by pressing +/-.



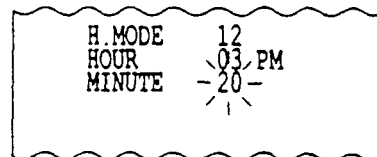
Press SHIFT ▼.

- 8 Set the hour by pressing +/-.



Press SHIFT ▼.

- 9 Set minutes by pressing +/-.



Press SHIFT ▼.

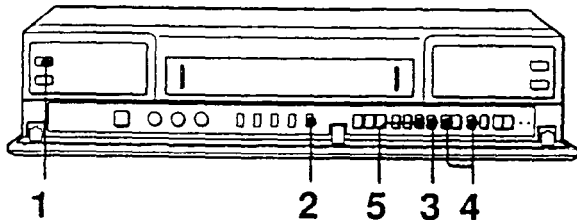
- 10 Press REC/PLAY SPEED – simultaneously with a time signal.

You can set the clock at the 00 second point.

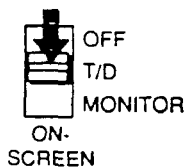
After setting the date and time, press CLOCK/COUNT to display the normal screen.

Setting Time/Date Display

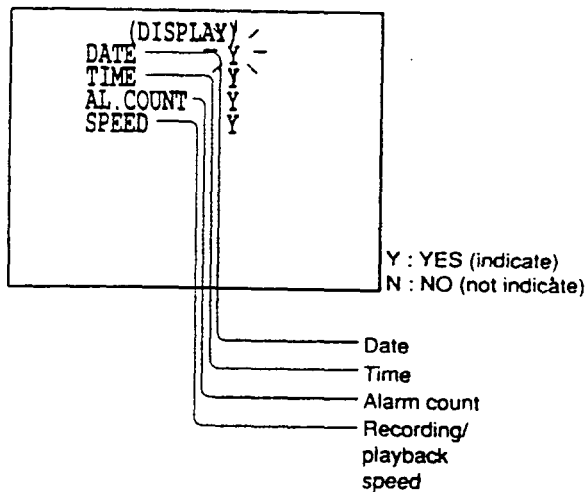
You can display four items of information, date, time, number of alarm recordings and recording/playback speed and turn off each item which you do not want to display.



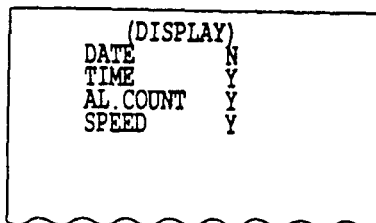
- 1 Turn on the power of the equipment to be used.
- 2 Set ON-SCREEN to T/D.



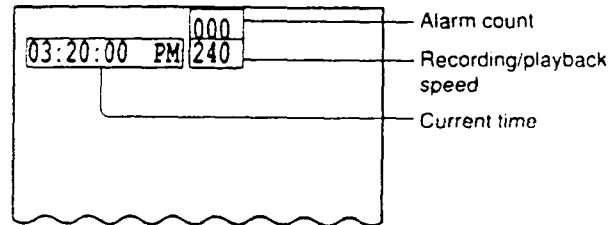
- 3 Press PAGE twice to display (DISPLAY) on the monitor.



- 4 Press SHIFT ▼ so that the item to be set and +/- to set blinks to Y or N.
Example: When you set the date display to N.



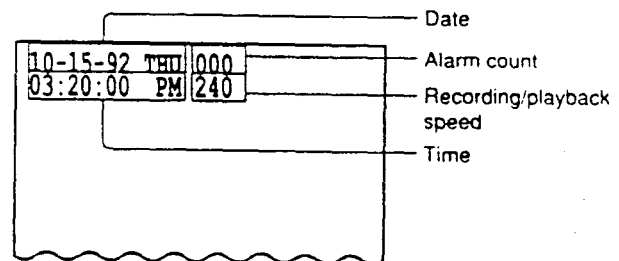
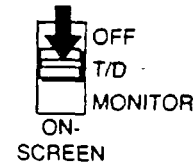
- 5 Press CLOCK/COUNT to display the normal picture (time/date screen).



Changing the Display Position of the Normal Screen

Changing the position of the time/date screen

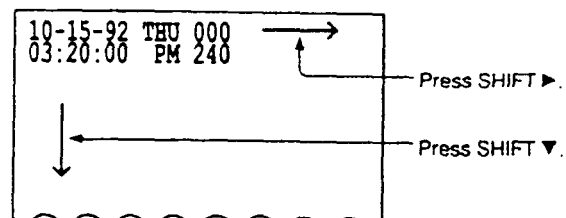
- 1 Set ON-SCREEN to T/D.



- 2 Change the display position.

To move the display downwards, press SHIFT ▼.
(When the bottom of the screen is reached, the display position returns to the top of the screen.)

To move the display rightwards, press SHIFT ▶.
(When the right-hand edge of the screen is reached, the display position returns to the left-hand edge of the screen.)

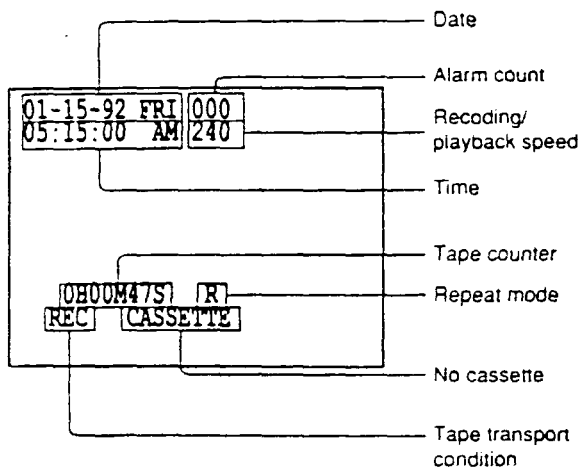


Setting Date and Clock

Changing the position of the monitor screen

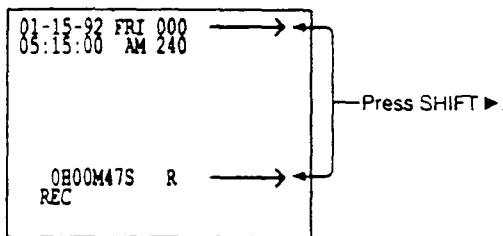
You can check the operation mode of the unit on the monitor.

- 1 Set ON-SCREEN to MONITOR.



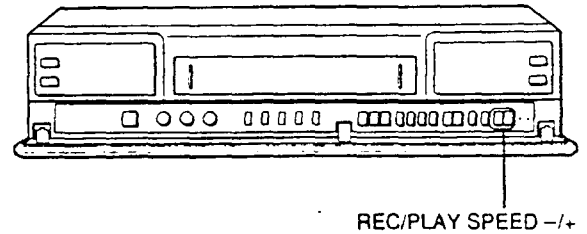
- 2 Change the display position.
You cannot move the monitor screen downwards.

To move the display rightwards, press SHIFT ►.
(When the right-hand edge of the screen is reached, the display position returns to the left-hand edge of the screen.)



Selecting the Recording Speed

You can set the normal recording or the time lapse intervals for recording in 11 steps.



Press REC/PLAY SPEED - or REC/PLAY SPEED + to set the recording speed.

Recording time and intervals

Recording speed	Maximum recording time with 120-minute tape (hour)	Interval (sec.)	Audio recording	Tape motion	
2	Standard mode	2	1/60	Possible	Continuous
12	Time lapse mode	12	0.1		
24		24	0.2		
48		48	0.4		
72		72	0.6		
96		96	0.8		
120		120	1.0		
168		168	1.4	Impossible	Intermittent
240		240	2.0		
480		480	4.0		
720		720	6.0		
960		960	8.0		

On cassette

This unit is designed and calibrated with 120-minute tape (Sony T-120). To ensure stable operation and optimum picture quality, the use of Sony 120-minute tape is recommended.

The principle of extended recording

The extremely long recording times offered by the unit are made possible by moving the tape only for small incremental steps while a video picture is recorded.

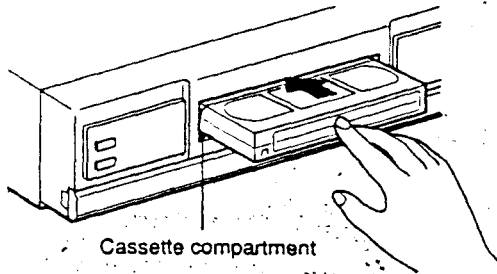
Note


"000" is displayed in the display window after the recording speed "960" is displayed. This is used for the one-shot recording on page 25.

Handling Video Cassette

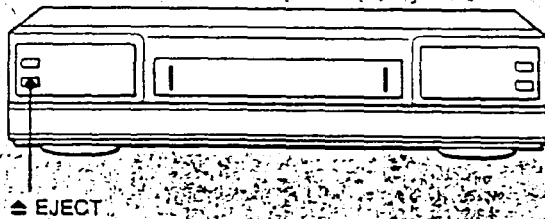
This section shows you how to insert a video cassette into the VCR.



Loading a Video Cassette



Insert the cassette into the cassette compartment by slowly pressing its center with the arrow on the top. When the cassette is loaded, the VCR automatically turns on and the  indicator lights in the display window. If the cassette without its safety tab is used for recording, the cassette is ejected automatically.

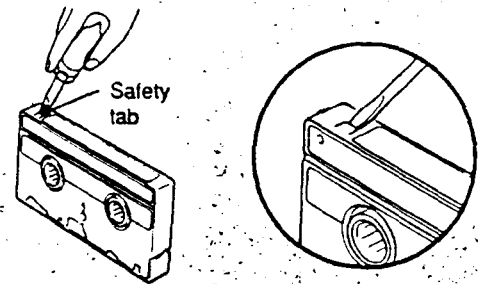
Ejecting the video cassette



Press  EJECT on the VCR. You can eject the cassette even when the power is off. When you press  EJECT, the VCR turns on automatically. After ejecting the cassette, the VCR turns off again.

Protecting your cassette from being erased

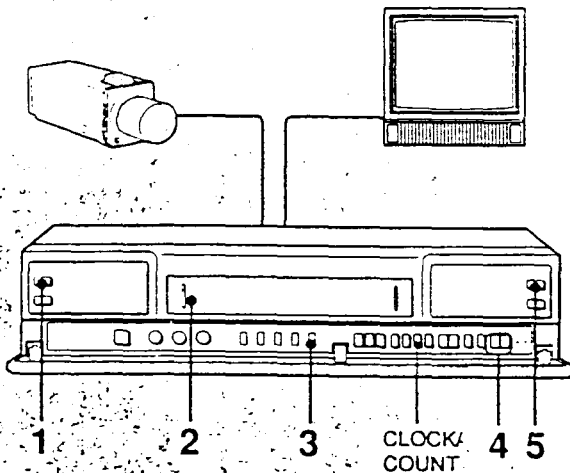
Remove the tab on the cassette with a screwdriver or a similar tool as shown. This protects against an accidental recording.



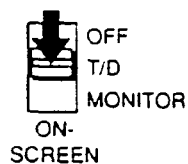
If you want to record again on the cassette without its safety tab, simply cover the safety tab hole with a piece of plastic tape.

Recording

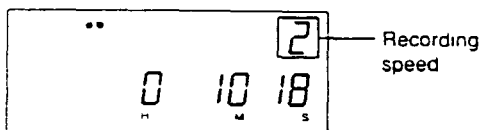
This section shows you how to record the signal from the video camera in the normal or time lapse mode, set the security lock, record repeatedly on the same cassette, continue recording on another VCR after the tape on the 1st VCR is reached at the end.



- 1 Turn on the power of the equipment to be used.
- 2 Insert the cassette.
- 3 Set ON-SCREEN to T/D.



- 4 Set the recording speed by pressing REC/PLAY SPEED +/-.



- 5 Press ● REC.
Recording starts.

To stop recording
Press ■ STOP.

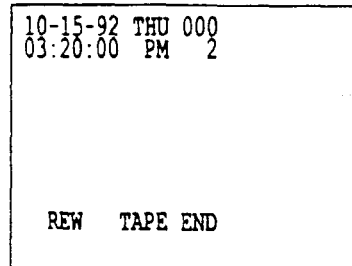
If recording does not start and the cassette is ejected

The tab on the cassette is removed to protect against the accidental recording. (See page 11.)

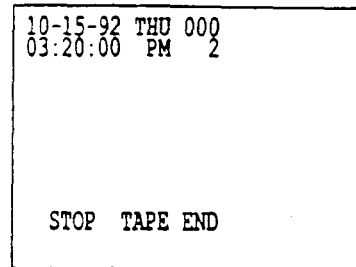
When the tape end is reached

The tape is rewound at the beginning of the tape and stops when REPEAT REC is set to OFF.

During rewinding



In stop mode

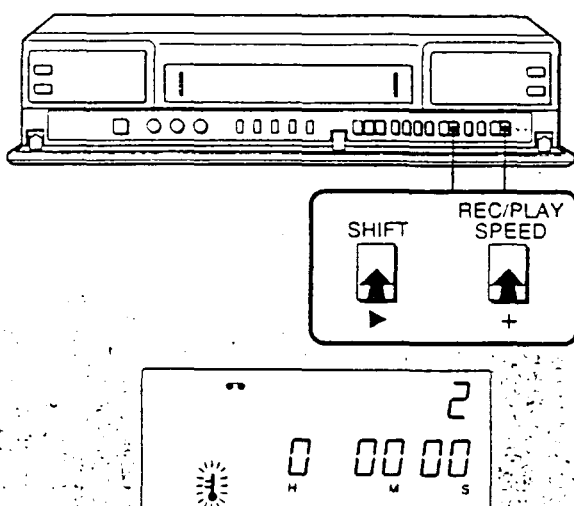


Security Lock Function

Locking the record mode is useful to guard against accidental recording interruptions when the unit is used for surveillance or monitoring purposes.

To set the security lock

While pressing SHIFT ►, press REC/PLAY SPEED + within one second. The \uparrow indicator lights in the display window.

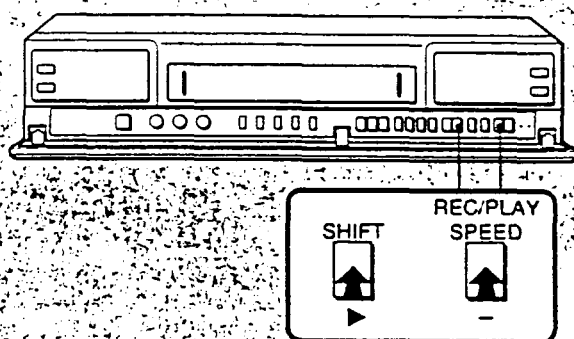


The security lock function also works in other modes. The buttons except the one used in the current mode do not work.

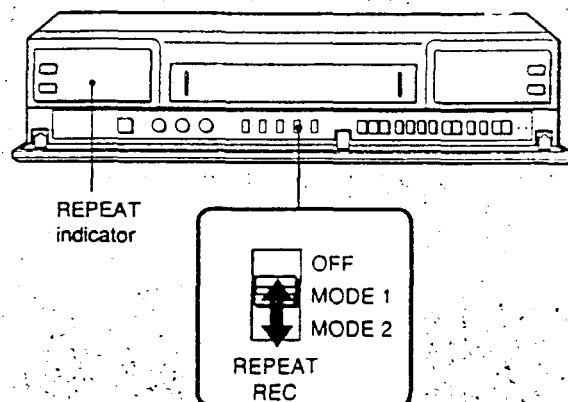
However, you can use SHARPNESS, TRACKING, and STILL V. LOCK.

To release the security lock

While pressing SHIFT ►, press REC/PLAY SPEED – within one second. The \uparrow indicator turns off.



Repeated Recording on the Same Cassette



Set REPEAT REC to MODE 1 or MODE 2 and then press ● REC. The R and REPEAT indicators light and recording begins.

MODE 1: If an alarm input is received during autorepeat recording, the recording mode switches to alarm recording. (The R indicator disappears.) After the end of the tape is reached, the tape is rewind and stops at the beginning.

MODE 2: If an alarm input is received during autorepeat recording, the recording mode switches to alarm recording. Repeat recording is performed regardless of whether an alarm input is received or not.

Note

If REPEAT REC is set to OFF while autorepeat recording is in progress, recording proceeds until the end of the tape is reached and then stops automatically after the tape is rewound at the beginning.

Recording

Series Recording

Connect another SVT-5000 for series recording (page 6) and set each of the units as follows.

Item	Unit #1	Unit #2	Unit #3 and subsequent unit
SERIES on (ALARM SET)/(1 SHOT SET)screen	Y	Y	Y
Operating status	Recording	Stopped	Stopped
REPEAT REC switch	OFF	OFF	OFF
Memory rewind	Released	Released	Released
Security lock	Locked	Locked	Locked
Timer	OFF	OFF	OFF
Cassette tape	Loaded	Loaded	Loaded

When all of the settings are complete, set unit #1 in recording mode and turn off the power of unit #2 and subsequent unit. When recording on unit #1 is complete, the power for unit #2 turns on and recording begins (The recording cannot be done for about 5 seconds.). The unit #1 rewinds its tape and turns off.

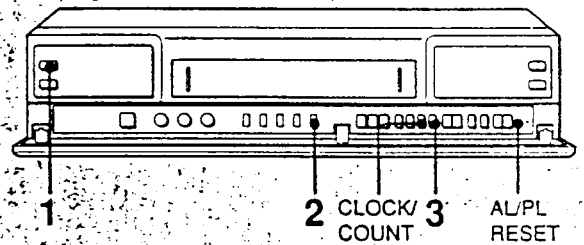
Recording after power interruption or moisture condensation

If a power interruption occurs, the P indicator lights in the display window and if a moisture condensation occurs, the dddd indicator blinks. Even if a power interruption or moisture condensation occurs while recording, the internal batteries provide backup power for memory for at least 15 days. After power is restored, press ● REC to start recording in preset mode. The internal batteries can be charged in about 48 hours.

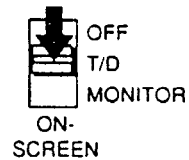
If the power is interrupted during recording with the security locked, the recording starts automatically after power is restored.



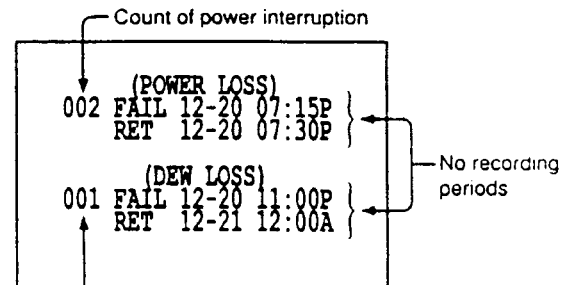
To check power interruptions or moisture condensation



- 1 Turn on the power of the equipment to be used.
- 2 Set ON-SCREEN to T/D.

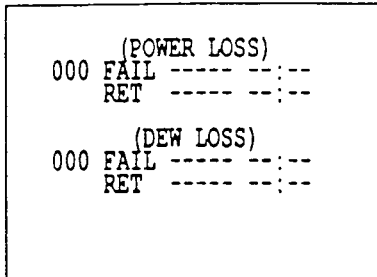


- 3 Press PAGE six times to display (POWER LOSS)/(DEW LOSS). This shows a count of the power interruption and moisture condensation and the period when the recording was interrupted.



To clear the P indicator

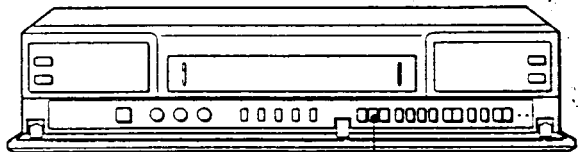
Press AL/PL RESET with a ball point pen or similar object.
The contents on the monitor also disappears.



To display the normal picture
Press CLOCK/COUNT.

Monitoring the recording condition

You can check the recording condition by pressing
▶ PLAY/REC CHECK while recording in time lapse mode.

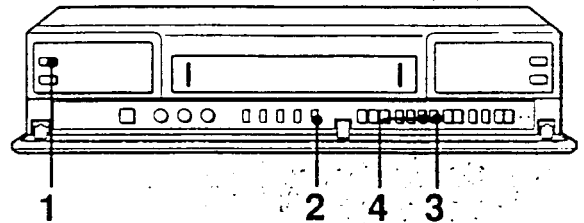


Press ▶ PLAY/REC CHECK while recording.
After the tape is rewound for about three seconds and played back for about two seconds, the unit returns to the original recording mode.

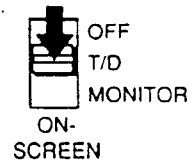
Note

While monitoring the recording condition, recording is interrupted.

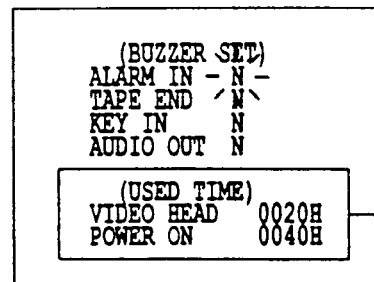
Checking the Used Time



- 1 Turn on the power of the equipment to be used.
- 2 Set ON-SCREEN to T/D.



- 3 Press PAGE five times to display (BUZZER SET)/(USED TIME).
The VIDEO HEAD reading indicates the amount of time the video head has been used, and the POWER ON reading indicates the amount of time the power has been on.



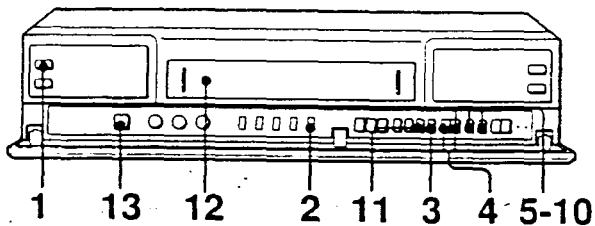
- 4 Press CLOCK/COUNT to display the normal picture.

Timer Recording

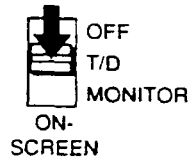
You can set the timer recording in two methods: day of the week recording and daily recording. Before starting, make sure that the time and date are set properly.

Ex.1 Making a recording from 8:00 a.m. on Tuesday to 5:00 p.m. the same day with the recording speed set to 24-hour mode.

	SUN	MON	TUE	WED	THU	FRI	SAT
SUN	---	---	---	---	---	---	M
MON	---	---	---	---	---	---	N
TUE	08:00A	05:00P	24	Y			
WED	---	---	---	---	---	---	N
THU	---	---	---	---	---	---	N
FRI	---	---	---	---	---	---	N
SAT	---	---	---	---	---	---	N
DLY	---	---	---	---	---	---	M



- 1 Turn on the power of the equipment to be used.
- 2 Set ON-SCREEN to T/D.



- 3 Press PAGE three times to display (TIMER SET).

	START	STOP	SPD
SUN	---	---	N
MON	---	---	N
TUE	---	---	N
WED	---	---	N
THU	---	---	N
FRI	---	---	N
SAT	---	---	N
DLY	---	---	N

- 4 Press SHIFT ▼ to move the blinking to TUE and then SHIFT ► to move it to the hour position of START.

	START	STOP	SPD
SUN	---	---	N
MON	---	---	N
TUE	08	---	N
WED	---	---	N
THU	---	---	N

- 5 Set the start hour by pressing +/- and press SHIFT ►. "A" (a.m.) and "P" (p.m.) are set automatically.

	START	STOP	SPD
SUN	---	---	N
MON	---	---	N
TUE	08:00A	---	N
WED	---	---	N
THU	---	---	N

- 6 Set the start minute by pressing +/- and press SHIFT ►.

	START	STOP	SPD
SUN	---	---	N
MON	---	---	N
TUE	08:00A	05	N
WED	---	---	N
THU	---	---	N

- 7 Set the stop hour by pressing +/- and press SHIFT ►.

	START	STOP	SPD
SUN	---	---	N
MON	---	---	N
TUE	08:00A	05:00P	N
WED	---	---	N
THU	---	---	N

- 8 Set the stop minute by pressing +/- and press SHIFT ►.

	START	STOP	SPD
SUN	---	---	N
MON	---	---	N
TUE	08:00A	05:00P	N
WED	---	---	N
THU	---	---	N

- 9 Set the recording speed by pressing +/- and press SHIFT ▶.

(TIMER SET)			
	START	STOP	SPD
SUN	---	---	---
MON	---	---	---
TUE	08:00A	05:00P	24 N
WED	---	---	---
THU	---	---	---

- 10 Select Y (yes) to execute the timer recording by pressing +/-.

(TIMER SET)			
	START	STOP	SPD
SUN	---	---	---
MON	---	---	---
TUE	08:00A	05:00P	24 Y
WED	---	---	---
THU	---	---	---

For another program presetting, repeat steps 4 to 10.

- 11 When all of the settings are completed, press CLOCK/COUNT to display the normal picture.
- 12 Insert the cassette.
- 13 Press TIMER/AUDIO ON.
The VCR turns off automatically, and enters the timer recording standby mode. The indicator appears.
When no cassette is inserted, the indicator blinks and the beep sounds are heard.

To stop the beep sounds

Press TIMER/AUDIO ON. After you insert the cassette, press TIMER/AUDIO ON again.

When the indicator appears in the display window, the buttons except TIMER/AUDIO ON does not work.

Daily recording

You can preset the timer to start recording each day of the week. Move the blinking to the appropriate day of the week by pressing SHIFT ▼ and set the day to DLY by pressing +/- before setting the hour position of START in step 4.

(TIMER SET)			
	START	STOP	SPD
SUN	---	---	---
DLY	---	---	---
TUE	---	---	---
WED	---	---	---
THU	---	---	---

Note

When you want to set the timer according to the following example 2, do not use the bottom two lines (SAT and DLY).

When the time set in the STOP column is earlier than the time set in the START column

The STOP time is assumed to be for the next day, and the T (tomorrow) indicator is displayed before the stop time.

(TIMER SET)			
	START	STOP	SPD
SUN	---	---	---
MON	05:00P	T08:10A	120 Y
TUE	---	---	---
WED	---	---	---
THU	---	---	---

Timer recording is interrupted in the following case:

When the power is interrupted.

After the power recovers, the recording resumes.

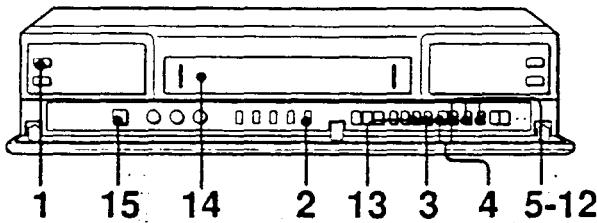
To stop the timer recording

Press TIMER/AUDIO ON. The recording stops and the power is turned off.

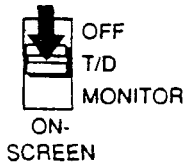
Timer Recording

Ex. 2 Making a recording from 5:20 p.m. on Friday to 7:50 a.m. on Monday with the recording speed set to 120-hour mode.

	SUN	MON	TUE	WED	THU	FRI	SAT
SUN	---	---	---	---	---	---	---
MON	---	---	---	---	---	---	---
TUE	---	---	---	---	---	---	---
WED	---	---	---	---	---	---	---
THU	---	---	---	---	---	---	---
FRI	---	---	---	---	---	---	---
FRI 05:20P	---	---	---	---	---	---	---
MON ** **	---	---	---	---	---	---	---
	07:50A	120	Y				



- 1 Turn on the power of the equipment to be used.
- 2 Set ON-SCREEN to T/D.



- 3 Press PAGE three times to display (TIMER SET).

(TIMER SET)			
	START	STOP	SPD
SUN	---	---	N
MON	---	---	N
TUE	---	---	N
WED	---	---	N
THU	---	---	N
FRI	---	---	N
SAT	---	---	N
DLY	---	---	N

- 4 Press SHIFT ▼ to move the blinking to SAT (7th line), change SAT (the day of the week) to FRI by pressing +/- and press SHIFT ►.

(TIMER SET)			
	START	STOP	SPD
SUN	---	---	N
MON	---	---	N
TUE	---	---	N
WED	---	---	N
THU	---	---	N
FRI	---	---	N
FRI	---	---	N
DLY	---	---	N

- 5 Set the start hour by pressing +/- and press SHIFT ►.

(TIMER SET)			
	START	STOP	SPD
SUN	---	---	N
MON	---	---	N
TUE	---	---	N
WED	---	---	N
THU	---	---	N
FRI	---	---	N
FRI 05	---	---	N
DLY	---	---	N

- 6 Set the start minute by pressing +/- and press SHIFT ►.

(TIMER SET)			
	START	STOP	SPD
SUN	---	---	N
MON	---	---	N
TUE	---	---	N
WED	---	---	N
THU	---	---	N
FRI	---	---	N
FRI 05:20P	---	---	N
DLY	---	---	N

- 7 Set the stop time, recording speed and timer execution to "**** ** *" by pressing +/- and press SHIFT ►. The day of the week in the last line is set to FRI and start time is set to **:***.

(TIMER SET)			
	START	STOP	SPD
SUN	---	---	N
MON	---	---	N
TUE	---	---	N
WED	---	---	N
THU	---	---	N
FRI	---	---	N
FRI 05:20P	**:**	*** *	*
FRI **:**	---	---	N

- 8 Set blinking FRI to MON by pressing +/- and press SHIFT ▶ to move it to the hour position of STOP.

(TIMER SET)			
	START	STOP	SPD
SUN	---	---	N
MON	---	---	N
TUE	---	---	N
WED	---	---	N
THU	---	---	N
FRI	---	---	N
FRI	05:20P	**:**	*** *
MON	**:**	---	N

- 9 Set the stop hour by pressing +/- and press SHIFT ▶.

(TIMER SET)			
	START	STOP	SPD
SUN	---	---	N
MON	---	---	N
TUE	---	---	N
WED	---	---	N
THU	---	---	N
FRI	---	---	N
FRI	05:20P	**:**	*** *
MON	**:**	07:--	N

- 10 Set the stop minute by pressing +/- and press SHIFT ▶.

(TIMER SET)			
	START	STOP	SPD
SUN	---	---	N
MON	---	---	N
TUE	---	---	N
WED	---	---	N
THU	---	---	N
FRI	---	---	N
FRI	05:20P	**:**	*** *
MON	**:**	07:50A	N

- 11 Set the recording speed by pressing +/- and press SHIFT ▶.

(TIMER SET)			
	START	STOP	SPD
SUN	---	---	N
MON	---	---	N
TUE	---	---	N
WED	---	---	N
THU	---	---	N
FRI	---	---	N
FRI	05:20P	**:**	*** *
MON	**:**	07:50A	120 N

- 12 Select Y (yes) to execute the timer recording by pressing +/-.

(TIMER SET)			
	START	STOP	SPD
SUN	---	---	N
MON	---	---	N
TUE	---	---	N
WED	---	---	N
THU	---	---	N
FRI	---	---	N
FRI	05:20P	**:**	*** *
MON	**:**	07:50A	120 Y

- 13 When all of the settings are completed, press CLOCK/COUNT to display the normal picture.

- 14 Insert the cassette.

- 15 Press TIMER/AUDIO ON.

The VCR turns off automatically, and enters the timer recording standby mode. The indicator appears. When no cassette is inserted, the indicator blinks and the beep sounds are heard.

To stop the beep sounds

Press TIMER/AUDIO ON. After you insert the cassette, press TIMER/AUDIO ON again.


When the indicator appears in the display window, the buttons except TIMER/AUDIO ON does not work.

Timer recording is interrupted in the following case:
 When the power is interrupted.
 After the power recovers, the recording resumes.

To stop the time recording

Press TIMER/AUDIO ON. The recording stops and the power is turned off.

Timer Recording

When the  indicator appears in the display window, press TIMER/AUDIO ON to clear it and operate the followings.

Changing the Timer Settings

- 1 Display the (TIMER SET) screen.
- 2 Press SHIFT ► or ▼ to move the blinking to the portion where you want to change.
- 3 Press +/- to change the setting.
- 4 Press CLOCK/COUNT to display the normal picture.

Cancelling the Timer Setting

- 1 Display the (TIMER SET) screen.
- 2 Press SHIFT ▼ to move the blinking to the position where you want to cancel.
- 3 Press SHIFT ► to move the blinking to the timer execution.
- 4 Press +/- to set the timer execution to N.

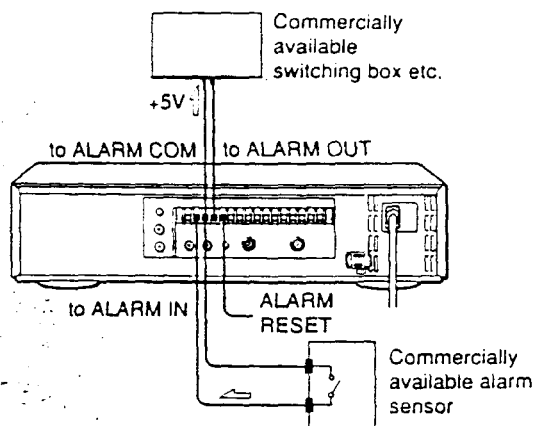
Cancelling All Timer Settings

- 1 Display the (TIMER SET) screen.
- 2 Press AL/PL RESET.

Alarm Recording

A door switch or alarm sensor can be used to trigger alarm recording. You can make alarm recording in recording mode, stop mode, power off mode and one-shot mode.

Alarm Sensor Connection

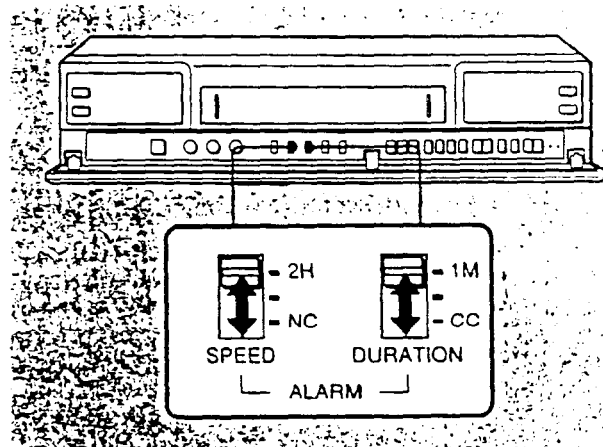


Setting the Alarm Speed and Alarm Duration

You can set the alarm speed and alarm duration by the following two ways:

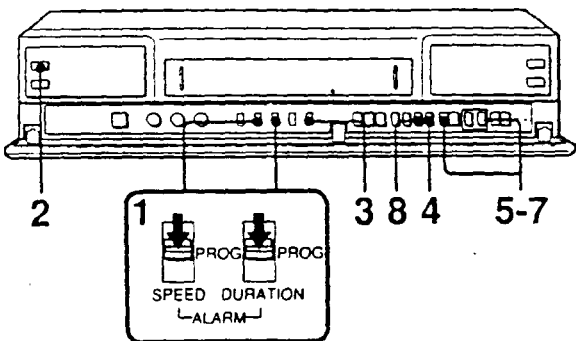
- Setting ALARM SPEED to 2H or NC and ALARM DURATION to 1M or CC.
- Setting them on the monitor after setting ALARM SPEED and ALARM DURATION to PROG.

Setting with ALARM SPEED and ALARM DURATION on this unit



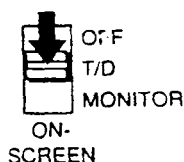
- 1 Set ALARM SPEED to 2H or NC.
2H: for recording in 2-hour mode
NC: for recording at the same speed as before the alarm was received.
- 2 Set ALARM DURATION to 1M or CC.
1M: for recording for one minute
CC: for recording as long as the alarm signal is being input.

Setting the alarm speed and alarm duration on the monitor

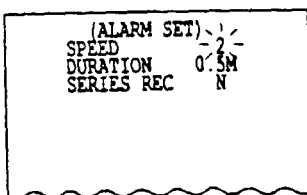


Example: To set the alarm speed to 12-hour mode and the alarm duration to three minutes.

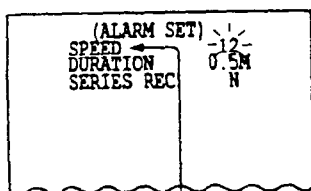
- 1 Set ALARM SPEED and ALARM DURATION to PROG.
- 2 Turn on the power of the equipment to be used.
- 3 Set ON-SCREEN to T/D.



- 4 Press PAGE four times to display (ALARM SET) on the monitor.



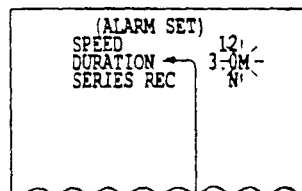
- 5 Set the alarm speed by pressing +/-.



Alarm recording speed

Press SHIFT ▼.

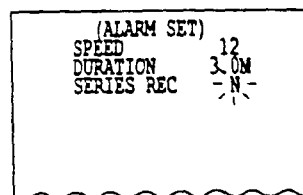
- 6 Set the alarm duration by pressing +/-.
- You can set the alarm duration in units of 30 seconds, up to five minutes.



Alarm recording duration

Press SHIFT ▼.

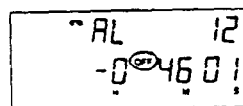
- 7 Set in which mode the alarm recording begins by pressing +/-.
- Y (yes): accepts alarms only in recording mode.
 N (no): accepts alarm in recording mode, stop mode, power off mode or one-shot recording mode



- 8 Press CLOCK/COUNT to display the normal picture.

Notes

- While alarm recording is in progress, other buttons are inoperable.
- If an alarm signal is received while the power is off, the unit is turned off after the alarm recording is performed.
- If an alarm input is received while the unit is in autorepeat recording MODE 1, autorepeat recording is reset and the REPEAT indicator goes off. After the end of the tape is reached, the tape is rewound and the unit goes into stop mode. The OFF indicator lights in the display window.



When the OFF indicator lights, in order to prevent accidental erasure of a recorded tape, timer recording and alarm recording cannot be executed.

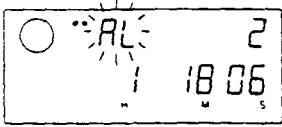
If any of ● REC, ►► FF, ◀◀ REW, ► PLAY/REC CHECK is pressed, the OFF indicator goes off.

- If another alarm is received while alarm recording is in progress, the second alarm is ignored.
- If the power is interrupted while alarm recording is in progress and restored again, the operation before the alarm occurred resumes.

Alarm Recording

Indicators during alarm recording

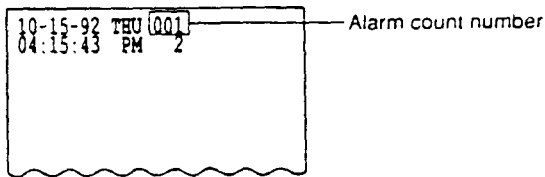
The AL indicator flashes in the display window.



The count (left digit) of the alarm recording flashes on the monitor.

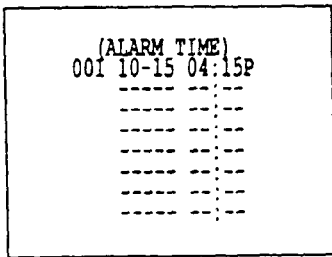
The alarm recording can be counted up to 999.

When the alarm function has worked 1000 times, the count number returns to 000.



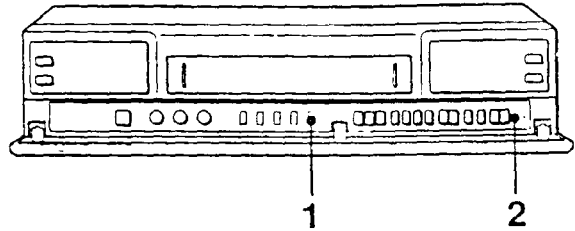
To display the alarm list

Press PAGE seven times to display (ALARM TIME) on the monitor.

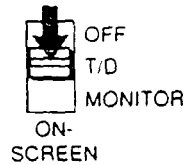


Press CLOCK/COUNT to display the normal picture.

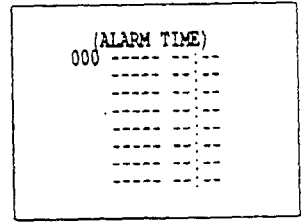
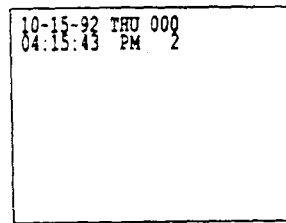
To reset the alarm count



1 Set ON-SCREEN to T/D.



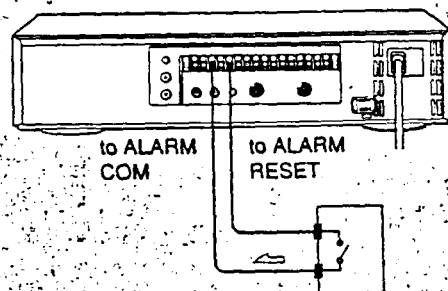
2 Press AL/PL RESET. The count on the monitor are reset to 000.



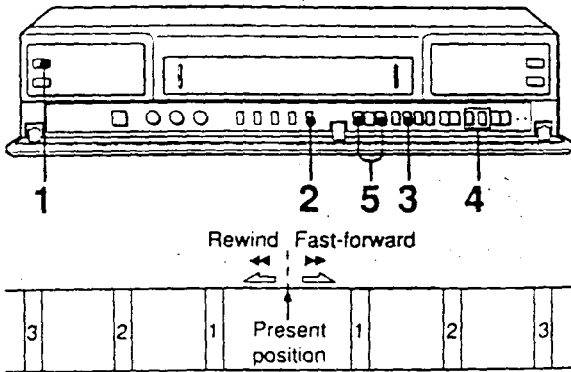
To stop the alarm recording

Shortcircuit the ALARM RESET and COM terminals during alarm recording.

When the shortcircuiting is released and the alarm signal is received, the alarm recording is started again.



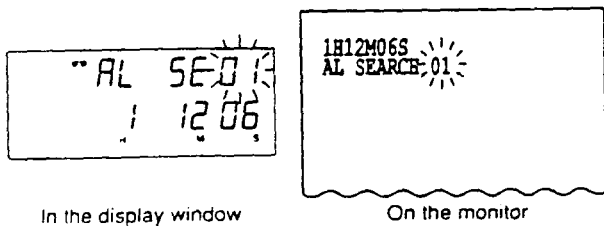
Searching the Picture When the Alarm Function Worked—Alarm Search



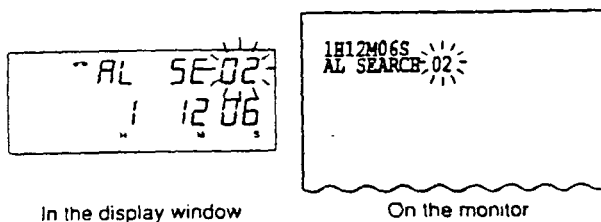
- 1 Turn on the power of the equipment to be used.
- 2 Set ON-SCREEN to T/D or MONITOR.



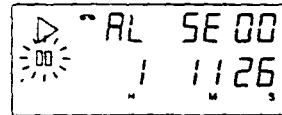
- 3 Press SEARCH/REV in stop mode.
The alarm search indicator blinks in the display window and on the monitor.



- 4 Press + or - to set the alarm search number.



- 5 Press ▶▶ FF or ◀◀ REW.
The cassette stops at the portion where the alarm function worked and the still picture playback is displayed.
The alarm search mode is cleared automatically.



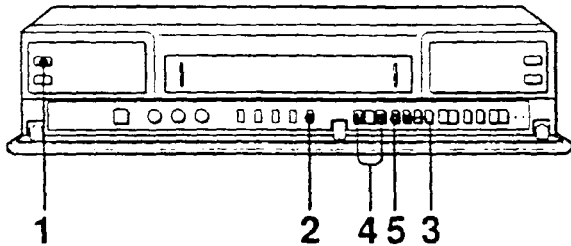
Notes

- If the tape is reached at its end during searching, the tape is rewound and the unit goes into stop mode at the beginning of the tape.
- For alarm search operation, set the alarm speed to 2H and alarm duration to 1M.
- You can search the recording up to 99 times.

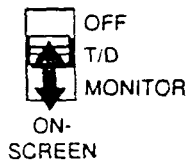
ALARM SEARCHING

Alarm Recording

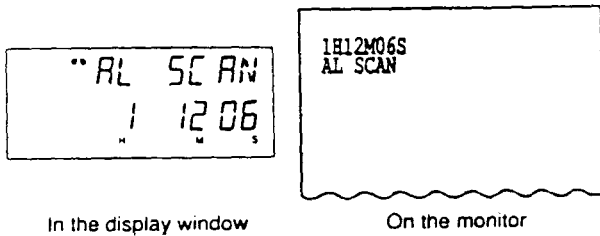
Scanning the Picture When the Alarm Function Worked—Alarm Scan



- 1 Turn on the power of the equipment to be used.
- 2 Set ON-SCREEN to T/D or MONITOR.



- 3 Press SEARCH/REV twice in stop mode. The alarm scan indicator lights in the display window or on the monitor.

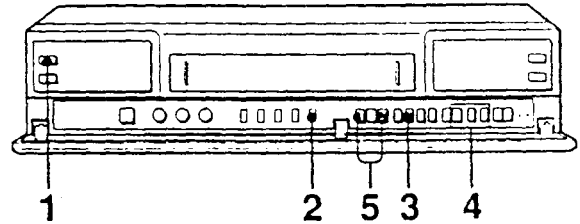


- 4 Press FF or REW. The portion where the alarm function worked is sequentially played back for five seconds.
- 5 Press STILL/REC PAUSE to stop the scan. The alarm scan mode is cleared automatically. To play back the tape, press PLAY/REC CHECK or STILL/REC PAUSE again.

Notes

- If the tape is reached at its end during scanning, the tape is rewound and the unit goes into stop mode at the beginning of the tape.
- For alarm scan operation, set the alarm speed to 2H and alarm duration to 1M.

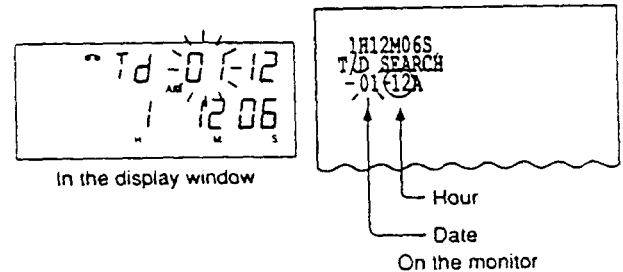
Searching the Time and Date When the Alarm Function Worked—Time/Date Search



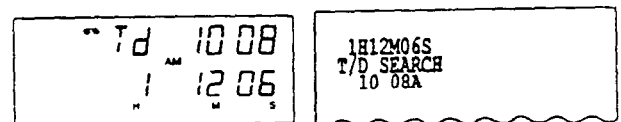
- 1 Turn on the power of the equipment to be used.
- 2 Set ON-SCREEN to T/D or MONITOR.



- 3 Press SEARCH/REV three times in stop mode. The time/date search indicator blinks in the display window and on the monitor.



- 4 Press + or - to set the date and SHIFT > to move the blinking to the time. Press + or - to set the time.



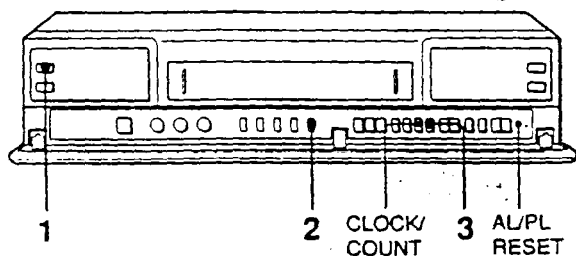
- 5 Press FF or REW. The cassette stops at the portion when you set the time and date and the still picture playback is displayed. The time/date search mode is cleared automatically.

Notes

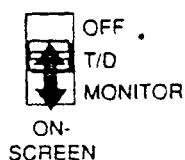
- The time/date function works in 12 to 240 hours recording speed mode.
- If the tape is reached at its end during searching, the tape is rewound and the unit goes into stop mode at the beginning of the tape.

One-Shot Recording

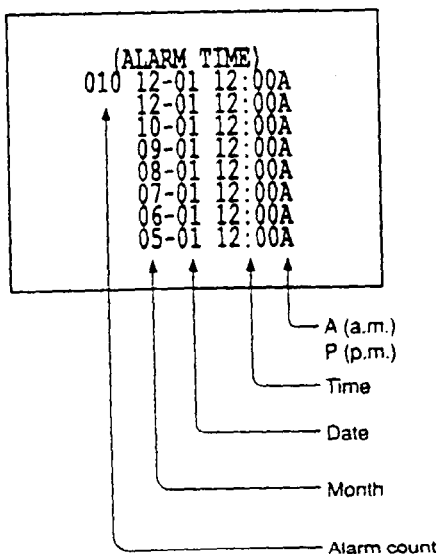
Displaying the Alarm List—Alarm Recall



- 1 Turn on the power of the equipment to be used.
- 2 Set ON-SCREEN to T/D or MONITOR.



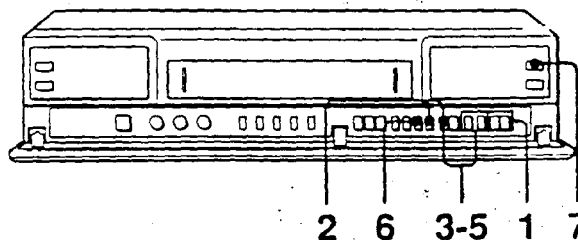
- 3 Press PAGE seven times to display (ALARM TIME). The alarm count, date and time are displayed. The date and time are displayed up to recent eight times.



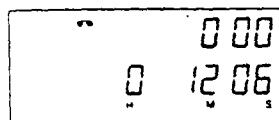
To clear the alarm list on the monitor
Press CLOCK/COUNT. The display shows the normal picture.

To clear the alarm count in the display window
Press AL/PL RESET.

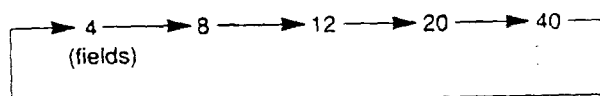
Aside from long-term recording in time-lapse mode, this unit is capable of one-shot recording, which has applications with data files and animation.



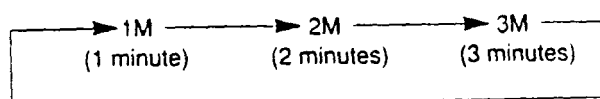
- 1 Set the recording speed in the display window to "0 00" by pressing REC/PLAY SPEED +/-.



- 2 Press PAGE four times to display (ALARM SET)/(1 SHOT SET) and SHIFT ▼.
- 3 Press +/- to specify FIELD (the number of fields) to be recorded during one-shot recording and then press SHIFT ▼. The specified number of fields is recorded at 0.6 second intervals.



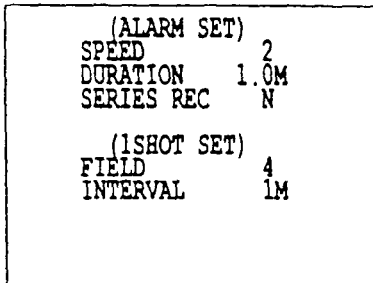
- 4 Press +/- to set the one-shot time in INTERVAL.



Press SHIFT ▼.

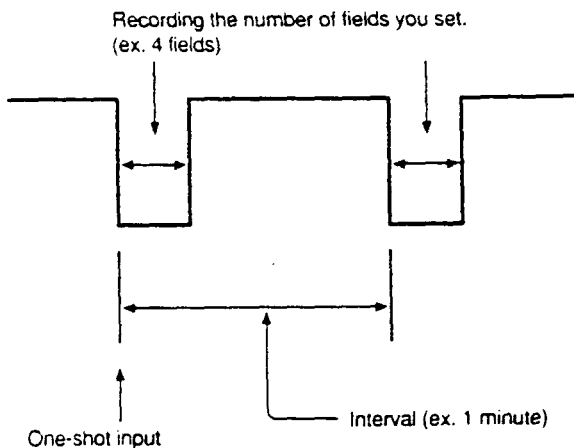
One-Shot Recording

- 5 Press +/- to set SERIES REC on the (ALARM SET) screen to N.



- 6 Press CLOCK/COUNT to display the normal picture.

- 7 Press ● REC.
The unit enters into the recording pause mode. After the interval to be set passes, one shot recording starts.



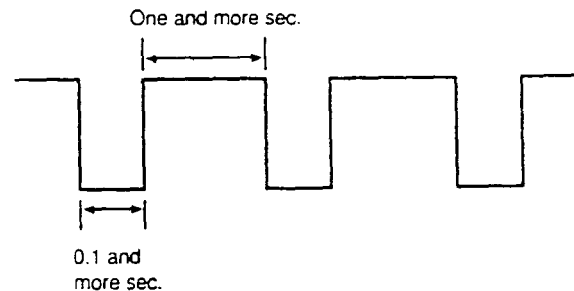
When you shortcircuit the 1 SHOT IN and 1 SHOT COM terminals for one-shot recording

You can set the desired interval up to three minutes. (However, the number of fields specified in step 3 is recorded.)

In step 4 of the above operations, set INTERVAL to the same and longer interval than the one made by short-circuiting 1 SHOT IN and 1 SHOT COM terminals. In step 7, shortcircuit the 1 SHOT IN and 1 SHOT COM terminals.

Notes on use 1 SHOT IN and 1 SHOT COM terminals

- 0.1 and more secs. are required when the switch is turned on and one and more sec. is required for the one-shot interval.



If a one-shot recording input is not received from terminals, one-shot recording is performed according to the settings on (1 SHOT SET) screen.

To stop the one-shot recording

Press ■ STOP.

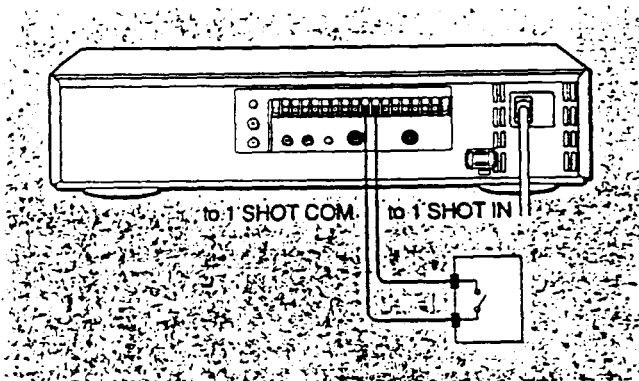
If an alarm input is received while one-shot recording is in progress

The alarm recording can be performed.

The alarm recording speed is automatically set to the 2-hour mode.

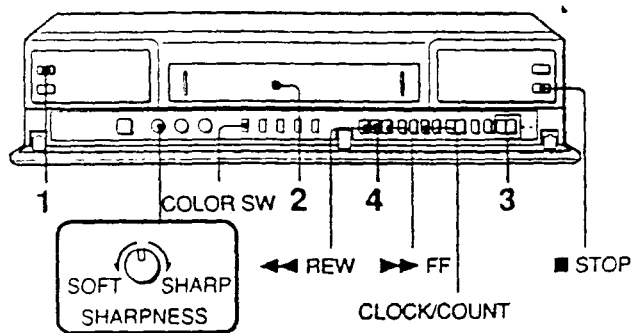
To start one-shot recording immediately

Press ● REC again or short-circuit the 1 SHOT IN and 1 SHOT COM terminals.



Playback

to be continued ►



- 1 Turn on the power of the equipment to be used.
- 2 Insert the cassette.
- 3 Select the play back speed by pressing REC/PLAY SPEED +/-.
The selected playback speed is displayed in the display window.
- 4 Press ► PLAY/REC CHECK.
Playback starts.

To stop playback

Press ■ STOP.

To rewind the tape

Press ■ STOP and then ◀◀ REW.

To fast-forward the tape

Press ■ STOP and then ▶▶ FF.

To adjust the sharpness of the picture

Turn SHARPNESS to SHARP for a sharper picture or to SOFT for a softer picture.

Setting the COLOR SW switch

COLOR SW should normally be set to AUTO for the automatic color/black and white switching circuit to work properly.

However, a weak signal will result in poor picture quality and S/N ratio.

In this case, set the switch to COLOR or B/W (for the black and white picture.)

Resetting the tape counter

The tape counter in the display window helps you to locate a certain scene after playback. Press CLOCK/COUNT to display the counter in the display window and COUNTER RESET to set the counter to "0H00M00S" (counter zero) position before playing back the tape. The unit keeps counting the length of the tape being played back.

Note, however, that the tape counter will not count the portions without video signals recorded.

Note

You cannot play back the tapes recorded on other time-lapse

Audio Playback

You can play back the sound with the picture in 2-hour mode, 12-hour mode, and 24-hour mode. Play back the tape at the same speed at which it was recorded so that you can monitor the sound normally.

For audio playback in 2-hour mode

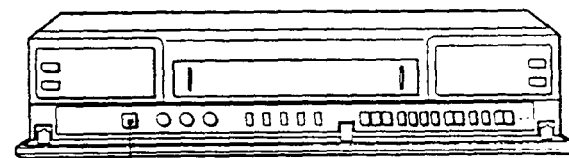
Play back the tape normally.

For audio playback in 12-hour or 24-hour mode

Press TIMER/AUDIO ON in playback mode.

"A12" or "A24" is displayed in the display window.

To turn off the sound, press TIMER/AUDIO ON again.



TIMER/AUDIO ON

Note

Noise appears on the screen and the sound is distorted when you play back the picture in 12- or 24-hour mode.

playback

Playback speed

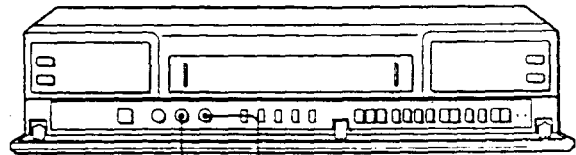
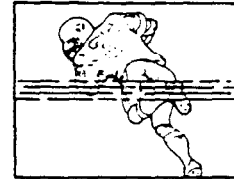
You can view the playback picture at a following speed.

Recording speed (H)	Playback speed (H)											
	2	12	24	48	72	96	120	168	240	480	720	960
2	1	1/6	1/12	1/24	1/36	1/48	1/60	1/84	1/120	1/240	1/360	1/480
12	6	1	1/2	1/4	1/6	1/8	1/10	1/14	1/20	1/40	1/60	1/80
24	12	2	1	1/2	1/3	1/4	1/5	1/7	1/10	1/20	1/30	1/40
48	24	4	2	1	2/3	1/2	2/5	2/7	1/5	1/10	1/15	1/20
72	36	6	3	3/2	1	3/4	3/5	3/7	3/10	3/20	1/10	3/40
96	48	8	4	2	4/3	1	4/5	4/7	2/5	1/5	2/15	1/10
120	60	10	5	5/2	5/3	5/4	1	5/7	1/2	1/4	1/6	1/8
168	84	14	7	7/2	7/3	7/4	7/5	1	7/10	7/20	7/30	7/40
240	120	20	10	5	10/3	5/2	2	10/7	1	1/2	1/3	1/4
480	240	40	20	10	20/3	5	4	20/7	2	1	2/3	1/2
720	360	60	30	15	15/2	6	30/7	3	3/2	1	3/4	
960	480	80	40	20	40/3	10	8	40/7	4	2	4/3	1

For example, when a tape recorded in 120-hour mode is played back in 12-hour mode, you can view the playback picture at a speed 10 times faster than the recorded one.

Adjusting Pictures

If streaks or noise bands appear on the playback picture, adjust the tracking condition.



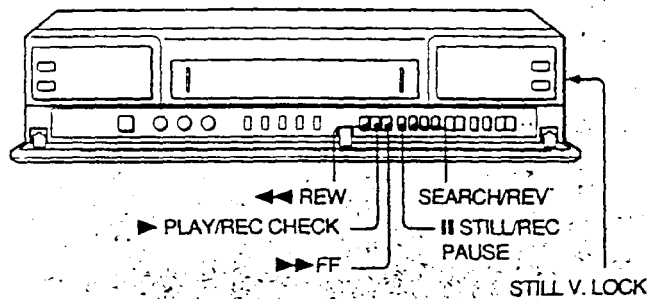
TRACKING SLOW
TRACKING NORMAL

For the picture recorded in 2-hour mode: Use TRACKING NORMAL.

For the picture recorded in 12- to 960-hour mode: Use TRACKING SLOW.

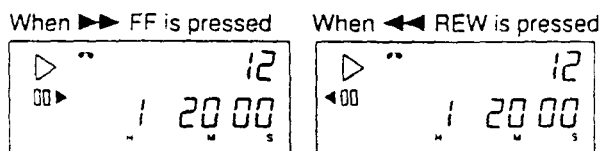
Various Playback Mode

You can play back the picture at various modes: reverse playback mode, still and frame-by-frame pictures, and high-speed playback in both forward and reverse directions.



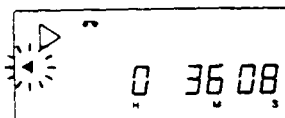
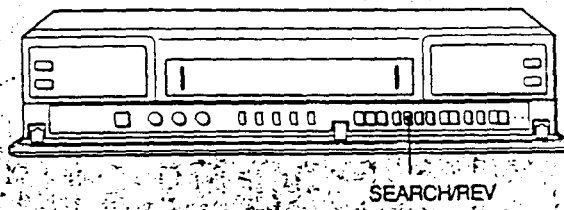
Frame-by-frame Picture

In the still mode, press ►► FF or ◀◀ REW. Each time you press the button, the picture advances or rewinds by one field.



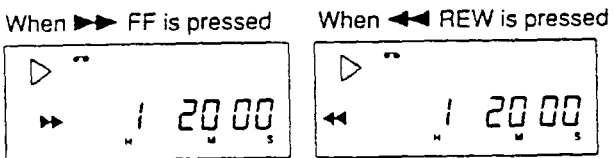
Reverse Playback

During playback, keep pressing SEARCH/REV. Reverse playback picture appears on the TV screen.



Picture Search

During playback, press ►► FF (forward direction) or ◀◀ REW (reverse direction). A high-speed picture (about five times the normal speed in 2-hour mode) without sound appears on the TV screen. To resume normal playback, press ► PLAY/REC CHECK.



Note

During picture search, streaks or noise band appear on the TV monitor.

Note

During reverse playback, streaks appears.

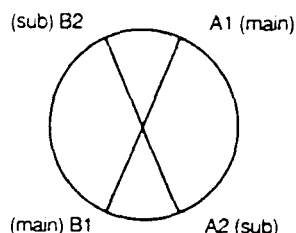
Still Picture

During playback, press || STILL/REC PAUSE. To resume normal playback, press || STILL/REC PAUSE or ► PLAY/REC CHECK. When the pause mode lasts for more than approximately five minutes, the unit will automatically enter the playback mode.

If the picture shakes while in the still mode Adjust the picture with STILL V. LOCK on the rear panel.

Using the Subheads

This unit uses a four-head dual-azimuth system; during normal recording and playback, the main heads A1 and B1 are used.



If trouble occurs on the main heads and the playback picture cannot be viewed, the subheads are used for the operation. (If this should happen, contact your Sony dealer as soon as possible.)

If trouble occurs on the main heads, operate as following step ① to ③.

	Heads to be used	Operation	Indicator in the display
①	A1, A2	During playback, press COUNTER MEMORY + while pressing ● REC.	⊥
②	B1, B2	During playback, press COUNTER RESET - while pressing ● REC.	—
③	A2, B2	During playback, press REC/PLAY SPEED + while pressing ● REC.	SC
④	A1, B1	During playback, press REC/PLAY SPEED - while pressing ● REC.	no indication

In cases ① and ②, the picture is played back as follows:

2-hour mode: Clear picture (tracking adjustment may be required)

12- or 24-hour mode: Noise band appears.

Reverse playback mode: Noise band appears.

48- to 960-hour mode: Noise band appears and disappears repeatedly.

Still and frame-by-frame pictures: Noise band appears and disappears repeatedly.

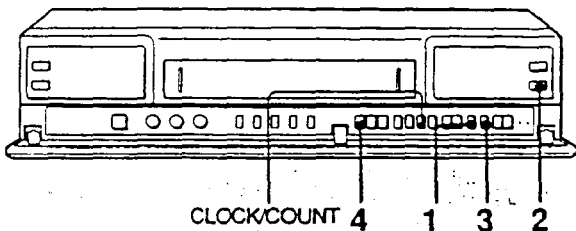
Note

If the subheads are used and any of the following occur, the main heads are used again:

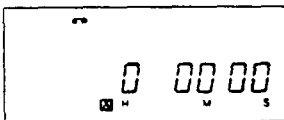
- the end of the tape is reached.
- the tape stops.
- the cassette is ejected.
- the power is interrupted.

Locating the Counter Zero Point

The unit can memorize the counter zero point and can automatically stop at that point. Thus, you can search for a desired point quickly during playback or recording. To display the counter, press CLOCK/COUNT.



- 1 During playback or recording, press COUNTER RESET at the point you want to locate later. The counter shows "0H00M00S".
- 2 When recording or playback is finished, press ■ STOP.
- 3 Press COUNTER MEMORY so that the **M** indicator appears.



- 4 Press ◀◀ REW. The unit rewinds the tape and stops automatically at the position close to the counter zero point.

If you press ◀◀ REW again, the unit shows a negative counter value. To locate the counter zero point, press ▶▶ FF.

To cancel the memory

Press COUNTER MEMORY again.

Notes

- The counter will not advance during any portion of a tape that is unrecorded.
- The counter works as a linear time counter only when the recording speed is 2-hour mode, indicating the tape movement in terms of hours, minutes, and seconds. With other recording speeds, the counter reflects the ratio of the recording speed to that of 2-hour mode. For example, in 12-hour mode, each second on the counter reflects six actual seconds ($12/2=6$).
- There may be a slight discrepancy between the position shown on the tape counter and the actual tape position.

Maintenance

to be continued ▶

We recommend to check the unit daily to confirm that the unit function correctly.

Perform the following checks before starting to record.

- 1 Turn on the camera, monitor, and this unit.
- 2 Confirm that the picture from the camera is shown on the monitor.
- 3 Confirm that the date and time display on the monitor is correct.
- 4 To check the recording condition of the previous day, rewind the tape for a few tape counter digits and set the unit to playback.
- 5 Confirm that playback is normal.
- 6 Confirm that recorded date and time information is correct.

If any malfunction is detected, switch all units off, unplug the unit from the AC outlet, and consult your Sony dealer.

Note

When the security lock is in effect, release it before operating.

Video Head Cleaning

After prolonged use, the video heads may become contaminated, which results in impaired picture quality (snow) or loss of picture. To avoid this, head cleaning should be performed regularly.

Video Head Life

Like the pickup of a record player, video heads do not last indefinitely. If optimum picture quality is not restored even after cleaning, head replacement may be necessary. Please consult your Sony dealer.

Maintenance

Periodic Maintenance Every 1000 Hours

A video cassette recorder is a high-precision piece of equipment because the unit records or plays back the picture on a magnetic tape. In particular, the video head and other mechanical parts become dirty or worn. To maintain a clean picture, we recommend maintenance every 1000 hours. To identify the service time, display the (USED TIME) screen. (See page 15.)

Extended Non-use Periods

When not used for long periods, the unit should be switched on now and then and set to the playback mode for about three minutes. This helps to prevent mechanical deterioration.

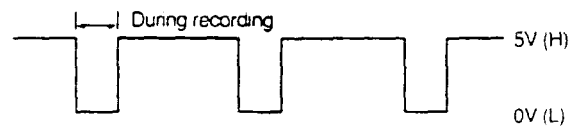
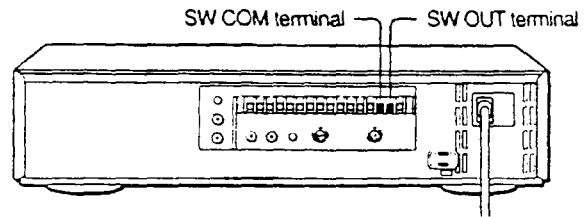
Periodic Servicing

To maintain optimum operating conditions and picture quality, unit servicing (cleaning, lubrication, parts replacement) should be performed regularly. Please consult your Sony dealer.

If the unit is to be used for critical monitoring purposes, it may be preferable to perform servicing at shorter intervals.

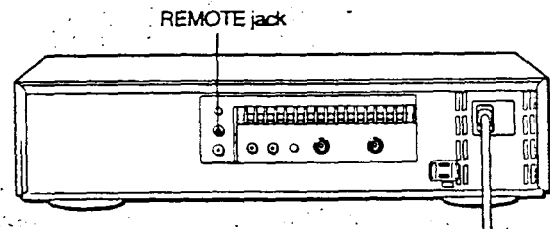
SW (switch) OUT Terminal

The system outputs a pulse signal from the SW OUT terminal every time one field of intermittent recording 12 to 960-hour mode is conducted.



REMOTE Jack

The system can be remotely controlled by adding the circuit shown below to this jack.

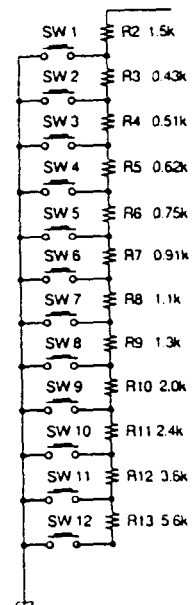


- SW1 STOP
- SW2 STILL
- SW3 REW
- SW4 FF
- SW5 PLAY
- SW6 REC
- SW7 PAGE
- SW8 SEARCH/RVS
- SW9 REC/PLAY SPEED +
- SW10 COUNTER MEMORY +
- SW11 SHIFT ▼
- SW12 SHIFT ►

Resistor tolerance should be equal to or less than $\pm 2\%$

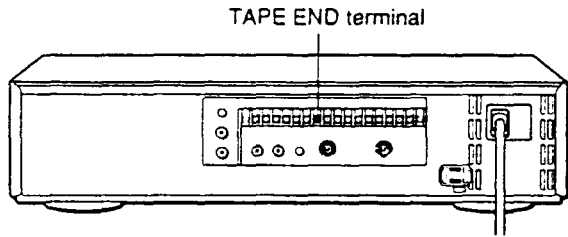
Note

Use the shield cord less than 5m (16 ft.) in length.

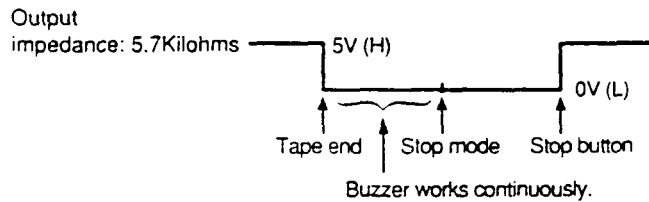


TAPE END Terminal

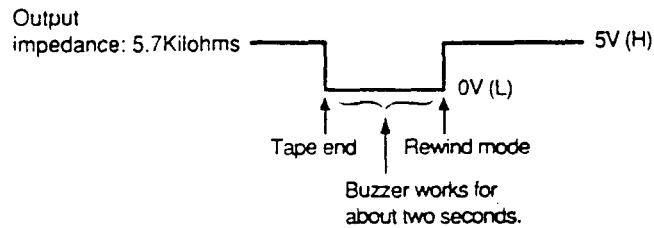
When the unit detects the tape end during recording, the output level becomes 0 V DC and the OFF indicator and buzzer work. To clear the output, press ■ STOP or ▲ EJECT.



REPEAT REC → OFF/MODE 1 (with alarm input)



REPEAT REC → MODE 1/MODE 2 (without alarm input)

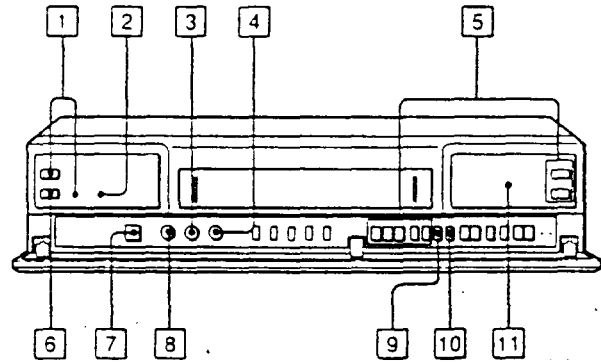


Labeling Parts and Controls

to be continued ▶

Refer to pages in circles for details.

Front Panel

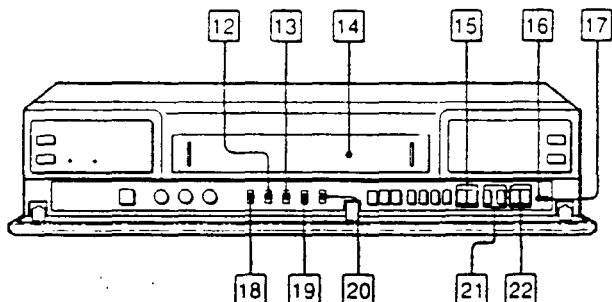


- 1 POWER switch and indicator
- 2 REPEAT indicator 18
- 3 TRACKING NORMAL control 23
- 4 TRACKING SLOW control 23
- 5 Tape operation buttons
 - ◀◀ REW button
 - ▶ PLAY/REC CHECK button
 - ▶▶ FF button
 - || STILL/REC PAUSE button
 - SEARCH/REV button
 - STOP button
 - REC button
- 6 ▲ EJECT button 11
- 7 TIMER/AUDIO ON button 17, 19, 27
- 8 SHARPNESS control 27
- 9 CLOCK/COUNT button 12, 31
- 10 PAGE button 7, 16
- 11 Display window 35

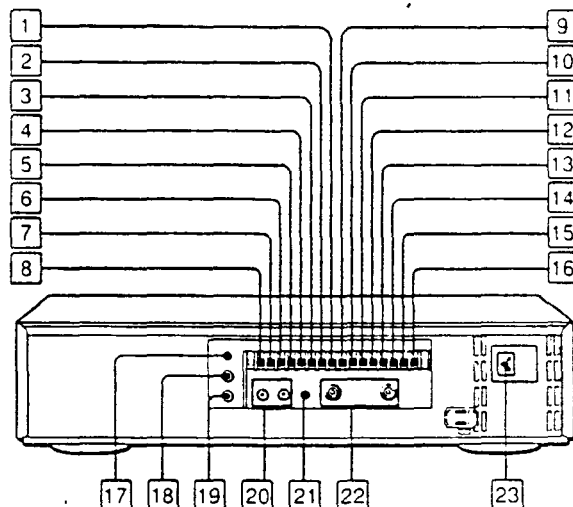
English

Maintenance/SW (switch) OUT Terminal/REMOTE Jack/TAPE END Terminal/Labeling Parts and Controls

Labeling Parts and Controls



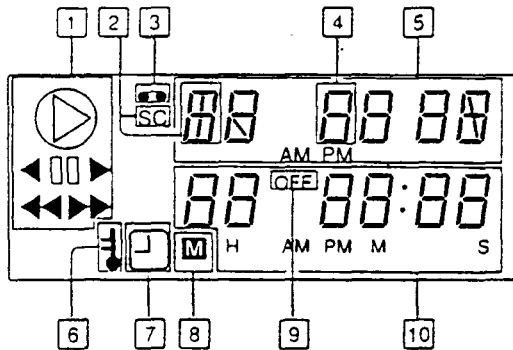
- 12 ALARM SPEED switch 20
- 13 ALARM DURATION switch 20
- 14 Cassette compartment 11
- 15 SHIFT ▼/▶ buttons 8, 15, 16
- 16 AL/PL RESET button 25
- 17 T/D (time/date) RESET button 3
- 18 COLOR SW switch 27
- 19 REPEAT REC switch 18
- 20 ON-SCREEN switch 7
- 21 COUNTER RESET/MEMORY/-/+ buttons 8, 31
- 22 REC/PLAY SPEED -/+ buttons 15, 27



- 1 CLOCK terminal
- 2 TAPE END terminal 33
- 3 COM (common) terminal
- 4 ALARM RESET terminal 22
- 5 ALARM OUT terminal 20
- 6 ALARM COM (common) terminal 20, 22
- 7 ALARM IN terminal 20
- 8 AUDIO SENSOR terminal 5
- 9 1 SHOT COM (common) terminal 25
- 10 1 SHOT IN terminal 26
- 11 SERIES IN terminal 6
- 12 SERIES COM (common) terminal 6
- 13 SERIES OUT terminal 6
- 14 SW COM (switch common) terminal 32
- 15 SW OUT (switch out) terminal 32
- 16 NOP terminal
- 17 STILL V. LOCK (Vertical synchronization volume) control 29
- 18 REMOTE jack (mini type) 32
- 19 MIC IN jack (mini type) 5
- 20 AUDIO IN/OUT jacks (phono type)
- 21 SENSOR LEVEL control 5
- 22 VIDEO IN/OUT jacks (BNC type) 5
- 23 AC IN (inlet) 5

Specifications

Display Window



- 1 Tape operation indicators
- 2 Head select indicators
- 3 Cassette indicator
- 4 Power interruption indicator
- 5 Tape speed/Alarm/One shot recording/Moisture condensation
- 6 Security lock indicator
- 7 □ (timer recording standby) indicator
- 8 M (memory) indicator
- 9 OFF indicator
- 10 Current time/Linear time counter/One shot recording/Timer recording indicator

General

Recording method	Dual-azimuth dual-head rotating helical scanning system
Audio recording	Only in 2-, 12-, and 24-hour modes
Tape speed	33.35 mm/sec (2-hour mode)
Specified video cassette tape	VHS 1/2 video cassette tape
Recording/playback time	2, 12, 24, 48, 72, 96, 120, 168, 240, 480, 720, and 960 hours (when using T-120 tape) (one-shot mode is also available)
Fast-forward/rewind time	Approx. 5 minutes (when using T-120 tape)
Television system	NTSC color TV system

Video

Recording method	Luminance signal: FM method Color signal: Low-pass band-pass Transformation direct recording method
Input	1 Vp-p, BNC, 75 ohms unbalanced
Output	1 Vp-p, BNC, 75 ohms unbalanced
Horizontal resolution	Black & white mode: 350 lines or more Color mode: 240 lines or more

Audio

Input	3.6 mV (-7.8 dBs), phono jack 100 kilohms unbalanced
Output	3.6 mV (-7.8 dBs), phono jack 600 ohms unbalanced
Microphone input	-60 dBs, 3.5 mm minijack, high impedance

Connector

Alarm input	Contact closes with no voltage
Alarm output	+5 V, 5.7 kilohms
Alarm reset input	No voltage
Tape end output	+5 V, 5.7 kilohms
Clock output	+5 V, 5.7 kilohms
One-shot input	No voltage
Series input	No voltage
Series output	+5 V, 5.7 kilohms
Switch output	+5 V, 5.7 kilohms
Remote control input	3.5 mm minijack

Other specifications

Operating temperature range	5° C to 40° C
Operating humidity range	80% or less
Power supply	120 V AC, 60 Hz
Power consumption	18W
External dimensions	Approx. 420 × 100 × 340 (w/h/d) (16 5/8 × 4 × 13 1/2 in.)
Weight	Approx. 5.8 Kg (12 lb 13 oz)

Design and specifications are subject to change without notice.

Troubleshooting

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

Symptom	Possible cause	Corrective action
The picture is not monitored.	Wrong connection.	Correct the connection.
	No power is provided to video camera and/or monitor TV.	Turn on the power.
Does not function with the operation button depressed.	No cassette.	Insert a cassette.
	Moisture condensation has occurred.	Leave the unit until its temperature reaches the room temperature. (See Page 3.)
	During the alarm recording.	Wait for the alarm recording completed.
	The security lock function works.	Release the security lock. (See page 13.)
	The unit is in timer-recording standby mode or during timer recording	Press TIMER/AUDIO ON.
Recording cannot be done. (The tape ejects automatically.)	The recording safety tab on the cassette is missing.	Place vinyl tape over the tab hole in the cassette. (See page 11.)
The repeat recording cannot be done.	Alarm recording was executed during repeat recording.	This is normal.
	REPEAT REC is set to OFF.	Set REPEAT REC to MODE1 or MODE 2.
Timer recording does not function.	Clock setting is not correct.	Set the clock correctly. (See page 7.)
	TIMER/AUDIO ON is not set to ON.	Press TIMER/AUDIO ON.
Playback picture flickers or blurs.	Video heads are dirty.	Clean the video heads.
Date and time were not recorded.	The ON-SCREEN is set to OFF.	Set ON-SCREEN to T/D or MONITOR.
The tape cannot eject.	System trouble.	Turn off the power and on again to reset the system.
The unit does not function except playing back the tape.	The power of the equipment to be used is not turned on.	Turn on the power.

System down

If system does not respond to commands or if there is no power, perform the following steps:

- 1 Check to see that the unit is plugged in.
- 2 Turn off the power and unplug the power cord.
- 3 Connect the power cord and turn on the power.

If none of the above works, contact your dealer.

Transient power failure

Transient power failure may cause the recording speed to set to the 2-hour mode due to failure of back-up, but this is not a problem.