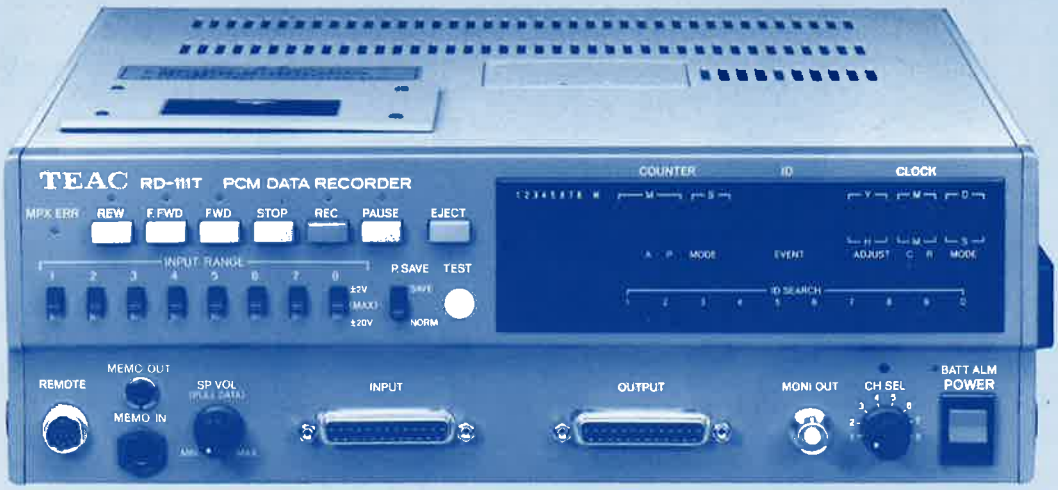
TEAC®

RD-101T/RD-111T

PCM DATA RECORDERS

For more detailed information, please refer to the Instruction Manual.
The information in this manual also applies to RD-100T/RD-110T.

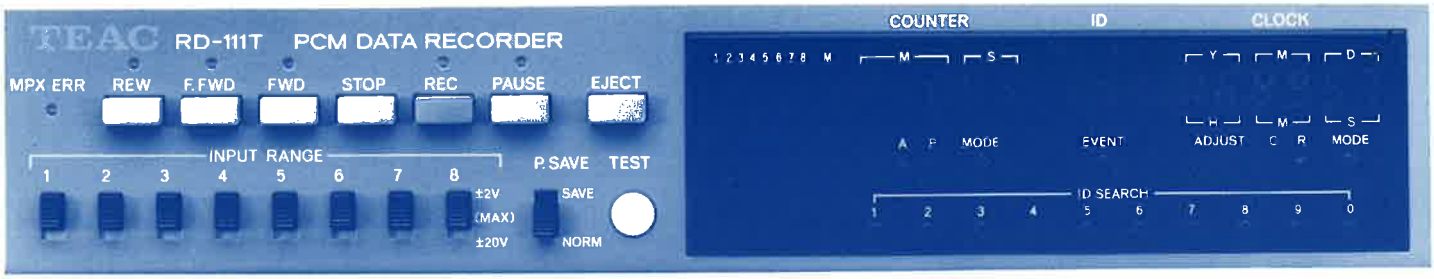
SUPPLEMENTARY INSTRUCTIONS



Caution

1. Condensation may happen when the data recorder is moved to a location with a higher temperature than its previous environment.
2. Always remove the tape before moving or turning off the recorder.

Basic Operation (for ID recording and reproduction up to 10 ID numbers)



(Cassette tape: Use a new cassette tape starting at the beginning of the tape.) (P•SAVE switch: NORM)

Operation	Explanation	Checking items (display change) excluding display portions which do not change
Connect the power cable. **POWER** ON	Condensation may happen when the data recorder or tape is moved to a location with a higher temperature than its previous environment. Wait at least 30 minutes after turning the power on before inserting a tape. Tapes do not like changes in temperature. The presence of codensation inside the RD-101T/111T will cause the machine to stop operating in order to prevent damage. Once the condensation has evaporated, the recorder will operate normally. Remove the tape before turning power off.	COUNTER: 000 ID: 00 CLOCK: YMD or HMS real time display MODE: C or R BATT ALM: When lights, indicates abnormal voltage in DC power supply
EJECT Press	Cassette compartment is opened.	ID: 00 Flashes or steady
Insert a cassette tape.	Automatic tape loading Recording preparation completed.	ID: 00 Flashes while tape is being loaded REC and PAUSE: Flashes and remains lit after about eight seconds
REC Press	Start of recording (Pressing the tape run mode switch with the cassette compartment open causes the indicator to flash. When the indicator stops flashing, perform the following operation.)	REC and FWD: Light COUNTER: Display of recording elapsed time for both A and P ID: 01
FWD Press more than 60 seconds		
TEST Press	Test signal recording when pressed.	BAR METER: The last four dots are turned on for each channel M Indicates according to the level of ambient sound pressure
PAUSE Press	Pausing operation	REC and PAUSE: Light COUNTER: Stops
more than 60 seconds	Restarting recording Recording operation is repeated nine times for more than 60 seconds.	REC and FWD: Light COUNTER: A: Continuous display; P: Displays recording elapsed time from 000 ID: 02→03→04→ ——— →10
FWD Press		
STOP Press	Stopping tape motion (To stop tape motion, press the STOP button. Turning the power ON or OFF during running may cause the tape to sag or damage the tape.)	Running mode indicators: All turned off. COUNTER: Stops ID: 10 CLOCK: YMD or HMS real time display
REW Press	Stop after rewinding to the beginning of the tape.	COUNTER: 000 ID: 00 Displays the value recorded in the tape in rewinding
FWD Press	Reproduction from the beginning of the tape.	COUNTER: A: Displays minutes/seconds continued from beginning of tape; P: Displays minutes/seconds continued from beginning of each ID block ID: 01 → 10 CLOCK: YMD or HMS BAR METER: Signal level
STOP Press	Speaker: Sound recorded in the memo channel or data sound of the channel selected by CH SEL with SP VOL knob pulled out MEMO OUT: Using the earphone shifts to this mode; the speaker is muted MONI OUT: Output of the data channel selected by CH SEL	

Record / Rewind / Reproduce

ID Recording and Search Functions

ID Recording

Note: It is recommendable to record more than 60 seconds for high-speed search with ID number.

- The ID number always begins with 01 and is incremented by one at every recording operation unless the tape is advanced over unrecorded tape during recording. ID numbers cannot be arbitrarily recorded. (See Figure 1.)
- If there is an unrecorded portion of tape during continuous recording, and the power is turned off, ID numbers for the next recording operations start from 01. (See Figure 2.)
- Pressing the EVENT button once during continuous recording increments the ID number by one. It takes approximately nine seconds for an ID number to be recorded, during which time the EVENT button is disabled. (See Figure 1.)
- When a previously recorded tape is used for recording, the unit reads and displays the ID number of the recorded portion. Recording then starts from the portion with the ID number of [displayed value +1].
- When attempting to continue an ID number by eliminating the unrecorded portion, rewind the tape. Stop it just before the end of the unrecorded portion and perform REC FWD.

ID Search

- Set the desired ID number by pressing the ID SEARCH button during the stop mode. Press [FWD]. Reproduction will begin automatically at the beginning of the desired segment.
- Repeatedly press [F•FWD] or [REW] during FWD mode until the desired ID number is displayed. Operation will automatically return to FWD mode. (See Figure 3.)

Hint

- Press the EVENT button to record the next increment ID number and wait at least 60 seconds before pressing the STOP button. This ID can be conveniently used for the next data recording operation by using the search function.

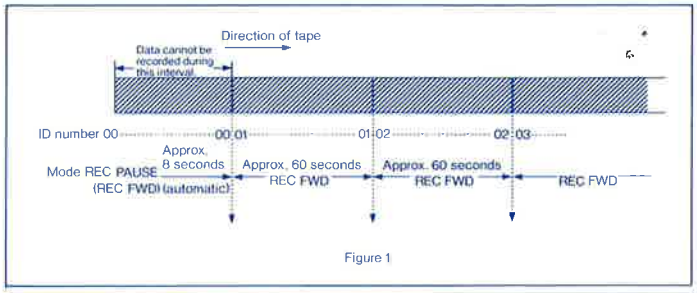


Figure 1

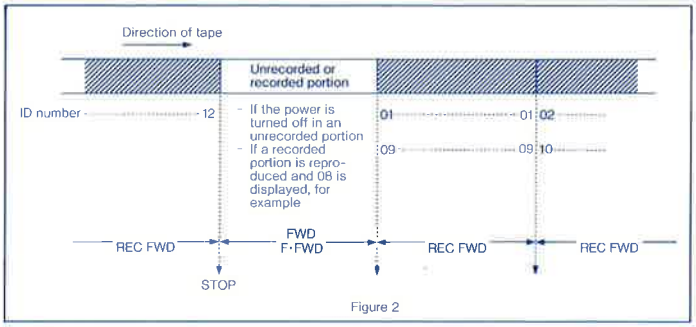


Figure 2

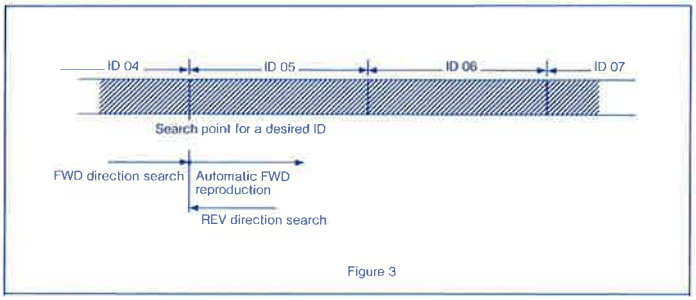


Figure 3

Counter Recording

- Elapsed time is displayed on the counter and automatically recorded. Arbitrary counter values cannot be recorded.
- A continuous counter value is recorded when continuous recording is made in the A (absolute) mode. If an unrecorded tape is used, the counter A value returns to 000 after continuous recording stops. (See Figure 4.)
- The P (Program) mode value is recorded beginning with 000 whenever a recording is made; the ID number is incremented by pressing the EVENT button.
- If a recorded tape is used to record data, this unit reads and displays the counter value of the previous recording and starts the recording the counter value following that value when the cassette tape is loaded. (See Figure 5.)

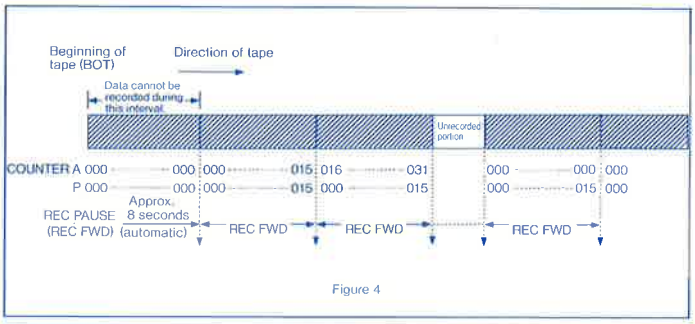


Figure 4

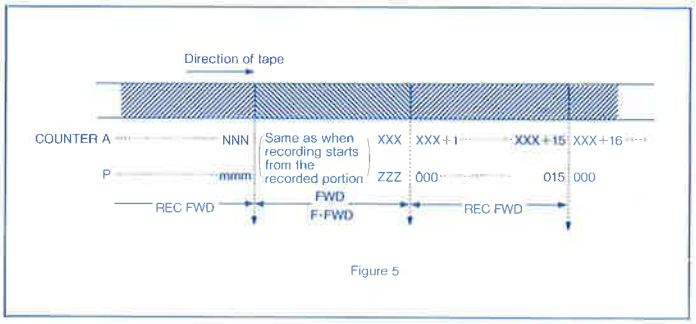


Figure 5

Names and Functions of Parts

REW (Rewind)

- Pressing this button in the stop mode rewinds the tape.
- This button can also be used for search function in the FWD mode (see ID Search Functions).

F·FWD (Fast-forward)

- Pressing this button in the stop mode to fast-forward the tape.
- This button can also be used for search function in the FWD mode (see ID Search Functions).

FWD (Reproduction)

- Pressing this button in the stop mode runs the tape forward and performs reproduction.
- If an ID number has been set, pressing this button in the stop mode will initiate a high-speed search for the beginning of the desired data and perform reproduction automatically.

STOP (Load Stop) (Unload Stop) (Stop)

- Pressing this button in REC, REC PAUSE, REW, or F·FWD mode stops the tape running or releases the pause mode.
- In the stop mode, all operation mode indicators are turned off.
- Stop mode means either LOAD STOP (the tape is touching the head) or UNLOAD STOP (the tape drawn into the cassette and is not touching the head).

  UNLOAD STOP mode is entered three minutes after the initiation of LOAD STOP.

REC (Record)

- Pressing this button during stop mode causes the REC and PAUSE indicators to light, and prepares for recording. Subsequently pressing FWD will then start recording.
- Data recording will not begin by simultaneously pressing REC and FWD.

Note: The recorder will enter stop mode after approximately three minutes have elapsed under REC PAUSE.

PAUSE (Pause)

- Pressing this button during REC or FWD mode pauses recording or reproduction. Operation will resume when FWD is pressed again.
- Pressing this button in the stop mode is equivalent to pausing in FWD mode.
- Only the PAUSE indicator will be lit when pressing PAUSE in FWD mode.

Note: Stop mode is entered after approximately three minutes have elapsed under REC PAUSE or FWD PAUSE.

EJECT (Ejection)

- Pressing this button once while in any mode other than REC and REC PAUSE opens the cassette compartment.

Note: The cassette compartment may not open if this button is pressed twice. Simply press the button again.

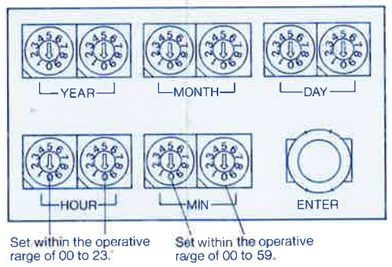
Note: EJECT will not function if the power is not turned on.

CASSETTE COMPARTMENT

- Pressing EJECT when the power is on opens the cassette compartment. Insert the cassette tape so that the arrow mark corresponds to that displayed on the cassette compartment. Push the compartment securely enough to close and lock it.

CLOCK adjusting; open/close door

- Pressing the part marked PUSH opens the door, exposing a set of switches. Use the accessory small screwdriver to set year, month, day, and time.
- Pressing ENTER displays the time.
- Correction and/or adjustment of seconds can be made by pressing the ADJUST button on the front panel.



BAR METER (I/O level display)

REC PAUSE, REC FWD	Input level display
FWD	TAPE OUT level display

- The highest level indicates 100%.

COUNTER (Minutes/seconds display)

FWD, F·FWD, REW	Displays minutes/seconds readout from the tape, changed according to tape movement
REC FWD	Displays minutes/seconds write to the tape, changed according to tape movement
(REC) PAUSE, STOP	Retains minutes/seconds read out from the tape

- Maximum display is 199 minutes, 59 seconds.

Note: If a tape is used which has no counter value recorded in each mode, meaningless or previous numbers may be displayed.

MODE (A-P mode switching)

- Switches the counter display between A (Absolute) and P (Program) modes.

A (Absolute) (Absolute time)

- Displays absolute time from the beginning of the tape.

P (Program) (Program time)

- Displays time from the beginning of data for each ID number.

CLOCK (Clock/calendar display)

- Displays time (hours, minutes, seconds) or calendar (year, month, day)

CLOCK ADJ (Zero seconds setting)

- Pressed for less than 29 seconds resets seconds count to last minute; pressed for more than 30 seconds resets seconds count to next minute.

C (Calendar indicator)

- Y=year, M=month, and D=day

R (Clock real time indicator)

- H=hours, M=minutes, and S=seconds

FWD	Recorded tape	Displays the reproduction time on the tape
	Unrecorded tape	Previous state is continued with precious display
F·FWD REW STOP PAUSE	Use of these operations other than during reproduction of recorded tape	
	Use of these operations during reproduction of recorded tape	Retains the reproduction time with the previous display
REC PAUSE REC FWD During power-on		Displays the time in real time

MODE (C-R mode selector switch)

Used to switch clock display between C (calendar) and R (clock) modes.

ID (Data number display)

While loading tape	00 (flashing)
Wound tape	00
Unwound tape	Recorded ID number
FWD, F·FWD, REW	
STOP	Retains the displayed ID number

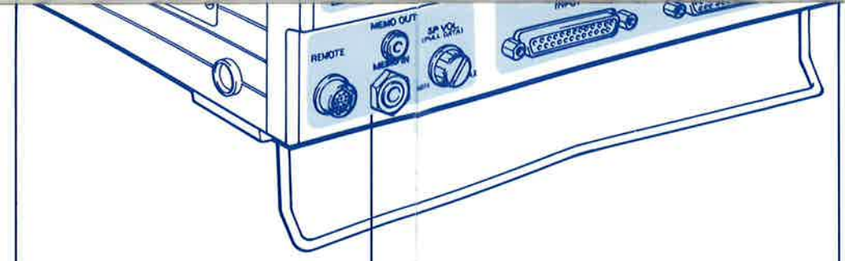
EVENT

- Pressing this button in the REC FWD mode increments the ID number by one.

Note: It takes about nine seconds to record an ID number, during which time the EVENT button is disabled.

ID SEARCH

- Pressing the FWD button after setting the ID SEARCH number on the



recorded tape automatically searches the tape for the beginning of the data with the set ID number, then reproduces the tape.

Note: To select another number after ID SEARCH number setting, pressing STOP displays the previous number.

FULL CHARGE

Lights when the optional BU-40 battery unit is completely charged.

AC Power input connector

90~130V AC/190~250V AC, 48~440Hz

Connector for GP-300

Used for connecting optional GP-300 GP-IB Interface unit.

MEMO IN (Microphone input)

- When the microphone jack is plugged into the MEMO IN connector, the built-in microphone is disconnected.

MEMO OUT (Earphone output)

- When the earphone is plugged into the MEMO OUT jack, the sound from the speaker is muted.

SP VOL (PULL DATA) (Volume adjustment)

- In REC FWD mode with built-in microphone, ambient sound can be continuously recorded with the level of input sound reflected on the bar meter at mark M.
- Pulling the SP VOL knob enables monitoring the reproduction input or output signal (in REC PAUSE or REC FWD mode) selected by CH SEL.

REMOTE

- For use with optional ER-40 remote control unit.
- Switches on the data recorder are operable even during use of the ER-40.

POWER (Power on/off switch)

- Pushing upper portion turns power ON; pushing the lower portion turns power OFF.

BATT ALM (Voltage alarm indicator)

- Flashes when the voltage is 11V or less when using a battery or DC power supply.

CH SEL (Channel selector switch)

- Selects the MONITOR OUT channel.

Microphone hole for built-in microphone

MONI OUT (Monitor Output)

STOP, F·FWD, REW	0V
FWD	Reproduction output
REC FWD, REC PAUSE	Electrical to Electrical output

OUTPUT (Output connector)

INPUT (Input connector)

Note 1. Use the dedicated I/O cable supplied as an accessory.

Note 2. I/O is unbalanced, and GND side of each channel is common, connected to the frame GND.

Note 3. Input voltage range is maximum ±2Vp/±20Vp, switchable. Absolute maximum input voltage is ±100Vp Input impedance is 100kΩ.

Note 4. Output voltage is ±2Vp for 100% input. Output current is ±10mA. Output impedance is 75Ω.

Note 5. Accidental input of signal into output terminal can result in damage to the system.

TEST (Test signal generator)

- Generates a test signal of about 60%, sine wave (1kHz).
- A test signal is output while the TEST button is held down in the REC PAUSE or REC FWD mode.

P·SAVE (Power Save Switch)

- In the save mode, all lamps except R and C indicators are turned off.

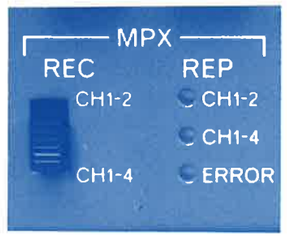
INPUT RANGE (Input voltage selector switch)

- According to selected channel, either ±2V or ±20V is selected.
- Input voltage in excess of the specified range will cause saturation during reproduction. Avoid operating when the maximum input level is indicated on the BAR METER.

MPX REP ERROR (Data reproduction error)

- Lights when a data error occurs in FWD mode.
- REP ERROR indicates damaged tape, clogged head or running system, or use of tape recorded under a different model (RD-101T, RD-111T, and audio-use R-DAT are mutually incompatible).

During reproduction, an error may be momentarily indicated at the initial portion of the tape or when a clear leader segment passes over the head.



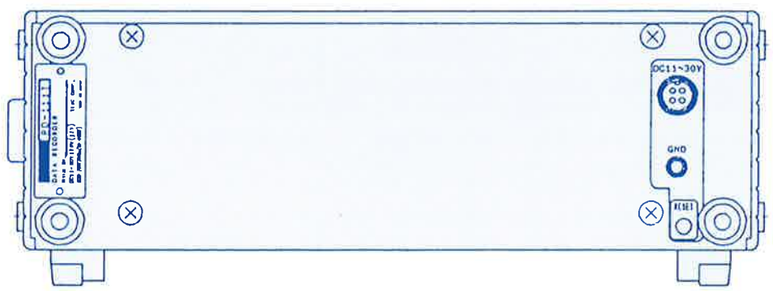
MPX REC CH1-2, CH1-4 (Number of channels selection switch) (Not provided with RD-111T)

- CH1-2 for Input and Output for the first and second channels (DC-20kHz).
- CH1-4 for Input and Output for all channels (DC-10kHz).

MPX REP, CH1-2, CH1-4 (Not provided with RD-111T)

- At time of reproduction, indicator automatically lights the number of channels selected during recording.

Rear Panel



DC Power input connector

Used for DC power supply (11~30V) or optional BU-40 battery unit. AC/DC is automatically shifted. In either connection, AC is given priority.

GND (Grounding terminal)

RESET button

When a DC power supply is being used, power is automatically turned off when voltage drops below about 10.5V.

Correct the DC power voltage and restore the power by pressing this button.

Maintenance and Countermeasures

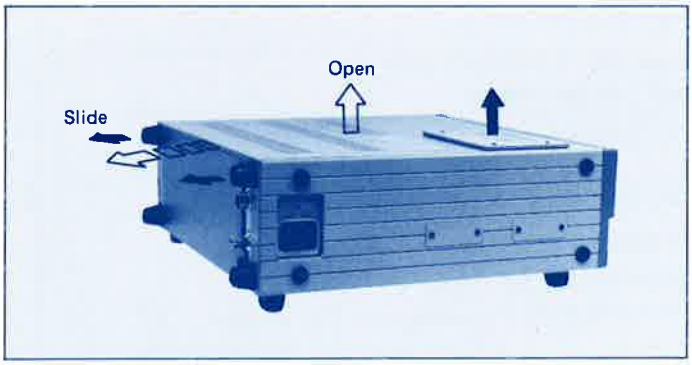
Head cleaning
Run the attached cleaning tape for about 10 seconds by pressing the FWD button before a recording is made (about once a day) or if the MPX ERROR indicator is lights or if a waveform is missing.

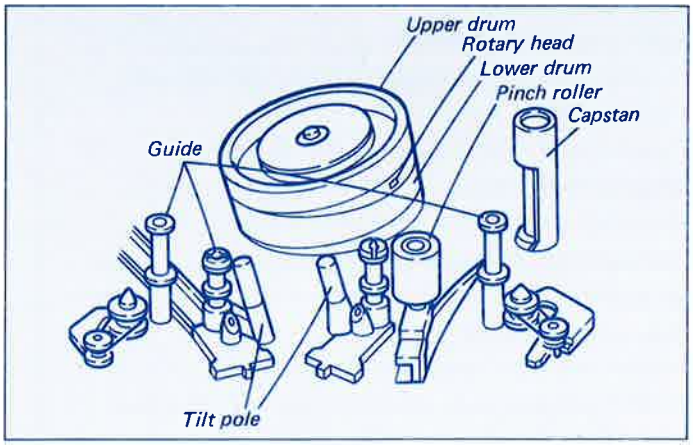
Cleaning the running system
If the running system is very dirty when viewed from the gap in the cassette compartment, or every 20 to 30 hours of operation, clean the running system by removing the four screws for fixing the cassette compartment and wipe using the attached TZ-350 cleaning kit.
CAUTION: Never wipe the rotary head.

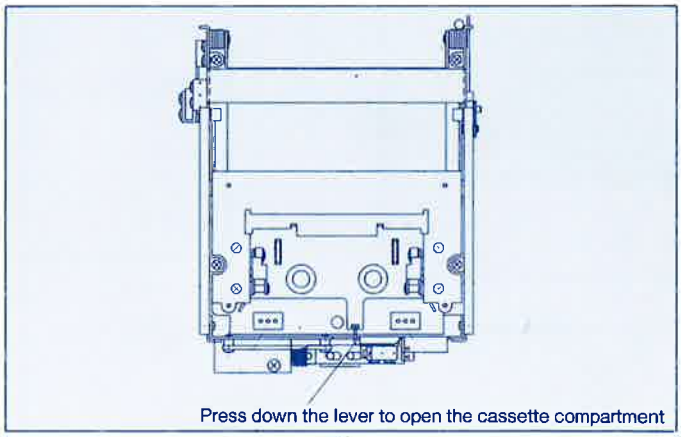
How to remove the top cover:
Remove the four setscrews for the cassette compartment. Remove the two setscrews for the rubber legs and detach the top cover by sliding it back. (Be careful not to damage or detach the speaker cable.)
CAUTION: Be sure to turn off the power when removing.

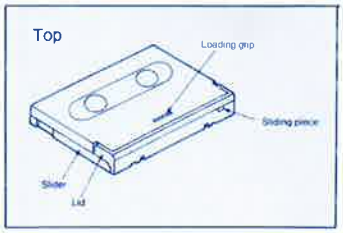
Freeing a tape tangled around the rotary head
If the tape becomes tangled around the rotary head due to condensation, take the following emergency procedures.

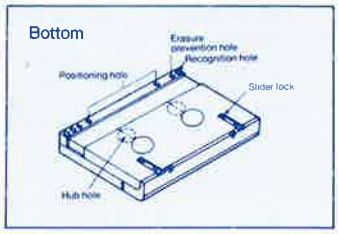
1) Remove the top cover after turning the power off and disconnecting the power cable.
2) Manually turn the rotary head catching the tape about one turn clockwise. When the tape becomes slack, lead it out and release the tangled portion by turning the rotary head clockwise.
3) Press down the lever in front of the cassette compartment to open the cassette compartment and remove the cassette tape.
   Push the slider locks, lower the slider, and open the lid. Rotate the reel to wind the tape into the cassette.
4) Check to make sure that the drum is free of any extraneous material or dirt. If it is dirty, clean the running system and install the top cover and the lid of the cassette compartment.
5) Turn the power on. After warming up the unit for 10 to 20 minutes, run the head-cleaning tape for about 10 seconds. Confirm that the unit is functioning normally by recording and reproducing a new cassette tape.
6) The reuse of a tape which has become tangled is not recommended as it has probably suffered some damage or become dirty.











Erasure

For the R-DAT cassette tape used in this unit, previous recordings are replaced by new recordings when a recording is made again on a recorded tape. Previous recordings remain in the portions where rerecording is not made. When these data items interrupt data output or search operation, use the cassette tape whose entire contents are demagnetized by a bulk tape eraser. Because the R-DAT cassette tape is very difficult to erase, take at least 10 seconds erasing both sides of the tape with an optional bulk tape eraser, such as CH-M5C (120V AC)/CH-M5A (220V AC).

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