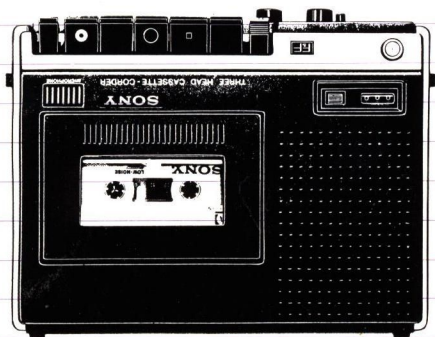


CASSETTE-CORDER

# TC-142

OWNER'S INSTRUCTION MANUAL



If You Didn't Get This From My Site,  
Then It Was Stolen From...

[www.SteamPoweredRadio.Com](http://www.SteamPoweredRadio.Com)

The Sony Cassette-Corder Model TC-142 is easy to operate, convenient to carry and enjoyable to use.

Before operating the TC-142, be sure to read this owner's instruction manual thoroughly to ensure proper operation. Save this manual for future reference.

## PRINCIPAL FEATURES

### **F & F (Ferrite and Ferrite) head**

The TC-142's record/playback head is all "ferrite" with durability, gap precision and surface smoothness to ensure longer head life.

### **3-head system**

With the monitor head you can monitor the just-recorded sounds during recording.

### **Automatic recording and manual recording systems**

Automatic recording system adjusts the recording level automatically (SONY-MATIC).

Manual recording system permits you to adjust the recording level to your preference.

### **All-mode shut-off**

The tape will stop and the power will be disconnected at end-of-tape in any operating mode.

### **Pre-end alarm system**

The END ALARM lamp will start to flicker during recording a few minutes before end-of-tape. Simultaneously, an alarm is heard through the earphone.

### **Counter-inertial flywheel system**

This system prevents excessive wow and flutter during mobile recordings.

### **Four way power**

The TC-142 may be operated with the batteries, house current, rechargeable battery or a 12 volt car battery.

Furthermore TC-142 also provides a Built-in condenser microphone, PAUSE button, TAPE SELECT switch, and a Battery check button.

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## WARNING

To avoid electrical shock, do not open the cabinet.

Refer servicing to qualified personnel only.

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

## PRECAUTIONS

- Keeping the tape heads in a clean condition is essential to the proper operation of the recorder. For cleaning information refer to page 14.
- Operate only on 120V AC or 6V DC. For AC operation use the supplied AC power cord. Do not use any other type AC power cord.
- Unplug the set from the wall outlet when it is not to be used.
- To disconnect the cord, pull it out by the plug. Never pull it by the cord.
- Should any liquid or foreign objects fall into the cabinet, unplug the set and have it checked by qualified personnel before operating it any further.
- Allow adequate air circulation to prevent internal heat build-up. Do not place the set on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- Do not install the set in a location near heat sources such as radiators or airducts, or in a place subject to direct sunlight, or excessive dust or shock.
- The RECORD button cannot be depressed in the following cases.
  1. No cassette in the Cassette holder.
  2. The cassette in the holder has the safety tabs removed. (Refer to page 4.)
- If you have any problem or question regarding your TC-142, consult your nearest authorized Service Station of Sony tape recorder

## NOTES ON CASSETTES

Before inserting a cassette, take up any slack in the tape by inserting a pencil into the hub of the cassette and turning it a few times. (Fig. 1)

The sides of a Sony cassette are marked "A" and "B".

To record or play back side "A", place a cassette into the Cassette holder with side "A" up as illustrated in Fig. 2.

Similarly for side "B", insert the cassette with side "B" up as illustrated in Fig. 3.

The letter "A" on the Sony cassette is embossed to help you distinguish that side of the cassette in a dimly lighted area.

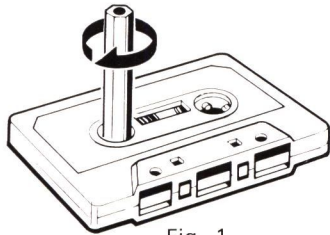


Fig. 1



Fig. 2



Fig. 3

### To prevent accidental erasure

When the recorder is operated in the record mode, previous recordings are automatically erased. For this reason, cassettes incorporate a convenient safety device to prevent accidental erasure. When the small tabs at the rear of a cassette are broken out, a safety device on the recorder will be activated, preventing recording. To protect side "A" recording, break out the tab on that side (Fig. 4). For protection of side "B", break out the tab of side "B". When the cassette is installed with the tabs broken out, the RECORD button cannot be depressed. To reuse a cassette for recording after the tabs have been removed, simply cover each slot with a small piece of cellophane or vinyl tape. (Fig. 5)

○Don't stick cellophane, vinyl tape or paper anywhere except on the portion marked ○.

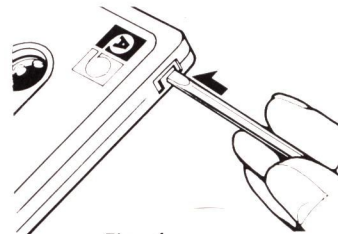


Fig. 4

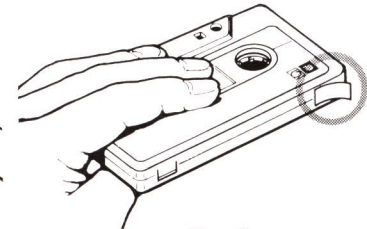
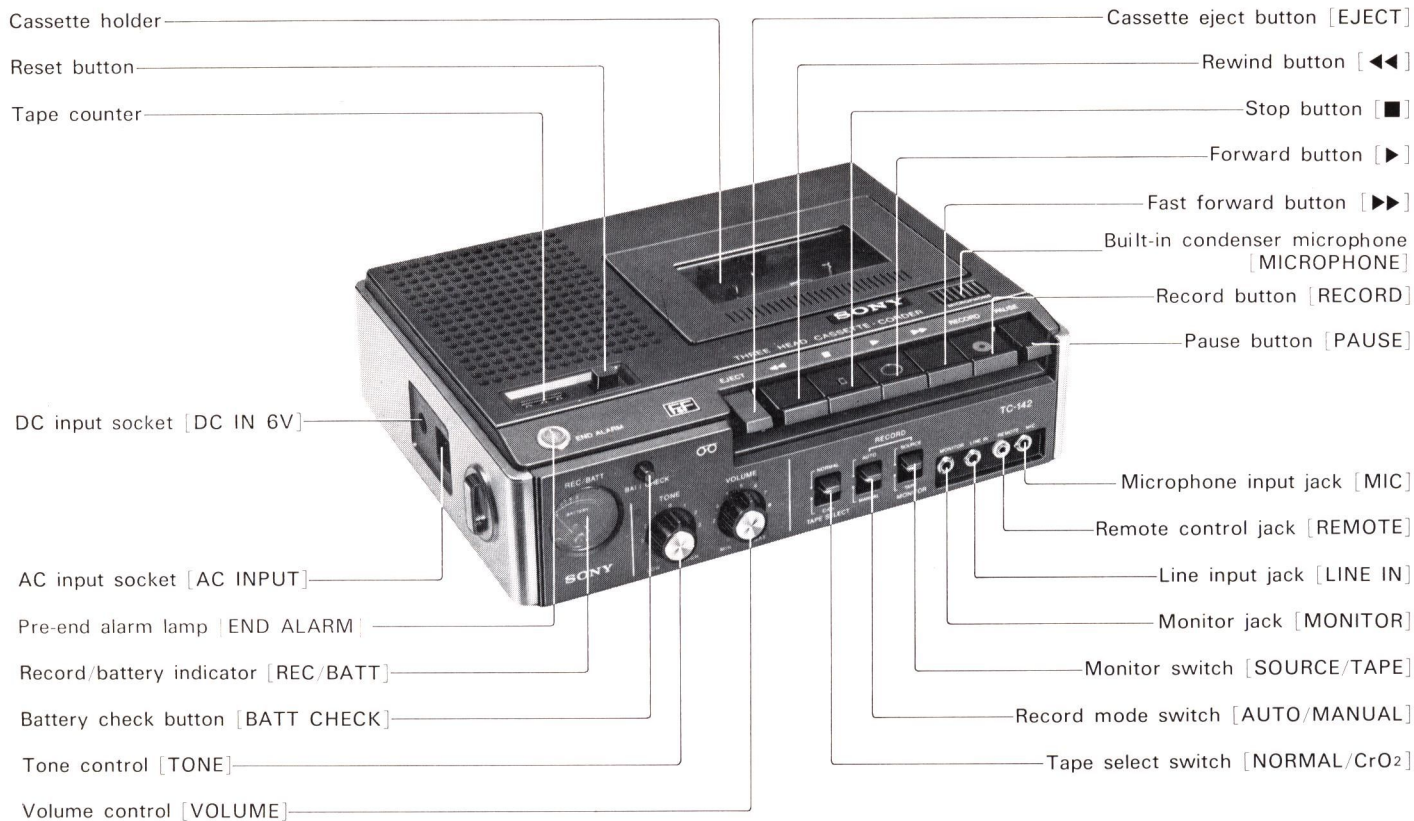


Fig. 5

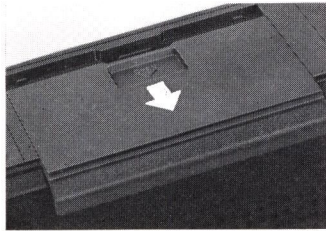
## LOCATION OF PARTS AND CONTROLS



## POWER SOURCES

### Batteries

1. Remove the cover of the Battery compartment located at the rear.
  2. Insert four batteries (size "C") with correct battery polarity indicated inside.
  3. Replace the cover.
- Be sure that the AC power cord and/or the optional car battery cord is disconnected from the respective socket of the set.
  - When the set is not to be used for a long time or used on house current, remove the batteries to avoid damage from battery leakage and corrosion.



### Battery life

About 5 hours of continuous recording with the Built-in condenser microphone is possible using Sony Super Batteries (size "C"). Intermittent use will prolong the battery life.

- If the set is operated on batteries in the cold, the life of the batteries will be shortened.

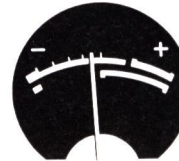
### Checking battery condition

Depress the ► button.

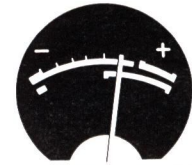
If the pointer of the REC/BATT indicator does not stay within the green zone, replace all four batteries with new ones.

When you check the battery condition while recording, depress the BATT CHECK button and see the pointer in the same way as in playback.

- For critical recording, fresh batteries are recommended.



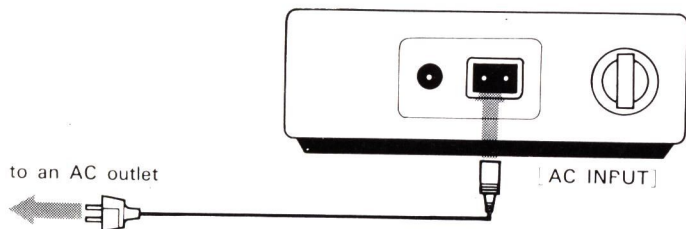
Replace the batteries



Good battery condition

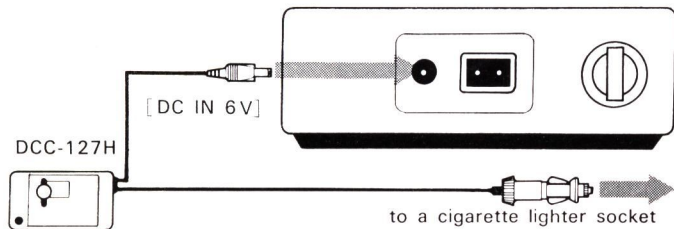
### House Current

First insert the AC power cord in the AC INPUT socket of the set and then connect the cord plug to an AC outlet. While the AC power cord is connected to the AC INPUT socket, the internal batteries are automatically disconnected.



### Car Battery

With the use of Sony Car Battery Cord DCC-127H (optional), connect the DC IN 6V socket of the set to a cigarette lighter socket of a 12V car. For further details refer to the instruction manual of DCC-127H.

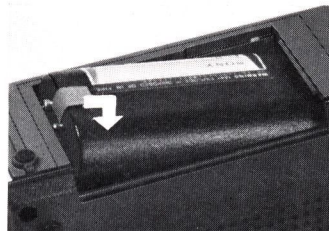


### Rechargeable Battery Pack

Install the Sony Rechargeable Battery Pack BP-16H (optional) into the Battery compartment instead of the batteries. The fully charged BP-16H allows about 7 hours of continuous recording with the Built-in condenser microphone. Charging time is about 21 hours.

Before using, charge the battery pack. The BP-16H will automatically be recharged whenever the TC-142 is connected to house current.

○When recharging is completed, remove the AC power cord to avoid overcharging the battery pack.



## RECORDING

### With the Built-in condenser microphone

#### SONY-MATIC recording

The SONY-MATIC recording control system adjusts and maintains proper recording level automatically.

1. Depress the EJECT button to open the Cassette holder.
2. Install a cassette into the holder with the desired side "UP" for recording. Close the holder.

○ Do not touch the exposed portion of the tape.

○ Be sure that the portion of the tape to be recorded is wound on the left reel. If not, depress the ◀ button to rewind the tape.

3. Set the RECORD mode switch to AUTO.

4. Set the TAPE SELECT switch to

NORMAL: to record with a standard cassette (including Sony UHF cassette).

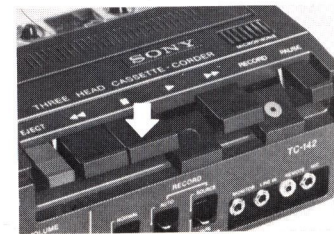
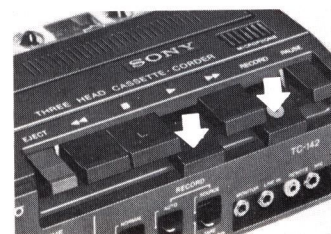
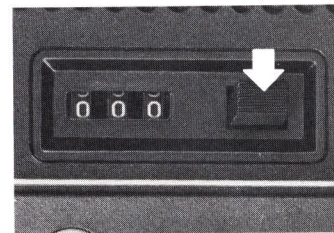
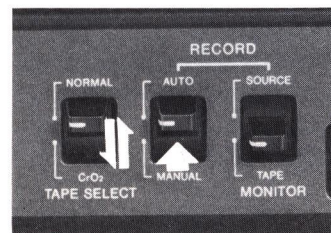
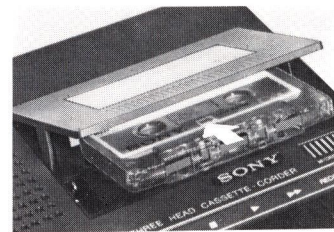
CrO<sub>2</sub>: to record with a chromium dioxide cassette.

5. Set the Tape counter to "000" by pushing the Reset button.
6. Depress the RECORD button and the ▶ button simultaneously. Recording will begin.
7. To stop the tape before it comes to the end, depress the ■ button.

○ You can make sure that the TC-142 is recording, by setting the MONITOR switch to TAPE and monitoring through the earphone and by REC/BATT indicator's swinging.

○ If the recording is not completed by the end of one side of the tape, depress the EJECT button to open the cassette holder and take out the cassette.

Turn the cassette over and repeat step 2, 5 and 6.



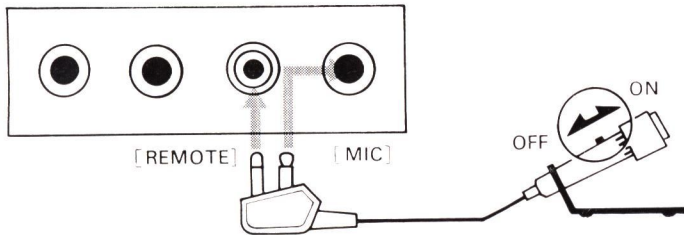


### With an external microphone

When using a two-pin plug microphone such as Sony F-27S (optional), insert the thicker pin in the MIC input jack and the thinner one in the REMOTE control jack. When using a one-pin plug microphone such as Sony ECM-250D (optional), only the MIC input jack is used. The built-in microphone will be disconnected automatically.

Other recording procedures are the same as for recording with the Built-in condenser microphone.

- The REMOTE control jack of the set is not set firmly in order to allow easier access when inserting plug.
- A dual-pin plug microphone provides remote tape stop/start capability.

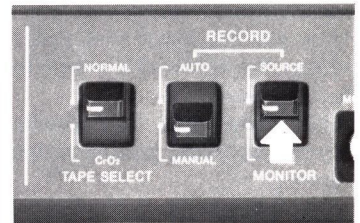
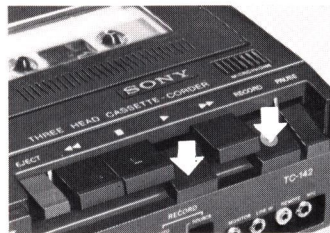
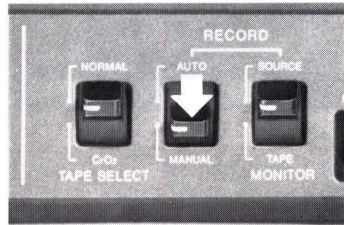


### Manual recording

In manual recording, recording level can be adjusted to your preference.

Proceed as follows after the cassette has been installed in the Cassette holder, the position of the TAPE SELECT switch has been selected, and the Reset button has been pushed.

1. Set the RECORD mode switch to MANUAL.
2. Depress the PAUSE button.
3. Depress the RECORD button and the ► button simultaneously.
4. Set the MONITOR switch to SOURCE.



5. Insert the earphone in the MONITOR jack.

While monitoring through the earphone adjust the recording level with the VOLUME control so that the pointer of the REC/BATT indicator deflects near 0 at program peaks.

6. Depress the PAUSE button again to release.

Recording will begin.



### To monitor while recording

Insert the supplied earphone in the MONITOR jack.

When setting the MONITOR switch at SOURCE, source sounds can be monitored and at the TAPE position the just-recorded sounds can be monitored.

Thus you can make sure that the TC-142 is surely recording by setting the MONITOR switch to TAPE and monitoring through the earphone.

While monitoring, tone quality can be adjusted to your preference by TONE control in both SONY-MATIC and manual recording.

### Pre-end alarm system

The END ALARM lamp will start to flicker a few minutes before end-of-tape in the record mode. Simultaneously, an alarm is heard through the earphone.

With the Sony Cassette Tape C-60, the lamp will begin to flicker about 1.5 minutes before end-of-tape, C-90 about 2.5 minutes before end-of-tape and C-120 about 3.5 minutes before end-of-tape.

### Tape counter

Use the Tape counter for indexing tape contents.

Before starting a recording, set the tape counter to "000" by pushing the Reset button.

The figures on the counter will change, as the tape passes. Make a note of the figures and the program being recorded.

### PAUSE button

To momentarily pause during the recording to avoid unwanted program material, depress and lock the PAUSE button. To restart depress the button again to release it.

The PAUSE button can also be used for "standby" recording. For instantaneous recording, depress and lock the PAUSE button first. Then depress the ► button and the RECORD button simultaneously. When the desired program starts, depress the PAUSE button again. Recording will begin immediately.

The PAUSE button can also be used for a momentary stop during playback.

Use the ■ button for extended pauses.

○The PAUSE button does not operate in fast forward and rewind mode.

## PLAYBACK

1. Depress the EJECT button to open the Cassette holder.
2. Install a cassette into the holder with the desired side "UP" for listening. Close the holder.
  - Do not touch the exposed portion of the tape.
  - Be sure that the portion of the tape to be played back is wound on the left reel. If not, depress the ◀◀ button to rewind the tape.
3. Set the TAPE SELECT switch to  
NORMAL: to play back with a standard cassette (including Sony UHF cassette)  
CrO<sub>2</sub>: to play back with a Chromium dioxide cassette.
4. Depress the ▶ button. Now playback will begin.
5. Adjust volume with the VOLUME control and tone with the TONE control to your preference.
6. To stop the tape, depress the ■ button.
  - When the tape is finished, the locked ▶ button will be released and the power is automatically disconnected.
  - For private listening, connect the supplied earphone to the MONITOR jack. The speaker will be automatically disconnected.

### Fast forward and Rewind

To advance the tape rapidly, depress the ▶▶ button.  
To rewind the tape, depress the ◀◀ button.

### All-mode shut-off

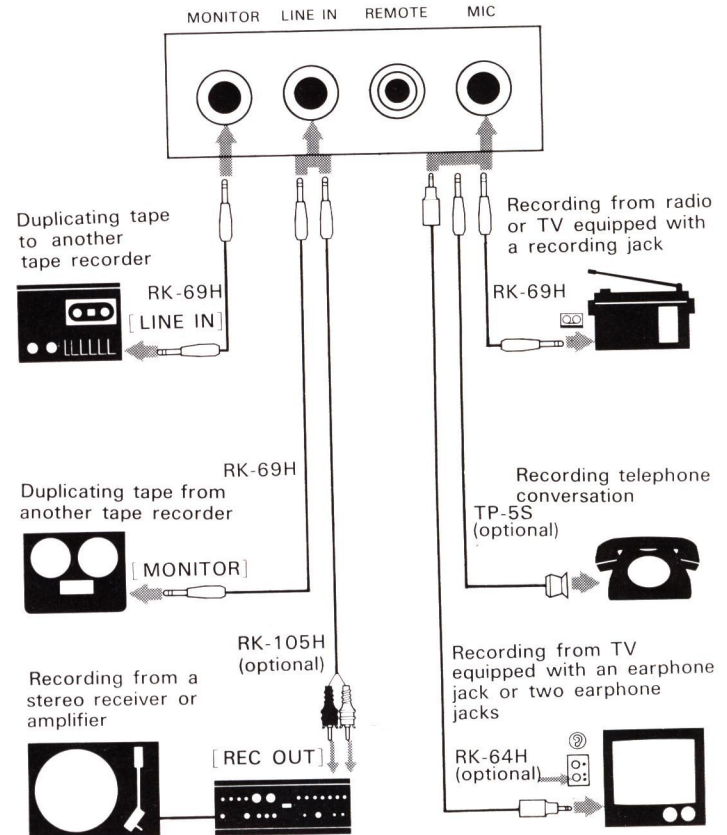
At end-of-tape, tape motion stops automatically in any operating mode and the locked push buttons will be released. With this mechanism, it is no longer necessary to worry about when the tape will run out. This assures protection of tapes and prevents undue battery wear. The mechanism activates after about 10 seconds at end-of-tape.



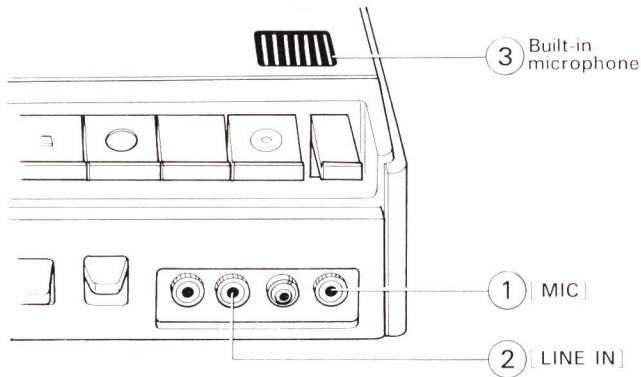
## OTHER RECORDINGS

It is possible to record directly from a radio, TV, tape recorder or other source by using an appropriate connecting cord as illustrated. If your radio, TV, etc. is not a Sony product, refer to the instruction manual of that set.

1. When duplicating a tape from the TC-142 to another tape recorder, adjust the TC-142 to a normal listening sound level (at around 4 of the VOLUME control).
2. When duplicating tape from another tape recorder to the TC-142, adjust the other recorder to a normal listening level.
3. When recording from a stereo receiver or amplifier, set mode selector of the source to "MONO" position.
4. When recording from the recording jack of a radio or TV, the volume and tone quality of the radio or TV will have no effect on the recording result.
5. When recording a telephone conversation, keep magnetized objects away from the Telephone Pickup, TP-5S (optional).
6. When recording from an earphone jack of a TV, adjust the volume and tone of the TV to a normal listening level.



Recording through the MIC input jack takes priority of other recordings as follows.



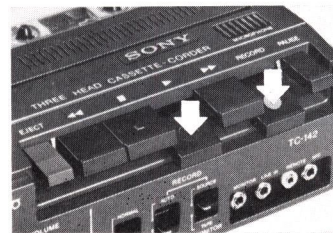
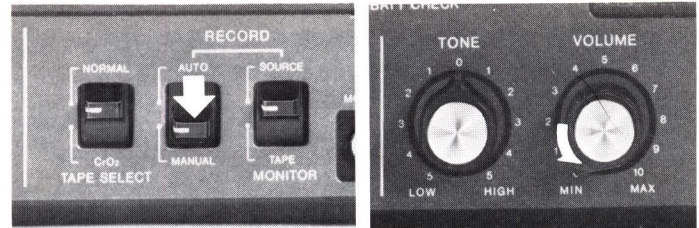
When recording through the LINE IN jack, remove any connections from the MIC input jack.

When recording with the built-in microphone, remove any connections from the MIC, and LINE IN jacks.

## ERASING

When you start a new recording, any previous recording is automatically erased as the tape passes the erase head. However, a cassette can be erased without adding a new recording as follows.

1. Insert the cassette into the holder with the desired side "UP" to be erased.
2. Set the RECORD mode switch to MANUAL.
3. Turn the VOLUME control completely to the left [MIN].
4. Depress the RECORD button and the ► button simultaneously to record. Erasing will begin.
5. When the erasure is completed, depress the ■ button.



## MAINTENANCE

### Cleaning heads

The portion of the heads are the most important parts in the tape recorder. Always keep the heads clean, otherwise, the reproduced sound may be distorted.

With the head cleaning tip (supplied) or a soft cloth moistened with alcohol, gently wipe heads, capstan and pinch roller over which the tape travels.

Avoid jamming the swab between the pinch roller and the capstan.

For easier head access of cleaning, remove the cassette holder as follows.

1. Depress the EJECT button to open the Cassette holder.
2. Gently push the stopper arms of the holder to the inside.
3. Pull the holder toward you and remove it.



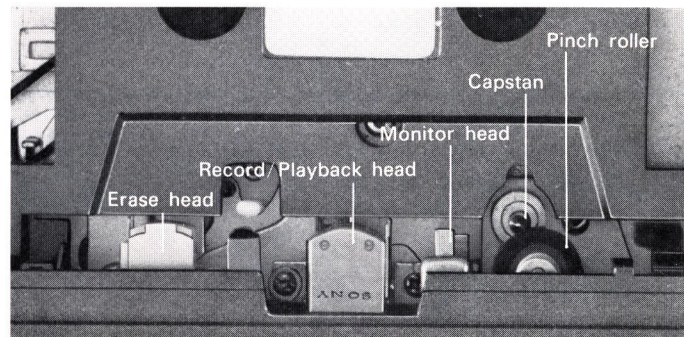
### Demagnetizing heads

Accidental contact with a piece of magnetized steel (screwdriver, scissors, etc.) will magnetize the heads causing an increase in noise.

It is recommended that the heads be demagnetized periodically to maintain optimum performance with a head demagnetizer available on the market.

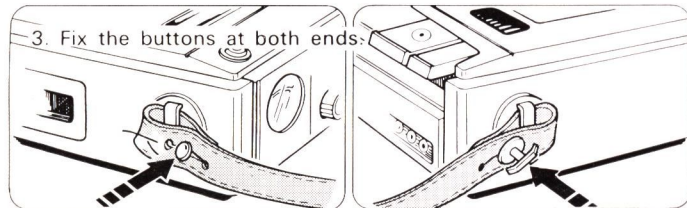
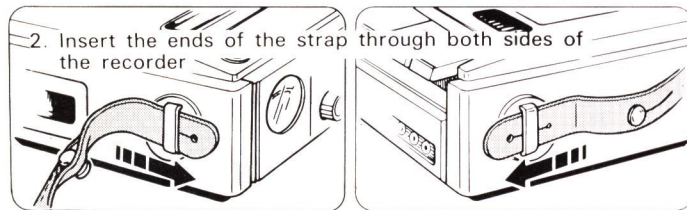
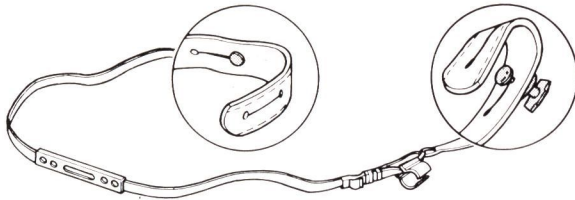
### Cleaning cabinet

Clean the cabinet with a soft cloth moistened with mild detergent. Do not use solvents such as alcohol, benzene or thinner as they may mar the finish of the set.



## TO ATTACH THE SHOULDER STRAP

1. Remove the buttons at both ends.



4. Adjust the length of the strap.

## TROUBLESHOOTING GUIDE

If trouble occurs with the TC-142, make the following simple tests to determine whether or not the trouble requires a professional engineer's attention. If the trouble persists after you have made these tests, consult your nearest authorized Service Station of Sony tape recorder for further instructions.

TROUBLE	PROBABLE CAUSES	WHAT TO DO
Cassette cannot be installed.	Cassette is installed incorrectly.  The ► button is depressed.	Install a cassette with the exposed portion of the tape toward you. Depress the ■ button to release the ► button.
The RECORD button cannot be depressed.	No cassette in the Cassette holder The cassette in the holder has the safety tabs removed.	Install a cassette. Use a cassette with the tab not broken, or cover each slot with a small piece of cellophane or vinyl tape.
Recording cannot be made.	Improper connections Batteries are exhausted. Dirty heads	Check connections. (Refer to page 12) Replace all the batteries with new ones. Clean the heads.
Tape does not move, when the ► button is depressed.	The PAUSE button is depressed.  The tape is completely wound to the right reel.	Depress the PAUSE button to release.  Depress the ◀◀ button to rewind.
No sound from the speaker	The earphone is plugged. The VOLUME control is set to MIN.	Disconnect the earphone. Increase the volume.
Unsatisfactory erasing	Dirty erase head	Clean the erase head. (Refer to page 14)



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Noise	Magnetism on the heads	Demagnetize the head. (Refer to page 14)
	Dirty heads	Clean the heads. (Refer to page 14)
Unbalanced tone in higher or lower frequency	Improper setting of the TAPE SELECT switch	Set the TAPE SELECT switch according to the type of tape used in both recording and playback. Adjust the tone with the TONE control.

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## SPECIFICATIONS

Power requirements	AC 120 V, 60 Hz DC 6 V, 4 batteries size "C" Rechargeable Battery Pack BP-16H (optional) or 12 V Car Battery with Car Battery Cord DCC-127H (optional)
Power consumption	6 W
Tape speed	1 7/8 ips
Recording time	60 min. per track (Sony Tape Cassette C-120)
Semiconductors	FET 1 (for built-in condenser microphone) 23, transistors 11 diodes
Speaker	2 1/2 × 4"
Power output	1.2 W
Frequency response	70 – 10,000 Hz (with a standard cassette) 70 – 12,000 Hz (with a chromium dioxide cassette)
Inputs	Microphone input jack Sensitivity 0.2 mV Low impedance Line input jack Sensitivity 0.06 V Impedance 100 k ohms
Output	Monitor jack for 8-ohm earphone Load impedance 10 k ohms or higher
Battery life	5 hours of continuous recording with built-in condenser microphone (using Sony Super Batteries size "C")
Dimensions	9 3/4 × 2 7/8 × 7 5/8" (W/H/D)
Weight	5 lb 12 oz (with batteries)

Supplied accessories	Demonstration cassette	1
	Earphone	1
	AC power cord	1
	Connecting cord RK-69H	1
	Carrying case and shoulder strap	1
	Accessory case	1
	Microphone hanger	1
	Head cleaning tip	1 set
Design and specifications subject to change without notice.		

Sony Tape for best recording.

## OPTIONAL ACCESSORIES

Condenser Microphone	ECM-250D, ECM-16
Dynamic Microphone	F-27S
Remote Control	RM-15
Telephone Pickup	TP-5S
Car Battery Cord	DCC-127H
Connecting Cord	RK-105H, RK-64H
Rechargeable Battery Pack	BP-16H

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Sony Corporation