

SONY®

SONY-O-MATIC

TC-800

OWNER'S INSTRUCTION MANUAL



Servocontrol

Feature

The SONY Tape Recorder Model, TC-800 is a new all-purpose and all transistorized portable tape recorder. Its SONY Servo Control Motor is the newest SONY achievement....assures critical timing accuracy.

Read the information contained in this manual carefully before operating the recorder. Save this manual for future reference.

SERVOCONTROL The SONY Servo Control Motor automatically corrects for speed variations and maintains precise timing accuracy.

SONY-O-MATIC With the AVC, the SONY-O-MATIC system, recording level of TC-800 is automatically adjusted; any recording sound can be recorded at optimum recording level without manual adjustment.

AC OR BATTERY OPERATION Switches instantly from battery power to household current with no adaptor required.

FULL FACILITY The Remote Control Switch on a cardioid microphone provides for remote instant stop and start. The tape speed can be slowed down by use of the Remote Control Device, RM-5 which is available separately. While recording you can monitor through the speaker or in the recording mode you can use it as a public address system.

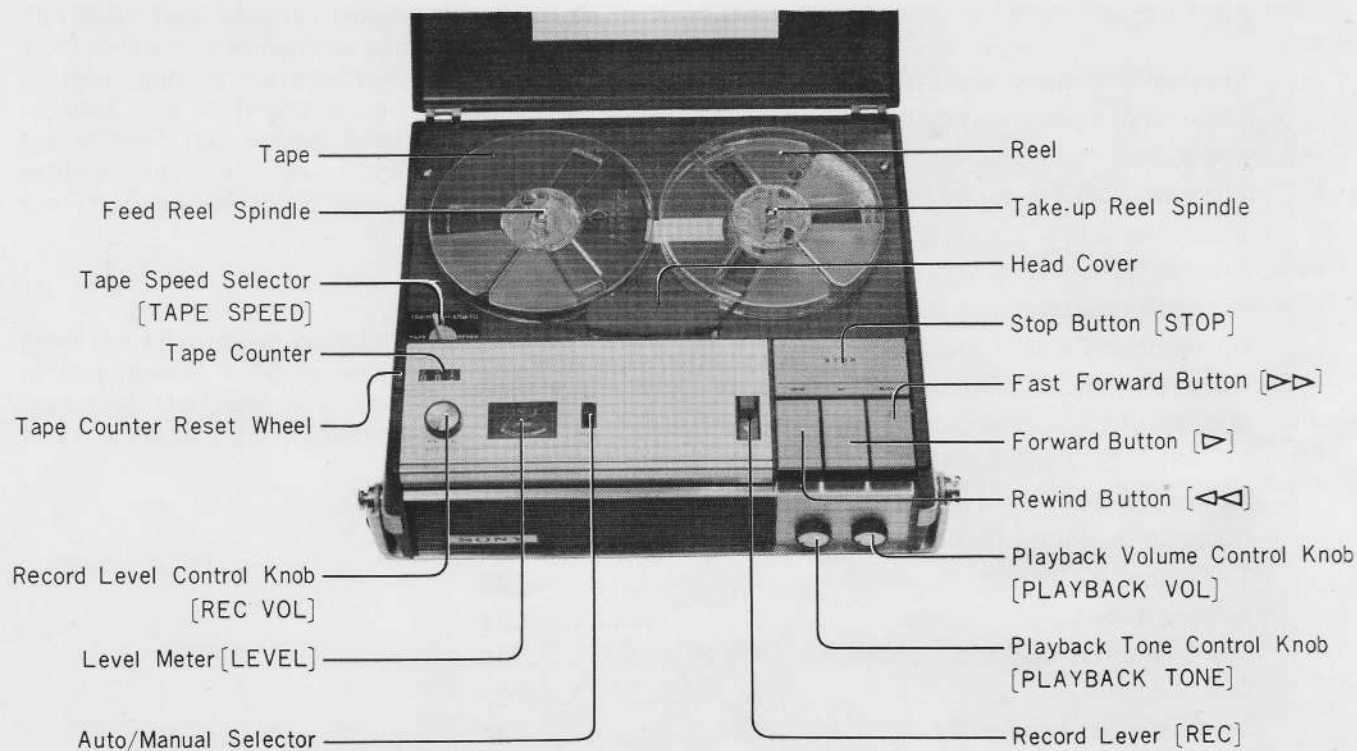
LEVEL METER Indicates record level of manual recording and battery condition or play level.

PUSH BUTTON SYSTEM Assures positive and convenient operation.

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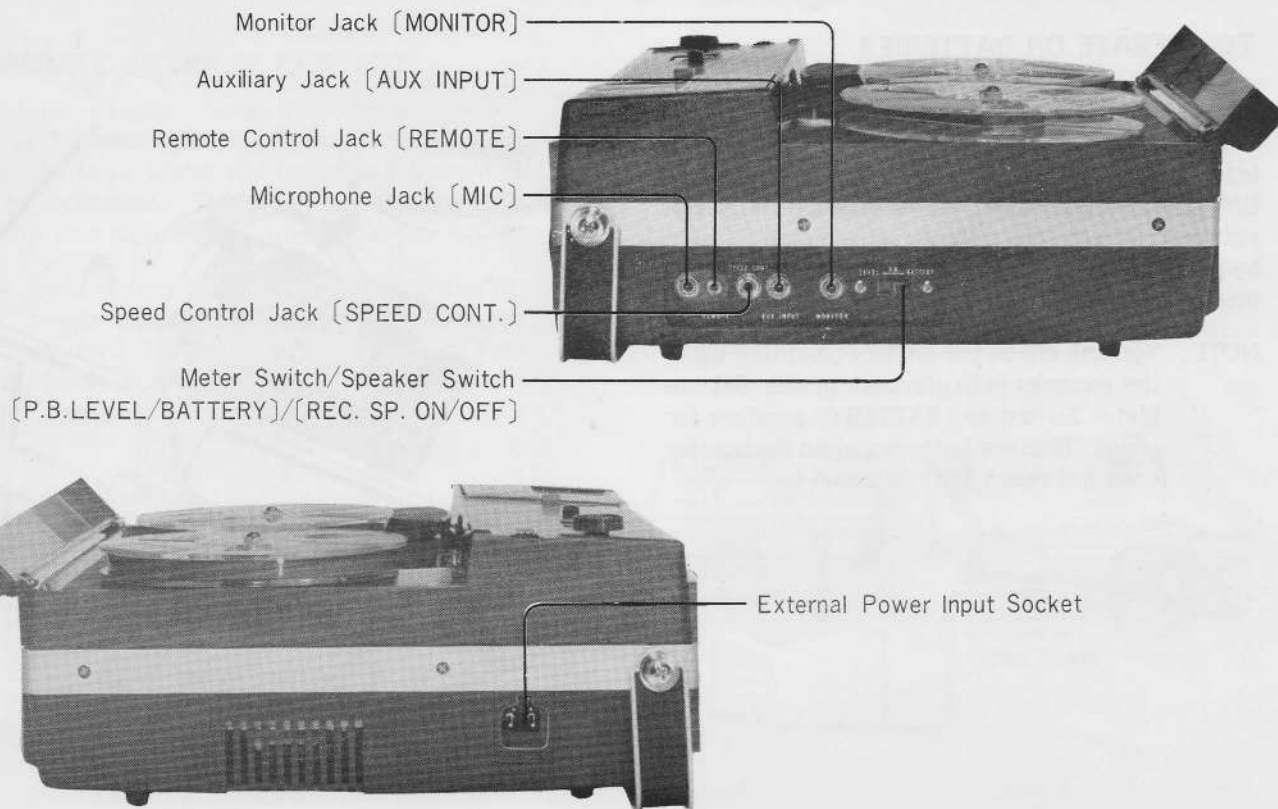
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Location of Controls and Indicators



For further details, read the paragraph "Operation of Controls and Indicators" on page 13.

Location of Input and Output Connectors



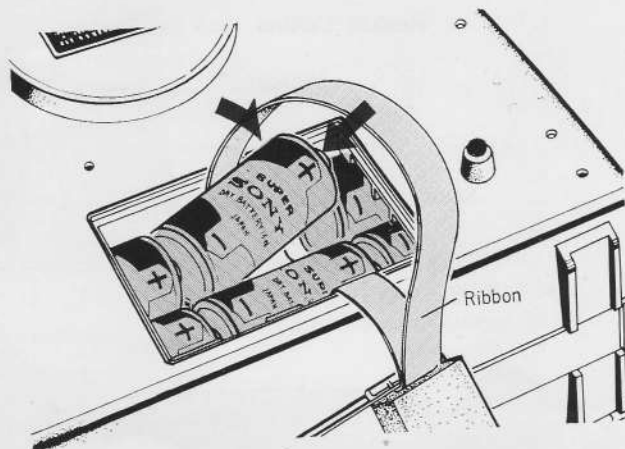
For further details, read the paragraph "Input and Output Connectors" on page 16.

Power Source

TO OPERATE ON BATTERIES

Remove the Battery Compartment Cover by sliding the lock to the direction indicated with the arrow. Insert 8 supplied flashlight batteries (SONY Supper UM-1) into the Battery Compartment through the ribbon loop with the polarity as indicated inside by pressing down towards the direction illustrated below. Pull the ribbon when you take out batteries.

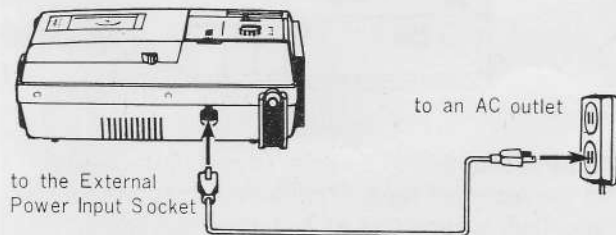
NOTE: You can check the battery condition while the recorder is in playback mode. Set the Meter Switch to [BATTERY] position for check. Replace batteries when the pointer does not reach the red zone.



TO OPERATE ON HOUSE CURRENT

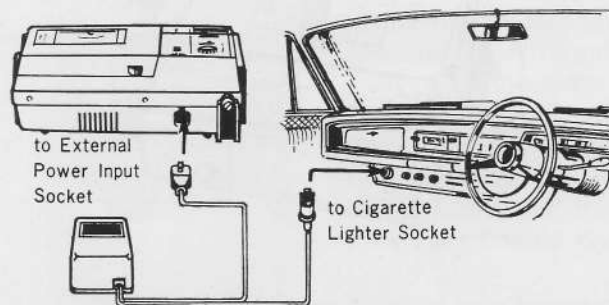
Connect the External Power Input Socket and AC outlet with the supplied AC Power Cord, the pilot lamp in the Level Meter will be on and the set is ready for operation. The set is equipped with a DC motor and be used on either 50c/s or 60c/s.

NOTE: Before connecting the recorder to the AC power supply, check whether or not the recorder is set to the voltage of the operating area.



TO OPERATE ON CAR BATTERY

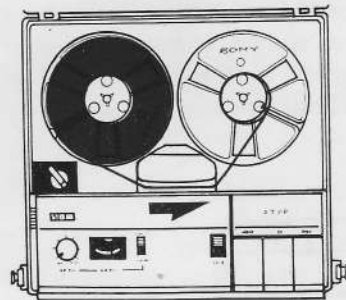
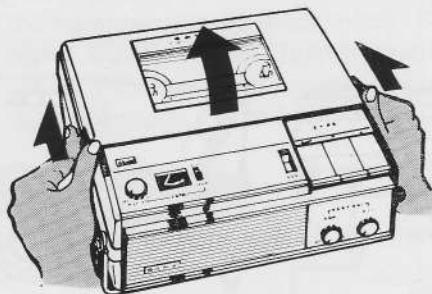
If the voltage of your car is 12V, use the Car Battery Cord DCC-2AW (optional). Insert the round plug of the DCC-2AW into the cigarette lighter socket of the car, and the 4-hole plug into the External Power Input Socket of the recorder. If the voltage of your car is 6V, use SONY Car Battery Voltage Booster DCC-4 (optional). Check if your car has noise suppressors, if not install them.



Playback

PREPARATION

1. Insert the supplied batteries into the Battery Compartment, or connect the External Power Input Socket and an AC outlet with the supplied AC Power Cord. See page 4 or 5.
2. To open the lid, push the protrusions on both sides of the lid toward the rear and lift up.



4. Set the Tape Speed Selector to match the speed of the recorded tape. The demonstration tape, supplied, is recorded at 3-3/4 ips (9.5 cm/s).

PLAYBACK PROCEDURE



1. Push the Forward Button, the power will be on and the tape will start.
2. To adjust sound volume and quality, turn the Playback Volume Control Knob and the Playback Tone Control Knob.



3. Push the Stop Button for stopping tape motion. Push the Rewind Button for rewinding the tape.

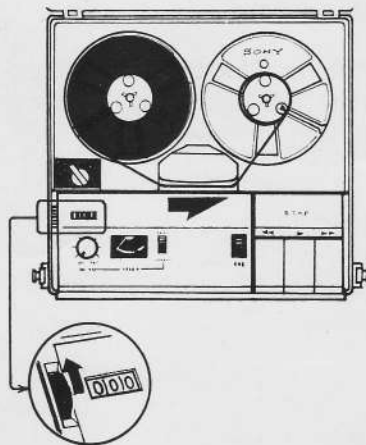
- To listen through the ear-phone, plug the supplied ear-phone into the Monitor Jack. The speaker will be automatically disconnected. Monitoring sound volume and quality can be adjustable by turning the Playback Volume Control Knob and the Playback Tone Control Knob.
- To move tape forward quickly to a desired position, push the Fast Forward Button. To stop fast forward, simply push the Stop Button.

Recording

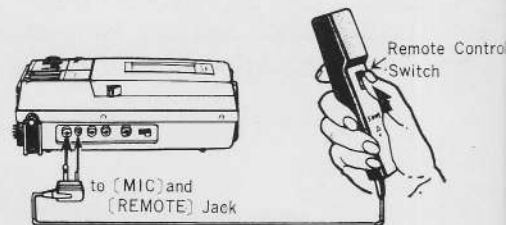
PREPARATION

1. Insert the supplied batteries to the Battery Compartment, or connect the External Power Input Socket and an AC outlet with the supplied AC Power Cord. See page 4 or 5.
2. To open the lid, push the protrusions on both sides of the lid toward the rear and lift up.

3. Place an empty reel on the Take-up Reel Spindle and a full reel of tape on the Feed Reel Spindle. Thread the tape as shown in the illustration. Turn the Tape Counter Reset Wheel upwards until three zeros [000] appear in the window of the Tape Counter.

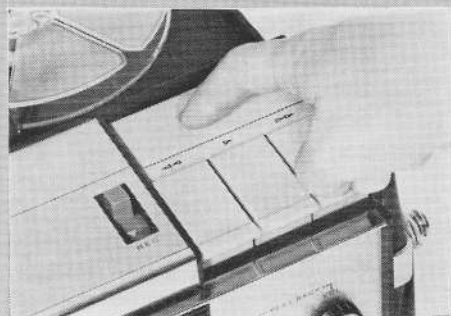
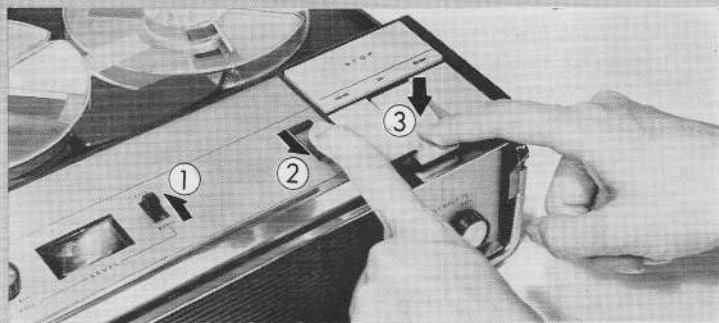


4. Select recording tape speed. When longer recording is desired, select 1-7/8 ips. When better sound quality is desired, select 3-3/4 ips.
5. When recording with a microphone, plug the supplied microphone into the Microphone Jack and the Remote Control Jack (encircled with red) and slide up the Remote Control Switch on the microphone to [FORWARD] position.
For recording from radio, TV, etc, read the paragraph "Connection for recording from radio, TV, etc" on page 17.



RECORDING PROCEDURE

■ SONY-O-MATIC Recording



1. Set the Auto/Manual Selector to [AUTO] position.
2. Pulling the Record Lever toward you,
3. Push the Forward Button. The letters [REC] marked on the Record Lever indicates that the recorder is in record mode. No record level adjustment is necessary with SONY-O-MATIC recording.
4. Upon completion of recording, push the Stop Button. Then push the Rewind Button and rewind the tape to the beginning until three zeros [000] appear on the Tape Counter.

- To monitor while recording, plug the supplied earphone into the Monitor Jack. Also this recorder provides the facility for monitoring through the set speaker. Place the Speaker Switch to [ON], you can monitor through the speaker.

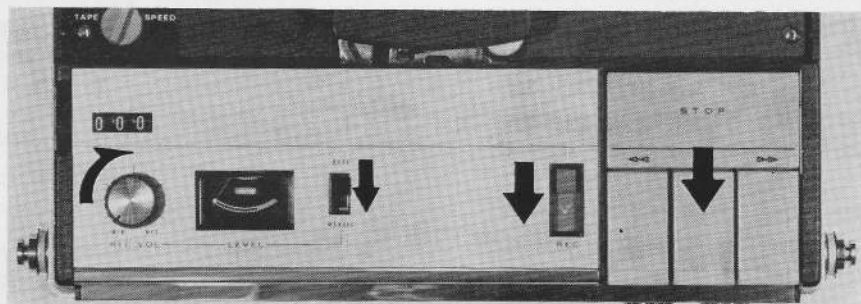
NOTE: While speaker monitoring, howling effect (acoustic feedback) may be caused when the microphone is too near the speaker. In this case, place the microphone away from the recorder.

- To stop tape instantly while recording with microphone, slide the Remote Control Switch on the microphone to [STOP]. To release, simply slide the Switch to [FORWARD], the tape will immediately pick up normal forward speed. This Switch operates also in the playback mode when the microphone is connected to the recorder.

- Dual-track Recording

This recorder can record two tracks on one tape (dual-track recording system). When the upper half track of the tape is completely recorded, invert both reels and reverse their positions. Proceed with recording or playback on the other half track. For further detail, read the paragraph "Notes on Dual-track Recording" on page 22.

Manual Recording



1. Set the Auto/Manual Selector to [MANUAL] position.
 2. Pulling the Record Lever, turn the Record Level Control Knob and adjust the recording level so that at peak volume the swing of the pointer does not reach the red zone.
 3. Keeping the Record Lever pulled, push the Forward Button.
- To stop tape instantly while recording with microphone, slide the Remote Control Switch to [STOP] position; to forward tape again, slide the Switch to [FORWARD] position.

Erasing Tape

The Erase Head operates only in record mode and erases the upper half of the tape. When you start a new recording on a pre-recorded tape, previous recordings are automatically erased as the tape passes the Erase Head. You can also erase a tape without making a new recording with this feature.

Simply place the recorder in record mode and run tape through without connecting any input source.

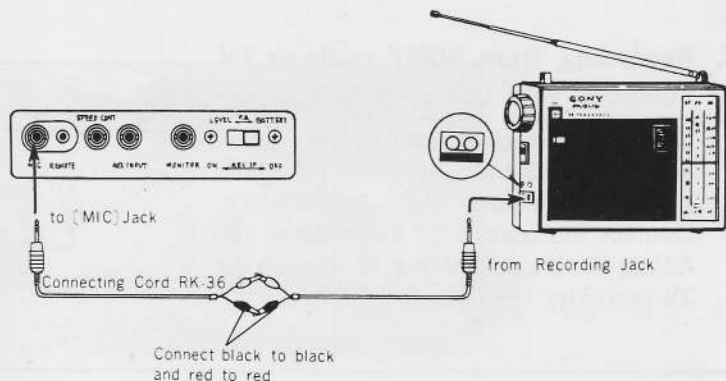
Notes on Operation

1. The ventilation grill located at the left side and the bottom of the recorder should always be free to permit proper ventilation.
2. Avoid use in dusty place and keep away from very high temperature.
3. Keep the microphone away from magnetism since sensitivity will decrease.

Connection for recording from Radio, TV, etc.

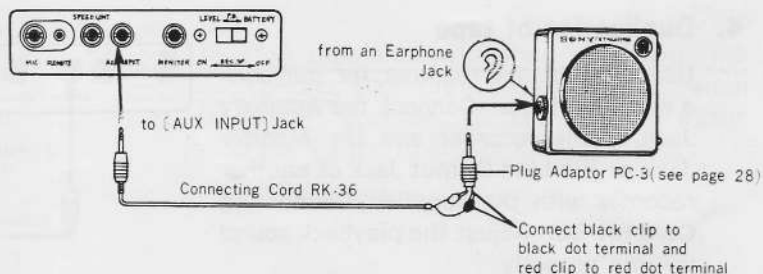
1. Recording from SONY radio or TV equipped with recording jack

Connect the Microphone Jack of the recorder and the Recording Jack of the radio or TV with the supplied Connecting Cord RK-36 as illustrated. The sound volume of a radio or TV does not affect the Recording Level of the recorder.



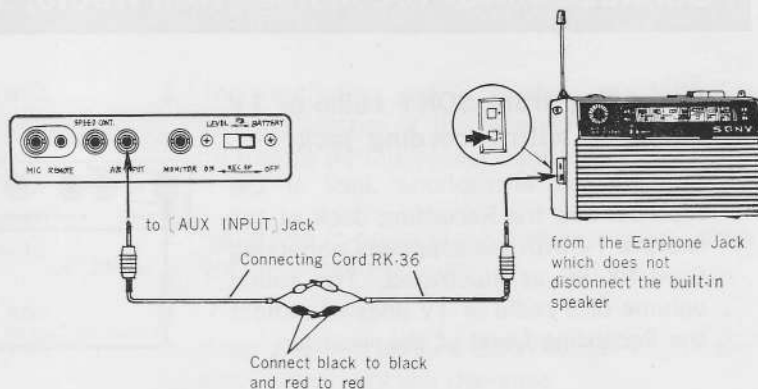
2. Recording from SONY radio equipped with only one earphone jack

Connect the Auxiliary Jack of the recorder and the Earphone Jack of the radio with the supplied Connecting Cord RK-36 using a Plug Adaptor PC-3 (optional) as illustrated. Adjust the sound volume of a radio properly.



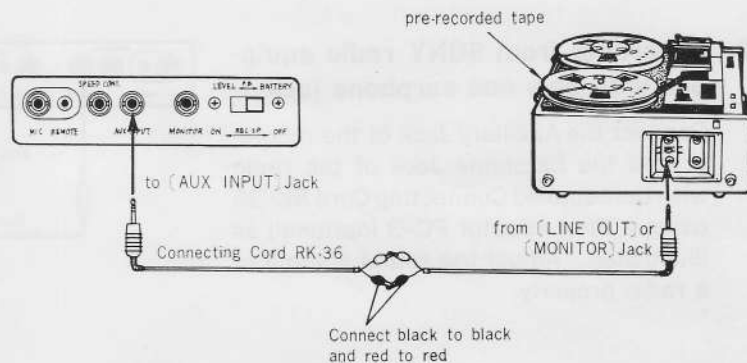
3. Recording from SONY radio or TV equipped with two earphone jacks

Connect the Auxiliary Jack of the recorder with two Connecting Cords RK-36 to the Earphone Jack which does not disconnect the speaker of the radio or TV. Adjust the sound volume of a radio or TV properly.



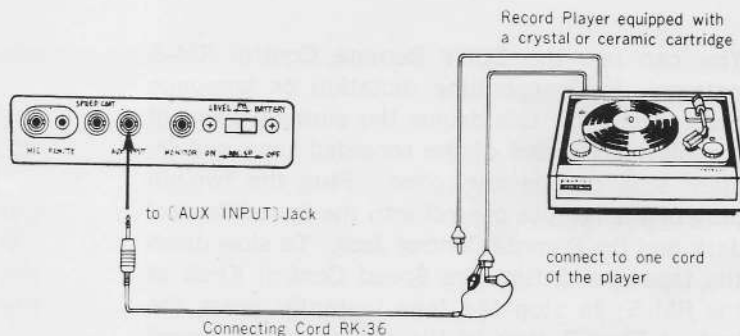
4. Duplication of tape

Use another tape recorder for playback a recorded tape. Connect the Auxiliary Jack of the recorder and the Monitor Jack or the Line Output Jack of another recorder with the supplied Connecting Cord RK-36. Adjust the playback sound volume properly.



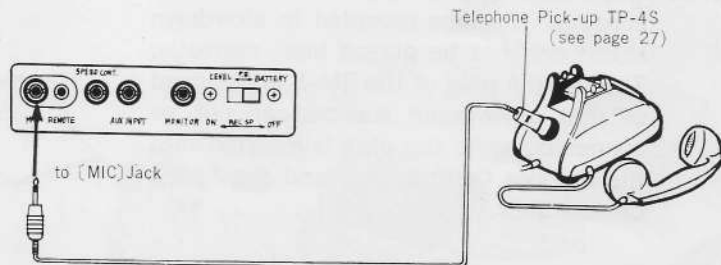
5. Recording from phonograph

Connect the Auxiliary Jack of the recorder and the plug of a phonograph equipped with a crystal or ceramic cartridge by use of the supplied Connecting Cord RK-36. When you record from a phonograph equipped with a magnetic cartridge, a pre-amplifier is needed for connection.



6. Recording telephone conversations

Install the SONY Telephone Pick-up TP-4S on the rear of a telephone and plug in the Telephone Pick-up plug to the Microphone Jack of the recorder.



To control tape speed for various use

You can use the SONY Remote Control RM-5 (optional) for transcribing dictation or language exercise. With this device the slowing down of the playback speed of the recorded tape and instant stop can be controlled. Plug the two-pin plug of the remote control into the Speed Control Jack and the Remote Control Jack. To slow down the tape speed, turn the Speed Control Knob of the RM-5; to stop the tape instantly, press the Instant Stop Button of the center of the Speed Control Knob.

NOTE: Avoid slowing down tape speed while recording. The tape recorded in slowdown speed can not be played back normally. The two-pin plug of the RM-5 is designed so that other input sources can not be connected while the plug is inserted into the Remote Control Jack and the Speed Control Jack.



To use the recorder as a public address system

This recorder can be used for public address with microphone, radio, TV, etc.

Plug the microphone into the Microphone Jack, or connect other input sources. (cf. "Connection for recording from radio, TV, etc." on page 17.)

With the recorder in recording mode but without a tape, set the Auto/Manual Selector to [MANUAL] position; set the Speaker Switch to [ON] and adjust the sound volume by turning the Record Volume Control Knob.

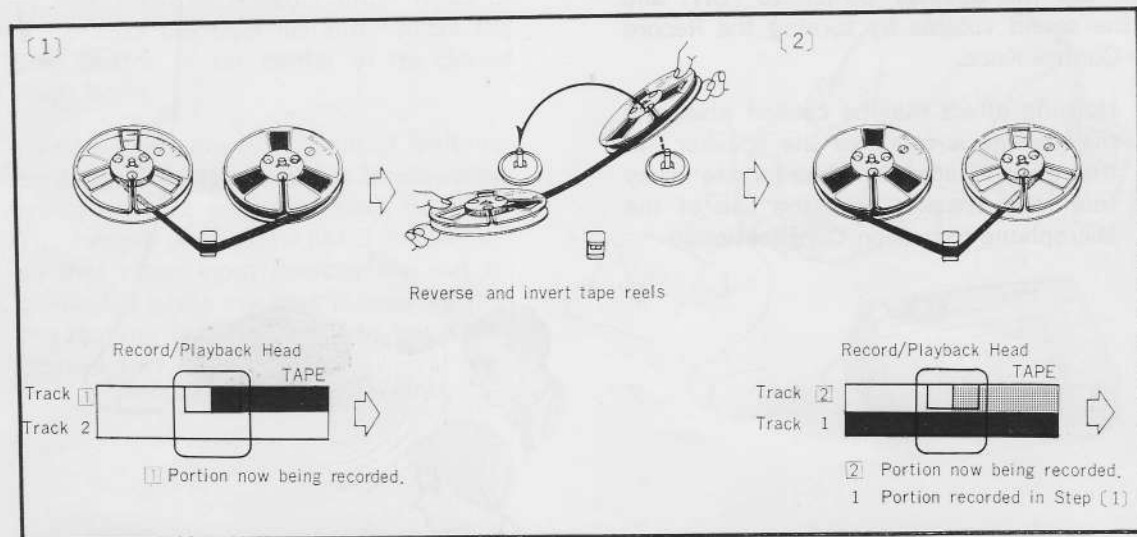
NOTE: Howling effect may be caused when the microphone is too near the speaker. In this case, place the microphone away from the speaker with the use of the Microphone Extension Cord (optional).



Notes on Dual-track Recording

In dual-track recording system, you can record or playback half of a standard 1/4" tape in one direction and the other half in the opposite direction. When the upper half track of the tape is completely recorded, invert both reels and reverse

their positions. Proceed with recording on the other half track. The tape in actual use is two times as long as when used for single full track recording.

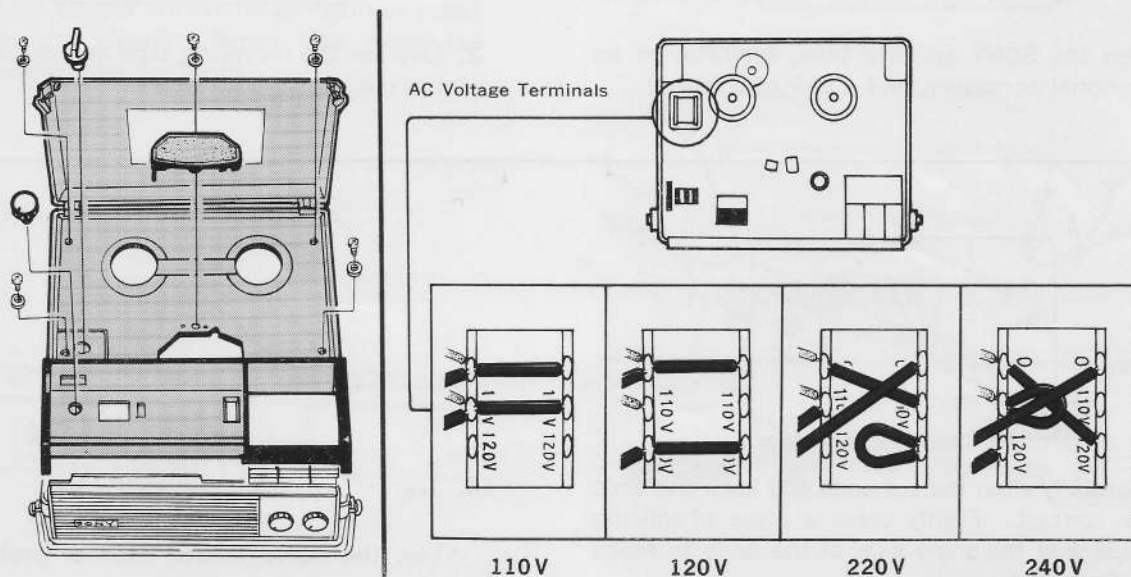


To change AC voltage

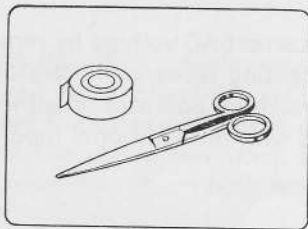
Before operating the recorder on AC power, check whether the recorder is set for the operating AC voltage identical to your local power line voltage. If necessary, change the tapping of the voltage

terminals for correct AC voltage by removing four (4) white connecting wires as illustrated below.

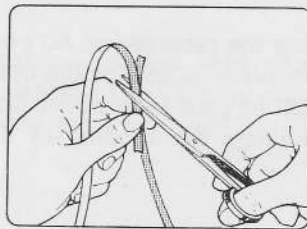
NOTE: This recorder operates on either 50 or 60 cycles with no additional modifications.



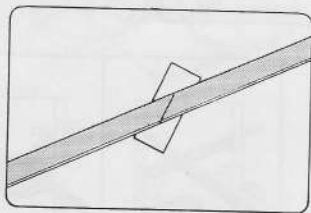
Splicing Tape



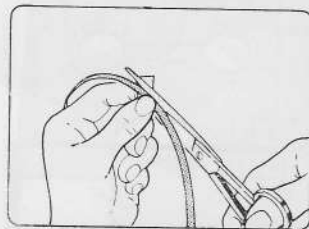
1. Use the SONY splicing tape, available as an optional accessory, and a pair of scissors.



2. Overlap the recording tape and make a diagonal cut across both tapes.



3. Carefully align the cut ends and keep the ends in contact. Firmly press a piece of splicing tape over the shiny side of the ends to make a firm joint.



4. Trim off the excess splicing tape.

* Use the SONY leader tape for protection or marking of tape ends.

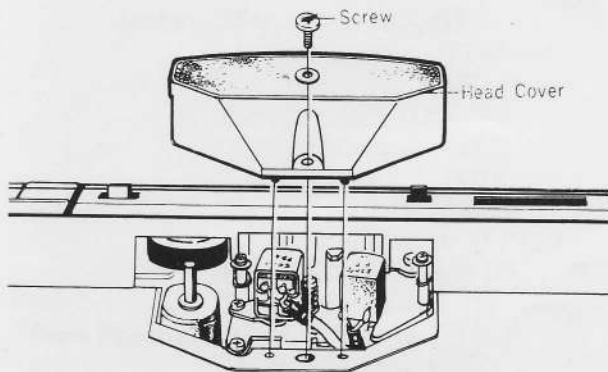
Maintenance

Waxing

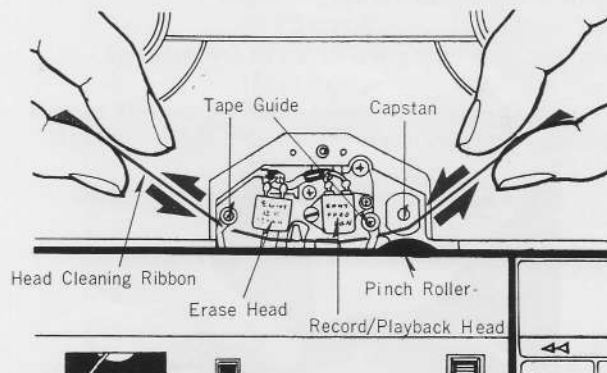
HEADS

To clean

Intimate contact between heads and tape is important for optimum performance, therefore head surface should always be as clean as possible. Generally, cleaning heads after every ten hours of use will be sufficient.

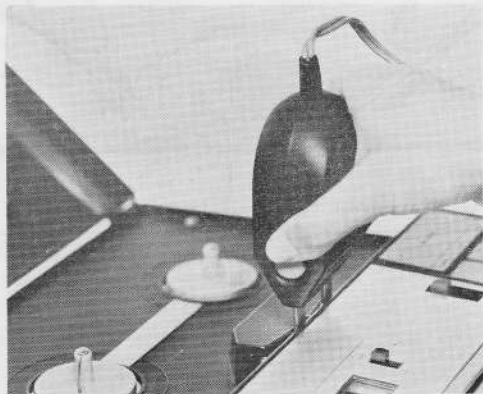


Remove the head cover by turning the screw clockwise with a small screw driver; using the head cleaning ribbon supplied, carefully wipe the head surfaces, capstan, pinch roller and tape guides over which the tape travels. Do not bring magnets or pieces of steel near the heads.



To demagnetize heads

Through continuous use, the varying magnetic fields of the tape will gradually build up residual magnetism on the gap of the head. Excessive residual magnetism on the head will produce noise while the tape is being played; therefore, it is advisable to demagnetize the head by using the SONY Head Demagnetizer HE-2(optional).



CABINET

Clean the cabinet with a clean, soft moistened with mild soapsuds.

LUBRICATION

It is recommended to have the drive mechanism checked and lubricated every six months. Ask your nearest SONY dealer for check and lubrication.

Specifications

Power DC 12V
Requirement: AC 110V, 120V, 220V or 240V; 50/60 c/s
Motor: D-501 F DC Servo Control Motor

Power
Consumption: AC 6W
Tracks: Dual Track
Bias Frequency: Approx. 55KC
Reels: 5 inches or smaller
Transistors: 15
Diodes: 11
Jacks: Microphone Jack (1)
 Sensitivity 0.195 mV
 Impedance 600 ohms
 Auxiliary Jack (1)
 Sensitivity 0.055 V
 Impedance 100K ohms
 Monitor Jack (1)
 Normal Output 0.775 V
 Remote Control Jack (1)
 Speed Control Jack (1)
Tape Speeds: 3½ ips (9.5 cm/s)
 1½ ips (4.75 cm/s)

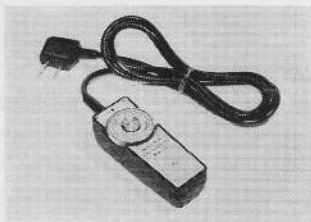
Recording Time: 1.5 hours total at 3½ ips (9.5 cm/s)
 3 hours total at 1½ ips (4.75 cm/s)
 with 900 ft (275 m) tape

Frequency
Response: 50~13,000 c/s at 3½ ips (9.5 cm/s)
 50~7,000 c/s at 1½ ips (4.75 cm/s)
Speaker: 3½ × 6½" dynamic (8 × 16 cm)
Power Output: Max. 1 watt
Battery Life: 10 hours recording with supplied batteries
Dimension: 12¼ (w) × 4¾ (h) × 10¼ (d)" (322 × 107 × 261 mm)
Weight: 11 lb 13 oz (including batteries) (5.4 kg)

Recommended Accessories

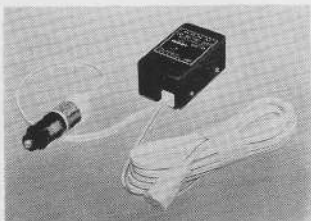
Remote Control, RM-5

To slow down the tape speed in playback mode or to stop tape motion instantly.



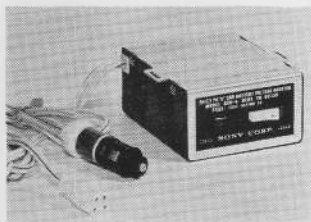
Car Battery Cord, DCC-2AW

To operate the set on 12V car battery.



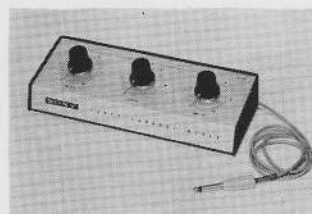
Car Battery Voltage Booster, DCC-4

To boost car battery voltage to 12V.



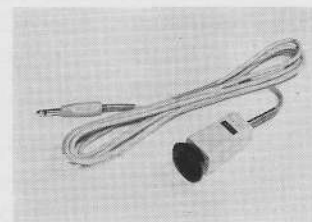
Microphone Mixer, MX-600

3-channel low impedance MIC and/or LINE INPUT mixer with independent volume controls for each channel.



Telephone Pick-up, TP-4S

For recording telephone conversations on tape.



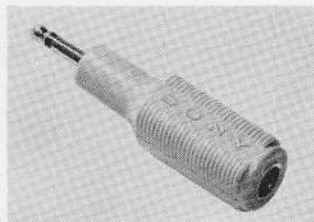
Carrying Case

For carrying the recorder or using it in outdoor.

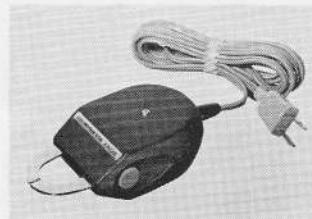


Plug Adaptor, PC-1

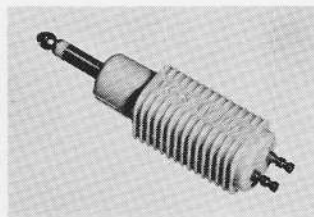
For connecting the standard phone plug into a mini-jack.

**Head Demagnetizer, HE-2**

To demagnetize heads.

**Plug Adaptor, PC-3**

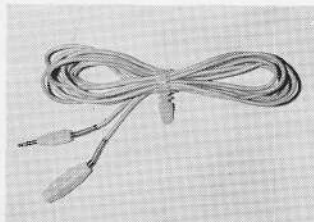
An adaptor with built-in 8 ohm dummy load for recording from external speaker jack of a tape recorder, radio, etc.

**Splicing Tape**

For splicing tape.

Microphone Extension Cord, EC-5M, EC-10M, EC-25M

For placing a microphone away from the set.

**Leader Tape**

For protection or marking of tape ends.

SONY CORPORATION