



SONY

**STEREO
TAPECORDER
TC-252 D**

**OWNER'S
INSTRUCTION MANUAL**

The SONY Model 252 D Tape Deck Recorder is a four-track stereophonic/monophonic tape transport for the accurate recording and playback of recorded or pre-recorded tapes in conjunction with high fidelity components and speakers. The 252 D will fill all of the needs of the hi-fi enthusiast for the accurate recording and playback of tape.

Special features: vibration-free motor; all-silicon transistors for exceptional low noise and distortion; professional high frequency low noise and distortion; professional high frequency bias; scrape flutter filter which eliminates tape modulation distortion; automatic sentinel shut-off; stereo headphone jack; and retractomatic pinch roller.

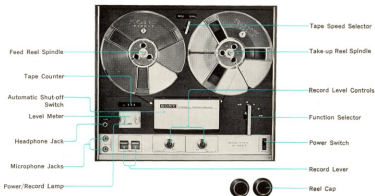
The 252 D comes mounted in an attractive walnut-finish base and can be operated in either a vertical or horizontal position or custom mounted in any sound system.



TABLE OF CONTENTS

Location of Controls	1
Notes	1
Connection to Pre-amp/Amplifier	2
Stereo Playback	2
Monophonic Playback	2
Connection Information	2
Stereo Recording	4
Monophonic Recording	5
Sound-on-Sound Recording	5
Erasing Tape	5
Splicing Tape	6
Maintenance	6
Mounting	7
Specifications	7
Schematic Diagram	8
Warranty	9

LOCATION OF CONTROLS

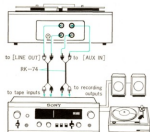


NOTES

1. Keep the set away from extreme heat and avoid any mechanical shock. The ventilation grill located at the bottom should be free to permit proper ventilation.
2. The 252D can be used in either horizontal and vertical position. When in use vertically, make sure to place the reel caps on the spindles. Also, if necessary, attach the supplied non-skid pads to the bottom of the cabinet.
3. When recording through the Auxiliary Input Jacks, re-move any input source connected to the Microphone Jacks, otherwise any input source connected to the Auxiliary Input Jacks will not be recorded.
4. Keep the head clean. Dust and deposits on the heads will prevent optimum performance.
5. When the set is not in use, the Function Selector must be placed in the stop position.

CONNECTION TO PRE-AMP/AMPLIFIER

Connect left and right Line Output Jacks of the recorder to respective tape input jacks (or line input jacks) of an integrated amplifier (pre-amp/amplifier) using the Connecting Cord RK-74 (supplied). Then, connect left and right Auxiliary Input Jacks of the recorder to respective line output jacks (or recording output jacks) of the integrated amplifier with the Connecting Cord RK-74 (supplied).



STEREO PLAYBACK

1. Set up the stereo playback system.
2. Turn the AC power of each component ON.
3. Place a prerecorded tape on the Feed Reel Spindle with the side 1 up and place an empty reel on the Take-up Reel Spindle.
- ☆ When the recorder is used in vertical position, place the supplied Reel Caps on the spindles.
4. Thread the tape through the tape path of the Head Cover.



5. Set the Tape Speed Selector to the required speed of the prerecorded tape.
6. Set the Function Selector to [▶] position, the tape will begin to move forward. Track-1 and track-3 will be played back.
7. Adjust the volume and tone controls of the connected amplifier.
8. To play back track-4 and track-2, invert and reverse the tape reels.

For fast forward

If you want to listen to the programs from the middle of the tape, turn the Function Selector to [▶▶]. When the tape reaches the desired position, turn the Selector to [●] position and turn it again to [▶] position.

For instant stop

To stop tape motion instantly at any desired time, turn the Function Selector to [●] position.

For private listening

Connect the SONY Stereo Headphone DR-6A (optional accessory) or any 8 ohm stereo headphone to the Headphone Jack. The line output level of the Headphone Jack is fixed at a pre-determined point, therefore, the volume of the headphone is always constant.

MONOPHONIC PLAYBACK

The following playback procedure is recommended for a monophonic tape whose sequence of recording is; track-1, track-4, track-3 and track-2.

1. Set up the amplifier-speaker system.
2. Place the recorded tape with side 1 up and thread the tape.
3. Turn the AC power of each component ON.
4. Set the mode selector of an external amplifier to [L] position.
5. Set the Tape Speed Selector to the required speed of the pre-recorded tape.
6. Set the Function Selector to [▶] position, the tape will begin to move forward. Track-1 will be played back.
7. Adjust the tone, volume and other controls of the connected external amplifier to reproduce the left channel sound.
8. When the end of the tape is reached, do not rewind the tape. Invert and reverse the tape reels to play back track-4.
9. To playback track-3 and track-2, adjust the amplifier for right channel reproduction. Then repeat the procedure of track-1 and track-4 playback.

CONNECTION INFORMATION

Microphone Inputs

Equipped with mini jacks with an input level of 0.19mV. Will accept any high quality 600 ohm impedance microphone (SONY F-98 is recommended). Also accepts SONY radio or TV set equipped with a recording output jack.

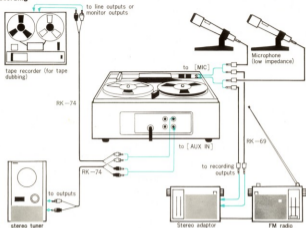
Auxiliary Inputs

Equipped with phono jacks. These inputs have an input level of 0.06V and an input impedance of 560 k ohms. Accept outputs of a stereo tuner, a receiver or tape recorder (monitor outputs or line outputs). When recording through these inputs, make sure to remove any sound source connected to the Microphone Jacks.

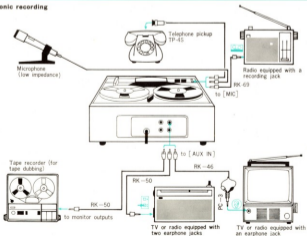
Line Outputs

Equipped with phono jacks. These outputs have an output level of 0.775V and a load impedance of 100 k ohms. Connect outputs to the inputs of a stereo amplifier or a receiver, or to inputs of another tape recorder.

stereo recording



monophonic recording





1. Connect the desired sound source to the Auxiliary Input Jacks or to the Microphone Jacks referring to the "Connection Information" on pages 2 and 3.



2. Turn the AC power of each component ON.

3. Place the tape on the Feed Reel Spindle with the side 1 up. Place an empty reel on the Take-up Reel Spindle and thread the tape.



4. Select the desired tape speed.

5. Set the figures on the Tape Counter to [0000] by pressing the Tape Counter Reset Button.



6. Press until locked the Record Levers and adjust the record level by turning the Record Level Controls. Deflection of the needle of the Level Meter to the boundary of the red and black zones provides normal recording level.



☆ It is normal for occasional transient peaks to deflect the needle into the red zone.

7. While holding the Record Levers down, turn the Function Selector to [▶] position. The recording of track-1 and track-3 will start.



8. When the recording of side 1 is completed, invert and reverse the reels on the spindles. Track-2 and track-4 recording will then be continued.

☆ For the monitoring of the programs being recorded, insert a stereo headphone into the Headphone Jack of the 252 D.



4-track stereo recording



Invert and reverse the tape reels

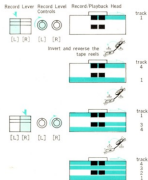


MONOPHONIC RECORDING

The sequence of the monophonic recording should be as follows; track-1, track-4, track-3 and track-2. For connection, refer to the page 3.

1. Connect the desired program source to the Auxiliary Input Jack [L] or the Microphone Jack [L].
2. Turn the AC power of each component ON.
3. Place the tape on the Feed Reel Spindle with the side 1 up and an empty reel on the Take-up Reel Spindle. Thread the tape.
4. Select the desired tape speed.
5. Set the figures on the Tape Counter to [000] by pressing the Tape Counter Reset Button.
6. Press until locked the Record Lever [L], and adjust the record level by turning the Record Level Control [L]. Deflection of the needle of the Level Meter to the boundary of the red and black zones provides normal recording level.
7. While holding the Record Lever [L] down, turn the Function Selector to [►] position. The recording of track-1 will start.
8. When track-1 is completed, invert and reverse the reels. Track-4 recording will then be continued.
9. To record on the track-3 and track-2, connect the program source to the Auxiliary Input Jack [R] or the Microphone Jack [R]. Adjust the record level by locking the right Record Lever and turning the Record Level Control [R]. Then, repeat the procedure of the track-1 and track-4 recording.

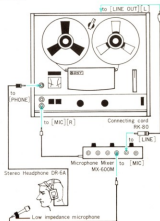
4-track monophonic recording



SOUND-ON-SOUND RECORDING

Sound-on-Sound Recording is possible with the use of the SONY Monophonic Microphone Mixer MX-600M or SONY Stereo Microphone Mixer MX-6S. Connect the microphone mixer to the recorder using the SONY Connecting Cord RK-80 (optional accessory) as illustrated.

1. Record basic source material on track-1 of the left channel according to monophonic recording on the previous paragraphs. When the tape is completed, rewind to the beginning.
 2. Plug in a low impedance stereo headphone to the Headphone Jack. Listening through the headphone, record on track-3 of the right channel. From the left headphone, the playback of left channel is heard, and from the right headphone, the composite recording being made is heard.
- ☆ While recording, be careful not to turn the Record Level Control of the recorder or Microphone Mixer fully clockwise.
3. When the end of the tape is reached, rewind it and play back track-3; the composite recording will then be played back.



ERASING TAPE

The erase head operates in record mode, therefore, every time you make a recording, any previous recording on the tape is automatically erased. You can also erase a tape without adding a new recording as follows.

1. Place the recorded tape which you want to erase on the Feed Reel Spindle.
2. Turn the Record Level Controls fully counterclockwise and disconnect any input source.

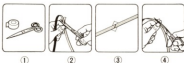
- While holding both Record Levers down, turn the Function Selector to [►] position. While the tape is in motion, track-1 and track-3 will be erased. Tape speed of 7-1/2 ips is recommended.
- When erasing of track-1 and track-3 is completed, invert and reverse the reels. Track-4 and track-2 will then be erased.

By pressing only the Record Lever [L], track-1 will be erased and track-4 will be also erased when the reels are inverted and reversed. By pressing only the Record Lever [R], track-3 will be erased and track-2 will be also erased when the reels are inverted and reversed.

For fast erasure, use a bulk eraser.

SPlicing TAPE

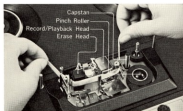
- Use splicing tape and a pair of scissors. Do not use ordinary cellophane tape as it tends to deteriorate.
- Overlap the tapes to be spliced and make a diagonal cut across the overlapped position.
- Place the two diagonal ends together, shiny side up, on a flat surface. Be careful to make ends meet, but not overlap. Then, place a piece of splicing tape over the joint.
- Trim off the excess tape.



MAINTENANCE

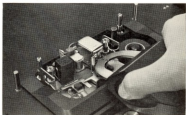
Cleaning heads

Optimum performance will be assured by clean heads. Remove the head cover by pulling it up. Take the supplied head cleaning ribbon or a soft cloth and wipe the heads and the tape guide over which the tape travels. When the deposits cannot be removed, moisten the ribbon or the cloth with denatured alcohol and repeat cleaning.



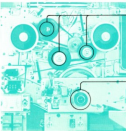
Magnetizing heads

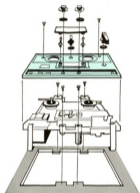
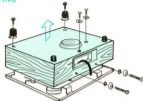
Although the 252 D incorporates a circuit to demagnetize the record head, under certain conditions such as prolonged playback, residual magnetism could gradually build up on the heads, causing degradation of tapes. Periodic use of the SONY HE-2 head demagnetizer is recommended to maintain optimum performance.



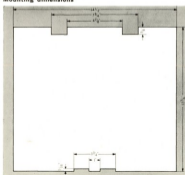
Lubrication

Use light machine oil and lubricate capstan, pinch roller shaft and idler shafts every 6 months. Avoid excessive lubrication. It will cause slippage of the mechanism and contamination of your tape. Remove the head cover by pulling it up. Remove the Function Selector, Tape Speed Selector and four screws from the top panel of the recorder and lift up the panel. Take out the caps of the pinch roller and the three idler shafts. Lubricate the capstan with 3 drops, and the idler shafts and the pinch roller with 1 drop each of light machine oil.





Mounting dimensions

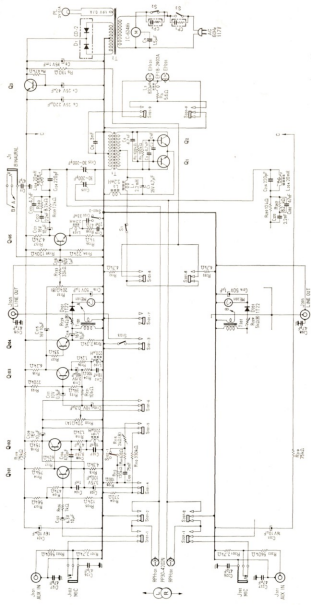


1. Make a rectangular cut-out at the desired location on the panel or the cabinet in accordance with the measurement.
2. Remove the two screws located at the rear side of the cabinet.
3. Place the recorder bottom side up, loosen the two screws located near the ventilation grill and two screws in the rubber feet and take off the wooden case.
4. Remove the Function Selector, Tape Speed Selector, Head Cover, two Record Level Control knobs and four screws from the top panel of the recorder. Remove the top panel.
5. Mount the deck in the panel or cabinet cut-out and fasten with four wood screws.
6. Place the top panel on top of the deck and replace the parts removed in step 4.

SPECIFICATIONS

Power requirements:	30 watts, AC 117 V, 60 Hz
Tape speed:	7½ ips, 3¾ ips
Reels:	7 inches or smaller
Recording system:	4-track stereophonic or monophonic
Frequency response:	30-18,000 Hz at 7½ ips 40-13,000 Hz at 3¾ ips
Signal-to-noise ratio:	52 dB
Flutter and wow:	0.12% at 7½ ips 0.15% at 3¾ ips
Level indication:	Two VU meters
Recording time:	4-track stereo 1 hr. 30 min. at 7½ ips 3 hrs. at 3¾ ips
(with 1800 ft tape)	4-track monophonic 3 hrs. at 7½ ips 6 hrs. at 3¾ ips
Fast forward and rewind time:	Within 2 min. 30 sec.
Inputs:	Microphone input jacks Sensitivity: -72 dB (0.19 mV) Impedance 600 ohms Auxiliary input jacks Sensitivity: -22 dB (0.05 V) Impedance: 560 k ohms
Outputs:	Line output jacks Output level: 0 dB (0.775 V) Impedance: 100 k ohms Headphone jack Impedance: 8 ohms
Transistors and diodes:	13 transistors, 3 diodes
Weight:	17 lb 11 oz
Dimensions:	15½ (w) × 7½ (h) × 13½ (d) "
Supplied accessories:	SONY Reel R-7A 1 Head cleaning ribbon 1 Reel cap 2 Connecting cord RK-74 2 Non-skid pad 4
Optional accessories:	Dust protector DP-2 Microphone F-98 Magnetic phono connecting cord RK-66 Connecting cord RK-80 Microphone mixer MX-6S, MX-600M Telephone pickup TP-4S Low impedance stereo headphone DR-6A

SCHEMATIC DIAGRAM



- | | |
|-----------|---|
| S101, 201 | Record/Playback switch (record position) |
| S102, 202 | Speed and equalize switch (7½ ips position) |
| S103, 203 | Muting switch (OFF position) |
| S1 | Bias shut-off switch (ON position) |
| S2 | Automatic shut-off switch (ON position) |
| S3 | Power switch (ON position) |