

DENON

MODEL 7D80

OWNERS MANUAL

AUTOMATIC REVERSING

4 TRACK-3 SPEED

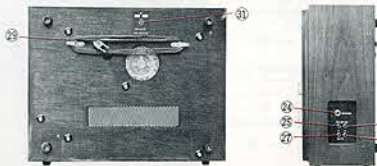
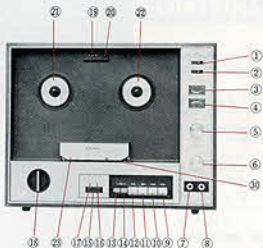
STEREO TAPE DECK



FEATURES

- * Automatic or manual tape reversing in both record and play mode
- * Piano key type pushbuttons for simple and positive operation
- * Three speeds without capstan change
- * Pushbutton reset counter
- * Dual VU meters
- * Separate left and right channel record interlocks
- * Automatic shut off

LOCATION OF CONTROLS AND JACKS



- | | |
|--|--|
| ① Power switch | ⑮ Tape direction indicator lamp, Forward |
| ② Mode switch | ⑯ Tape direction indicator lamp, Reverse |
| ③ Left channel level meter | ⑰ Speed selector knob |
| ④ Right channel level meter | ⑱ Digital counter |
| ⑤ Left channel record level control | ⑲ Counter reset button |
| ⑥ Right channel record level control | ⑳ Left reel hub |
| ⑦ Left channel microphone jack | ㉑ Right reel hub |
| ⑧ Right channel microphone jack | ㉒ Head cover |
| ⑨ F.F. button, Forward | ㉓ Headphone jack, Kopfhörer |
| ⑩ Stop button | ㉔ Left channel output jack |
| ⑪ F.R. button, Reverse | ㉕ Right channel output jack |
| ⑫ Play button | ㉖ Left channel aux. input jack |
| ⑬ Left channel record interlock button | ㉗ Right channel aux. input jack |
| ⑭ Right channel record interlock button | ㉘ Line cord |
| ⑮ Tape direction selector button | ㉙ Automatic shut off switch |
| ⑯ Tape direction indicator lamp, Forward | ㉚ Line selector |
| ⑰ Tape direction indicator lamp, Reverse | |

SPECIFICATIONS

| | |
|-----------------------------------|--|
| Track System: | Four track, two channel stereo- phonic recording and playback |
| Reel Size: | 7" maximum |
| Tape Speeds: | 7-1/2, 3-3/4 & 1-7/8 ips. All three speeds properly equalized |
| Heads: | 2 record-playback heads 2 erase heads |
| Wow and Flutter: | 0.2% @ 7-1/2 ips. 0.25% @ 3-3/4 ips 0.4% @ 1-7/8 ips |
| Frequency Response: | 30 to 20 KHz @ 7-1/2 ips 30 to 10 KHz @ 3-3/4 ips 30 to 5 KHz @ 1-7/8 ips |
| Inputs: | Microphone and Auxiliary |
| Input Impedance: | Microphone 10 K Ω Auxiliary 100 K Ω |
| Input Sensitivity: | Microphone 0.5 mv Auxiliary 100 mv |
| Outputs: | Preamplifier and headphone |
| Preamplifier Output Level: | 0.775 volt |
| Preamplifier Output Impedance: | 2 K Ω |
| Headphone Output Level: | 0.06 volts (max.) |
| Headphone Output Impedance: | 8 Ω |
| Power Requirements: | 115/230 V AC 50/60 Hz |
| Dimensions: | 18-3/4" W x 7-3/4" D x 15-1/8" H |
| Weight: | 30 lbs. |
| Accessories: | One (1) 7" empty Autothread reel Two (2) patch cords Two (2) pieces 1" foil sensing tape |

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FUNCTION OF CONTROLS

- Wichtigste Stelle* *steht auf "ON" gestellt* *in der VL*
Power Switch — when placed in the ON position, the VU meters will illuminate indicating unit is ready for operation.
- erhöht auf und drückt um, daß die beiden phosden*
Mode Switch — used to determine the mode of recording *von welcher* *und drückt sich toward der Aufnahme* only.
- Skizzen gemacht* *zeigt die Messung der Aufnahmen an*
Level Meters — used to indicate recording levels in the record mode and relative output levels in the playback mode.
- in der Aufnahme* *den der Wähler*
Record Level Controls — used to adjust for proper recording level in the record mode. Recording level will increase *erhöht* when this control is rotated clockwise and will decrease *senkt* when control is rotated counterclockwise.
- Microphonenschleife* *erhöhen* *ausgeben*
Microphone Jacks — used when making microphone recordings.
- knopf nach rechts drückt man einen Knopf*
F.F. Button (Forward) — depressing this button will wind tape at high speed from the left reel on to the right reel.
- und das Band von der linken Spule auf die rechte gehen*
Stop Button — depressing this button will cancel all other modes previously selected, and stop all tape movement.
- knopf nach links* *Band über Spule*
F.F. Button (Reverse) — depressing this button will wind tape at high speed from the right reel on to the left reel.
- unter 9 von von rechts nach links*
Play Button — depressing this button will cause the tape to move at the speed determined by the speed selector.

13 & 14 Record Interlock Buttons — these buttons and the play button must be depressed simultaneously to put your recorder in the record mode.

NOTE : Recording levels may be preset without tape movement by depressing the record interlock buttons (13 & 14) only.

15 Tape Direction Selector Button — used for selecting direction of tape travel. This button will not operate in either the F.F. (Forward) or the F.F. (Reverse) mode.

16 & 17 Tape Direction Indicator Lamp — when the right end of this button is depressed, the arrowhead pointing to the right will illuminate, indicating tape is traveling to the right (forward). When the left end of the button is depressed, the arrowhead pointing to the left will illuminate, indicating tape is traveling to the left (reverse).

18 Speed Selector Knob — selects the desired tape speed ($7\frac{1}{2}$, $3\frac{3}{4}$, $1\frac{1}{2}$ ips) without capstan change. Speed can be changed while recorder is in the play or record mode. Recorder is equalized to NAB standards on all three speeds.

19 & 20 Digital Counter and Reset Button — digital counter indicates relative position of tape. Reset button resets the counter to "zero".

21 & 22 Left and Right Reel Hubs — tape reels are placed on these hubs.

23 Head Cover — removable for cleaning of heads.

24 Headphone Jack — for connecting stereo headphones.

25 & 26 Left and Right Preamp Output Jacks — for connecting recorder to an external amplifier.

27 & 28 Left and Right Aux. Input Jacks — for recording from a tuner, T.V., or other high level source.

29 Line Cord — used to connect recorder to power line.

30 Automatic Shut off Switch — your recorder is equipped with a switch that will automatically shut off the motor whenever the tape is completely wound on one of the reels, or if the tape should accidentally break at some spot. This switch operates in all modes of operation.

31 Line Selector — adjust the line voltage selector switch to a proper operating position.

NOTE : This tape recorder is designed for operation on AC 115–230 V 50 or 60 cycles, and is present to carry AC 230 V 50 cycles. Be sure that the electric current and cycle is of the type required, before plugging AC power cord into any AC outlet. In case any other voltage and 60 cycles is required, adjust the line voltage selector to a proper voltage and the 50 cycle capstan sleeve should be taken off.

BEFORE OPERATION

Threading The Tape :

1. Depress the STOP button (10).
2. Place a full reel of tape on the left hub (21).
NOTE : Reel spindles are constructed in such a manner that no caps are required to hold tape reels in place.
3. Place the Autothread reel supplied on the right hub (22).
4. Place the tape in the slot below the head cover (23) and then just lay it on the easy thread reel.

Selecting Tape Speed :

Rotate speed selector knob (18) to desired speed.

Using the Digital Counter :

Before recording or playing back, depress reset button (20) to set counter (19) to zero. This zero is now a reference point which will aid in locating desired sections of the tape.

AC Power :

Depress power switch (1) to turn unit on.

THEORY OF REVERSING OPERATION

This recorder has been designed to record and playback in two directions without interchanging reels. This is accomplished by using four heads, two for erase and record/play in one direction and two for erase and record/play in the other direction. The reversing mechanism may be actuated at any time either manually or automatically. Manual reversing is accomplished by a simple touch of the tape direction selector button (17). Automatic reversing is accomplished by placing a piece of sensing tape on the recording tape. When the sensing tape reaches the area of the head cover, the machine will automatically reverse itself. This system will operate in either the record or play mode.

MONITORING

Your recorder is provided with a feature which allows you to monitor while recording. To monitor, headphones should be plugged into the headphone jack (24).

TO MAKE A STEREO RECORDING (MICROPHONE)

1. Thread the tape.
2. Plug a microphone into each of the MIC jacks (7 & 8). Position microphones approximately 7 feet apart for best results.
3. Set the speed selector knob (18) to the desired speed.
4. Depress the record interlock buttons (13 & 14) while simultaneously depressing the play button (12).

NOTE: Recording levels may be preset without tape movement by depressing the record interlock buttons (13 & 14) only.

5. Adjust record level controls (5 & 6) until the level meters (3 & 4) peak at approximately mid scale (start of red area) on the loudest passages. (The level meters should read approximately the same on each channel for proper balance.)

TO MAKE A STEREO RECORDING (TUNER)

1. Thread the tape.
2. Connect left and right outputs from tuner to corresponding AUX input jacks (27 & 28) on the recorder.
3. Set the speed selector knob (18) to the desired speed.
4. Depress the record interlock buttons (13 & 14) while simultaneously depressing the play button (12).

NOTE: Recording levels may be preset without tape movement by depressing the record interlock buttons (13 & 14) only.

5. Adjust record level controls (5 & 6) until the level meters (3 & 4) peak at approximately mid scale (start of red area) on the loudest passages. (The level meters should read approximately the same on each channel for proper balance.)

TO RECORD FROM A STEREOGRAPHIC RECORD CHANGER

1. Thread the tape.
2. Make direct connections from a changer using a crystal or ceramic type (high level) cartridge to the left and right AUX jacks (27 & 28).
3. Set the speed selector knob (18) to the desired speed.
4. Depress the record interlock buttons (13 & 14) while simultaneously depressing the play button (12).

NOTE: Recording levels may be preset without tape movement by depressing the record interlock buttons (13 & 14) only.

5. Adjust record level controls (5 & 6) until the level meters (3 & 4) peak at approximately mid scale (start of red area) on the loudest passages. (The level meters should read approximately the same on each channel for proper balance.)

TO STOP RECORDING

When you finish recording, depress the STOP button (10). Recording will stop and the record interlock buttons (13 & 14) will return to the off position.

TO PLAY A STEREO RECORDING

1. Thread the tape.
2. Depress the play button (12) making sure that tape is traveling in desired direction as indicated by the tape direction indicator lamps (16 & 17).

CAUTION: Do not press the record interlock buttons for playback or the recorded sound will be erased.

TO MAKE A MONAURAL RECORDING

1. Thread the tape.
2. Plug microphone into the left mic jack (7) on the front panel.
3. Set the speed selector knob (18) to the desired speed.
4. Depress the left record interlock button (13) while simultaneously depressing the play button (12).

NOTE: Recording level may be preset without tape movement by depressing the left record interlock button (13) only.

5. Adjust the left channel record level control (5) until the left channel level meter (3) peaks at approximately mid scale (start of red area) on the loudest passage.
6. Hold the microphone approximately eight inches from the mouth when recording voice.
7. Place the microphone two or three feet in front of the speaker when recording from a radio, phonograph or T.V. set.

FOUR TRACK MONAURAL RECORDING

Follow step by step instructions under "TO MAKE A MONAURAL RECORDING". When tape has been recorded completely, depress tape direction selector button (15) to reverse tape direction. When tape is recorded completely in that direction, remove microphone from the left mic jack (7) and plug into the right mic jack (8). Depress tape direction selector button (15) to again reverse tape direction. When tape is recorded completely, depress the tape direction selector to change direction of tape. When tape is completely recorded, depress the stop button (10). You have now recorded on all four tracks without having to interchange reels.

TO PLAY MONAURAL RECORDING

1. Thread the tape.
2. Set the speed selector knob (18) to the desired speed.
3. Depress the play button (12).

SPECIAL EFFECT RECORDING SOUND WITH SOUND

Sound with sound is the ability to record on one channel while at the same time listening to the other channel.

1. Thread the tape.
2. Set the speed selector knob (18) to the desired speed.
3. Plug microphone into mic jack of desired recording channel.
4. Depress the record interlock button of desired recording channel only, while depressing the play button (12).
5. Adjust the desired channel record level control while observing the appropriate level meter. The correct recording level is reached when the pointer approaches mid scale (start of red area) on the loudest passage.

USING HEADPHONES

For private listening, a pair of stereo headphones may be connected to headphone jack (24).

Headphones may also be used for monitoring in the record mode.

LUBRICATION

All moving parts of this recorder are provided with self-lubricating oil bearings. Additional constant lubrication will extend life of machine. When lubricating, use good grade sewing machine oil, wipe bearing areas with light wax free (instrument) oil.

NOTE: Any excess oil may seep to the outer edges of moving parts and cause slippage of the drive mechanism. Should this occur, wipe off all parts thus affected with a soft cloth and carbon tetrachloride.

CLEANING TRANSPORT AREA

The recording head, erase head, tape guide, capstan, and pressure roller are subject to an accumulation of tape coating residue. This accumulation should be periodically removed since it may affect sound level and quality. Wipe above surface carefully with a clean soft cloth. If residue is caked or hard and will not come off with a dry cloth, moisten slightly with carbon tetrachloride.

TO EDIT AND SPLICE TAPE

NOTE: Since one track cannot be edited and spliced without affecting the other track, recordings to be edited should be limited to one track only.

1. Tape may be edited by cutting out unwanted portions or by joining selections into another sequence. Announcements, etc., can be inserted between selections. Unused tape can be spliced for re-use.
2. For best results, cut the tape at a slight diagonal. Join the ends with a butt joint, and fasten them on the glossy side with splicing tape. Trim off any excess width.

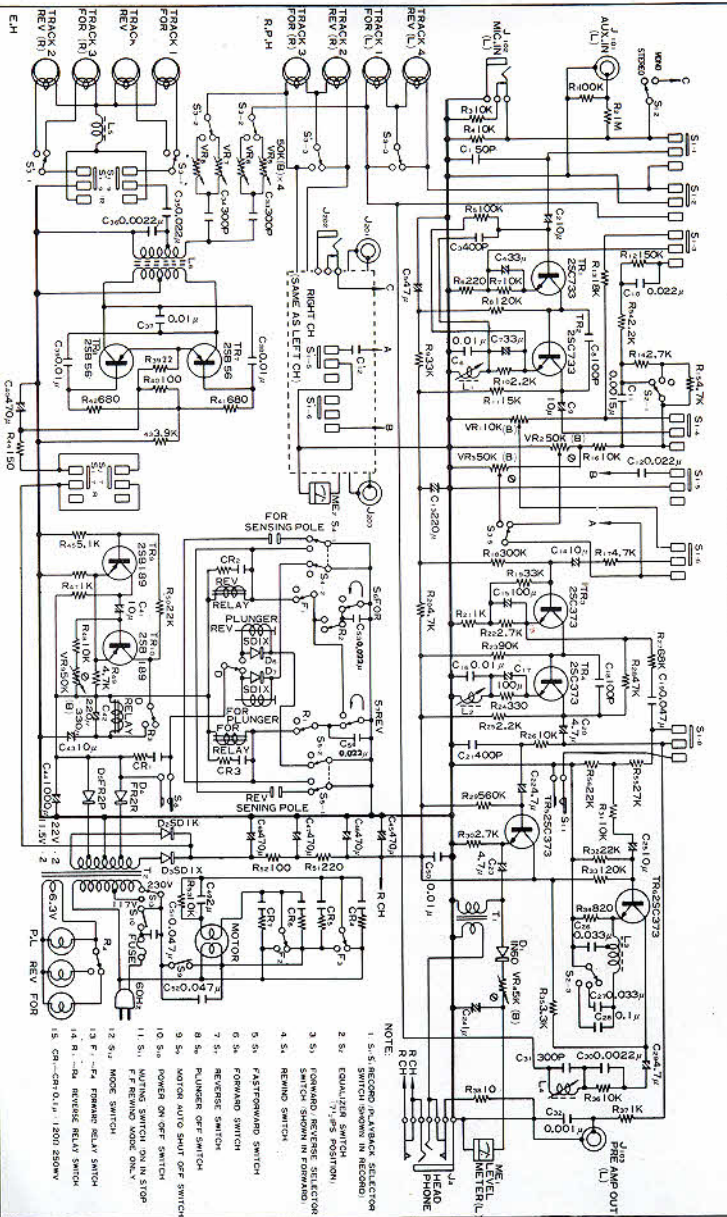
TO SPLICE THE TAPE



SCHEMATIC DIAGRAM

WIRING DIAGRAM

STEREO TAPE DECK



NOTE:

1. S1, S5 RECORD (PLAYBACK) SELECTOR
2. S2 EQUALIZER SWITCH
3. S3 FORWARD REVERSE SELECTOR SWITCH (SHOWN IN FORWARD)
4. S4 REWIND SWITCH
5. S5 FASTFORWARD SWITCH
6. S6 FORWARD SWITCH
7. S7 REVERSE SWITCH
8. S8 PLUNGER OFF SWITCH
9. S9 MOTOR AUTO SHUT OFF SWITCH
10. S10 POWER ON OFF SWITCH
11. S11 MOUNTING SWITCH (ON IN STOP F.F. REWIND MODE ONLY)
12. S12 MODE SWITCH
13. F1 - F2 FORWARD RELAY SWITCH
14. R1 - R2 REVERSE RELAY SWITCH
15. CR1 - CR2 0.15" 1200 2500V

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