

owner's manual



Quality. Uncompromised.

ROTEL[®] RD-870

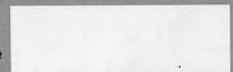
STEREO CASSETTE TAPE DECK

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WARNING
TO PREVENT FIRE OR SHOCK HAZARD,
DO NOT EXPOSE THIS APPLIANCE TO
RAIN OR MOISTURE

Write your SERIAL NUMBER here.

The number is located near the name plate on the rear panel.



ENGLISH

STEREO CASSETTE TAPE DECK RD-870

INTRODUCTION

We at Rotel want to thank you for purchasing our audio product.

Rotel audio products are designed to use the latest electronic technology, and they incorporate our long experience as a specialist manufacturer of audio equipment. We are confident that you will find satisfaction in the high quality sound and top performance, and that you will find pleasure in the functional beauty achieved through human-engineering concept. Before starting operation, please read this instruction manual thoroughly and acquaint yourself with the proper mode of using the unit and all its connections.

We hope you will enjoy top-notch performance for many years to come.

INSTALLATION

Be sure to place the unit in a level and flat place where it is free from humidity, vibration, high temperature and not to place the unit in a highly enclosed place such as near a wall or on a bookshelf. A poor ventilation will cause undesirable effects to the unit.

POWER SUPPLY CONNECTION

For power the unit requires the normal house electrical current (AC). You may simply plug the unit into a wall outlet, or into your amplifier's (or receiver's) convenience AC outlet.

CAUTION: Do not apply power without first making sure the proper connections are completed. If you live in U.K. and your unit comes with 2-core cord without a plug, be sure to read the exclusive caution for U.K.

EXCLUSIVE NOTE FOR U.K.

If your unit comes with a 2-core cable without a plug, make certain live and neutral leads are connected to the proper terminals. Check that the terminals are screwed down firmly and no loose strands of wire are present.

IMPORTANT: The wires in this mains lead are coloured in accordance with the following code:

BLUE: NEUTRAL
BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows.

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLUE or BLACK. The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured BROWN or RED.

CONNECTION TO INTEGRATED AMPLIFIER OR RECEIVER

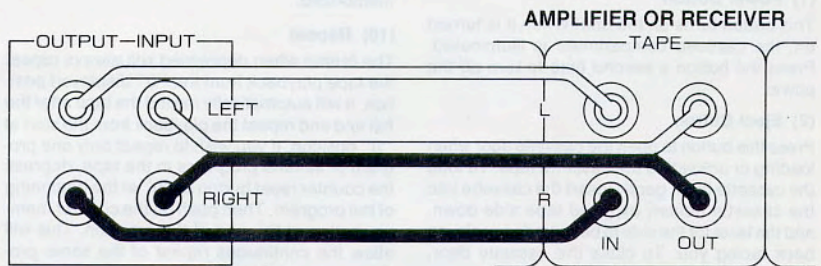
Using the two accompanying pairs of RCA pin cords, connect INPUT and OUTPUT terminals on the back of deck with TAPE MONITOR terminals of the amplifier or receiver. Make sure INPUT terminals are connected to OUT terminals, and OUTPUT terminals to IN terminals. Be sure to match L (left) and R (right) terminals of the components. To make correct connections, use cords with white plugs for left channel connections, and cords with red plugs for right channel connections.

AUTOMATIC SHUTOFF SYSTEM

When either end of tape is reached in play, record, fast-forward, or rewind mode, the motor and transport mechanism will automatically shut off, disengaging the present mode. Note, however, that it is still necessary to turn off the entire unit by pressing the power switch to off.

AUTOMATIC TAPE SELECTION SYSTEM

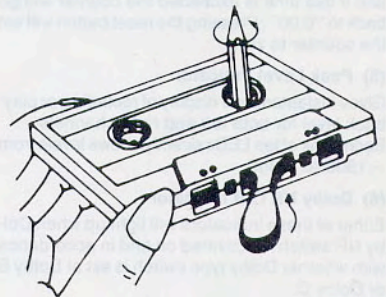
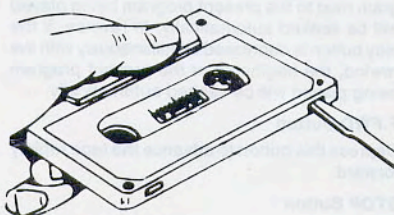
The RD-870 is equipped with an automatic tape selector system which eliminates manual tape selector buttons. When a tape is inserted, the correct equalization and biasing in accordance to the tape type will be automatically done. It should be noted that the manual bias control is also available on the front panel for fine-tuning if necessary.

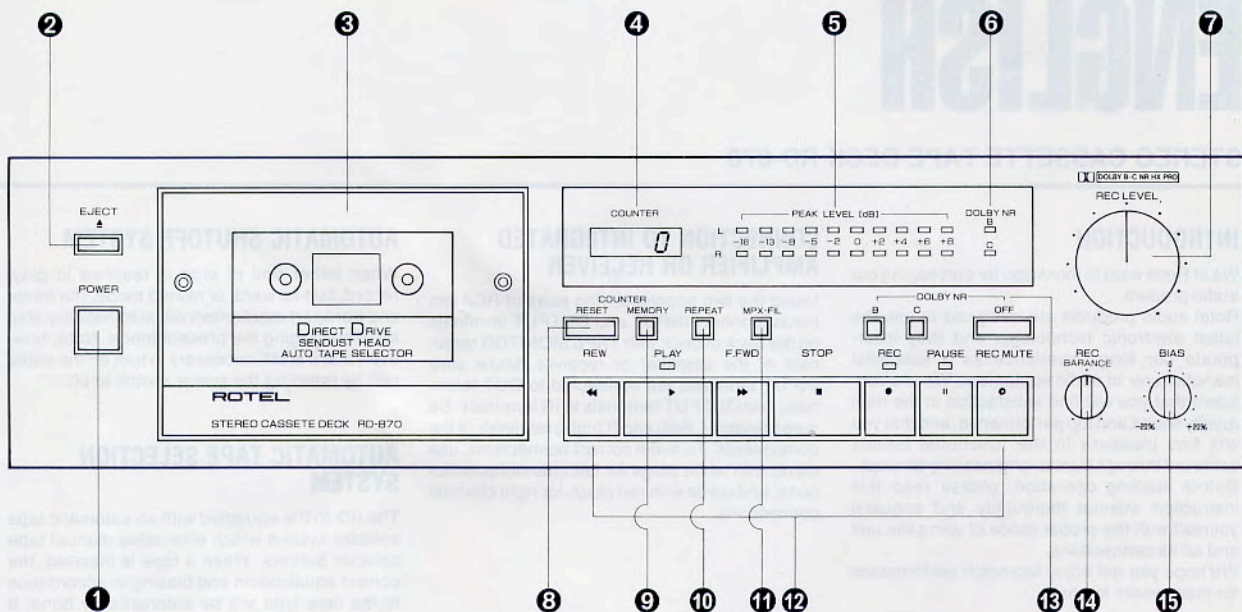


CASSETTE TAPES

- To prevent possible trouble with the transport mechanism, use of large size cassette tapes, such as C-120, is not recommended.
- Handle cassette tapes with care. Keep them away from heat, circulating dust, or a magnetic field (e.g. on the TV set).
- Each cassette tape has safety tabs on its back edge to prevent accidental re-recording. The tabs are provided for both sides of cassette tape. You cannot record on the side whose tab has been removed. The tab can be removed with a screwdriver, etc. If you wish to record on the side with no tab, place a piece of adhesive tape, etc. over the opening where the tab has been, then you can record.

- A loosened tape may cause trouble in playback or recording. Check the tape before loading it into the deck. If it is slack, insert a pencil or the like into either of cassette's hubs, and rotate it carefully until the slack is taken up.





SWITCH AND CONTROLS

(1) Power Button

This button turns on the unit. When it is turned on, the cassette compartment is illuminated. Press the button a second time to turn off the power.

(2) Eject Button

Press this button to open the cassette door when loading or unloading the cassette tape. To load the cassette tape, gently insert the cassette into the cassette holder, exposed tape side down, and the label for the side to be recorded or played back facing you. To close the cassette door, push it in lightly.

(3) Cassette Door

Cassette tape is loaded into the cassette door. Press the EJECT button to open the door.

(4) Tape Counter

The 4-digit digital tape counter will display in two modes. It will indicate numerical counts from "0" to "9999" when in playback, fast forward and rewind functions. After "9999", it will go back to "0". The counter will indicate real time in minutes and seconds when in recording function. The maximum time displayable is "59:59", and if this time is exceeded the counter will go back to "0:00". Pressing the reset button will set the counter to zero.

(5) Peak Level Indicator

Gives instantaneous display of recording or playback level for both left and right channels. Each bank of ten LEDs directly shows levels from -18dB to +8dB.

(6) Dolby NR C/B Indicator

Either of these indicators will light up when Dolby NR switch is activated on and in accordance with whether Dolby type switch is set to Dolby B or Dolby C.

(7) Recording Level Control

Used to adjust the recording level of incoming signals from line source.

(8) Counter Reset

Depress the button to reset the tape counter to zero. The display will indicate "0" for the numerical count or "0:00" for the real time.

(9) Counter Memory

Depress the button to memorize the displayed 2

number you wish to recall later. Push the rewind button to set the tape back to the position memorized.

(10) Repeat

The button when depressed will always repeat the tape playback from the "0" displayed position. It will automatically rewind the tape after the full end and repeat the playback from the start at "0" position. If you wish to repeat only one program or several programs in the tape, depress the counter reset button to "0" at the beginning of the program. Then push on the counter memory button at the end of the program. This will allow the continuous repeat of the same program, until both the counter memory and the repeat buttons are disengaged.

(11) MPX Filter Button

Depress this button when recording stereo FM broadcasts. FM stereo broadcasting system uses a 19kHz pilot signal which may adversely affect the sound quality in some case.

When the MPX filter button is depressed to ON, the MPX filter is activated to eliminate the 19kHz pilot signal, and clean stereo FM recording is achieved.

(12) Cassette Controls

REW Button

For rapid tape rewind, depress this button.

PLAY Button

Depress this button to start the cassette for playback of recorded tape.

The LED provided on the button will be illuminated.

If the button is depressed simultaneously with the fast forward button, the beginning of the program next to the present program being played will be sought automatically. In reverse, if the play button is depressed simultaneously with the rewind, the beginning of the present program being played will be sought automatically.

F.FWD Button

Depress this button to advance the tape rapidly forward.

STOP Button

Depress this button to stop the tape in any mode: record, playback, rewind or fast-forward. This button will release any transport button currently engaged.

REC Button

To record, depress this and PLAY button. The deck is now in the recording mode, and the tape should be winding. The LED provided on the button glows during recording.

PAUSE Button

Press this button to stop the tape temporarily during recording or playback without disengaging the mode currently employed. The indicator above the button glows. In this state pressing the PLAY button restarts the tape in the interrupted mode.

REC MUTE Button

Depressing the button during the recording mode will automatically allow you to make a 5-second silent interval in your tape. After the 5 seconds the mode will be changed to REC PAUSE, so push the play button to start recording again. If you wish to make more than the 5-second interval, keep depressing this button for a desired interval. When the button is released the mode will be changed to REC PAUSE, so push the play button to continue recording.

(13) Dolby NR Buttons

Depress either the Dolby B or the Dolby C button according to your requirement when you wish to record or playback through the Dolby noise reduction system. Depressing the OFF button will deactivate the Dolby circuit.

(14) Rec Balance Control

Adjusts the relative recording levels between the left and right channels. Rotate the knob to the left so that the left channel sound is recorded at a louder level than the right, and vice versa. Normally set the knob at the mid-position.

(15) Bias Adjust Control

Normally set the control at the "0" position. However, in case of some tapes a fine-tuning may be required for optimum bias setting. Turning the control to "-" will increase high frequency level, and turning to "+" will decrease high frequency level.

OPERATION

- Be certain that power connection and connection with amplifier are properly made.
- When recording, be sure the safety tabs on the cassette tape are not removed.
- When recording from line sources, choose the desired program (tuner, turntable, etc.) on your amplifier.

Recording

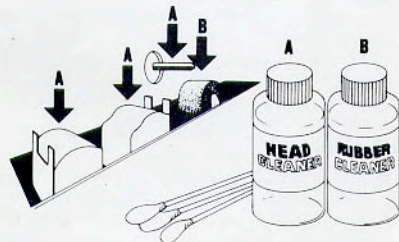
1. When you wish to record through Dolby B- or C-type NR circuit, depress the Dolby NR button, and then set the B-C type selector button to the desired position.
2. Turn on the deck Power switch.
3. Press REC and PAUSE button and the unit is put into REC PAUSE state.
4. Adjust the recording level for left and right channels with Recording Level control so that the level indicator readings do not exceed 0dB position frequently, and when they do, only very briefly.
5. After adjusting recording level, press the PLAY button again to put the unit into recording mode and to start the tape.
6. Carefully watch the meter indication during recording as well. PAUSE button may be used to temporarily halt recording.
7. Press STOP button when recording is finished.

Playback

1. Set the Dolby NR button in depressed position when you play back a tape recorded with Dolby NR. Release the button when you play back a tape not recorded with Dolby NR. When you play back a tape recorded with Dolby NR, also set the Dolby B-C type selector button according to whether Dolby NR, B or C, is used.
2. Turn on the power switch on your amplifier, keeping its volume control set to minimum.
3. Turn on the Power switch on the deck.
4. Press PLAY button and playback will begin. Raise the volume to the desired level.
5. To momentarily halt playback, press the PAUSE button. When you wish to end playback, press the STOP button.

HEAD CLEANING

The most frequent cause of failure to record in one or both channels, or of weak, distorted sound, is dirty tape heads and capstan. So, be sure to clean the heads, capstan, pinch roller and tape guides as often as possible using a "Q" tip dipped in ordinary rubbing alcohol or commercial liquid tape head cleaner. Thoroughly wipe the surface of the heads, capstan, roller and tape guide.



HEAD DEMAGNETIZING

The tape heads, capstan and tape guides gradually become magnetized with use, which will eventually affect the sound quality of your tapes. Demagnetizing should follow cleaning, but need not take place as often as cleaning, once after every 20 to 30 hours of use should suffice. A demagnetizer may be purchased at a moderate cost from any dealer carrying tape recording accessories. Follow the instruction supplied with the demagnetizer.

Caution: Be sure to turn off the unit before you attempt demagnetizing.

VOLTAGE SELECTION

Not available for U.K., Canada and Scandinavia

The unit is a variable voltage equipment that can run on 120V, 220V or 240V power supply. Your unit should already be preset at the proper voltage for use in your area. However, if you move to an area where the power supply voltage is different, consult your dealer.

SPECIFICATIONS

Heads: Rec/Play	Sendust core
Erase	Ferrite core
Track	4-track/2-channel
Tape Speed	4.8cm/sec.
Motor	Brushless Direct Drive FG Servo DC
Wow and Flutter	0.1% (DIN)
	0.035% (WRMS)
Distortion (REC/PB, 400 Hz)	0.9% (METAL)
Frequency Response (-20 dB)	Normal, LH 30 to 18,000Hz \pm 3dB
	SPECIAL 30 to 19,000Hz \pm 3dB
	Metal 30 to 20,000Hz \pm 3dB

Signal-to-Noise Ratio (WTD, 0 dB = 580 mV, Chromium)	Dolby NR In: 64 dB (B type) 73 dB (C type)
	Dolby NR out: 55 dB

Input Sensitivity/Impedance..... LINE 50 mV/33 kohms

Output Level/Impedance:
LINE..... 580 mV/1.5 kohm

Fast Wind Time (C-60)..... 80 seconds

Tape Selector BIAS EQUALIZER

Normal, LH..... 100% 120 μ s

Special..... 150% 70 μ s

Metal..... 220% 70 μ s

MISCELLANEOUS

Power Requirement..... 120V/60 Hz, 220V/50 Hz, 240V/50 Hz,
or 120, 220, 240V/50-60 Hz
(depending on destinations)

Power Consumption..... 27 watts

Dimensions (Overall)..... 433 (W) x 115 (H) x 300 (D) mm

Weight (net)..... 17-1/32" x 4-17/32" x 11-13/16"

Weight (gross)..... 5.2kg/11.44lbs.

- Specifications and design subject to possible modification without notice.
- Dolby noise reduction and HX PRO headroom extension manufactured under license from Dolby Laboratories Licensing Corporation.
HX PRO originated by Bang and Olufsen. "Dolby", the double-D symbol, and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

When the cassette is inserted into the deck, the transport will automatically start to run. The counter will start to count down from 60.00. Press the PAUSE button to stop the tape.

Press the STOP button to stop the tape. The counter will stop at the time the tape is stopped.

Press the PLAY button to start the tape. The counter will start to count down from 60.00.

Press the REVERSE button to reverse the tape. The counter will start to count down from 60.00.

Press the F.WIND button to fast wind the tape. The counter will start to count down from 60.00.

Press the EJECT button to eject the tape. The counter will stop at the time the tape is ejected.

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