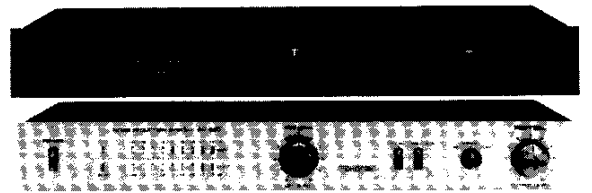


使用説明書

owner's manual

BEDIENUNGSANLEITUNG
MANUEL DE L'UTILISATEUR
GEBRUIKSAANWIJZING
MANUAL DEL USUARIO
MANUALE DELLE ISTRUZIONI
BRUKSANVISNING



Quality. Uncompromised.

ROTEL®

HIGH COM NOISE REDUCTION SYSTEM

RN-1000

RN-500

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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

HIGH COM NOISE REDUCTION SYSTEM RN-1000/RN-500

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.

BEFORE ENJOYMENT/ POWER SUPPLY

Follow the instructions below for maximum safety:

1. Use a wall outlet for power supply

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.

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 switched or unswitched AC outlet. If it is plugged into a switched outlet, by leaving the power switch of the unit on, you will be able to maintain switching control for the unit with your amplifier. If it is connected to an unswitched outlet, like connecting to a wall outlet you must use the unit's own power switch for switching control.

2. Connecting and removing AC cord

Be sure to connect or disconnect the AC line cord only after turning off the power switch to prevent possible shock noise or damage to the speakers.

3. Do not open the cabinet

In order to avoid electric shock or damage to the component, never open the cabinet. If a foreign object falls inside the unit by mistake, turn the power off, disconnect the wall plug, and consult a qualified electrician or your dealer.

4. Installation

Be sure to place the unit in a level and flat place where it is free from humidity, vibration, high temperature and not exposed to direct sunlight. Be careful 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.

5. Moving the unit

When transporting, remove the AC cord from the wall outlet and all other connected cords on the rear panel to prevent wire breakage and short circuits.

6. If the unit gets wet

If the unit should get wet, immediately disconnect the AC cord, and consult your dealer or a qualified electrician.

7. Cleaning and maintenance

Do not use chemicals such as benzene or thinners on the front panel. Always use a soft, dry cloth to clean the unit.

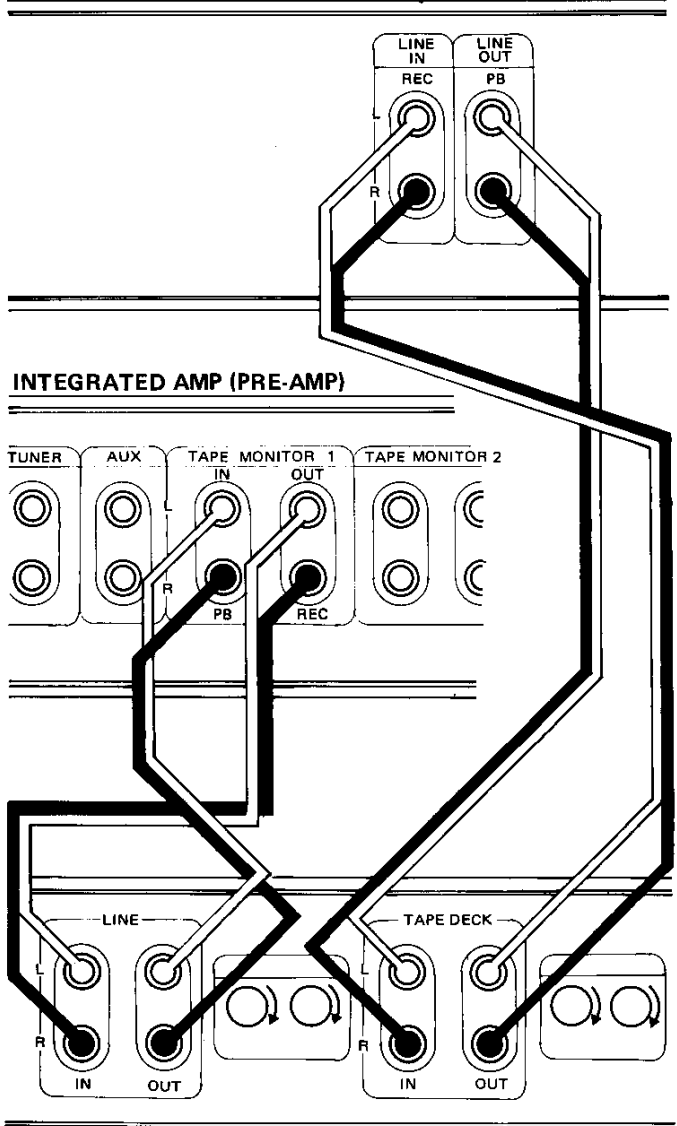
8. Retain the owner's manual

Retain the owner's manual near the unit, and write down the serial number (found on the rear panel) on the cover.

CONNECTION

The unit's TAPE DECK terminals should be connected to a tape deck, and LINE terminals to an integrated amplifier or receiver. The unit's LINE OUT terminals should be connected to TAPE IN terminals on amplifier, and the unit's LINE IN terminals to TAPE OUT terminals on amplifier.

TAPE DECK



The unit's TAPE DECK OUT terminals should be connected to LINE IN/ REC on deck, and the unit's TAPE DECK IN terminals to LINE OUT/PB on deck. Be certain to match right and left terminals between components correctly. The RCA cord with white plug is for left channel (L) connection, and that with red plug is for right channel (R) connection.

High Com

SWITCHES AND CONTROLS

(1) Power Button

Pressed once, this button turns on power in the compandor. Pressed a second time, the button is released and the unit is turned off.

(2) Recording Level Control

Used in recording through HIGH COM. Controls the recording level of incoming signals from LINE IN terminals on the rear panel of the unit. Recording signals are delivered from TAPE DECK OUT terminals on the rear panel to the tape deck. This control is a dual concentric knob which permits either separate or combined adjustment of both

channels. Turn clockwise to increase the recording level and counterclockwise to decrease it.

(3) MPX Filter Button

This button is used when recording stereo FM broadcasts. When it is pressed to ON, the MPX filter is activated to cancel the 19kHz pilot signal and to prevent faulty operation of HIGH COM noise reduction system. Press a second time to deactivate the filter. Use of this button is not necessary when the MPX filter on the tuner is used.

(4) Recording Check Generator Button

Used to calibrate the tape deck in

reference to HIGH COM system. When the button is depressed, the built-in oscillator is activated to generate 400Hz test tone.

(5) Mode Selector Switch

This is a three-position switch consisting of REC (with HIGH COM), BYPASS, and PLAY (with HIGH COM) positions.

(6) Output Level Control

For playback using HIGH COM. Controls the level of input signals going through TAPE DECK IN terminals on the rear panel of the unit (i.e. output level of the deck in question). Turn the knob clockwise to increase the level of out-

put signals to be sent to the amplifier through the LINE OUT terminals on the rear of the unit, and counterclockwise to decrease it.

(7) Peak Level Indicator

Two banks of 10-segment LEDs indicate, for left and right channels separately, peak levels in recording or playback, between -26 dB and +9dB.

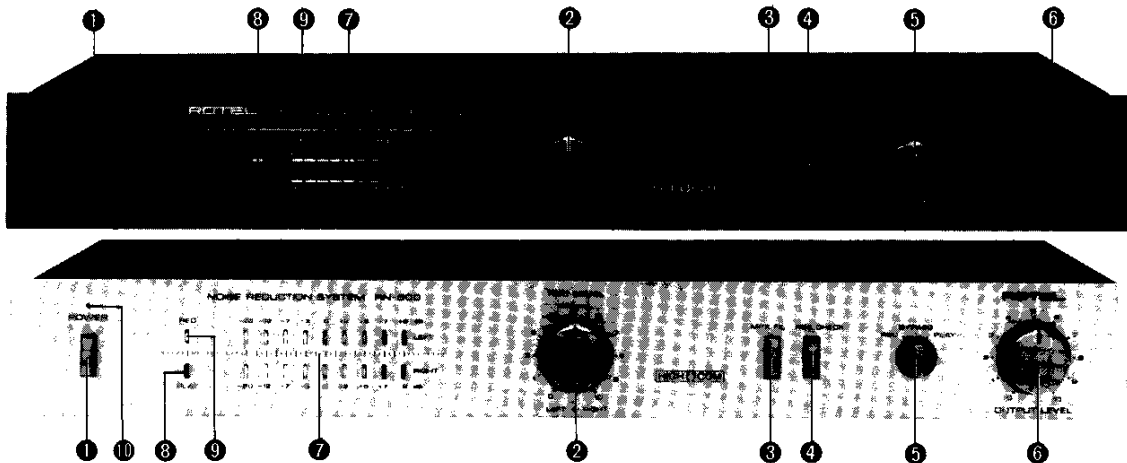
(8) Playback Indicator

Glowes when HIGH COM PLAY mode is selected.

(9) Recording Indicator

Glowes when HIGH COM REC mode is selected.

RN-1000



RN-500

SWITCHES AND CONTROLS

(1) Power Button

Pressed once, this button turns on power in the compandor. Pressed a second time, the button is released and the unit is turned off.

(2) Recording Level Control

Used in recording through HIGH COM. Controls the recording level of incoming signals from LINE IN terminals on the rear panel of the unit. Recording signals are delivered from TAPE DECK OUT terminals on the rear panel to the tape deck. This control is a dual concentric knob which permits either separate or combined adjustment of both channels. Turn clockwise to in-

crease the recording level and counterclockwise to decrease it.

(3) MPX Filter Button

This button is used when recording stereo FM broadcasts. When it is pressed to ON, the MPX filter is activated to cancel the 19kHz pilot signal and to prevent faulty operation of HIGH COM noise reduction system. Press a second time to deactivate the filter. Use of this button is not necessary when the MPX filter on the tuner is used.

(4) Recording Check Generator Button

Used to calibrate the tape deck in reference to HIGH COM system. When the button is depressed, the

built-in oscillator is activated to generate 400Hz test tone.

(5) Mode Selector Switch

This is a three-position switch consisting of REC (with HIGH COM), BYPASS, and PLAY (from HIGH COM) positions.

(6) Output Level Control

For playback using HIGH COM. Controls the level of input signals going through TAPE DECK IN terminals on the rear panel of the unit (i.e. output level of the deck in question). Turn the knob clockwise to increase the level of output signals to be sent to the amplifier through the LINE OUT terminals on the rear of the unit, and

counterclockwise to decrease it.

(7) Level Indicator

Two banks of 9-segment LEDs indicate, for left and right channels separately, levels in recording or playback, between -20dB and +9dB.

(8) Playback Indicator

Glowes when HIGH COM PLAY mode is selected.

(9) Recording Indicator

Glowes when HIGH COM REC mode is selected.

(10) Power Indicator

Glowes when the power is turned on.

TO COORDINATE UNIT AND TAPE DECK RECORDING AND PLAYBACK LEVELS

To use the HIGH COM Noise Reduction System correctly, it is first necessary to match respective recording and playback levels of the compandor and the tape deck.

1. To send 400Hz test tone to the tape deck, set the mode selector to BYPASS position and depress the rec. check generator button.
2. Insert a cassette into the tape deck and place the deck into REC mode (both REC and PAUSE buttons is ON position). Turn the recording level control on the deck clockwise all the way.
3. Adjust by turning the rec. calibration control on the rear of the unit, obtaining 0dB (0VU) reading on the level meter (or level indicator) for left and right channels separately.
4. Release the PAUSE button on the deck and record 400Hz test tone for about 1 minute.
5. Rewind the tape to initial position after recording, and set the rec. check generator button to OFF position.
6. Play back the recorded tape. If your tape deck is equipped with an output level control, make sure to raise the output level to maximum before playback.
7. Turn the play cal. control on the rear of the unit to obtain 0dB reading on the level indicator, for left and right channels separately. Now calibration is complete.

Note 1: Once optimum setting of recording and playback levels is obtained on the deck, be careful that neither the tape deck rec./output level controls nor the rec./play cal. controls on the rear of the unit are moved. After completing calibration, adjust recording and playback levels by the controls on the front panel of the unit.

Note 2: In some tapes there may be significant differences between level of recording and level of playback, rendering the noise reduction system ineffective. Always use quality tapes.

RECORDING

1. Set the unit mode selector to REC.
2. Raise the unit rec. level control, making certain maximum reading of the level indicator does not exceed +9dB.
3. Put the tape deck into record mode and start recording.

Note 1: Switches and controls that may be operated on the deck are: tape transport mechanism (REC., PLAY, F.FWD., REW, PAUSE) and

tape selector only.

Note 2: No other noise reduction system already incorporated into the deck should be used (set to OUT position).

Note 3: When recording FM stereo broadcasts, depress MPX filter.

Note 4: Since REC and PLAY modes are selected by the unit mode selector, the separate unit must be used when monitoring the recorded signal using a 3-head tape deck.

PLAYBACK

1. Set the mode selector on the unit to PLAY.
2. Put the tape deck into PLAY mode and start playback.
3. Adjust by turning the unit output level control until output at playback reaches the same level as that of turntable or tuner connected to an integrated amplifier or receiver.

Note 1: Set the unit mode selector to BYPASS when playing back tape recorded 1) with other noise reduction systems or 2) without any noise reduction system.

Note 2: HIGH COM effectively reduces hiss generated in "transmission channel" (from recording stage to playback). The system cannot reduce noise accompanying original input signal (such as scratch from defective record).

LEVEL INDICATOR ON THE TAPE DECK

When HIGH COM system is used, the motion of level indicator/level meter on tape deck is slower than when HIGH COM is bypassed. This results when the dynamic range of signals are being compressed by HIGH COM system operation; it is not an abnormal phenomenon. In ordinary instructions provided with a tape deck, there sometimes appears the phrase, "The level meter or level indicator reading should not exceed 0dB too often." This warning does not apply to the compandor. Even if the level indicator on the unit reaches +9dB, the actual input level of the tape deck is lower than the reading, causing no trouble. Generally, with HIGH COM, the recording level should be set a little higher.

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, the voltage setting can be manually changed. **BE SURE THAT YOUR UNIT IS NOT CONNECTED TO THE POWER SOURCE BEFORE ATTEMPTING TO MAKE THIS CHANGE.** To check the voltage setting, remove the name plate on the rear panel and locate the VOLTAGE SELECTOR. Use a screwdriver to turn the voltage selector to the required voltage.

PRINCIPLE AND EFFECT OF HIGH COM

HIGH COM is a new noise reduction system developed by A.E.G. Telefunken in Germany. The new system can effectively suppress unpleasant interference or hiss superimposed during music intervals or pianissimo and soft passages in the cassette deck operation.

HIGH COM stands for High Fidelity Compandor (Compressor-Expander), which carries out high fidelity compression and expansion of the dynamic range. With HIGH COM the dynamic range is compressed by half the prerecording range, and it is then expanded proportionally (doubled) upon recovery. The effect is to suppress interference below the audible threshold. Unlike conventional noise reduction systems built into cassette decks, HIGH COM offers unparalleled advantages:

- (1) 20dB noise reduction
- (2) Broad band compansion (effective throughout the whole audible frequency range)
- (3) Low breathing effect

The effectiveness of HIGH COM is maximized when recording quality program sources. Make best use of this revolutionary noise reduction system in creating top-quality tape libraries.

SPECIFICATIONS

Noise Reduction Principle	Division of frequency range into 2 bands, level compression/expansion
Compression/Expansion Ratio	Compression 1 : 2, expansion 2 : 1
S/N Improvement . . . . .	.20-25dB
Distortion . . . . .	.003% (at 400Hz, BYPASS)
Number of Channels	2
Input:	
Line . . . . .	.30mV/30 kilohms
Playback (from tape deck) . . . . .	.30mV/50 kilohms
Output:	
LINE . . . . .	.600mV/100 ohms
Record (from tape deck) . . . . .	.600mV/100 ohms
Frequency Response . . . . .	.20-20,000Hz±1.0dB
Power Requirement . . . . .	.120V/60Hz, 220V/50Hz, 240V/50Hz, 120V, 220V, 240V/50Hz-60Hz
Power Consumption . . . . .	.14 watts
Dimensions (overall)	W 430mm/16-7/8" H 59mm/2-5/16" D 315mm/12-13/32"
Weight (net) . . . . .	.3.0kg/6.6 lbs.

Specifications and design subject to change without notice.

The HIGH COM has been manufactured under license from A. E. G. TELEFUNKEN in Germany.

HIGH COM is the trademark of A.E.G. TELEFUNKEN.