owner's manual

Quality Uncompromised

ROTEL®

RA-840BX4

STEREO INTEGRATED AMPLIFIER

ENGLISH.....1
DEUTSCH.....6
FRANCAIS.....10

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.

SAFETY INSTRUCTIONS

1. **Read Instructions** — All the safety and operating instructions should be read before the appliance is operated.
2. **Retain Instructions** — The safety and operating instructions should be retained for future reference.
3. **Heed Warnings** — All warnings on the appliance and in the operating instructions should be adhered to.
4. **Follow Instructions** — All operating and other instructions should be followed.
5. **Water and Moisture** — The appliance should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.
6. **Carts and Stands** — The appliance should be used only with a cart or stand that is recommended by the manufacturer.
7. **Wall or Ceiling Mounting** — The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. **Ventilation** — The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
9. **Heat** — The appliance should be situated away from heat sources such as radiators, stoves, or other appliances that produce heat.
10. **Power Sources** — The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
11. **Power-Cord Protection** — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
12. **Cleaning** — The appliance should be cleaned only as recommended by the manufacturer.
13. **Nonuse Periods** — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
14. **Object and Liquid Entry** — Care should be taken so that objects do not fall into and liquids not spilled into the inside of the appliance.
15. **Damage Requiring Service** — The appliance should be serviced by qualified service personnel when:
    A. The power-supply cord or the plug has been damaged; or
    B. Objects have fallen, or liquid has been spilled into the appliance; or
    C. The appliance has been exposed to rain; or
    D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
    E. The appliance has been dropped, or the cabinet damaged.
16. **Servicing** — The user should not attempt to service the appliance beyond those means described in the operating instructions. All other servicing should be referred to qualified service personnel.
17. **Grounding or Polarization** — The precautions that should be taken so that the grounding or polarization means of an appliance is not defeated.



CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK)
NO USER-SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL



The lighting flash with arrowhead symbol, within an equilateral triangle, is intended to alart the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

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 colour BROWN or RED.

CAUTION:

To prevent electric shock do not use this (polarized) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

ENGLISH

STEREO INTEGRATED AMPLIFIER RA-840BX4

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
Be sure to connect the AC line cord to a house-hold wall outlet. Be certain that the outlet voltage matches the electrical rating of the unit, found on the rear panel name plate.

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. Ventilate the unit well
Never block any ventilation holes at the top and bottom of the unit. Be sure also to provide ample ventilation space around the unit. Poor ventilation may result in damage due to excessive heat.

4. 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.

5. 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.

6. 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.

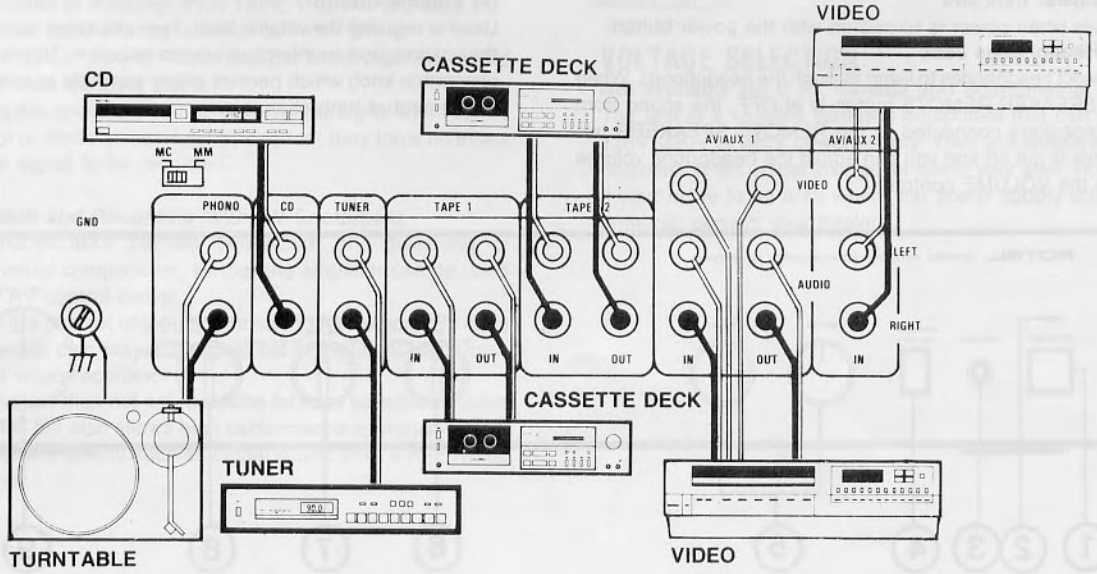
7. If the unit gets wet
If the unit should get wet, immediately disconnect the AC cord, and consult your dealer or a qualified electrician.

8. Cleaning and maintenance
Do not use chemicals such as benzine or thinners on the front panel. Always use a soft, dry cloth to clean the unit.

9. Owner's manual
Keep the owner's manual near the unit, and record the serial number (found on the rear panel) on the cover.

CONNECTING COMPONENTS

Connect all necessary audio components to the rear panel of the unit, using RCA pin cords. See the illustration for properly completed connections. When connecting RCA pin cords, be sure that L (left) and R (right) marketings on each component are matched correctly. Connect the grounding wire of the turntable to the terminal marked GND on the amplifier.



SPEAKERS

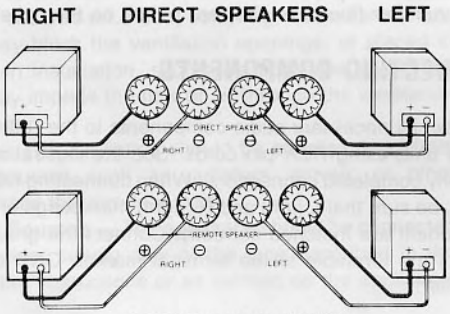
Use speaker systems with impedance ratings of 4-16 ohms, when you hook up 2 sets of speaker systems, be sure to speakers with ratings of 8-16 ohms. Before hooking up your speaker system, check its impedance, which should be indicated either on the back of the speaker, or in the speaker instruction manual.

HOOKING UP SPEAKERS

On the rear panel of the RA-840BX4 are two sets of speaker terminals, "DIRECT" and "REMOTE", to which two speaker systems may be connected. Connect the speaker leads of the right-hand speaker to terminals RIGHT, and the speaker leads of the left-hand speaker to terminals LEFT. Make sure that the "+" speaker lead is connected to the "+" terminal, and the "–" lead to the "–" terminal.

Strip 1.0cm (3/8″) of the polyvinyl chloride insulation from the end of each speaker lead. Twist the exposed strands tightly, and secure the end with a touch of solder.

Note: When only one pair of speakers is used, be sure to connect them to DIRECT terminals, which is "straight-path", so headphone circuit is not connected. If wish to listen to headphone and privately, connect the remote speaker terminals and use the speaker remote button on front panel to turn speaker off.



SWITCHES AND CONTROLS

(1) Power Button

Depress this button to turn on the power in the unit. Press the button a second time to release it and to cut off the power.

(2) Power Indicator

Glows when power is turned on with the power button.

(3) Headphones Jack

Connect headphones to listen through the headphones. When the SPEAKER REMOTE button is at OFF, the sound from the speakers connected to the REMOTE SPEAKERS terminals is cut off and you can adjust the headphone volume with the VOLUME control.

If a speaker system is connected to the DIRECT speakers terminals, however, the sound from those speakers cannot be cut off, so listening through the headphones only is impossible.

To listen through the headphones alone, do not connect any speakers to the DIRECT SPEAKERS terminals.

(4) Speaker Remote Button

Press the button to activate the speaker system connected to REMOTE speaker terminals on the rear panel. Release the button OFF to cut off sound from remote speakers.

(5) Tone Controls

Two separate tone controls regulate bass and treble respectively: knob labeled BASS is for low frequency range and TREBLE for high frequency range.

Rotate the knob clockwiseto boost the response and counterclockwise to cut it.

(6) Tone Selector

With the selector at OFF, the signals do not pass through the tone control circuit (in order to prevent deterioration of the tone quality). Therefore the tone controls do not function, but this unit provides superior tone quality. If the listening room acoustics are extremely lively or dead and no adjustment is possible by rearranging the furnitures or the speakers, set this selector to ON. You can then adjust the tone with the tone controls.

At the MONO position, all the signals are output in mono, and the tone controls are active.

(7) Tape Monitor Selector

Used to listen to a signal supplied from the tape deck. Set the selector to TAPE 1 position for the signal from a tape deck connected to TAPE 1 terminals on the rear panel, and set to TAPE 2 for the deck connected to TAPE 2 terminals. when it is set to the "1 ► 2" position, you can perform tape-to-tape copying from the TAPE 1 to the TAPE 2 deck.

Be sure to set this selector to SOURCE when listening to a source selected by the FUNCTION selector.

(8) Function Selector

Select the program source to play or record.

PHONO: Turntable connected to the PHONO terminals.

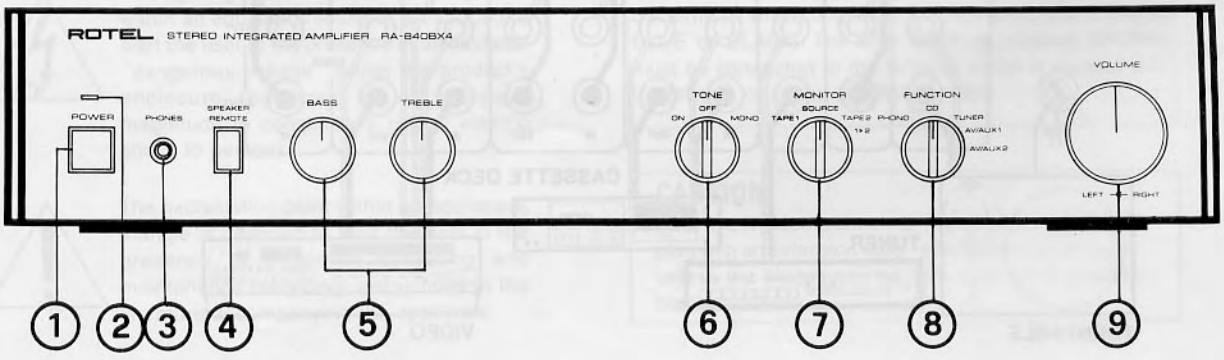
CD: CD player connected to the CD terminals.

TUNER: Tuner connected to the TUNER terminals.

AV/AUX 1, AV/AUX 2: Video cassette recorder or video disc recorder connected to the AV/AUX 1 or AV/AUX 2 terminals. Use this selector with the Tape Monitor selector at the SOURCE position.

(9) Volume Control

Used to regulate the volume level. Turn clockwise to increase the volume, and counterclockwise to reduce it. This is a dual concentric knob which permits either separate or combined adjustment of both channels.



OPERATION

• Before commencing operation, check to see if all connections are properly made.

• Always be sure to set the volume control to the minimum position before turning on power.

Listening from turntable

1. Set Tape Monitor selector to SOURCE.
2. Select PHONO on the function selector.
3. Start playing turntable, and raise the volume to the desired level.

Phono MM/MC Selector

The unit has a built-in MC head a amplifier. This selector is used to receive MM (moving magnet) or MC (moving coil) phono cartridge signal with an appropriate gain. In position, the built-in MC head amplifier is activiated. When your turntable uses an MC cartridge, set the selector to MC position. When MM cartridge is used, set the selector to MM position.

Listening from compact disc player or tuner

1. Set Tape Monitor selector to source.
2. To listen to a compact disc, set the input selector to the CD position; set it to the TUNER position to listen to radio broadcasts.
3. Play the compact disc or tune in to the desired station, according to instructions given for the equipemnt.
4. Raise the volume to the desired level.

Playing back tape deck

1. Set Tape Monitor selector to TAPE position according to the tape deck you are going to play back.
2. Start playback.
3. Raise the volume to the desired level.

Recording program source

Play the desired program source according to the procedures mentioned above. The signal from the source will be sent through TAPE MONITOR OUT terminals on unit's rear panel. Put the tape deck in the record mode to record the signal. During recording, operation of Volume control will have no effect on the signal being sent through TAPE MONITOR OUT terminals.

Dubbing

By connecting two tape decks, dubbing (tape-to-tape copying) of prerecorded tapes can be performed. The unit allows one modes of dubbing: from TAPE 1 to TAPE 2 deck.

1. Set Tape Monitor selector to "1 ► 2".
2. Play back TAPE 1 deck, and put TAPE 2 deck in record mode, then dubbing starts.

During this operation, you can listen to the signal with Volume control or Mode selector set as desired; they have no effect on the signal to be recorded.

Playback and Recording With AV Equipment

The RA-84OBX4 permits connection and switching of audiovisual components, so that the amplifier can be used as an AV control center.

There are one set of inputs for a stereo AV component such as a video disc player and one set of inputs/outputs for a stereo video recorder.

This system then not only provides for easy selection of video sources, but also allows high performance operation for optimal sound quality such as digital sound from a Hi-Fi video recorder.

In addition, sound trace of video components can be dubbed onto a tape recorder connected to the amplifier, or vice versa. Video dubbing is also possible from AV/AUX 2 to AV/AUX 1.

Playback

To carry playback with the equipment connected to the AV/AUX inputs, set the function selector to AV/AUX 1 or AV/AUX 2 as required and set the tape monitor selector to SOURCE position.

Adjust the volume and other controls on the amplifier to suit your needs.

Recording (Dubbing)

Set the tape monitor selector to SOURCE position and function selector to AV/AUX 2, where the source to be recorded is connected.

Then record with the video recorder connected to the AV/AUX 1 terminals on the real panel.

PROTECTION CIRCUIT

The unit incorporates a protection relay circuit to prevent a popping noise from being generated upon turning on the power. Upon turn-on, no sound is produced for several seconds. This is for the stabilization of the unit and is not an abnormal operation.

HUM AND NOISE

In any high fidelity installation, hum may be caused by the interconnection of a turntable, tuner and amplifier, and speakers as the result of wiring, different grounding or locations of components.

If hum is experienced with your unit, disconnect everything but the speakers from the unit. Plug in the turntable and if hum or howling appears, move the turntable away from the speakers as much as possible.

Note hum may also be induced by defective cable connections or by running the cables too close to strong Ac field. When your unit picks up noise during the reception of broadcasts, causes are mostly due to external objects such as fluorescent lamps and house appliances using motor or thermostat, or others that may induce the noise. Either relocating the unit away from the noise sources or using an improved outdoor antenna may readily solve the problem. In the event you cannot find the cause consult your dealer or a qualified electrician.

VOLTAGE SELECTION

Not available for U.K., Canada and Scandinavia

The unit is a variable voltageg 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 your move to an area where the power supply voltage is different, consult your dealer.

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SPECIFICATIONS

Continuous Power Output....50 watts* per channel, min. RMS both channels driven into 8 ohms from 20 to 20,000Hz with no more than 0.3% total harmonic distortion.
DIN Output.....80 watts per channel (1 kHz, 4 ohms, 1% THD)
Music Power.....190 watts
Total Harmonic Distortion.....No more than 0.3% (continuous
(20 to 20,000 Hz, from AUX) rated power output)
No more than 0.1% (continuous 1/2 rated power output)
No more than 0.2% (1 watt per channel power output, 8 ohms)
Intermodulation Distortion....No more than 0.3% (continuous rated power output)
(60 Hz: 7 KHz = 4 : 1)
No more than 0.1% (continuous 1/2 rated power output)
No more than 0.2% (1 watt per channel power output, 8 ohms)
Output: Speaker.....4-16 ohms
Headphone.....4-16 ohms
Damping Factor.....100(20 to 20,000 Hz, 8 ohms)
Input Sensitivity/Impedance:
PHONO MM.....2.5 mV/47 kohms
MC.....250 μV/180Ω
CD.....150 mV/20 kohms
TUNER.....150 mV/20 kohms
TAPE 1, 2.....150 mV/20 kohms
AV/AUX 1, 2.....150 mV/20 kohms
Overload Level (T.H.D. 0.5%, 1KHz):
PHONO MM.....170mV
MC.....20mV
CD, TUNER, TAPE 1, 2..5V
AV/AUX 1, 2.....5V
Frequency Response:
PHONO.....20 to 20,000 Hz, ±0.3 dB (RIAA STD)
CD, TUNER, TAPE 1, 2..10 to 100,000 Hz, +1.0 dB, −3.0 dB
AV/AUX 1, 2.....10 to 100,000 Hz, +1.0 dB, −3.0 dB
Singal to Noise Ratio (IHF, A network):
PHONO MM.....80 dB
MC.....70 dB
CD, TUNER.....95 dB
TAPE 1, 2.....95 dB
AV/AUX 1,2.....95 dB

MISCELLANEOUS

Power Requirement.....120V/60 Hz, 220V/50 Hz, 240V/50 Hz, or 120, 220, 240V/50-60 Hz (switchable) (depending on destinatins)
Power Consumption.....260 watts
Dimensions (overall).....444(W) × 86(H) × 346(D)mm
17½" × 3 13/32" × 12 26/32"
Weight (net).....7.2 kg/15.8 lbs

- Specifications and design subject to possible modification without notice.
- * Measured pursuant to the Federal Trade Commission's Trade Regulation Rule or, Power Claims for Amplifiers (applicable to the U.S.A. only).