

# ROTEL *hifi*

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STEREO CONTROL AMPLIFIER

# RC-870BX

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# owners manual

使用説明書

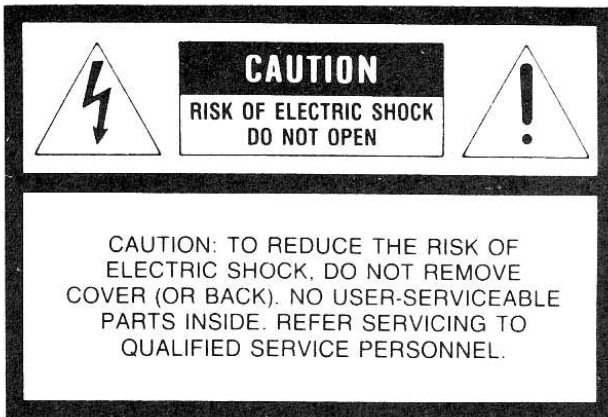
ENGLISH .....	2
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**WARNING**  
**TO PREVENT FIRE OR SHOCK HAZARD,**  
**DO NOT EXPOSE THIS APPLIANCE**  
**TO RAIN OR MOISTURE**

Write your SERIAL NUMBER here.

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

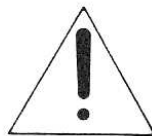
# SAFETY INSTRUCTIONS



## • Explanation of Graphical Symbols



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert you 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 you 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.

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. Read 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.

# ENGLISH

## STEREO CONTROL AMPLIFIER RC-870BX

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### 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.

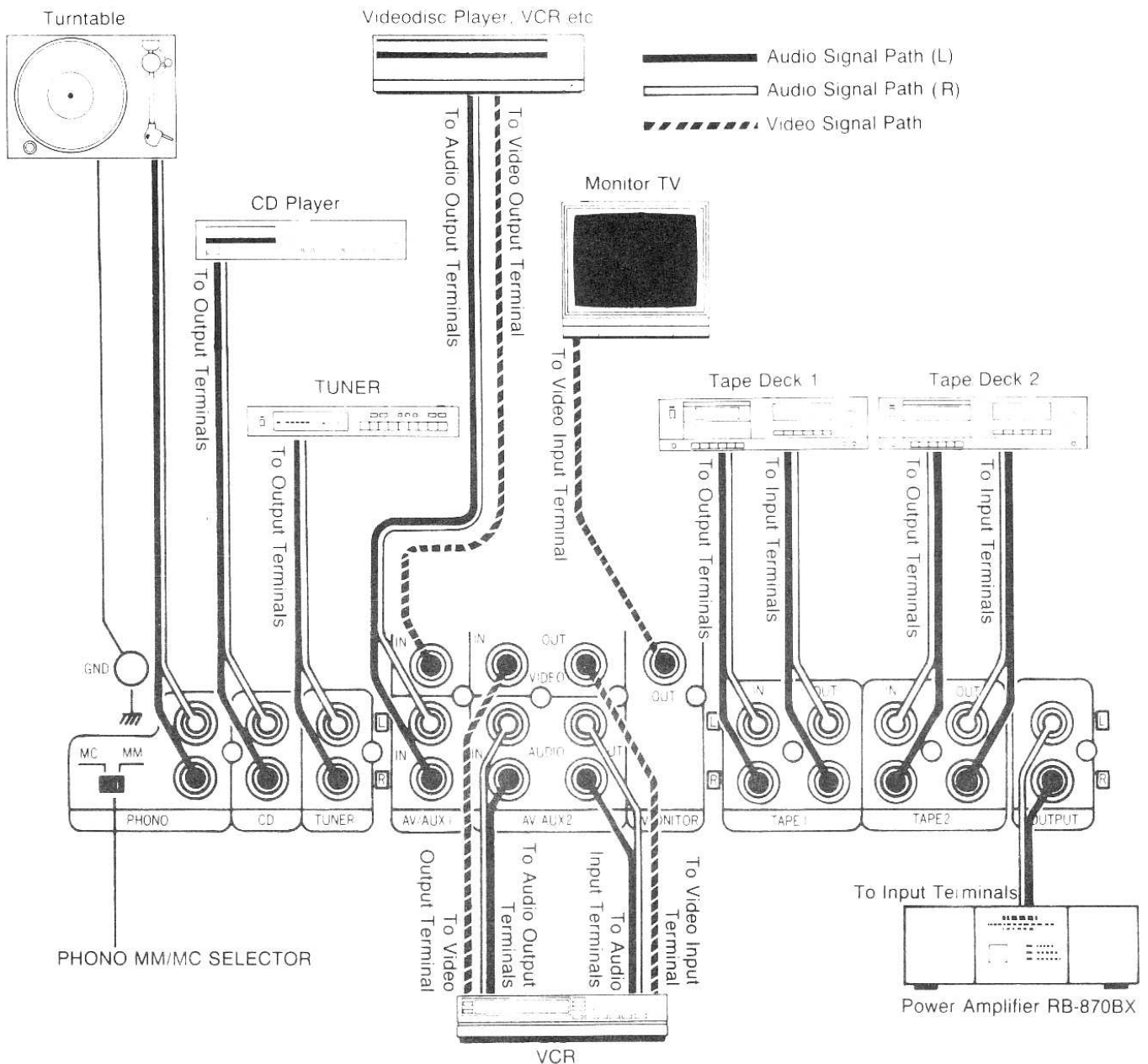
**Caution (applicable to the U.S.A., Canada, Hong Kong, and Southeast Asia):** On the rear panel of the RC-870BX are two sets of AC outlet through which power is supplied to audio equipment (turntable, CD player, tuner, cassette deck, etc.) you use in conjunction with the RC-870BX. Each AC outlet is the switched type, turned on or off upon switching on or off the power in the RC-870BX and has rating of 400 watts maximum. Do not attempt to connect equipment whose power consumption exceeds the rating of these AC outlets. Never connect a power amplifier to these AC outlets.

## CONNECTING COMPONENTS

Connect all necessary audio/visual 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) markings on each component are matched correctly. Connect the grounding wire of the turntable to the terminal marked GND on the amplifier.

### PHONO MM/MC Selector

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



## 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

Glow when power is turned on with the power button.

### (3) Headphones jack

To monitor the sound from headphones without using the power amplifier, connect the headphones here. The headphone volume can be adjusted with the Volume Control of this unit. This unit is not equipped with a headphones switch because of the design policy of obtaining the best possible tone quality. Therefore, the sound from speakers cannot be cut by connecting the headphones, unless the power amplifier and the speaker system are disconnected from this unit. For pri-

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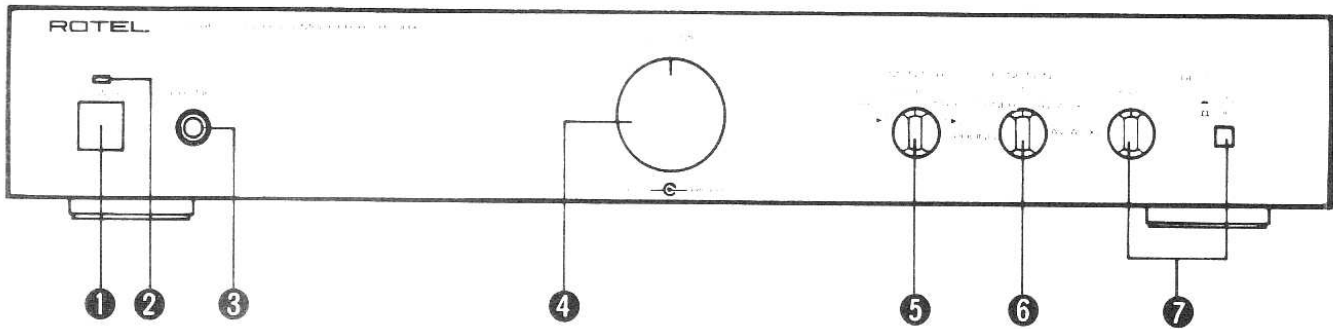
vate listening through headphones, disconnect the power amplifier from this unit.

### (4) 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.

### (5) 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. Likewise, the "2 ▶ 1" position permits copying from the TAPE 2 to the TAPE 1 deck.



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

#### (6) 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.

#### (7) CD Direct ON/OFF Switch and Level Control

This unit is designed so that you can enjoy the high quality sound of the compact disc with no deterioration. By depressing the switch to ON, the signals from the CD player are sent to the power amplifier directly. In this case, the Volume Control of this unit cannot operate, but the volume of the CD sound can be adjusted with the LEVEL control. Try enjoying the excellent sound with the CD DIRECT function.

With the switch at the released OFF position, the signals flow as usual and the Volume Control operates although the LEVEL control does not function.

### 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.
- When listening to a compact disc with the CD DIRECT switch at the ON position, be sure to turn the LEVEL control completely to the left before turning the power switch to ON.

#### 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.

#### Playing a compact disc

##### • Playing in the direct signal path mode

1. Set the Tape Monitor selector to SOURCE.
2. Select CD on the function selector.
3. Set the CD DIRECT switch to ON.
4. Start playing the compact disc and adjust the volume with the LEVEL control.

##### • Playing in the normal signal path mode

1. Set the Tape Monitor selector to SOURCE.
2. Select CD on the function selector.
3. Set the CD DIRECT switch to OFF.
4. Start playing the compact disc and raise the volume to the desired level with the VOLUME control.

#### Radio broadcast reception

1. Set the Tape Monitor selector to SOURCE.
2. Select TUNER on the function selector.
3. Tune in the desired station on the tuner and raise the volume to the desired level.

#### Playing back tape deck

1. Set Tape Monitor selector to TAPE 1 or TAPE 2 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 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, and Tone control will have no effect on the signal being sent through TAPE OUT terminals.

**Note:** When playing a compact disc in the direct signal path mode, the signal will not be sent to TAPE OUT terminals but only to the speaker terminals, and so cannot be recorded.

#### Dubbing

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

1. Set Tape Monitor selector to "1▶2" or "2▶1".
2. Play back TAPE 1 (or TAPE 2) deck, and put TAPE 2 (or TAPE 1) deck in record mode, then dubbing starts. During this operation, you can listen to the signal with Volume control or Balance control set as desired; they have no effect on the signal to be recorded.

### PLAYBACK AND RECORDING WITH AV EQUIPMENT

The RC-870BX permits connection and switching of audiovisual components, so that the receiver 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. There is also a separate TV monitor output for connection of a color monitor for high quality viewing.

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

#### Playback

To carry out 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.

Set the TV or video monitor to the video input mode to view the picture. Adjust the volume and other controls on the receiver to suit your needs.

### Recording (Dubbing)

Set the tape monitor selector to SOURCE position and function selector to AV/AUX 1 where the source to be recorded is connected.

Then record with the video recorder connected to the AV/AUX 2 terminals on the rear panel. The video signal being recorded can be monitored by the connected TV or video monitor.

For advanced applications, such as combining sound from an audio source with a video signal and recording both on the video cassette recorder connected to the AV/AUX 2 terminals, please refer to the signal flow table shown on page 17. (Note: the audio and video signal supplied to the video recorder is completely unaffected by the volume and balance settings of the receiver.)

### 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 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

Total Harmonic Distortion	No more than 0.004% (CD/TUNER, 20 to 20,000Hz)
Intermodulation Distortion (60Hz-7kHz = 4:1)	No more than 0.004% (CD/TUNER)
Output	Headphone 4-16 ohms
Input Sensitivity/Impedance	
PHONO (MM)	2.5mV/47 kohms
PHONO (MC)	250 $\mu$ V/180 ohms
CD, TUNER, TAPE 1/2	150mV/24 kohms
AV/AUX 1, AV/AUX 2	150mV/24 kohms
Output sensitivity/ Impedance	1.0V/330 ohms
Overload Level (THD 0.5%, 1kHz)	
PHONO (MM)	180mV
PHONO (MC)	15mV
CD, TUNER, TAPE 1/2	5V
AV/AUX 1, AV/AUX 2	5V
Frequency Response	
PHONO	20 to 20,000Hz, $\pm$ 0.2dB (RIAA STD)
CD, TUNER, TAPE 1/2	4 to 100,000Hz, + 0.5dB, - 3dB
AV/AUX 1, AV/AUX 2	4 to 100,000Hz, + 0.5dB, - 3dB
Signal-to-Noise Ratio (IHF A network)	
PHONO (MM)	80dB
PHONO (MC)	70dB
CD, TUNER, TAPE 1/2	95dB
AV/AUX 1, AV/AUX 2	95dB
Power Requirement	120V/60Hz, 220V/50Hz, 240V/50Hz or 120, 220, 240V/50-60Hz (switchable) (depending on destinations)
Power Consumption	10 watts
Dimensions (overall)	430 (W) x 66 (H) x 320 (D)mm 16-15/16" x 2-19/32" x 12-19/32"
Weight (net)	3.8kg/8.36 lbs.

- Specifications and design subject to possible modification without notice.

**THE ROTEL CO., LTD.**

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1-36-8, Ohokayama, Meguro-ku, Tokyo 152, Japan

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