

# ROTEL®

## STEREO ACTIVE CONTROLLER

# RHA10

# OWNER'S MANUAL

## 使用説明書

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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



**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.**

## 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.

### • 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.

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 Source — 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.

### PORTABLE CART WARNING



S3125A

## Forward

Thank you for purchasing a Rotel high-end product.

This Rotel component has been endowed with years of our dedicated work in audio technologies, the result of countless technical experiments and stringent listening tests during development. That we have devoted so much time in conducting these tests has come about for no other reason than the fact that we at Rotel simply love good music.

In our pursuit of genuine musicality, Rotel has been very stubborn about circuit designs and uncommonly exacting in selection of parts so as not to depart in any way from the basic Rotel philosophy of balanced design and no-nonsense operation. The deciding factors behind the sound reproduced by this component were not determined by high-performance measuring instruments or computers but by human ears with

heartful sensitivity. We believe that you, a devoted music lover will be fully pleased with our rich musical sound that is of a caliber never before experienced in your room.

We are confident that the product will provide you with many years of satisfying entertainment.

### NOTE

The design philosophy of this product is different from that of conventional audio components. Because of this, several areas concerning how the product is used and how it is connected require special attention. Before you enjoy the rich musical sound provided by this product, please take some time to familiarize yourself with the contents of this manual to ensure that you will use it effectively and safely.

## Prior to Use

For safe use of this component, please adhere to the following cautions:

### 1. Power Source

Use the AC power for home use. Please plug the RHA-10 into a wall outlet or into an auxiliary AC outlet provided on another component.

### 2. Handling the Power Cord

When plugging the power cord into or unplugging it from the AC outlet, be sure that the power switch to the unit is first turned off.

### 3. Do not attempt to modify or otherwise alter this product.

This component has been adjusted and inspected at the factory before being shipped. Attempts at alterations can cause problems and invite the danger of electrical shocks, jeopardizing the product's safety. Should a need to make adjustments or other operations arise, please consult with the authorized Rotel dealer where you purchased the unit; never open the top cover to the unit on your own.

### 4. Choosing a Safe Location

Place this component horizontally onto a rack or shelf that is strong enough to support the total weight of the units you plan to place with it. Be sure that this location is free of vibrations, humidity, dust, and away from direct sunlight.

### 5. Moving the Unit

In the event you want to move this unit, first be sure that the power switch is turned off. Next, disconnect all cords and cables including the power cord. Moving the unit with the power still turned on is dangerous.

### 6. In the event that water or other foreign matter enters the unit...

Water or other foreign matter entering the unit can cause problems such as shorted circuits which can result in breakdowns or damage. Please ensure that this does not occur. In the event problems of this type do occur, immediately turn off the power switch to the unit, unplug the power cord, and consult the authorized Rotel dealer where you purchased the unit.

### 7. Owner's manual

Keep this manual in a safe place with your warranty copy. Let it be available to you whenever you need to consult it.

# Connecting Components

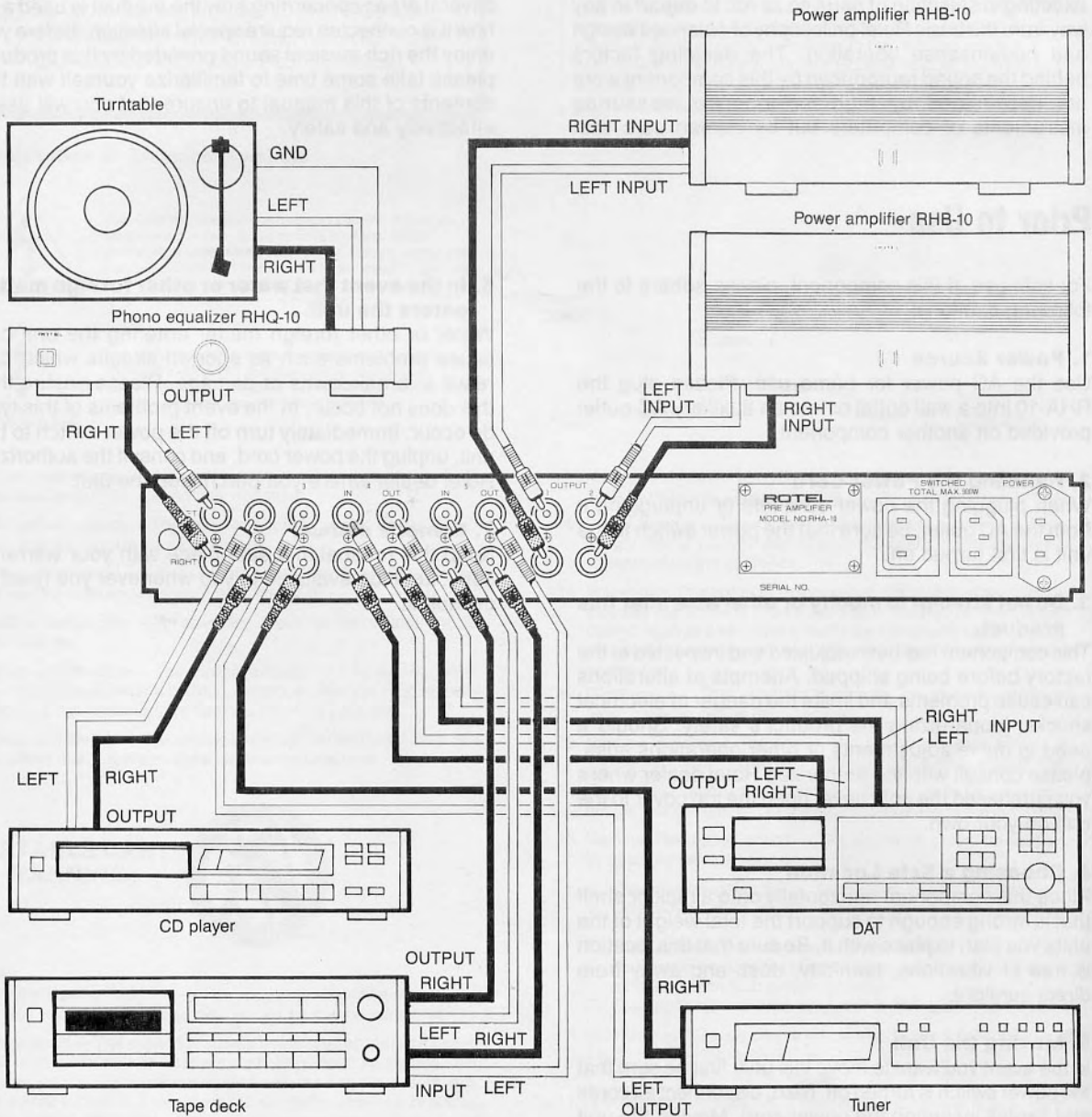
The RHA-10 is an active controller equipped with five sets of input terminals, two sets of REC OUT terminals, and two sets of MAIN OUT terminals. The five sets of input terminals accept any type of high level audio source component, which does require amplification. Inputs 1 to 3 accept a phono equalizer, a CD player, and a tuner, while inputs 4 and 5 accept a tape recorder, or a similar audio source.

**NOTE:** When connecting a turntable, first connect the turntable to the Rotel RHQ-10 or other phono equalizer, and then connect the equalizer to the RHA-10.

# Using the Output Terminals

The RHA-10 is equipped with two sets of output terminals (OUTPUT 1 & 2) in parallel. A power amplifier is normally connected to either OUTPUT 1 or OUTPUT 2. However, when using a bi-amp speaker system, a low-range power amplifier is connected to one of the output terminals and a high-range power amplifier is connected to the other output terminal. Use only highest grade interconnect cables with RCA pins when making connections. Left-channel terminals are aligned along the upper row while right-channel terminals occupy the lower row; be sure that you connect the LEFT OUT and RIGHT OUT terminals of the output devices to this unit correctly.

Figure 1



# Front Panel

## (1) Stand by Switch

Power is turned ON by pushing the Stand by switch, and it is turned OFF by pushing the switch again. The AC service outlet on the rear panel is linked to the Stand by switch.

## (2) Power Indicator

When the RHA-10 is plugged into an AC outlet, the unit enters standby status and the power indicator lamp lights up in green. When the Power switch is turned ON, the lamp changes to red.

## (3) Remote Sensor Window

The Remote Sensor receives signals emitted from the remote control unit.

## (4) Attenuator

Signals from sources connected to the RHA-10 can be adjusted for level when output to a power amplifier. The attenuator knob adjusts the level for signals reproduced by the power amplifier. Turn the knob to the right (clockwise) to raise the volume, or to the left (counterclockwise) to lower it. The front section of the knob controls the right channel while the section at the back controls the left channel. Though both sections of this knob can be operated simultaneously, using them separately lets you adjust the stereo balance between the two channels.

## (5) Muting Indicator

Muting is operated from the remote control unit. When this indicator lamp is illuminated, muting is ON. When the Mute button on the remote controller is pressed again, muting is disabled, the indicator goes off, and the sound is heard again at the original volume setting.

## (6) REC OUT ON/OFF

When this switch is in the OFF position, signal output from the two REC OUT terminals is disabled. Set the switch to this position whenever recordings are not being made. An improved signal quality can then be fed to the power amplifier.

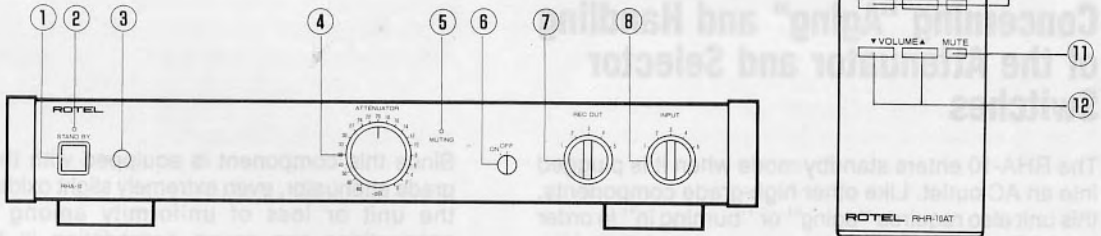
## (7) REC OUT Selector

The REC OUT Selector is used to select an input source from among the five input terminals on the rear panel for output to the REC OUT terminals.

## (8) Input Selector

The Input Selector is used to select an input source from among the five input terminals on the rear panel for output to the MAIN OUT terminals. Use this selector for audio listening purposes.

Figure 2



# Remote Control Unit

(9) Turns power ON/OFF (the same function as the Stand by switch on the main unit).

(10) These keys are not used for the RHA-10. They are used to operate Rotel's high-end tuner, the RHT-10, when connected.

(11) This is the Audio Mute switch, used to operate the muting function. When pressed, the sound is instantly muted. When the pressed again, the indicator goes off and the sound is heard again at the original volume level.

(12) These are the volume keys and have the same function as the attenuator on the main unit, except that it cannot adjust left/right stereo balance.

### Note:

When using the remote control unit, be sure to aim it directly at the remote control sensor on the RHA-10.

# Operations

Check to ensure all components including this unit are properly connected.

## Listening

1. The signals to be fed through the OUTPUT terminal to the power amplifier are selected using the Input Selector. Turn the attenuator all the way to the left to minimum.
2. Turn on the power of the power amplifier and start up play on the selected source.
3. Turn the attenuator toward the right until you reach the desired listening level.

**NOTE 1:** To enjoy the highest possible sound quality, be sure that the REC OUT ON/OFF switch is set to OFF when the REC OUT selector is not in use.

**NOTE 2:** In the event that noise occurs, connect a wire to the ground terminal on the rear panel of this unit, and connect the other end to the ground terminal on the applicable source device or any other point on its chassis where noise can be brought down to a minimum.

### IMPORTANT

**When connecting a wire to another unit as described in NOTE 2 above, absolutely avoid touching the wire onto any areas related to the power source such as auxiliary AC outlets or inserting the wire inside the chassis.**

## Concerning "Aging" and Handling of the Attenuator and Selector Switches

The RHA-10 enters standby mode when it is plugged into an AC outlet. Like other high-grade components, this unit also requires "aging" or "burning in" in order to stabilize the performance and characteristics of the parts and circuits so that they can deliver the highest possible sound quality. Once all connections have been completed and the system is fully assembled, turn on the power to the system and conduct the "aging" process in conjunction with the other components. The "aging" time required is normally about 100 hours.

### IMPORTANT

**It is not necessary to "burn in" this unit by leaving it turned on for 100 hours continuously. Instead, let the unit age for a few hours a day over several days while you enjoy normal listening. During the aging period, it is important that you are within eye's reach of the system; when going out or sleep, for instance, stop the "aging" for the time and turn off the power to the entire system.**

## Recording

1. Use the REC OUT Selector to select the source device you wish to record.
2. Set REC OUT ON/OFF switch to ON.
3. Start play on the selected source device and start the recording function on the tape deck.

### NOTE:

The attenuator will not work for recording since the signals will not be passing through it. Monitoring the sound during recording, is possible but we discourage this as it can adversely affect the highest-quality sound guaranteed by this component.

Since this component is equipped with the highest-grade attenuator, even extremely slight oxidation inside the unit or loss of uniformity among electrical connections can cause degradation in the sound quality. On days you do not use the system, we recommend that you simply move the attenuator and selector switches while leaving the power to the system off, as even this exercise will help to prevent deterioration over the years.

## Specification

### Total Harmonic Distortion

(20 Hz — 20 kHz,  
rated output) ..... No more than 0.004%  
(20 Hz — 20 kHz,  
10 V output)..... No more than 0.004%

### Intermodulation

Distortion  
(60 Hz : 7 kHz=4 : 1).. No more than 0.004%

### Input (1-5) Sensitivity/

Impedance..... 140 mV/13 kohms

### REC OUT Impedance .. 100 ohms

### Output Sensitivity/

Impedance..... 0.775 V/100 ohms

### Frequency response..... 4 Hz — 100 kHz $\pm 0.3$ dB

### Signal-to-Noise Ratio

(IHF A Network)..... 100 dB

### Power Supply..... AC 120 V/60 Hz, 230 V/50 Hz, 240 V/50 Hz

### Power Consumption ..... 12 W (2.4 W during standby)

### Dimensions..... 470 (W) × 76 (H) × 332 (D) mm (18 1/2" × 3" × 13 1/16")

### Weight ..... 7.7 kg/16.90 lbs

- Specifications and design subject to possible modification without notice.

