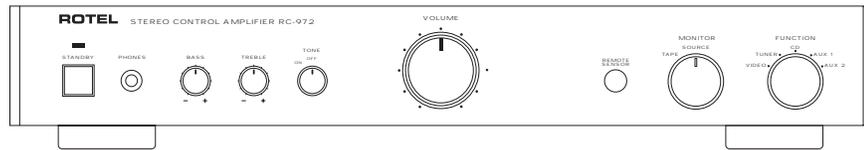


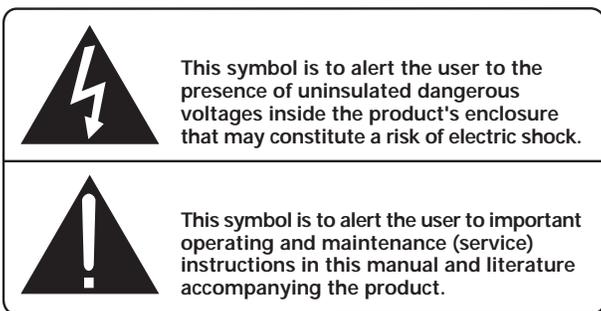
ROTEL *hi fi*

RC-972

STEREO CONTROL AMPLIFIER



Owner's Manual



WARNING:

There are no user serviceable parts inside. Refer all servicing to qualified service personnel.

WARNING:

To reduce the risk of fire or electrical shock, do not expose the unit to moisture or water. Do not allow foreign objects to get into the enclosure. If the unit is exposed to moisture, or a foreign object gets into the enclosure, immediately disconnect the power cord from the wall. Take the unit to a qualified service person for inspection and necessary repairs.

Read all the instructions before connecting or operating the unit. Keep this manual so you can refer to these safety instructions.

Heed all warnings and safety information in these instructions and on the product itself. Follow all operating instructions.

Clean the unit only with a dry cloth or a vacuum cleaner.

Keep the ventilation inlets on the unit unobstructed. For example, do not place the unit on a bed, sofa, rug, or similar surface that could block the ventilation slots. If the unit is placed in a bookcase or cabinet, there must be sufficient clearance around the unit and ventilation of the cabinet to allow proper cooling.

Keep the unit away from radiators, heat registers, stoves, or any other appliance that produces heat.

The unit must be connected to a power supply only of the type and voltage specified on the rear panel of the unit.

Connect the unit to the power outlet only with the supplied 2-pin polarized power supply cable or an exact equivalent. Do not modify the supplied cable in any way. Do not attempt to defeat grounding and/or polarization provisions. The cable should be connected to a 2-pin polarized wall outlet, matching the wide blade of the plug to the wide slot of the receptacle. Do not use extension cords.

Do not route the power cord where it will be crushed, pinched, bent at severe angles, exposed to heat, or damaged in any way. Pay particular attention to the power cord at the plug and where it exits the back of the unit.

The power cord should be unplugged from the wall outlet if the unit is to be left unused for a long period of time.

Immediately stop using the unit and have it inspected and/or serviced by a qualified service agency if:

- The power supply cord or plug has been damaged.
- Objects have fallen, or liquid has been spilled, into the unit.
- The unit has been exposed to rain.
- The unit shows signs of improper operation
- The unit has been dropped or damaged in any way

Place the unit on a fixed, level surface strong enough to support its weight. Do not place the unit on a moveable cart that could tip over.



Figure 1: Controls and Connections

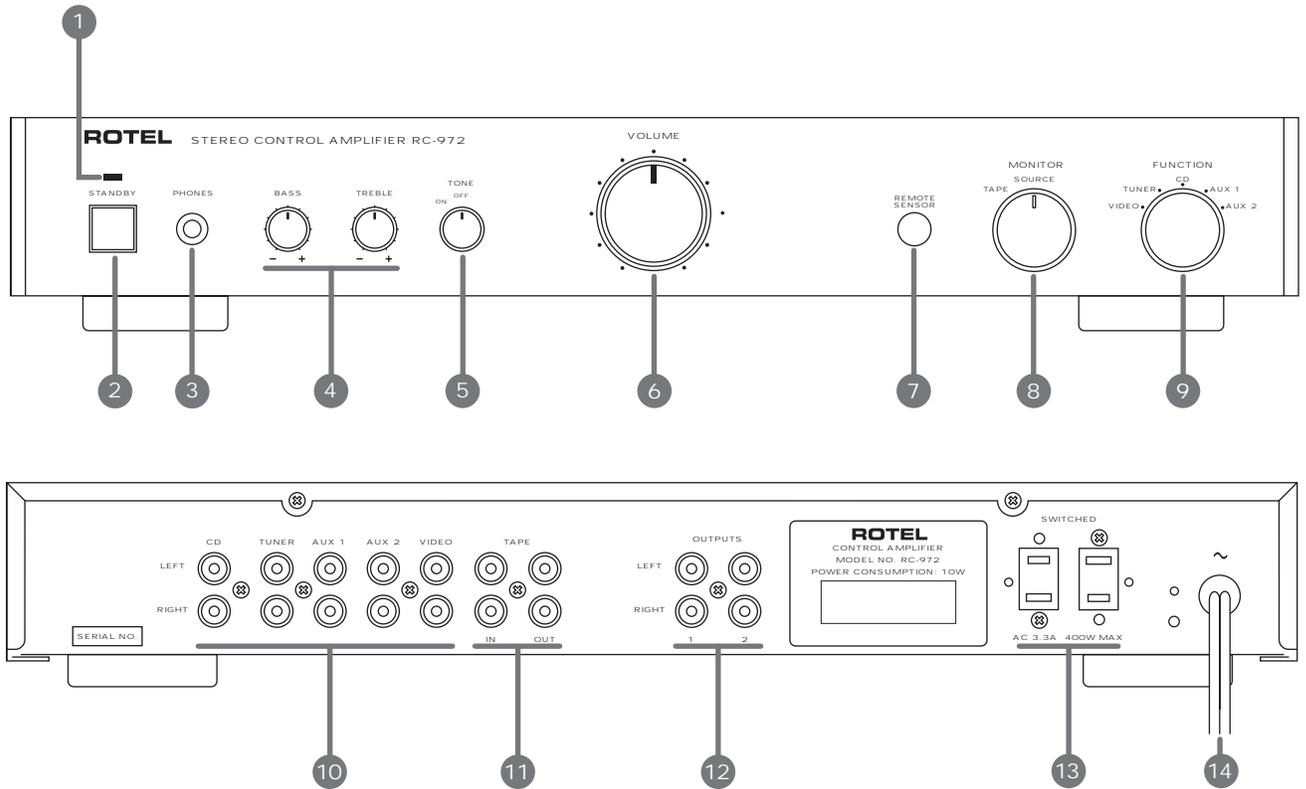


Figure 2: RR-C91 Remote Control

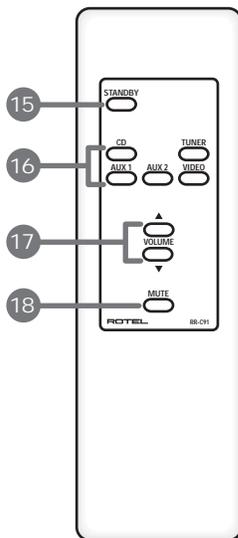


Figure 3: Output Connections

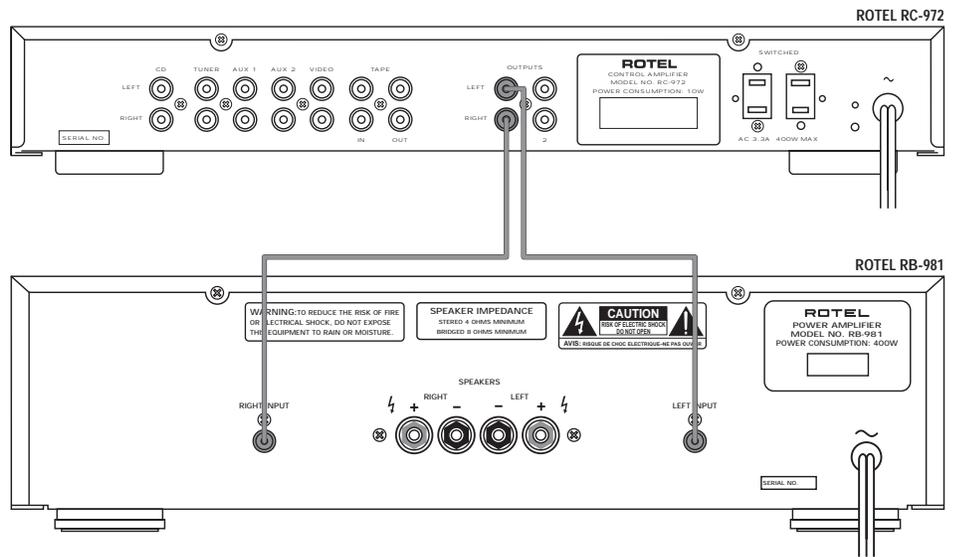


Figure 4: Line Level Input Connection

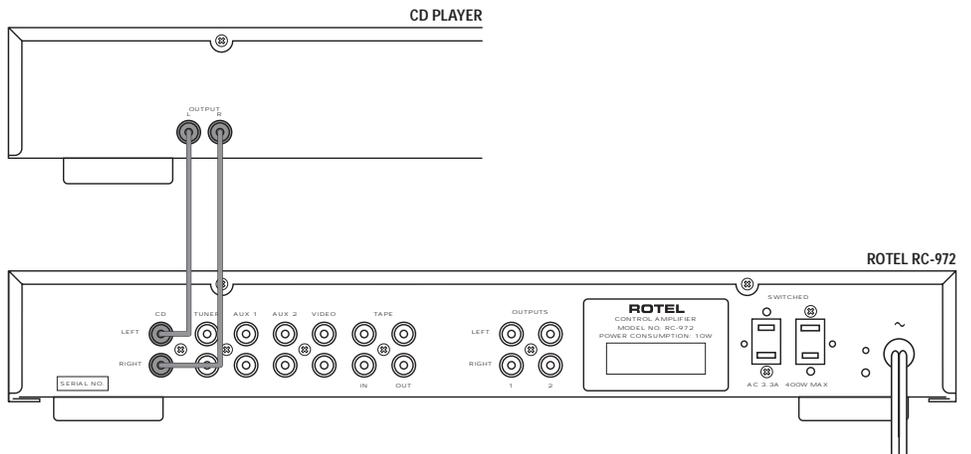
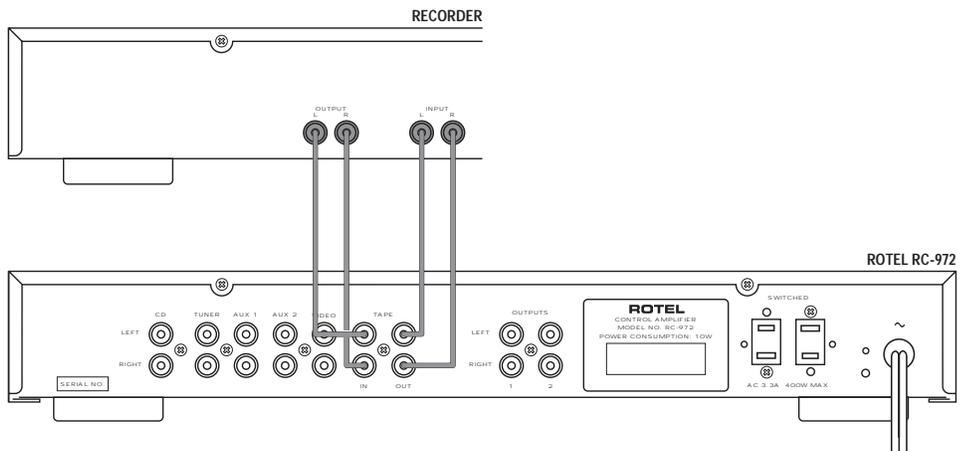


Figure 5: Recorder Connections



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About Rotel

A family whose passionate interest in music led them to manufacture high fidelity components of uncompromising quality founded Rotel over 30 years ago. Through the years that passion has remained undiminished and the family goal of providing exceptional value for audiophiles and music lovers, regardless of their budget, is shared by all Rotel employees.

The engineers work as a close team, listening to, and fine tuning each new product until it reaches their exacting musical standards. They are free to choose components from around the world in order to make that product the best they can. You are likely to find capacitors from the United Kingdom and Germany, semi conductors from Japan or the United States, while toroidal power transformers are manufactured in Rotel's own factory.

Rotel's reputation for excellence has been earned through hundreds of good reviews and awards from the most respected reviewers in the industry, who listen to music every day. Their comments keep the company true to its goal – the pursuit of equipment that is musical, reliable and affordable.

All of us at Rotel thank you for buying this product and hope it will bring you many hours of enjoyment.

Getting Started

Thank you for purchasing the Rotel RC-972 Stereo Control Amplifier. When used in a high-quality music audio system, it will provide years of musical enjoyment.

The RC-972 is a full featured, high performance preamplifier. All aspects of the design have been optimized to retain the full dynamic range and subtle nuances of your music. The RC-972 has a highly regulated power supply incorporating a Rotel custom-designed power transformer. This low impedance power supply has ample power reserves, which enables the RC-972 to easily reproduce the most demanding audio signals. This type of design is more expensive to manufacture, but it is better for the music.

The RC-972 printed circuit boards (PCB) are designed with Symmetrical Circuit Traces. This insures that the precise timing of the music is maintained and faithfully recreated. The RC-972 circuitry uses metal film resistors and polystyrene or polypropylene capacitors in important signal paths. All aspects of this design have been examined with the final goal being faithful reproduction of music.

The RC-972 is straightforward in its installation and operation. If you have experience with other stereo systems, you shouldn't find anything perplexing. Simply plug in the associated components and enjoy.

A Few Precautions

Please read this manual carefully. It provides complete information on how to incorporate the RC-972 into your system as well as general information that will help you get optimum sound performance. Please contact your authorized Rotel dealer for answers to any questions you might have. In addition, all of us at Rotel welcome your questions and comments.

Save the RC-972 shipping carton and all enclosed packing material for future use. Shipping or moving the RC-972 in anything other than the original packing material may result in severe damage to your amplifier.

Fill out and send in the owner's registration card packed with the RC-972. Also be sure to keep the original sales receipt. It is your best record of the date of purchase, which you will need in the event warranty service is ever required.

Placement

Like all audio components that handle low-level signals, the RC-972 can be affected by its environment. To minimize the chance the RC-972 will pick up hum or interference, do not place it on top of an amplifier or any other device that has a large power transformer. Keep the RC-972 away from devices that have motors for the same reason. Do not place the RC-972 where it will be exposed to direct sunlight.

We recommend installing the RC-972 in furniture designed to house audio components. Such furniture is designed to reduce or suppress vibration which can adversely affect sound quality. Ask your authorized Rotel dealer for advice about component furniture and proper installation of audio components.

The RC-972 is supplied with a compact, easy to use remote control – the RR-C91. In order to take advantage of the convenience it provided, the RC-972 must be placed where you can see the Remote Sensor on the front panel.

Cables

Be sure to keep the power cords, digital signal cables and regular audio signal cables in your installation away from each other. This will minimize the chance of the regular audio signal cables picking up noise or interference from the power cords or digital cables. Using only high quality, shielded cables will also help to prevent noise or interference from degrading the sound quality of your system. If you have any questions see your authorized Rotel dealer for advice about the best cable to use with your system



Remote Control

The RC-972 is supplied with an RR-C91 remote control. This compact unit allows you to operate many of the controls of the RC-972 from your listening location. When using the RR-C91 the emitter on the front of the control must be pointed at the RC-972 front panel.

The RR-C91 duplicates the basic functions of the front panel control. When a control is on both the front panel and the remote control, both control identifiers are shown in the related instruction text. For example, to change the volume level you can either turn the control 6 on the front panel or use the buttons 17 on the remote control.

Remote Sensor 7

The Remote Sensor picks up the infrared signals from the remote control. Do not cover or block the sensor. It must be unobstructed or the remote control will not work properly. The operation of the Remote Sensor can also be affected if it is exposed to bright light, particularly sunlight. Certain types of lighting, such as halogen lights, that emit a fair amount of infrared light, can also interfere with proper operation. In addition remote control functions may not work reliably if the batteries in the RR-C91 are weak.

Remote Control Batteries

The supplied batteries must be installed before the remote control can be used. The battery cover is on the back of the RR-C91. Gently press the small triangular symbol on the cover and slide the cover down to expose the battery well. Install the batteries with the terminals as shown in the illustration in the battery well. Test the control for proper operation, then slide the cover back into place. When the batteries become weak the remote control won't operate the RC-972 consistently. Installing fresh batteries should eliminate the problem.

Note: Remove the batteries from the remote control if it will not be used for a long period of time. Do not leave run down batteries in the remote control. Exhausted batteries can leak corrosive chemicals which will damage the unit.



Output Connections 12

[See Figure 3 for RCA output connection illustration.]

The RC-972 has RCA-type output connectors that are compatible with the inputs of most power amplifiers. Use high quality cables and be sure to connect the Left and Right channel outputs of the RC-972 to the correct channels of the amplifier.

There are two sets of outputs on the RC-972. The second set of outputs may be used in custom system configurations to drive a second power amplifier or to supply a signal to a special signal processor.

Input Signal Connections 10

[See Figure 4 for input connection illustration.]

The RC-972 has conventional RCA type input connectors, the type found on nearly all audio equipment.

Note: To prevent loud noises that neither you nor your speakers will appreciate, make sure the system is turned off when you make any signal connections.

The CD, Tuner, and Aux inputs of the RC-972 are “line level” inputs. These are for connecting components such as CD players, Hi Fi or NICAM Stereo video cassette recorders, tuners for audio or video, Laser Disc players or the analog output from a CD ROM drive.

The Left and Right channels are clearly labeled and should be connected to the corresponding channels of the source component. The Left RCA connectors are white, the Right connectors are red. Use high quality RCA cables for connecting input source components to the RC-972. Ask your authorized Rotel dealer for advice about cables.

Note: The optional phono board card enables you to connect a phonograph to the RC-972. See your authorized Rotel dealer for more information.

Recorder Connections 11

[See Figure 5 for recorder connection illustration.]

The Tape inputs and outputs can be connected to any record/playback device that accepts standard line level analog input and output signals. Typically that will be a conventional tape recorder.

When connecting a recorder to the RC-972 remember that the *outputs* of the recorder must be connected to the tape *inputs* of the RC-972. Similarly the tape *outputs* of the RC-972 must be connected to the *inputs* of the recorder. As with other sources be sure to connect the Left and Right channels of each device to the proper channels on the associated components. Use high quality connecting cables to prevent loss of sound quality.

AC Power and Control

AC Power Input 14

The RC-972 does not use a significant amount of power. However there are two auxiliary power outlets on the back of the unit, which can be used to supply power for other units. Consequently it is usually best to plug the RC-972 directly into a 2-pin polarized wall outlet. Avoid the use of extension cords. A heavy duty multi-tap power outlet strip may be used if it (and the wall outlet) is rated to handle the current demanded by the components connected to it.

Note: Do not connect the power cord for a power amplifier to the auxiliary power outlets on the RC-972. Power amplifiers often draw more power than these outlets can provide.

Your RC-972 is configured at the factory for the proper AC line voltage in the country where you purchased it (either 115 volts AC or 230 volts AC with a line frequency of either 50 Hz or 60 Hz). The AC line configuration is noted on a decal on the back panel.

Note: Should you move your RC-972 amplifier to another country, it is possible to reconfigure your amplifier for use on a different line voltage. Do not attempt to perform this conversion yourself. Opening the enclosure of the RC-972 exposes you to dangerous voltages. Consult a qualified service person or the Rotel factory service department for information.

If you are going to be away from home for an extended period of time such as a month-long vacation, it is a sensible precaution to unplug your amplifier (as well as other audio and video components) while you are away.

Power/Standby Switch 2 15 and Power Indicator 1

The Power Indicator light above the Standby button is always illuminated when the RC-972 is connected to a “live” AC outlet. When the Power/Standby switch is pressed the RC-972 is turned on. The Function indicator light and Volume Control indicator light will illuminate. Pressing the Standby switch again will put the RC-972 in “standby” mode and these indicator lights are turned off.

Auxiliary Power Outputs 13 (U.S.A. version)

The RC-972 has two switched outlets on the back panel. Power is available from these outlets when the RC-972 is turned on. These outlets can provide up to a total of 400 watts. They are appropriate for supplying power to signal sources, such as CD players, tuners, or tape decks. They should not be used for power amplifiers. Connecting components that will draw more than 400 watts to these outputs could damage the Standby switch in the RC-972.

Audio Controls

Volume Control 6 17

As with all normal volume controls turn the control knob 6 *clockwise* to increase the volume, or *counterclockwise* to decrease the volume. Or press the remote control volume button 17 next to the ▲ symbol to turn the volume up; press the button next to the ▼ symbol to turn the volume down.

Tone On/Off Switch 5

When the switch is in the Off position the tone control circuits are bypassed to ensure the purest possible sound. Leave the switch in the Off position unless you want to use the tone controls. Turn the switch to the On position if you want to adjust the tone controls.

Bass and Treble Controls 4

When the Tone Switch is in the On position, turning the Bass and Treble controls adjusts the tone balance of the sound. Turn the controls *clockwise* to increase the bass or treble output. Turn the controls *counterclockwise* to decrease the bass or treble output.

A properly set up high-performance audio system produces the most natural sound with little or no adjustment of the tone controls. Use these controls sparingly. Be particularly careful when turning the controls up (clockwise). This increases the power output in the bass or treble range, increasing the load on the amplifier and speakers.

Input "Function" Selector 9 16

The setting of the Function Selector controls which of the input signals goes to the main outputs and onto the power amplifier – or, more simply, which source is heard. Turn the knob on the front panel control 9 to the source you want to use, or press the corresponding button 16 on the RR-C91 remote. The signal from the selected source also goes to the Tape Outputs.

Tape Monitor Switch 8

When the Tape Monitor switch is in the Source position you hear the sound source that is selected by the Function Selector. Turning the switch to the Tape position lets you listen to a previously recorded tape, or monitor the sound from the tape recorder while you are recording.

Mute Control 18 (remote only)

To temporarily mute the sound of the system press the Mute Button on the RR-C91 remote. Press the button again to return the sound volume to the original level. The LED in the volume control will flash when the unit is muted.

Phones Output 3

The Phones output allows you to connect headphones for private listening. This output accommodates standard stereo phone (1/4") plugs. If your headphones have another type of plug, such as a 1/8" mini-plug, you will need an adapter plug. Contact your authorized Rotel dealer, to get the correct adapter plug.

Note: Plugging in a set of headphones does not cut off the signal to the outputs. In most instances you should turn off the power amplifier when listening to headphones.

Recording

Set the Function Selector switch 9 to the component you want to use for the signal source. If you have a three-head cassette recorder, a three-head reel-to-reel tape recorder or a DAT recorder that allows simultaneous "read and write" operation you can monitor your recording by setting the Tape Monitor switch 8 to the "Tape" position. When not monitoring a recording, or listening to a previously recorded tape, set the Tape Monitor switch 8 to the "Source" position.

Optional Phono Board Card

In order to use an analog phono turntable with the RC-972 you must install the optional MM or MC phono board card. These plug in boards convert the Aux 1 input to a phono input. They can be installed by your authorized Rotel dealer, or you can install them yourself. If you plan to install them yourself, follow the supplied instructions very carefully. *Failure to precisely follow the instructions can result in damage to the RC-972 or personal injury. If you are not sure you have the knowledge and skills to properly install the preamp boards, have the installation done by your dealer.*

Troubleshooting

Most difficulties in audio systems are the result of incorrect connections, or improper control settings. If you encounter problems, isolate the area of the difficulty, check the control settings, determine the cause of the fault and make the necessary changes. If you are unable to get sound from the RC-972, refer to the suggestions for the following conditions:

Power Indicator Is Not Lit

The Power Indicator should be lit whenever the RC-972 is plugged into the wall power outlet. If it does not light, test the power outlet with another electrical device, such as a lamp. Be sure the power outlet being used is not controlled by a switch that has been turned off.

Fuse Replacement

If another electrical device works when plugged into the power outlet, and the Power Indicator still will not light, it indicates that the internal power fuse may have blown. If you believe this has happened, contact your authorized Rotel dealer to get the fuse replaced.

No Sound

Be sure the RC-972 is turned on. The Volume Control indicator light and the selected function indicator should be lit. Be sure the Function Selector is set to the proper input. Check to see if the Mute Function has been engaged. Check the signal source to see if it is functioning properly. Make sure the cables from the signal source to the RC-972 inputs are connected properly. Check the power amplifier for power and proper operation. Check all the wiring between the RC-972 and the power amplifier, and the power amplifier and speakers.

Specifications

Total Harmonic Distortion (20 Hz-20 kHz)	< 0.004%
Intermodulation Distortion (60 Hz : 7 kHz, 4:1)	< 0.004% at 1V output
Input Sensitivity / Impedance	150 mV / 24 kOhms
Output Level / Impedance	1 V / 100 Ohms
Usable Headphone Impedance	8 - 2,000 Ohms
Frequency Response	4Hz-100kHz, +0, -3dB
Tone Controls	±6dB at 100 Hz and 10K Hz
Signal to Noise Ratio (IHF "A" weighted)	95 dB
Power Requirements	
USA Version	115 Volts, 60 Hz
European Version	230 Volt, 50 Hz
Power Consumption	10 Watts
Dimensions (W x H x D)	440 x 72 x 286 mm 17 ³ / ₈ " x 27 ⁷ / ₈ " x 11 ¹ / ₄ "
Weight (net)	4.3 kg, 9.46 lbs.

All specifications are accurate at the time of printing.
Rotel reserves the right to make improvements without notice.

RC-972

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