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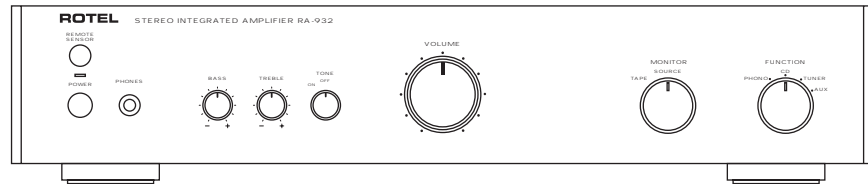
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RA-932



STEREO INTEGRATED AMPLIFIER



Owner's Manual

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

APPLICABLE FOR USA, CANADA OR WHERE APPROVED FOR THE USAGE	
CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT. INSERT FULLY.	
ATTENTION: POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.	

	This symbol is to alert the user to the presence of uninsulated dangerous voltages inside the product's enclosure that may constitute a risk of electric shock.
	This symbol is to alert the user to important operating and maintenance (service) instructions in this manual and literature accompanying the product.

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.

You must allow 10cm, or 4 inches, of unobstructed clearance around the unit. 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

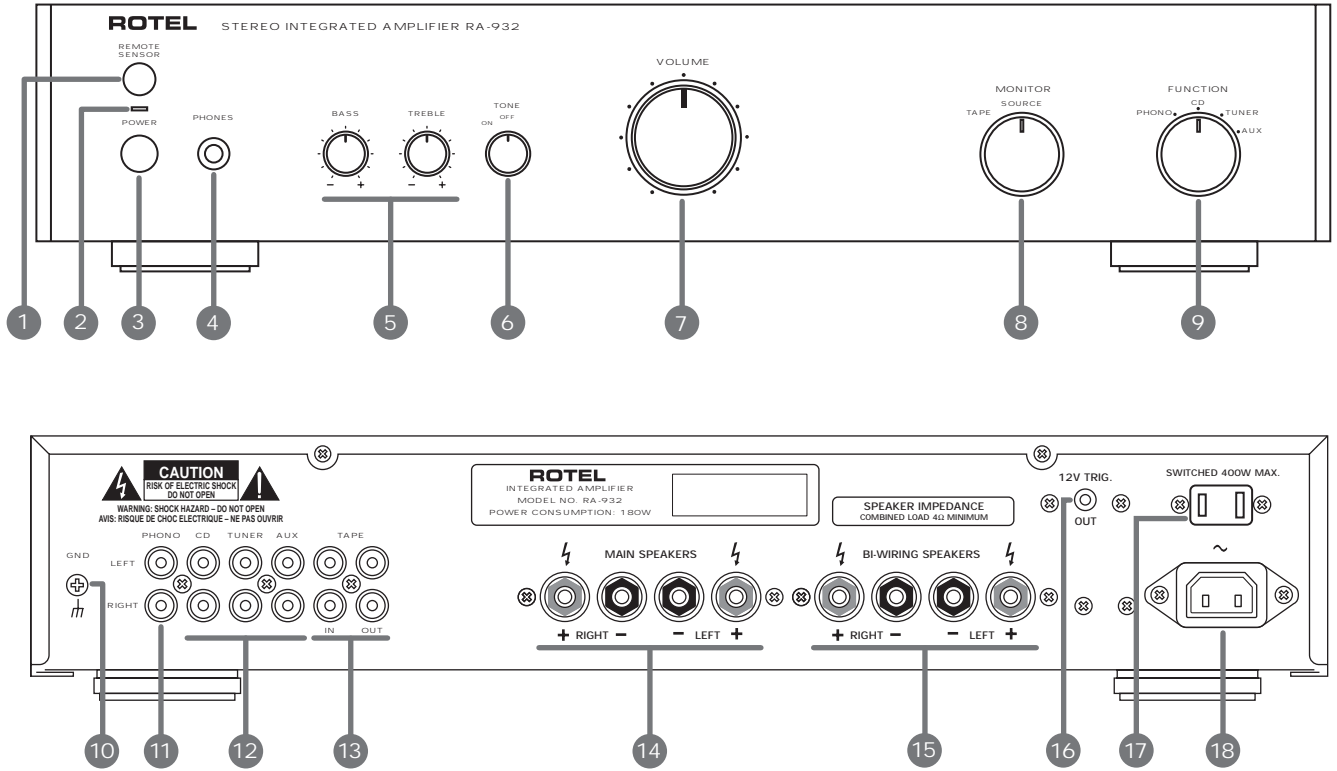


Figure 2: Line Level Signal, Recorder and Speaker Output Connection

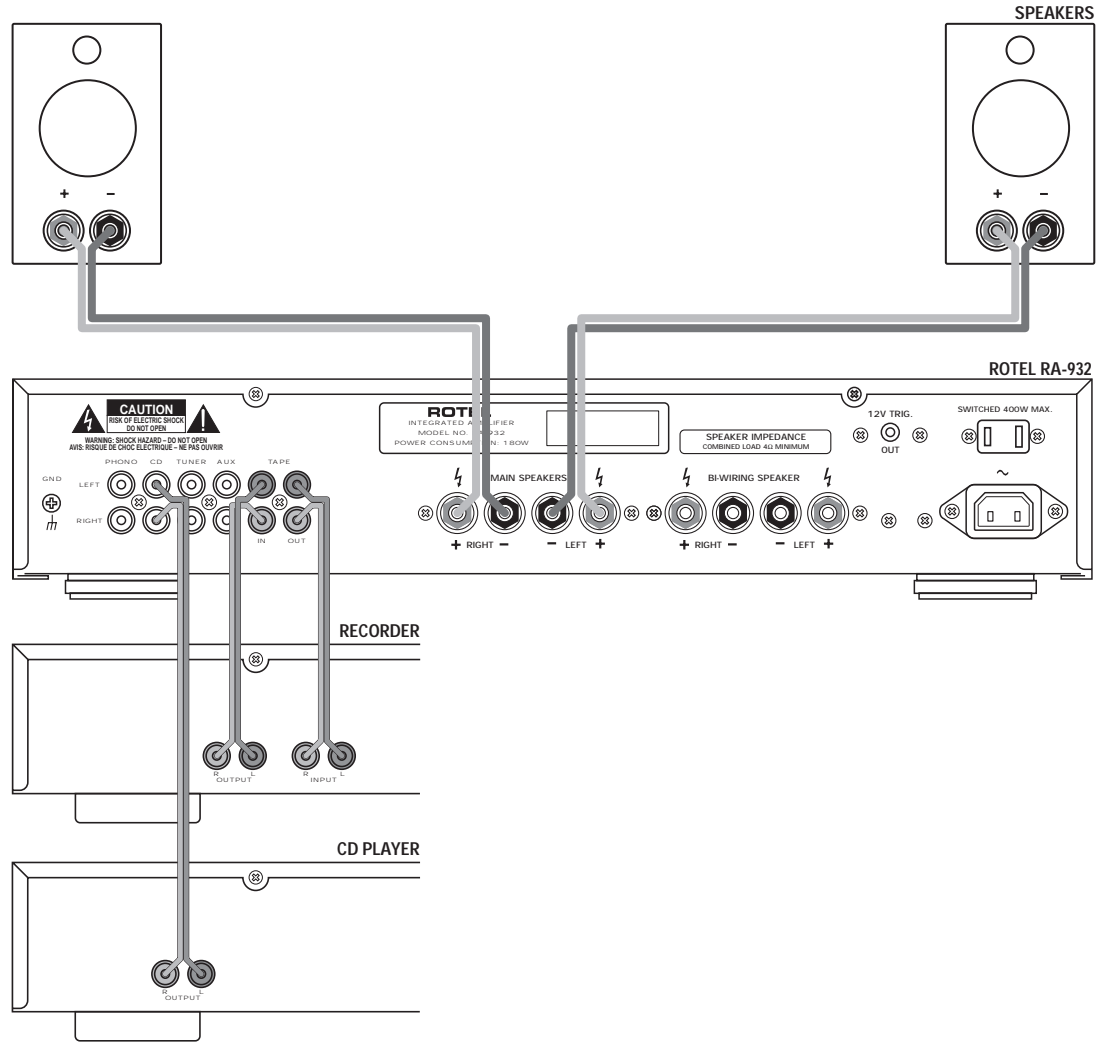
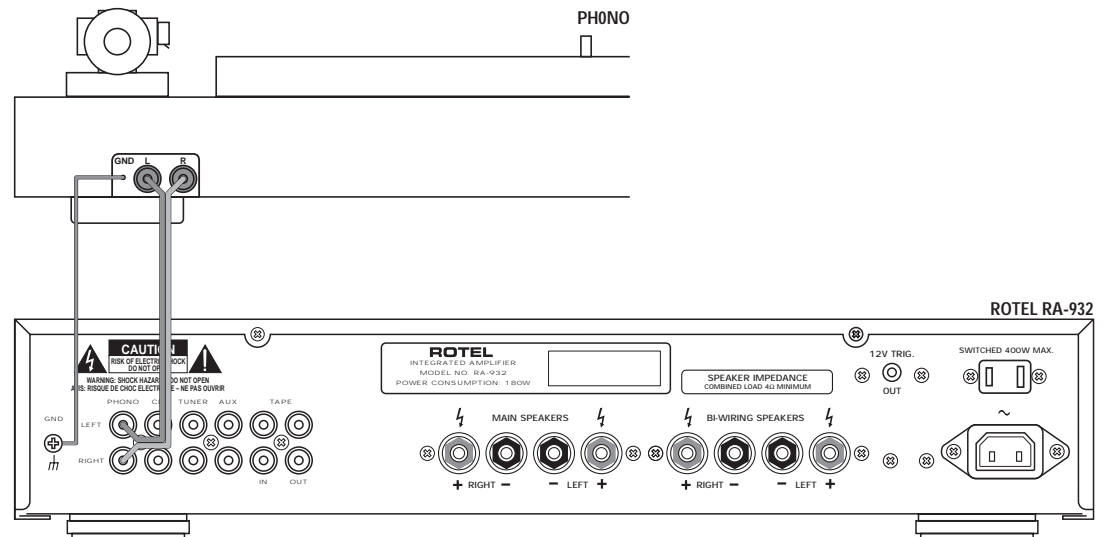


Figure 3: Phono Input Connection



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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 RA-932 Stereo Integrated Amplifier. When used in a high-quality music audio system, it will provide years of musical enjoyment.

The RA-932 is a full featured, high performance component. All aspects of the design have been optimized to retain the full dynamic range and subtle nuances of your music. The RA-932 has a highly regulated power supply incorporating a Rotel custom-designed toroidal power transformer and custom-made slit foil capacitors. This low impedance power supply has ample power reserves, which enables the RA-932 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 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 RA-932 circuitry uses metal film resistors and polystyrene or polypropylene capacitors in important signal paths. All aspects of this design have been examined to ensure the most faithful music reproduction.

In addition the RA-932 has independent input signal selectors for listening and recording. They allow you to listen to one signal source while recording another.

The main functions of the RA-932 are easy to install and use. 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

WARNING: To avoid potential damage to your system, turn off ALL the components in the system when connecting or disconnecting the loudspeakers or any associated components. Do not turn the system components back on until you are sure all the connections are correct and secure. Pay particular attention to the speaker wires. There must be no loose strands that could contact the other speaker wires, or the chassis of the amplifier.

Please read this manual carefully. It provides information on how to incorporate the RA-932 into your system as well as 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 RA-932 shipping carton and all enclosed packing material for future use. Shipping or moving the RA-932 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 RA-932. 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 RA-932 can be affected by its environment. Avoid placing the RA-932 on top of other components. Also avoid routing audio signal cables near power cords. This will minimize the chance it will pick up hum or interference.

The RA-932 generates heat as part of its normal operation. The heat sinks and ventilation openings in the amplifier are designed to dissipate this heat. The ventilation slots in the top cover must be open. There should be 10 cm (4 inches) of clearance around the chassis, and reasonable airflow through the installation location, to prevent the amplifier from overheating.

Remember the weight of the amplifier when you select an installation location. Make sure that the shelf or cabinet can support it. We recommend installing the RA-932 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.

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.



AC Power and Control

AC Power Input 18

The RA-932 does not draw high levels of current from the power outlet. However, when ever possible, it should be plugged directly into a 2-pin polarized wall outlet. Do not use an extension cord. A heavy duty multi-tap power outlet strip may be used if it (and the wall outlet) can handle the current demanded by the RA-932 and all the other components connected to it.

Your RA-932 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 RA-932 amplifier to another country, it is possible to reconfigure it for use on a different line voltage. Do not attempt to perform this conversion yourself. Opening the enclosure of the RA-932 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 Indicator 2 and Power Switch 3

Push in the Power Switch button to turn the RA-932 on. The Power Indicator light is illuminated when the RA-932 is on. Press and release the Power Switch button again to turn the RA-932 off.

Auxiliary Power Outlet 17 (U.S.A. version only)

The RA-932 has a switched power outlet on the back panel. Power is available from this outlet when the RA-932 is turned on. This outlet can provide up to 150 watts. It is appropriate for supplying power to signal source, such as a CD player, tuner, or tape deck. Do not connect a power amplifier to this power outlet. Connecting a component that draws more than 150 watts to this outlet could damage the Power Switch of the RA-932.

12 Volt Trigger Outlet 16

Some audio components can be turned on automatically when they receive a 12V turn on "signal". The 12V Trigger Output of RA-932 provides the required signal. Connect the compatible components to the RA-932 with a conventional 1/8" miniplug cable.

Input Signal Connections

The RA-932 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.

Phono Input 11 and Ground Wire Connection 10

[See Figure 3 for phono input connection illustration.]

Plug the cable from the turntable into the appropriate left and right phono inputs. Most turntables also have a "ground" wire. Connect it to the screw terminal to the left of the Phono inputs. It will help prevent hum and noise.

Line Level Inputs 12

[See Figure 2 for line level input connection illustration.]

The CD, Tuner, and Aux inputs of the RA-932 are all "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. Figure 2 shows a CD player connected to the CD inputs. Other components are connected in the same way.

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 RA-932. Ask your authorized Rotel dealer for advice about cables.

Recorder Connections 13

[See Figure 2 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 RA-932 remember that the *outputs* of the recorder must be connected to the tape *inputs* of the RA-932. Similarly the tape *outputs* of the RA-932 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.

Speaker Outputs 14 and 15

[See Figure 2 for speaker connection illustration.]

The RA-932 has two sets of speaker outputs, labeled MAIN 14 and BI-WIRING 15. Both sets of speaker outputs are "live" at all times. They are wired in parallel. The combined minimum impedance load for the speakers connected to the RA-932 must be at least 4 ohms. If only one pair of speakers is connected, virtually any speaker may be used. However, if two pairs of speakers are connected, all the speakers should have an impedance of 8 ohms or higher. See your authorized Rotel dealer if you have any questions.

Speaker Wire Selection

Use insulated two-conductor stranded wire to connect the RA-932 to the speakers. The size and quality of the wire can have an audible effect on the performance of the system. Standard speaker wire will work, but can result in lower output or diminished bass response, particularly over longer distances. In general, heavier wire will improve the sound. For best performance, you may want to consider special high-quality speaker cables. Your authorized Rotel dealer can help in the selection of cables for your system.

Polarity and Phasing

The polarity – the positive/negative orientation of the connections – for every speaker and amplifier connection must be consistent so all the speakers will be in phase. If the polarity of one connection is reversed, bass output will be very weak and stereo imaging degraded. All wire is marked so you can identify the two conductors. There may be ribs or a stripe on the insulation of one conductor. The wire may have clear insulation with different color conductors (copper and silver). There may be polarity indications printed on the insulation. Identify the positive and negative conductors and be consistent with every speaker and amplifier connection.

Speaker Connection

Turn off all the components in the system before connecting the speakers. The RA-932 has color-coded binding post type speaker connectors on the back panel (except in European Community countries where their use is not permitted). These connectors accept bare wire, connector lugs, or dual banana type connectors.

Route the wire from the RA-932 to the speakers. Give yourself enough slack so you can move the components to allow access to the speaker connectors.

If you are using dual banana plugs, connect them to the wires and then plug into the backs of the binding posts. The thumbscrews of the binding posts should be screwed in all the way (clockwise).

If you are using terminal lugs, connect them to the wires. If you are attaching bare wires directly to the binding posts, separate the wire conductors and strip the insulation from the end of each conductor. Be careful not to cut into the wire strands. Unscrew (turn counterclockwise) the binding post thumbscrews. Place the connector lug or wire around the binding post shaft. Turn the thumbscrews clockwise to clamp the connector lug or wire firmly in place.

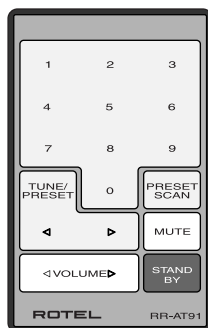
Note: Be sure there are no loose wire strands that could touch adjacent wires or connectors.

Front Panel Controls

Volume Control 7

The Volume control is a standard control. Turn the control *clockwise* to increase the volume, or *counterclockwise* to decrease the volume.

The volume of the RA-932 can also be controlled with the small remote control that is provided with it, the RR-AT91. Press the right side of the area labeled <VOLUME> to increase the volume level. Press the left side of the button to decrease the volume level.



Mute Control (remote only)

To temporarily mute the sound of the system press the MUTE button on the RR-AT91 remote. Press the button again to return the sound to the original volume level. The LED in the Volume Control will blink when the sound is muted.

Standby On/Off (remote only)

When the Power switch is on, the RA-932 will go to Standby Mode when the STANDBY button on the remote is pressed. The LED in the Volume control will turn off. Press the mute button again to return the unit to normal operating mode.

Tone On/Off Switch 6

When the Tone Switch is in the Off position the Bass and Treble Control (Tone Control) circuits are bypassed to ensure the purest possible sound. Leave the Tone Switch in the Off position unless you want to use the Tone Controls. Turn the Tone Switch to the On position if you want to adjust the Tone Controls.

Bass and Treble Controls 5

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.

Function Selector 9

The setting of the Function Selector controls which of the input signal is heard, as long as the Tape Monitor switch is in the "Source" position. (See the following section.)

Tape Monitor Control 8

Normally the Tape Monitor Switch should be set to the "Source" position. Then the source you hear will be the one selected by the Function Selector. To listen to a tape recording, or to monitor a recording in-progress with a tape recorder that provides that function, set the control to the "Tape" position.

Phones Output 4

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. Plugging in a set of headphones cuts off the signal to the speaker outputs.

Note: Because the sensitivity of speakers and headphones can vary widely, always reduce the volume level before connecting or disconnecting headphones.

Remote Sensor 1

The Remote Sensor is located above the Power Indicator on the front panel. It picks up the infra-red signals from the remote control. Do not cover or block the sensor. It must be clear of obstructions 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 sun light. In addition remote control functions may not work reliably if the batteries in the RR-AT91 are weak.

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 RA-932 refer to the suggestions for the following conditions:

Power Indicator Is Not Lit

The Power Indicator should be lit whenever the RA-932 is plugged into the wall power outlet and the Power Switch is pushed in. 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, but the Standby Indicator still will not light when the RA-932 is plugged into the wall outlet, 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

Check the signal source to see if it is functioning properly. Make sure the cables from the signal source to the RA-932 inputs are connected properly. Be sure the Listening Selector is set to the proper input. Check the wiring between the RA-932 and the speakers.

Specifications

Continuous Power Output (20-20 kHz, < 0.03%, 8 ohms)	35 watts/ch
Total Harmonic Distortion (20Hz-20kHz)	< 0.03% at rated power, 1/2 power or 1 watt
Intermodulation Distortion (60 Hz : 7 kHz, 4:1)	< 0.03% at rated power, 1/2 power or 1 watt
Frequency Response	
Phono Input	20Hz-15kHz, ± 0.3 dB
Line Level Inputs	10Hz-40kHz, ± 1 dB
Damping Factor (20-20,000 Hz, 8 ohms)	180
Input Sensitivity / Impedance	
Phono Input	2.5mV / 47 kOhms
Line Level Inputs	150 mV / 20 kOhms
Input Overload	
Phono Input	180mV
Line Level Inputs	5V
Tone Controls - Bass /Treble	± 6 dB at 100Hz / 10kHz
Signal to Noise Ratio (IHF "A" weighted)	
Phono Input	80 dB
Line Level Inputs	100 dB
Power Requirements	
USA Version	115 Volts, 60 Hz
European Version	230 Volts, 50 Hz
Power Consumption	180 Watts
Dimensions (W x H x D)	440 x 92 x 347 mm 17 ³ / ₈ x 3 ⁵ / ₈ x 13 ¹¹ / ₁₆ "
Weight (net)	5.5 kg, 12.1 lbs.

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

RA-932

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