

# ROTEL *hiFi*

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## **RKW-950**

**WIRELESS MICROPHONE  
RECEIVER**

## **& RKM-950**

**WIRELESS MICROPHONE**

# **OWNER'S MANUAL**

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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.

**WARNING:**

To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.



**Explanation of Graphical Symbols**

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert 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 instructions in the literature accompanying the appliance.



**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 use instructions should be followed.
5. **Water and Moisture** - The appliance should not be used near water - for example, near a bathtub, 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.
- 6A. An appliance and cart combination should be moved with care. Quick stops, excessive force and uneven surfaces may cause the appliance and cart combination to overturn.
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 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, heat registers, stoves or other appliances (including amplifiers) 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. **Grounding or Polarization** - The precautions that should be taken so that the grounding or polarization means of an appliance is not defeated.
12. **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 and plugs, convenience receptacles and the point where they exit from the appliance.
13. **Cleaning** - The appliance should be cleaned only as recommended by the manufacturer.
14. **Nonuse Periods** - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
15. **Object and Liquid Entry** - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through the openings.
16. **Damage Requiring Service** - The appliance should be serviced by qualified factory-authorized service personnel when:
  - The power-supply cord or the plug has been damaged; or
  - Objects have fallen, or liquid has been spilled into the appliance; or
  - The appliance has been exposed to rain; or
  - The appliance does not appear to operate normally or exhibits a marked change in performance; or
  - The appliance has been dropped, or the enclosure damaged.
17. **Servicing** - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified factory-authorized service personnel.



## A WORD FROM ALL OF US AT ROTEL

We thank you for purchasing our RKM 950 Wireless Microphones and RKW 950 Wireless Microphone Receiver. We have been designing and manufacturing high quality, high performance audio electronics for more than 30 years. While it may seem unusual for Rotel to be making wireless microphones and receivers, they are a natural extension of our love of music. Our passion for good sound and enjoyment of music is well known and we feel that the RKM 950 and RKW 950 Wireless Microphone and Receiver set will be a source of enjoyment for many years to come.

Rotel is committed to making quality products to enhance your life. We have designed this set to be durable, reliable and to have high fidelity sound. These are high quality designs and will provide you with years of service if properly cared for. Reading the owner's manual will help ensure that the receiver and microphone's installation give optimum reception and the best performance possible. We appreciate being a part of your life.

## INCLUDED

- 1 set RKW 950 Wireless Mic Receiver (A, B, C, or D)
- 2 pcs RKM 950 Wireless Microphones (to match receiver)
- 2 pcs Microphone cables (to connect RKW 950 to a mixer)
- 4 pcs AA batteries for the RKM 950 Microphones (2 each)

## INSTALLATION

Please place the Mic Receiver in a **dry** level place, away from large metal objects and walls. It should be in a location where it will not be wet or subject to vibrations. **Do not place it on top of the amplifier as the heat and the metal casing of the amplifier may adversely affect performance and reception of the microphone receiver and overheat the amplifier by blocking its' cooling vents.** It should be in the same room where you will use the microphone.

We recommend that the receiver be 1 meter (1 yard) above the floor and at least 30 cm (1 foot) away from the side walls of the room. This will ensure optimum reception of the microphone by the mic receiver. The antenna should be attached and standing straight up for optimum reception of the microphone.

Large metal objects, such as a refrigerator, may cause interference with the reception from the microphones. The best performance will be possible if the RKW 950 receiver is located away from electrical motors, microwave ovens, air conditioners or other electrical appliances.

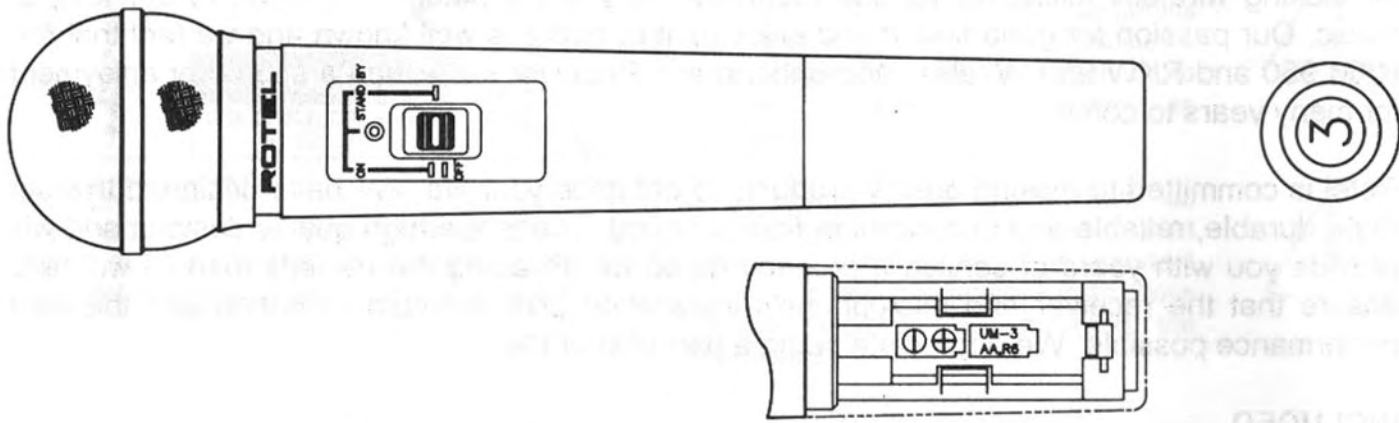
Important Note: There are **NO** user serviceable parts inside the RKW 950 Wireless Microphone Receiver. **Do not open the case as this could expose you to the risk of electrical shock.** This may also damage the circuits and void your warranty.

**Moisture will damage or destroy the RKM 950 Microphones so please do not get them wet.**

## PREPARING THE MICROPHONES AND RECEIVER FOR USE

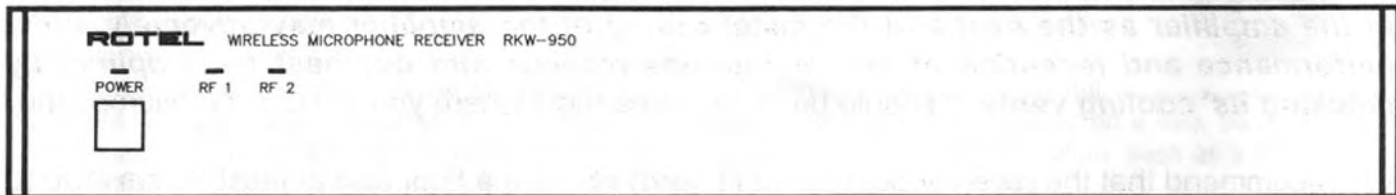
The RKM 950 microphone is battery operated and requires two (2) AA (R 6, UM-3) batteries for power. Unscrew the bottom of the microphone by turning it **counterclockwise** and then gently pull down on the end. This will expose the battery holder for the AA batteries. Please be certain to install the batteries with the correct polarity ( +, - ) to be certain that the microphone has

power. To replace the battery cover slide it gently back up the battery holder and then turn it **clockwise** to seal the battery compartment. (If you will use the microphone for long periods of time we recommend the use of Alkaline batteries, as they last longer. Rechargeable batteries will also work well in these microphones and are a renewable power source that is environmentally friendly.)



Above is an illustration of the RKM 950 microphone, showing power switch, frequency label and battery compartment.

The microphone Power Switch has an Off, Standby and an On position. We have also included a power LED to indicate that the microphone (MIC) is On and that the battery is in good condition. When the LED becomes dim or does not light, the batteries should be replaced or (**ONLY** if they are NiCad rechargeable or Alkaline rechargeable batteries) recharged in an external battery charger.



Above is an illustration of the RKW 950 wireless microphone receiver front panel, showing power switch, RF 1 and RF2 indicator lights.

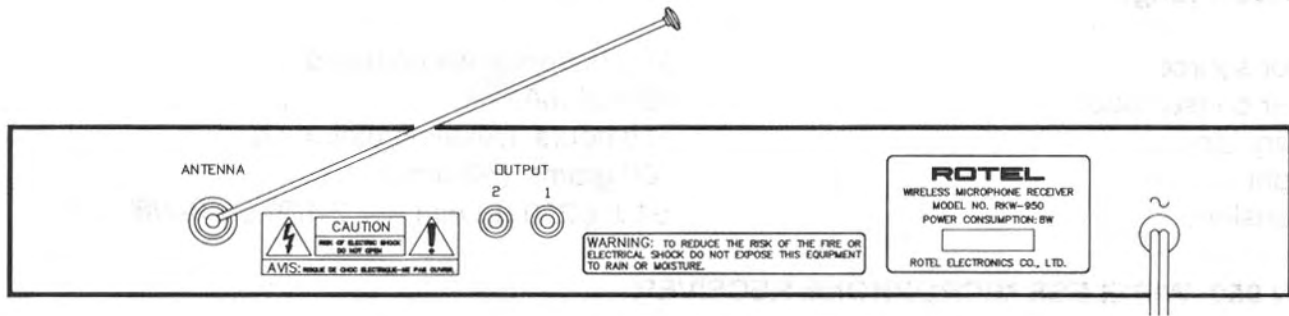
The RKW 950 has indicator lights (RF 1 and RF 2) on the front panel to confirm proper reception signal from the RKM 950 microphones. The RF 1 light will respond to the frequencies associated with Channels 1 through 4 and RF 2 will respond to Channels 5 through 8. (See the note below regarding Letter and Channel designations for the Microphones and Receivers.)

There is a channel frequency number on the bottom of each microphone. We include two microphones with each receiver and they are of a different frequency. This allows the RKW 950 to receive two microphone signals at the same time, as confirmed by the RF 1 and RF 2 indicator lights. The receiver will have a label on the back to indicate which microphones it will receive.

**NOTE:** The following letter label on the Receiver back panel indicates the RKW 950 will receive the following designated channels:

- A** receives channels **1** and **8**.
- B** receives channels **2** and **7**.
- C** receives channels **3** and **5**.
- D** receives channels **4** and **6**.

As many as four RKW 950 receivers may be used in one installation. In this case, they should all be different letter labeled receivers. (**One each** of Letter A, B, C, and D.) This will make it possible to use as many as 8 microphones at the same time.



Above is an illustration of the back panel of the RKW 950, showing the two output jacks and antenna.

### CONNECTING THE RKW 950 TO YOUR MIXER PREAMPLIFIER (RKC 950)

The RKW 950 has two output jacks (OUTPUT 1 & 2) for microphones on the back panel. These should be connected to the back or front panel microphone jacks (MIC 1 & 2 or 3 & 4) on the RKC 950 Karaoke Mixer Preamplifier by attaching the supplied microphone cables from the OUTPUT 1 and 2 microphone jacks to the MIC 1 & 2 or 3 & 4 jacks on the RKC 950. *Please make all connections while the power is Turned Off.*

**NOTE:** If you use the RKW 950 with another brand of mixer you should read the owner's manual for your mixer before connecting the OUTPUTS of the RKW 950 to the appropriate input jacks on your mixer or preamplifier. *Incorrect connections will result in poor performance or no sound from the system.* Please check all connections to be certain they are correct before turning on the mixer for the first time.

**Thank you for choosing our RKW 950 and RKM 950 Wireless Microphone and Receiver set. Enjoy the music !**

## SPECIFICATIONS

### RKM 950 WIRELESS MICROPHONES

Mic unit	Dynamic, cardioid type
Modulation mode	FM
Frequency stability	+/- 0.005%
Maximum deviation	+/- 15kHz
Operating temperature range	-5 to 50 degrees Centigrade
Frequency response	50 Hz to 12 kHz
Dynamic range	> 90 dB
Output power	10 Milliwatts
Broadcast range	Approx. 10-20 meters
Power source	3 volts from 2 AA batteries
Power consumption	70-100 mA
Battery life	~15 hours (Alkaline batteries)
Weight	200 grams (~8 ozs.)
Dimensions	54 $\phi$ x 250 (L) mm      2-1/8" $\phi$ x 9-7/8" (L)

### RKW 950 WIRELESS MICROPHONE RECEIVER

Image rejection	> 60 dB
Signal to noise ratio	> 80 dB
Total harmonic distortion	< 1% (10kHz deviation @ 1kHz)
Reception range	10-20 meters
(Reception range may be increased if an external antenna is used in place of the unit supplied with the RKW 950. Ask your dealer for advice.)	
RF input for microphones	2 inputs
Output to mixer	2 outputs
Output voltage (rated)	200 mV @ 1kHz
Output level	-20 dB
Power requirement	115 volts AC 50/60 Hz 230 volts AC 50/60 Hz
Power consumption	8 watts
Weight	3.1 kg / 6.8 lbs
Dimensions	440(w) x 72(h) x 210(d) mm 17-3/8"(w) x 2-7/8"(h) x 8-1/4"(d)

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