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› WishRing HH-9000 Quad-Band Mobile Radio Antenna User Manual

WishRing HH-9000

WishRing HH-9000 Quad-Band Mobile Radio Antenna User Manual

1. INTRODUCTION

This manual provides essential instructions for the proper installation, operation, and maintenance of your WishRing HH-9000 Quad-Band Mobile Radio Antenna. Please read this manual thoroughly before using the antenna to ensure optimal performance and longevity. This antenna is designed for mobile radio applications, supporting 10-meter, 6-meter, 2-meter, and 70-centimeter amateur radio bands.

2. PRODUCT OVERVIEW

The WishRing HH-9000 is a high-gain quad-band mobile radio antenna. It is designed to provide reliable communication across multiple frequency bands. The antenna is supplied in three main sections for ease of transport and assembly.

Key Features:

- Quad-band operation: 10m (29.6MHz), 6m (50.5MHz), 2m (144MHz), 70cm (435MHz)
- High Gain: 2.15dB (10/6m), 3.0dB (2m), 5.5dB (70cm)
- Power Rating: 60/150W
- Impedance: 50Ω
- VSWR: Under 1.5
- Connector Type: PL-259
- Total Length: 1.27 meters (composed of three parts: 46cm, 50cm, 32cm)

Package Contents:

- 1x HH-9000 Quad-Band Mobile Radio Antenna (3 sections)



Figure 2.1: Assembled WishRing HH-9000 Antenna.

3. SETUP AND INSTALLATION

Proper installation is crucial for the performance of your HH-9000 antenna. Ensure you have a suitable mobile antenna mount (not included) and coaxial cable with a PL-259 connector.

3.1 Assembly of Antenna Sections

1. Carefully unpack all three antenna sections.
2. Connect the middle section to the base section by screwing them together. Ensure a firm connection.
3. Attach the top whip section to the middle section. The antenna is designed to be assembled in a specific order to achieve its full length of 1.27 meters.



Figure 3.1: The three main sections of the HH-9000 antenna.

3.2 Mounting the Antenna

Mount the assembled antenna to a sturdy mobile antenna mount on your vehicle. For optimal performance, the antenna should be mounted as high as possible and in the clear, away from obstructions. A good ground plane is essential for efficient operation, especially on lower bands.

3.3 Connecting to Your Radio

1. Connect your coaxial cable (with a PL-259 connector) to the base of the antenna.
2. Ensure the connection is tight to prevent signal loss and moisture ingress.
3. Connect the other end of the coaxial cable to your mobile radio (e.g., TYT TH9800, WOUXUN KG-UV920R).



Figure 3.2: PL-259 connector at the antenna base.

3.4 Tuning the Antenna (VSWR Adjustment)

While the HH-9000 is designed for broad-band operation, fine-tuning may be necessary for optimal performance on specific frequencies within each band. Use a reliable SWR meter to check the Standing Wave Ratio (VSWR) on your desired operating frequencies.

- **Procedure:** Adjust the length of the top whip section by sliding it in or out. A shorter whip generally increases the resonant frequency, while a longer whip decreases it.
- **Goal:** Aim for a VSWR of 1.5:1 or lower for efficient power transfer and to protect your radio's final amplifier.
- **Important:** Always perform SWR checks with the antenna mounted in its final operating position and with a good ground plane.

4. OPERATING INSTRUCTIONS

Once installed and tuned, the HH-9000 antenna operates passively. Ensure your radio is correctly configured for the desired frequency band and power output. Always operate within the antenna's specified power rating (60/150W). The antenna features a fold-over mechanism for convenience, allowing it to be lowered for clearance in garages or low-hanging areas. When folding the antenna, ensure the mechanism is securely latched in both the upright and folded positions to prevent accidental movement during vehicle operation.

5. MAINTENANCE

- **Regular Inspection:** Periodically check all antenna connections, including the PL-259 connector and mounting hardware, for tightness and corrosion.
- **Cleaning:** Keep the antenna clean from dirt, grime, and road salt. Use a mild soap and water solution, then rinse thoroughly. Avoid abrasive cleaners.
- **Set Screws:** If the antenna features set screws for securing sections or the fold-over mechanism, ensure they remain tight. Loose set screws can lead to antenna instability or unexpected folding. Consider applying a thread-locking compound if frequent loosening occurs.
- **Environmental Exposure:** While designed for outdoor use, extreme weather conditions (heavy ice, strong winds) can stress the antenna. Inspect for damage after such events.

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
High VSWR (above 2.0:1)	• Poor ground plane • Incorrect antenna length/tuning • Damaged coaxial cable or connector • Antenna mounted too close to metal objects	• Ensure a solid electrical connection to the vehicle's chassis. • Adjust the antenna whip length (refer to Section 3.4). • Inspect cable and connectors for damage; replace if necessary. • Relocate antenna to a clearer position.

Problem	Possible Cause	Solution
Poor reception/transmission	• High VSWR • Loose connections • Antenna damage • Incorrect radio settings	• Address high VSWR (see above). • Check all connections from antenna to radio. • Inspect antenna for physical damage. • Verify radio frequency, mode, and power settings.
Antenna folds down unexpectedly	• Loose fold-over mechanism • Worn spring/latch	• Tighten any set screws on the fold-over mechanism. • Inspect the latching mechanism for wear. If worn, replacement may be necessary.

7. SPECIFICATIONS

- **Model:** HH-9000
- **Brand:** WishRing
- **Frequency Bands:** 29.6MHz (10m), 50.5MHz (6m), 144MHz (2m), 435MHz (70cm)
- **Gain:** 2.15dB (10/6m), 3.0dB (2m), 5.5dB (70cm)
- **Power Rating:** 60W (continuous) / 150W (peak)
- **Impedance:** 50Ω
- **VSWR:** < 1.5:1
- **Connector:** PL-259
- **Total Length:** 1.27 meters (approx. 50 inches)
- **Component Lengths:** 46cm, 50cm, 32cm
- **Color:** Black, Silver

8. WARRANTY INFORMATION

This WishRing HH-9000 antenna is covered by a limited manufacturer's warranty against defects in materials and workmanship. The warranty period and terms may vary by region and retailer. Please retain your proof of purchase for warranty claims. For specific warranty details, refer to the documentation provided at the time of purchase or contact your retailer.

9. SUPPORT

For technical assistance, troubleshooting, or inquiries regarding your WishRing HH-9000 antenna, please contact your authorized dealer or the manufacturer's customer support channels. Refer to the product packaging or manufacturer's website for contact information.

ASK A QUESTION ABOUT THIS MANUAL

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