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> TWAYRDIO DC-143M Dual Band VHF UHF Portable Radio Antenna User Manual

## TWAYRDIO DC-143M

# TWAYRDIO DC-143M Dual Band VHF UHF Portable Radio Antenna User Manual

Model: DC-143M

## PRODUCT OVERVIEW

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The TWAYRDIO DC-143M is a high-performance dual-band loop antenna designed for portable two-way radios. It supports both VHF (144 MHz) and UHF (430 MHz) frequencies, offering enhanced signal reception and transmission capabilities for a wide range of compatible devices. Its compact and durable design makes it an ideal accessory for radio enthusiasts and professionals.

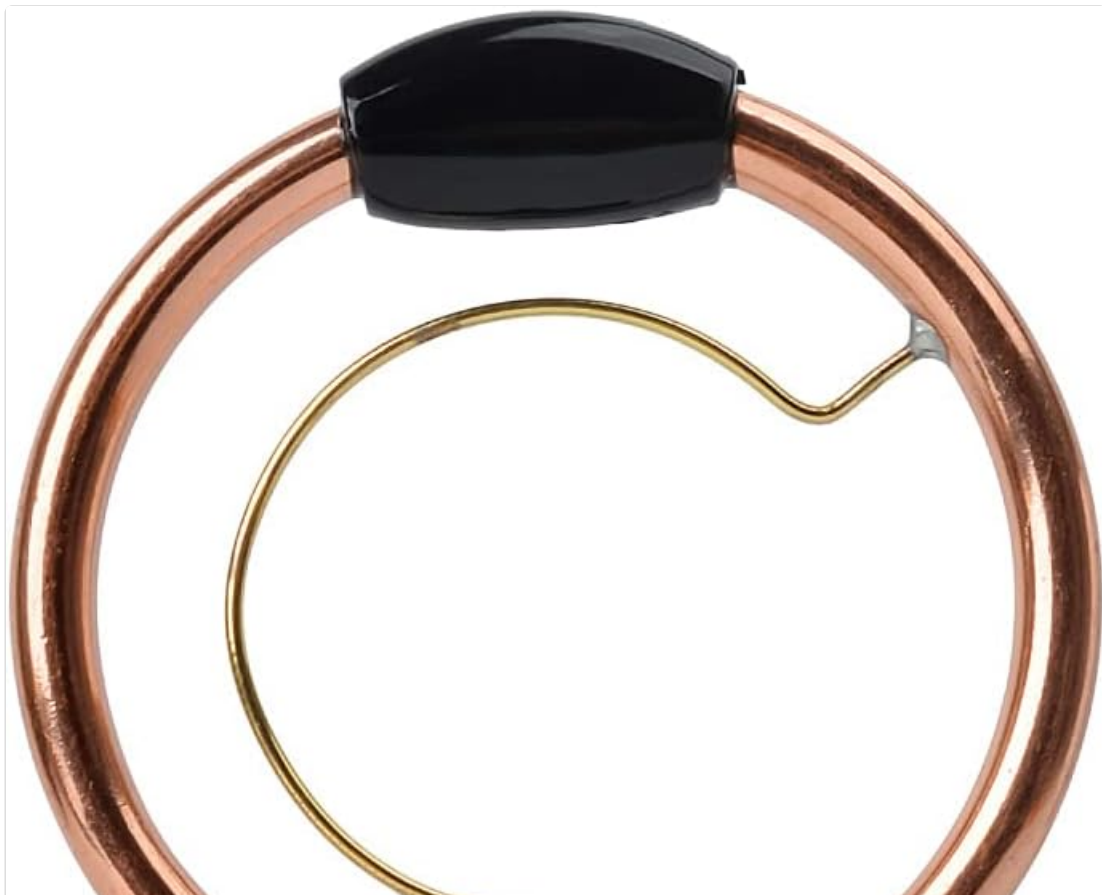




Figure 1: TWAYRDIO DC-143M Dual Band Loop Antenna. This image shows the full antenna, featuring its distinctive copper loop and black base with an SMA-Male connector.

## SPECIFICATIONS

Feature	Detail
Frequency	144/430 MHz (VHF/UHF)
Impedance	50 $\Omega$
VSWR	<1.5
Gain	1.8/2.8 dBi (VHF/UHF)

Feature	Detail
Polarization	Vertical
Radiation	Omni-directional
Lightning Protection	Direct Grounding
Maximum Input Power	20 W
Height	150 mm (5.9 inches)
Connector	SMA-Male
Radome Material	ABS
Color	Black
Model Number	DC-143M



Figure 2: Antenna dimensions. The image illustrates the compact size of the antenna, approximately 14.5 cm (5.7 inches) in height.

## SETUP AND INSTALLATION

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The TWAYRDIO DC-143M antenna features an SMA-Male connector for easy installation. Follow these steps to attach the antenna to your compatible two-way radio:

1. Ensure your radio is powered off before attaching or detaching any antenna.
2. Locate the antenna connector on your radio. Most compatible radios will have an SMA-Female connector.
3. Align the SMA-Male connector of the DC-143M antenna with the SMA-Female connector on your radio.
4. Gently screw the antenna onto the radio connector clockwise until it is finger-tight. Do not overtighten, as this can damage the connectors.
5. Once securely attached, you may power on your radio.



Figure 3: Close-up view of the SMA-Male connector at the base of the antenna, highlighting its threaded design for secure attachment.



Figure 4: The TWAYRDIO antenna connected to a portable radio, demonstrating proper installation and typical usage.

## OPERATING INSTRUCTIONS

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The TWAYRDIO DC-143M antenna is designed to optimize the performance of your dual-band portable radio. No specific operational steps are required for the antenna itself beyond proper installation. Its omni-directional radiation pattern ensures consistent signal coverage in all directions.

For optimal performance, ensure your radio is tuned to the correct VHF (144-174 MHz) or UHF (400-470 MHz) frequency range. The antenna's gain of 1.8/2.8 dBi (VHF/UHF) will help extend your communication range and improve signal clarity compared to standard stock antennas.

**Important:** Always operate your radio within the legal power limits and frequency allocations for your region. The antenna is rated for a maximum input power of 20W.

## MAINTENANCE

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The TWAYRDIO DC-143M antenna is built for durability and requires minimal maintenance. Follow these guidelines to ensure its longevity:

- **Cleaning:** Wipe the antenna with a soft, dry cloth to remove dust or dirt. Avoid using harsh chemicals or abrasive materials, which could damage the ABS radome or copper loop.
- **Storage:** When not in use, store the antenna in a cool, dry place away from direct sunlight and extreme temperatures.
- **Inspection:** Periodically inspect the SMA connector for any signs of corrosion or damage. Ensure the connection remains clean and secure.
- **Handling:** While durable, avoid bending or applying excessive force to the copper loop, as this could affect its performance characteristics.

## TROUBLESHOOTING

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If you experience issues with your TWAYRDIO DC-143M antenna, consider the following troubleshooting steps:

- **Poor Signal Quality or Range:**
  - Ensure the antenna is securely screwed onto the radio's connector. A loose connection can significantly degrade performance.
  - Verify that your radio is set to the correct frequency band (VHF or UHF) for your communication.
  - Check for obstructions between your radio and the receiving station. Large buildings, hills, or dense foliage can block radio signals.
  - Test with another known-good antenna if available, to determine if the issue is with the antenna or the radio.
- **Antenna Not Fitting Radio:**
  - Confirm your radio has an SMA-Female connector. This antenna is designed with an SMA-Male connector.
  - Refer to your radio's manual to confirm its antenna connector type. Adapters may be available for different connector types, but direct connection is always recommended for best performance.
- **Physical Damage:**
  - Inspect the antenna for any visible damage to the copper loop, ABS housing, or connector. Physical damage can severely impact performance.
  - If the antenna is physically damaged, it may need to be replaced.

## COMPATIBLE DEVICES

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The TWAYRDIO DC-143M antenna is compatible with a wide range of portable two-way radios featuring an SMA-Male antenna connector. Below is a list of commonly compatible models:

- **YAESU:** VX-1R, VX-2R, VX-3R, VX-5R, VX-6R, VX-7R, VX-8R, VX-110, VX-130, VX-131, VX-150, VX-160, VX-170, VX-177, VX-180, VX-300, VX-400, VX-410, VX-800, FT-270R, FT-70D, FT-250R, FT-60R, VX-230, VX-8D.
- **TYT:** TH-UV8R, UVF9, UVF9D, UVF8D, F8, F5, F3, F7, TH-F1, TC-3000A, UVF10, UV6R, UVF9, UVF11, UVF8, TC-3000B, TC-3000S, TC8000, UV8000D, MD-280, MD-380, MD-446.
- **BAOFENG:** BF-UV3R, UV-100, UV-200.
- **WOUXUN:** KG-UV6D, KG-UV8D, KG-UV9D Plus, KG-UV66.
- **PUXING:** PX-325, PX-333, PX-2R, PX-V6, PX-A6, PX-358, PX-359.
- **LINTON:** LT-6100, LT-6188.
- **TONGFA:** TF-UV985, 385.

- And other radio brands compatible with SMA-Male antennas.

## WARRANTY AND SUPPORT

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For warranty information and technical support regarding your TWAYRDIO DC-143M antenna, please refer to the documentation provided with your purchase or contact TWAYRDIO customer service directly. Details for contacting support are typically available on the manufacturer's official website or through your point of purchase.

Please retain your proof of purchase for any warranty claims.