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Retevis MA09

Retevis MA09 GMRS Base Antenna Instruction Manual

Comprehensive Guide for Installation, Operation, and Maintenance

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your Retevis MA09 GMRS Base Antenna. Please read this manual thoroughly before using the product to ensure proper function and safety.

Package Contents

Verify that all components are present in the package:

- 1 x Retevis MA09 GMRS Base Antenna (Fiberglass sections)
- 2 x Fixing rings (U-bolts)
- 2 x Fixing screws
- 3 x Bracket Rods (for ground plane radials)
- Mounting hardware (nuts, washers)



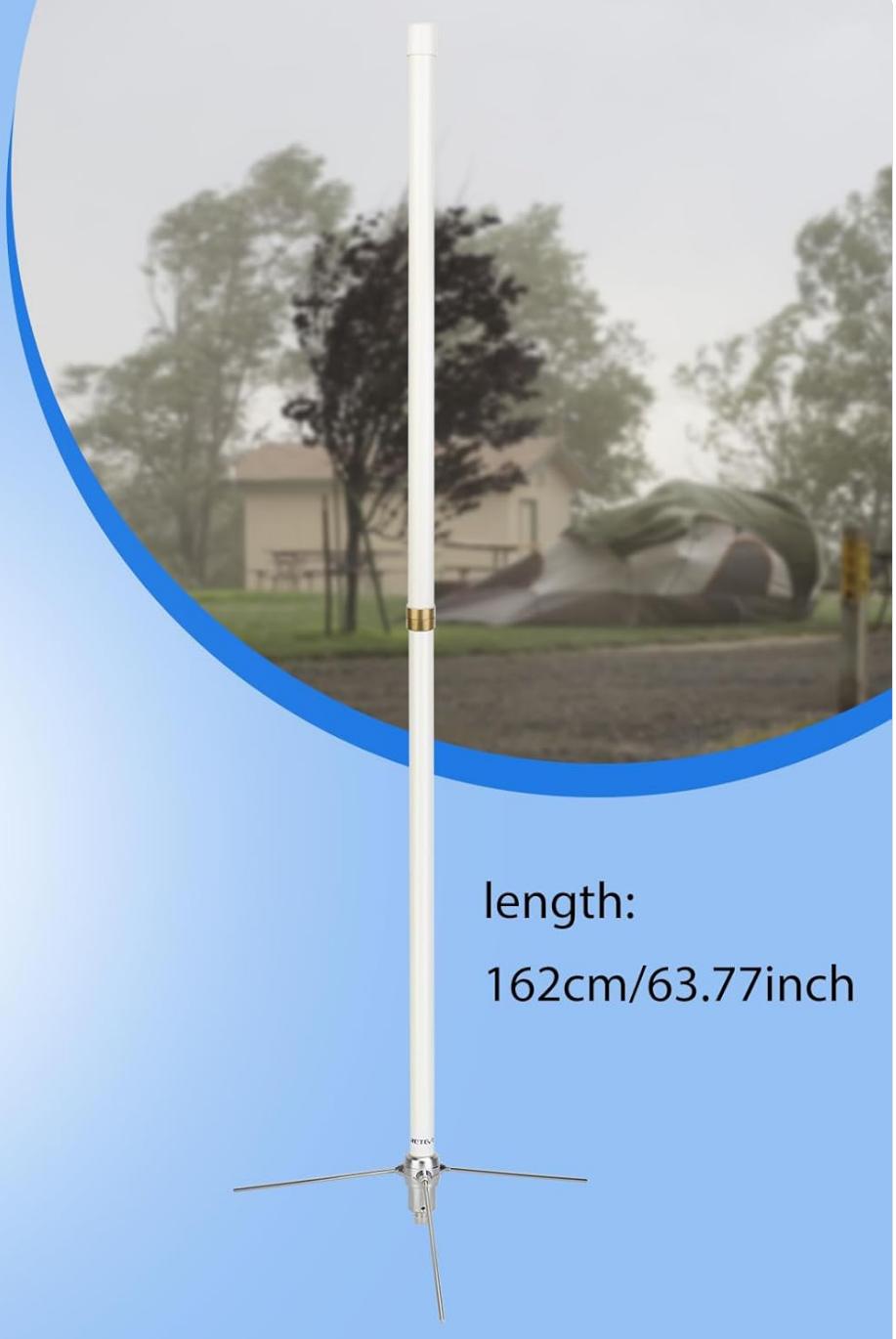
WATERPROOF



WINDPROOF



ANTI-CORROSION



length:
162cm/63.77inch

Image: Contents of the Retevis MA09 GMRS Base Antenna package, showing the fiberglass antenna sections, U-bolts, fixing screws, and bracket rods.

2. SPECIFICATIONS

Feature	Value
Frequency Range	GMRS 462-467MHz
VSWR	<1.5
Impedance	50Ω
Gain	4.5/7.2Bi
Maximum Power Input	200W
Antenna Type	Omni-directional Base Antenna

Material	Heavy-duty Fiberglass, Alloy Connector
Product Dimensions	37 x 4 x 4 inches (approx. 94 x 10 x 10 cm)
Item Weight	2.74 pounds (approx. 1.24 kg)



Aluminum Alloy Antenna

Make the signal more stable and ensure communication quality

Image: Diagram illustrating key specifications and features of the Retevis MA09 GMRS Base Antenna, including frequency range, VSWR, gain, and power input.

3. SETUP AND INSTALLATION

Follow these steps to assemble and install your GMRS base antenna. Ensure all connections are secure before operation.

3.1 Antenna Assembly

1. Unpack all components and verify against the package contents list.

2. Connect the fiberglass antenna sections by screwing them together. Ensure the alloy connectors are tightly fastened to reduce power loss.
3. Attach the three bracket rods (radials) to the base of the antenna. These rods form the ground plane for optimal performance.



Image: The fully assembled Retevis MA09 GMRS Base Antenna, showing the fiberglass mast and the three radial elements at the base.

3.2 Mounting the Antenna

The antenna is designed for outdoor base station use. Choose a mounting location that is as high as possible and clear of

obstructions for best performance.

1. Secure the antenna to a mast or pole using the provided fixing rings (U-bolts) and screws.
2. Ensure the antenna is mounted vertically and is stable against wind and other environmental factors.
3. Connect your GMRS radio or repeater to the antenna using a suitable coaxial cable with a PL259 connector.

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Vehicle Antenna

Antenna interface	SMA-M	SL16.J	SL16	SL16/PL259	NMO SL16-J
Length	15.35inch	48.2inch	48.2inch	18.86inch	20inch
Frequency	MURS	GMRS	144/430MHz	144/430MHz	144/430MHz
Gain	2.15dBi	6.5dBi	3.5dB/6.5dB	2.15/3.5dBi	2.15/3.5dBi
VSWR	<1.5	≤ 1.5	≤ 1.5	<1.5	<1.5
Maximum power	20w	50W	50W	70w	150w
Impedance	50ohm	50ohm	50ohm	50ohm	50ohm
Cables		RG-58U 5m	RG-58U 5m	RG58 C/U (3.9m)	RG58 4m
Weight		2.65Pounds	2.65Pounds	1.3 Pounds	26.98ounce
Antenna interface	NMO	NMO PL-259	PL259	SL16-K/PL259	SL16-K/PL259
Length	32inch	32inch	43.3 inch	63.77inch	63.77inch
Frequency	GMRS	GMRS	156-163 MHz	144/430MHz	GMRS
Gain	4.5dBi	4.5dBi	3.5dbi	4.5dBi /7.2dBi	7.2dBi(UHF)
VSWR	≤ 1.5	≤ 1.5	<1.5	<1.5	<1.5
Maximum power	50W	50W	100w	200w	200w
Impedance	50ohm	50ohm	50ohm	50ohm	50ohm
Cables		RG-58U 5m	RG-58U 7m		
Weight	0.68lb	2.88 Pounds	1.63 Pounds		

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Image: The Retevis MA09 GMRS Base Antenna mounted on a pole, demonstrating a typical installation scenario.

3.3 Important Installation Considerations

- Avoid installing the antenna near tall buildings or large metal structures, as this can affect the Standing Wave Ratio (SWR) and overall performance.
- Ensure proper grounding for lightning protection.
- Use high-quality coaxial cable to minimize signal loss.

GMRS Bands



Image: Visual representation of the GMRS frequency bands (462-467MHz) for which the antenna is designed.

4. OPERATING THE ANTENNA

Once installed, the Retevis MA09 GMRS Base Antenna operates passively to enhance your radio's signal transmission and reception. No direct user interaction is required with the antenna itself during operation.

4.1 Connecting to a Radio/Repeater

- Connect the coaxial cable from your GMRS radio or repeater to the antenna's N-type connector.
- Ensure the radio/repeater is configured for the GMRS frequency range (462-467MHz).

Handheld Antenna

					
Antenna interface	SMA-F	SMA-M	SMA-F	SMA-F	SMA-M
Length	6.6cm/2.6inch	6.6cm/2.6inch	5cm/2.56inch	39cm/15.35inch	39cm/15.35inch
Frequency	144/430MHz	144/430MHz	144/430MHz	144/430MHz	144/430MHz
Gain	2.15dBi	2.15dBi	2.15dBi/3.0db	2.15dBi	2.15dBi
VSWR	<1.5	<1.5	<1.5	<1.5	<1.5
Maximum power	10w	10w	10w	20w	20w
Impedance	50ohm	50ohm	50ohm	50ohm	50ohm
Polarization	Vertical	Vertical	Vertical	Vertical	Vertical
Radiation	Omnidirectional	Omnidirectional	Omnidirectional	Omnidirectional	Omnidirectional
					
Antenna interface	SMA-F	SMA-F	SMA-F	SMA-M	SMA-F
Length	20cm/7.87inch	14.17inch	28.94inch	28.94inch	39cm/15.35inch
Frequency	144/430MHz	144/430MHz	144/430MHz	144/430MHz	MURS
Gain	2.15dBi	2.15dBi	5dBi	5dBi	2.15dBi
VSWR	<1.5	<2.15/ 3.0	<1.5	<1.5	<1.5
Maximum power	20w	20w	20w	20w	20w
Impedance	50ohm	50ohm	50ohm	50ohm	50ohm
Polarization	Vertical	Vertical	Vertical	Vertical	Vertical
Radiation	Omnidirectional	Omnidirectional	Omnidirectional	Omnidirectional	Omnidirectional

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Image: A close-up view of the antenna's alloy interface, highlighting the robust connection point for coaxial cables.

4.2 Optimal Performance

- The antenna's high gain (4.5/7.2Bi) and low VSWR (<1.5) are designed to provide clear and stable communication over extended ranges.
- Regularly check the SWR of your antenna system to ensure optimal performance.

Your browser does not support the video tag.

Video: This video demonstrates the assembly process of a GMRS base antenna, showing how the fiberglass sections and radial elements are connected.

5. MAINTENANCE

The Retevis MA09 GMRS Base Antenna is constructed from heavy-duty fiberglass and alloy, designed for durability and minimal maintenance.

- **Regular Inspection:** Periodically inspect the antenna and its mounting hardware for any signs of wear, corrosion, or damage, especially after severe weather conditions.
- **Cleaning:** Clean the antenna with a damp cloth to remove dirt and debris. Avoid using harsh chemicals that could damage the fiberglass or alloy components.
- **Connection Check:** Ensure all connections, including the coaxial cable and mounting hardware, remain tight and secure.

Image: The Retevis MA09 GMRS Base Antenna shown in diverse outdoor settings, emphasizing its robust construction for various environmental conditions.

6. TROUBLESHOOTING

If you experience issues with your antenna system, refer to the following common troubleshooting tips:

6.1 High SWR Readings

A high SWR (Standing Wave Ratio) indicates that the antenna is not efficiently transmitting power. This can be caused by several factors:

- **Improper Installation:** Ensure the antenna is mounted in a clear area, away from large metal objects or buildings.
- **Damaged Cable/Connectors:** Inspect the coaxial cable and connectors for any damage or poor connections.
- **Antenna Damage:** Check the antenna elements for any physical damage.
- **Incorrect Frequency:** Verify that your radio is operating on the correct GMRS frequencies (462-467MHz).



Retevis MA09 Antenna

Provide you with a stable signal no matter what the environment



Image: A guide to SWR (Standing Wave Ratio) questions and answers, explaining common causes of high SWR and troubleshooting steps.

6.2 Poor Reception/Transmission

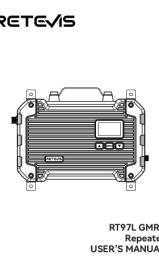
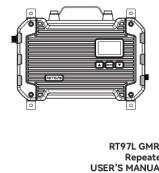
- **Antenna Height:** Ensure the antenna is mounted as high as possible. Height significantly impacts range.
- **Obstructions:** Clear any new obstructions that may have appeared in the antenna's line of sight.
- **Radio Settings:** Double-check your radio's power output and other settings.

7. WARRANTY AND SUPPORT

Retevis provides a 1-year warranty for accessories and a 30-day no-reason return policy. Beyond the warranty period, maintenance services are still offered, with buyers responsible for associated costs.

For support or warranty claims, please contact Retevis Direct on Amazon. They aim to reply within 12 hours.

Related Documents - MA09

 RETEVIS RT97L GMRS Repeater USER'S MANUAL	<p>Retevis RT97L GMRS Repeater User Manual</p> <p>User manual for the Retevis RT97L GMRS Repeater, covering installation, operation, features, technical specifications, and troubleshooting.</p>
 RETEVIS RT97L GMRS Repeater USER'S MANUAL	<p>Retevis RT97L GMRS Repeater User Manual</p> <p>User manual for the Retevis RT97L GMRS Repeater, covering installation, operation, features, technical specifications, troubleshooting, and safety information.</p>
 RETEVIS RB26 Two Way Radio USER'S MANUAL	<p>Retevis RB26 Two Way Radio User's Manual</p> <p>Comprehensive user's manual for the Retevis RB26 Two Way Radio, covering setup, operation, technical specifications, safety guidelines, and warranty information.</p>
 RETEVIS RT-628 Walkie-Talkie Radio	<p>Retevis RT-628 Walkie-Talkie Radio for Kids - Features and Specifications</p> <p>Discover the Retevis RT-628, a user-friendly walkie-talkie radio designed for children. This brochure details its features, specifications, standard and optional accessories, and technical details.</p>
 RETEVIS RB23 Walkie Talkie User's manual	<p>Retevis RB23 Walkie Talkie User Manual</p> <p>Comprehensive user manual for the Retevis RB23 two-way radio, covering unboxing, setup, basic operations, safety guidelines, technical specifications, and compliance information.</p>

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MA1
Mobile Transceiver
USER'S MANUAL

[Retevis MA1 Mobile Transceiver User Manual - Features and Operation Guide](#)

Comprehensive user manual for the Retevis MA1 Mobile Transceiver, covering safety, installation, operation, features, and specifications. Learn how to use your UHF/VHF FM radio effectively.