

[Manuals.plus](#) /

› [SIGNALPLUS](#) /

› SIGNALPLUS 915MHz LoRa Antenna User Manual (Model: 915mhz lora antennas)

SIGNALPLUS 915mhz lora antennas

SIGNALPLUS 915MHz LoRa Antenna User Manual

Model: 915mhz lora antennas

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your SIGNALPLUS 915MHz LoRa Antenna. This antenna is designed for use with Meshtastic devices, LORA32 modules, and Helium HNT Miner Hotspots operating within the 824MHz to 960MHz frequency range. It features a 10dBi gain and comes with a 16.5ft RP-SMA SMA cable.

The antenna is constructed with high-quality fiberglass and a copper internal structure, ensuring durability and optimal performance with low VSWR and high power handling capabilities. It is designed for both indoor and outdoor use, featuring a waterproof and snow-resistant design suitable for all seasons.

Onmi 915MHz LoRa Antenna

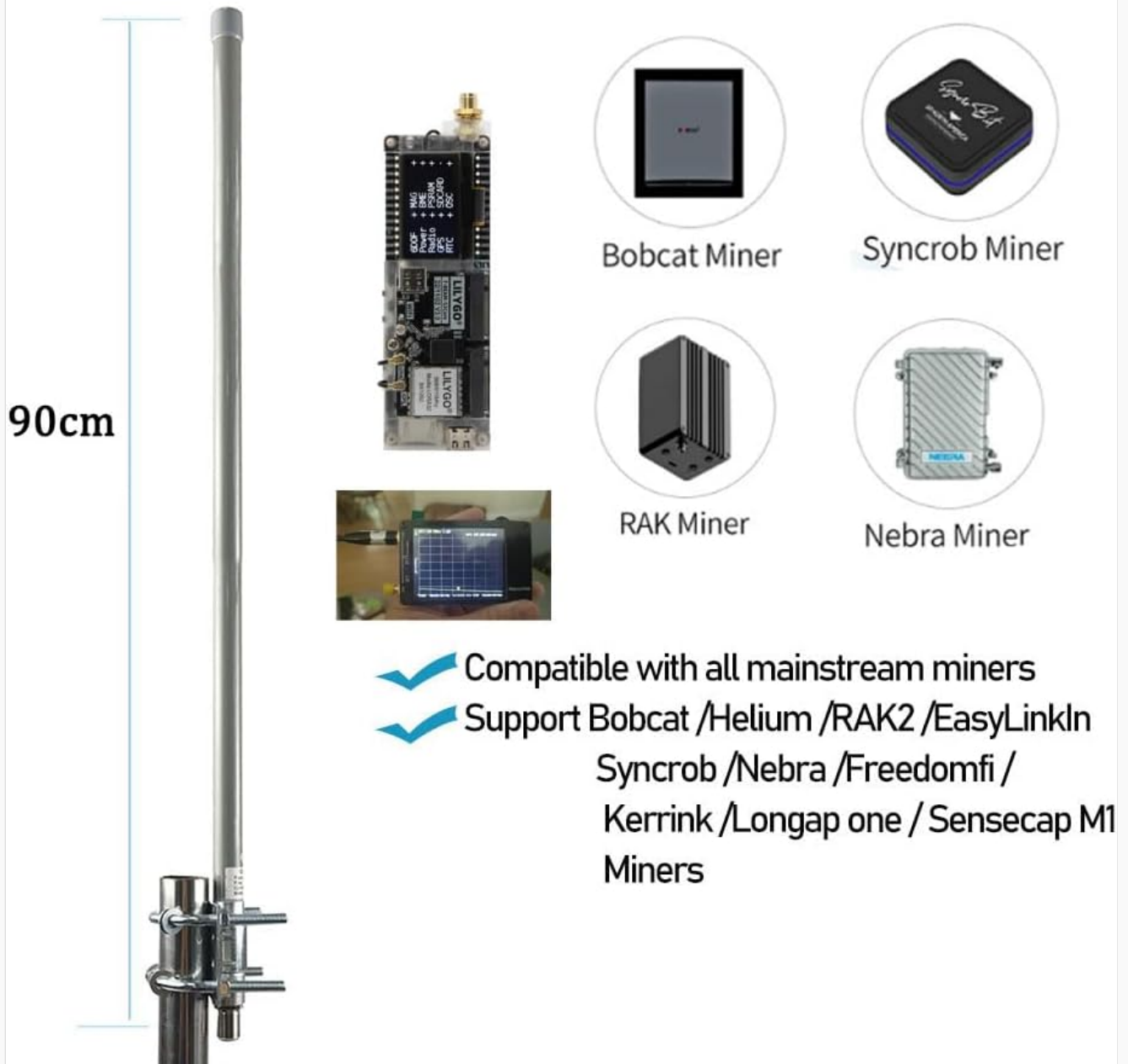


Figure 1: Overview of the SIGNALPLUS 915MHz LoRa Antenna, showing its 90cm length and compatibility with various miner brands such as Bobcat, Syncrob, RAK, and Nebra.

2. PACKAGE CONTENTS

Verify that all items are present in the package before proceeding with installation:

- 1 x 915MHz LoRa Antenna
- 1 x 16.5ft (5 meters) RG58 Cable (N-Male to RP-SMA Female)
- 1 x RP-SMA Male to SMA Male Adapter
- 1 set U-clip code (Mounting Hardware)

3. SETUP INSTRUCTIONS

3.1. Antenna Assembly and Mounting

The antenna is designed for pole-holding mounting. The mounting hardware accommodates poles with a diameter between 40mm and 60mm. Ensure the antenna is securely fastened to a stable pole for optimal performance and safety.

Your browser does not support the video tag.

Video 1: This video demonstrates the unboxing and assembly process of the antenna, including attaching the mounting bracket and connecting the cable. It provides a visual guide for setting up the antenna.

Follow these steps for assembly:

1. Unpack all components, including the antenna, mounting hardware (U-bolts, nuts, washers), and cable.
2. Attach the U-clip mounting bracket to the base of the antenna using the provided nuts and washers.
3. Secure the assembled antenna to a suitable pole. Ensure the pole is stable and the antenna is positioned vertically.



Figure 2: The antenna installed outdoors, highlighting its waterproof and all-weather design (IP67 rated) for reliable performance on rooftops or other exposed locations.

3.2. Cable Connection

The provided cable has an N-Male connector for the antenna end and an RP-SMA female connector for the miner device. An RP-SMA male to SMA male adapter is included for devices with an SMA connector.

1. Connect the N-Male end of the cable to the N-Female port at the base of the antenna. Tighten securely.
2. Connect the RP-SMA female end of the cable to your miner device.
3. If your device requires an SMA connector, use the provided RP-SMA male to SMA male adapter.



Figure 3: Illustration of common connector types: N-Type Male (antenna end), RP-SMA male (for miner device), SMA male, and RP-SMA female, to assist with proper cable connection.

4. OPERATING INSTRUCTIONS

This antenna is compatible with a wide range of Meshtastic devices and Helium HNT miner brands, including AU915 Linxdot hotspot, Rak Miner 2v, Kerlink Wirnet iFemtocell miner, Cotx-X3 Helium miner, LinxDot, FreedomFI, Bobcat

300, Finestra miner, Sensecap, Syncrobit, and others.

When updating antenna settings in your Helium app, you can typically select "custom" or choose any brand option available, as the antenna's electrical specifications are the primary factor for configuration.

5. MAINTENANCE

The antenna is designed for minimal maintenance. Its fiberglass construction and sealed, waterproof treatment ensure durability against environmental elements such as rain and snow. Regular visual inspection for any physical damage or loose connections is recommended, especially after severe weather conditions.

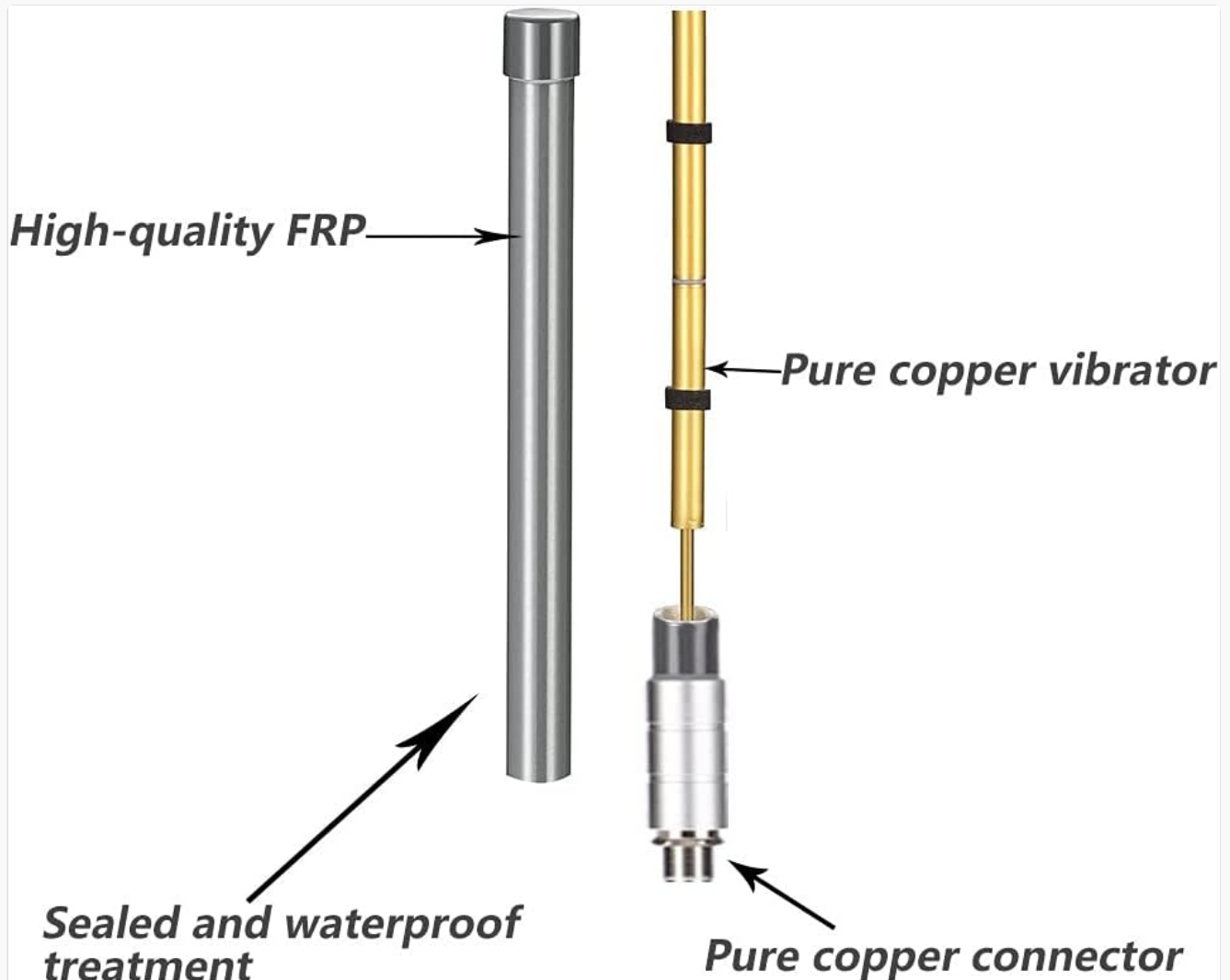


Figure 4: Cross-section view of the antenna, illustrating its internal components including the high-quality FRP casing, pure copper vibrator, and pure copper connector, all contributing to its robust and waterproof design.

6. TROUBLESHOOTING

Antenna performance is significantly influenced by its surroundings. To achieve optimal results, consider the following:

- **Placement:** Experiment with the height and location of the antenna installation. Moving your hotspot and antenna to different positions may help identify a "sweet spot" that maximizes signal reach and rewards.
- **Line of Sight:** Ensure there is a clear line of sight between your antenna and other devices or hotspots. Obstructions like buildings, dense foliage, or terrain can significantly degrade signal quality.
- **Cable Quality:** The provided RG58 cable is suitable for many applications. However, for very long cable runs or specific high-performance requirements, consider using a lower-loss cable (e.g., LMR-400 equivalent) to

minimize signal attenuation.

- **Connector Integrity:** Verify that all connectors are clean, dry, and securely tightened. Loose or corroded connections can lead to signal loss.
- **Device Compatibility:** Confirm that your miner or Meshtastic device is correctly configured for the 915MHz frequency band and that its software settings match the antenna's specifications.

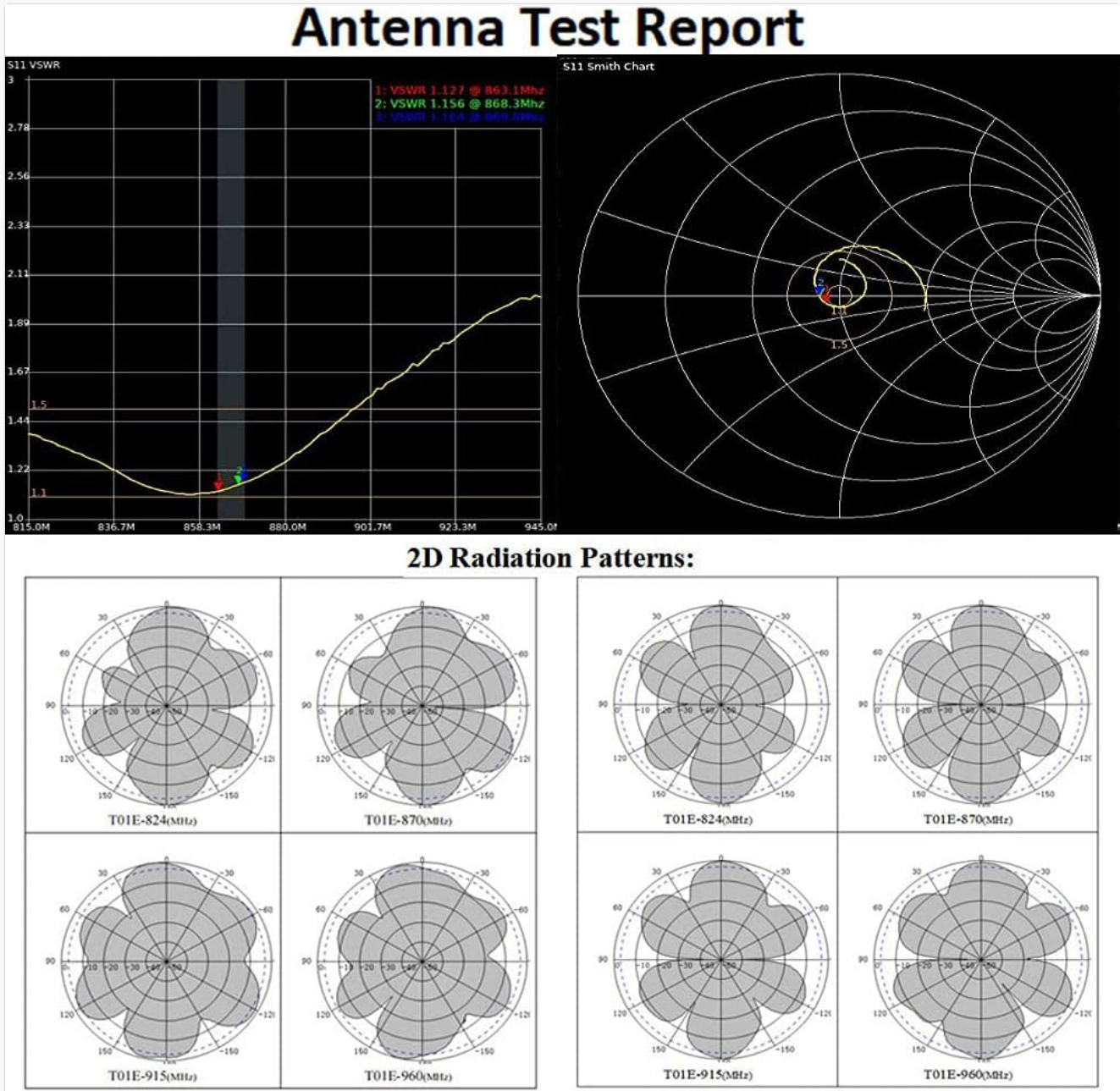


Figure 5: An antenna test report displaying key performance metrics such as VSWR (Voltage Standing Wave Ratio), Smith Chart, and 2D radiation patterns across different frequencies (824MHz, 870MHz, 915MHz, 960MHz). This data helps in understanding the antenna's directional characteristics and efficiency.

7. SPECIFICATIONS

Feature	Specification
Frequency Range	824MHz - 960MHz
Bandwidth	136 MHz

Feature	Specification
Gain	10 dBi
Half-power Beam Width	H: 360°, V: 20°
VSWR	≤1.5
Input Impedance	50 Ω
Polarization	Vertical
Maximum Input Power	50 W
Lightning Protection	DC Ground
Antenna Input Connector Type	N Female
Cable Connector (Miner End)	RP-SMA Female (with RP-SMA Male to SMA Male adapter included)
Dimensions (Antenna)	Φ20 * 900 mm (Diameter * Length)
Antenna Weight	0.75 kg
Operating Temperature	-40°C to 60°C
Rated Wind Velocity	60 m/s
Radome Color	Gray
Mounting Way	Pole-holding
Mounting Hardware Diameter	φ40-φ60 mm

8. WARRANTY AND SUPPORT

This item can be returned in its original condition for replacement within 30 days of receipt. We offer a 100% satisfaction guarantee. If you have any questions about the product, require technical assistance, or need to initiate a return or replacement, please feel free to contact us through the platform where you purchased the product.