

Pctel BMOY8905

Pctel BMOY8905 11 dBi 890-960 MHz 5 Element Yagi Antenna User Manual

Model: BMOY8905

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your Pctel BMOY8905 11 dBi 890-960 MHz 5 Element Yagi Antenna. Please read this manual thoroughly before attempting to install or operate the antenna to ensure proper function and safety.

1.1 Product Overview

The Pctel BMOY8905 is a high-gain, directional Yagi antenna designed for the 890-960 MHz frequency range. It features 5 elements welded 360 degrees to the main boom for enhanced durability and a black powder-coated polyester finish for protection against environmental elements. The antenna is equipped with an N-female connector for reliable signal transmission.

1.2 Package Contents

- Pctel BMOY8905 Yagi Antenna
- Mounting hardware (BWC1001)

2. SAFETY INFORMATION

Always observe the following safety precautions to prevent injury or damage to the antenna or property.

- **Warning:** Installation of this antenna near power lines is dangerous. For your safety, follow the installation instructions.
- **Warning:** Do not install the antenna during a lightning storm.
- Ensure the mounting structure is robust enough to support the antenna, especially in windy conditions.
- Wear appropriate safety gear, including gloves and eye protection, during installation.
- Consult local building codes and regulations for antenna installation requirements.

3. SETUP AND INSTALLATION

Proper installation is crucial for optimal performance of your Yagi antenna.

3.1 Mounting the Antenna

The BMOY8905 Yagi antenna is designed for directional signal reception/transmission. It should be mounted securely to a mast or pole using the provided mounting hardware (BWC1001).

- Select a mounting location that is as high as possible and free from obstructions (e.g., buildings, trees) in the direction of the desired signal.
- Attach the antenna to the mast using the supplied brackets and U-bolts. Ensure all connections are tightened securely to prevent movement in high winds.
- Orient the antenna horizontally or vertically based on the polarization of the signal you intend to receive or transmit.

3.2 Connecting the Coaxial Cable

The antenna features an N-female connector at its base.

- Connect a high-quality 50-ohm coaxial cable with an N-male connector to the antenna's N-female port.
- Ensure the connection is hand-tightened, then use a wrench to gently tighten it further, but do not overtighten.
- Route the coaxial cable away from the mast and secure it at regular intervals to prevent strain and damage.
- Connect the other end of the coaxial cable to your radio, receiver, or other compatible equipment.



Figure 1: The Pctel BMOY8905 Yagi Antenna, showing its main boom, five elements, and N-female connector at the base. The antenna is black with a yellow warning label near the top.

4. OPERATING THE ANTENNA

Once installed, the Yagi antenna requires proper alignment for optimal performance.

4.1 Antenna Alignment

- Yagi antennas are highly directional. Point the front (the end with the shortest elements) of the antenna directly towards the signal source or target area.
- Use a signal strength meter or the signal indicator on your connected equipment to fine-tune the antenna's direction for maximum signal strength.
- Secure the antenna's position once optimal alignment is achieved.

4.2 Signal Optimization

- Ensure all coaxial cable connections are tight and weatherproofed to prevent signal loss and water ingress.
- Minimize cable length to reduce signal attenuation.
- Avoid placing the antenna near large metallic objects that could interfere with its radiation pattern.

5. MAINTENANCE

Regular maintenance will ensure the longevity and consistent performance of your antenna.

- **Periodic Inspection:** Annually inspect the antenna, mounting hardware, and coaxial cable for any signs of wear, corrosion, or damage. Check for loose connections.
- **Cleaning:** Gently clean the antenna elements and boom with a soft cloth and mild detergent if dirt or grime accumulates. Avoid abrasive cleaners.
- **Weatherproofing:** Ensure all cable connections are properly sealed with weatherproof tape or sealant to prevent moisture from entering.
- **Environmental Factors:** In areas prone to heavy snow or ice, periodically check the antenna for buildup that could affect performance or cause structural stress.

6. TROUBLESHOOTING

If you experience issues with your antenna, consider the following troubleshooting steps:

- **No Signal / Weak Signal:**
 - Verify the antenna is correctly aimed at the signal source.
 - Check all cable connections for tightness and proper seating.
 - Inspect the coaxial cable for damage (kinks, cuts, corrosion).
 - Ensure your connected equipment (radio, receiver) is functioning correctly.
- **Intermittent Signal:**
 - Check for loose connections at both the antenna and equipment ends.
 - Examine the cable for intermittent breaks or damage.
 - Consider potential interference from nearby electronic devices or structures.
- **Physical Damage:**
 - If the antenna elements or boom are bent or broken, performance will be severely affected. Replacement may be necessary.

7. SPECIFICATIONS

Feature	Specification
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Model Number	BMOY8905
Brand	Pctel
Frequency Range	890-960 MHz
Gain	11 dBi
Number of Elements	5
Connector Type	N-female
Boom Length	20.5 inches
Product Dimensions (L x W x H)	20.5 x 0.8 x 20.5 inches
Item Weight	14.4 ounces
Color	Black
UPC	748528962690

8. WARRANTY AND SUPPORT

For specific warranty information regarding your Pctel BMOY8905 antenna, please refer to the documentation provided at the time of purchase or visit the official Pctel website. For technical support or further assistance, please contact Pctel customer service through their official channels.