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Installation Manual

Dual Band J Pole Antenna

TT-ANT-JP-003

The **TT-ANT-JP-003**, VHF/UHF dual-band J-pole antenna is a simple, efficient, and a ideal antenna for amateur radio applications. It provides dual band operation, making it suitable for both VHF and UHF communications simultaneously using same antenna.

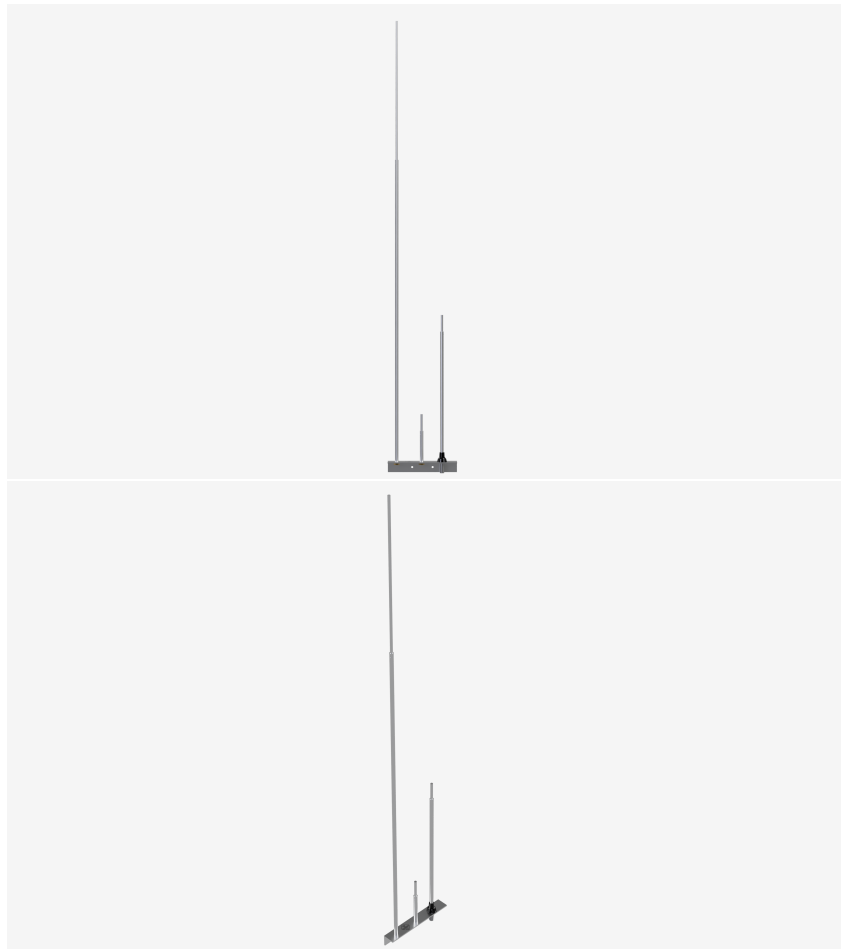


Figure 1: Diplexer TT-RF-FL-002: Dual band J pole antenn: Front view (top) and side view (bottom)

1 Antenna Structure

A J-pole antenna consists of:

- Driving element
- Matching stub
- VHF element
- Aluminium angle bar for grounding

2 Site Selection

- Install at maximum possible height
- Ensure clear line of sight
- Maintain clearance from metallic objects
- Avoid mounting near power lines

3 Mounting Procedure

1. Mount antenna vertically on mast (metal mast preferred).
2. Fix the antenna to the mast using clamps (preferred Jaw clamps: [Tejtronics Jaw Clamp](#))

4 Grounding and Protection

- Properly ground the mast
- Install lightning arrester (preferred: [Tejtronics Surge Arrestor](#))

5 Operating Configuration

5.1 Configuration 1: Direct Connection to Dual-Band Transceiver

In this configuration, the dual band J-pole antenna is directly connected to a single VHF/UHF transceiver.

- The antenna feedline is connected directly to the RF port of the transceiver.
- Ensure proper impedance matching ($50\ \Omega$) to avoid high SWR.

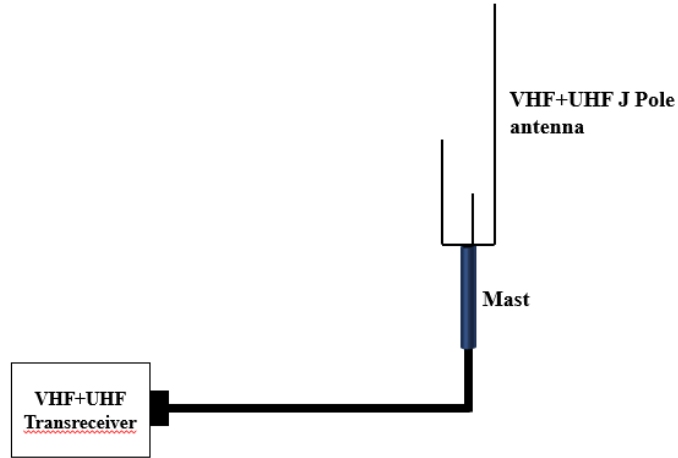


Figure 2: Configuration 1: Direct connection of VHF/UHF dual-band J-pole antenna to a single transceiver.

5.2 Configuration 2: Combined HF and VHF/UHF Operation Using Diplexers

In this configuration, the dual band J-pole antenna is used along with an HF antenna, connected to a radio system with separate HF and VHF/UHF ports using diplexers.

- Use two HF/VHF+UHF diplexers for proper frequency separation.
- The HF antenna is connected to the HF port of the diplexer.
- The dual band J-pole antenna is connected to the VHF/UHF port of the diplexer.
- This arrangement allows simultaneous connection of HF and VHF/UHF antennas without mutual interference.

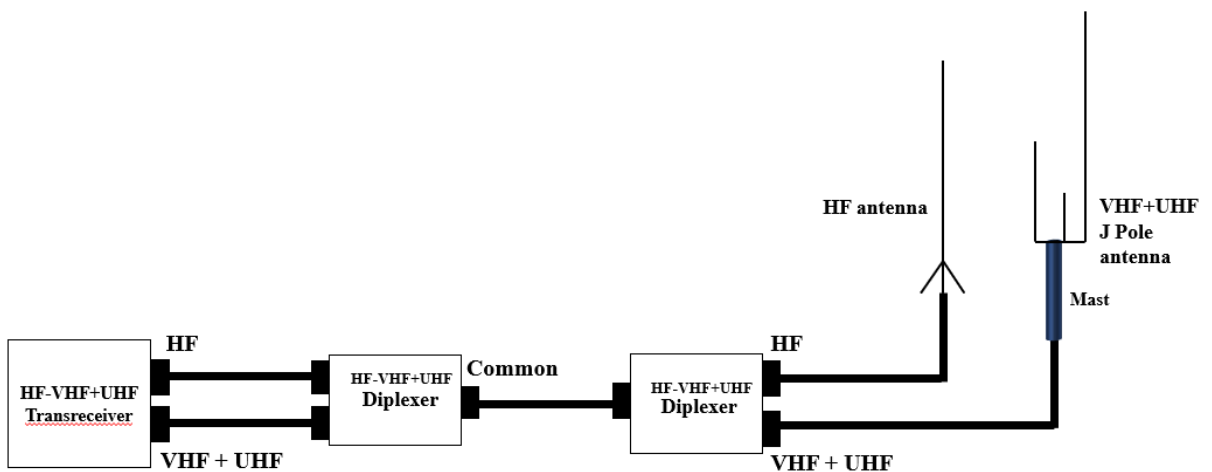


Figure 3: Configuration 2: Integration of HF and VHF/UHF antennas using dual diplexer-based configuration.