α ALPHA ANTENNA®

Model – HexTenna

1. Introduction

The **Alpha Antenna HexTenna** is a portable, multi-band antenna system designed for HF, VHF, and UHF operation that can be configured as a **vertical** or **dipole** antenna.

2. Specifications

- **Frequency Coverage:** 440MHz plus 2m–40m (configurable for HF/VHF/UHF)
- **Power Handling:** Up to 1.5 kW PEP SSB, 750W for CW, and 325W for Digital (FT8, etc.)
- **Antenna Types:** Vertical, Dipole
- **Connector:** SO-239

3. Package Contents

- HexTenna hub and Mount (Tripod optional)
- Telescoping whip elements (x2), 30/40M wire elements (x2), and counter element (x1)
- Carry bag and this User Guide

4. Assembly Instructions

A. Vertical Configuration

1. **Mount the Hub:** Attach the HexTenna hub to your mast or tripod.
2. **Install one whip:** Install one telescopic whip in the vertical position.
3. **Install Radial(s):** Attach ground radial(s) or Counterpoise at a 45° downward angle.
4. **Connect Coax:** Attach your coax feedline to the SO-239 connector.

B. Dipole Configuration

1. **Mount the Hub:** Attach the HexTenna hub to your mast or tripod.
2. **Install two whips:** Install two telescoping whips opposite each other.
3. **Connect Coax:** Attach your coax feedline to the SO-239 connector.

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5. Tuning

- Adjust the elements to the lengths provided in **Chart 1** in this manual.
- Use an **antenna analyzer** or SWR meter to fine-tune element lengths.

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CHART 1

DIPOLE/YAGI VERTICAL

The deployed length of the elements can vary based upon ground conditions.

*Adjust element length to tune for the lowest SWR

Band (30/40 forms an M-Dipole)	* Each Dipole Element (add 4 % if Yagi reflector)
40 Meters	15 ft 8.5 in & clip add-on element to whip's corona ball
30 Meters	4 ft 3.5 in & clip add-on element to whip's corona ball
20 Meters	16 feet 11 1/2 inches
17 Meters	13 feet 3/4 inch
15 Meters	10 feet 11 1/2 inches
12 Meters	9 feet 6 inches
10 Meters	8 feet 3 1/2 inches
6 Meters	4 feet 8 inches
2 Meters	4 feet 7 1/2 inches

Band	* Vertical Element	* Counterpoise
20 Meter	13 feet 2 inches	18 feet 2 inches
17 Meters	9 feet 8 inches	14 feet 2 3/8 inches
15 Meters	8 feet 7 3/4 inches	12 feet 1 1/2 inches
12 Meters	7 feet 1 inch	10 feet 4 inches
10 Meters	6 feet	9 feet
220 MHz	2 feet 2 inches	No counterpoise
440 MHz	3 feet 4 3/4 inches	No counterpoise

6. Maintenance

- Wipe elements with a dry cloth and store system in the provided bag after each use.
- Periodically check screws and connections for tightness.

7. Safety Warnings

- Never operate near overhead power lines.
- Do not transmit without a properly tuned antenna.
- Keep bystanders clear of antenna elements during operation.

8. Troubleshooting

Issue	Possible Cause	Solution
High SWR	Poor tuning or bad feedline	Retune, check coax
Weak signals	Obstructions	Relocate antenna to open space
High noise floor	Nearby electronics interference	Move away from noise sources

NOTE: Adding more radials or counterpoise can improve both SWR and performance.