

# **α ALPHA ANTENNA®**

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## **Model – 25W Alpha Loop**

**Operating Manual, Version 4.0, September 10, 2018**

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### **Operation**

The 25W Alpha Loop is designed to operate from 10 through 40 meters, which includes the 10, 12, 15, 17, 20, 30, & 40 Meter amateur radio bands, where it is rated at 12W CW, 6W Digital, and 25W PEP SSB.

### **Deployment**

An assortment of adapters for mounts and tripods are available for the 25W Alpha Loop, which is shown assembled in the following image.



### **Excess RF Exposure Warning**

In the United States, the Federal Communications Commission has established guidelines for human exposure to Radio Frequency (RF) electromagnetic fields. The commission's requirements are detailed in parts 1 & 2 of the FCC's rules and regulations {47 CFR, 1.1307(b), 1.1310, 22.1091, 2.1093}. It is the responsibility of the owner/operator of this device to follow all applicable warnings and precautions regarding human exposure to RF fields. Additional references: <http://www.arrl.org/rf-exposure>

### **Support Contacts**

If you have questions about your antenna, please feel free to contact us.

Email: [support@alphaantenna.com](mailto:support@alphaantenna.com) - Phone: 1-888-482-3249

WEB: [www.alphaantenna.com](http://www.alphaantenna.com) – Video Tutorials: [www.YouTube.com/AlphaAntenna](http://www.YouTube.com/AlphaAntenna)

# ALPHA ANTENNA®

## Antenna Assembly Instructions

Please follow the steps listed below to assure proper operation of this antenna and deploy as described.

Step	Assembly Operation
1	Select and install the appropriate adapter for your mounting hardware on the bottom of the grey Alpha Match box.
2	Attach the Outer Loop Element to the grey Alpha Match box by attaching (screw-on) the PL-259 connectors on the Outer Loop into the SO-239 connectors on the Alpha Match.
3	Attach the Inner Loop using the included Nylon clips to the approximate center of the Outer Loop Element.
4	Attach the assembled system to your mounting hardware in an anchored manner.
5	Now it is time to connect the antenna with your feedline to your radio. Attach your feedline's PL259 to the SO239 on the T-Connector in the center of the (small) coupling loop, then connect the other end of the feedline to your equipment.

## Antenna Operation

The 25W Alpha Loop antenna has a built in tuning knob on the Alpha Match. It is with this black knob that you tune the antenna to the lowest SWR of 2:1 or less 10-40 meters. NOTE – It is easier to match and learn to tune the loop on 40 meters. The following technique has proven to be the easiest method for tuning the 25W Alpha Loop in nearly all scenarios:

- 1) After attaching your coax to your radio, turn the Black Knob to the far left.  
Note – The capacitor can turn past 360 degrees without damaging any component.
- 2) Then set your rig to SSB Mode, turn the volume up, and listen for the loudest noise floor as you turn the Black Knob to the right.
- 3) Optionally, you can fine tune the Alpha Match with the black knob till the SWR meter on your rig's internal meter or your antenna analyzer is as low as possible (usually <2:1 on any given band).

### REVERSE TUNING TIP (Offset frequency while tuning for hand capacitance)

- a. Too off-set the effect of hand capacitance while tuning, a technique called reverse tuning can be used. To reverse tune a magnetic loop, tune for minimum SWR while touching the Black Knob on the Alpha Match, say 1.9:1; and then when you remove your hand you might see 4.3:1 for example. Then all you have to do is tune for 4.3:1 while your hand is on the knob to achieve an SWR of 1.9:1 when you remove your hand.

### ADDITIONAL TUNING TIP (Without touching the antenna)

- a. An antenna analyzer, SWR meter (whether internal to the rig or inline) can be used to find the lowest SWR after step 1 & 2, without you having to touch the antenna. While watching the SWR on your equipment, change the frequency on your rig or analyzer till minimum SWR is shown on the meter. It is at that frequency where the SWR will be at its' lowest possible point.