



User Guide

For

Alpha Antenna – Parasitic Alpha Loop

Manufactured by:
Alpha Antenna
1.888.482.3249

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Welcome

Thank you for your support of Alpha Antenna systems. Alpha Antenna designs easy use systems for modern day challenges. Whether it be for the first line of contact or last line of resort.

Definition

Parasitic Alpha Loop: A device that enables you to couple your Alpha Loop with the Parasitic Alpha Loop.

Purpose: Increase your signal's gain by inductively coupling two magnetic loops.

Deployment Options: A) Tripod deployment, B) EMCOMM deployment, D) Tactical deployment

Introduction

Thank you for purchasing the Parasitic Alpha Loop. We hope that you will enjoy using this product, as we continue to receive written testimonials from Amateur Radio Operators (Hams) who are surprised by the system's ability to make many long distance contacts, using relatively low power.

The Parasitic Alpha Loop offers enhanced tuning for Alpha Loops that cover 40, 30, 20, 17, 15, 12, & 10 meter bands by enabling lower SWRs to be realized when both loops are used in tandem. The lowered SWRs and inductive coupling of the Parasitic Alpha Loop with the Alpha Loop then enables greater ERP (Effective Radiated Power).

Product Overview

The Parasitic Alpha Loop is approximately 3 feet 1 inches in diameter and has a built-in tuner at the base of the system. The parasitic element is designed to enhance operations continuously from 10 through 40 meters, which including the 10, 12, 15, 17, 20, 30, and 40 Meter amateur radio bands.

Additional Details

- Weight: 1.3 pounds
- Tripod Weight: 1 pound
- Configuration: Circular Loop
- Frequency Coverage: 7 MHz to 29.700 MHz
- Maximum Power Rating: 20 Watts PEP SSB
- Diameter of Parasitic Alpha Loop system: Approximately 3 feet



Parts List

The following parts are included with this system. Please contact our support line if you discover that parts are missing or damaged.

Item	Description	Qty.	Comment
1	Outer Loop	1	Continuous frequency coverage from 7 to 29.7 MHz using crimped & soldered Silver Plated PL-259s, which is the same technique used to build MIL-SPEC connections for the U.S. Military
2	Selfie Stick	1	
3	Mount	1	Integrated mount with 3/8x24 & 1/4x20 threads
4	Silver Plated SO-239s	1	Milled & formed 100% in the U.S.A.
5	Alpha Match Enclosure	1	NEMA High-voltage box
	Tripod	1	Aluminum

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Safety Tips

When installing or operating this antenna or any other antenna/tower, please observe the following safety tips.

NOTE – High voltages are present when transmitting, no matter how much or little power is applied. Do not touch any part of the antenna while transmitting.

WARNING: INSTALLATION OR OPERATION OF THIS PRODUCT NEAR POWER LINES IS DANGEROUS! FOR YOUR SAFETY, FOLLOW THE ENCLOSED INSTALLATION DIRECTIONS. THOUGH THIS ANTENNA IS CONSTRUCTED OF INSULATED WIRE, PROPER CARE MUST BE TAKEN DURING INSTALLATION. INSTALLER ASSUMES ALL LIABILITY FOR PROPERTY AND LIFE SAFETY.

YOU, YOUR ANTENNA, AND SAFETY

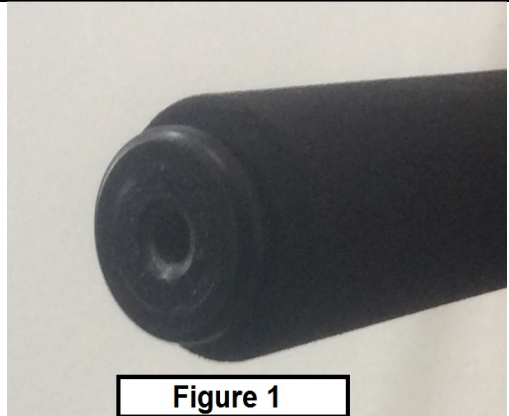
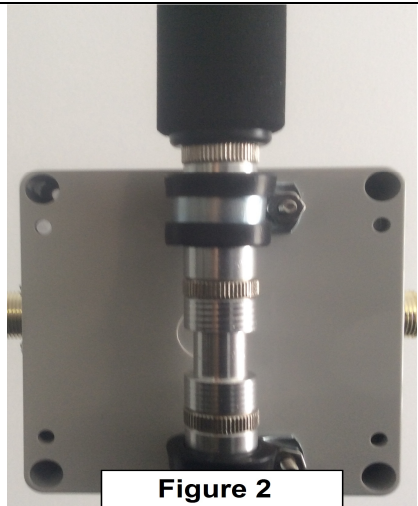
Each year, hundreds of people are killed, mutilated, or receive severe and permanent injuries when attempting to install an antenna. In many of these cases, the victim was aware of the danger of electrocution, but did not take adequate steps to avoid the hazard. For your safety, and to help you achieve a good installation, please **READ** and **FOLLOW** the safety precautions below. **THEY MAY SAVE YOUR LIFE!**

1. If you are installing an antenna for the first time, please, for your own safety as well as others, seek PROFESSIONAL ASSISTANCE.
2. Select your installation site with safety, as well as performance, in mind. **REMEMBER:** ELECTRIC POWER LINES AND PHONE LINES LOOK ALIKE. FOR YOUR SAFETY, ASSUME THAT ANY OVERHEAD LINES CAN KILL YOU.
3. Call your electric power company. Tell them your plans and ask them to come take a look at your proposed installation. This is a small inconvenience, considering **YOUR LIFE IS AT STAKE.**
4. Plan your installation procedure carefully and completely *before* you begin. Successful raising of a mast or tower is largely a matter of coordination. Each person should be assigned a specific task, and should know what to do and when to do it. One person should be designated as the leader/coordinator of the operation to call out instructions and watch for signs of trouble.
5. When installing your antenna, **REMEMBER: DO NOT USE A METAL LADDER. DO NOT WORK ON A WET OR WINDY DAY. DO DRESS PROPERLY:** shoes with rubber soles and heels, rubber gloves, long sleeved shirt or jacket.
6. If the assembly starts to drop, get away from it and let it fall. Remember, the antenna, mast, cable and metal guy wires are all excellent conductors of electrical current. Even the slightest touch of any of these parts to a power line completes an electrical path through the antenna and the installer – **THAT'S YOU!**
7. If ANY PART of the antenna system should come in contact with a power line, **DON'T TOUCH IT OR TRY TO REMOVE IT YOURSELF. CALL YOUR LOCAL POWER COMPANY.** They will remove it safely. If an accident should occur with the power lines, call for qualified emergency help **IMMEDIATELY.**

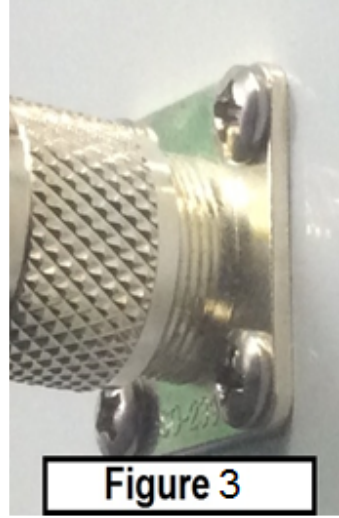
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Assembly Instructions

Please follow the steps listed below to assure proper operation and deployment.

Step	Assembly	
1	<p>Locate the <u>Selfie Stick</u>:</p> <p>Extend the sections and take note of the hole on the bottom (Figure 1). This hole is where the screw on top of the grey Alpha Match box will attach.</p>	 <p>Figure 1</p>
2	<p>Locate the <u>grey Alpha Match box</u>:</p> <p>Place the screw from the top of the back support bracket on the grey Selfie Match box into the bottom hole on the Alpha Stick (Figure 2) and turn till it is secure. Note - There is a 1/4 - 20 threaded hole on the bottom of the support bracket that can be used to mount the system on an optional tripod.</p>	 <p>Figure 2</p>
3	<p>Locate the <u>large Coaxial Loop element</u>:</p> <p>Straighten this Alpha Coaxial Loop Element to form an approximate circle that is slightly larger than 3 feet in diameter. Take note of the approximate center for this run of coax. This is where the smaller Coaxial Loop element will be attached using the included Velcro ties.</p>	

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Step	Assembly	
4	<p>a) Use the Top Clamp on the Selfie Stick to secure the Coaxial Loop Elements at their center by removing the securing screw, inserting the large Coaxial Loop Element.</p> <p>b) Adjust the placement of the coaxial loop so that the PL-259 ends are near the Alpha Match box.</p> <p>c) Attach the PL-259 connectors on the large Coaxial Loop Element to the SO-239 connectors on the grey Alpha Match box per Figure 3.</p>	 <p>Figure 3</p>

Operation

The Parasitic Alpha Loop has a built in tuning knob on the Alpha Match, which is black. By varying the distance between the two loops and adjusting the black knob on both Alpha Match units, you can achieve low SWRs that enables maximum ERP (Effective Radiated Power) to more easily occur on any frequency from the 10 Meter through the 40 Meter band.

Whether you use a) an Antenna Analyzer to perfectly refine the tuning and placement of the loops or b) the audio level & SWR meter in your rig to tune and place both loops, tuning the entire system will eventually become a relatively simple process. The following technique has proven to be the easiest method for tuning the system in nearly all scenarios:

- 1) After the respective assembly procedures have been completed for both the Parasitic Alpha Loop and the Alpha Loop, then place the Parasitic Alpha Loop in the same plane as the Alpha Loop with approximately 3 feet of separation between the two loops.
- 2) Tune the Alpha Loop for lowest SWR.
- 3) Tune the Parasitic Alpha Loop for an even lower SWR.
- 4) Move the physical placement of the two loops for an even lower SWR.
- 5) Repeat Steps 2 through 4 till the lowest possible SWR is achieved.



Support Contacts

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

Email: support@alphaantenna.com

Phone: 1-888-482-3249