

User Guide

For

Alpha Antenna
Continuous Aluminum Loop

Civilian Military Systems

Manufactured by:
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Available from the:
AmateurRadioStore.com

Website: <https://amateurradiostore.com>

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Introduction

Thank you for your support of the Alpha Antenna line. We hope that you will enjoy using this product, as we continue to receive written testimonials from Amateur Radio Operators (Hams) on how easy the Alpha Antenna systems are to deploy, how well they work, and how each antenna system that is deployed has made each persons operating experiences positive and enduring.

The Alpha Antenna is a Civilian Military system that is easy to deploy, has acceptable SWRs, and is extremely durable. The antenna system is composed of building blocks that used to construct a large variety of deployable solutions. No supports are necessary to deploy the systems, however, several varieties of deployment options exists if natural supports are available. If space or privacy is a premium, the Alpha Antenna is deployable for covert operations. This antenna is so efficient that it is also deployable indoors, from a porch or balcony.

Product Overview

With proper deployment, the Alpha Antenna system is designed to operate continuously from 10 through 40 meters, with only the use of a wide-band antenna tuner. It will accept up to 30 Watts (PEP) of transmitter power on SSB.

Additional Product Details

- Antenna Weight: 1.5 pounds
- Tripod Weight: 3 pounds
- Bag Weight: .25 pounds
- Antenna Configuration: Circular Loop
- Frequency Coverage: 7 MHz to 21.450 MHz
- Maximum Power Rating: 30 Watts PEP SSB
- Height to top of Alpha Loop Sr (if mounted on tripod):
 - Minimum; Approximately 6 Feet
 - Maximum; Approximately 9 ½ Feet

Safety Tips

When installing or operating this antenna, 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.

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 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.
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.



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Antenna Parts List

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

| Item | Description | Qty. | Comment |
|------|---|------|---------|
| 1 | Tripod with integrate Mast | 1 | |
| 2 | One assembled Alpha Continuous Loop Antenna | 1 | |

Antenna Installation

The major components of the antenna, and their relative positions, are depicted in Figure 1.

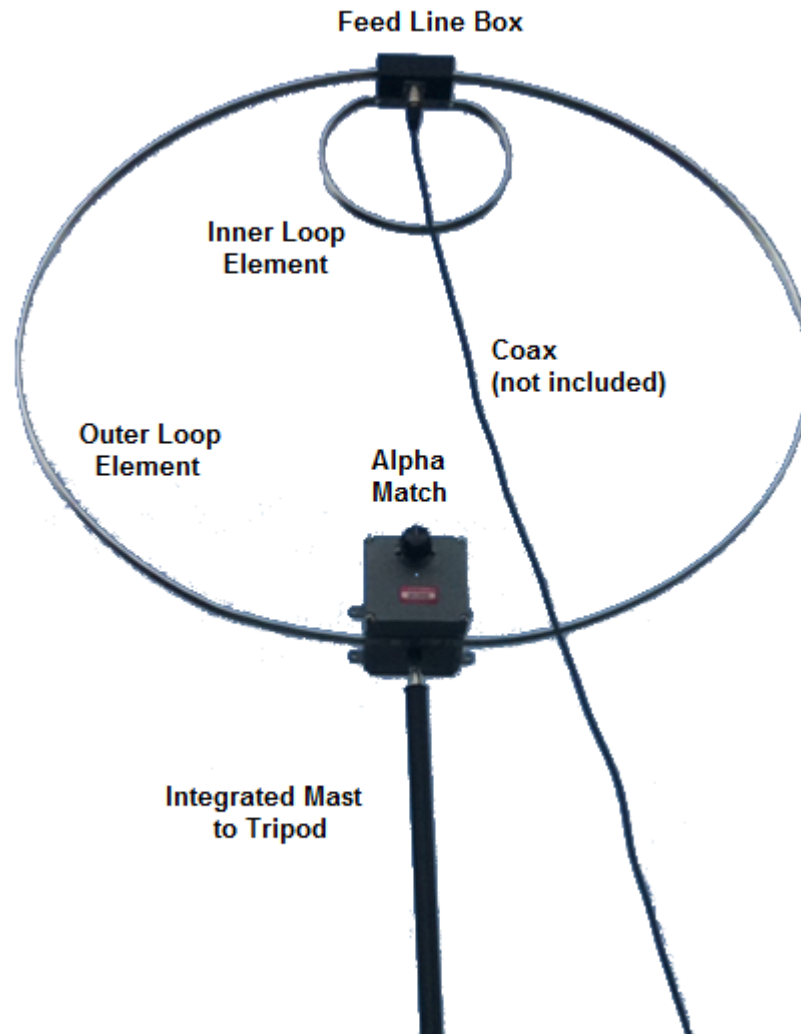


Figure 1

Antenna Assembly

Please follow the steps listed below to assure proper operation of this antenna and deploy as depicted in Figure 1.

| Step | Assembly |
|------|--|
| 1 | Locate the tripod, extend the tripod sections, and then screw the base of the antenna's Alpha Match box to the tripod. Position the antenna in a location where it cannot touch other objects such as lamps, desks, poles, wires, power lines, ladders, people, etc.). |
| 2 | Connect a PL-259 connector with 50 Ohm coax transmission line to the Black Feed Line Box as depicted in Figure 1 above and test the antenna before operating on the air. |

Antenna Operation

The Alpha Loop Sr antenna has a built in tuning knob, which is black, on the Alpha Match, as depicted Figure 1 above, and other images as well. It is with this knob that you tune the antenna to the lowest SWR of less than 1.9:1 on any frequency from the 15 Meter through the 40 Meter band. The following technique has proven to be the easiest method for tuning the Alpha Loop Sr in nearly all scenarios:

- 1) After attaching your coax (per Step 2 above), turn your radio on and to the frequency you would like to operate, then adjust the volume so you can hear it while standing at the antenna.
- 2) Turn the black knob on the Alpha Match till you hear the loudest noise level coming from the speaker on the antenna.
- 3) Return to the radio and adjust the power to a level of 10 watts or less and set your rig into FM mode and a maximum of 5 watts out, then set you rig into transmit mode.
- 4) Return to the antenna and fine tune the Alpha Match with the black knob till the built in SWR Indicator bulb is most brightly lit.
- 5) Your SWR, as indicated on your rig, should now be at 3:1 or less.

OPTIONAL FINE TUNING

- 6) Optional fine tuning:
 - a. Continue to transmit in FM mode with your transmitter at 10 watts and while watching the SWR meter on your rig either;
 - i. Move your tuning dial (within the frequency range you are licensed to operate on, till minimum SWR is attained), or
 - ii. Slightly move the black knob on the Alpha Match till the minimum (1.5:1 or less) is shown on your rig. This step can also be used if an antenna analyzer is connected rather than a transceiver.

As is mentioned, you can use an antenna analyzer that is set to the frequency you are going to transmit on and turn the knob on the Alpha Loop Sr till your SWR dips. When using the antenna analyzer, many have found that an A/B Switch with the rig on A and the analyzer on B makes it quick and easy to switch from analysis to transmit.

For future reference, and as you learn where the arrow and tic mark on the Alpha Match knob is pointing, please feel free to make a note for where the pointer and tic mark are located on the front label behind where the black knob is pointing. This will allow an alternate tuning method for you to find where the arrow and also the knob tic mark should be pointed for each band when you need to retune your antenna.

HINT – When you remove your hand after tuning for minimum SWR (for example 1.4:1), then when you remove your hand the SWR goes to 2.6:1 (for example). Simply tune for 2.6:1 (for



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example) when your hand is touching the black knob on the Alpha Match, and then when you remove your hand the SWR should go to 1.4:1 (for example).

NOTE – High voltages are present when transmitting, no matter how much or little power is applied. Do not touch any part of the Alpha Loop Sr except the black knob while transmitting.



Support Contacts

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

Email: support@AlphaAntenna.com – Phone: 1-888-482-3249 – WEB: www.AlphaAntenna.com