



User Guide  
for the

Alpha Antenna  
ProMaster system

Manufactured by:  
Alpha Antenna  
1.888.482.3249

Website: <http://AlphaAntenna.com>

User Guide Version 2.5.b

March 29, 2018

# **α ALPHA ANTENNA®**

## **Table of Contents**

Safety Information .....	3
Excess RF Exposure Warning .....	4
Introduction .....	5
Product Overview .....	5
Antenna Parts List .....	6
Antenna Assembly .....	7
Primary Connections .....	9
The NVIS Element .....	10
The Deployed Antenna.....	11
Support Contacts .....	12

### **REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS**

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail or email us a marked copy to the contact information on the last page of this manual.

### **REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)**

If your Alpha FMJ multiband antenna needs improvement, let us know. You, the user, are the only one who can tell us what you don't like about your equipment. Mail or email us an EIR to the contact information on the last page of this manual.



## Safety Information

*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 WITH INSULATED MATERIALS, 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.**



## **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.

The FCC Office of Engineering Technology (OET) Bulletin 65, Supplement B, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields directly concerns the use and operations of all Alpha Antenna systems. This bulletin establishes safe operating distances from antennas associated power levels in order to permit the operator and persons who may be impacted by operation to exist in a safe environment. Guidelines for Maximum Permissible Exposure, or MPE, are defined in Supplement B of the bulletin.

### **IMPORTANT NOTE:**

Refer to the above mentioned Supplement B along with FCC OET Bulletin 65, Version 97-01. The information in the supplement provides additional details that are used for evaluating compliance of amateur radio stations with FCC guidelines for exposure to radio frequency electromagnetic fields. Supplement B users should, however, also consult Bulletin 65 for complete information on FCC policies, guidelines, and compliance related issues. Definitions of terms used in this supplements appear in Bulletin 65. Bulletin 65 can be viewed and downloaded from the FCC's Office of Engineering and Technology's web site at: <http://www.fcc.gov/oet/rfsafety>

# **α ALPHA ANTENNA®**

## **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 person's operating experiences positive and enduring.

## **Product Overview**

With proper deployment, the Alpha Antenna system is designed to operate continuously from 10 through 80 meters. It will accept up to 500 Watts (PEP) of transmitter power on SSB.

## **Additional Product Details**

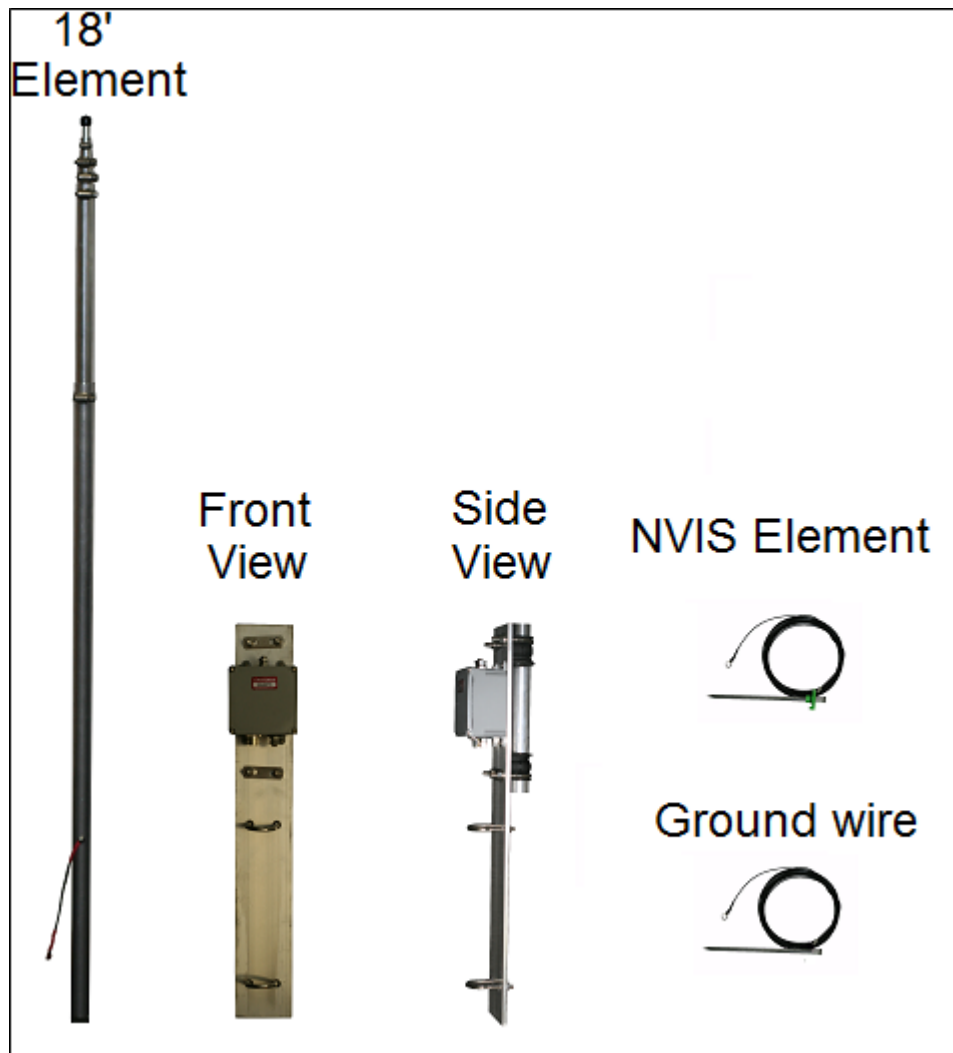
- Antenna Configuration:
  - Vertical Element: 1 Self-supporting 6 section telescopic vertical element
  - Horizontal Elements: 1 NVIS element
  - Ground Wire: 1 ground wire with grounding stake
- Maximum Frequency Coverage: 3.5 MHz to 29.7 MHz
- Maximum Power Rating: 500 Watts PEP SSB
- Weight: 7 pounds

# α ALPHA ANTENNA®

## Antenna Parts List

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

Item	Description	Qty.	Comment
1	Mounting hardware with Alpha Match	1	
2	Vertical Element	1	
3	NVIS Element	1	
4	Ground wire	1	



# α ALPHA ANTENNA®

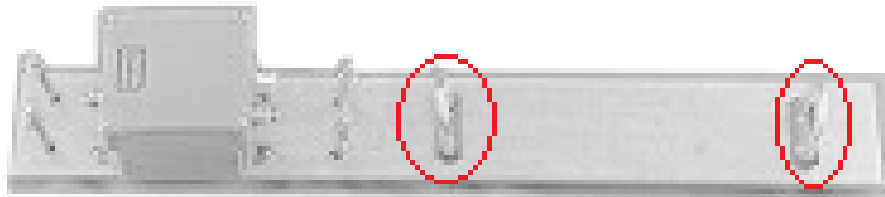
## Antenna Assembly

Step 1 – Prepare your mounting installation with a) galvanized 1 3/8" fence rail placed 3-4 feet in ground, b) Steel tripod from Alpha Antenna, or c) any other similar conductive or non-conductive mast that is no larger than 1 3/8" in diameter.

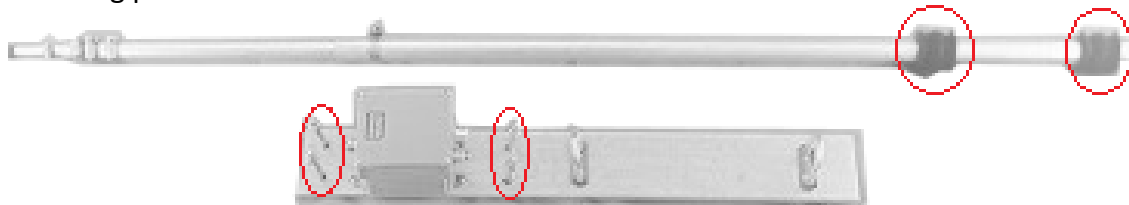
Step 2 – Lay the 6 tapered vertical antenna elements end to end flat on the ground. Insert each section into the next until each element passes the slit of the other by 1/4 inch, and secure each section with a stainless steel clamp.



Step 3 – Place aluminum mounting plate hardware onto the supporting item in Step 1 & tighten the U-Bolts that are circled below.



Step 4 – Mount the vertical antenna element into the U-Bolts opposite of those used to mount the aluminum mounting plate. Here is where you will place the included rubber offsets circled around the vertical element and under the associated U-Bolts on the mounting plate that are circled below.



Step 5 – a) Place the o-ring connector that has red shrink tube, which feeds the Vertical element, over the top bolt on the Alpha Match. b) Place the o-ring connector that has red shrink tube, which feeds the 25 foot long NVIS element, over the top bolt on the Alpha Match. c) Secure the ring connectors in place with the included nut.



# $\alpha$ ALPHA ANTENNA®

Step 6 – a) Attach the 1 o-ring that has black shrink tube on the Ground wire to the bottom bolt on the Alpha Match, as circled below. b) Secure the ring connector in place with the included nut.



Step 7 – Mount the aluminum hardware with fully assembled vertical element onto the mounting installation that was prepared in Step 1, then drive the Ground wire's stake into the ground at least 4 inches.

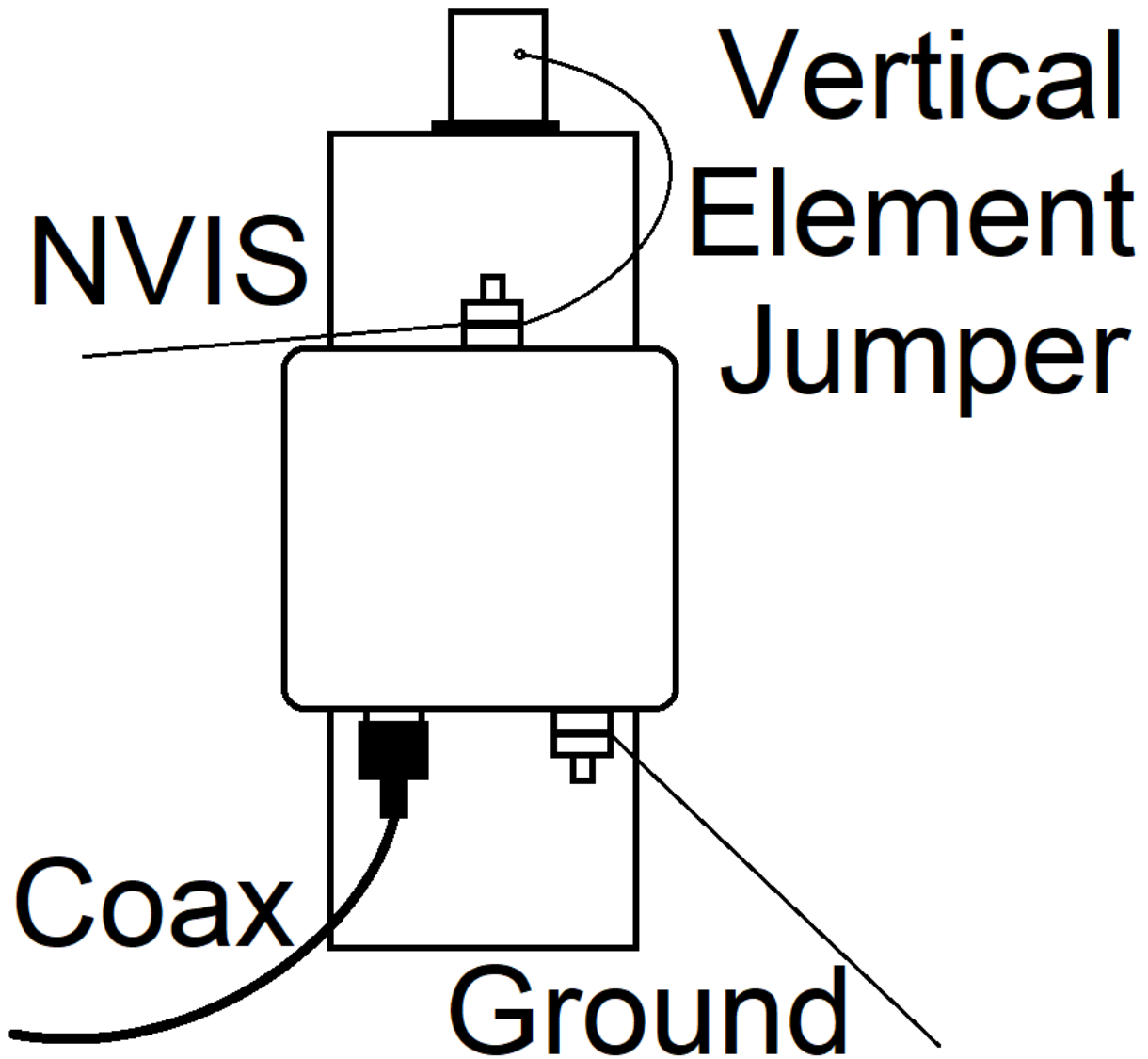
Step 8 – Attach your coaxial feedline to the SO-239 on the Alpha Match.



# $\alpha$ ALPHA ANTENNA®

## Primary Connections

Here is how your primary connections for the antenna should be assembled:



# $\alpha$ ALPHA ANTENNA®

## The NVIS Element

When fully deployed with the NVIS element, the antenna system is configured to enhance your signal in the opposite direction the NVIS element is run. For an omnidirectional signal pattern, you may remove the NVIS element, which may require a tuner on some of the bands.



# $\alpha$ ALPHA ANTENNA®

## The Deployed Antenna

The antenna systems should be placed in the most free and clear place on your property. This will give the takeoff angle the best chance to propagate your signal in the most optimum manner possible. You may also use an external antenna tuner if your antenna is installed over a poor ground or not placed in a clear area.

Here is an example of what your deployed ProMaster might look like when deployed with a background of foliage.





## 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)