



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





Smart Technology. Delivered.

## Phantom Elite® Antenna Installation Instructions

(Protected By U.S. Patent Nos. 5,977,931; 6,292,156; and other patents pending)

### **Congratulations on your purchase of the Phantom Elite® Antenna.**

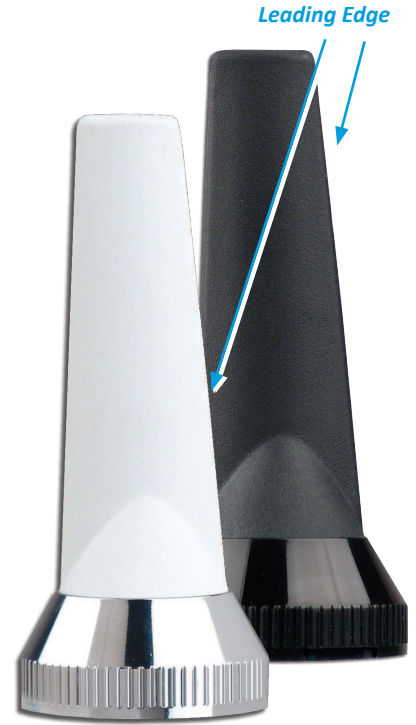
The Elite is a patented antenna product offered exclusively by Laird and its affiliates. Like two antennas in one, the Elite features a wideband, no tune, field-diversity design providing the same benefits of the standard Phantom in a striking aerodynamic shape.

### **Mounting Instructions:**

For optimum performance, the mounting area must be free of metal obstructions within half electrical wavelength apart. This is approximately 12.8" at 450 MHz and 7" at 800 MHz. Any object within this range may detune the antenna.

The Phantom Elite has a unique shape that when installed correctly, has the distinct aerodynamic look of a vertical stabilizer on an aircraft. This shape has what is known as a leading edge (the more angled edge) and a trailing edge. For the best installed look, the leading edge should face towards the front of the vehicle. Because of this unidirectional design, we have developed a unique colletting action mounting system that allows for appropriate alignment of the antenna during installation.

Over Please →



Smart Technology. Delivered.

## Phantom Elite® Antenna Installation Instructions

(Protected By U.S. Patent Nos. 5,977,931; 6,292,156; and other patents pending)

### **Congratulations on your purchase of the Phantom Elite® Antenna.**

The Elite is a patented antenna product offered exclusively by Laird and its affiliates. Like two antennas in one, the Elite features a wideband, no tune, field-diversity design providing the same benefits of the standard Phantom in a striking aerodynamic shape.

### **Mounting Instructions:**

For optimum performance, the mounting area must be free of metal obstructions within half electrical wavelength apart. This is approximately 12.8" at 450 MHz and 7" at 800 MHz. Any object within this range may detune the antenna.

The Phantom Elite has a unique shape that when installed correctly, has the distinct aerodynamic look of a vertical stabilizer on an aircraft. This shape has what is known as a leading edge (the more angled edge) and a trailing edge. For the best installed look, the leading edge should face towards the front of the vehicle. Because of this unidirectional design, we have developed a unique colletting action mounting system that allows for appropriate alignment of the antenna during installation.

Over Please →

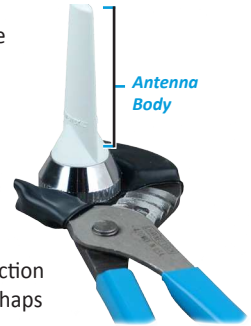




Smart Technology. Delivered.

For ground plane or metallic surface antennas:

1. Prepare an NMO style mount on a metallic surface of the vehicle. It is recommended to mount at or nearest the center of the surface away from other objects.
2. Check your Phantom Elite® to be certain the antenna resonant frequency range and your radio are compatible.
3. Install the Phantom Elite antenna by tightening it onto a threaded NMO style-mounting socket. A fair amount of torque is needed to fully tighten the antenna until a seal is obtained between the bottom o-ring and vehicle surface. To assist tightening the antenna to the mount, apply two small pieces of protective heat shrink tubing (Part no. "Sealtube3") to the jaws of a slip joint pliers (see illustration)
4. After the antenna is fully tightened and sealed to the mount surface, rotate the antenna body to position it with the leading edge (the more angled edge) facing the front of the vehicle. O-ring and gasket seals are employed in the unique colletting design to provide a water seal. Take care to rotate clockwise only once to achieve the proper position. Excessive rotation may compromise the colletting action and seal of the antenna. When finished, inspect for a proper bottom o-ring seal. This will prevent water leaking into the mount and perhaps into the vehicle. NOTE: The molded plastic radome and brass collet nut are designed to remain intact for proper water seal. Do not disassemble the collet nut from the antenna radome.



**Warranty:** Laird warrants to the original purchaser that this product will remain free from defects in materials and workmanship for a period of one year from the purchase date. If any such defect is discovered within the warranty period, Laird will at its sole option, repair or replace your product free of charge. This warranty applies only if the product is used in a normal fashion, and is void if the product is abused, disassembled, tampered with, used unreasonably, or fails as result of normal wear. Furthermore, this warranty applies only to defects which occur where the proper product is selected as recommended by Laird and is used in the fashion recommended by Laird. This warranty is in lieu of all other warranties, expressed or implied, and is limited to a period of one year from date of original purchase. Laird is not liable for incidental or consequential damages of any kind. Any warranty extended herein shall be limited to the price paid to Laird for the product. Where state and or local law governs the period of warranty such period shall control.

**Model and Ordering Information**

Model #	Color	Description
ETRA4503	White	450-470 MHz UHF 3 dB-MEG
ETRA84503	Black	450-470 MHz UHF 3 dB-MEG
ETRA8063	White	806-866 MHz UHF 3 dB-MEG
ETRA88063	Black	806-866 MHz UHF 3 dB-MEG

©Laird - All Rights Reserved

Tel: 847.839.6000 • Fax: 847.839.6036 • www.lairdtech.com

L:\Instruction Sheet PDF's (Shop)\ANT\_IS\_PHANTOM ELITE INSTALL 082514.pdf



Smart Technology. Delivered.

For ground plane or metallic surface antennas:

1. Prepare an NMO style mount on a metallic surface of the vehicle. It is recommended to mount at or nearest the center of the surface away from other objects.
2. Check your Phantom Elite® to be certain the antenna resonant frequency range and your radio are compatible.
3. Install the Phantom Elite antenna by tightening it onto a threaded NMO style-mounting socket. A fair amount of torque is needed to fully tighten the antenna until a seal is obtained between the bottom o-ring and vehicle surface. To assist tightening the antenna to the mount, apply two small pieces of protective heat shrink tubing (Part no. "Sealtube3") to the jaws of a slip joint pliers (see illustration)
4. After the antenna is fully tightened and sealed to the mount surface, rotate the antenna body to position it with the leading edge (the more angled edge) facing the front of the vehicle. O-ring and gasket seals are employed in the unique colletting design to provide a water seal. Take care to rotate clockwise only once to achieve the proper position. Excessive rotation may compromise the colletting action and seal of the antenna. When finished, inspect for a proper bottom o-ring seal. This will prevent water leaking into the mount and perhaps into the vehicle. NOTE: The molded plastic radome and brass collet nut are designed to remain intact for proper water seal. Do not disassemble the collet nut from the antenna radome.



**Warranty:** Laird warrants to the original purchaser that this product will remain free from defects in materials and workmanship for a period of one year from the purchase date. If any such defect is discovered within the warranty period, Laird will at its sole option, repair or replace your product free of charge. This warranty applies only if the product is used in a normal fashion, and is void if the product is abused, disassembled, tampered with, used unreasonably, or fails as result of normal wear. Furthermore, this warranty applies only to defects which occur where the proper product is selected as recommended by Laird and is used in the fashion recommended by Laird. This warranty is in lieu of all other warranties, expressed or implied, and is limited to a period of one year from date of original purchase. Laird is not liable for incidental or consequential damages of any kind. Any warranty extended herein shall be limited to the price paid to Laird for the product. Where state and or local law governs the period of warranty such period shall control.

**Model and Ordering Information**

Model #	Color	Description
ETRA4503	White	450-470 MHz UHF 3 dB-MEG
ETRA84503	Black	450-470 MHz UHF 3 dB-MEG
ETRA8063	White	806-866 MHz UHF 3 dB-MEG
ETRA88063	Black	806-866 MHz UHF 3 dB-MEG

©Laird - All Rights Reserved

Tel: 847.839.6000 • Fax: 847.839.6036 • www.lairdtech.com

L:\Instruction Sheet PDF's (Shop)\ANT\_IS\_PHANTOM ELITE INSTALL 082514.pdf