

# 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 VHF Phantom Elite antenna is a patented product offered exclusively by Laird and its affiliates. Like two antennas in one, the Elite features the same field-diversity design standard VHF Phantom with no tuning required. The striking aerodynamic shape and broadband no-tune design sets it apart from the competition. Also featured is a patent pending NMO adapted bayonet mounting system that enables quick and easy alignment of the antenna during installation.

#### **Mounting Instructions:**

The VHF Phantom Elite antenna is ground plane dependant. For optimum performance the antenna requires a ground plane of at least 17" in radius. The antenna may operate satisfactorily on a smaller ground plane but depending on mount conditions, you may experience diminished performance. The mounting area should also be free of metal obstructions. This can contribute to de-tuning of the antenna.

The VHF Phantom Elite antenna also features a unique and aerodynamic shape that is visually striking but unobtrusive. For the best installed look, the antenna should be positioned such that the pointed ends are directed to the front and back of the vehicle. In order to achieve flexibility in positioning on a standard NMO mount, we have developed a unique bayonet mounting system using a special bright chrome plated bayonet mounting adapter nut which is included with your antenna.

#### To mount your antenna on a new or existing ¾" hole NMO mount:

- 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 product to be certain the antenna resonant frequency range and your radio are compatible.
- 3. Remove the outer brass ring from your existing NMO mount and replace it with the chrome bayonet mounting adapter nut. Be certain to insert the o-ring in the adapter nut before installing. Using a 1" wrench on the flats, tighten the adapter nut on the mount so that the final 1/4 turn seats the nut tightly and points one bayonet insertion notch toward the front of the vehicle. The opposite notch should point toward the rear of the vehicle. See illustration at right.
- 4. Install the VHF Phantom Elite on the mount by positioning the bayonet pins in the two insertion notches. Align either leading edge of the antenna angled toward the front left or driver side of the vehicle. Note: The antenna has an omnidirectional radiation pattern, allowing either edge to function as the leading edge without affecting performance. Push the antenna down to seat the housing in notches and rotate clockwise to lock into position. The leading edge of the antenna should now be facing toward the front of the vehicle. Repeat step 3 with minor adjustments if the final position is not as intended.

#### **IMPORTANT:**

- 1. Before use, check the antenna for VSWR performance with a reflectometer or antenna tester.
- 2. This antenna is rated at 60 watts maximum power for 60 seconds maximum duration. More power will result in permanent damage to the antenna.

