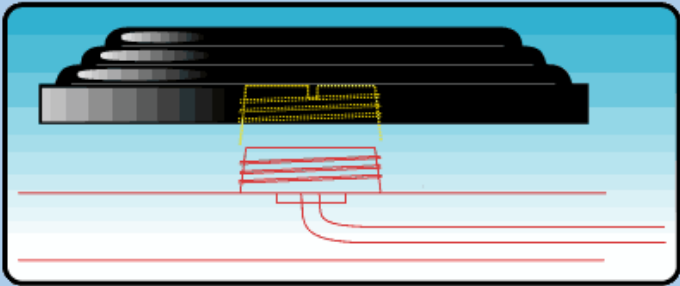


**NMO Mount** - The NMO mount models are compatible with any standard 3/4" Motorola-type mount. The NMO mount assembly and spring-loaded contact pin are made of brass. An O-ring made of nitrile is installed in the base to provide a waterproof seal. It withstands temperatures from -65¼ to +180¼ F and has excellent compression set, cold flow, tear and abrasion resistance characteristics. The base is polypropylene and color matched to the radome.



**NMO Mount Model**

Black Radome	White Radome	Description	Freq (MHz)	Dimensions (Hght. x Dia.)
NMO4000	NMO4000W	UHF	450-470	1" x 7 1/2"
NMO8000	NMO8000W	Cellular	824-896	1" x 4 1/2"<
NMO8500	NMO8500W	SMR/Trunking	806-866	1" x 4 1/2"<
NMO9000	NMO9000W	SMR/Trunking	890-950	1" x 4 1/2"

## Antenna Design

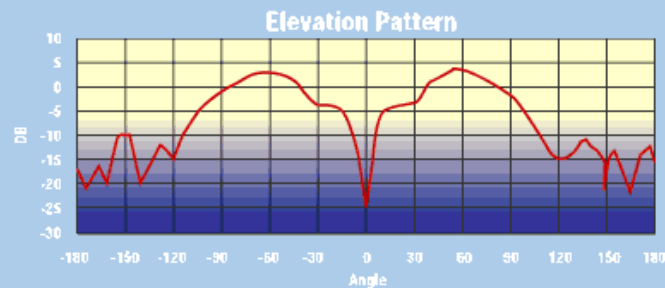
The LoPro<sup>®</sup> antenna utilizes enhanced edge slot technology. When parallel plates are inductively tuned and excited, they produce a vertically polarized cosine pattern. The basic version of an edge slot antenna has a standing wave ratio and gain equal to a quarter wave monopole. But, the performance of the LoPro<sup>®</sup> is enhanced by optimizing the size and separation of the parallel plates and the inductive tuning. These features maximize gain over the bandwidth required. The field propagates outward from the center of the plates and radiation occurs at the edge of the upper parallel plate. All voltages at the upper plate edge are equal around the circumference yielding a uniform, omni-directional radiation pattern.

### Electronic Specifications

<b>VSWR at resonant point:</b>	1.5:1 or less
<b>Nominal Impedance:</b>	50 Ohms
<b>Gain:</b>	3dBi
<b>Radiation Pattern:</b>	Omni-directional
<b>Polarization:</b>	Vertical
<b>Maximum Power Input:</b>	50 Watts, typical
<b>Ground Plane Required:</b>	Yes

### Elevation Pattern (Typical)

LoPro<sup>®</sup> antennas produce a typical butterfly-shaped elevation plot.



## A. Mounting Surface

For proper installation and optimal performance, the mounting surface should be flat, provide a ground plane, be clean and free of metal objects above or beside the antenna.

**Follow these steps to determine a suitable location:**

**Flat Surface:** If installing the antenna on a vehicle roof, the flattest area is generally the center. Avoid areas near the front or rear windshield where radius will be greatest. To check for a flat location, place a straight edge or ruler across the surface. There should be little or no gap between ruler and surface over the 4 1/2" or 7 1/2" dimension of the antenna base.



**Ground Plane Required:** If the antenna installation surface is not metal, an artificial ground plane must be added. Metallic tape or a disc may be applied either under the antenna or on the underside of the mounting surface as long as that surface is less than .200" thick. Ideally, the ground plane will measure 20" in diameter, extending at least 8 inches beyond the edge of the antenna.

**Ground Independent Styles:** No ground plane is required.

**Clean:** For the adhesive to bond properly, the surface for mounting the antenna should be wiped with an alcohol-based cleaner to ensure it is free of grease and dirt. For Adhesive Mount Models, go to Section B; For NMO Mount Models, jump to section C.

## C. Antenna Installation - NMO Mount Model

The NMO mount version of the LoPro® antenna is compatible with any standard 3/4" hole mount. These can be purchased from any 2-way radio dealer or distributor.

### Replacement

1. If you are installing the LoPro® NMO mount as a replacement for a broken whip antenna, a 3/4" hole mount connector is likely already in place. Check cable and connector for continuity. If no signs of water damage or corrosion are present and the cable checks okay, simply screw on the LoPro® in place of the old antenna. If damage is found, purchase a new mount before proceeding. Then follow instructions for a new installation.

### New Installations

1. Having determined a suitable location and prepared the mounting surface area, install a 3/4" hole mount per the instructions provided with that equipment.
2. Screw the LoPro® down on the mounting surface securely. The "O" ring must be compressed completely to provide a waterproof seal.
3. Check for proper installation, a continuity tester between the center conductor and the outside braid of the coax will indicate a DC short.