



Laird's unique patented Phantom<sup>®</sup> antenna is ideal for cell, GSM, PCE, WIFI, 802.11 and Bluetooth wireless applications. Measuring only 2.7" tall, the Phantom 800 MHz to 5.8 GHz antenna models' revolutionary design features a robust IP67 rated mechanical solution with frequency agility, low visibility, wide bandwidth and a low angle radiation pattern that is superior to traditional gain antennas in most applications, both outdoor and indoor.

The industry standard NMO mounting socket mates with all Laird Technologies' magnetic, trunk lid, and hole mounts. A threaded permanent stud mount model is also available for vandal resistant mounting on brackets, panels, ceilings or any other kind of housing.

The Phantom<sup>®</sup> patented technology is beneficial when high performance is desired and extreme ruggedness and low profile is required.

#### FEATURES AND BENEFITS

- A low profile mechanically robust high-power solution.
- Outperforms a 3-dB whip in many applications
- U.S. Patent Nos. 5,977,931 – 6,292,156 and 7,209,096

| ELECTRICAL SPECIFICATIONS                    |                                                               |
|----------------------------------------------|---------------------------------------------------------------|
| Operating Frequency (MHz)                    | 806-870/821-896/890-960/902-928/1850-1990/2400-2500/4900-6000 |
| VSWR                                         | < 2.1                                                         |
| Gain (dBi)                                   | 3                                                             |
| Max Power - Ambient 25°C (W)                 | 100                                                           |
| Nominal Impedance (Ohms)                     | 50                                                            |
| Polarization                                 | Vertical                                                      |
| Pattern                                      | Omnidirectional                                               |
| Half-Power Beamwidth (Elevation° x Azimuth°) | 130 x 360                                                     |

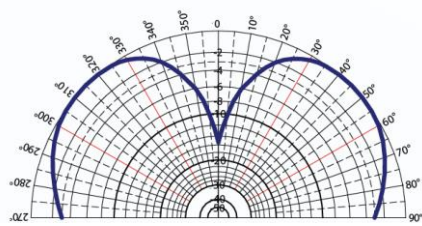
| MECHANICAL SPECIFICATIONS                    |                                                         |
|----------------------------------------------|---------------------------------------------------------|
| Dimensions – diameter x height – mm (inches) | 36.52 x 69.85 (1.438 x 2.75)                            |
| Weight – kg (lbs.)                           | 0.078 (0.173)                                           |
| Material                                     | SABIC Lexan                                             |
| Color                                        | Black or White                                          |
| Mounting Information                         | NMO (PN: MB8, MAB8) – Sold separately                   |
| Noise Suppressor                             | BlackHawk NS1535<br>1-35 VOLT, 15 Amp – Sold separately |

#### CONFIGURATION

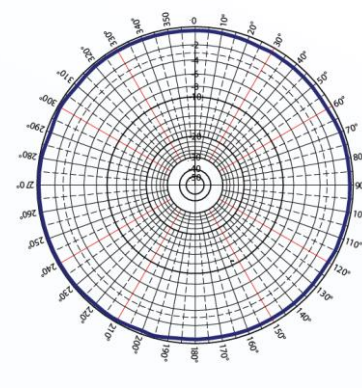
| PART NUMBER | DESCRIPTION                                                                                 |
|-------------|---------------------------------------------------------------------------------------------|
| TRA8063     | 806-870 MHz 3 dBi Phantom <sup>®</sup> ¾ NMO, White Radome                                  |
| TRA8213     | 821-896 MHz 3 dBi Phantom <sup>®</sup> ¾ NMO, White Radome                                  |
| TRA8903     | 890-960 MHz 3 dBi Phantom <sup>®</sup> ¾ NMO, White Radome                                  |
| TRA9023     | 902-928 MHz 3 dBi Phantom <sup>®</sup> ¾ NMO, White Radome                                  |
| TRA18503    | 1.85 - 1.99 GHz 3 dBi Phantom <sup>®</sup> ¾ NMO, White Radome                              |
| TRA24003    | 2.4 – 2.5 GHz 3 dBi Phantom <sup>®</sup> ¾ NMO, White Radome                                |
| TRA58003    | 4.9 – 6.0 GHz 3 dBi Phantom <sup>®</sup> ¾ NMO, White Radome                                |
| TRADCAGP    | G - Drop ceiling antenna adaptor for P-mount Phantom w/ 6"x6"x0.016" ground plane           |
| Sealtube3   | Heat shrink tubing 3 in. x 1 in. DIA install (use for jaw protector on installation wrench) |

**Note:** Add "B" to model number for black radome. Example: TRAB8063  
Add "P" to model number for Permanent Mount. Example: TRA8063P

## ANTENNA PATTERNS



Elevation Pattern (Y, Z, or H-plane)  
Normalized to 3 Db-MEG



Azimuth Pattern (X,Y, or E-plane)  
Normalized to 3 dB-MEG

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