

Laird

TECHNOLOGIES®



global solutions :
local support.™

| Vehicular Antennas



Laird Technologies is the world-leader in the design and supply of customized performance-critical products for wireless and other advanced electronic applications. Laird Technologies partners with its customers to help find solutions for applications in various industries such as:

Aerospace

Automotive Electronics

Computers

Consumer Electronics

Data Communications

Medical Equipment

Military

Network Equipment

Telecommunications

Laird Technologies offers its customers unique product solutions, dedication to research and development and a seamless network of manufacturing and customer support facilities located all across the globe.

global solutions :
local support™

www.lairdtech.com

Contents

Introduction.....	2
Phantom®	
Phantom®	3
Phantom Elite®	6
Traditional Mobile	
Mobile Load Coil	8
Wideband.....	10
A-Base.....	11
Quarterwave.....	12
Dual Band - VHF and UHF.....	13
Discadoo®.....	13
Elevated Feed Point	13
Tuf Duck® Portables.....	14
GPS	
Single band GPS.....	16
Dual and Tri-band GPS	18
Mounts, Accessories, Cable and Connectors	
Mobile Mounts.....	20
Magnetic Mounts	22
Mobile to Base Converter.....	22
Mount Kits and Accessories.....	23
Cables and Connectors.....	26
NMO Mount Antenna Guide.....	28

What's New

700 MHz Trunking Radio Antennas

Phantom.....	4
Phantom Elite	7
B-Coil.....	10
A-Base.....	11
Quarterwave.....	12
Discadoo.....	13
Elevated Feed	13
Survivor Dual Band GPS	18

2.4 GHz Antennas

2.4 GHz A-Base.....	11
---------------------	----

GPS Antennas

Micro GPS.....	17
Glass Mount GPS.....	17

Laird Technologies' Vehicular Antennas

Laird Technologies vehicular land mobile radio antennas are the industry standard for public safety agencies, fleet and transportation networks. From 27 MHz to 5.8 GHz, Laird Technologies designs and manufactures a wide variety of mobile antennas with a multitude of mounting options.



The patented whip-less Phantom® and Phantom Elite® low-profile antenna family has no equal with true field diversity performance. The patented technology utilizes dual polarization for unsurpassed performance in urban canyons as well as rural drop off areas. Laird Technologies also offers traditional mobile coil antennas, value conscious quarterwaves and A-base products with superior workmanship and design features. A wide array of specialty antennas including dual bands, elevated feed point and wide band models are also available. Tuf Duck® portable antennas have been the standard for two-way radio applications since their introduction over twenty-five years ago. Multiple cable options, connectors, mounts and bracket products provide a complete antenna system.

Patented Phantom® antennas set industry standard that cannot be duplicated

The patented Phantom® series is a tough antenna for outdoor or indoor applications. Available in standard, low profile and stealth Phantom Elite® models, all antennas feature field diversity with both vertical and horizontal polarization components. This gives the antennas diversity, frequency agility, low visibility, wide bandwidth and a low angle radiation pattern that is superior to traditional gain antennas in most applications.

- True Field Diversity
- U.S. Patent No. 5,977,931 and 6,292,156 - do not be fooled by imitators that have no gain or field diversity
- Available in VHF, UHF, 800/900, 2.4, 5.8 GHz, and multi-band cellular and GPS frequencies
- 3dB MEG outperforms a conventional 3dB antenna in many applications
- Available in standard NMO, permanent, direct N female and ceiling tile mounts
- Less susceptible to damage
- Thousands in service worldwide



**Patented
Field Diversity™**



TRA4503



TRA4503P

Phantom Antenna

TRA4503

Decorative pebble grain finish
For a higher quality look and feel

Patented PC Board Radiator
For 3 dB Mean Effective Gain performance

All silver soldered joints
For an electrically and mechanically secure connection

ABS material is injection molded directly around the solid brass insert
For a virtually indestructible housing that will not leak, disassemble or fail

O-ring built into the base
For a weather-tight seal

Gold push pin contact
Best power transfer over time

Permanent product identification with date code
Easy long term identification

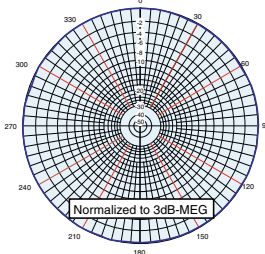


Model	Description	Frequency Range	Gain	Color	Radome Height	Max. Power
VHF Tunable Unity Models						
TRAT1420	Phantom VHF Antenna	142-160 MHz	Unity	White	3.5"	60 watt
TRABT1420	Phantom VHF Antenna	142-160 MHz	Unity	Black	3.5"	60 watts
TRAT1500	Phantom VHF Antenna	150-168 MHz	Unity	White	3.5"	60 watts
TRABT1500	Phantom VHF Antenna	150-168 MHz	Unity	Black	3.5"	60 watts
TRABT1500P	Phantom VHF Antenna P. Mt.*	150-168 MHz	Unity	Black	3.5"	60 watts
TRAT1560	Phantom VHF Antenna	156-172 MHz	Unity	White	3.5"	60 watts
TRABT1560	Phantom VHF Antenna	156-172 MHz	Unity	Black	3.5"	60 watts
TRABT1560P	Phantom VHF Antenna P. Mt.*	156-172 MHz	Unity	Black	3.5"	60 watts
TRA2100	Phantom VHF Antenna	210-225 MHz	Unity	White	2.9"	100 watts
TRAB2100	Phantom VHF Antenna	210-225 MHz	Unity	Black	2.9"	100 watts

*Add .625" overall height for all P mount models



TRAT1420



TRA4303



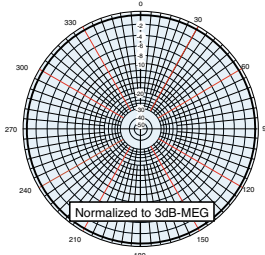
TRA7603

TRA7603P

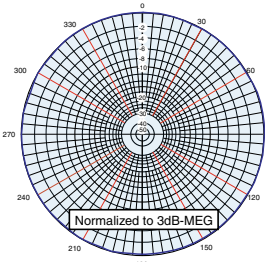
NEW

Trunking Radio Band Phantom

- Low profile field diversity antenna
- 760 - 870 MHz



TRA8063N



TRA24003N

Model	Description	Frequency Range	Gain	Color	Radome Height	Max. Power
UHF 3 dB-MEG (Mean Effective Gain) Models -						
TRA4103	Phantom UHF Antenna	410-430 MHz	3-dB MEG	White	3.40"	150 watts
TRAB4103	Phantom UHF Antenna	410-430 MHz	3-dB MEG	Black	3.40"	150 watts
TRA4303	Phantom UHF Antenna	430-450 MHz	3-dB MEG	White	3.40"	150 watts
TRAB4303	Phantom UHF Antenna	430-450 MHz	3-dB MEG	Black	3.40"	150 watts
TRA4303P	Phantom UHF Antenna P. Mt.*	430-450 MHz	3-dB MEG	White	3.40"	150 watts
TRAB4303P	Phantom UHF Antenna P. Mt.*	430-450 MHz	3-dB MEG	Black	3.40"	150 watts
TRA4500N	Phantom UHF Antenna NGP	450-470 MHz	3-dB MEG	White	3.40"	150 watts
TRAB4500N	Phantom UHF Antenna NGP	450-470 MHz	3-dB MEG	Black	3.40"	150 watts
TRA4503	Phantom UHF Antenna	450-470 MHz	3-dB MEG	White	3.40"	150 watts
TRAB4503	Phantom UHF Antenna	450-470 MHz	3-dB MEG	Black	3.40"	150 watts
TRA4503P	Phantom UHF Antenna P. Mt.*	450-470 MHz	3-dB MEG	White	3.40"	150 watts
TRAB4503P	Phantom UHF Antenna P. Mt.*	450-470 MHz	3-dB MEG	Black	3.40"	150 watts
TRA4703	Phantom UHF Antenna	470-490 MHz	3-dB MEG	White	3.40"	150 watts
TRAB4703	Phantom UHF Antenna	470-490 MHz	3-dB MEG	Black	3.40"	150 watts
TRA4703P	Phantom UHF Antenna P. Mt.*	470-490 MHz	3-dB MEG	White	3.40"	150 watts
TRAB4703P	Phantom UHF Antenna P. Mt.*	470-490 MHz	3-dB MEG	Black	3.40"	150 watts
TRA4903	Phantom UHF Antenna P. Mt.*	490-512 MHz	3-dB MEG	White	3.40"	150 watts
TRAB4903	Phantom UHF Antenna	490-512 MHz	3-dB MEG	Black	3.40"	150 watts

700 MHz - 5.8 GHz 3 dB-MEG Models

TRA7463	Phantom Antenna	746-796 MHz	3-dB MEG	White	2.70"	150 watts
TRAB7463	Phantom Antenna	746-796 MHz	3-dB MEG	Black	2.70"	150 watts
TRA7603	Phantom Antenna	760-870 MHz	3-dB MEG	White	2.70"	150 watts
TRAB7603	Phantom Antenna	760-870 MHz	3-dB MEG	Black	2.70"	150 watts
TRA7603P	Phantom Antenna P. Mt.*	760-870 MHz	3-dB MEG	White	2.70"	150 watts
TRAB7603P	Phantom Antenna P. Mt.*	760-870 MHz	3-dB MEG	Black	2.70"	150 watts
TRA8063	Phantom Antenna	806-866 MHz	3-dB MEG	White	2.70"	150 watts
TRAB8063	Phantom Antenna	806-866 MHz	3-dB MEG	Black	2.70"	150 watts
TRA8063P	Phantom Antenna P. Mt.*	806-866 MHz	3-dB MEG	White	2.70"	150 watts
TRAB8063P	Phantom Antenna P. Mt.*	806-866 MHz	3-dB MEG	Black	2.70"	150 watts
TRA8063NP	Phantom Antenna P. Mt.* /NGP	806-866 MHz	3-dB MEG	White	2.70"	150 watts
TRAB8063NP	Phantom Antenna P. Mt.* /NGP	806-866 MHz	3-dB MEG	Black	2.70"	150 watts
TRA8213	Phantom Antenna	821-896 MHz	3-dB MEG	White	2.70"	150 watts
TRAB8213	Phantom Antenna	821-896 MHz	3-dB MEG	Black	2.70"	150 watts
TRA8213P	Phantom Antenna P. Mt.*	821-896 MHz	3-dB MEG	White	2.70"	150 watts
TRAB8213P	Phantom Antenna P. Mt.*	821-896 MHz	3-dB MEG	Black	2.70"	150 watts
TRA8213NP	Phantom Antenna P. Mt.* /NGP	821-896 MHz	3-dB MEG	White	2.70"	100 watts
TRAB8213NP	Phantom Antenna P. Mt.* /NGP	821-896 MHz	3-dB MEG	Black	2.70"	100 watts
TRA8903	Phantom Antenna	890-960 MHz	3-dB MEG	White	2.70"	150 watts
TRAB8903	Phantom Antenna	890-960 MHz	3-dB MEG	Black	2.70"	150 watts
TRA9023	Phantom Antenna	902-928 MHz	3-dB MEG	White	2.70"	150 watts
TRAB9023	Phantom Antenna	902-928 MHz	3-dB MEG	Black	2.70"	150 watts
TRA9023P	Phantom Antenna P. Mt.*	902-928 MHz	3-dB MEG	White	2.70"	150 watts
TRAB9023P	Phantom Antenna P. Mt.*	902-928 MHz	3-dB MEG	Black	2.70"	150 watts
TRA9023NP	Phantom Antenna P. Mt.* /NGP	902-928 MHz	3-dB MEG	White	2.70"	100 watts
TRAB9023NP	Phantom Antenna P. Mt.* /NGP	902-928 MHz	3-dB MEG	Black	2.70"	100 watts
TRA24003	Phantom Antenna	2.4-2.5 GHz	3-dB MEG	White	2.70"	100 watts
TRAB24003	Phantom Antenna	2.4-2.5 GHz	3-dB MEG	Black	2.70"	100 watts
TRA24003P	Phantom Antenna P. Mt.*	2.4-2.5 GHz	3-dB MEG	White	2.70"	100 watts
TRAB24003P	Phantom Antenna P. Mt.*	2.4-2.5 GHz	3-dB MEG	Black	2.70"	100 watts

*Add .625" overall height for all P mount models



Model	Description	Frequency Range	Gain	Color	Radome Height	Max. Power
TRA24003NP	Phantom Antenna P. Mt.*/NGP	2.4-2.5 GHz	3-dB MEG	White	2.70"	100 watts
TRAB24003NP	Phantom Antenna P. Mt.*/NGP	2.4-2.5 GHz	3-dB MEG	Black	2.70"	100 watts
TRA58003	Phantom Antenna	4.9-6.0 GHz	3-dB MEG	White	3.40"	150 watts
TRAB58003	Phantom Antenna	4.9-6.0 GHz	3-dB MEG	Black	3.40"	150 watts
TRA58003P	Phantom Antenna P. Mt.*	4.9-6.0 GHz	3-dB MEG	White	3.40"	150 watts
TRAB58003P	Phantom Antenna P. Mt.*	4.9-6.0 GHz	3-dB MEG	Black	3.40"	150 watts



TRA24003

Multi-Band 3 dB-MEG Models

TRA821/18503	Phantom Cell/PCS Antenna	821-896 MHz 1850-1990 MHz	3-dB MEG	White	2.30"	100 watts
TRAB821/18503	Phantom Cell/PCS Antenna	821-896 MHz 1850-1990 MHz	3-dB MEG	Black	2.30"	100 watts
TRA821/18503P	Phantom Cell/PCS Permanent Mt.*	821-896 MHz 1850-1990 MHz	3-dB MEG	White	2.30"	100 watts
TRAB821/18503P	Phantom Cell/PCS Permanent Mt.*	821-896 MHz 1850-1990 MHz	3-dB MEG	Black	2.30"	100 watts
TRA806/17103	Phantom DCS/GSM/UMTS Antenna	806-960 MHz 1710-2500 MHz	3-dB MEG	White	2.30"	100 watts
TRAB806/17103	Phantom DCS/GSM/UMTS Antenna	806-960 MHz 1710-2500 MHz	3-dB MEG	Black	2.30"	100 watts
TRA806/17103P	Phantom DCS/GSM/UMTS Permanent Mt.*	806-960 MHz 1710-2500 MHz	3-dB MEG	White	2.30"	100 watts
TRAB806/17103P	Phantom DCS/GSM/UMTS Permanent Mt.*	806-960 MHz 1710-2500 MHz	3-dB MEG	Black	2.30"	100 watts

Model	Description	Freq	Gain	Overall Height	Connector Type	Coax Type
-------	-------------	------	------	----------------	----------------	-----------

Low Profile Models with integrated plane

All models listed with permanent mount*

DTRA8063P	Low Profile Phantom	806-866 MHz	3 dB-MEG	1.25"	TNC-Male	ATX195
DTRA8213P	Low Profile Phantom	821-896 MHz	3 dB-MEG	1.25"	TNC-Male	ATX195

Dual-Band Phantom with GPS

All models listed with permanent mount*

GPSD4503P	Standard AVL w/Phantom	450 - 470 MHz	3 dB-MEG	3.5"	TNC-Male	ATX195
GPSD7463P	Low Profile AVL w/Phantom	746 - 786 MHz	3 dB-MEG	1.25"	TNC-Male	ATX195
GPSD8063P	Low Profile AVL w/Phantom	806 - 866 MHz	3 dB-MEG	1.25"	TNC-Male	ATX195
GPSD8063EP	As above with ext. 1" mounting nut	806 - 866 MHz	3 dB-MEG	1.25"	TNC-Male	ATX195
GPSD8213P	Low Profile AVL w/Phantom	821 - 896 MHz	3 dB-MEG	1.25"	TNC-Male	ATX195
GPSD8903P	Low Profile AVL w/Phantom	890 - 960 MHz	3 dB-MEG	1.25"	TNC-Male	ATX195
GPSD9023P	Low Profile AVL w/Phantom	902 - 928 MHz	3 dB-MEG	1.25"	TNC-Male	ATX195

Tri-Band Phantom with GPS AVL

GPST821/18503P	Cell/PCS/GPS Low Profile*	821-896 MHz/ 1850-1990 MHz	3 dB-MEG	1.25"	TNC-Male	17'-RG174
----------------	---------------------------	-------------------------------	----------	-------	----------	-----------

Custom tuning available

*Add .625" overall height for all P mount models

Ordering Guide

DTRA8063P =

Low Profile, Phantom, Black finish, 806-866 MHz, 3 dB-MEG gain, permanent mount

D	Low Profile
TRA	Phantom antenna
B	B = Black Finish Blank = White Finish
806	Initial Frequency
3	Gain Blank = Unity 3 = 3 dB MEG (Mean Effective Gain)
P	Mount option Blank = NMO P = Permanent N = No Ground Plane



DTRA8063P



GPSD4503P



GPSD7463P

TNC-Male connector with 17' cable standard on all P mounts. Other connectors available

Phantom Elite: Design + Performance = True Field Diversity Refined Beyond Imitation

The next generation Antenex Phantom Elite® antennas blend stealth inspired design with patented true field diversity technology providing both vertical and horizontal polarization. The antenna that revolutionized the industry makes a striking visual impact by enclosing the superior Phantom technology in a significantly more aerodynamic housing. The Phantom Elite® is the perfect low profile choice for taxi and public safety vehicles. The patented "no-whip" design counteracts signal fading in highly reflective urban or mobile environments. The stealth antennas are also less susceptible to damage and vandalism. All models are produced with field-proven ABS injection molded material.

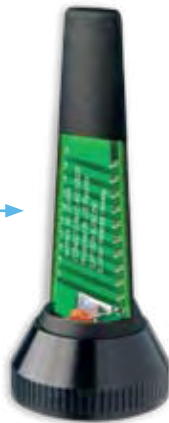


Model	Description	Frequency Range	Gain	Color	Radome Height	Max. Power
VHF Unity Models						
ETRA1440	Phantom Elite VHF Antenna	144-148 MHz	Unity	White	2.375"	60 watts
ETRA1440	Phantom Elite VHF Antenna	144-148 MHz	Unity	Black	2.375"	60 watts
ETRA1500	Phantom Elite VHF Antenna	150-155 MHz	Unity	White	2.375"	60 watts
ETRA1500	Phantom Elite VHF Antenna	150-155 MHz	Unity	Black	2.375"	60 watts
ETRA1550	Phantom Elite VHF Antenna	155-160 MHz	Unity	White	2.375"	60 watts
ETRA1550	Phantom Elite VHF Antenna	155-160 MHz	Unity	Black	2.375"	60 watts
ETRA1650	Phantom Elite VHF Antenna	165-170 MHz	Unity	White	2.375"	60 watts
ETRA2100	Phantom Elite VHF Antenna	210-225 MHz	Unity	White	2.375"	100 watts
ETRA2100	Phantom Elite VHF Antenna	210-225 MHz	Unity	Black	2.375"	100 watts
UHF 3 dB-MEG Models						
ETRA4103	Phantom Elite UHF Antenna	410-425 MHz	3-dB MEG	White	3.40"	150 watts
ETRA4103	Phantom Elite UHF Antenna	410-425 MHz	3-dB MEG	Black	3.40"	150 watts
ETRA4303	Phantom Elite UHF Antenna	430-450 MHz	3-dB MEG	White	3.40"	150 watts
ETRA4303	Phantom Elite UHF Antenna	430-450 MHz	3-dB MEG	Black	3.40"	150 watts
ETRA4303P	Phantom Elite UHF Antenna P. Mt.*	430-450 MHz	3-dB MEG	White	3.40"	150 watts
ETRA4303P	Phantom Elite UHF Antenna P. Mt.*	430-450 MHz	3-dB MEG	Black	3.40"	150 watts
ETRA4500N	Phantom Elite UHF Antenna NGP	450-470 MHz	3-dB MEG	White	3.40"	150 watts
ETRA4500N	Phantom Elite UHF Antenna NGP	450-470 MHz	3-dB MEG	Black	3.40"	150 watts
ETRA4503	Phantom Elite UHF Antenna	450-470 MHz	3-dB MEG	White	3.40"	150 watts
ETRA4503	Phantom Elite UHF Antenna	450-470 MHz	3-dB MEG	Black	3.40"	150 watts
ETRA4503P	Phantom Elite UHF Antenna P. Mt.*	450-470 MHz	3-dB MEG	White	3.40"	150 watts
ETRA4503P	Phantom Elite UHF Antenna P. Mt.*	450-470 MHz	3-dB MEG	Black	3.40"	150 watts
ETRA4703	Phantom Elite UHF Antenna	470-490 MHz	3-dB MEG	White	3.40"	150 watts
ETRA4703	Phantom Elite UHF Antenna	470-490 MHz	3-dB MEG	Black	3.40"	150 watts
ETRA4703P	Phantom Elite UHF Antenna P. Mt.*	470-490 MHz	3-dB MEG	White	3.40"	150 watts
ETRA4703P	Phantom Elite UHF Antenna P. Mt.*	470-490 MHz	3-dB MEG	Black	3.40"	150 watts



**Patented
Field Diversity™**

Patented PC
board radiator



All silver
soldered joints



Aerodynamic molded ABS
housing is virtually indestructible



Model	Description	Frequency Range	Gain	Color	Radome Height	Max. Power
700 MHz - 2.4 GHz 3 dB-MEG Models						
ETRA7463	Phantom Elite Antenna	746-796 MHz	3-dB MEG	White	2.70"	150 watts
ETRA87463	Phantom Elite Antenna	746-796 MHz	3-dB MEG	Black	2.70"	150 watts
ETRA8063	Phantom Elite Antenna	806-866 MHz	3-dB MEG	White	2.70"	150 watts
ETRA88063	Phantom Elite Antenna	806-866 MHz	3-dB MEG	Black	2.70"	150 watts
ETRA8063P	Phantom Elite Antenna P. Mt. *	806-866 MHz	3-dB MEG	White	2.70"	150 watts
ETRA88063P	Phantom Elite Antenna P. Mt. *	806-866 MHz	3-dB MEG	Black	2.70"	150 watts
ETRA8063NP	Phantom Elite Antenna P. Mt. */NGP	806-866 MHz	3-dB MEG	White	2.70"	150 watts
ETRA88063NP	Phantom Elite Antenna P. Mt. */NGP	806-866 MHz	3-dB MEG	Black	2.70"	150 watts
ETRA8213	Phantom Elite Antenna	821-896 MHz	3-dB MEG	White	2.70"	150 watts
ETRA88213	Phantom Elite Antenna	821-896 MHz	3-dB MEG	Black	2.70"	150 watts
ETRA8213P	Phantom Elite Antenna P. Mt. *	821-896 MHz	3-dB MEG	White	2.70"	150 watts
ETRA88213P	Phantom Elite Antenna P. Mt. *	821-896 MHz	3-dB MEG	Black	2.70"	150 watts
ETRA8213NP	Phantom Elite Antenna P. Mt. */NGP	821-896 MHz	3-dB MEG	White	2.70"	100 watts
ETRA88213NP	Phantom Elite Antenna P. Mt. */NGP	821-896 MHz	3-dB MEG	Black	2.70"	100 watts
ETRA8903	Phantom Elite Antenna	890-960 MHz	3-dB MEG	White	2.70"	150 watts
ETRA88903	Phantom Elite Antenna	902-928 MHz	3-dB MEG	White	2.70"	150 watts
ETRA89023	Phantom Elite Antenna	902-928 MHz	3-dB MEG	Black	2.70"	150 watts
ETRA89023P	Phantom Elite Antenna P. Mt. *	902-928 MHz	3-dB MEG	Black	2.70"	150 watts
ETRA89023NP	Phantom Elite Antenna P. Mt. */NGP	902-928 MHz	3-dB MEG	Black	2.70"	100 watts
ETRA24003	Phantom Elite Antenna	2.4-2.5 GHz	3-dB MEG	White	2.70"	100 watts
ETRA824003	Phantom Elite Antenna	2.4-2.5 GHz	3-dB MEG	Black	2.70"	100 watts
ETRA24003P	Phantom Elite Antenna P. Mt. *	2.4-2.5 GHz	3-dB MEG	White	2.70"	100 watts
ETRA824003P	Phantom Elite Antenna P. Mt. *	2.4-2.5 GHz	3-dB MEG	Black	2.70"	100 watts
ETRA24003NP	Phantom Elite Antenna P. Mt. */NGP	2.4-2.5 GHz	3-dB MEG	White	2.70"	100 watts
ETRA824003NP	Phantom Elite Antenna P. Mt. */NGP	2.4-2.5 GHz	3-dB MEG	Black	2.70"	100 watts

Multi-Band 3 dB-MEG Models

ETRA821/18503	Phantom Elite Cell/PCS Antenna	821-896 MHz 1850-1990 MHz	3-dB MEG	White	2.70"	100 watts
ETRA8821/18503	Phantom Elite Cell/PCS Antenna	821-896 MHz 1850-1990 MHz	3-dB MEG	Black	2.70"	100 watts
ETRA821/18503P	Phantom Elite Cell/PCS P. Mt. *	821-896 MHz 1850-1990 MHz	3-dB MEG	White	2.70"	100 watts
ETRA8821/18503P	Phantom Elite Cell/PCS P. Mt. *	821-896 MHz 1850-1990 MHz	3-dB MEG	Black	2.70"	100 watts

Wifi Indoor Solutions

ETRA24003DTM	Desktop Version White	2.4-2.5 GHz	3-dB MEG	White	2.70"	100 watts
ETRA824003DTM	Desktop Version Black	2.4-2.5 GHz	3-dB MEG	Black	2.70"	100 watts
ETRA24003WM	Wall Mount	2.4-2.5 GHz	3-dB MEG	White	2.70"	100 watts
ETRA24003CM	Ceiling Tile Mount	2.4-2.5 GHz	3-dB MEG	White	2.70"	100 watts

Drop Ceiling Antenna Adaptors

TRADCA	No Ground Plane
TRADCAGP	With 6 x 6 Inch Ground Plane

*Add .625" overall height for all P mount models

NEW

Trunking Radio Band Phantom Elite



Elite VHF Special Chrome bayonet mounting adapter.
Specify 3/8 or 3/4" size on order



ETRAB4503

ETRA8063

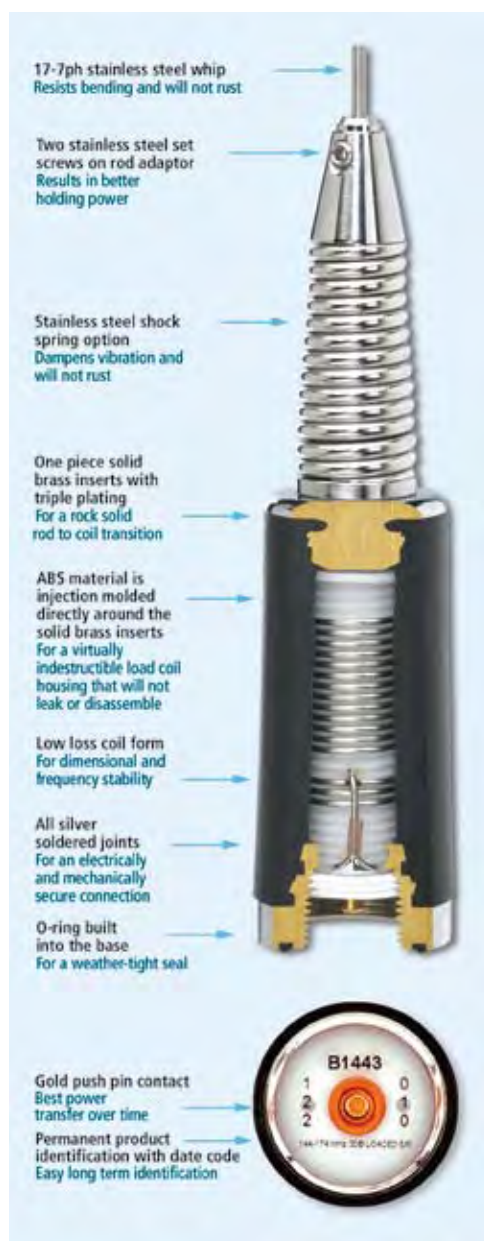


ETRA24003CM
with Ceiling Mount



Laird Technologies Mobile Load Coil antennas are the most technologically advanced antennas on the market

Laird Technologies continues to develop and improve all land mobile radio antenna products. Years of refinement in the mechanical and electrical design of load coil products have resulted in the most technically advanced antennas on the market. These mobile antennas are designed and built for demanding applications and typically outlast the cars they are mounted on. Laird Technologies mobiles are used extensively on municipal vehicles, in off road racing, on industrial vehicles, taxi cabs and other high endurance applications such as police cruisers, emergency vehicles, and forestry service vehicles. The antennas are manufactured in over 100 variations and each model is permanently marked for model and frequency. No ground plane antennas provide flexibility in any mounting application, while dual and wide band models attain full value out of today's advanced radios. Please contact Laird Technologies for availability on additional products and mobile applications.



Antenna Ordering Guide

BB4505CNS =

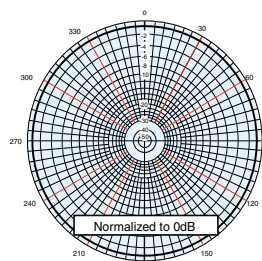
B-Mobile Load Coil, Black Chrome Finish, 450-470 MHz, 5 dB Gain, Closed Coil Collinear, No Ground Plane, Spring

B	Antenna Style B = B Mobile Load Coil			
B	Finish	Blank = Chrome	B = Black	
450	Frequency	Initial frequency rating component of part number		
5	Gain	Blank = Unity (Lowband Models) 0 = Unity	3 = 3 dB	5 = 5 dB
C	Phasing Coil	Blank = Straight Rod	C = Close	
N	Ground Plane	N = No Ground Plane	Blank = Ground Plane	
S	Spring Option	S = Spring Option		

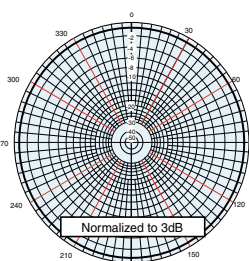
Model	Description	Frequency	Center	Gain Freq	Overall Length	Whip Style
Lowband DC Ground Base Models						
C27	1/4 Wave	26.75-31 MHz	Tunable	Unity	52.5	49" Tapered
C30	1/4 Wave	30 - 35 MHz	Tunable	Unity	52.5	49" Tapered
C34	1/4 Wave	34 - 37 MHz	Tunable	Unity	52.5	49" Tapered
C37	1/4 Wave	37 - 40 MHz	Tunable	Unity	52.5	49" Tapered
C40S	1/4 Wave w/Spring	40 - 47 MHz	Tunable	Unity	52.5	49" Tapered
C40	1/4 Wave	40 - 47 MHz	Tunable	Unity	52.5	49" Tapered
C47	1/4 Wave	47 - 50 MHz	Tunable	Unity	52.5	49" Tapered

VHF Models						
B66	1/4 Wave Broadband	66 - 174 MHz	Tunable	Unity	51	49" Tapered
B132	1/4 Wave Broadband	132 - 928 MHz	Tunable	Unity	23	21" Straight
B132S	1/4 Wave Broadband	132 - 525 MHz	Tunable	Unity	23	21" Straight
B1322N	NGP Base Loaded 1/2 Wave	132 - 174 MHz	Tunable	2.4 dB	57	55" Tapered
B1322W	1/4 Wave Wideband	Variable*	Tunable	Unity	23	21" Straight
B1322WS	1/4 Wave Wideband w/spring	Variable*	Tunable	Unity	23	21" Straight
B1323S	5/8 Wave w/Spring	132 - 174 MHz	Tunable	3 dB	59	55" Tapered
B1323	5/8 Wave	132 - 174 MHz	Tunable	3 dB	57	55" Tapered
B1442NS	NGP Base Loaded 1/2 Wave w/Spring	144 - 174 MHz	Tunable	2.4 dB	53	49" Tapered
B1442N	NGP Base Loaded 1/2 Wave	144 - 174 MHz	Tunable	2.4 dB	51	49" Tapered
B1443	5/8 Wave	144 - 174 MHz	Tunable	3 dB	51- 3/8	49" Tapered
B1443S	5/8 Wave w/Spring	144 - 174 MHz	Tunable	3 dB	53- 3/8	49" Tapered
B2003	5/8 Wave	200 - 225 MHz	Tunable	3 dB	35	33" Straight
B2503	5/8 Wave	250 - 280 MHz	Tunable	3 dB	26.5	24 1/2" Straight
B2002N	NGP Base Loaded 1/2 Wave	200 - 225 MHz	Tunable	2.4 dB	31.5	29 1/2" Straight

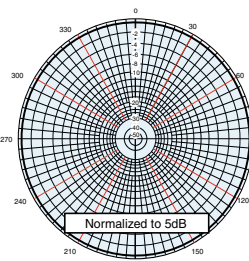
UHF Models						
B4063	5/8 Wave	406 - 430 MHz	Tunable	3 dB	15	13" Straight
B4303	5/8 Wave	430 - 450 MHz	Tunable	3 dB	14	11 13/16" Straight
B4503	5/8 Wave	450 - 470 MHz	Tunable	3 dB	13	11" Straight
B4703	5/8 Wave	470 - 490 MHz	Tunable	3 dB	12.5	10 11/16" Straight
B4903	5/8 Wave	490 - 512 MHz	Tunable	3 dB	12.5	10 1/2" Straight
B4065C	Closed Coil Collinear	406 - 430 MHz	Tunable	5 dB	39.5	37 3/8" Collinear
B4305C	Closed Coil Collinear	430 - 450 MHz	Tunable	5 dB	36	34 1/8" Collinear
B4505CS	Closed Coil Collinear w/Spring	450 - 470 MHz	Tunable	5 dB	37	32 3/4" Collinear
B4505C	Closed Coil Collinear	450 - 470 MHz	Tunable	5 dB	35	32 3/4" Collinear
B4705C	Closed Coil Collinear	470 - 490 MHz	Tunable	5 dB	33	31 1/4" Collinear
B4905C	Closed Coil Collinear	490 - 512 MHz	Tunable	5 dB	31	29 1/8" Collinear
B4062N	NGP 1/2 Wave	406 - 430 MHz	Tunable	2.4 dB	14.31	11 9/16" Straight
B4302N	NGP 1/2 Wave	430 - 450 MHz	Tunable	2.4 dB	12.5	10 5/8" Straight
B4502N	NGP 1/2 Wave	450 - 470 MHz	Tunable	2.4 dB	12.5	10 5/16" Straight
B4065CN	NGP Closed Coil Collinear	406 - 430 MHz	Tunable	5 dB	36	34 1/8" Collinear
B4305CN	NGP Closed Coil Collinear	430 - 450 MHz	Tunable	5 dB	35	32 7/8" Collinear
B4505CN	NGP Closed Coil Collinear	450 - 470 MHz	Tunable	5 dB	32.5	30 1/2" Collinear
B4705CN	NGP Closed Coil Collinear	470 - 490 MHz	Tunable	5 dB	30.5	28 7/16" Collinear
B4905CN	NGP Closed Coil Collinear	490 - 512 MHz	Tunable	5 dB	29	27 1/8" Collinear



C27



B1443



B4505C



B1322S

B1322

C47

Technical Data - Product Features & Information

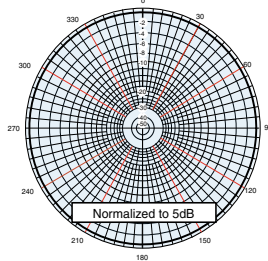
- **Gain:**
See model.
- **Frequency Range:**
See model.
- **VSWR:**
<2:1.
- **Maximum Power:**
All models - 200 watts.
Bandwidth:
See representative VSWR plot.
- **Impedance:**
50 ohms.
- **Tuning:**
Models are shipped at the lowest frequency in the range. Custom factory tuning is available.
- **Mounting Base:**
Injected molded high heat ABS with copper, nickel, bright or black chrome solid brass inserts.
- **Radiator:**
17-7ph tapered stainless steel whip or 17-7ph straight stainless steel collinear with a centerless ground finish or black chrome plate.
- **Coil Form:**
3 dimensional precision machined Delrin®.
- **Phasing Coils:**
Silver plated tempered brass.
- **Contacts:**
Gold plated push pin.
- **Mounts to:**
3/4", 3/8", Magnetic and Mini-Trunk mounts.
- **Quality Assurance:**
100% tested on a network analyzer.

Custom tuning available

NEW

Trunking Radio Band B-Coil

- 760 - 870 MHz



B8065C

Wideband Antennas

- Feature unique dual tuned circuit design
- Allows operation over a broad range of channels/frequencies
- Self tuning feature with no rod trimming allows for faster installations



CW4405C CW27 CW1503

Custom tuning available

U.S. Patent No. 5,604,507 -
International Patents Pending.

Model	Description	Frequency	Center Freq	Gain	Overall Length
700 - 900 MHz Models					
B7603	Base Loaded 5/8 Wave	760 - 870 MHz	812 MHz	3 dBi	4 7/8" Straight
B7643	Base Loaded 5/8 Wave	764 - 870 MHz	812 MHz	3 dBi	4 7/8" Straight
B8063	Base Loaded 5/8 Wave	806 - 866 MHz	Tunable	3 dB	4 7/8" Straight
B8963	Base Loaded 5/8 Wave	896 - 970 MHz	933 MHz	3 dBi	4 7/8" Straight
B8065C	Base Loaded Closed Collinear	806 - 866 MHz	Tunable	5 dB	16" Collinear
B8965C	NGP Closed Collinear	896 - 970 MHz	Tunable	5 dB	13 3/4" Collinear
B8062N	NGP Bases Loaded 1/2 Wave	806 - 866 MHz	Tunable	2.4 dB	4 7/8" Straight
B8065CN	NGP Closed Collinear	806 - 866 MHz	Tunable	5 dB	16" Collinear
B8965CN	NGP Closed Collinear	896 - 970 MHz	Tunable	5 dB	13 3/4" Collinear

Options and Accessories

B	Add Black Chrome Finish
S	Add Shock Spring
SB	Add Black Shock Spring
RO49T	49" tapered whip and ball
ROB49T	Black 49" tapered whip and ball

Wideband - Lowband

CW27	Base Loaded 1/4 Wave	26.8 - 29.7 MHz	28.25 MHz	Unity	67.5
CW30	Base Loaded 1/4 Wave	30 - 34 MHz	32 MHz	Unity	63.5
CW34	Base Loaded 1/4 Wave	34 - 40 MHz	37 MHz	Unity	66
CW37	Base Loaded 1/4 Wave	37 - 46 MHz	41.5 MHz	Unity	60-3/4
CW42	Base Loaded 1/4 Wave	42 - 48 MHz	45 MHz	Unity	54-3/4

Wideband - VHF Models

CW1320	End Fed 1/4 Wave	132 - 174 MHz	Tunable	Unity	18-3/4"
CW1443	Base Loaded 5/8 Wave	144 - 156 MHz	150 MHz	3 dB	50-1/2
CW1503	Base Loaded 5/8 Wave	150 - 162 MHz	156 MHz	3 dB	48-1/2
CW1533	Base Loaded 5/8 Wave	153 - 169 MHz	161 MHz	3 dB	49-1/2
CW1623	Base Loaded 5/8 Wave	162 - 174 MHz	168 MHz	3 dB	43-1/2

Wideband - UHF Models

CW4065C	Closed Coil Collinear	406 - 430 MHz	418 MHz	5 dB	37-1/2
CW4405C	Closed Coil Collinear	440 - 470 MHz	455 MHz	5 dB	35-1/2

Options and Accessories

B	Black Finish
S	Shock Spring for B and C Coils

Technical Data - Product Features & Information

	LOWBAND	VHF	UHF
• Gain:	Unity	3 dB	5 dB
• VSWR (across band):	2.0:1 or better	2.0:1 or better	2.0:1 or better
• Maximum Power:	200 watts	200 watts	200 watts
• Bandwidth:	Exceeds 10% @1.8:1 VSWR	Exceeds 10% @1.8:1 VSWR	Exceeds 10% @1.8:1 VSWR
• Impedance:	50 ohms DC Continuity	50 ohms DC Continuity	50 ohms DC Continuity
• Mounts to:	3/4" hole, 3/8" hole, Magnetic & Mini-Trunk Mounts		

Choose A-Base antennas in Quarterwave, Collinear, or Broad Band options

- Exclusive Laird Technologies gold-plated push-pin contact provides the most corrosion resistance and power transfer over time
- Long tuning ferrule allows for greater freedom in frequency adjustment without trimming
- Stainless steel corona ball stays on the rod - no dissimilar metal interaction associated with competitor designs

Model	Frequency	Color	Gain	Radiator
VHF Models				
AFT	118 - 896 MHz	Chrome	Unity	0.100" Dia. 1/4 Wave
ABFT	118 - 896 MHz	Black	Unity	0.100" Dia. 1/4 Wave
A150	150 - 174 MHz	Chrome	Unity	0.100" Dia. 1/4 Wave
A150S	150 - 174 MHz	Chrome	Unity	0.100" Dia. 1/4 Wave
AB150	150 - 174 MHz	Black	Unity	0.100" Dia. 1/4 Wave

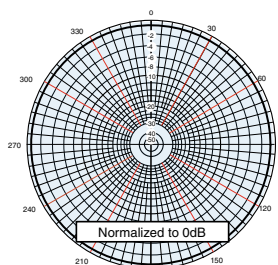
UHF Models				
A450	450 - 470 MHz	Chrome	Unity	0.100" Dia. 1/4 Wave
AB450	450 - 470 MHz	Black	Unity	0.100" Dia. 1/4 Wave
A4503	450 - 470 MHz	Chrome	3.5 dB	Open Collinear
A4503C	450 - 470 MHz	Chrome	3.5 dB	Closed Collinear
AB4503	450 - 470 MHz	Black	3.5 dB	Open Collinear
AB4503C	450 - 470 MHz	Black	3.5 dB	Closed Collinear

700-800 MHz Antennas				
A7603	760 - 870 MHz	Chrome	3 dB	Open Collinear
AB7603	760 - 870 MHz	Black	3 dB	Open Collinear
A8063	806 - 896 MHz	Chrome	3 dB	Open Collinear
A8963	896 - 970 MHz	Chrome	3 dB	Open Collinear
A8063C	806 - 896 MHz	Chrome	3.5 dB	Closed Collinear
A8065CT	806 - 896 MHz	Chrome	5 dB	Closed Trilinear
AB8065CT	806 - 896 MHz	Black	5 dB	Closed Trilinear
AB8063	806 - 896 MHz	Black	3 dB	Open Collinear
AB8963	896 - 970 MHz	Black	3 dB	Open Collinear
AB8063C	806 - 896 MHz	Black	3.5 dB	Closed Collinear

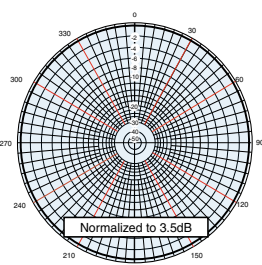
800 MHz Models with Spring				
A8063S	806 - 896 MHz	Chrome	3 dB	Open Collinear
A8063CS	806 - 896 MHz	Chrome	3.5 dB	Closed Collinear
A8065CTS	806 - 896 MHz	Chrome	5 dB	Closed Trilinear
AB8063S	806 - 896 MHz	Black	3 dB	Open Collinear
AB8063CS	806 - 896 MHz	Black	3.5 dB	Closed Collinear
AB8065CTS	806 - 896 MHz	Black	5 dB	Closed Trilinear

2.4 GHz Models				
A2400	2400 - 2500 MHz	Chrome	Unity	
AB2400	2400 - 2500 MHz	Black	Unity	
A24003	2400 - 2500 MHz	Chrome	3 dBi	Open Collinear
AB24003	2400 - 2500 MHz	Black	3 dBi	Open Collinear
A24005	2400 - 2500 MHz	Chrome	5 dBi	Open Trilinear
AB24005	2400 - 2500 MHz	Black	5 dBi	Open Trilinear

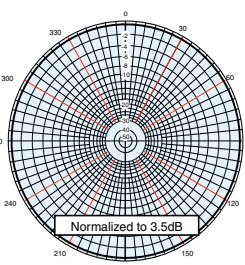
Springs	
AS	Low Profile Base Chrome Spring w/Key & Set Screw
ASB	Low Profile Base Black Spring w/Key & Set Screw



A150



A8063C



AB4503C

Technical Data - Product Features & Information

- **Gain:** See model.
- **Frequency Range:** See model.
- **VSWR:** <1.5:1
- **Maximum Power:** 200 watts
- **Bandwidth:** VHF - up to 25 MHz (with spring), UHF/800/900 - 100 MHz+
- **Impedance:** 50 ohms
- **Mounting Base:** High temperature molded ABS with threaded brass insert.
- **Radiator:** Type 302 stainless steel with a brite or black chrome plate finish for .062" diameter rods.
17-7ph stainless steel with a centerless ground finish or black chrome plate for all other models.
- **Brass Fittings:** Highly polished brite or black chrome plated ferrule.
- **Contacts:** Gold plated push pin contact on A style.

Custom tuning available

NEW

2.4 GHz A-Base Antennas

- Unity, 3 dBi or 5 dBi gain





Quarterwave Antennas

- All Quarterwaves are built with gold plated contacts for corrosion resistance and best power transfer
- Stand-up™ grommet will not degrade over time
- High spring temper rod stays straighter longer
- Stainless steel corona ball stays on the rod - no dissimilar metal interaction associated with competitor designs



QWB800

QW450

Laird Technologies Quarterwave Antennas

Laird Technologies' least expensive mobile antennas receive the most detailed attention. Quarterwave models and 3 dB chrome nut models feature a gold plated brass contact and heavy duty specially formulated Stand Up™ grommets that last longer and stay straighter. For any mobile application, you can be sure that Laird Technologies has a feature packed solution for you.

Unity Gain Models

Stainless Models

Q27S	Stainless	27 - 54 MHz	Unity	102	1/4 Wave
QW***	Stainless	Customer Specified	Unity	Customer Spec.	1/4 Wave
QW136	Stainless	136 - 144 MHz	Unity	22	1/4 Wave
QW144	Stainless	144 - 152 MHz	Unity	19	1/4 Wave
QW152	Stainless	152 - 162 MHz	Unity	18	1/4 Wave
QW162	Stainless	162 - 174 MHz	Unity	17	1/4 Wave
QW220	Stainless	220 - 225 MHz	Unity	12.5	1/4 Wave
QW406	Stainless	406 - 430 MHz	Unity	7	1/4 Wave
QW430	Stainless	430 - 450 MHz	Unity	6.5	1/4 Wave
QW450	Stainless	450 - 470 MHz	Unity	6	1/4 Wave
QW470	Stainless	470 - 490 MHz	Unity	5.75	1/4 Wave
QW490	Stainless	490 - 512 MHz	Unity	5.5	1/4 Wave
QW760	Stainless	760 - 870 MHz	Unity		1/4 Wave
QW800	Stainless	806 - 896 MHz	Unity	3.3	1/4 Wave
QW900	Stainless	896 - 970 MHz	Unity	3	1/4 Wave
QWFT120	Stainless	118 - 970 MHz	Unity	24	1/4 Wave

NEW

Black Models

QWB***	Black	Customer Specified	Unity	Customer Spec.	1/4 Wave
QWB136	Black	136 - 144 MHz	Unity	22"	1/4 Wave
QWB144	Black	144 - 152 MHz	Unity	19"	1/4 Wave
QWB152	Black	152 - 162 MHz	Unity	18"	1/4 Wave
QWB162	Black	162 - 174 MHz	Unity	17"	1/4 Wave
QWB220	Black	220 - 225 MHz	Unity	12.5"	1/4 Wave
QWB406	Black	406 - 430 MHz	Unity	7"	1/4 Wave
QWB430	Black	430 - 450 MHz	Unity	6.5"	1/4 Wave
QWB450	Black	450 - 470 MHz	Unity	6"	1/4 Wave
QWB470	Black	470 - 490 MHz	Unity	5.75"	1/4 Wave
QWB490	Black	490 - 512 MHz	Unity	5.5"	1/4 Wave
QWB760	Black	760 - 870 MHz	Unity		1/4 Wave
QWB800	Black	806 - 896 MHz	Unity	3.3"	1/4 Wave
QWB900	Black	896 - 970 MHz	Unity	3"	1/4 Wave
QWFTB120	Black	118 - 970 MHz	Unity	24	1/4 Wave

NEW

3 dB Gain Models

Stainless Models

QW8063	Stainless	806 - 866 MHz	3 dB	16.25	Open Coil Flexible
QW8253	Stainless	825 - 896 MHz	3 dB	15.5	Open Coil Flexible
QW8963	Stainless	896 - 970 MHz	3 dB	14.5	Open Coil Flexible

Black Models

QWB8063	Black	806 - 866 MHz	3 dB	16.25	Open Coil Flexible
QWB8253	Black	825 - 896 MHz	3 dB	15.5	Open Coil Flexible
QWB8963	Black	896 - 970 MHz	3 dB	14.5	Open Coil Flexible

Accessories

QWNUT	Quarterwave Nut - Chrome
QWNUTB	Quarterwave Nut - Black
QWRC	Quarterwave Rain Cap - Chrome
QWRCB	Quarterwave Rain Cap - Black

Model	Finish	Frequency	Gain	Overall Length	Phasing Coil
-------	--------	-----------	------	----------------	--------------

Dual Band & Special Applications

Chrome Models

A150/450C	Chrome	150-174/450-470	Unity	18.5"	Closed coil trap
C144/440C	Chrome	144-148/440-450	2/5 dB	36-3/8"	Closed coil collinear
C150/450C	Chrome	150-174/450-470	2/5 dB	33-3/8"	Closed coil collinear
C144/440CS	Chrome	144-148/440-450	2/5 dB	36-3/8"	Closed coil collinear w/Spring
C150/450CS	Chrome	150-174/450-470	2/5 dB	33-1/2"	Closed coil collinear w/Spring
AB150/450C	Black	150-174/450-470	Unity	18-1/2"	Closed coil trap
CB144/440C	Black	144-148/440-450	2/5 dB	36-3/8"	Closed coil collinear
CB150/450C	Black	150-174/450-470	2/5 dB	33-3/8"	Closed coil collinear
CB144/440CS	Black	144-148/440-450	2/5 dB	36-3/8"	Closed coil collinear w/Spring
CB150/450CS	Black	150-174/450-470	2/5 dB	33-1/2"	Closed coil collinear w/Spring

Disguise Antennas (Cellular Look-alike)

Chrome Models

AD150	Chrome	150-174 MHz		15-5/8"	Short 1/4 Wave
AD450	Chrome	450-470 MHz			Short 1/4 Wave

Black Models

ADB150	Black	150-174 MHz		15-5/8"	Short 1/4 Wave
--------	-------	-------------	--	---------	----------------

Scanner Antennas

ASCANC	Chrome	150/450/800	Rx Only	18-1/2"	Closed Collinear
ABSCANC	Black	150/450/800	Rx Only		Closed Collinear
AS	Chrome Spring			2-5/8"	
ASB	Black Spring			2-5/8"	

Model	Frequency	Dimensions - Diameter x Height
-------	-----------	--------------------------------

Discadoo - NMO Mount MODELS

Ground Plane

DISC760M	760-870 MHz	4.75" x .75"
DISC806M	806-866 MHz	4.75" x .75"
DISC824M	824-896 MHz	4.75" x .75"

NEW

Discadoo - Self Adhesive Models with Pigtail Jumper

No Ground Plane

DISC2400PNSM	Black	2400-2500 MHz	4.75" x .75"
DISCW2400PNSM	White	2400-2500 MHz	4.75" x .75"

Model	Finish	Frequency	Center Frequency	Gain	Overall Length	Whip Style
-------	--------	-----------	------------------	------	----------------	------------

Elevated Feed Point - UHF Model

EB4503C	Black	450-470 MHz	460 MHz	3 dB	40-1/4"	Closed coil Collinear
---------	-------	-------------	---------	------	---------	-----------------------

NEW

Elevated Feed Point - 800/900 MHz Models

E7603	Chrome	760 - 870 MHz	851 MHz	3 dB		Open coil collinear
E7603C	Chrome	760 - 870 MHz	851 MHz	3 dB		Closed coil collinear
E8063	Chrome	806 - 896 MHz	851 MHz	3 dB	25-3/8"	Open coil collinear
E8063C	Chrome	806 - 896 MHz	851 MHz	3 dB	26 7/8"	Closed coil collinear
EB8063	Black	806 - 896 MHz	851 MHz	3 dB	25-3/8"	Open coil collinear
EB8063C	Black	806 - 896 MHz	851 MHz	3 dB	26-7/8"	Closed coil collinear
EB8065C	Chrome	806 - 896 MHz	851 MHz	5 dB	37-1/4"	Closed coil collinear
EB8065C	Black	806 - 896 MHz	851 MHz	5 dB	37-1/4"	Closed coil collinear
EB8965C	Black	896 - 970 MHz	933 MHz	5 dB	33-1/2"	Closed coil collinear

Dual Band & Special Applications

- Built in O-ring provides weather-tight seal
- Dual-band is only 38" tall

Q27S

C150/450CS

DISC806M

Discadoo®

- Low profile with big performance
- Low angle omni-directional radiation provided by Planar-Inverted-F antenna design
- Available in NMO and Self Adhesive mounting styles

Elevated Feed Point

- Ensure signal over high roof lines
- Internal circuit board design provides stable high performance
- No ground plane allows versatile mounting options
- Fiberglass feed shaft for heat resistance, strength, and rigidity

E8065C





1



2



3



4



5



6



7



8



9



10

Model Frequency Connectors Photo Avg. length

Low Band 27-88 MHz

A+Frequency+connector	27-88MHz	BN, HT, KR, MX, PL, & TN	1	6"-10"
A+Frequency+connector+6	27-88MHz	BN, HT, KR, MX, PL, & TN		6"-10"
EXL Models	25-29 MHz	HT, KR, MX, BN, TNX	2	
EXL25	25-29 MHz		2	10.75"-11.10"
EXL30	30-36 MHz		2	10.75"-11.10"
EXL36	36-42 MHz		2	10.75"-11.10"
EXL42	42-50 MHz		2	10.75"-11.10"
EXL66	66-76 MHz		2	10.75"-11.10"
EXL76	76-88 MHz		2	10.75"-11.10"
EXW30	30-88 MHz	BN, TNX	3	12"

VHF 118-225 MHz

DR	118-225 MHz	BN, MX, SF	4	19"
EXB Models		HT, KR, MX, BN, BN, MD, MXI, SF, SFJ, SFU, SM, TN, TNX, PL	5	
EXB118	118-127 MHz			7.8"
EXB127	127-136 MHz			7.6"
EXB136	136-144 MHz			6.48"-7.3"
EXB144	144-148 MHz			6.25"-6.9"
EXB150	150-162 MHz			5.95"-6.5"
EXB155	155-164 MHz			5.8"-6.3"
EXB161	161-174 MHz			5.9"
EXB164	164-174 MHz			5.6"-6"
EXB220	220-225 MHz			4.1"-4.9"
EXB0	Untuned			7.12"
SXB Models		MX, SF, SFU	6	
SXB145	136-149 MHz			5.5"
SXB155	150-161 MHz			5.5"
SXB165	162-174 MHz			5.5"
EXH Models		SM, SMI, SMV, TN, BN, KR, MD, MX, MXI, SF, SFU	7	
EXH150	145-155 MHz			10.5"
EXH155	150-160 MHz			10.5"
EXH160	155-165 MHz			10.5"
EXH170	165-175 MHz			10.5"
EXR Models		BN, BN, MX, MXI, SFU, SMI, SMV	8	
EXR136	136-220 MHz			7"-8"
EXR144	144-148 MHz			7"-8"
EXR148	148-155 MHz			7"-8"
EXR150	150-162 MHz			7"-8"
EXR155	155-164 MHz			7"-8"
EXR164	164-174 MHz			7"-8"
EXR220	220-225 MHz			7"-8"
EXS Models		HT, KR, MX, BN, BN, MXI, SF, SFJ, SFU, SM, SMI, SMV, TN, TNX	9	
EXS118	118-127 MHz			5.10"
EXS127	127-136 MHz			3.62"-4.4"
EXS136	136-144 MHz			3.62"-4.4"
EXS144	144-148 MHz			3.55"-4.45"
EXS148	148-155 MHz			3.50"-4.39"
EXS150	150-162 MHz			3.50"-4.39"
EXS155	155-164 MHz			3.45"-4.20"
EXS164	164-174 MHz			3.30"-3.95"
EXS220	220-225 MHz			3.50"-4.39"
EXW Models		BN, MX, TNX	3	
EXW136	136-162MHz			8.75"
EXW148	148-174MHz			8.75"
EXW220	220-225MHz			8.75"
EXW 225	225-240MHz			8.75"
TS Models		HT, KR, MX, BN, TN	10	
TS 118	118-174MHz			17"
TS	Continuous Order 150			
V Models		HT, KR, MX, BN, TN	11	
V118	118-127 MHz			17"
V127	127-136 MHz			17"
V136	136-144 MHz			17"
V144	144-148 MHz			17"
V148	148-155 MHz			17"
V150	150-162 MHz			17"
V164	164-174 MHz			17"
V220	220-225 MHz			17"

Connector Guide



MX



MD



KR



HT



BN



BNX

Model Frequency Connectors Photo Avg. length

UHF 300-512 MHz and Dual Band

EXC Models		KR, MD, MX, BN, BNX, MXI, SF, SFU, SM, SMI, SMV, TN, TNX	12	
EXC308	308-322 MHz		6.5"-7"	
EXC312	312-318 MHz		6.5"-7"	
EXC400	400-420 MHz		6.5"-7"	
EXC410	410-430 MHz		6.5"-7"	
EXC420	420-450 MHz		6.5"-7"	
EXC440	440-460 MHz		6.5"-7"	
EXC450	450-470 MHz		6.1"-6.8"	
EXC470	470-512 MHz		5.9"-6.6"	
EXC0	Untuned		6"	
EXD Models		HT, KR, MD, MX, BN, BNX, MXI, SF, SFJ, SFU, SM, SMI, SMV, TN, TNX	13	
EXD308	308-322 MHz		3.2"-4.1"	
EXD312	312-318 MHz		3.2"-4.1"	
EXD400	400-420 MHz		3.2"-4.1"	
EXD410	410-430 MHz		3.1"-3.4"	
EXD420	420-450 MHz		3.2"-4.1"	
EXD450	450-470 MHz		2.95"-3.88"	
EXD470	470-512 MHz		2.8"-3.6"	
EXR Models		KR, MX, BN, TN	14	
EXR308	308-322 MHz		6.62"-6.95"	
EXR312	312-318 MHz		6.62"-6.95"	
EXR400	400-420 MHz		6.62"-6.95"	
EXR420	420-450 MHz		6.62"-6.95"	
EXR450	450-470 MHz		6.62"-6.95"	
EXR470	470-512 MHz		6.62"-6.95"	
EXW400	400-512 MHz	BNX, TNX	3	9"
G Models		BN, TN	15	
G400	400-420 MHz		10"	
G420	420-450 MHz		10"	
G450	450-470 MHz		10"	
G470	470-512 MHz		10"	
SXD Models		MX, SF, SFU	16	
SXD420	420-450 MHz		3.5"	
SXD440	440-470 MHz		3.5"	

Trunking and SMR Applications

EXC806	806-866 MHz	HT, KR, MD, MX, BN, BNX, MXI, SF, SFU, SM, SMI, SMV, TN,	17	3.70"-4.6"
EXC821	821-902 MHz	BN, BNX, MD, TNX		3.70"-4.6"
EXC902	902-960 MHz	SF, SFJ, SFU, SM, SMI, SMV, TN		3.5"-3.65"
EXE Models		BN, BNX, MD, SF, SFU, SM, TN, TNX	18	
EXE806	806-866 MHz			8-8.9"
EXE821	821-802 MHz			8"
EXE902	902-960 MHz			8.3"
EXE2400	2400-2500 MHz			
EXP806	806-869 MHz	MD, SF, SFJ, SFU	19	6.9"
EXP902	896-940 MHz	MD, SF, SFU, SFJ, SMS		6.9"
EXR Models		BN, TN	20	
EXR806	806-869 MHz			9.25-9.5"
EXR821	821-902 MHz			9.16"
EXR902	902-960 MHz			9.25-9.5"
EXR1850	1850-1970 MHz			9.25-9.5"
EXS Models		MD, SF, SFJ, SFU, SM, SMS, TN	21	
EXS806	806-866 MHz			2.25
EXS902	902-960 MHz			

Model Radiator Connectors Length

2.4 GHz Antennas

EXC2400SM	1/4 Wave	SMA	2.5"
EXCN2400RTN	1/4 Wave	Reverse Polarity TNC	4"
EXCN2400TN	1/4 Wave	TNC	4"
EXE2400TNX	1/2 Wave	Covered TNC	8"
EXR2400RSM	1/2 Wave	Reverse Polarity SMA	Right Angle
EXR2400SMA	1/2 Wave	SMA	Right Angle
EXRN2400RBN	1/2 Wave	Reverse Polarity BNC	Right Angle
EXRN2400RTN	1/4 Wave	Reverse Polarity TNC	Right Angle
EXSN2400RSM	1/4 Wave	Reverse Polarity SMA	4"
WRX2400TN	1/2 Wave	TNC	4"



SF SFJ SFU SM TN TNX

Connector Guide



11



12



13



14



15



16



17



18



19



20



21

GPS antennas features

- Monitor location with GPS models available in NMO, magnetic, and trunk mount options
- Multiple applications - heavy equipment to luxury automobiles
- Heavy duty spring available on some models
- GPSDS1370P model is ideal for ORBCOMM® applications



Standard NMO Mount GPS antennas GPSU15M

- Small Size - 1½" tall x 2 5/8" diameter
- 3 or 5 Volt bias
- Gold Plated Pushpin Contact

Laird Technologies GPS antennas provide low profile, high performance and cost effective mobile communication solutions

Laird Technologies GPS antennas are low profile, high performance and cost-effective solutions for your mobile communications needs. Available in combinations that cover all primary cellular frequencies plus GPS and Satellite Radio, Laird Technologies GPS antennas feature small form factors allowing easy installation virtually anywhere inside or outside a vehicle. Phantom® AVL/GPS antennas are currently utilized by ocean bound freighters monitoring temperature and data while withstanding extreme temperatures, salt water and vibration. With integrated research, tooling, molding, assembly and accelerated life testing facilities around the world, Laird Technologies' engineers will quickly and efficiently create solutions to your wireless challenges.



Technical Data - Product Features & Information

GPS Patch Antenna

• VSWR:	2:1 Typical@1575.42 MHz
• Operating Temperature:	-40° to 85° C
• Polarization:	Right Hand Circular
• Antenna Description:	Active Patch Antenna
• Azimuth Coverage:	360°
• Impedance:	50 ohms
• Elevation Coverage:	0° - 90°
• Operating Voltage:	3.0-5.0 Vdc +/- .20 Vdc GPSU15M: 3 Vdc
• LNA Gain (GPS Band):	26 dB typical@20mA max
• Cellular Filtering:	-24 dB
• Antenna Height:	GPSM = 5/8", GPSU = 9/16"
• Operating Frequency:	1575.42 MHz

Model	Description	Center Freq	Gain	Overall Height	Connector Type	Coax Type
-------	-------------	-------------	------	----------------	----------------	-----------

NMO Mountable

GPSU15M	NMO GPS - 3 or 5 Volt Bias	1575.42 MHz	26 dB	1.5	NMO	NA
GPSUW15M	NMO GPS - 3 or 5 Volt Bias - White	1575.42 MHz	26 dB	1.5	NMO	NA1

Standard AVL

GPS1575P	Low Profile AVL *	1575.42 MHz	26 dB	1.25"	TNC-Male	RG174
----------	-------------------	-------------	-------	-------	----------	-------

*Add .625" overall height for all P mount models

Trunk Mount GPS

TM8GPS	Trunk Mount GPS	1575.42 MHz	.75"			
TMB8GPS	Black Trunk Mount GPS	1575.42 MHz	.75"			

GPS Add On Bracket

GPSNMOAO	Bright Stainless Bracket with GPS	1575.42 MHz	.75"			17' - RG174
GPSBNMOAO	Black Stainless Bracket with GPS	1575.42 MHz	.75"			17' - RG174

Micro GPS Magnetic and Adhesive Base

GPS15MGBNC	Micro GPS Antenna	1575.42 MHz	.43"	BNC		15' RG174/U
GPS15MG SMA	Micro GPS Antenna	1575.42 MHz	.43"	SMA		15' RG174/U
GPS15MG SMB	Micro GPS Antenna	1575.42 MHz	.43"	SMB		15' RG174/U
GPS15MG TNC	Micro GPS Antenna	1575.42 MHz	.43"	TNC		15' RG174/U

GPS Glass Mount Antenna

GPS15GLSM	GPS Glass Mount Antenna	1575.42 MHz	25 dB	1.25"	SMA	15' - RG316
-----------	-------------------------	-------------	-------	-------	-----	-------------

**Low Profile GPS antennas
GPSU1575P**

- Low profile - 1.5" tall
- P mount

**NEW****Micro GPS
GPS15MG SMB**

- Very Small Size - Approx. 1.61"L x 1.42"W x .43"H
- Magnetic or adhesive base available
- Bottom or side exit
- Water proof

**NEW****GPS Glass Mount antenna
GPS15GLSM**

- Low Profile
- Adhesive mount





Low profile multi-band GPS GPST821/18503P

- Patented field diversity Phantom® technology ensures uninterrupted voice and data transmissions in urban canyons and rural drop off areas
- 27 dB active GPS patch with high sensitivity for accurate timing and locating
- Low profile design prevents tampering and is visually pleasing

NEW

Survivor™ Dual Band GPS antennas

- Highly durable molded housing design survives the harshest of environments and applications - traditional whip with spring options available.
- 26dB active GPS patch antenna provides high performance and sensitivity for accurate locating and timing
- Multiple applications from heavy equipment to luxury automobiles



GPSDS13780GR
with Magnetic Base
and Boot Option



GPSDS1370PLP

Model	Description	Frequency	Gain	Overall Height	Connector Type	Coax Type
-------	-------------	-----------	------	----------------	----------------	-----------

Dual-Band GPS AVL

GPSD4503P	Low Profile AVL w/Phantom*	450 - 470 MHz	3 dB-MEG	3.5"	TNC-Male	ATX195
-----------	----------------------------	---------------	----------	------	----------	--------

Dual-Band Low Profile GPS AVL

GPSD7463P	Low Profile AVL w/Phantom*	746 - 786 MHz	3 dB-MEG	1.25"	TNC-Male	ATX195
GPSD8063P	Low Profile AVL w/Phantom*	806 - 866 MHz	3 dB-MEG	1.25"	TNC-Male	ATX195
GPSD8063EP	As above with ext. 1" mounting nut	806 - 866 MHz	3 dB-MEG	1.25"	TNC-Male	ATX195
GPSD8213P	Low Profile AVL w/Phantom*	821 - 896 MHz	3 dB-MEG	1.25"	TNC-Male	ATX195
GPSD8903P	Low Profile AVL w/Phantom*	890 - 960 MHz	3 dB-MEG	1.25"	TNC-Male	ATX195
GPSD9023P	Low Profile AVL w/Phantom*	902 - 928 MHz	3 dB-MEG	1.25"	TNC-Male	ATX195

Tri-Band Low Profile GPS AVL

GPST821/18503P	Cell/PCS/GPS Low Profile*	821-896 MHz/ 1850-1990 MHz	3 dB-MEG	1.25"	TNC-Male	17-RG174
----------------	---------------------------	-------------------------------	----------	-------	----------	----------

Dual-Band GPS/Land Based Bar Antenna (No Ground Plane)

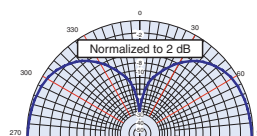
GPSDL1370APN	Low Profile Phantom Wideband VHS/GPS	137 - 150 MHz	3 dB-MEG	2.2"	N-Male	RG58
--------------	--------------------------------------	---------------	----------	------	--------	------

Survivor™

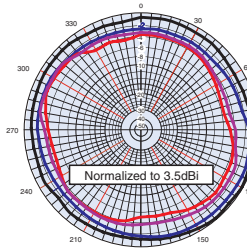
GPSDS1370P	Survivor - VHF plus GPS*	137 - 150 MHz	Unity	21.75"	Optional	14'
GPSDS1370PLP	Survivor - Low Profile VHF plus GPS*	137 - 150 MHz	Unity	7.25"	Optional	14'
GPSDS1370G	Survivor - VHF/GPS w/ Magnetic Base*	137 - 150 MHz	Unity	7.25"	Optional	14'
GPSDS7603P	Survivor - 700 MHz + 3 db Gain*	760 - 870 MHz	3 dB	14.285"	Optional	14'
GPSDS8060P	Survivor - 800 MHz + Unit3y Gain*	806 - 866 MHz	Unity	6"	Optional	14'
GPSDS8063P	Survivor - 800 MHz + 3 db Gain*	806 - 866 MHz	3 dB	14.285"	Optional	14'
GPSDS8065P	Survivor - 800 MHz + 5 db Gain*	806 - 866 MHz	5 dB	26.25"	Optional	14'



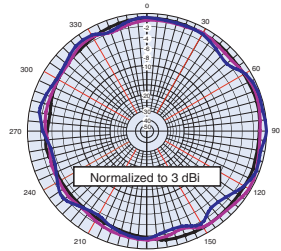
*Add .625" overall height for all P mount models



GPSDS8060P



821 MHz
840 MHz
860 MHz
880 MHz



1850 MHz
1910 MHz
1990 MHz

GPST821/18503P

Model	Description	Frequency	Gain	Connector Type	GPS Connector	Coax Type
Internal Mercury™ Tri-Band						
3V AMPS/PCS/GPS						
GPST3I824/18503	3V Tri-Band Internal Mercury	AMPS: 824-896 MHz PCS: 1850-1990 MHz GPS: 1575.42 MHz	3.0 dBi	SMA	SMA	17' RG-174
5V AMPS/PCS/GPS						
GPST5I824/18503	5V Tri-Band Internal Mercury	AMPS: 824-896 MHz PCS: 1850-1990 MHz GPS: 1575.42 MHz	3.0 dBi	SMA	SMA	17' RG-174
GPST5I880/17103	5V Tri-Band Internal Mercury	AMPS: 880-960 MHz DCS: 1710-1880 MHz GPS: 1575.42 MHz	3.0 dBi	SMA	SMA	17' RG-174

External Mercury™ Tri-Band

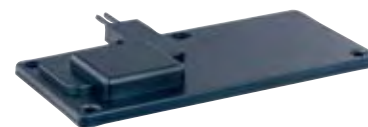
3V AMPS/PCS/GPS						
GPST3E824/18503	3V Tri-Band External Mercury	AMPS: 824-896 MHz PCS: 1850-1990 MHz GPS: 1575.42 MHz	3.5 dBi	SMA	SMA	17' RG-174
5V AMPS/PCS/GPS						
GPST5E824/18503	5V Tri-Band	AMPS: 824-896 MHz PCS: 1850-1990 MHz GPS: 1575.42 MHz	3.5 dBi	SMA	SMA	17' RG-174

Roof Mount Tri-Band GPS

GPSTR824/18503	5V Roof Mount Tri-Band	AMPS: 824-896 MHz PCS: 1850-1990 MHz GPS: 1575.42 MHz	2 dBi 1.5 dBi 2.7 dBi	Fakra	Fakra	10"
GPSTR824/18503C	5V Roof Mount Tri-Band GPS with cable assembly	As above	TNC*	SMA*		15'

*Other connector options available

Model	Description	Frequency	Gain	Connector Type	Coax Length
Dual and Quad-Band MicroBlade™ with and without GPS					
MAF90001	MicroBlade Dual Band	AMPS: 824-896 MHz	2.3 dBi	SMA	3m
RG-174		GSM: 880-960 MHz	2.3 dBi		
MAF90002	MicroBlade Dual Band	DCS: 1710-1880 MHz	2.1 dBi	SMA	3m
		PCS: 1850-1990 MHz	3.1 dBi		
MAF90004	MicroBlade Dual Band	As above		Straight MCX Plug	9"
GPSQ	MicroBlade1 QuadBand & GPSIM15 Antenna	AMPS: 824-896 MHz GSM: 880-960 MHz DCS: 1710-1880 MHz PCS: 1850-1990 MHz GPS: 1575.42 MHz	2.3 dBi 2.3 dBi 2.1 dBi 3.1 dBi 2.5 dBi	SMC	5'
Microblade1	MicroBlade1 Antenna	As above without GPS		SMC	5'
GPSIM15	Internal GPS Antenna - 3 volt	GPS: 1575.42 MHz	2.5 dBi	SMA	5'
Microblade1W	MicroBlade1 Antenna Waterproof	As above without GPS	2.3 dBi	SMC	5'



GPST3I824/18503

Internal Mercury™ Tri-band GPS antennas

- Keeps track of your fleet while providing AMPS and PCS wireless communication
- Low-profile stealth design installs on dashboards or rear decks
- Measures only 5" L x 2.5" W x .5" H



GPST3E824/18503

External Mercury™ Tri-band GPS antenna:

- Low-profile weatherproof design is an excellent solution for trucks, trailers and tall vehicles
- Transmits voice and data while measuring only 5.625" x 5.125" x .875"
- Sleek durable housing mounts on a ground plane or no ground plane surface

Roof Mount Tri-band GPS

- Streamlined OEM-style design
- 1.875" x 4" x 3.5"

GPSTR824/18503



GPSQ

MAF90001

Multi-Band MicroBlade™

- Dual and Quad band models available
- GPSQ measures only 4.94" x 1.34" x .25"





Mobile Mounts

- All brass construction and gold plated contact design ensure the most corrosion resistance and best power transfer available
- 78 Rockwell Hardness brass material resists corrosion
- Silver soldered ground lug and contact virtually eliminates RF noise or static
- Multiple cable options are available

"O" Ring Seal



Model Connector Type

3/4" Or 3/8" Hole Alternative Mounts (Cable Not Included)

MO	3/4 Steel Mount
MBO	3/4 Brass Mount for use with RG58 size Cable
MBOX	3/4 Brass Mount for RG8X size Cable
MBOF	3/4 Brass Mount for Teflon® Cable
MABO	3/8 Brass Mount for use with RG58 size Cable
MABTO	3/4 or 3/8 Brass Thick Plate Mount for 3/16" to 1/4" thick surfaces
MABVTO	3/4 or 3/8 Hole 1/2" Thick Plane Adjustable Mount Only
MXGPO	3/8" snap-in Ground Plane Mount
MXO	Snap-in Mount

5/8" Hole Alternative Mounts

VTPM	1" Extra Thick Plate Mount (UHF Barrel - 1 3/8" total stud length)
VTPM800	800 MHz - 1/2" Thick Plate Mount (N Barrel - 1 3/16" total stud length)

3/4 Hole Brass Mounts*

Models with 17' of RG58A/U Stranded Center Conductor Cable

MB8	No Connector
MB8B	BNC Crimp
MB8M	Mini UHF Crimp
MB8N	N Crimp
MB8NS	N Solder
MB8P	UHF (PL259) Crimp
MB8PS	UHF (PL259) Solder
MB8PST	UHF (PL259) Teflon® Solder
MB8T	TNC Crimp

Models with 17' of RG58U Solid Center Conductor Cable

MB8U	No Connector
MB8UB	BNC Crimp
MB8UM	Mini UHF Crimp
MB8UN	N Crimp
MB8UNS	N Solder
MB8UP	UHF (PL259) Crimp
MB8UPST	UHF (PL259) Teflon® Solder
MB8UT	TNC Crimp

Models with 17' of RG8X Low Loss Solid Center Conductor Cable

MB8X	No Connector
MB8XB	BNC Crimp
MB8XM	Mini UHF Crimp
MB8XN	N Crimp
MB8XNS	N Solder
MB8XP	UHF (PL259) Crimp
MB8XPST	UHF (PL259) Teflon® Solder
MB8XT	TNC Crimp

Models with 17' of Teflex™ Cable

MBD	No Connector
MBDB	BNC Crimp
MBDM	Mini UHF Crimp
MBDN	N Crimp
MBDNS	N Solder
MBDP	UHF (PL259) Crimp
MBDPST	UHF (PL259) Teflon® Solder
MBDT	TNC Crimp

Models with 17' of Teflon® Cable

MBF	No Connector
MBFB	BNC Crimp
MBFM	Mini UHF Crimp
MBFN	N Crimp

Models with 17' of ATX195 Cable

MB195	No Connector (Good for higher frequency)
-------	--

Installation Accessories

P34	N/A	Package of 6 - 3/4" Hole Plugs
MOGSK	N/A	Package of 6 - 3/4 Mount Gaskets
MORNG	N/A	Package of O-rings for "M" Mounts

*All connectors are shipped loose.
Choose "I" option for installed connectors

Model Connector Type

3/8 Hole Brass Mounts*

Models with 17' of RG58A/U Stranded Center Conductor Cable

MAB8	No Connector
MAB8B	BNC Crimp
MAB8M	Mini UHF Crimp
MAB8N	N Crimp
MAB8NS	N Solder
MAB8P	UHF (PL259) Crimp
MAB8PS	UHF (PL259) Solder
MAB8PST	UHF (PL259) Teflon® Solder
MAB8T	TNC Crimp

Models with 17' of RG58U Solid Center Conductor Cable

MAB8U	No Connector
MAB8UB	BNC Crimp
MAB8UM	Mini UHF Crimp
MAB8UN	N Crimp
MAB8UNS	N Solder
MAB8UP	UHF (PL259) Crimp
MAB8UPST	UHF (PL259) Teflon® Solder
MAB8UT	TNC Crimp

Models with 17' of RG8X Low Loss Solid Center Conductor Cable

MAB8X	No Connector
MAB8XB	BNC Crimp
MAB8XM	Mini UHF Crimp
MAB8XN	N Crimp
MAB8XNS	N Solder
MAB8XP	UHF (PL259) Crimp
MAB8XPST	UHF (PL259) Teflon® Solder
MAB8XT	TNC Crimp

Models with 17' of Teflex™ Coax

MABD	No Connector
MABDB	BNC Crimp
MABDM	Mini UHF Crimp
MABDN	N Crimp
MABDNS	N Solder
MABDP	UHF (PL259) Crimp
MABDPST	UHF (PL259) Teflon® Solder
MABDT	TNC Crimp

Thick Plane Models* - up to 1/4"

Models with 17' of RG58A/U Stranded Center Conductor Cable

MABT8	No Connector
MABT8B	BNC Crimp
MABT8M	Mini UHF Crimp
MABT8N	N Crimp
MABT8P	UHF (PL259) Crimp
MABT8PS	UHF (PL259) Solder

Models with 17' of RG58U Solid Center Conductor Cable

MABT8U	No Connector
MABT8UB	BNC Crimp
MABT8UM	Mini UHF Crimp
MABT8UN	N Crimp
MABT8UP	UHF (PL259) Crimp

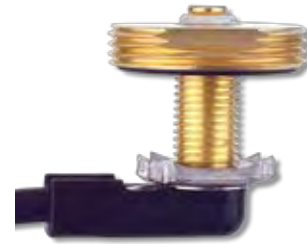
Thick Plane Models* - up to 1/2"

Models with 17' of RG58A/U Stranded Center Conductor Cable

MABVT8	No Connector
MABVT8M	Mini UHF Crimp
MABVT8B	BNC Crimp
MABVT8UP	UHF (PL259) Crimp

Model with 17' of RG58U Solid Center Conductor Cable

MABVT8U	
---------	--



MABVT8
Adjusts Up to
1/2" Thick Mtg. Surface
3/8" or 3/4" Hole Mount

Ordering Guide

MB8PSI14 =

3/4" Brass Mount, PL259 Solder Installed,
14' of RG58A/U

MB Mount Style & Hole Style
M = 3/4" Steel Hole Mounts
MAB = 3/8" Brass Hole Mounts
MABT = 3/8" or 3/4" Brass Mounts
for Thick Plate up to 1/4"
MABVT = 3/8" or 3/4" Brass Hole
Mounts Adjustable up to 1/2"
MB = 3/4" Brass Hole Mounts
MX = 3/8" Brass Snap-in Hole Mount

8 Cable Style
8 = RG58A/U
8U = RG58U
8X = RG8X "low loss"
D = Teflex™
F = Teflon® Coax Cable
O = Only (Mount Only-No Cable)
195=ATX195

PS Connector Style
Blank = No connector
B = BNC crimp
M = Mini UHF crimp
N = N crimp
NS = N solder
P = PL259 crimp
PS = PL259 solder
PST = PL259 solder Teflon®
SM = SMA Crimp
T = TNC crimp

I Installation Option
Blank = Loose connector
I = Installed connector
(Add \$1.00 for crimp, \$1.50 for solder.)

14 Cable Length
Blank = Standard 17 ft. cable length
14 = Optional 14 ft. cable length
Other lengths available upon request

*All connectors are shipped loose.
Choose "I" option for installed connectors



GBR8

Magnetic Mounts

- Corrosion resistant materials used throughout for high durability and weather resistance
- Neoprene seal for moisture protection
- High 80lb pull strength will allow antenna to stay put
- Optional rubber boot provides additional protection to mounting surface
- Triple reinforced coax strain relief eliminates cable pull out
- 3-1/4" diameter



MBC800

Mobile-to-Base Converters

- Value conscious option for VHF, UHF, 800 MHz and up applications

Model Connector Type

3/4" Style Magnetic Mounts*

Chrome Models with 12' of RG58A/U Stranded Center Cable

G8	No Connector
G8B	BNC Crimp
G8BI	BNC Crimp, Installed
G8MI	Mini UHF Crimp, Installed
G8N	N Crimp
G8NS	N Solder
G8P	UHF (PL259) Crimp
G8PI	UHF (PL259) Crimp, Installed
GR8PI	UHF (PL259) Crimp, Installed
G8PS	UHF (PL259) Solder
G8PST	UHF (PL259) Teflon® Solder
G8TI	TNC Crimp, Installed

Chrome Models with 12' of RG58U Solid Center Conductor Cable

G8U	No Connector
G8UB	BNC Crimp
G8UM	Mini UHF Crimp
G8UN	N Crimp
G8UNS	N Solder
G8UP	UHF (PL259) Crimp
G8UPST	UHF (PL259) Teflon® Solder
G8UT	TNC Crimp

Chrome Models with 12' of RG8X Low Loss Cable

G8X	No Connector
G8XBI	BNC Crimp, Installed
G8XM	Mini UHF Crimp
G8XNI	N Crimp, Installed
G8XNS	N Solder
G8XP	UHF (PL259) Solder
G8XPST	UHF (PL259) Teflon® Solder

Chrome Models with 12' of Teflex™ Cable

GD	No Connector
GDBI	BNC Crimp, Installed
GDM	Mini UHF Crimp
GDNI	N Crimp, Installed
GDNS	N Solder
GDPI	UHF (PL259) Crimp, Installed
GDPST	UHF (PL259) Teflon® Solder
GDT	TNC Crimp

Black Models with 12' of RG58A/U Stranded Center Cable

GB8	RG58A/U
GBR8PI	Rubber Boot Option - RG58A/U with PL259 Installed

Customer specified cable lengths available. Contact your customer service representative.

Model Frequency Range

Mobile To Base Converter

MBC	Mobile-to-base Converter for VHF and UHF, S0239 Terminated
MBCN	Mobile-to-base Converter for VHF and UHF, N Terminated
MBC800	Mobile-to-base Converter for 800 and 900 MHz, N Terminated
MBC800LT	Mobile-to-base Converter for 800 and up, wall mount, N Terminated

*All connectors are shipped loose.
Choose "I" option for installed connectors

Model	Connector Type
-------	----------------

3/4" Style Mini-Magnetic Mounts***Chrome Models with 12' of RG58A/U Stranded Center Cable**

GM8	No Connector
GM8B	BNC Crimp
GM8M	Mini UHF crimp
GM8N	N Crimp
GM8NS	N Solder
GM8P	UHF (PL259) Crimp
GM8PI	UHF (PL259) Crimp, Installed
GM8PS	UHF (PL259) Solder
GM8PST	UHF (PL259) Teflon® Solder
GM8T	TNC Crimp

Chrome Models with 12' of RG58U Solid Center Conductor Cable

GM8U	No Connector
GM8UB	BNC Crimp
GM8UM	Mini UHF Crimp
GM8UN	N Crimp
GM8UNS	N Solder
GM8UP	UHF (PL259) Crimp
GM8UPST	UHF (PL259) Teflon® Solder
GM8UT	TNC Crimp

Chrome Models with 12' of Teflex™ Cable

GMD	No Connector
GMDB	BNC Crimp
GMDM	Mini UHF Crimp
GMDN	N Crimp
GMDNS	N Solder
GMDPI	UHF (PL259) Crimp, Installed
GMDPST	UHF (PL259) Teflon® Solder
GMDT	TNC Crimp

Black Models with 12' of RG58A/U Stranded Center Cable

GMB8	No Connector
------	--------------

Mini-trunk Lid Mounts***Models with 17' RG58A/U Stranded Center Conductor Cable**

TM8	No Connector
TMB8	No Connector
TM8B	BNC Crimp
TM8M	Mini UHF Crimp
TM8N	N Crimp
TM8NS	N Solder
TM8P	UHF (PL259) Crimp
TM8PS	UHF (PL259) Solder
TM8PST	UHF (PL259) Teflon® Solder
TM8T	TNC Connector

Models with 17' of RG58U Solid Center Conductor Cable

TM8U	No Connector
TMB8U	No Connector
TM8UB	BNC Crimp
TM8UM	Mini UHF Crimp
TM8UN	N Crimp
TM8UNS	N Solder
TM8UP	UHF (PL259) Crimp
TM8UPST	UHF (PL259) Teflon® Solder
TM8UT	TNC Crimp

*All connectors are shipped loose.

Choose "I" option for installed connectors



GM8

Miniature Magnetic Mounts

- Ideal for small antennas - 2-3/8" diameter
- 50lb pull strength
- Brass, ceramic magnet, and chrome plated steel materials are very durable and resist corrosion
- Gold plated contact



TM8

Mini-Trunk Lid Mounts

- Stainless steel brackets and hardware are the ultimate in corrosion resistance
- Elegant design enables proper fit on high tolerance trunk lid seams
- Non staining rubber cushion minimizes scratches and stains
- Gold plated contact



LBBMB8

Mobile Mount Kits & Brackets

- Conductive black chrome or bright stainless steel trunk groove bracket
- Reliable ground and high durability
- Extruded aluminum mirror mount brackets are stronger and more durable
- Stainless steel hardware - the ultimate in lifetime durability

Mobile Accessories



Brass Nuts



B&C Coil Springs

Model Description

Mirror Mount Models

LBM9034	"L" Bracket for Mirror Mount at 90°, 3/4" Hole
LBM9038	"L" Bracket for Mirror Mount at 90°, 3/8" Hole
LBM4534	Rt Angle "L" for Mirror Mount at 45°, 3/4" Hole
LBM4538	Rt Angle "L" for Mirror Mount at 45°, 3/8" Hole

Black Mirror Mount Models

LBM89034	Black "L" Bracket for Mirror Mount, 3/4" Hole
LBM89038	Black "L" Bracket for Mirror Mount, 3/8" Hole
LBM84534	Black Rt Angle "L" for Mirror at 45°, 3/4" Hole
LBM84538	Black Rt Angle "L" for Mirror at 45°, 3/8" Hole

Mirror Mount Bracket With 3/4 Mount

LBM88PS	17ft RG58 Cable with sol PL259 on conn
LBM88	17ft RG58 Cable with no connector

Black Mirror Mount Bracket With 3/4 Mount

LBBMB8	17ft RG58 Cable no connector
--------	------------------------------

Stainless Trunk Groove Models

LBT3400	Heavy Duty Fender Mount, 3/4" Hole
LBT3400	"L" Bracket for Trunk Groove, 3/4" Hole
LBT3800	"L" Bracket for Trunk Groove, 3/8" Hole
LBT8	"L" Bracket for Trnk Grv, 3/4" Hole w/NMO Mount and Cable

Black Stainless Trunk Groove Models

LBTB3400	Black "L" Bracket for Trunk Groove, 3/4" Hole
LBTB3800	Black "L" Bracket for Trunk Groove, 3/8" Hole

Stainless Straight Trunk Groove Models

SBT3400	Straight Bracket - 3/4" Hole
SBT3400	Black Straight Bracket - 3/4" Hole
SBH3400	"L" Bracket for Dodge Ram Trucks

Ferrule Set Screws - Package of 12 -

HWS0308	#10-32 x 1/8" - for A-Base Antennas
HWSB0308	#10-32 x 1/8" - for A-Base Black Antennas
HWS0316	#10-32 x 3/16" - for B & C Coil Antennas
HWSB0316	#10-32 x 3/16" - for B & C Coil Black Antennas
HWS8316	#8-32 x 3/16"
HWSB8316	#8-32 x 3/16" Black

O-rings and Gaskets - Package of 6

BCORNG	O-Rings for B & C Coils
MOGSK	Mount Gaskets for NMO Mt.
MORNG	Mount O-Rings for NMO Mt.

Black Body Hole Plugs - Package of 6

P34	3/4" Hole Plugs
P38	3/8" Hole Plug

Quarterwave Field Tunable Ball

QWFTBL	Chrome Ball
QWFTBBL	Black Ball

Brass Nut

MABNUT	Outer 3/8" mount
MBNUT	Outer 3/4" mount

Model Description

Heat Shrink Tubes

SEALTUBE 1	1 1" x 1"
SEALTUBE 2	2 2" x 1"

Mocap Tape and Strips

IASFST	36' Roll
IASFST10	Six Pack of 10" Strips

Magnetic Base Rubber Boots

GRO	Magnetic Mount
GMRO	Miniature Magnetic Mount

Quarterwave Nuts

QWNUT	Chrome
QWNUTB	Black

Quarterwave Rain Caps

QWRC	Chrome
QWRCB	Black

Springs

AS	Low Profile Base Chrome Spring
ASB	Low Profile Base Black Spring
S	B & C Coil Chrome Spring
SB	B & C Coil Black Spring

SpringGuard™

SG	B & C Chrome
SGB	B & C Black

A-Base

AO	Low Profile Base
----	------------------

X-Act™ Hole Saws

HS34	3/4"
HS38	3/8"
HS34RB	3/4" Repl. Blades (2)
HS34DB	3/4" Repl. Pilot Drill Bit
HS38DB	3/8" Repl. Pilot Drill Bit

Blackhawk™ Noise Suppressors

NS1535	35 Volt 15 Amp
NS3035	35 Volt 30 Amp

Surge Protectors (Lightning Arrestors)

SP3-90-6-BFF	Bulkhead Surge Protector, Bulkhead N Fem to N Fem, 6KA Discharge, .4dB IL, 3 GHz
SP3-90-6-BFM	Bulkhead Surge Protector, Bulkhead N Fem to N Male, 6KA Discharge, .4dB IL, 3 GHz
SP6-230-BFF	DC-6GHz Bulkhead Surge Protector, Bulkhead N Fem to N Fem
SP6-230-BFM	DC-6GHz Bulkhead Surge Protector, Bulkhead N Fem to N Male

Replacement Whips

RO49T	Chrome 42" Tapered w/Ball
ROB49T	Black 42" Tapered w/Ball

Many cable assembly combinations available. Call for information.



X-Act™ Hole Saw
U.S. Patent No. D377,495



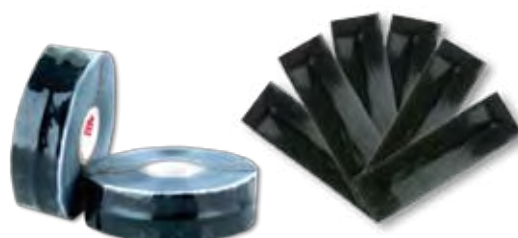
SpringGuard™



SP6-230-BFF
6 GHz Surge Protector



Magnetic Base Rubber Boot



Mocap Tape roll and strips



Blackhawk™ Noise
Suppressor

Cables/connectors

- All Cable assemblies and jumpers 100% tested before shipping ensures best performance
- Most popular lengths in stock
- Custom coaxial cables available
- Automated cable processing for highest accuracy at competitive pricing



Model	Description	Connector Type
-------	-------------	----------------

Bulk Cable

R8100	100 foot spool of RG58A/U	None
R8500	500 foot spool of RG58A/U	None
R81000	1000 foot spool of RG58A/U	None
R8U100	100 foot spool of RG58U	None
R8U500	500 foot spool of RG58U	None
R8U1000	1000 foot spool of RG58U	None
R195100	100 foot spool of ATX195	None
R195500	500 foot spool of ATX195	None
R59100	100 foot spool of RG59U (75 Ohm)	None
R59500	500 foot spool of RG59U (75 Ohm)	None
R591000	1000 foot spool of RG59U (75 Ohm)	None
R8X100	100 foot spool of RG8X	None
R8X500	500 foot spool of RG8X	None
RD100	100 foot spool of Teflex™ Teflon® Dual Shield	None
RD500	500 foot spool of Teflex™ Teflon® Dual Shield	None
RF100	100 foot spool of Teflon®	None
RF500	500 foot spool of Teflon®	None
RF1000	1000 foot spool of Teflon®	None
R9913100	100 foot spool of 9913	None
R9913500	500 foot spool of 9913	None
R400100	100 foot spool of high performance ATX400	None
R400500	500 foot spool of high performance ATX400	None

Precision Cable Assemblies

PT4003NN	Pigtail 3 foot ATX400	Crimp N/Crimp N
PT40010NN	Pigtail 10 foot ATX400	Crimp N/Crimp N
PT40015NN	Pigtail 15 foot ATX400	Crimp N/Crimp N
PT40012NNF	Pigtail with 12 foot ATX400	Crimp N/Crimp N Female
PT40025NN	Pigtail 25 foot ATX400 N to N	Crimp N/Crimp N
PT40035NN	Pigtail 35 ft. ATX400 N to N	Crimp N/Crimp N
PT40050NN	Pigtail 50 foot ATX400 N to N	Crimp N/Crimp N
PT40075NN	Pigtail 75 foot ATX400 N to N	Crimp N/Crimp N
PT400100NN	Pigtail 100 foot ATX400 N to N	Crimp N/Crimp N
PT40050NPS	Pigtail 50 foot ATX400	N male/PL259 male solder
PT400100NPT	Pigtail 100 foot ATX400	N male/PL259 Teflon® male
PT815NB	Pigtail 15 foot RG58	Crimp N/Crimp BNC
PT820NN	Pigtail 20 foot RG58	Crimp N/Crimp N
PT850NP	Pigtail 50 foot RG58A/U	N male/PL259 male
PT8U40NT	Pigtail 40 foot RG58U	Crimp N/TNC Male
PT8X25NN	Pigtail 25 foot RG8X	Crimp N male/Crimp N male
PT8X50NP	Pigtail 50 foot RG8X	N male/PL259 male
PTD5NN	Pigtail 5 foot Teflex™	Crimp N male/Crimp N male
PTD20PP	Pigtail 20 foot Teflex™	PL259 male/PL259 male
PT825PPF	Pigtail 25 foot RG58A/U	PL259 male/PL259 female

Crimp Tools, Heat Shrink Tubing And Connector Sealant

SEALTUBE1	Heat shrink tube 1 inch diameter by 1 inch long
SEALTUBE2	Heat shrink tube 1 inch diameter by 2 inch long
SEALTUBE3	Self adhesive lined heat shrink tube 3 inch diameter by 1 inch long
SEALTUBE4	Self adhesive lined heat shrink tube 4 inch diameter by 1 inch long
IA3MTP22	Tar pad connector seal
CCT	Heavy duty crimp tool for RG58 family of connectors
CCT213	Heavy duty crimp tool for 213/ATX400 family of connectors
IASFST10	MOCAP Installation Tape - Six pack of 10" strips
IASFST	MOCAP Installation Tape - 36 ft. roll

Adapters

CNFFNF	Type N female to type N female barrel
CNF3	3 way type N female "T" silver plated
CNUHFF	Type N male to UHF female
CPL9CFF	UHF female to UHF female barrel
CPL9CF3	3 way UHF female "T"
CUG175	UG175U adapter for PL259 to 58 size coax
CUG176	UG176U adapter for PL259 to 8X size coax

Model	Type	Attach	Coax	Finish
Connectors				
CBNC58	BNC Male	Crimp-on	RG58	N
CMUHF58	Mini UHF Male	Crimp-on	RG58	N
CMUHF58	Mini UHF FML	Crimp-on	RG58	N
CN58	Type N Male	Crimp-on	RG58	N
CN58S	Type N Male	Solder-on	RG58	N
CNF58	Type N Female	Crimp-on	RG58	N
CPL9C	PL259 Male	Crimp-on	RG58	N
CPL9CE	PL259 M (ext.nut)	Crimp-on	RG58	N
CPL9CT	PL259 Male	Crimp-on	RG58	S
CPL9CF	PL259 Female	Crimp-on	RG58	N
CPL9S	PL259 Male	Solder-on	RG58	N
CPL9TS	PL259 Male	Solder-on	RG58	S
CSN58	Type N Male	Crimp-on	RG58	S
CTNC58	TNC Male	Crimp-on	RG58	N
CTNC58F	TNC Female	Crimp-on	RG58	N
CSMA58	SMA Male	Crimp-on	RG58	N
CBNC8X	BNC Male	Crimp-on	RG8X	N
CMUHF8X	Mini UHF Male	Crimp-on	RG8X	N
CN8X	Type N Male	Crimp-on	RG8X	N
CPL9C8X	PL259 Male	Crimp-on	RG8X	N
CTNC8X	TNC Male	Crimp-on	RG8X	N
CN213	Type N Male	Crimp-on	213/8U	N
CN213S	Type N Male	Solder-on	213/8U	N
CBNC316	BNC Male	Crimp-on	RG316/U	N
CTNCF316	TNC Female	Crimp Jack	RG316/U	N
CBNC400	BNC Male	Crimp-on	ATX400	N
CN400	Type N Male	Crimp-on	ATX400	N
CN400S	Type N Male	Solder-on	ATX400	N
CNF400	Type N Female	Crimp-on	ATX400	N
CNF400S	Type N Female	Solder-on	ATX400	N
CPL9C400	PL259 Male	Crimp-on	ATX400	S
CTNC400	TNC Male	Crimp-on	ATX400	N
CSMA174	SMA Male	Crimp-on	RG316	N



Type	Center Conductor	Outer Jacket	Dielectric Material	Nominal O.D.	Nominal Impedance (ohms)	Nominal Capacitance (pf/ft)	Nominal Velocity of Propagation	Shield Cover	Attenuation (dB/100 ft)		
									150MHz	450MHz	900MHz
Coaxial Cable Specifications											
RG58A/U	Stranded	Black	Solid PVC	0.193" Polyethylene	50.0	30.8	66%	95% Braid	6.20	12.50	20.00
RG58/U	Solid	Black	Solid PVC	0.193" Polyethylene	53.5	28.5	66%	95% Braid	5.40	10.20	16.10
ATX 195	Solid BC	Black	Foam Polyethylene	0.195" Polyethylene	50.0	24.3	85%	100% Braid 100% Foil	4.40	7.80	11.10
RG59/U	Solid	Black	Gas Injected PVC	0.242" Foam	75.0	16.5	82%	67% Braid 100% Foil	3.80	7.00	10.10
Teflex™	Solid	White	Solid Teflon® PVC	0.195" FEP	50.0	30.0	69%	95% Braid 100% Foil	4.80	9.00	13.50
Teflon®	Stranded	White	Solid Teflon®	0.160" Teflon®	50.0	28.5	69%	95% Braid	5.80	10.00	14.50
RG8X	Solid	Black	Solid PVC	0.242" Polyethylene	50.0	33.0	66%	95% Braid	3.60	6.80	10.70
RG174	Stranded	Black	Solid Polyethylene	0.108" Polyethylene	50.0	30.8	66%	88% Braid	8.60	15.20	22.00
RG213/U	Stranded	Black	Solid PVC	0.405" Polyethylene	50.0	32.2	66%	95% Braid	2.30	4.50	7.60
RG316/U (Non-Plenum)	Stranded	Tan	TFE	0.092" Teflon®	50.0	29.0	69.5%	95% Braid	10.30	18.70	27.30
RG316/U (Plenum)	Stranded	White	Solid	0.102" Teflon®	50.0	29.0	70.0%	95% Braid	12.00	22.00	36.00
R9913	Solid	Black	Semi Solid PVC	0.405" Polyethylene	50.0	24	84%	88% Braid 100% Foil	1.86	3.40	4.90
ATX400	Solid	Black	Gas Injected Polyethylene	0.405" Polyethylene	50.0	23.9	85%	90% Braid 100% Foil	1.50	2.70	3.90

NMO universal antenna mount system

- Easy interchange for Phantom®, Phantom Elite® mobile load coil, a-base, quarterwave, elevated feed and GPS antennas
- Available in permanent, magnetic, trunk and mirror mount options
- Industry standard 78 Rockwell Hardness brass
- 3/8" and 3/4" hole options



For Product Information:

Contact Laird Technologies for technical assistance, product applications, part number questions, warranty and service questions.

800.323.3757 Toll free
847.839.6000
847.839.6036 Fax
sales @lairdtech.com
www.lairdtech.com

For Product Sales:

Contact any of the Laird Technologies distributors listed below to order antenna solutions.

NATIONAL

Tessco Technologies
800-508-5444
www.tessco.com

Talley Communications
800-949-7079
www.talleycom.com

Hutton Communications
877-648-8866
www.huttoncom.com

MIDWEST

Primus Electronics Corp.
800-435-1636
www.primuselectronics.com

Pulstar
800-634-4246
www.pulstar.net

Santa Fe Distributing Inc.
800-255-6595
www.s-f-d.com

SOUTHEAST

HYT America, Inc./Marketronics
800-845-1230
www.hytamerica.com

TEDI
800-729-8334
www.rfdistributor.com

SOUTHWEST

Sparco Technologies
800-890-1359
www.sparcotech.com

CANADA

Omni Provincial Electronics
877-291-9633
www.omniopro.ca

OEM DISTRIBUTORS

Arcadian Sales
888-925-5967
www.arcadiansales.com

Stellar Satellite Communications
Orbcomm network solutions
703-433-6491
www.stellar-sat.com

NOTICE: Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, Laird Technologies makes no representation or warranties as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Laird Technologies be responsible for damages of any nature whatsoever resulting from the use or reliance upon information or the product to which information refers. Nothing contained herein is to be construed as a recommendation to use any product, process, equipment or formulation in conflict with any patent, and Laird Technologies makes no representation or warranty, expressed or implied, that the use thereof will not infringe any patent. The data set forth in all tables, charts, graphs and figures herein are based on samples tested and are not guaranteed for all samples or applications. Such data are intended as guides and do not reflect product specifications for any particular product. NO REPRESENTATION OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OR MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.

global solutions :
local support™

global solutions : local support™

Laird Technologies is the world-leader in the design and supply of customized performance-critical products for wireless and other advanced electronic applications. Laird Technologies partners with its customers to help find solutions for applications in various industries such as Aerospace, Automotive Electronics, Computer, Consumer Electronics, Data Communications, Medical Equipment, Military, Network Equipment, and Telecommunications industries.

Laird
TECHNOLOGIES®

1751 Wilkening Ct
Schaumburg
IL 60173
USA
Tel: +1.847.839.6000
Fax: +1.847.839.6035

sales@lairdtech.com
www.lairdtech.com



ANT-CAT-Vehicular 0208