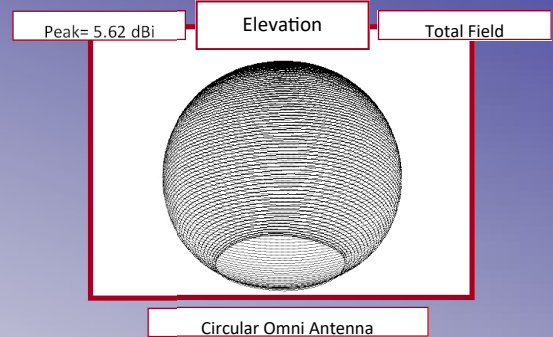
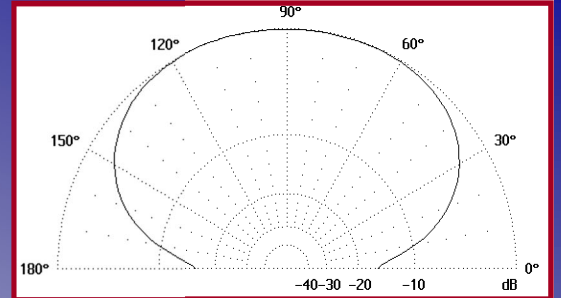
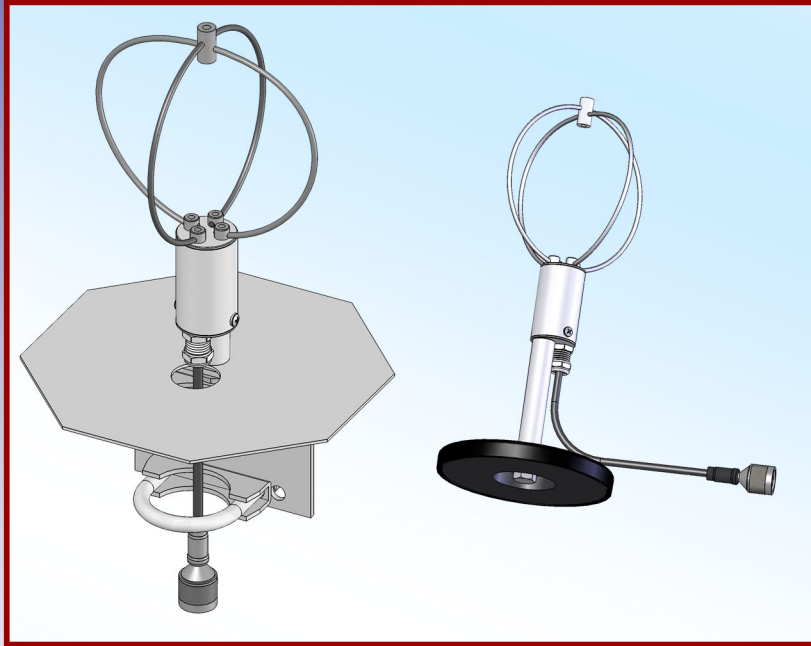




M2 Antenna Systems, Inc.

Model No: EB-915

Eggbeater Satellite Antenna



SPECIFICATIONS:

Model EB-915
 Frequency Range..... 850 To 1150 MHz
 Gain, Overhead 90° 5.5 dBic Typical
 Impedance 50 Ohms
 VSWR < 2.0:1
 Pattern..... Omni Directional
 Polarity RH Circular Overhead
 Polarity Horizontal @ Horizon

Power Handling..... 250 Watts
 Mounting Optional
 Connector..... "N" Female
 Size 7.5" H x 7.5" W
 Wind Survival 100 MPH
 Weight / Ship Wt. 1 Lbs. / 2 Lbs.

FEATURES:

The M²EB-915 **EGGBEATER** antenna offers performance characteristics for specialized fixed and mobile operations within the 850-1150 MHz frequency. The **EGGBEATER** produces a smooth, horizontally polarized omnidirectional pattern at the horizon. Above the horizon, the hemispheric pattern transforms to RIGHT HAND CIRCULAR polarization, making it a natural for aviation, ELINT, MILSATCOM, or other specialized use. No rotation or steering is required, producing instantaneous communications in all directions. The **EGGBEATER**'s rugged, weatherproof construction suits mobile and marine applications as well as fixed, land based installations in hostile environments. Operations with little room or budget for larger antennas will experience a new standard of performance with the EB-915.

EB-915 ASSEMBLY MANUAL

For best **TERRESTRIAL** results in a horizontally polarized mobile installation, the Eggbeater should be at least two feet above the top of the vehicle, preferably higher. To enhance the overhead circular pattern for **ABOVE HORIZON** communications, mount the EB-900 loops at 1/8 wave or 2" above the roof, or ground plain, basically at roof level or attached directly to a mag-mount.

FIXED LOCATION INSTALLATION

For best **TERRESTRIAL OR ON THE HORIZON COMMUNICATIONS** results, no reflector is required. This will produce the best on the horizon results. Mount the EB-900 as high as possible and preferably on the top of a mast.

For mostly **SATELLITE** or above the horizon communications use a ground plain Reflector as shown. Alternately, mount the EB-900 directly on a metal plane of mesh or solid metal 8" square or larger. Mounting this way will reduce your terrestrial performance by about 6 dB but improve your satellite signal by about the same amount. The Eggbeater produces an omni directional, horizontally polarized pattern, so no particular orientation is necessary. Changing the heights above the ground plain can change the angle of radiation. If you have specific angles of radiations needed, please call M2 for more information

GENERAL INFORMATION

Feed line should be good quality 50 ohm coax cable. Times LMR-400 and Belden 9913F are excellent low-loss foam types and RG-8X is also good for short run as in a mobile setup. Connect the male "N" to the Balun case connector and, if a mast is used, secure the cable to the mast with tape or nylon ties, beginning 4-6 inches below the connector and repeating every 12" down the mast. Be sure to leave a little slack where the cable passes the spring.

Any distortion or bends in the loops incurred during mobile use can and should be straightened out as soon as practical. AS WITH ANY ANTENNA FED WITH RF ENERGY, AVOID CONTACT OR CLOSE PROXIMITY WHILE TRANSMITTING.

SATELLITE APPLICATIONS:

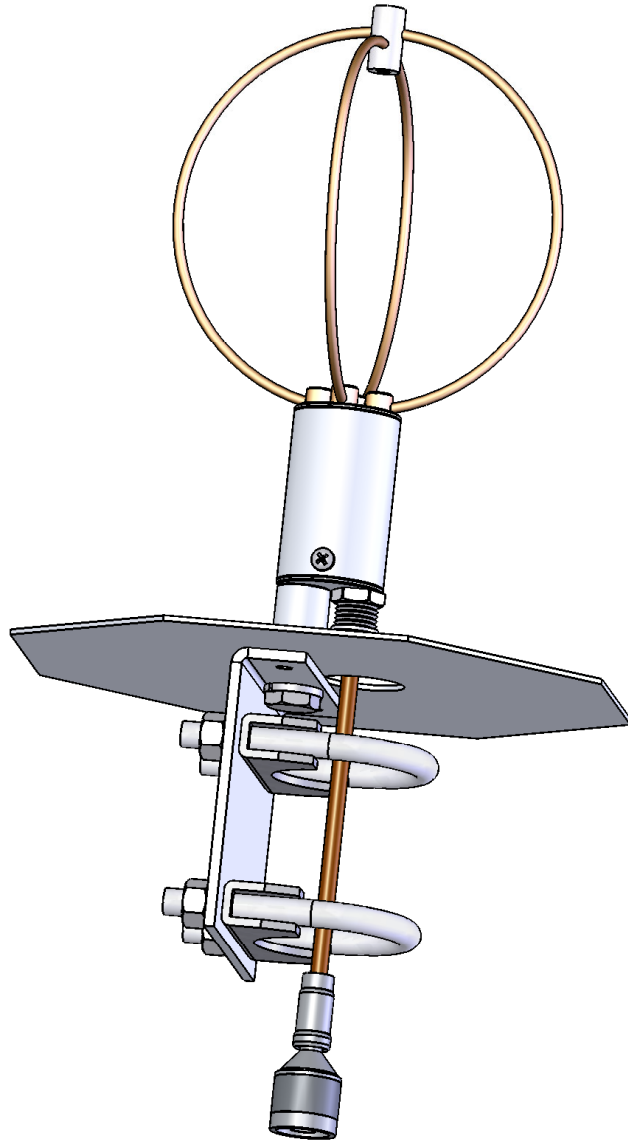
1. The Eggbeater is very effective as a omni directional satellite antenna because it produces Right-Hand Circular polarization off the top. When mounted 1/8 wave above an auto roof or **GROUND PLAIN** for base installations, the signal level off the top lobe increases by as much as 6 dB. No rotation or steering is necessary. Circularity is optimized in the 850-950 MHz region but is still effective from 850 to 1150 MHz.

2. Base station, contest and field day operations with the Eggbeater allows rapid fire communication with all horizontally polarized stations, in all directions. Its also great for nets and emergency stations requiring instant communications in all directions. The Eggbeater is not designed to replace a good directional antenna, but where space, time, or budget are strong factors, it will prove a valuable addition to any station.

As you can see from the APPLICATIONS, the EGGBEATER is a versatile antenna.....let your imagination run free!

Note: #10 Copper weld (steel copper-clad wire) is used in the loops for maximum efficiency. The steel is exposed at the ends and may show signs of rust in various environments. This effect is cosmetic only but can be reduced by coating the ends of the wire with epoxy, RTV, Penetrox or equivalent after assembly.

EB-915 ASSEMBLY MANUAL



EB-900

SHOWN WITH GROUND PLAIN KIT AND SPACER
MOUNTING BRACKET.
THIS CONFIGURATION ACHIVES THE PEAK GAIN
BETWEEN 5 DEG. AND 55 DEG.

EB-915 ASSEMBLY MANUAL



EB-900

SHOWN WITH MAG MOUNT KIT AND USING THE
VEHICLE ROOF AS A GROUND PLAIN.

EB-915 PARTS & HARDWARE

| DESCRIPTION | QTY |
|--|-----|
| EGGBEATER BODY ASSY | |
| BODY, 1.25 X .058 ALUM TUBE | 1 |
| TOP PLUG, UHMW | 1 |
| BOTTOM PLUG, ALUM | 1 |
| FEED POST, BRASS | 4 |
| LOOP ELEMENT, 14.00" # 10 SOLID COPPER | 2 |
| BALUN / FEED CABLE RG-303 X | 1 |
| FARITE BEAD, #43 | 2 |
| PHASE WIRE, #24 RED X 2.75" | 2 |
| TOP LOOP SPACER, UHMW | 1 |
| "N" MALE CONNECTOR | 1 |
| STRAIN RELIEF CONNECTOR SS | 1 |
| HARDWARE | |
| SCREW, 6-32 X 1/4 SS | 2 |
| SET SCREW, 6-32 X 1/4 SS | 4 |
| SET SCREW, 8-32 X 1/4 SS | 2 |
| NYLON TIE, 4.5" | 1 |
| MAG MOUNT KIT (OPTIONAL) | |
| MAST, 1/2 X 3.5" | 1 |
| MAGNET, 3" | 1 |
| STUD, 3/8-24 X 1.5 SS | 1 |
| BOLT, 3/8-24 X .5 SS | 1 |
| FLAT WASHER, 3/8 SS | 1 |
| GROUND PLAIN KIT (OPTIONAL) | |
| SPACER, 5/8 X 1" | 1 |
| BOLT, 3/8-24 X 1.5 SS | 1 |
| LOCK WASHER, 3/8 SS | 1 |
| FIXED MAST MOUNT (OPTIONAL) | |
| TOP MAST BRACKET (M2APT0063) | 1 |
| U-BOLT & CRADLE, 1 1/2" | 2 |
| U-BOLT & CRADLE, 2" | 2 |
| NUT, 5/16-18 SS | 4 |
| LOCK WASHER, 5/16 SS | 4 |

Carefully Manufactured by:
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