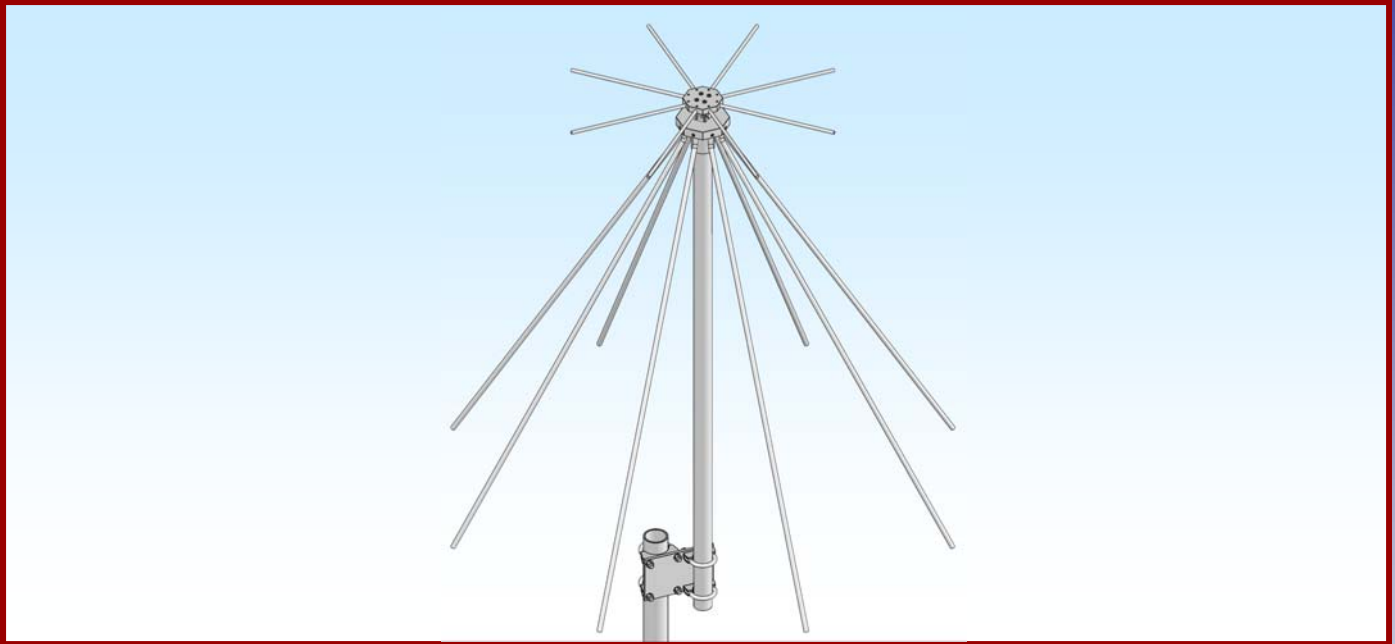




# M2 Antenna Systems, Inc. Model No: DCN100-500



### SPECIFICATIONS:

Model .....	DCN100-500	Input Connector .....	"N" Female
Frequency Range.....	100 To 500 mHz	Power Handling .....	1 kW
*Gain .....	2 dBi Nominal	Height / Dia.....	51" / 45"
Beamwidth .....	360 Omnidirectional	Mast Size.....	1.5" to 2"
Polarity .....	Vertical	Wind area / Survival .....	0.5 Sq. Ft. / 120 MPH
Feed type .....	Direct feed	Weight / Ship Wt.....	13 Lbs. / 20 Lbs.
Maximum VSWR.....	2.2:1 Max		

**\*Subtract 2.14 from dBi for dBd**

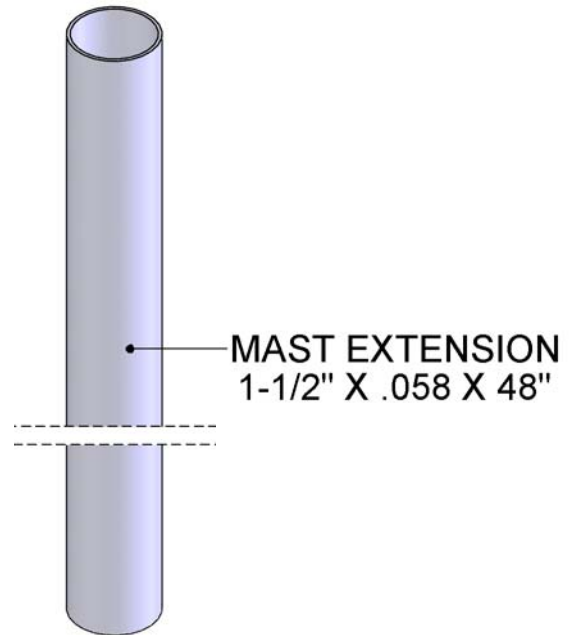
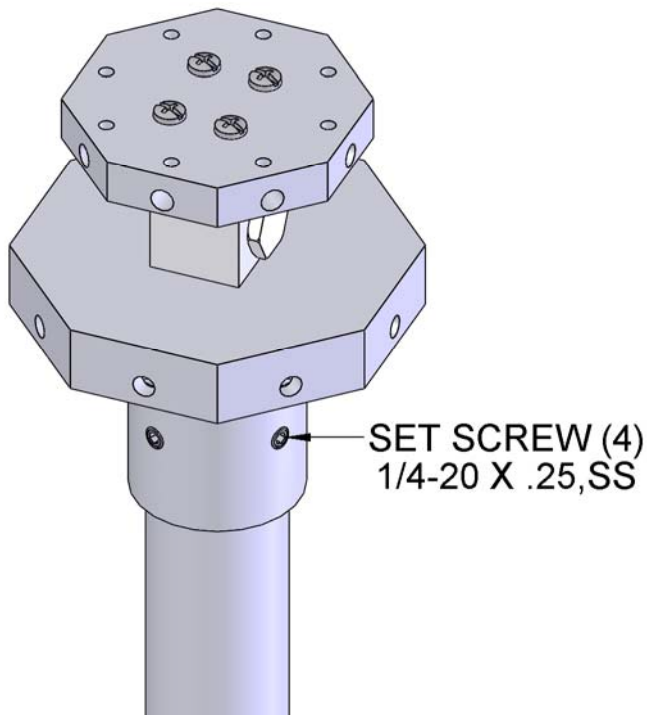
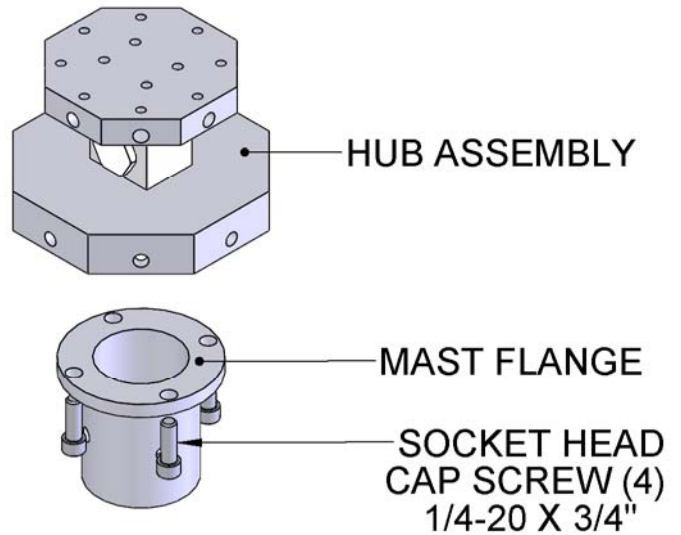
### FEATURES:

The M<sup>2</sup> 100-500 MHz Discone antenna is no toy and is ideal for use where broadband omnidirectivity is required. This is a heavy commercial grade antenna designed for many years of trouble free operation. Machined components, 6061-T6 aluminum materials and an "O" ringed connector means this unit is as weather proof as we can make it. All hardware is stainless steel.

# DNC100-500 ASSEMBLY MANUAL

Tools required for installation: 7/16" wrench, 1/2" socket and socket wrench.

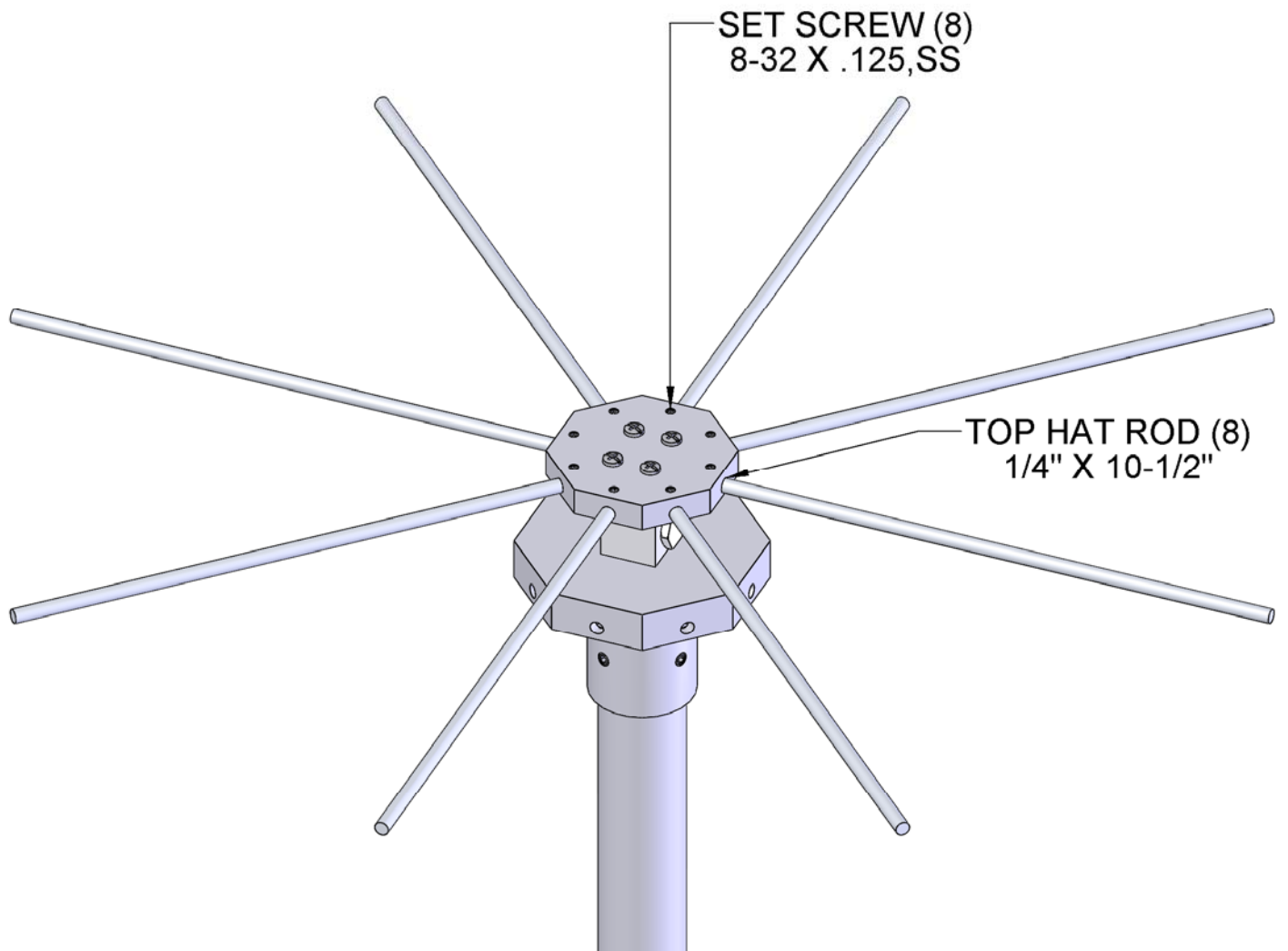
NOTE: It is recommended that each screw, rod and tube connection be assembled using Penetrox (zinc oxide paste) or equivalent. The paste or grease lubricates the screw threads and helps seal the aluminum to aluminum joint from moisture. This will insure long lasting joints even in harsh environments as well as aiding in disassembly should it be required.



**NOTE:**  
FEED YOUR COAX CABLE THRU  
MAST EXTENSION TUBE & MAST FLANGE

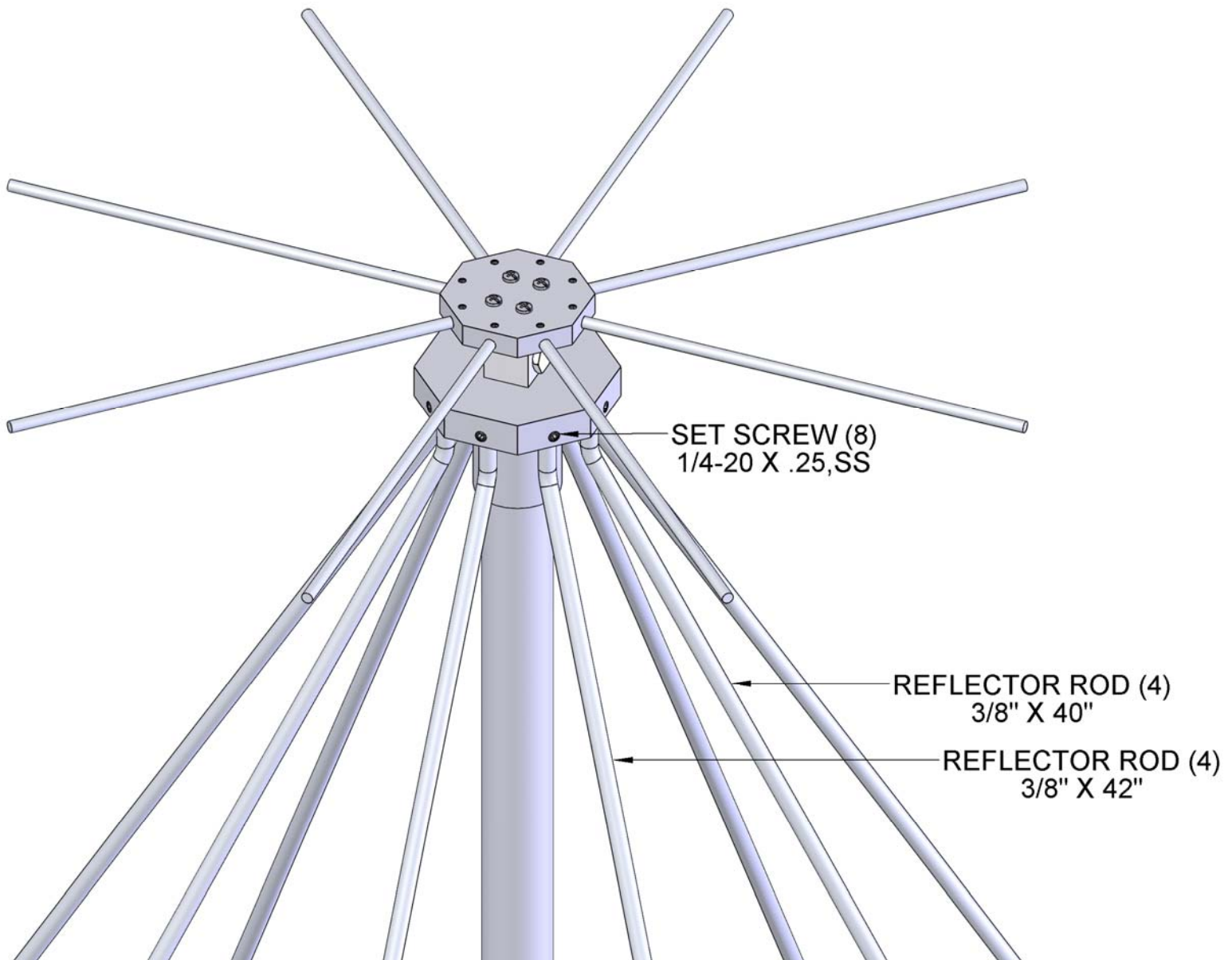
It is easiest to install the coax feedline to be used first. Therefore route coax feed cable through the 1-1/2" x 48" mast extension and mast flange. Tighten the cable connector securely and then install the mast flange to the hub assembly with cap screws. Next slide the mast extension tube fully into the mast flange and secure with set screws.

# DNC100-500 ASSEMBLY MANUAL



Insert the 10-1/2" top hat rods one at a time into the top hub and and tighten the set screw

# DNC100-500 ASSEMBLY MANUAL



**NOTE: THERE ARE TWO DIFFERENT LENGTH "REFLECTOR RODS", (4) 40" AND (4) 42" RODS.** Insert a longer, 42" element into any hole and tighten the set screw. Next to that reflector rod, insert a shorter 40" reflector rod and tighten the set screw. Continue alternating length until all 8 reflector rods are installed and tightened. If the mast has not been installed at this point, the antenna can "sit" on its "cone" legs.

At this point everything is assembled but it is a good idea to go back over every set screw and re-tighten to be sure everything is secure.

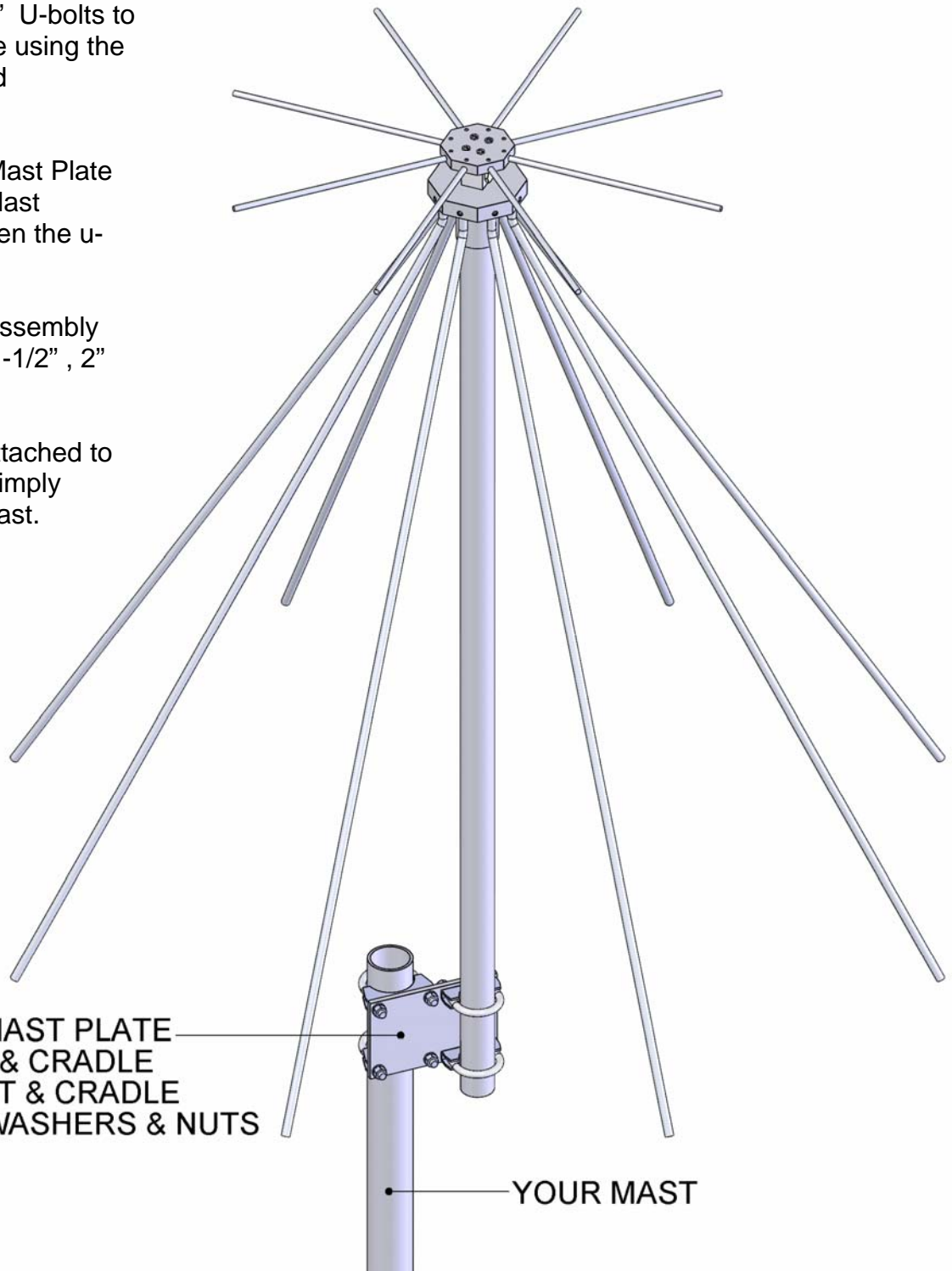
# DNC100-500 MOUNT TO YOUR MAST

Install the 2" and 1-1/2" U-bolts to the Boom to Mast Plate using the supplied 5/16" nuts and lockwashers.

Slide on the Boom to Mast Plate onto the 1-1/2" X 48" Mast Extension Tube. Tighten the u-bolts securely.

Now install the entire assembly onto your main mast (1-1/2" , 2" O.D.).

The feedline may be attached to the mast with tape or simply wrapped around the mast.



BOOM TO MAST PLATE  
2" U-BOLT & CRADLE  
1-1/2" U-BOLT & CRADLE  
USE: 5/16" LOCKWASHERS & NUTS

YOUR MAST

**M<sup>2</sup> ANTENNA SYSTEMS, INC.**

4402 N. SELLAND AVE.

FRESNO, CA 93722

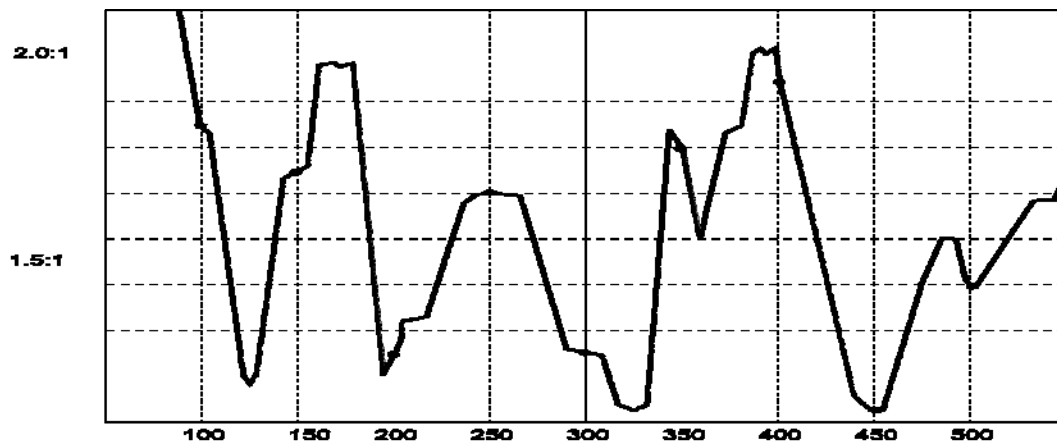
(559) 432-8873 FAX: 432-3059

[www.m2inc.com](http://www.m2inc.com) Email: [sales@m2inc.com](mailto:sales@m2inc.com)

# DCN100-500 VSWR PLOT

## ANTENNA MAINTENANCE:

1. Check the tube connections at the spokes for any loose connections. If the connection appears clean or otherwise free of corrosion or oxidation, re-tighten. If dirt, grit or corrosion is found, dis-assemble the affected parts and clean, removing any corrosion or oxidation with a file or wire brush.
2. Re-assemble, using Penetrox or equivalent at each screw, rod and tube joint.



TYPICAL VSWR CURVE

# DCN100-500 PARTS & HARDWARE

<b>DESCRIPTION .....</b>	<b>Qty</b>
DCN100-500 Hub Assembly .....	1
Mast Flange.....	1
Top Hat Rod, 1/4" x 10.5" aluminum,.....	8
Reflector Rod, 3/8" x 40", aluminum .....	4
Reflector Rod, 3/8" x 42", aluminum .....	4
Mast Extension Tube, 1-1/2" x .058 x 48", aluminum .....	1
Boom to Mast Plate, 4" x 6" x .250" (M2ADC0100) .....	1
U-bolt and cradle, 2".....	2
U-bolt and cradle, 1-1/2" .....	2
Penetrox cup, 1 oz. ....	1
Assembly Manual.....	1

<b>IN HARDWARE BAG.....</b>	<b>Qty</b>
Lockwasher, 5/16, SS .....	8
Nut, 5/16-18, SS .....	8
Socket Head Cap Screw, 1/4-20 x 3/4" SS.....	4
Set Screw, 1/4-20 x 1/4" SS.....	12
Set screw, 8-32 x 1/4", SS .....	8
Allen Wrench, 5/64" .....	1
Allen Wrench, 1/8".....	1

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