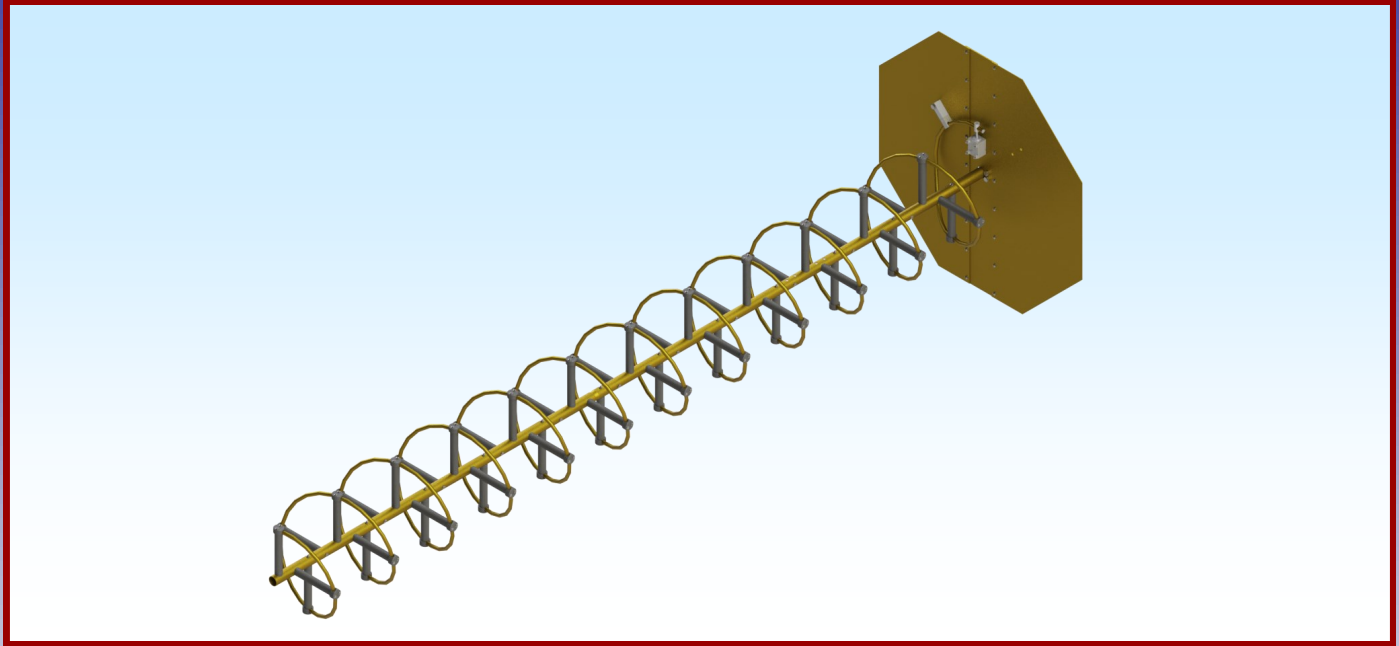




M2 Antenna Systems, Inc. Model No: 300-400-12



SPECIFICATIONS:

Model	300-400-12	Input Connector	"N" Female
Frequency Range.....	300 To 400 MHz	Power Handling	1 kW
*Gain	12 dBi	Polarity.....	RHCP or LHCP
Front to back	20 dB Nominal	Operating Temperature	-50 F To 130 F
Beamwidth	52° Nominal	Wind area / Survival	100 MPH
Feed Impedance.....	50 Ohms	Weight / Ship Wt.....	15 Lbs.
Maximum VSWR.....	1.5:1		

***Subtract 2.14 from dBic for dBdc**

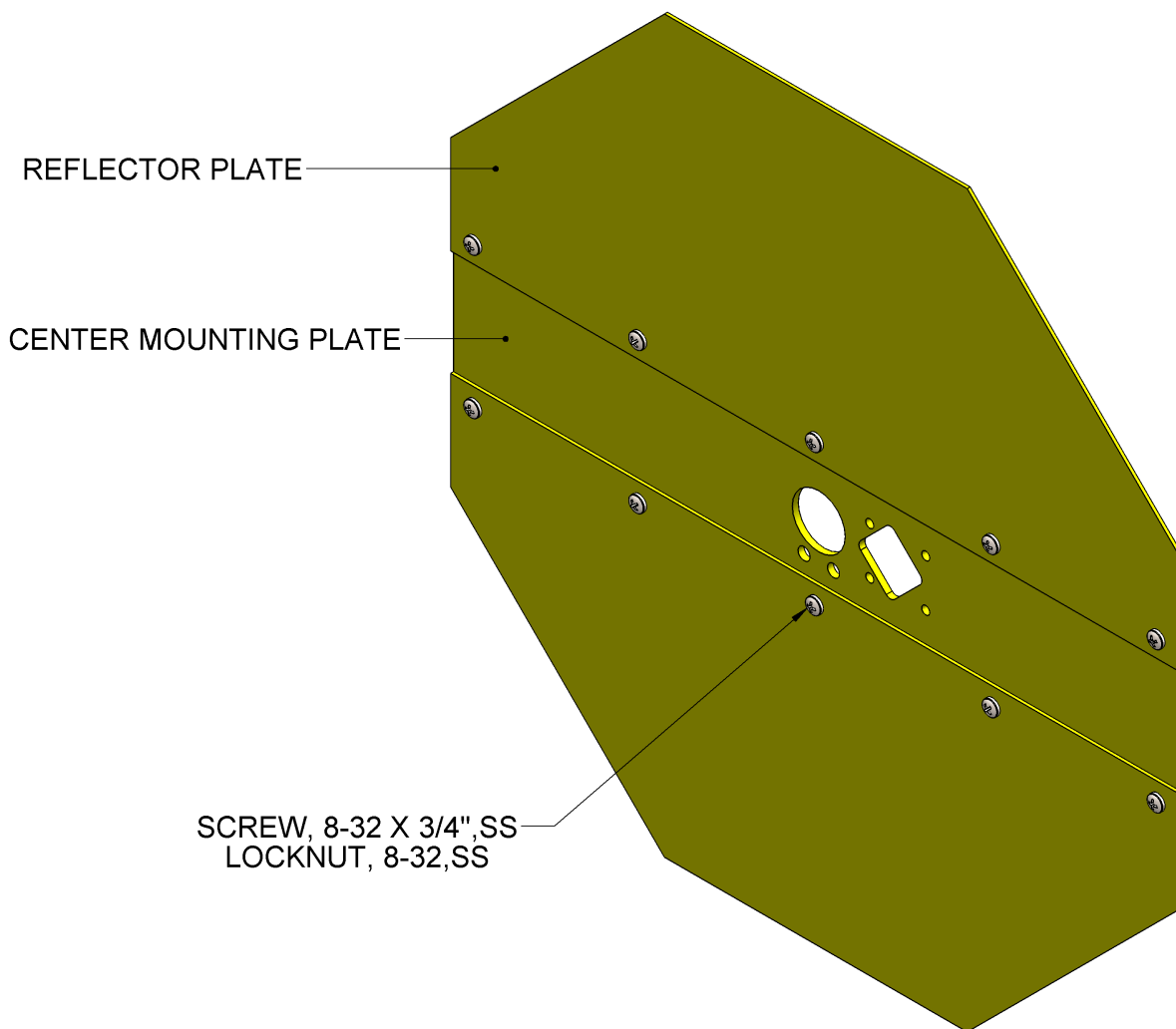
FEATURES:

The M2 300-400-12 Helix antenna offers performance characteristics for specialized fixed and rapid deploy operations within the 300 to 400 MHz band. It is perfect for either terrestrial or satellite applications. The antenna is shipped with the helix assembled less ground plane. Finishes are optional. Optional arrays of 2 or more are available. Other frequency ranges and gains are also available down to 100 MHz. Complete motorized, computer controlled AZ-EL systems are also manufactured by M2. Where circular polarity is not required but high bandwidth is, M2 offers a line of various log periodic antennas from 5 to 1300 MHz. If it is antenna related, we probably have made it. Call us with your requirements.

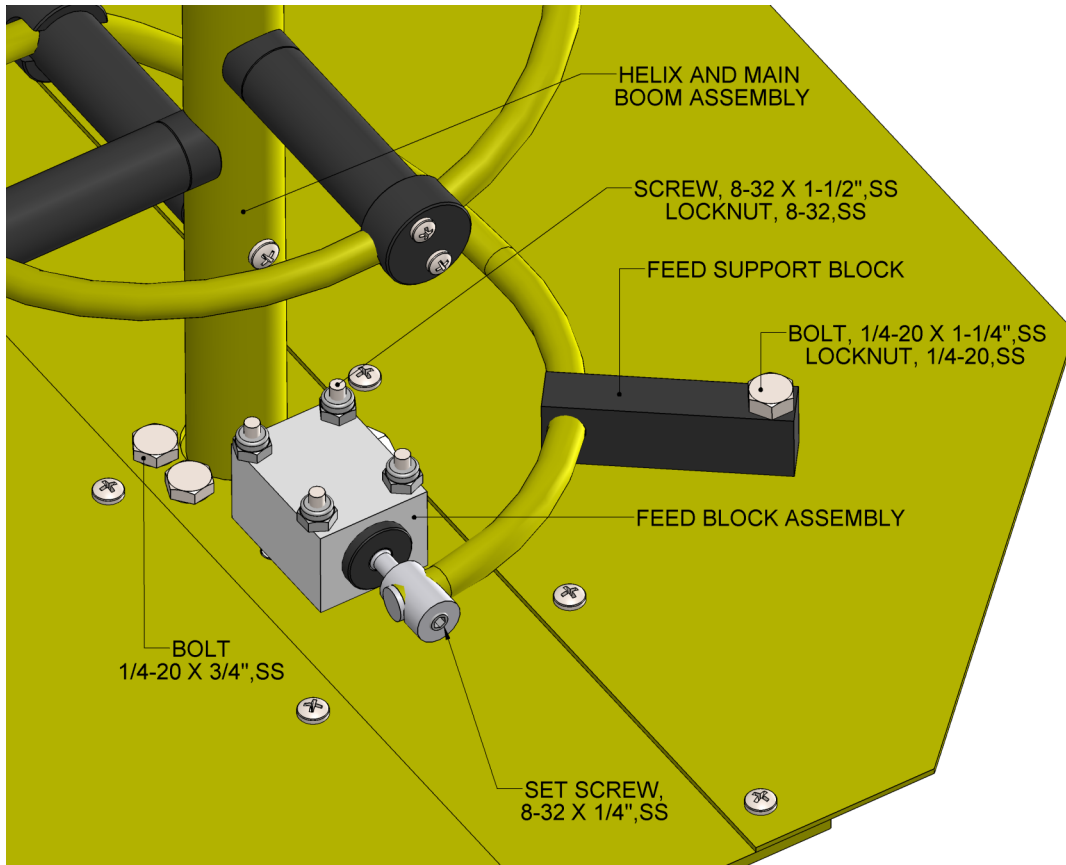
300-400-12 HELICAL ASSEMBLY MANUAL

TOOLS REQUIRED: #2 Phillips head screwdriver, 11/32" nut driver and 7/16" socket open end wrench.

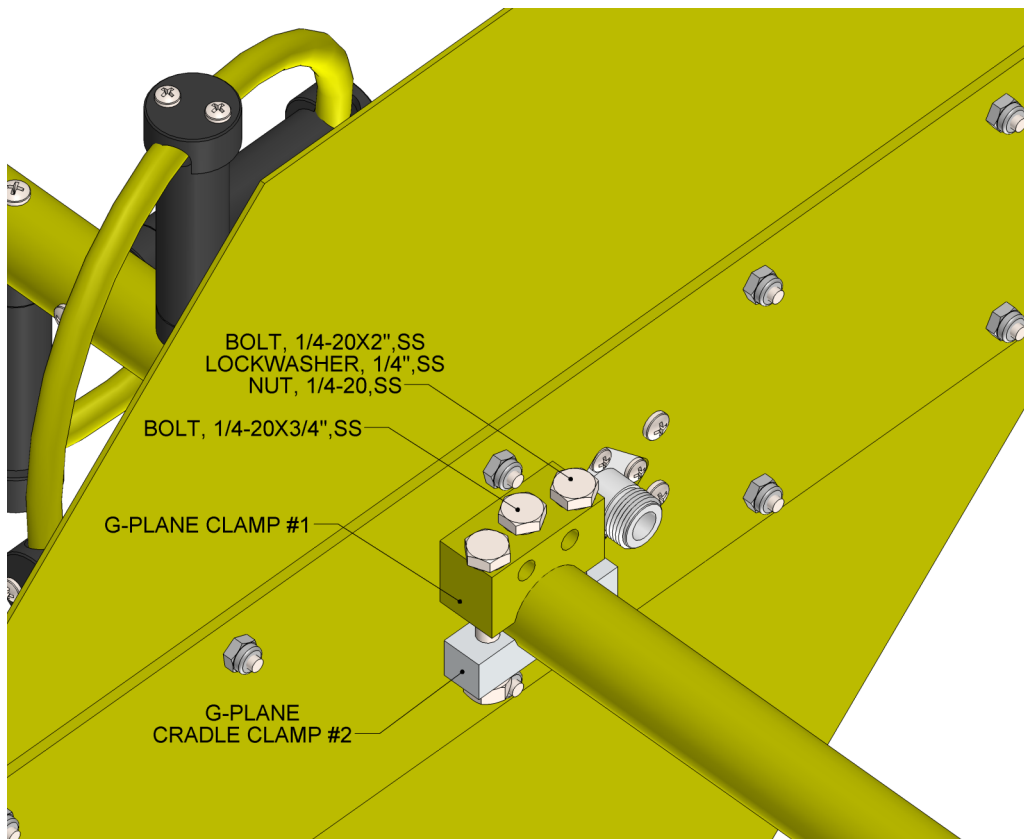
1. Unpack the factory assembled HELICAL antenna, the CENTER REFLECTOR PLATE, and the two (2) REFLECTOR HALVES. Attach the Reflector halves to the Center Reflector Plate using #8-32 x 3/4" screws and locknuts.
2. Add the G-Plane clamp #1 to the center reflector plate near the center hole using 1/4-20 x 3/4 bolts and lock washers. Then slide the assembly up the rear end of the helix boom. Align the hole in the rear boom section of the helix assembly with that of the g-plane clamp #1 and use a 1/4-20 x 3/4" bolt to set the position of the ground plane by threading the bolt through the g-plane clamp #1 and into the boom. This sets the position of the ground plane. Then add the g-plane clamp #2 and secure using 1/4-20 x 2 1/2 bolts and locknuts.
3. Slide the feed support block on to the helix, note that the hole in the support block is off set, install the block so there is the greatest distance between the helix and the ground plane. Align the holes on the ground plain and leave loose at this point. Then slide the 'N'-connector block assembly on the helix and rotate the connector down through the large hole in the plate. Secure the block to the plate with four (4) #8-32 x 1-1/2" screws and locknuts. Add the 1/4-20 bolt through the feed block support and ground plane and secure. Now install the 1/4-20 x 1/4" set screw in the round end of the feed block assembly and tighten, using the supplied 1/8" Allen wrench. Note set screw markings from original test assembly. Helix should protrude no more than 1/8" past the feed post. This completes the assembly.



FEED ASSEMBLY DETAIL



GROUND PLANE DETAIL



300-400-12 PARTS LIST

DESCRIPTION.....	QTY
HELIX AND MAIN BOOM ASSEMBLY	1
CENTER MOUNTING PLATE,	1
REFLECTOR PLATE	2
FEED BLOCK ASSEMBLY	1
G-PLANE CLAMP 1" BM DIA #1 (M2AHP0050)	1
G-PLANE CRADLE CLAMP 1" BM DIA #2 (M2AMC0110)	1
FEED SUPPORT, DELRIN (M2AHP0025).....	1
ASSEMBLY MANUAL	1
HARDWARE.....	QTY
BOLT, 1/4-20 X 1 1/2" HX HD SS	2
BOLT, 1/4-20 X 1 1/4" HX HD SS	1
BOLT, 1/4-20 X 3/4" HX HD SS	3
LOCKNUT, 1/4-20 SS	1
NUT, 1/4-20 SS.....	4
LOCKWASHER, 1/4, SS	4
SET SCREW, 1/4-20 X 1/4 SS.....	1
ALLEN WRENCH, 1/8.....	1
SCREW, 8-32 X 1 1/2" PHL PH SS.....	4
SCREW, 8-32 X 1/2 PHL PH SS.....	18
LOCKNUT, 8-32 SS	22

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