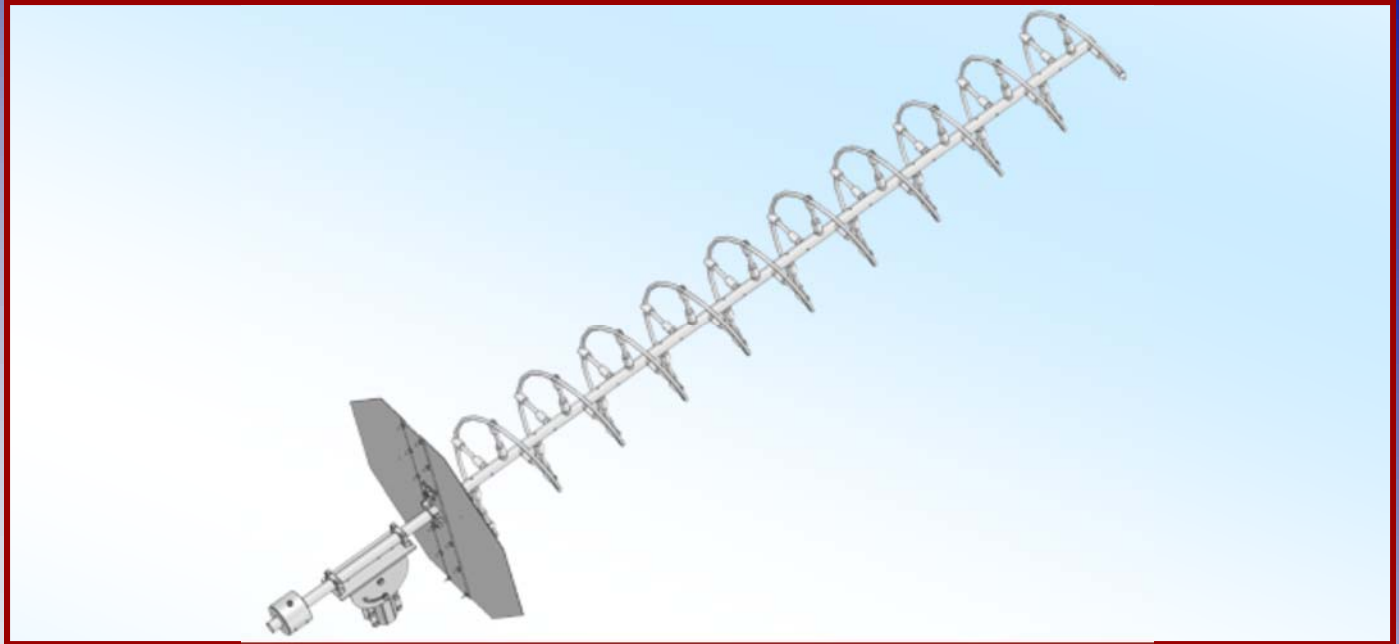




# M2 Antenna Systems, Inc. Model No: 375-450-10 HELICAL ANTENNA



## SPECIFICATIONS:

Model .....	FG375-450-10	Power Handling .....	1 kW
Frequency Range.....	375 To 475 MHz	Polarity.....	RHCP or LHCP (Customer Specific)
*Gain .....	11.5 dBi	Mounting.....	Adjustable AZ-EL on 2” x 84” Mast
Beamwidth .....	46° Nominal	Wind area / Survival .....	100 MPH
Feed Impedance.....	50 Ohms	Weight / Ship Wt.....	35 Lbs.
Maximum VSWR.....	1.5:1		
Input Connector.....	Type “N” Female		

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

## FEATURES:

The M2 375-475-10 Helix antenna offers medium performance characteristics for specialized fixed and rapid deploy operations within the 375 to 475 MHz band. It is perfect for either terrestrial or satellite applications. The antenna is supplied with a manually adjustable Azimuth / Elevation mount and a counter weight. The antenna is shipped with the helix assembled less ground plane. Finishes are optional. The steel adjustable mounting fixture and counterweight are zinc plated. 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.

# 375-450-10 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. 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" bolts and locknuts.
3. 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. 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 the black markings around the Helix tube and set screw markings from original test assembly. Helix should protrude no more than 1/8" past the feed post. This completes the assembly.



**375-450-10T HELICAL ANTENNA**

## 375-450-10 HELICAL ANTENNA PARTS LIST

<u>DESCRIPTION</u>	<u>QTY</u>	<u>HARDWARE BAG DESCRIPTION</u>	<u>QTY</u>
HELIX AND MAIN BOOM.....	1	BOLT, 1/4-20 x 3/4" SS.....	10
CENTER MOUNTING PLATE, .....	1	BOLT, 1/4-20 x 1-3/4" SS.....	4
REFLECTOR PLATE.....	2	BOLT, 1/4-20 X 2" SS .....	6
G-PLANE CLAMP #1 X.500 RAD.....	1	BOLT, 1/4-20 X 3.5" SS .....	1
FEED BLOCK W/ "N" CONN .....	1	SET SCREW, 1/4-20 x 1/4" SS.....	3
SADDLE ADAPTER PLATE .....	1	FLATWASHER, 1/4", SS.....	4
SADDLES, 1" DIA.....	5	LOCKWASHER, 1/4 SS .....	2
ELEVATION BRACKET.....	1	LOCKNUT, 1/4-20, SS .....	12
MAST BRACKET (W/ PEM NUTS).....	1	SCREW, 8-32 X 1-1/2", SS .....	4
MAST BRACKET (W/O PEM NUTS).....	1	SCREW, 8-32 X 3/4", SS .....	12
COUNTER BALANCE WEIGHT .....	1	LOCKNUT, 8-32 SS .....	16
ASSEMBLY MANUAL.....	1	1/8 ALLEN WRENCH.....	1

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

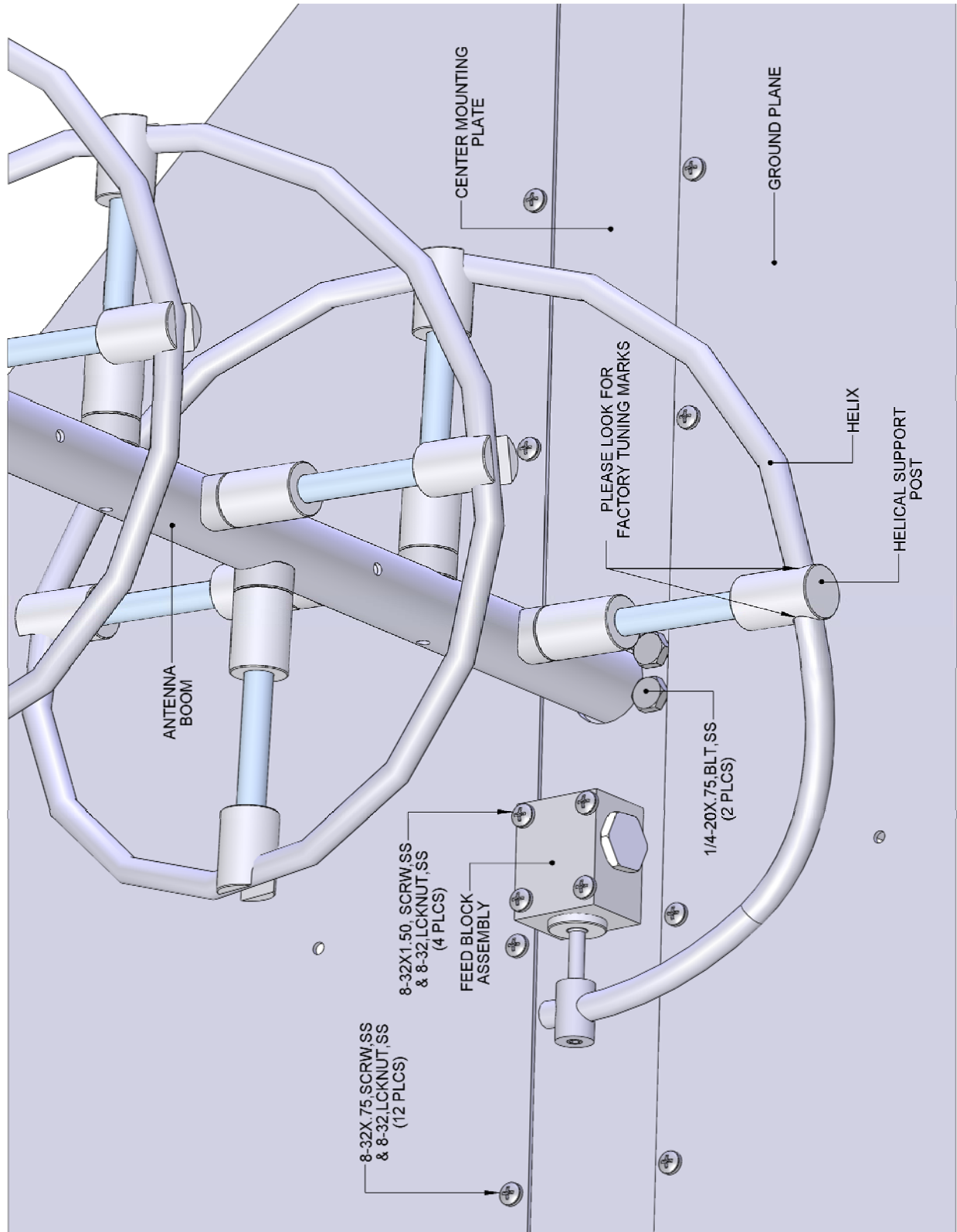
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# 375-450-10 HELICAL ASSEMBLY MANUAL



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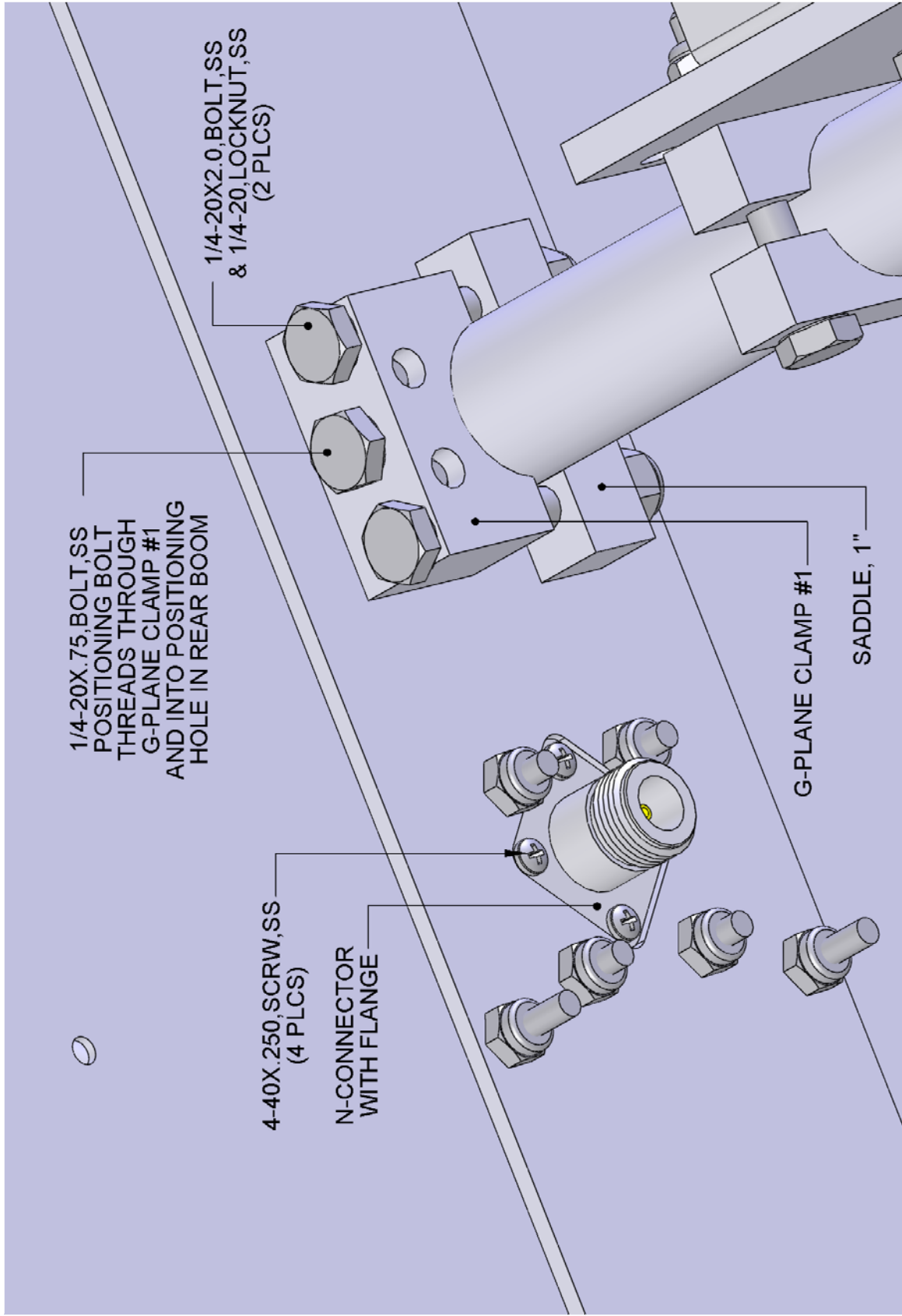
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