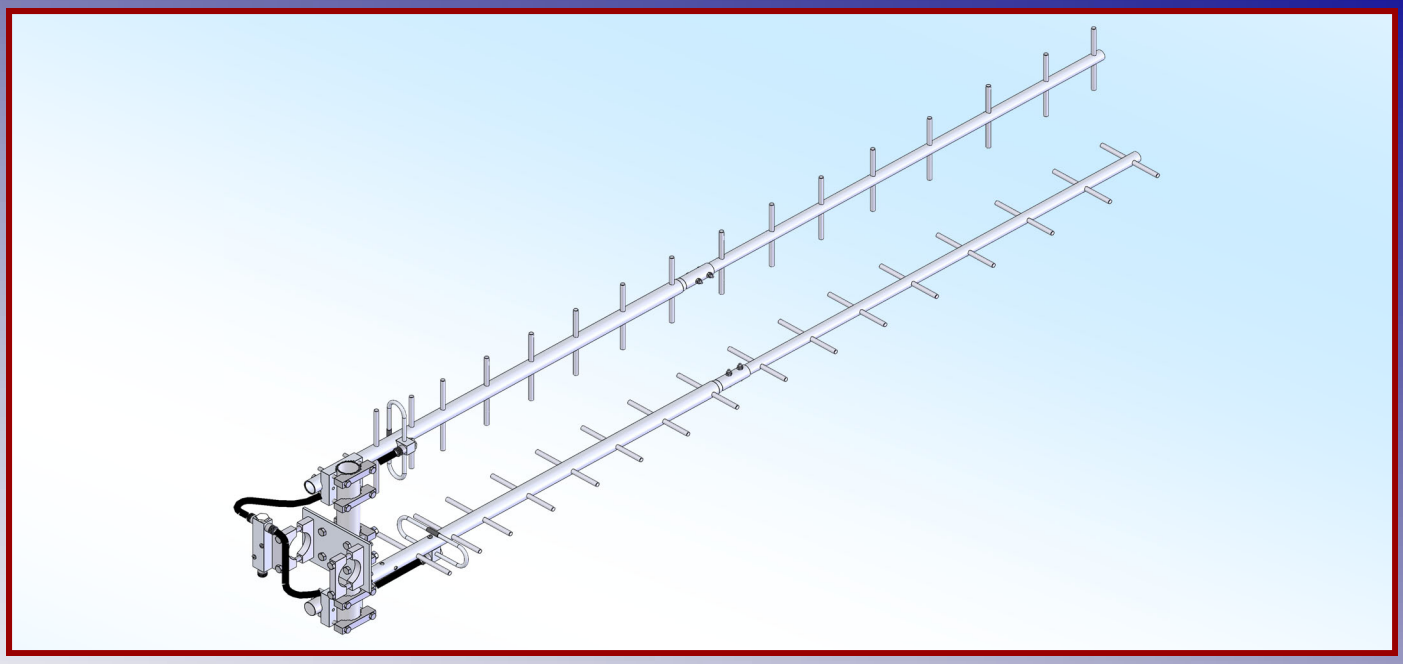
M2 Antenna Systems, Inc.
Model No: 917YACP



SPECIFICATIONS:

Model	917YACP
Frequency Range	900-930 mHz
*Gain	17.0 dBic
Front to back	25 dB Typical
VSWR	1.2:1 Typical
Beamwidth	H=22° / E=27°
Feed type	Folded Dipole
Feed Impedance.	50 Ohms Unbalanced

Input Connector	"N" Female
Power Handling	500 Watts
Boom Length / Dia	74" / 1" to 3/4"
Turning Radius:	34"
Stacking Distance (CP)	10"
Mast Size	1-1/4" to 2" Nom.
Wind area / Survival	0.8 Sq. Ft. / 100MPH
Weight / Ship Wt.	10 Lbs. / 15 Lbs.

***Subtract 2.14 from dBi for dBd**

FEATURES:

Circular polarized antennas have many uses, most commonly for reliable satellite communications. Above UHF frequencies cross coupling of horizontal + vertical elements can severely affect circularity. We find by using two separate yagis, one vertically and one horizontally polarized, cross coupling is minimized and good circularity is realized. Other advantages include pattern shaping and side lobe reduction. Using two yagis make RHC-LHC switching easy while Helical antennas by design are fixed at one direction or the other. This two yagi concept can be easily be expanded to more yagis for more array gain.

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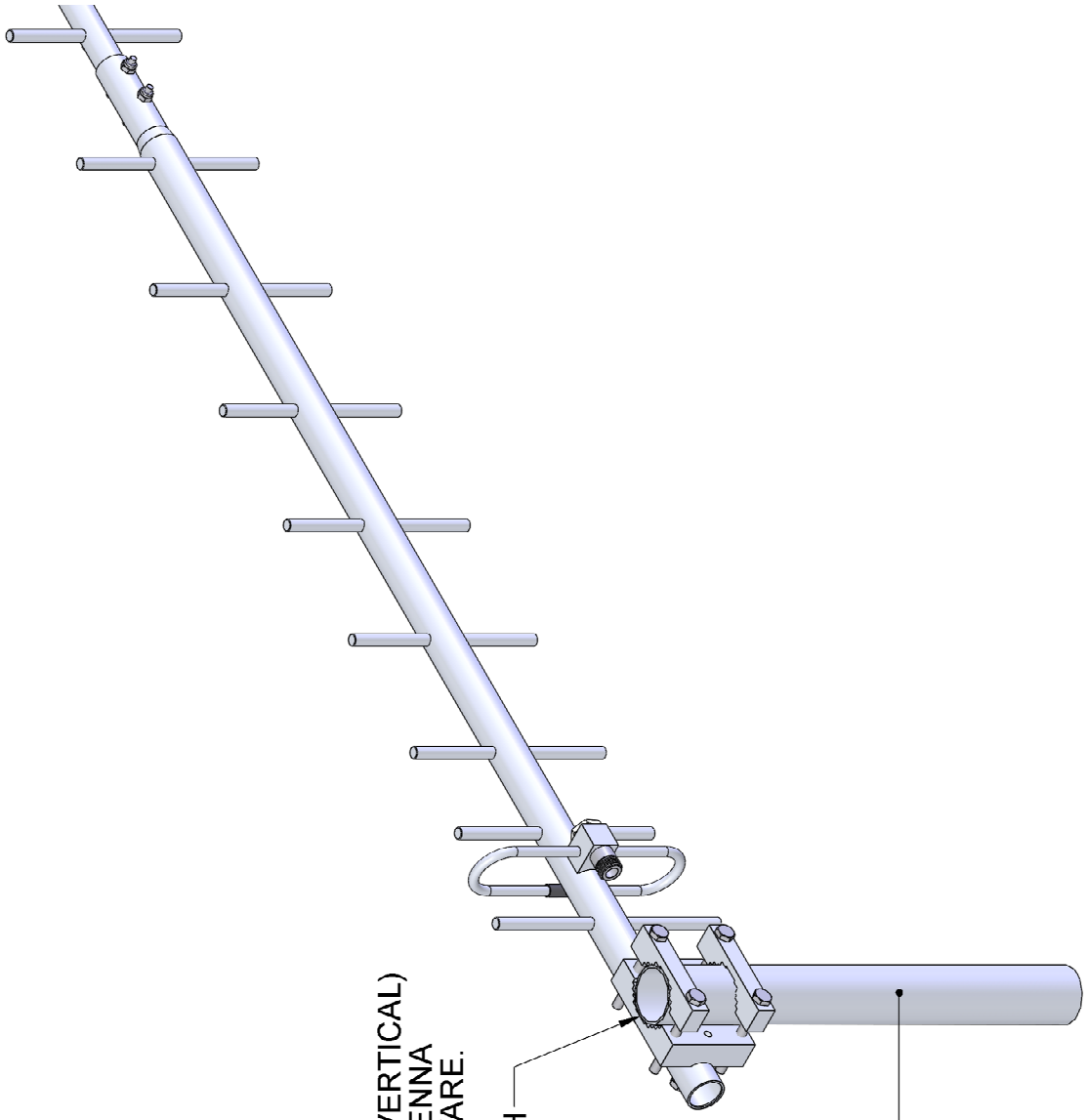
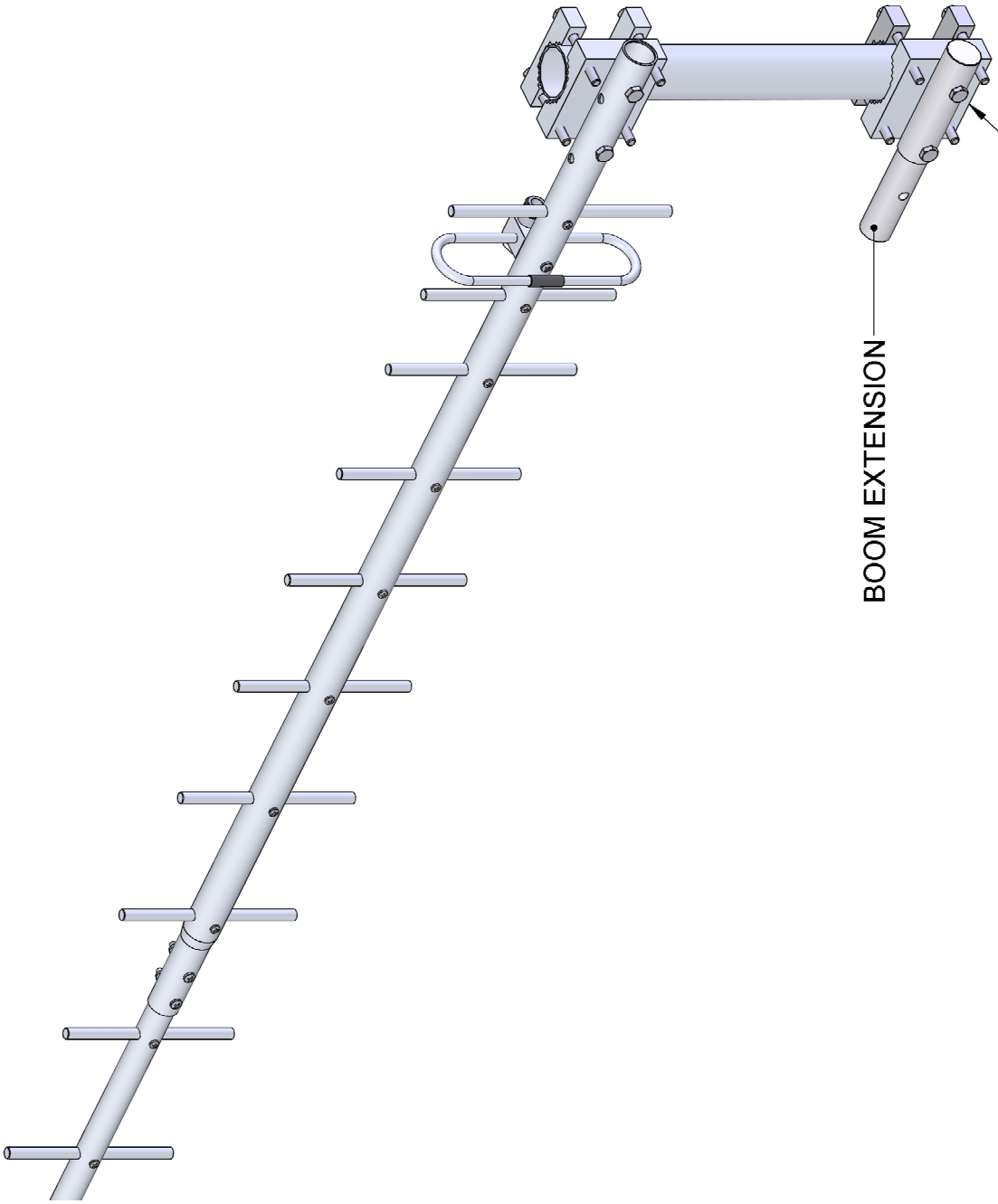
Rev.01

917YACP ASSEMBLY MANUAL



917YACP ASSEMBLY DETAILS



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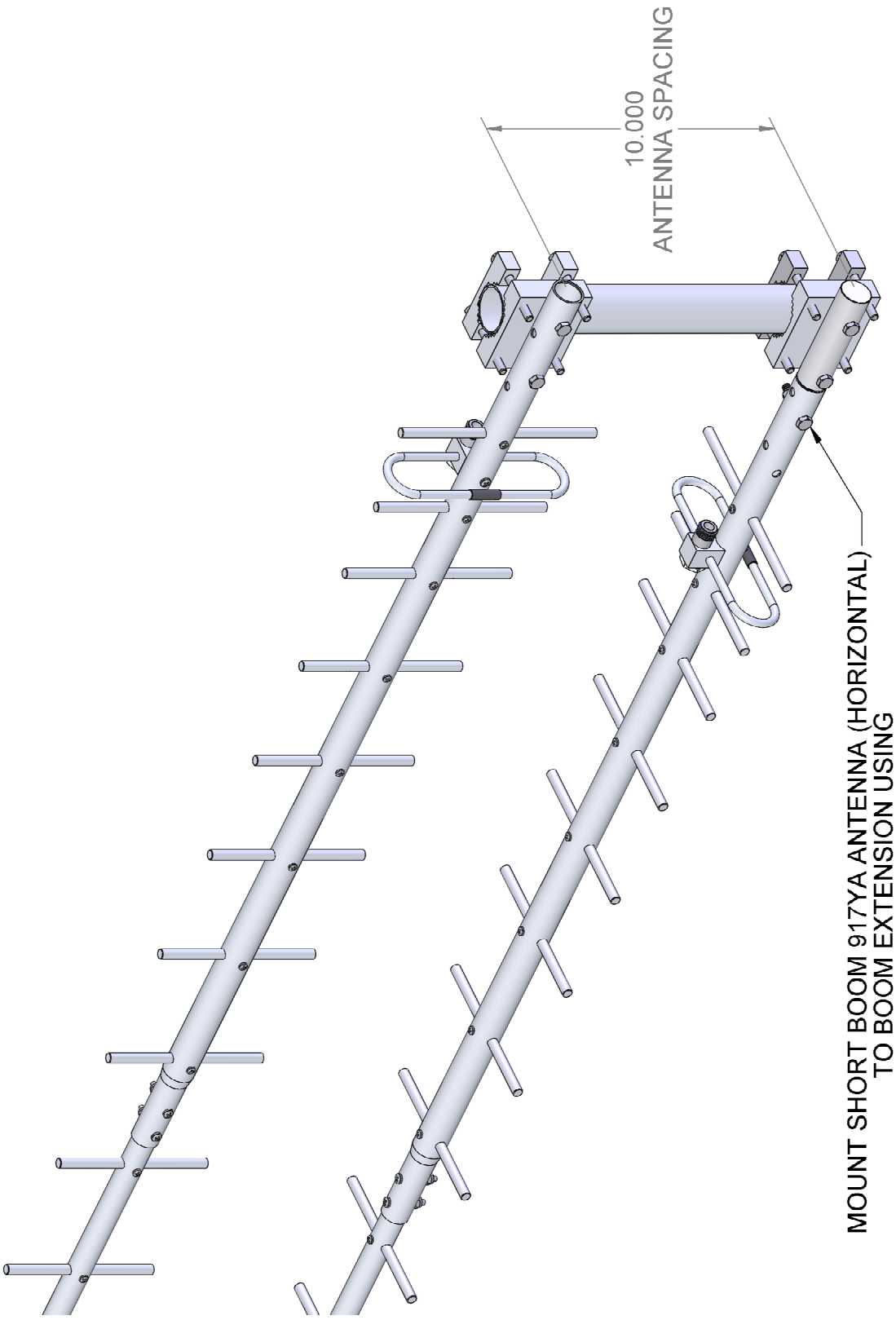

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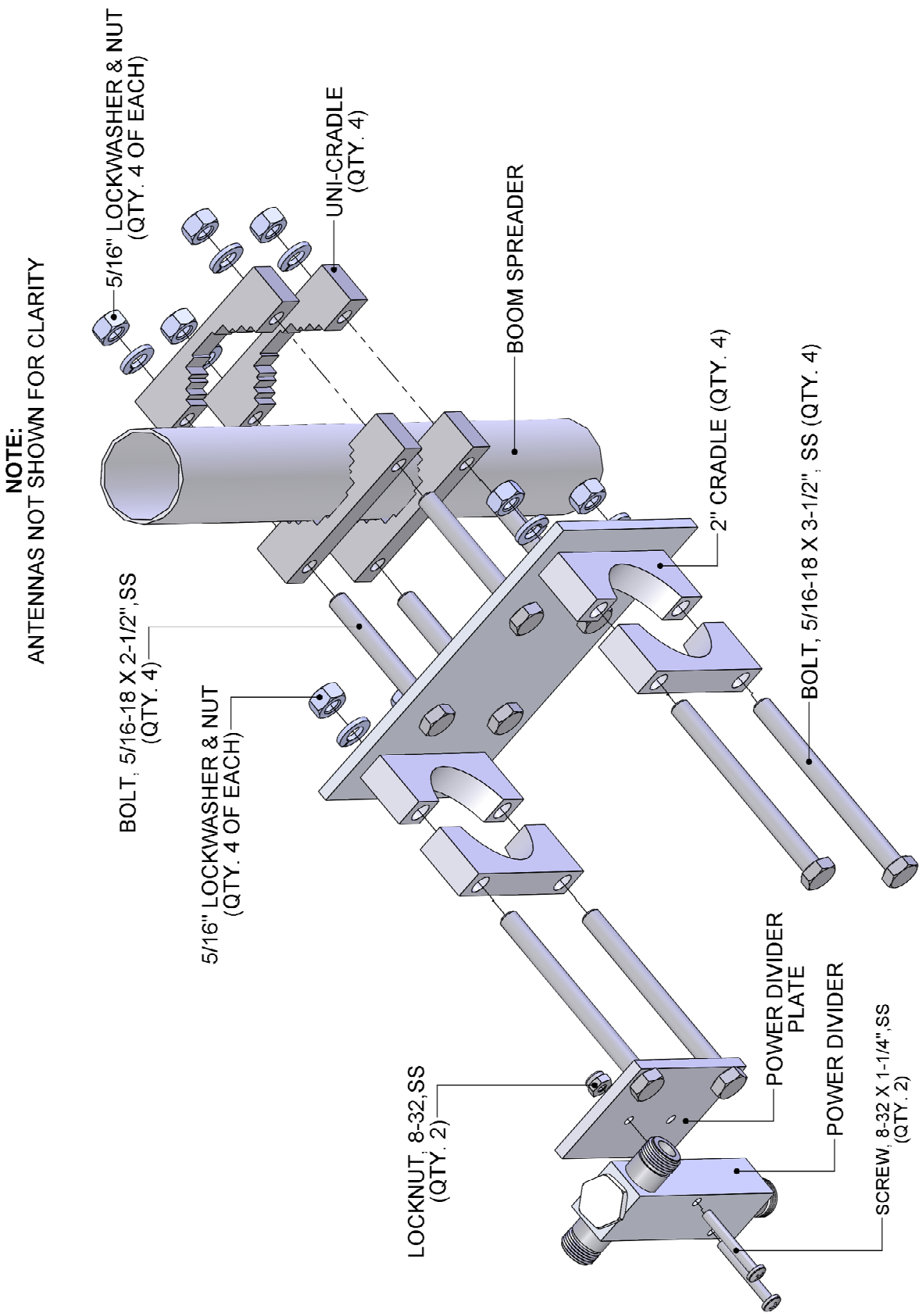
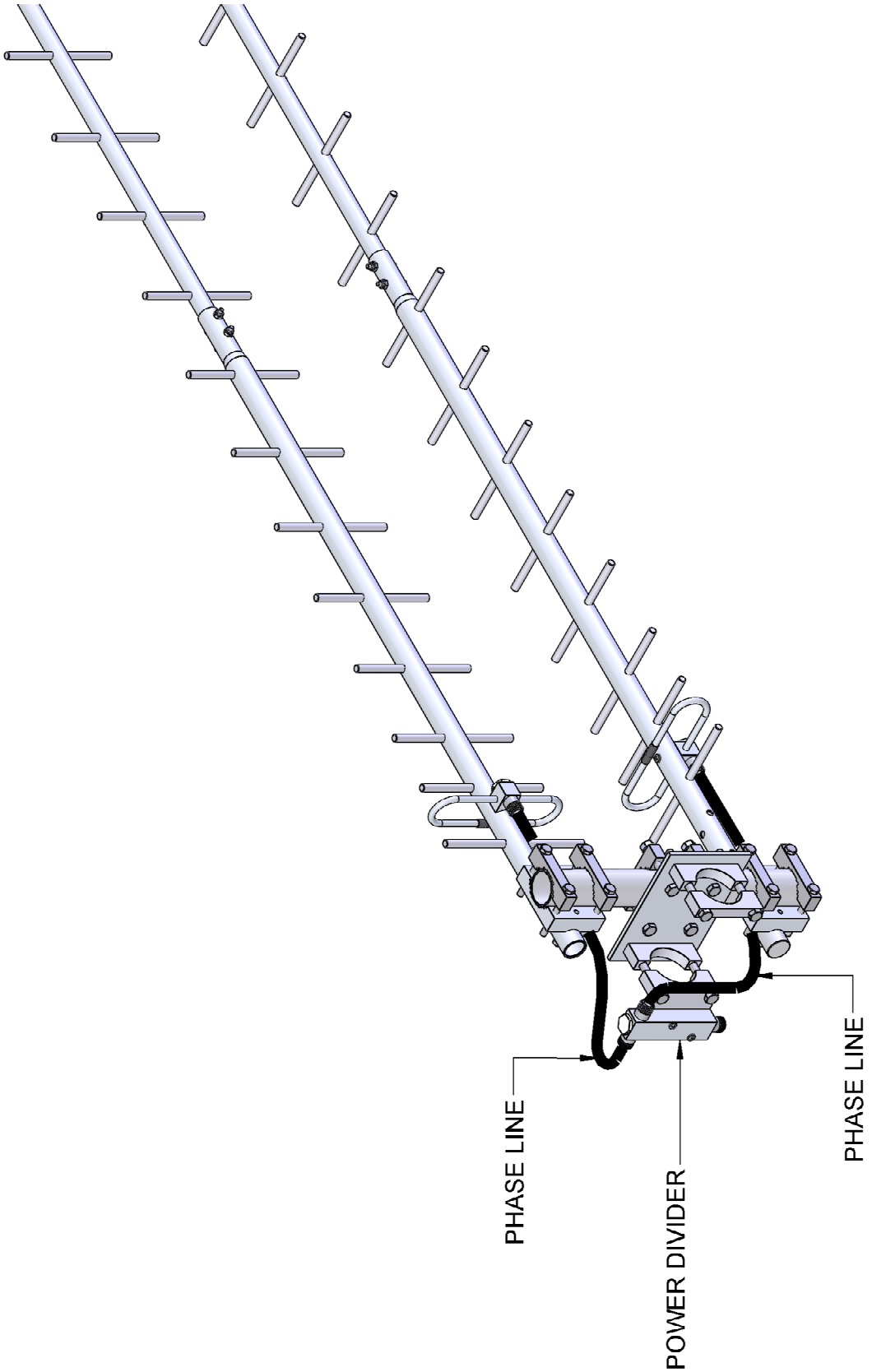
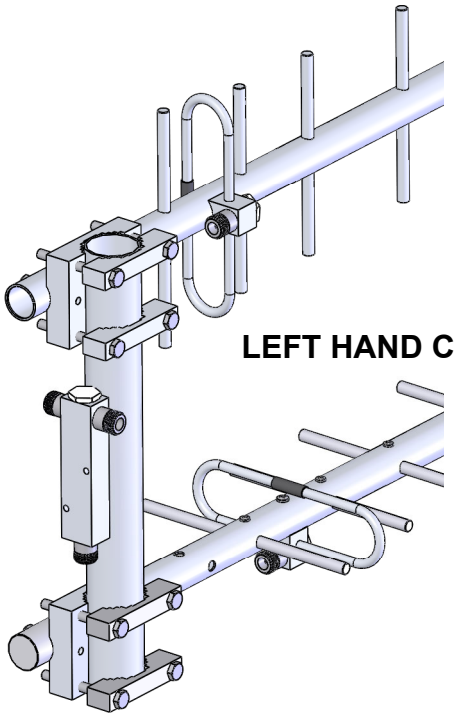


917YACP ASSEMBLY MANUAL



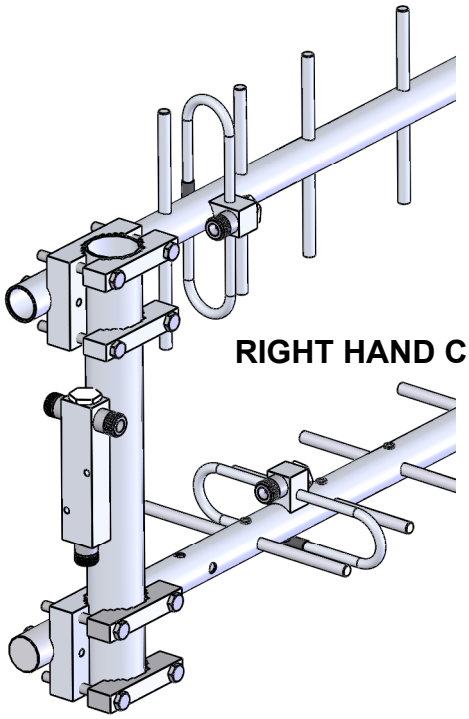
917YACP ASSEMBLY MANUAL

NOTE:
MOUNTING PLATE, CLAMPS &
PHASE LINES NOT SHOWN FOR CLARITY



LEFT HAND CIRCULARITY

When vertical and horizontal antennas are used, a 90° phased shift between them is necessary to create circularity. The easiest, most consistent way to achieve that 90° shift is to place one antenna ahead or behind the other by one free space quarter wave length. In the upper example left hand circularity (LHC) is created. To switch to right hand circularity (RHC) the lower dipole is rotated 180° from the bottom mounting position to the top mounted position.



RIGHT HAND CIRCULARITY

There are several other ways to switch from LHC to RHC, but this example is usually the easiest. For instantaneous switching, relays are used to insert or remove a half wave length of coax delay (180°) into one phase line or the other. If these methods are not suitable for you application contact M2 for an assortment of other possibilities.

917YACP PARTS & HARDWARE

DESCRIPTION	QTY
917YA (STANDARD) ANTENNA ASSEMBLY	1
917YA (SHORT BOOM) ANTENNA ASSEMBLY	1
BOOM SPREADER, 1-1/2” X 12-1/2”	1
BOOM EXTENSION	1
UNI-CRADLE, (M2AMC0076)	4
CRADLE, 2” (M2AMC0130)	4
SYSTEM MOUNT PLATE, 4” X 3/16” X 6”	1
POWER DIVIDER PLATE, 2” X 3/16” X 3-1/8”	1
2 PORT POWER DIVIDER, 900-300	1
PHASE LINE, 900-50 (LMR400)	2
ASSEMBLY MANUAL	1

IN HARDWARE BAGS:

BOLT, 5/16-18 X 3-1/2”, HEX HD,SS	4
BOLT, 5-16-18 X 2-1/2”, HEX HD,SS	4
LOCKWASHER, 5-16”,SS	8
NUT, 5/16-18,SS	8
BOLT, 1/4-20 X 1-1/2”, HEX HD, SS	1
LOCKNUT, 1/4-20,SS	1
SCREW, 8-32 X 1-1/4”, PH PHL,SS	2
LOCKNUT, 8-32,SS	2

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