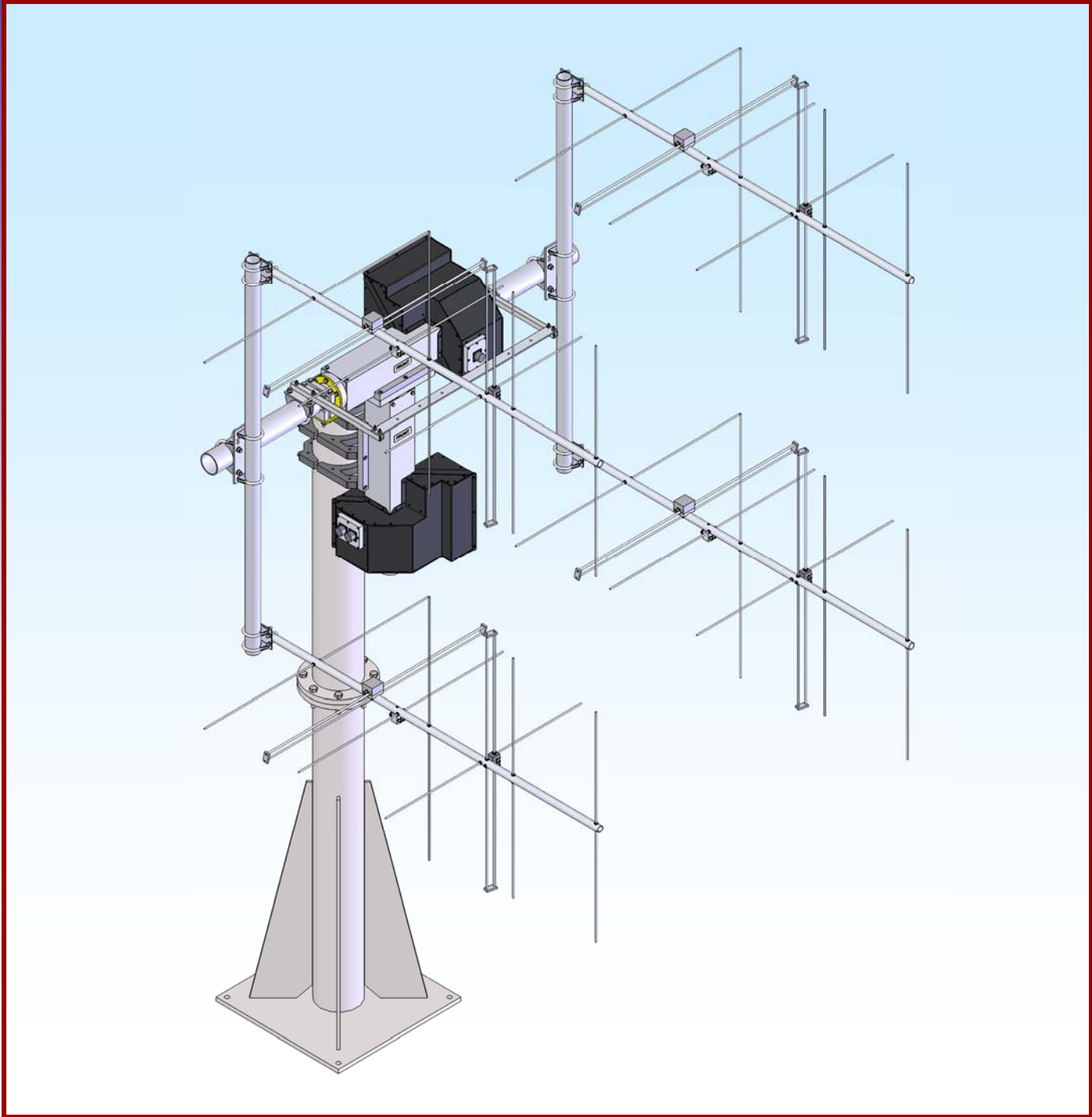


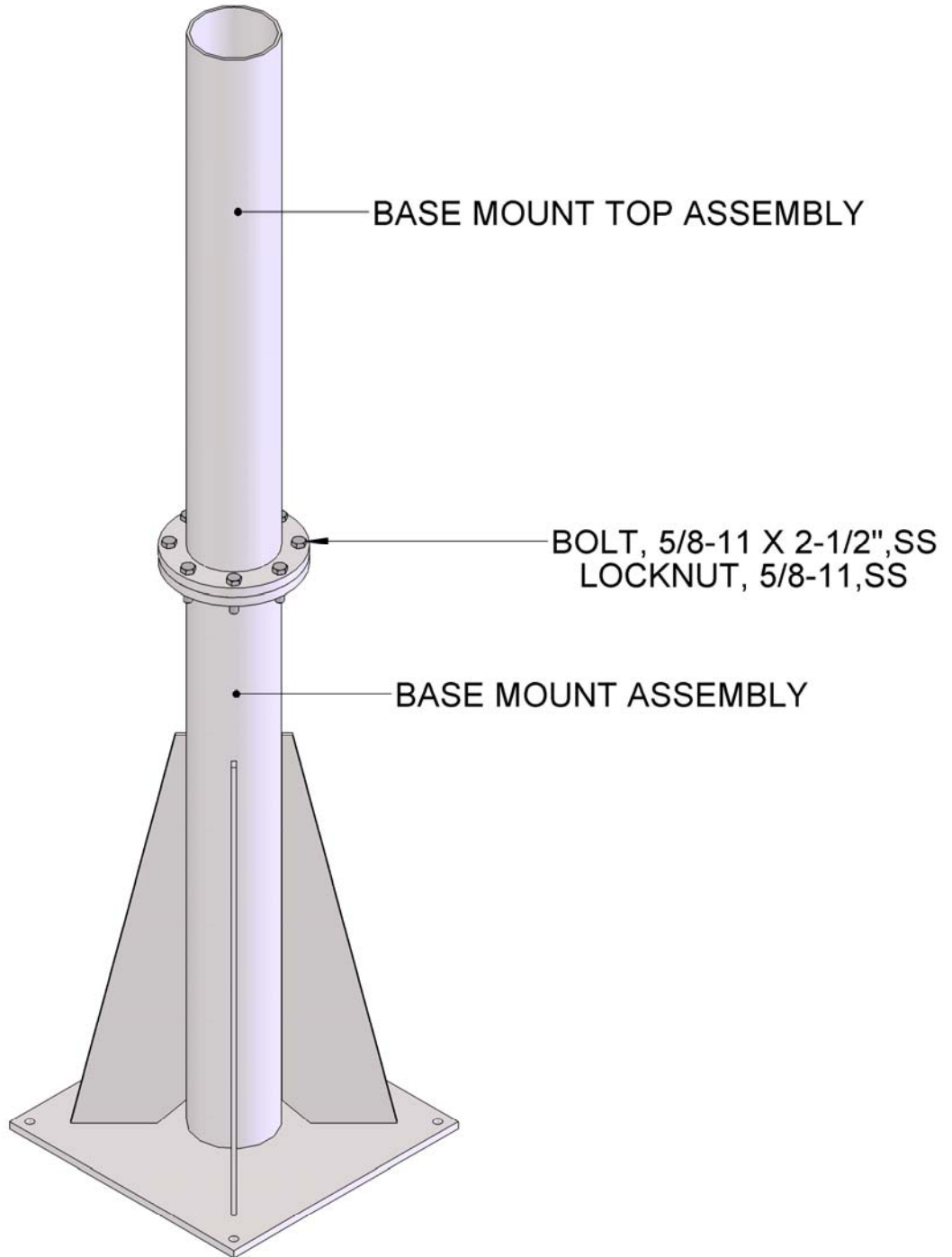


M2 Antenna Systems, Inc.

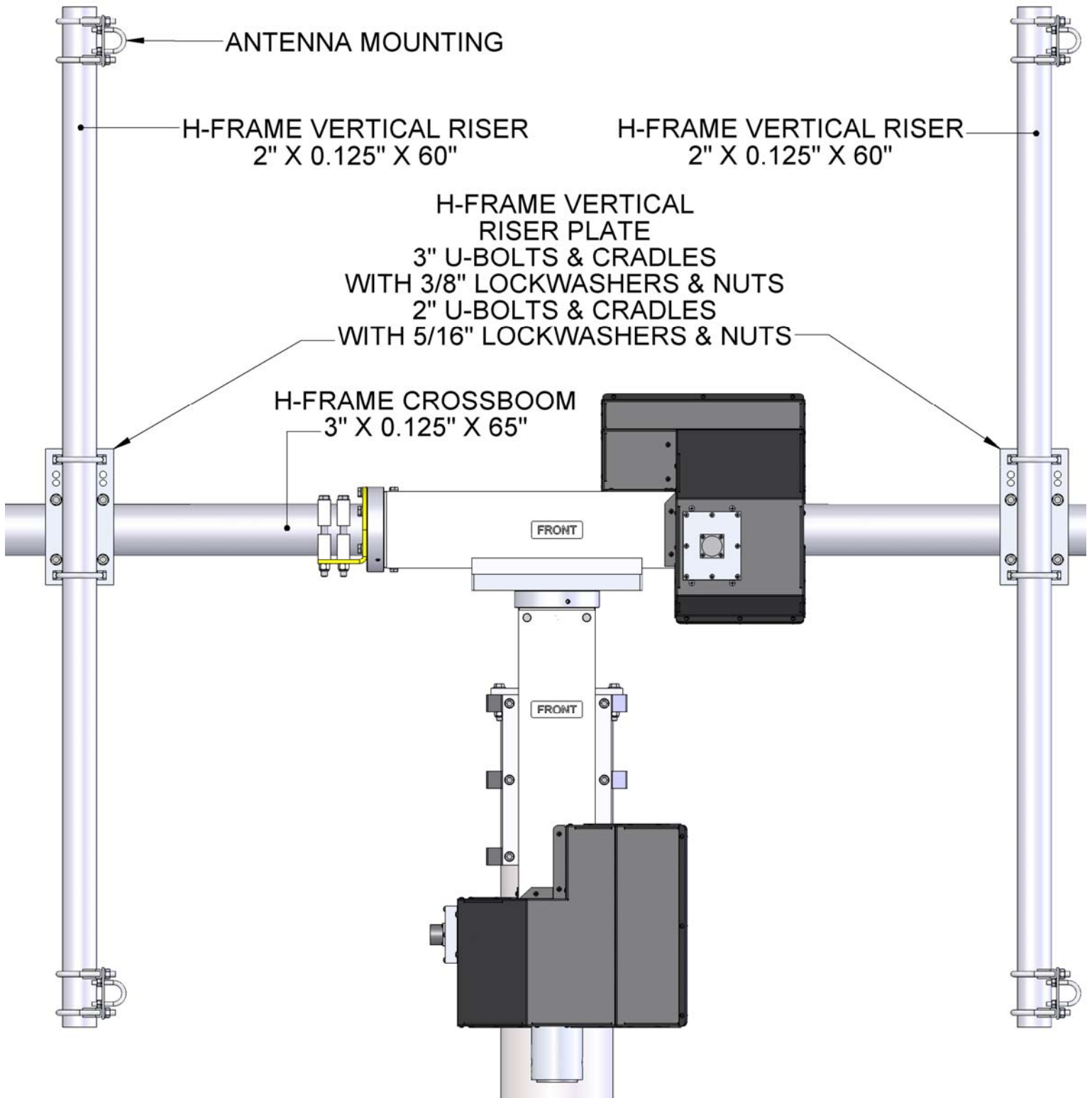
Model No. SYSTEM SAMPLE 1



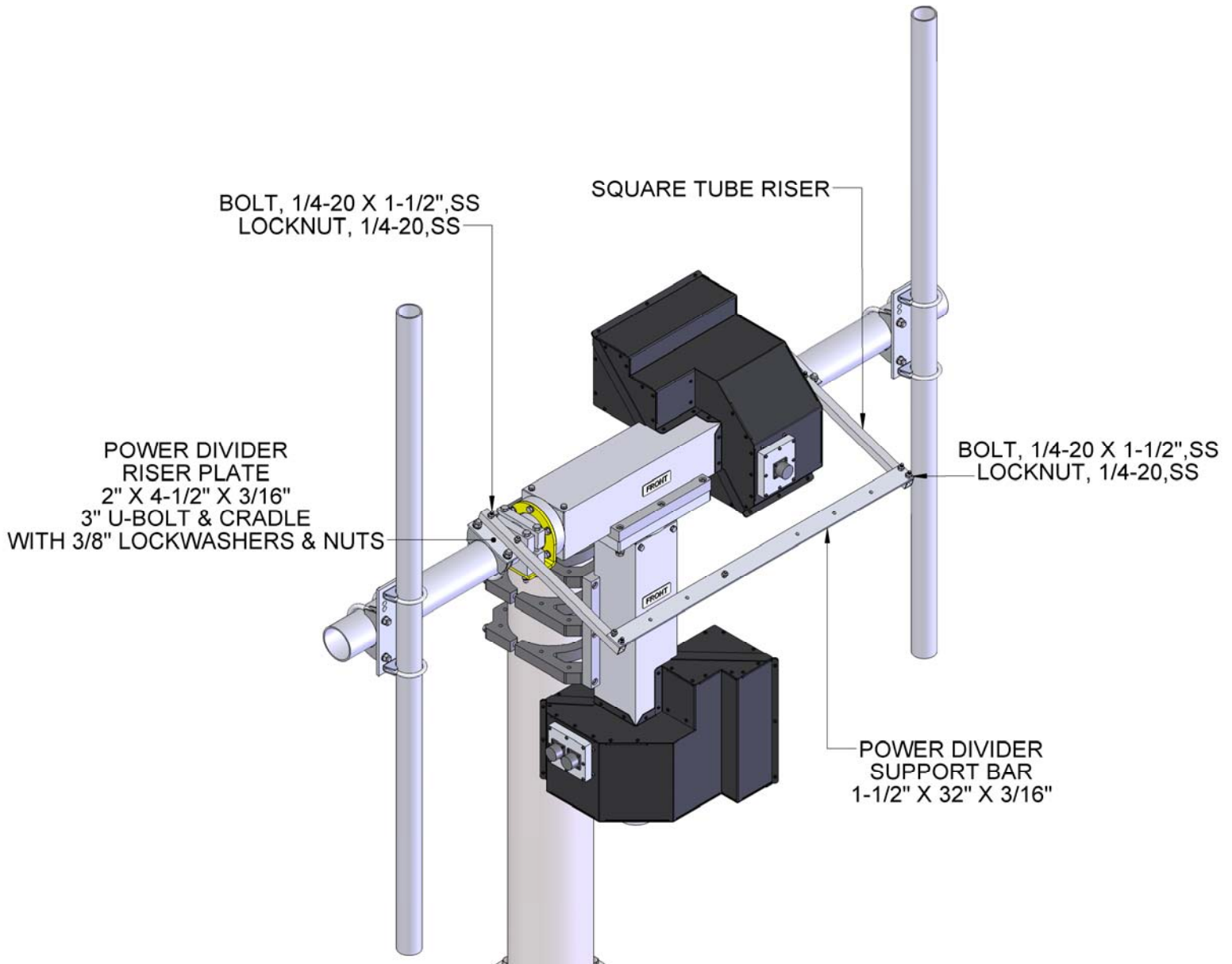
BASE MOUNT ASSEMBLY DETAIL



VERTICAL RISER ASSEMBLIES



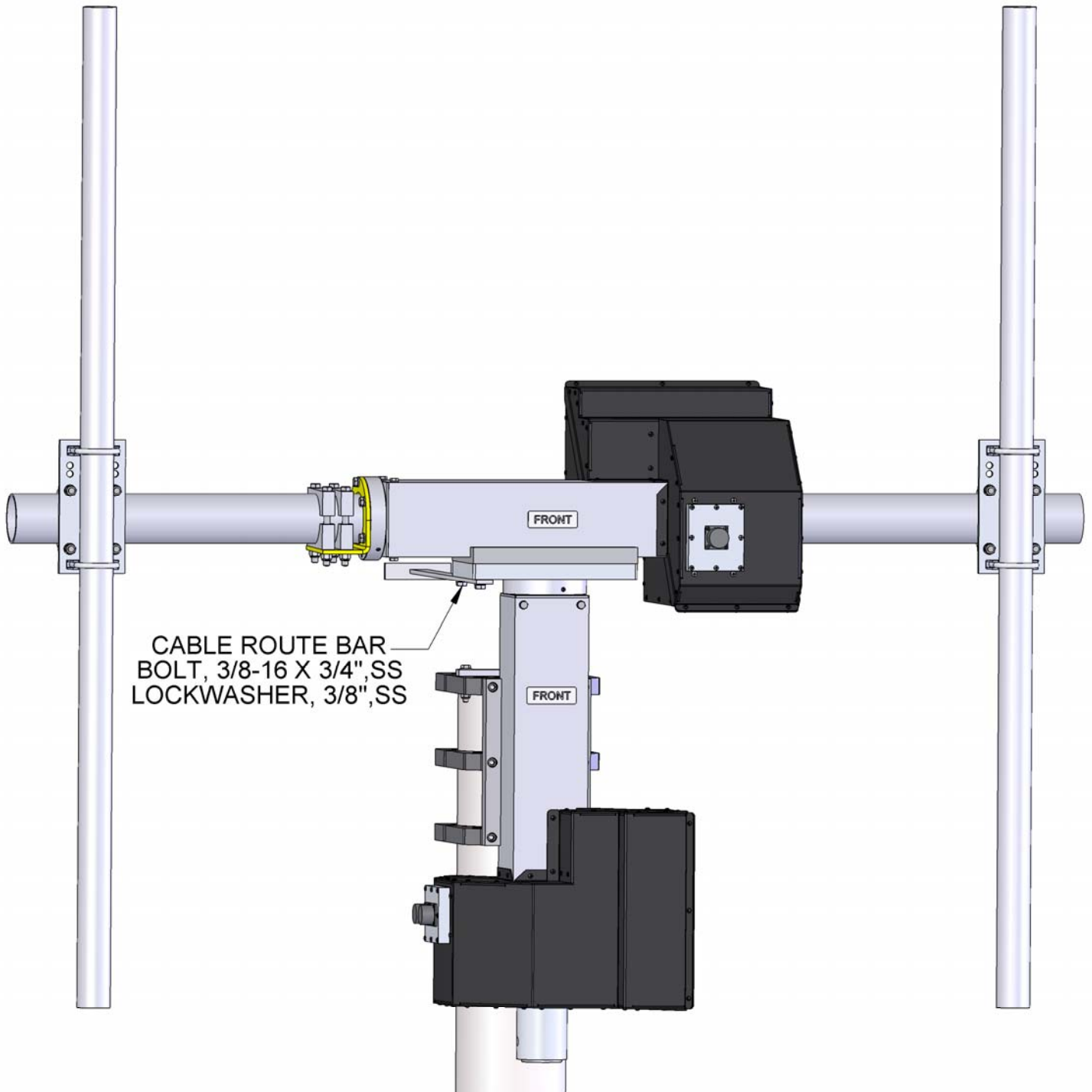
POWER DIVIDER SUPPORT ASSEMBLY



NOTE:

THE POWER DIVIDER IS OUT IN FRONT OF THE SYSTEM. THE BAR CAN NOT BE PERPENDICULAR TO THE SYSTEM. THE BAR NEEDS TO BE ANGLED DOWN A FEW DEGREES, THIS ALLOWS FOR THE ELEVATION TO MOVE 180° AND AVOIDS THE POWER DIVIDER PLATE INTERFERING WITH CABLE ROUTE BAR.

CABLE ROUTE BAR DETAILS



**NOTE:
ANTENNAS NOT SHOW FOR CLARITY**

EL CABLE TO AZ CABLE ROUTE

Note: The starting point for all cables that move with AZ or EL rotation. The AZ is at full counter clock wise and EL at 0 degrees.

Figure 1

Note the red colored cable. This cable comes up to the elevation motor unit. Once this cable is connected to the support arm it does not move or change as the unit is moved in AZ or EL.

Figure 2

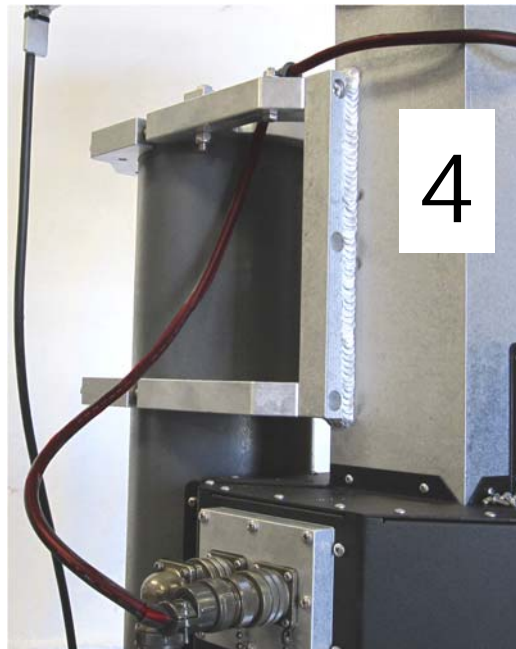
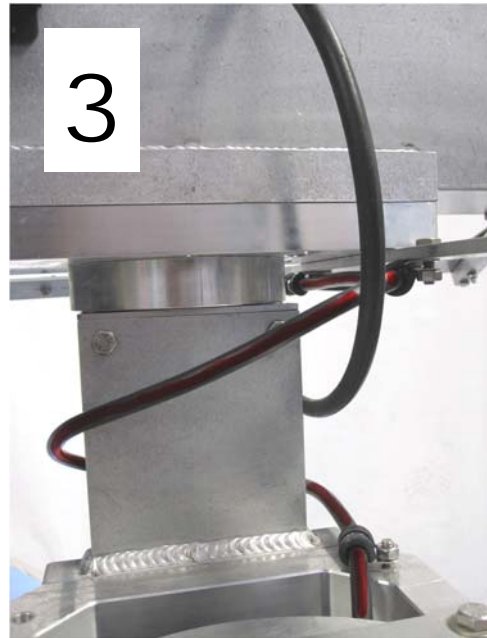
Shows the EL control cable supported along the main support arm with two cable calmps.

Figure 3

Shows the full 360° loop around the upper AZ support column. This 360° loop will increase in size as the AZ unit rotates in a clock wise direction.

Figure 4

Shows the final routing of this cable to its final connection point at the lower AZ unit.



PHASING LINE CABLE TO POWER DIVIDER

Note: All four antenna phasing lines will follow similar routing.

Figure 1

Since the cable is exactly $3/4$ wavelengths long, a small 6" - 7" diameter loop is required as shown. Note the cable tie location. More Cable ties or equivalent can be used as desired.

Figure 2

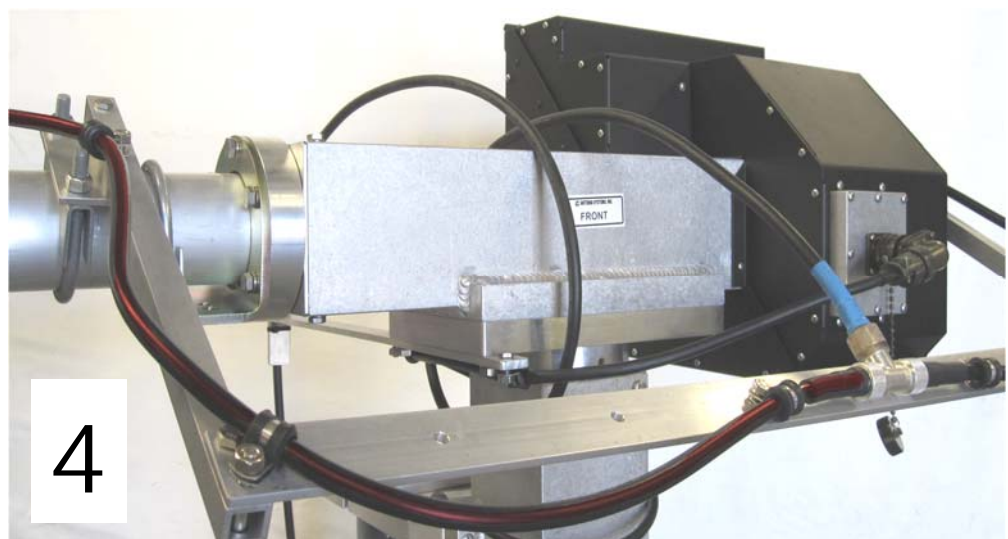
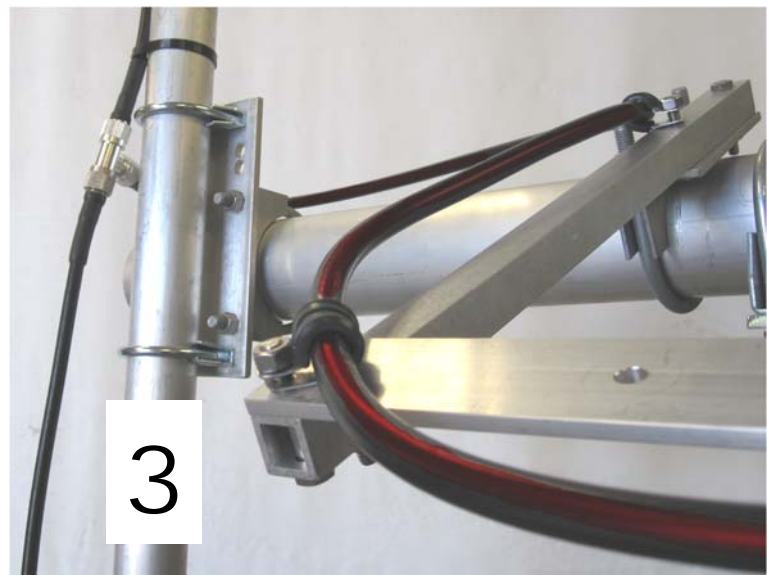
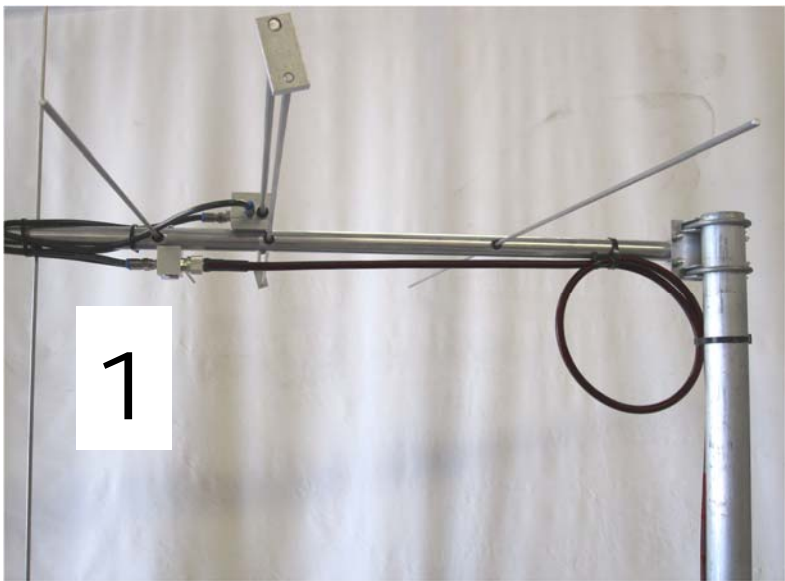
Shows the continuation of the phasing line down the vertical support leg of the H-Frame. Note the other phasing line coming up the vertical leg from the lower antenna. The two cables connect to "N" Female "T" where one end of the half of the $3/4$ wave power divider cables begins.

Figure 3

Shows the power divider cable in red, routing out and across the center cable support bar.

Figure 4

Shows one side of the two power divider cables connecting to the center "N" - "T" connector, where the main feed line connects (blue sleeve at the connector).



MAIN FEED LINE CABLE ROUTE

Note: The main 50 Ohm feed line is customer supplied.

Figure 1

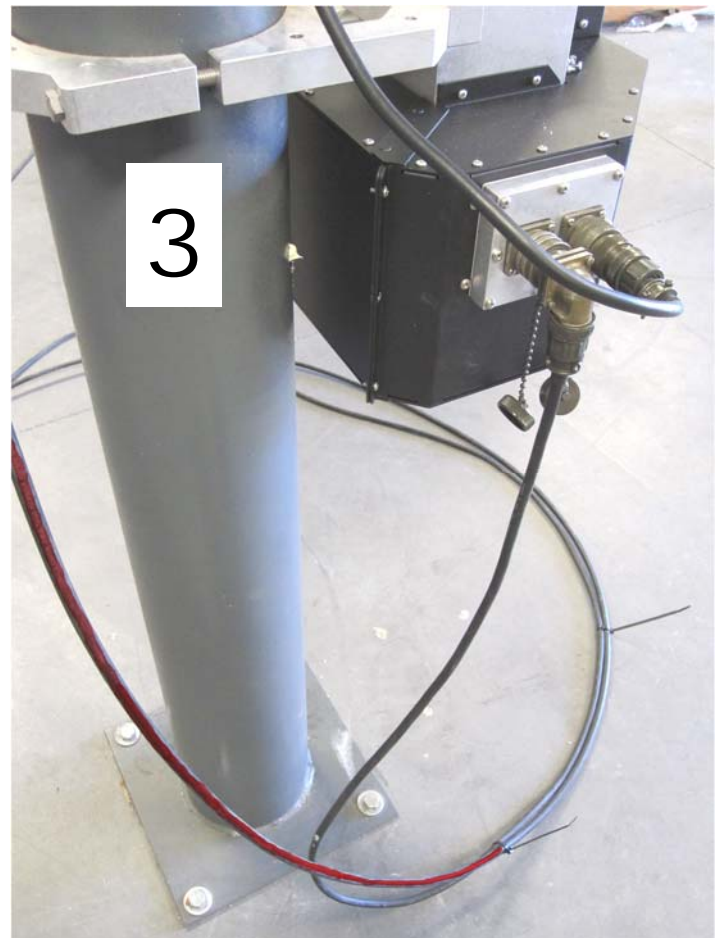
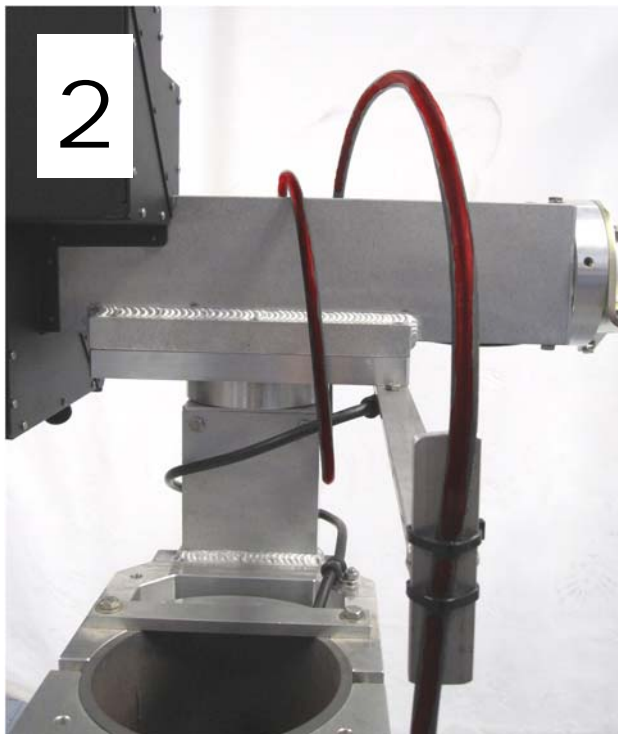
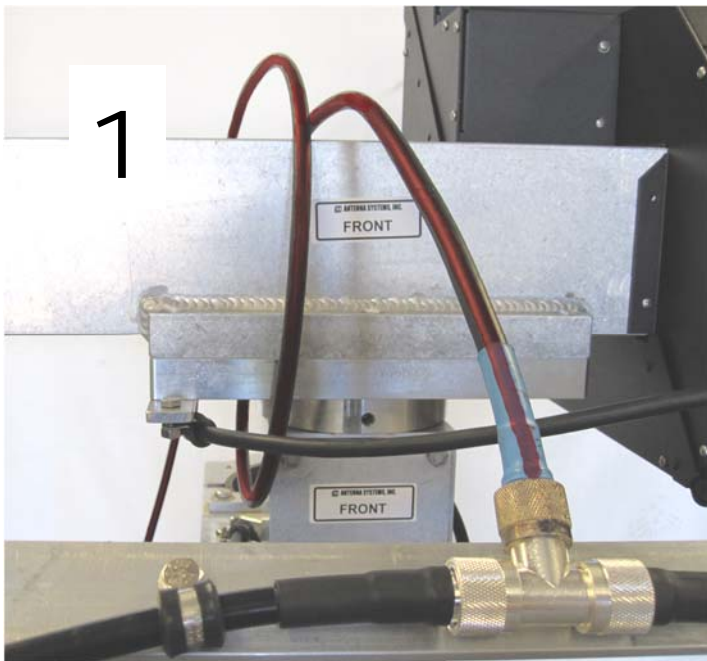
Shows the main feed line making a full 360° turn around the elevation unit body. With the antenna elevation at 0° elevation, this cable can be quite tight and close to the elevation body. Cable will open or loosen significant as the elevation is moved from 0° to 180°.

Figure 2

Shows the main feed line ending the 360° loop at the small T at end of the cable support arm. Secure as shown with two cable ties or equivalent.

Figure 3

Shows the main feed line dropping to the pedestal base with the main rotation control cable.



COMPLETE SYSTEM CABLES



This photo shows a significant loop of cables required for 360° azimuth rotation. Note: you may want to add more cable supports near the base of the pedestal.

Once the phasing lines, power divider & main feed line are attached, take time to slowly rotate the system through full 180° elevation and 360° azimuth to be sure no cable stress or hang-ups occur.

SYSTEM PARTS & HARDWARE

<u>DESCRIPTION</u>	<u>QTY</u>
FGAZEL1000SCB (AZ-1000S+EL-1000SCB+6" Pipe Clamp).....	1
Custom Base Mount (Base Assembly).....	1
Custom Base Mount (Top Assembly).....	1
H-Frame Cross Boom (3" x 0.125" x 65").....	1
H-Frame Vertical Riser (2" x 0.125 x 60")	2
H-Fame Vertical Riser Plate, 4" x 8" x 1/4".....	2
Power Divider Riser Plate, 2" x 4-1/2" x 3/16"	2
Power Divider Square Tube Riser, 3/4" x 3/4" x 16".....	2
Power Divider Support Bar, 1-1/2" x 32" x 3/16"	1
Cable Route Bar	1
FG146CP8 Antenna with PS-146	4
Coaxial Power Divider 4 Port (144-150 mHz)	1
Tuned Phased Cable Assembly	4

Spare Parts

Driven Element Block Assembly	1
Balun Assembly (4:1).....	1
Keeper Bag, 3/16" (50).....	1
Button Bag, 3/16" (50).....	1

HARDWARE..... QTY

U-Bolt & Cradle, 3"	6
U-Bolt & Cradle, 2"	4
Adel Clamp, #7	10
Bolt, 3/8-16 x 3/4",SS.....	2
Lockwasher, 3/8",SS.....	2
Bolt, 5/8-11 x 2-1/2" Hex Head S.S.....	8
Lock Nut, 5/8-11 S.S.....	8
Lock Washer, 3/8" S.S.	12
Nut, 3/8-16 S.S.	12
Lock Washer, 5/16" S.S.	8
Nut, 5/16-18 S.S.	8
Bolt, 1/4-20 x 1-1/2" Hex Head S.S.....	9
Bolt, 1/4-20 x 3/4" Hex Head S.S.....	4
Lock Nut, 1/4-20 S.S.....	13
Cable Tie, (Large)	15
Cable Tie, (Medium).....	15