
Standard Pole Mount Parabolic Antenna Mounting Instructions 3 ft. (90cm) & 4 ft. (120cm)



Standard pole Mount Parabolic Antenna Mounting Instructions, 3 ft. (90cm) & 4 ft. (120cm)

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IMPORTANT:

Please read instructions through completely before beginning installation. Caution should be used. Qualified persons experienced with antenna assembly and installation are required for installation.

DISCLAIMER

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Radio Waves Antennas

Key Features:

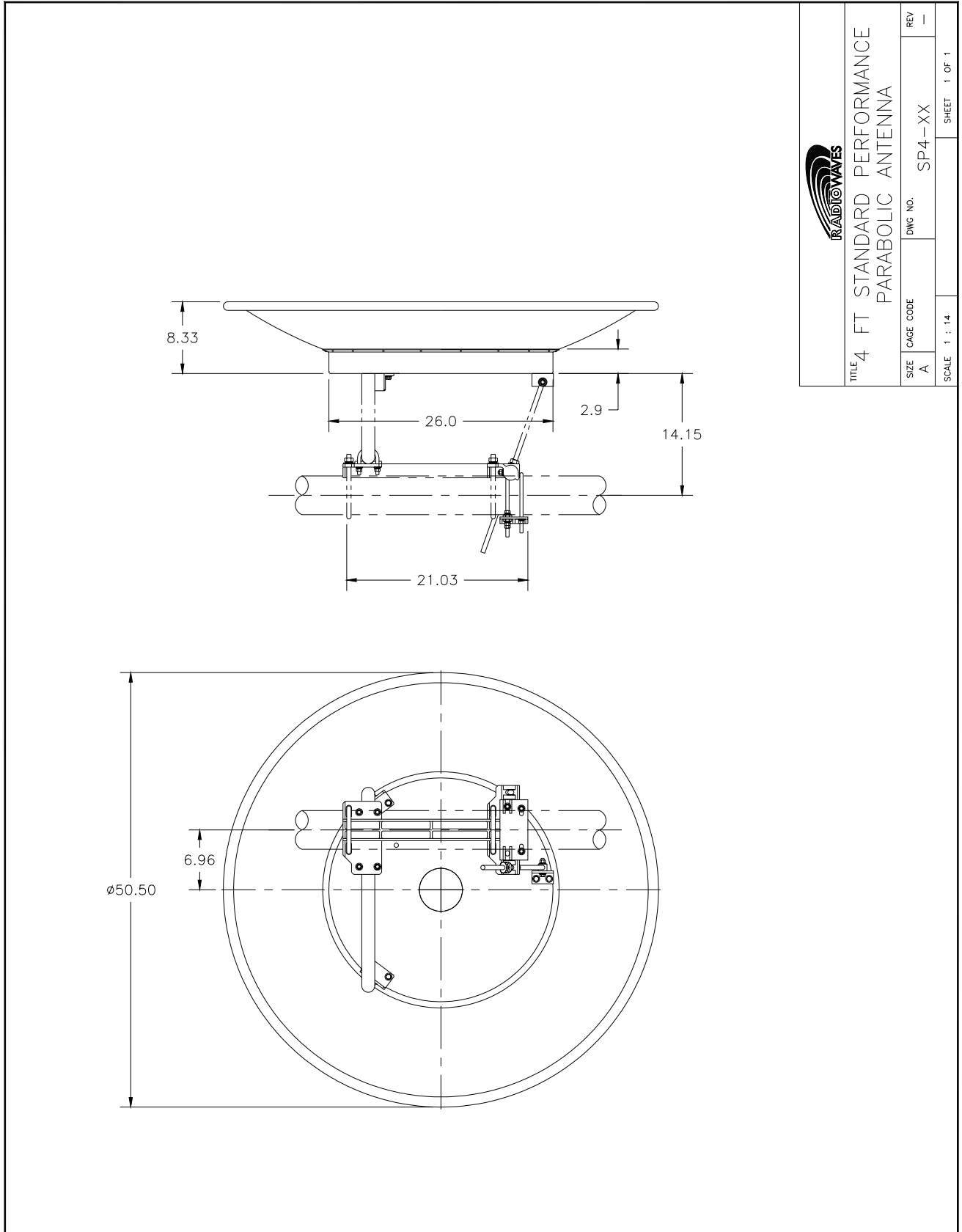
- **Ease of installation.**
- **Planar radomes that readily shed water, ice, snow and dirt.**
- **Left or right** pole mountable.
- **Rugged and light weight** cast aluminum mount with fine adjustment for both azimuth and elevation.
- **Compact size;** Antennas are designed to minimize size yet keep high performance.
- All materials are of coated aluminum, hot dipped galvanized steel and stainless steel for **corrosion resistance.**
- Backshell designs allow for **direct mounting** of RF Unit to minimize waveguide length and loss.

Mechanical Specifications:

- Elevation Range: $\pm 15^\circ$
- Azimuth Range: $\pm 15^\circ$
- Mounts to 3" - 4 1/2" outside diameter vertical pipemast.
- Weight (including mount):

Antenna Size	SP Series	SP W/Radome	HP Series
3 ft. (90cm):	43 lb. (19.50kg)	50 lb. (27.70kg)	50 lb. (27.70kg)
4 ft. (120cm):	90 lb. (27.22kg)	70 lb. (31.75kg)	85 lb. (38.63kg)

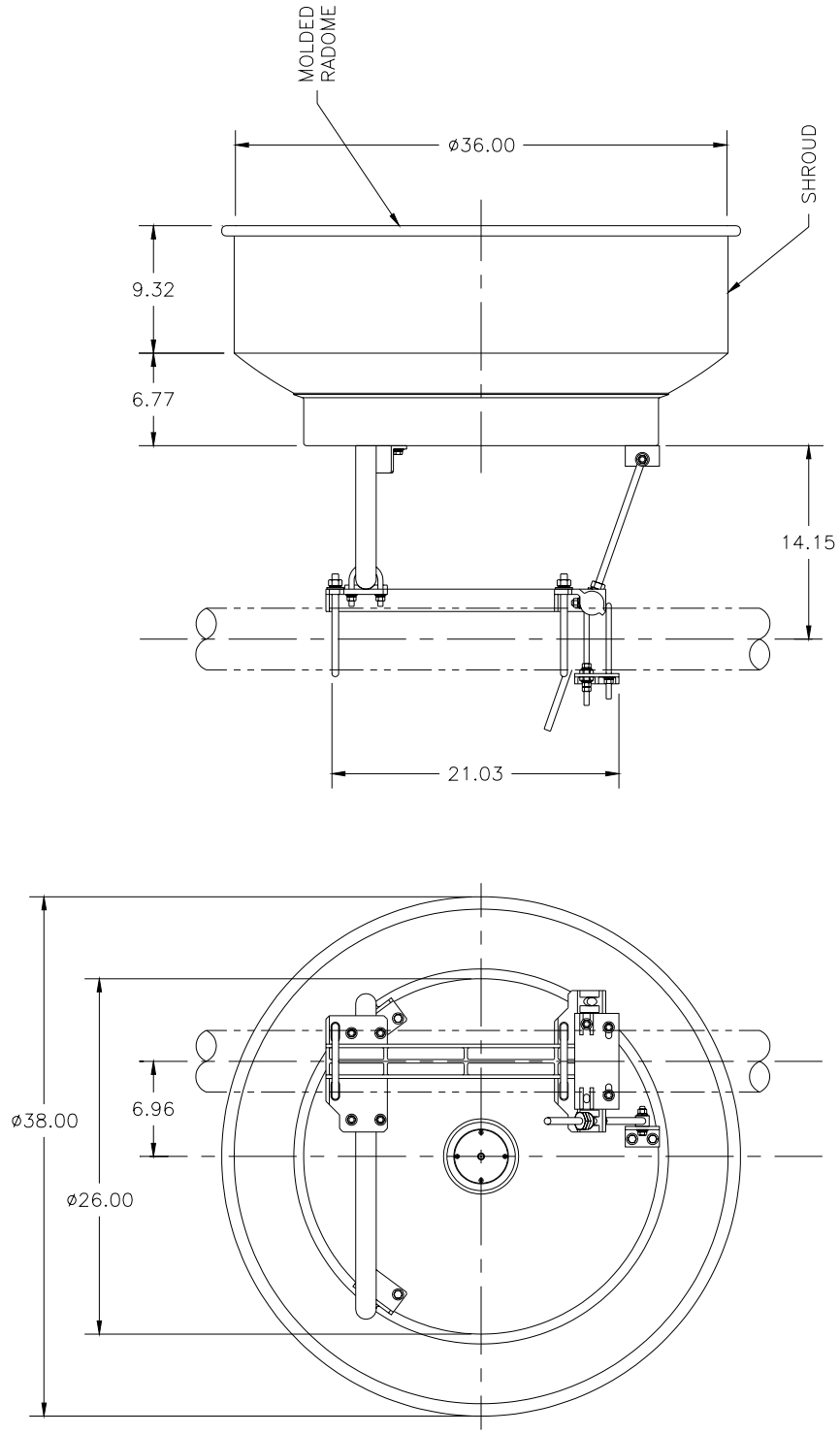
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TITLE 4 FT STANDARD PERFORMANCE PARABOLIC ANTENNA

SIZE	CAGE CODE	DWG NO.	REV
A		SP4-XX	-
SCALE 1 : 14			SHEET 1 OF 1

Standard pole Mount Parabolic Antenna Mounting Instructions, 3 ft. (90cm) & 4 ft. (120cm)



TITLE
**3ft HIGH PERFORMANCE
 PARABOLIC ANTENNA**

REV	—
DWG NO.	
CAGE CODE	
SIZE	A
SCALE	1 : 12
SHEET	1 OF 1

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90cm/36 in & 120cm/48 in ANTENNA MOUNTING PROCEDURE

The following describes the general installation practices that apply to the antenna mount and antenna assembly.

IMPORTANT: *Read instructions completely before assembling or installing the antenna. This assembly requires qualified personnel familiar with microwave antenna assembly and installation.*

Unpacking and Preparation

Carefully unpack the antenna assembly and mount parts from its shipping container.

CAUTION: *The reflector has been formed to a very close tolerance parabolic shape. Careful handling and assembly is required to avoid denting the reflector, which would degrade the antenna's performance.*

List of Tools

- (1) 7/16" Wrench
- (2) 9/16" Wrenches
- (1) 3/4" Wrench
- (1) 1" Wrench
- (1) #2 Phillips head screw driver

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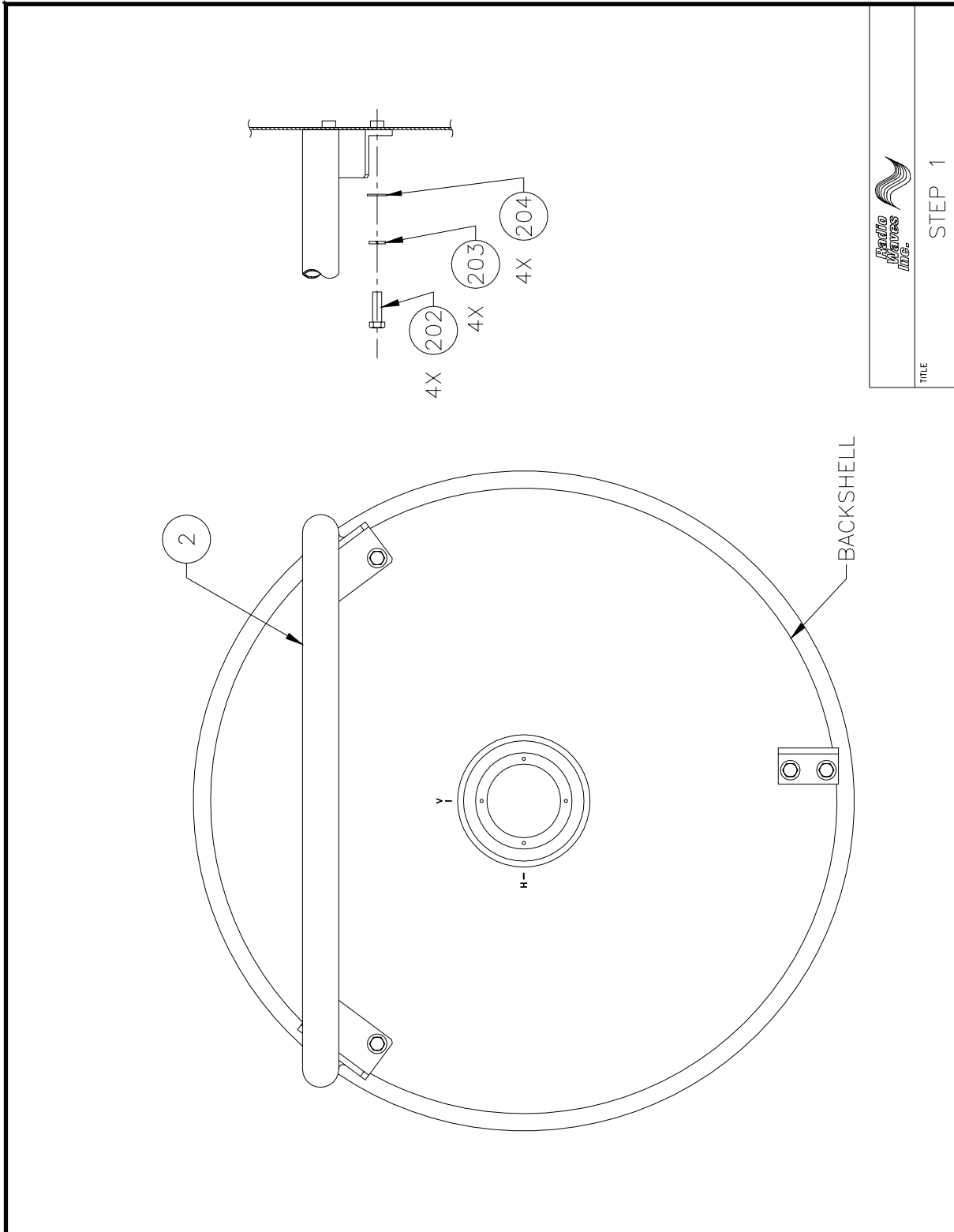
Item No.	Quantity	Part Number	Description
		100780-1	Pole Mount Kit
1	1	100782-1	Pole Mounting Bracket
2	1	100781-1	Antenna Mounting Pipe
3	1	100797-1	Bracket, Azimuth Adjust
5	1	101094-1	Eye Bolt, 3/8-16 Thread (Galvanized steel)
6	1	101150-1	Eye Bolt, 1/2-13 Thread (Galvanized steel)
7	4	100792	Spacer, 1/4-20 Stud (As required)
8	1	-	Antenna Assembly
		100795-1	Pole Attachment Hardware Kit
9	1	101093-1	Spacer, 1/2 OD x 1/2 Long
101	2	100794-1	U-Bolt, 1/2-13 Thread, 4-1/2" Pipe
102	1	100603-1	U-Bolt, 3/8-16 Thread, 4-1/2" Pipe
103	4	-	1/2-13 Hex Nut (Silicon Bronze)
104	4	-	1/2 Lockwasher, Split
105	4	-	1/2 Flatwasher (7/8" OD)
106	3	-	3/8-16 Hex Nut (Silicon Bronze)
107	3	-	3/8 Lockwasher, Split
108	3	-	3/8 Flatwasher
109	1	-	3/8-16 x 1-3/8 Hex Head Bolt
110	3	-	3/8-16 Hex Nut (Galvanized steel)
111	2	-	3/8 Flatwasher (Galvanized steel)
112	2	-	3/8 Lockwasher (Galvanized steel)
		100834-1	Antenna Attachment Hardware Kit
10	1	100741-4	Spacer, 5/8 OD x 5/8 Long
201	2	100793-1	3/8-16 U-Bolt, 1-1/2" Pipe
202	4	-	3/8-16 x 7/8 Hex Head Bolt
203	9	-	3/8 Lockwasher, Split
204	9	-	3/8 Flatwasher
205	5	-	3/8-16 Hex Nut (Silicon Bronze)
206	1	-	3/8-16 x 2 Hex Head Bolt
207	3	-	1/2-13 Hex Nut (Galvanized steel)
208	2	-	1/2 Lockwasher, Split (Galvanized steel)
209	2	-	1/2 Flatwasher (Galvanized steel)

Note: Unless otherwise specified, all hardware is stainless steel.

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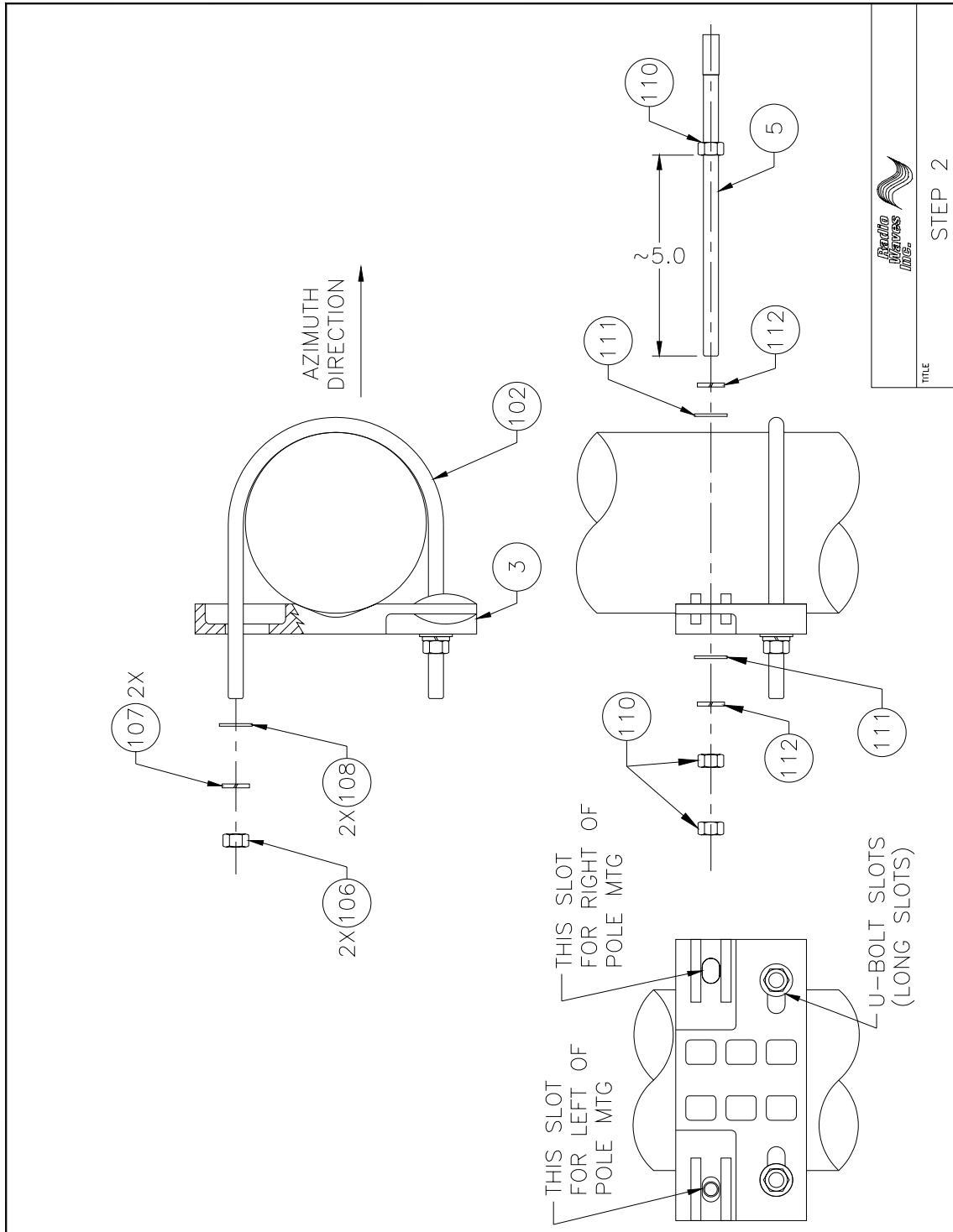
Antenna Assembly:

Step 1 Attach antenna mounting pipe (2) to the Antenna backshell with (4) 3/8-16 x 7/8 long hex head bolts (202), split lock washers (203) and flat washers (204).



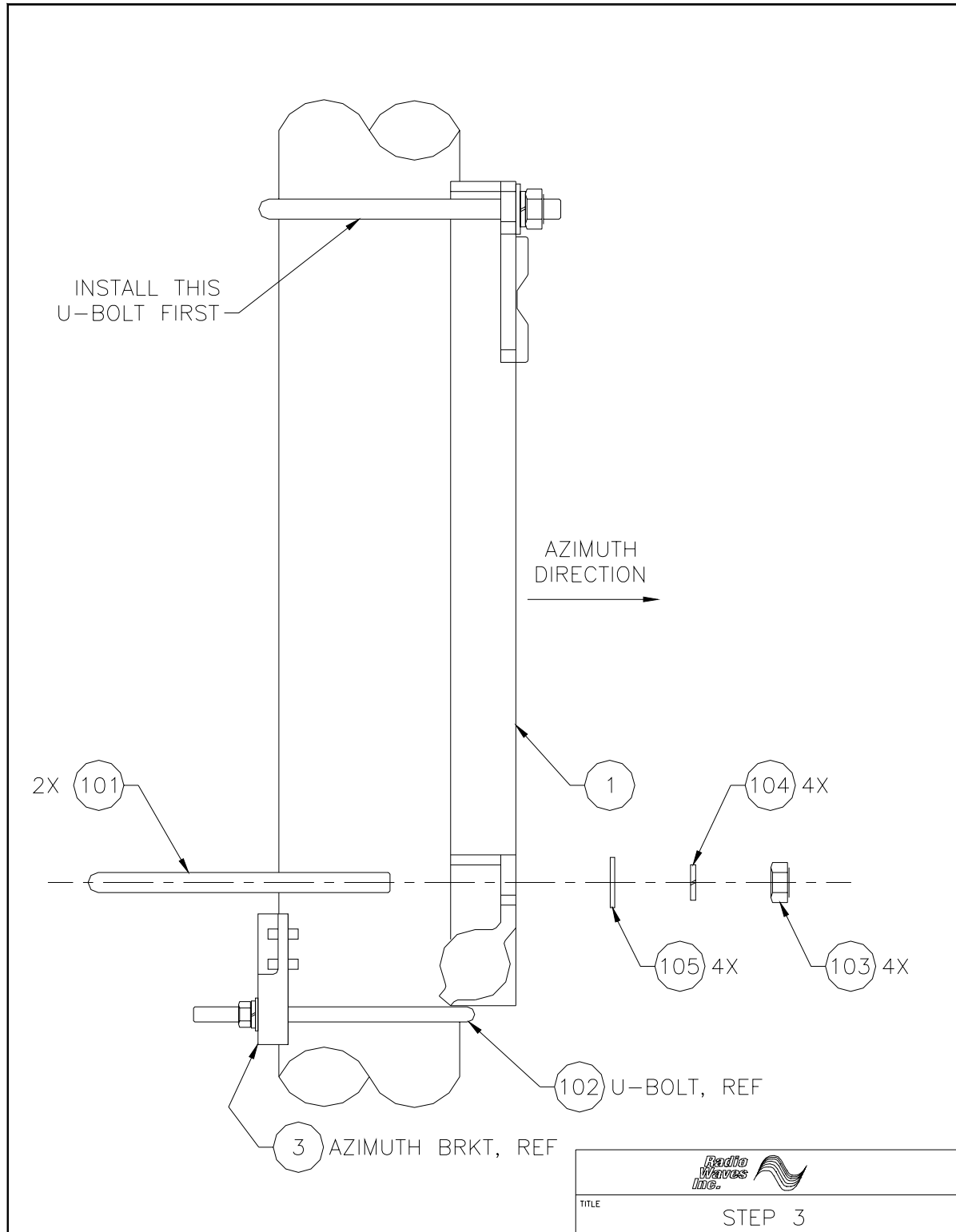
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Step 2. Attach azimuth bracket (3) to the pole with 3/8-16 U-bolt (102). Secure to pole with flat and split lock washers and silicon bronze hex nuts. Before tightening, ensure the plate is facing the approximate final direction of the antenna. Install 3/8-16 galvanized steel hex nut (110), lock (112) and flat washer (111) 5" onto the azimuth adjust rod (5) as shown in detail. Insert threaded rod into appropriate slot in the azimuth adjust bracket. Add hardware to opposite side of threaded rod as shown and hand tighten.



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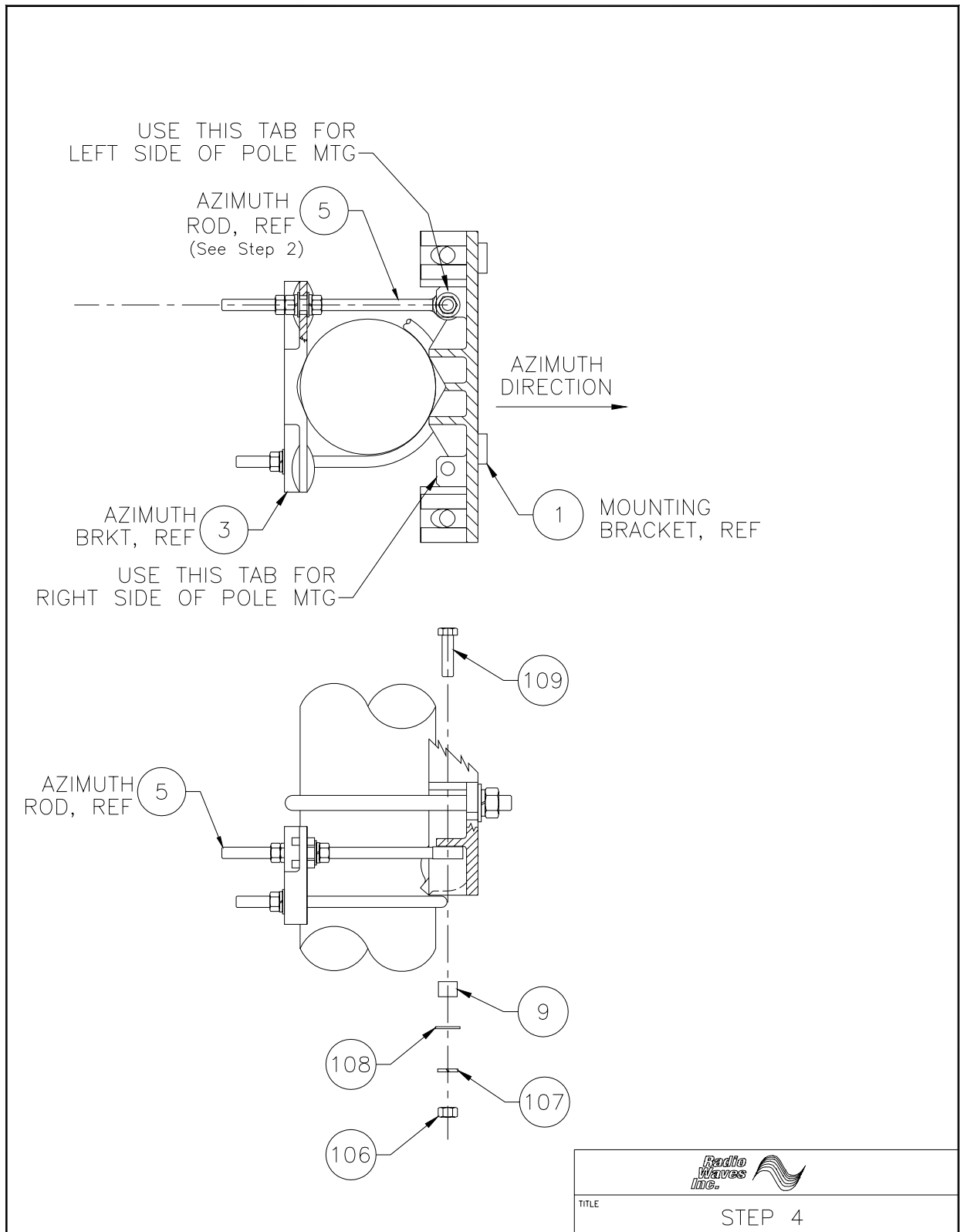
Step 3. Attach pole mounting bracket (1) to the 4-1/2" diameter pole using 1/2-13 U-bolts (101). Use the azimuth adjust U-bolt as a rest, face the bracket towards the desired antenna direction and secure the 1/2-13 U-bolts with the appropriate hardware. Tighten until the bracket is snug to pole - *do not fully tighten at this time.*



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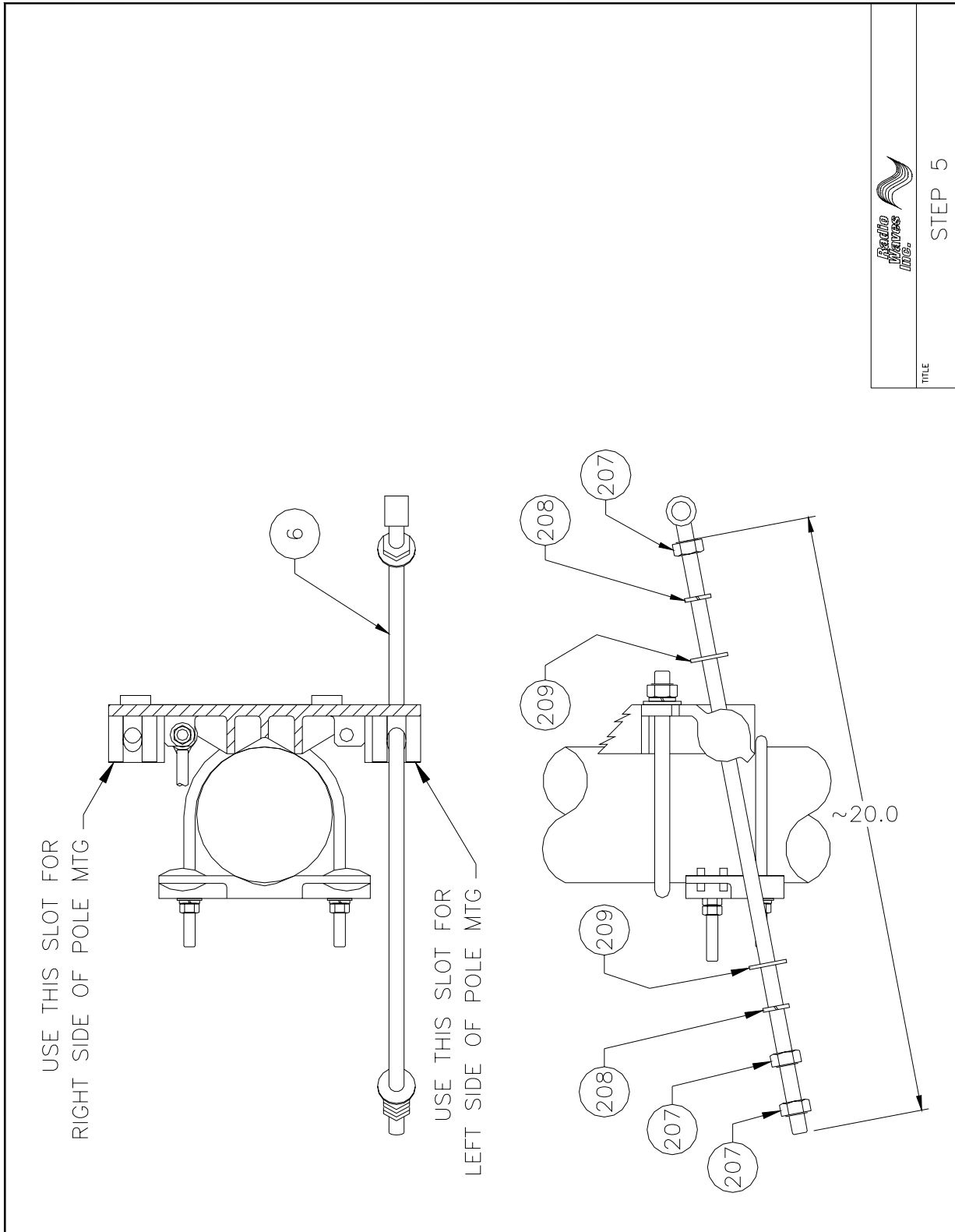
Step 4. Install bushing (9) into the hole of the azimuth adjust rod (5) and attach to the underside of the tab on the pole mounting bracket (1) with 3/8-16 x 1-3/8 long hex head bolt (109). Secure with galvanized steel flat (108), split lock washer (107) and silicon bronze hex nut (106).

Do not fully tighten at this time.



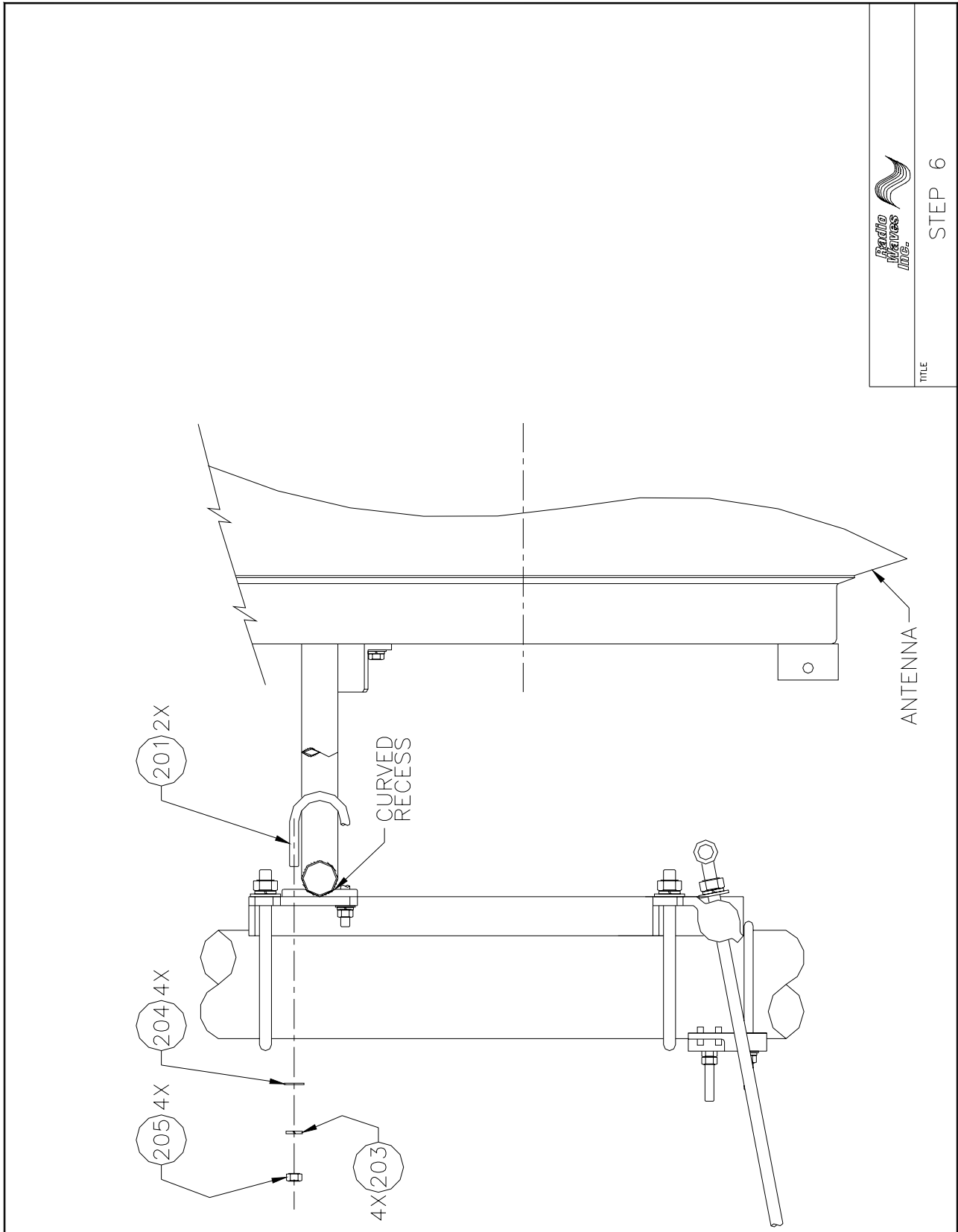
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Step 5. Install $\frac{1}{2}$ -13 galvanized hex nut (207) flat washer (209) and split lock washer (208) on the elevation adjust rod (6). Thread the nut approximately 20 inches up (as shown). Slide the adjustment rod through the slot of the pole mount bracket opposite the tab being used for the azimuth adjust rod. Secure with appropriate hardware as shown. *Leave hardware loose for final adjustments.*



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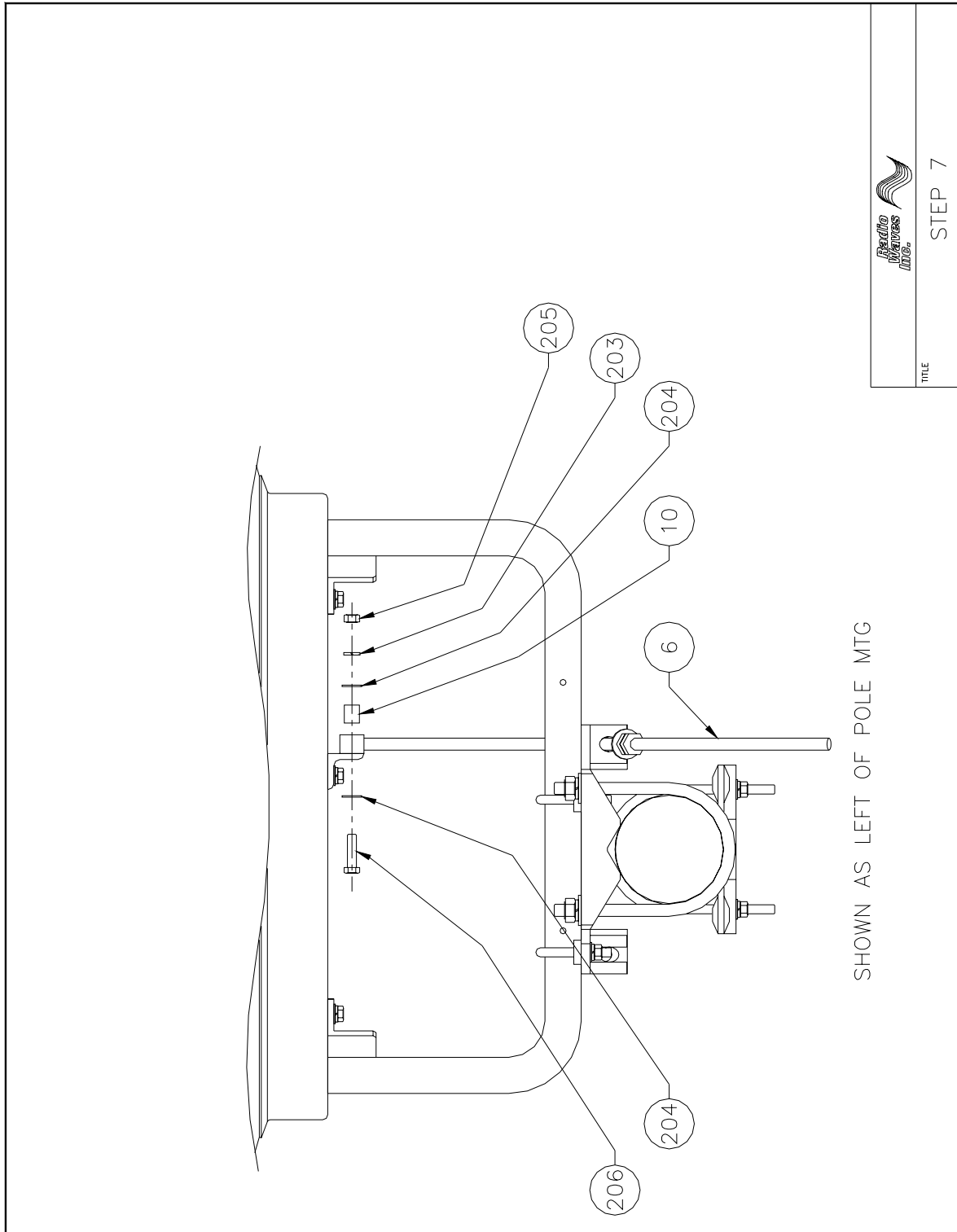
Step 6. Attach antenna subassembly to the pole mounting bracket by locating the pipe onto the curved recesses of the bracket. Attach the two assemblies together using (2) 3/8-16 U-bolts (201) and appropriate hardware as shown. Tighten hardware until snug. *Do not fully tighten at this time.*



TITLE
STEP 6

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Step 7. Assemble the elevation adjust rod (6) to the antenna assembly by installing the bushing (10) through the adjust rod hole and securing to bracket on antenna assembly with 3/8-16 x 2" long hex head bolt (206) and appropriate hardware as shown. Position the antenna such that the elevation adjust rod is aligned perpendicular to the mount. *Do not fully tighten at this time.*



This now completes the antenna assembly to the fixed pole. Please refer to owner's manual for RFU attachments.

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Feed and RFU Attachment Information

The feed is normally attached to the rear of the antenna in the vertical polarization position. Horizontal polarization is set by removing the (4) 8-32 pan head screws and washers, rotating the feed assembly 90 degrees such that the arrow on the feed is pointing to the “H” on the antenna backshell, and re-attaching the 8-32 hardware. Slots are provided in the feed flange to allow for antenna signal optimization.

(4) 1/4-20 stud spacers are provided as required to allow for RFU attachment to the antenna backshell.

- Refer to owners' manual for RFU attachment and adjustments.

Azimuth and Elevation Adjust

Prior to antenna adjustment, all hardware on the antenna system should be snug (allowing the ability to move the antenna without excessive play) and the RF unit should be fully installed.

Step 1. Azimuth Adjustment

As required, rotate (in a horizontal plane) the antenna assembly and azimuth fine adjustment plate for a coarse azimuth location. When the antenna is in the approximate azimuth position (± 10 degrees), and antenna is properly secured to pole, perform the fine azimuth adjustment. The U-bolt on the azimuth fine adjust plate should be securely tightened to the pole. Fine adjust along the azimuth plane with hex nuts on the adjustment rod (eye-bolt) moving the antenna to the left or right as required.

Step 2. Elevation Adjustment

To initially position the elevation, adjust the hex nuts on the adjustment rod and move the antenna either up or down to the coarse position. Fine adjust along the elevation plane with hex nuts on the 1/2-13 adjustment rod. The antenna system is designed for elevation angles of ± 15 degrees.

Inspection and Maintenance

1. Before leaving the installation, check that all hardware on the mount, backshell and feed is tight and that nuts are locked in place.
2. Inspection of the antenna should be performed at least once a year to check its condition and to ensure safe operation and maintenance. Qualified personnel, knowledgeable and experienced in antenna installation are required for this inspection.

General Nut Tightening Procedures

1. The following chart has the recommended tightening torque for nuts used on stainless steel bolts, U-bolts, galvanized bolts or any bolts without the ASTM - “A325” marking on the head.

<u>Nominal Bolt Size in Inches</u>	<u>Torque</u>
1/4	50 in-lb.
5/16	102 in-lb.
3/8	15 ft-lb.
7/16	24 ft-lb.
1/2	37 ft-lb.

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Radio Waves Contact information:

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