

Installation Instructions

Downtilt Mounting Kit for Panel Antennas MTG-L-STD

Andrew Institute offers installation training.

APPLICATION

Antenna Mounting Type	Required Mounting Kit
Antennas with 2 Mounts	Qty 1 MTG-L-STD
Antennas with 3 Mounts	Qty 2 MTG-L-STD

PERFORMANCE

MTG-L-STD downtilt mounting kit provides 150 mph windload rating for antenna installations that use mounting pipes with a 3.5 in (88 mm) diameter or larger.

To assure 150 mph windload rating for antenna installations that use mounting pipes smaller than 3.5 in (88 mm) diameter, also use the MTG-L-HD Kit (Bulletin #639584), which provides specialized substitute pipe clamps.

REQUIRED TOOLS

Description	Quantity
3/4" (19 mm) or adjustable wrench	2
7/16" (11 mm) or adjustable wrench	1

PRE-INSTALLATION INSTRUCTIONS

- Examine antenna and hardware to ensure that all parts are enclosed and that there is no physical damage.
- Check to ensure that the antenna feed connector mates with the jumper cable.
- Verify that the frequency range shown on the label on the back of the antenna matches the frequency range of the station equipment.
- Position the antenna with its "up" arrow label pointing upward before installation. This orientation allows the drain holes to be on the bottom of the antenna.

NOTICE

The installation, maintenance, or removal of an antenna requires qualified, experienced personnel. Andrew installation instructions are written for such installation personnel. Antenna systems should be inspected once a year by qualified personnel to verify proper installation, maintenance, and condition of equipment.

Andrew disclaims any liability or responsibility for the results of improper or unsafe installation practices.

PARTS LIST

Item	Part No.	Qty	Description	
1	E610086-1	2	Bracket, Clamp	
2	E601539-1	1	Adapter, Pole	
3	E602355-3	1	Adapter, Pole, Lower	
4	EROD190003	4	1/2" x 7" Threaded Rod	
5	EWSH150003	16	1/2" Split Washer	
6	ENUT150001	16	1/2" Hex Nut	
7	EBLT140002	8	1/2" x 1" Hex Head Bolt	
8	E601736-1	1	Bracket, Downtilt, Pole	
9	E601735-1	1	Bracket, Downtilt, Antenna	
10	EWSH150006	2	5/16" Split Washer	
11	EBLT140004	2	5/16" Hex Head Bolt	

Note: For antennas requiring use of two MTG-L-STD mounting kits, the following extra parts will not be used:

Item	Part No.	Qty	Description	
1	E610086-1	1	Bracket, Clamp	
3	E602355-3	1	Adapter, Pole, Lower	
4	EROD190003	2	1/2" x 7" Threaded Rod	
5	EWSH150003	4	1/2" Split Washer	
6	ENUT150001	6	1/2" Hex Head Nut	



Do not install near power lines. Power lines, telephone lines, and guy wires look the same. Assume any wire or line can electrocute you.



Do not install on a wet or windy day or when lightning or thunder is in the area. Do not use metal ladder.



Wear shoes with rubber soles and heels. Wear protective clothing including a long-sleeved shirt and rubber gloves.

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PRE-ASSEMBLY

1. Refer to the parts list and verify that all mounting hardware has been received.
2. Pre-assemble the threaded rods (Item 4) and the pole adapter brackets (Items 2 and 3) as shown in Figures 1 and 2. Tighten hex head nuts on the lower and upper/middle assemblies to 43 lb-ft (58.3 N-m).
3. The threaded rods in Figure 2 must not extend farther than 1 inch (25 mm) inside the pole adapter. See Figure 3.

4. Fasten downtilt brackets (Items 8 and 9) to upper/middle antenna mounting bracket with 1/2 inch hardware shown in Figure 4.
5. Fasten the threaded rod assemblies to the antenna as shown in Figure 5.

Note: Final torque on all 1/2 inch hardware used in Figures 4 and 5 is 43 lb-ft (58.3 N-m).

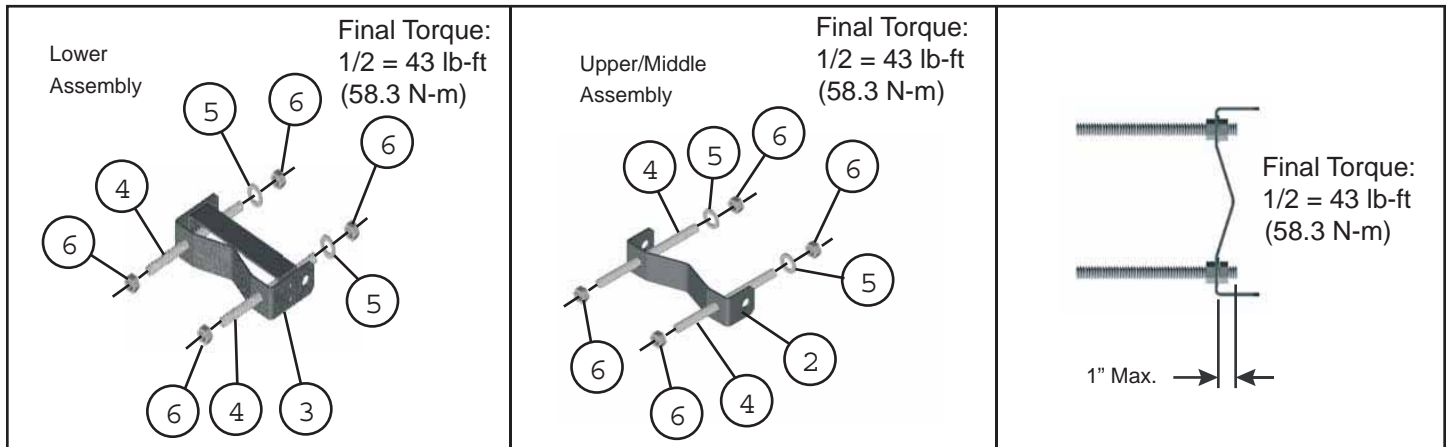


Figure 1. Lower Assembly.

Figure 2. Upper/Middle Assembly.

Figure 3. Threaded Rod Extension.

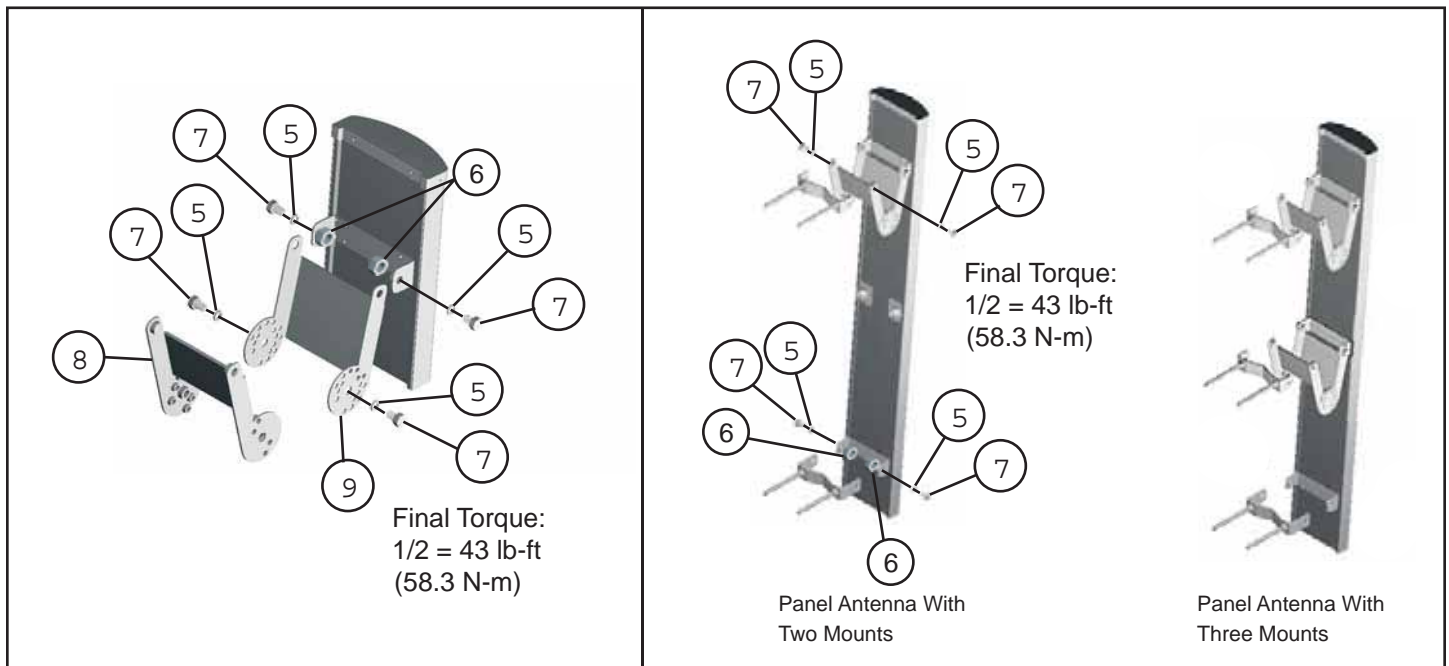


Figure 4. Fastening Downtilt Adapter Bracket to Upper/Middle Antenna Mounting Bracket.

Figure 5. Fastening Threaded Rod Assemblies to Antenna.

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HOISTING ANTENNA UP A TOWER

- Pre-assemble as much of the mounting hardware as possible before lifting the antenna up to the top of the tower.
- Align antenna to vertical before lifting, as shown in Figure 6.
- Attach a rope to the top mounting bracket on the back of the antenna. Keep the antenna vertical when hoisting the antenna. For safety, an additional rope can be attached to the bottom antenna mounting bracket and used as a guide by someone else on the ground.
- Bring the antenna into position on the tower and secure it using the hardware provided.

To avoid twisting the antenna, ensure that all the mounting clamps are aligned with each other. Securely tighten all hardware.

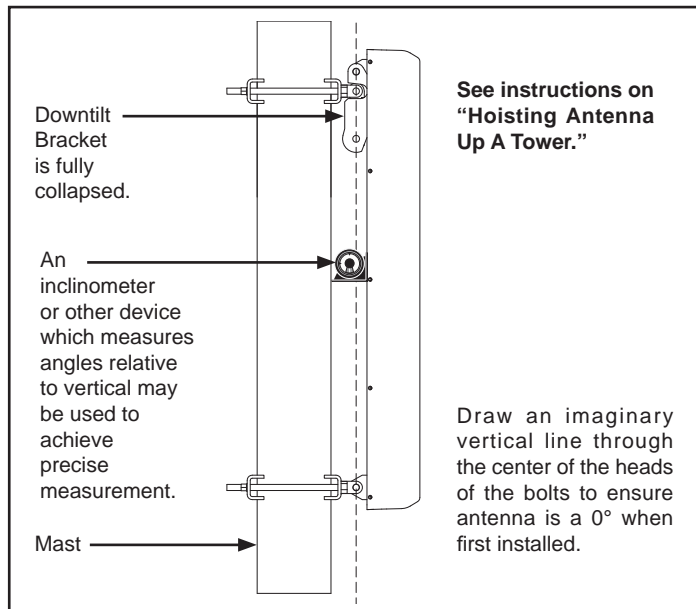


Figure 6. Ensure Antenna is Fully Collapsed at 0° When Attaching the Antenna to the Tower.

POLE ASSEMBLY

1. Using the bracket clamps (Item 1) and 1/2 inch hardware, properly orient the antenna and mount to a 3.5–4.5 in (88–115 mm) OD pole. See Figure 7.
2. Tighten the 1/2 inch hex nuts (Item 6). Torque to 20 lb-ft (27.1 N-m) minimum, so that the bracket clamps firmly hold the antenna to the pipe as shown in Figure 7.
3. Adjust the top end of the antenna until the downtilt bracket holes are aligned for desired degree of downtilt.
4. Use the 5/16 inch hardware as shown in Figure 8 to secure the downtilt positioning. Tighten hex head bolts (Item 11) to 11 lb-ft (14.9 N-m).

Notes:

- Maximum achievable downtilt angle will vary, depending on overall length of the antenna.
- Account for any degree of tower lean when measuring downtilt angle.
- Use an inclinometer or other device which measures angles relative to vertical for achieving precise downtilt measurements.

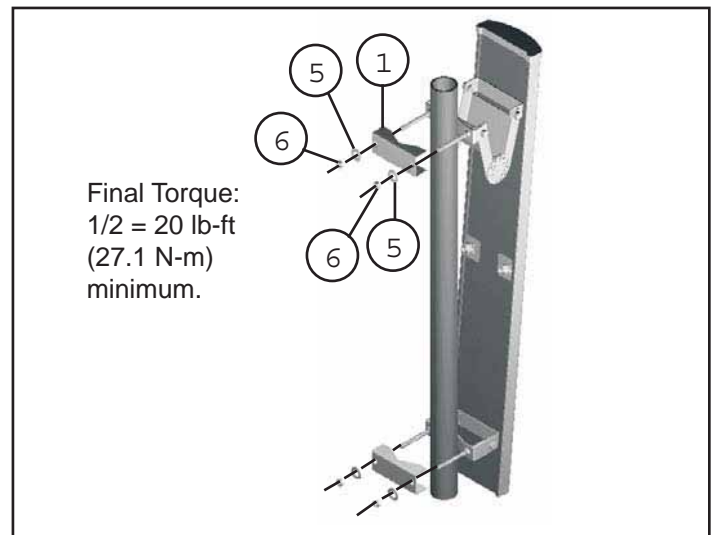


Figure 7. Fastening Bracket Assemblies to Pole.

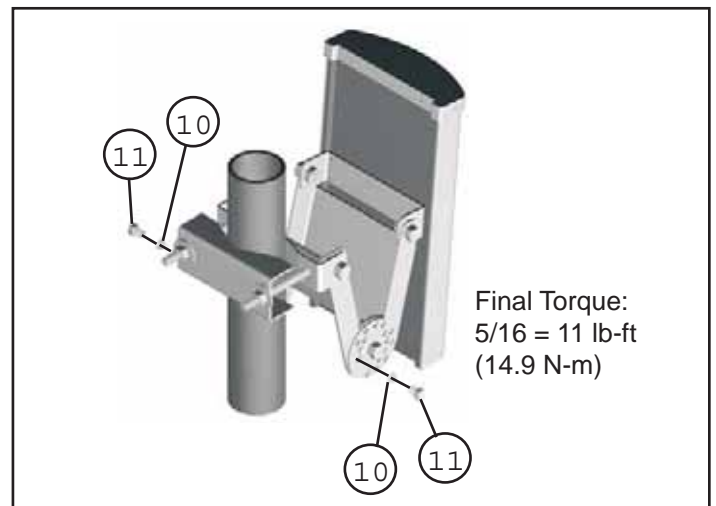


Figure 8. Securing the Downtilt Positioning Bracket.

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POST INSTALLATION INSTRUCTIONS

- Connect the station transmission line (not supplied) to the antenna. Make the connection snug, but do not apply heavy force with pliers.
- Carefully weatherproof all connections, covering all cracks and the outer jacket of the transmission line. Failure to waterproof the connection could result in improper operation of the antenna.
- Secure the transmission line to the tower in the best position to avoid physical damage to the cable.
- After the antenna and transmission line have been installed, a careful visual check should be made to ensure that:
 - All mechanical connections have been made and the antenna is mounted with sufficient physical clearance.
 - The “up” arrow is pointing upward and the drain holes in the end cap are oriented downward.
 - All connections have been carefully wrapped to prevent moisture problems.
 - The antenna is in the desired mechanical tilt position.