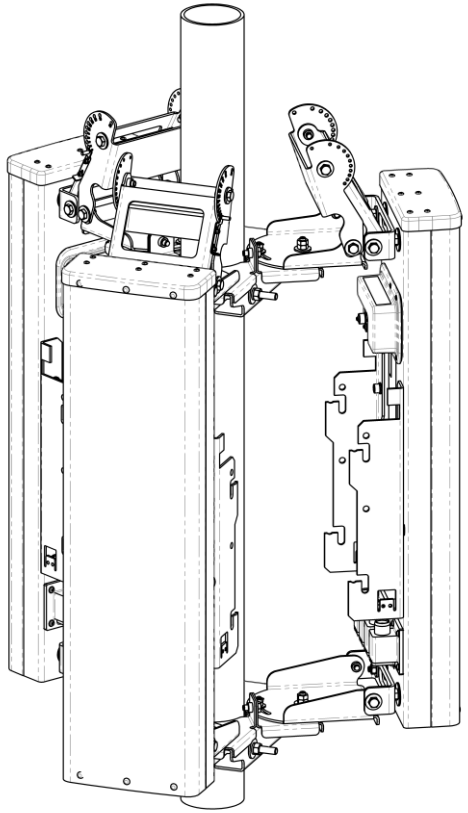
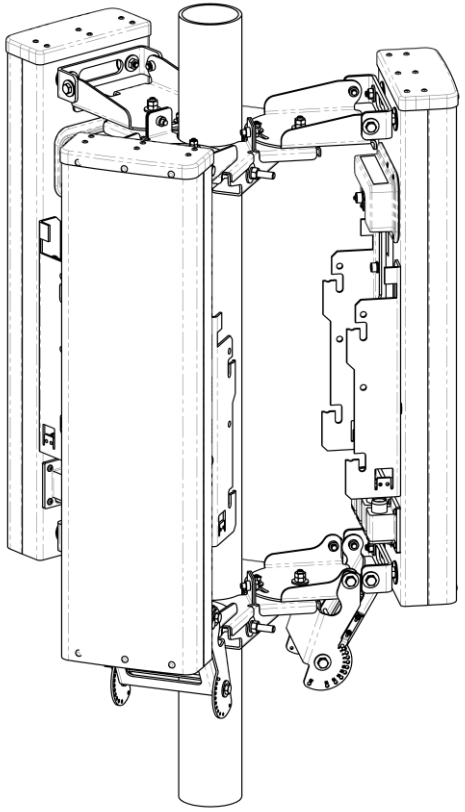
Swiveling MDT Mounting Kit Installation Guide (MBK-31)





DISCLAIMER:

The installation, maintenance, or removal of an antenna requires qualified, experienced personnel. You must refer to the appropriate local safety codes and ensure proper electrical and electromagnetic compatibility before proceeding with the installation. All local codes shall take precedence over information in this document. Antenna systems should be inspected once a year by qualified personnel to verify proper installation, maintenance, and condition of equipment. Communication Components Antennas Inc. disclaims any liability or responsibility for the results of improper or unsafe installation.

Swiveling MDT Mounting Kit Installation Guide (MBK-31)

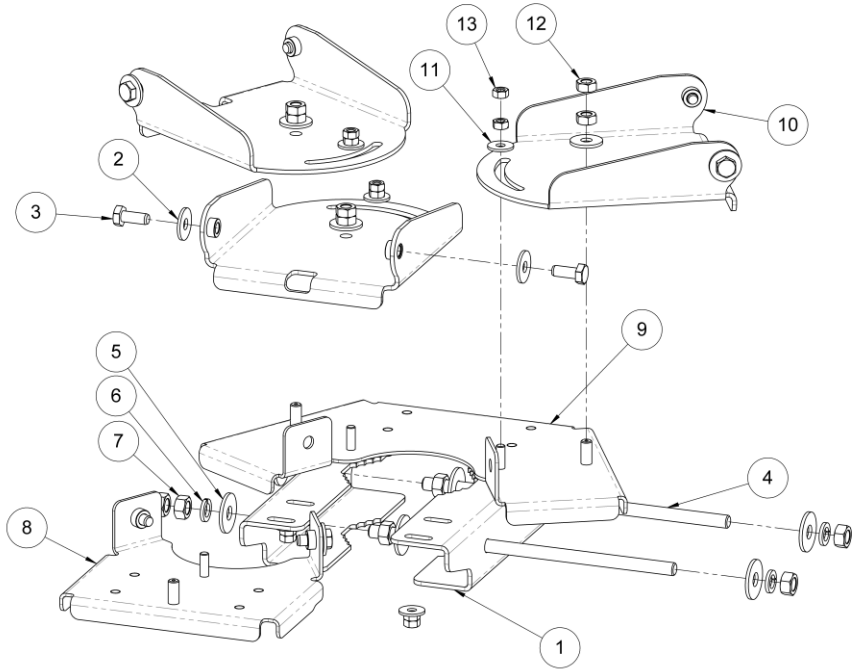


Fig. 1: Swiveling Triple MDT Fixed Bracket BOM

ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION
1	2	MAST BRACKET, CLAMP, MBK-19/20/21	8	1	BRACKET, SWIVEL JOINT, FLANGED, MBK-19
2	11	WASHER, FLAT, M10, 30OD, MIN 2.3 THK, DIN 9021, SS A2-70	9	1	BRACKET, DOUBLE HINGE, SWIVEL JOINT, FLANGED, MBK-21
3	8	SCREW, HEX, CAP, M10X1.5, 25L, DIN 933, ISO 4017, SS A4-70, NYLON PATCH	10	3	MAST BRACKET, SINGLE HINGE, FIXED, MBK-19
4	2	THREADED ROD, M12X1.75, 300L, DIN 976, SS A2-70	11	11	WASHER, FL, M8, ISO 7093, A2 SS, OVERSIZE
5	6	WASHER, FLAT, M12, 37 OD, MIN 2.3 THK, DIN 9021, SS A2-70	12	6	NUT, HEX, M10X1.5, DIN 934, 18-8 SS, 17MM HEX
6	4	WASHER, SPLIT LOCK, M12, DIN 127B, STEEL, SS A2-70	13	22	NUT, HEX, M8-1.25, SS, DIN 934, 13MM HEX
7	8	NUT, HEX, M12X1.75, DIN 934, SS A4-70			

Step	Task
1	The Triple Mounting Kit is intended for antennas with a pitch of 870mm between hinge brackets. It will provide mechanical downtilt capability of 0°-20°, and azimuth swiveling of ±30°. The Bottom Fixed Bracket only provides swiveling, while the Top Adjustable Bracket provides downtilt and swiveling. The Brackets will arrive assembled for Downtilt Setup but the hardware will not be torqued.

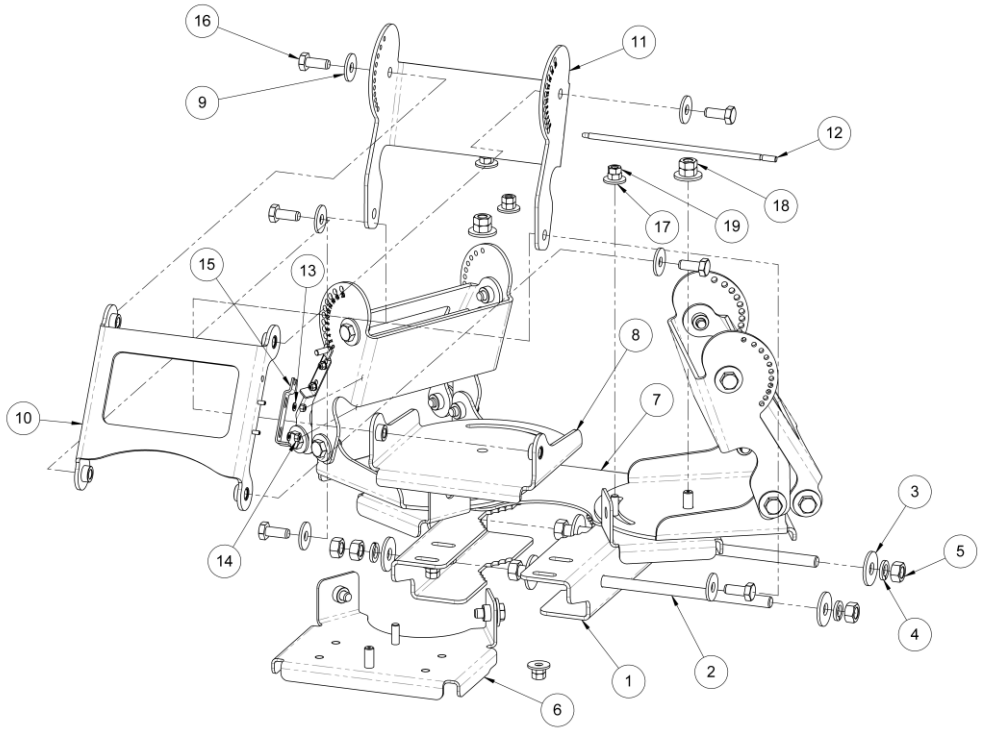


Fig. 2: Swiveling Triple MDT Adjustable Bracket BOM

ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION
1	2	MAST BRACKET, CLAMP, MBK-19/20/21	11	3	MAST BRACKET, ADJUSTABLE, REAR, MBK-30
2	2	THREADED ROD, M12X1.75, 300L, DIN 976, SS A2-70	12	3	BOLT, DOWNTILT BRACKET, MBK-19
3	6	WASHER, FLAT, M12, 37 OD, MIN 2.3 THK, DIN 9021, SS A2-70	13	6	WASHER, M4, 4.3ID, 9OD,.0.8TH, SS, DIN 125, ISO 7089
4	4	WASHER, SPLIT LOCK, M12, DIN 127B, STEEL, SS A2-70	14	6	NUT, HEX, M4-0.7, NYL LK, SS
5	8	NUT, HEX, M12X1.75, DIN 934, SS A4-70	15	3	LATCH, DOWNTILT BOLT, MBK-19
6	1	BRACKET, SWIVEL JOINT, FLANGED, MBK-19	16	20	SCREW, HEX, CAP, M10X1.5, 25L, ISO 4017, SS A4-70, NYLON PATCH
7	1	BRACKET, DOUBLE HINGE, SWIVEL JOINT, FLANGED, MBK-21	17	11	WASHER, FL, M8, ISO 7093, A2 SS, OVERSIZE
8	3	MAST BRACKET, SINGLE HINGE, ADJUSTABLE, MBK-19	18	6	NUT, HEX, M10X1.5, DIN 934, 18-8 SS, 17MM HEX
9	23	WASHER, FLAT, M10, 30OD, MIN 2.3 THK, DIN 9021, SS A2-70	19	22	NUT, HEX, M8-1.25, SS, DIN 934, 13MM HEX
10	3	MAST BRACKET, ADJUSTABLE, FRONT, MBK-30			

Swiveling MDT Mounting Kit Installation Guide (MBK-31)

Fig. 3: Fixed Triple Bracket Mounting on Mast

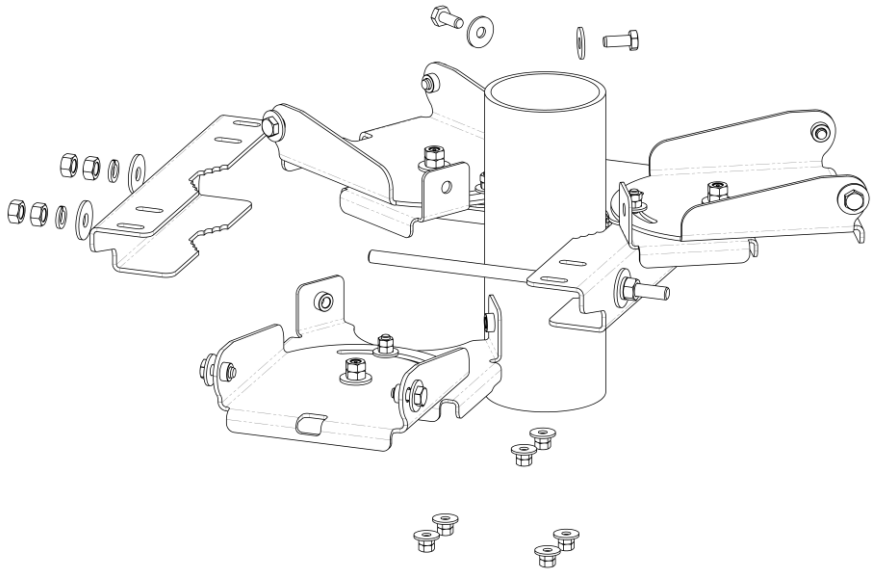
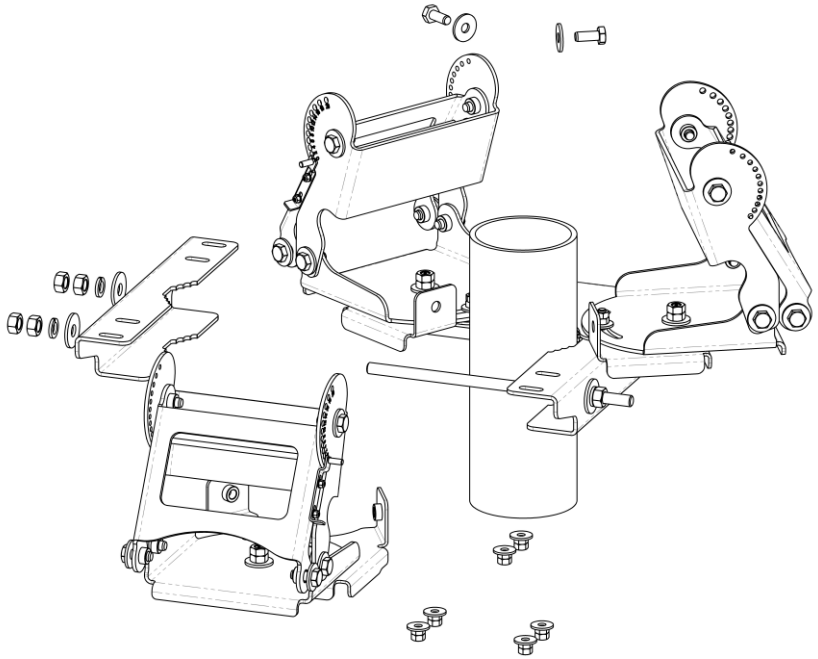


Fig. 4: Adjustable Triple Bracket Mounting on Mast



Step	Task
2	Attach the Bottom Fixed Triple Mount Bracket by separating one Clamp Bracket from the assembly, by removing some of the associated hardware (see Fig. 3). Place the Bracket on the mast at the correct height in the orientation shown, and also pointing in the desired direction as shown in Fig. 3. Reinstall the Clamp Bracket and the associated hardware. Adjust the M12 threaded rods to balance the protrusion on either side and tighten the M12 nuts to a torque of 54±2.5 N-M (40±2 ft-lbs.). Then tighten all sixteen M8 nuts (on the underside) to a torque of 9.5±0.5 N-M (7.0±0.5 ft-lb.).

Step	Task
3	Attach the Top Adjustable Triple Mount Bracket by separating one Clamp Bracket from the assembly, by removing some of the associated hardware (see Fig. 4). Place the Bracket on the mast in the orientation shown, at a height of 870mm above the Fixed Bracket (see Fig. 5) and also pointing in the same direction as shown in Fig. 6. Reinstall the Clamp Bracket and associated hardware. Adjust the M12 threaded rods to balance the protrusion on either side and tighten the M12 nuts to a torque of 54±2.5 N-M (40±2 ft-lbs.). Then tighten all sixteen M8 nuts (on the underside) to a torque of 9.5±0.5 N-M (7.0±0.5 ft-lb.).

Fig. 5: Spacing Between Fixed and Adjustable Triple Mount Brackets – Downtilt Setup

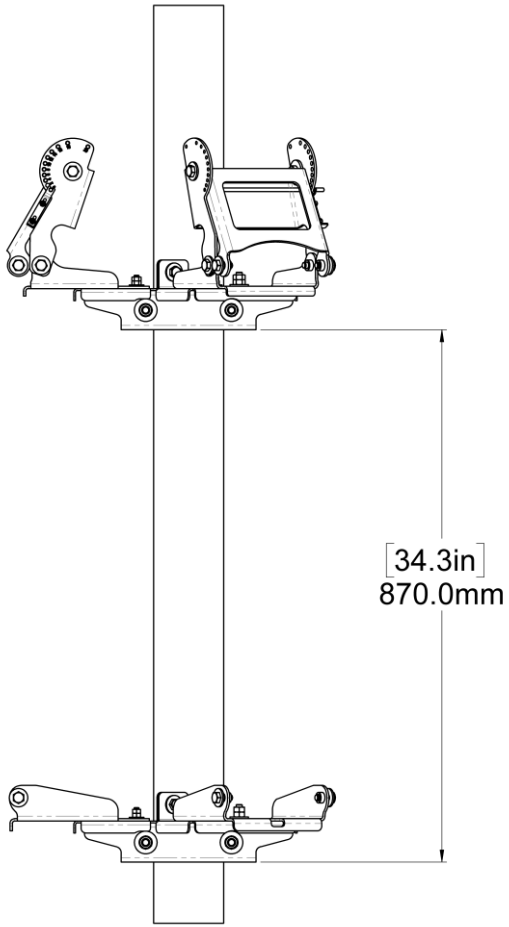


Fig. 6: Orientation of Fixed and Adjustable Triple Mount Brackets – Downtilt Setup

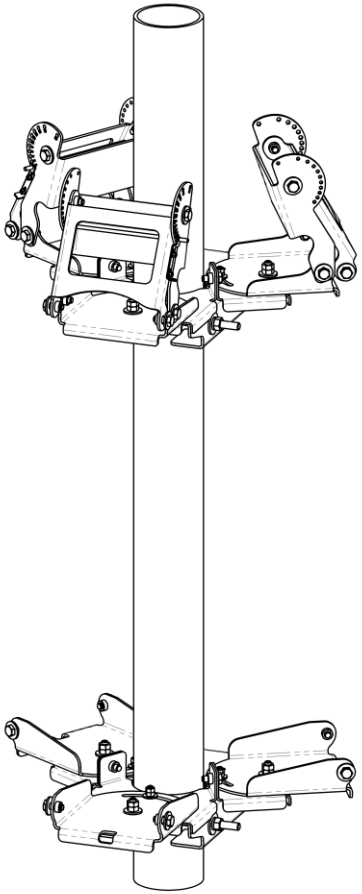


Fig.7: Installation of 1st Antenna/Radio Assembly on Fixed and Adjustable Triple Mount Brackets -– Downtilt Setup (ISO View)

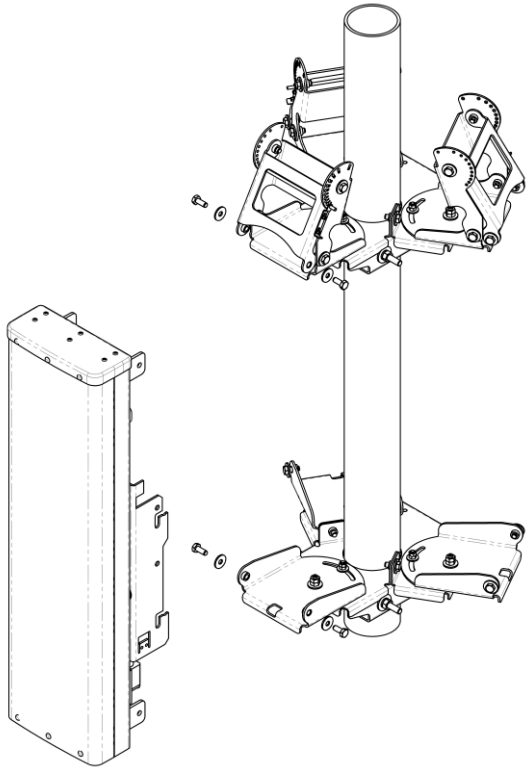
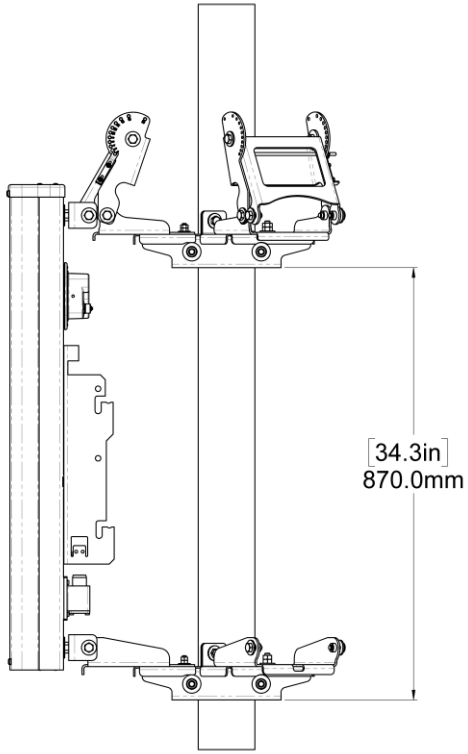


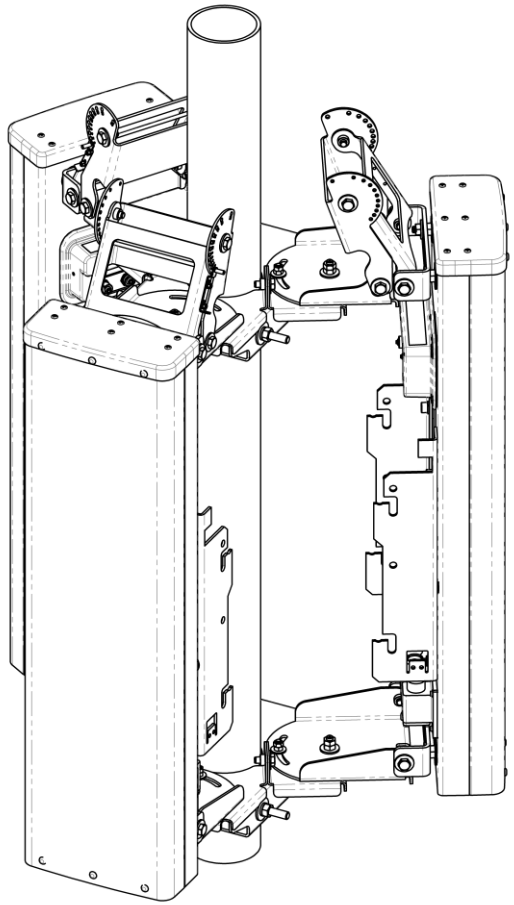
Fig.8: Installation of 1st Antenna/Radio Assembly on Fixed and Adjustable Triple Mount Brackets – Downtilt Setup (Side View)



Step	Task
4	Install the 1st antenna/radio assembly on to both the Fixed Bracket using 2 pcs. each of the M10 hardware, and the Adjustable Bracket using 2 pcs. each of the M10 hardware as shown in Fig. 7. Torque M10 hardware to 25±1.5 N-M (18.5±1.5 ft-lbs.). If further alignment is required loosen the M12 hardware holding the mast brackets in place and adjust the alignment of the 1st antenna/radio assembly in the direction specified by the site engineer. The orientation of the Antenna is normal to the sector unless specifically required otherwise.

Step	Task
5	Once properly aligned torque M12 clamp hardware to 54±2.5 N-M (40±2 ft-lbs.).
6	Completed installation with 0° MDT (Mechanical Downtilt) should appear as shown in Fig. 8.

Fig.9: Three (3) Antenna/Radio Assemblies on Fixed and Adjustable Triple Mount Brackets – Downtilt Setup (ISO View)



Step	Task
7	Install additional Antenna/Radio assemblies in an identical manner.

Fig.10: How to Assemble Adjustable Bracket for Uptilt Orientation

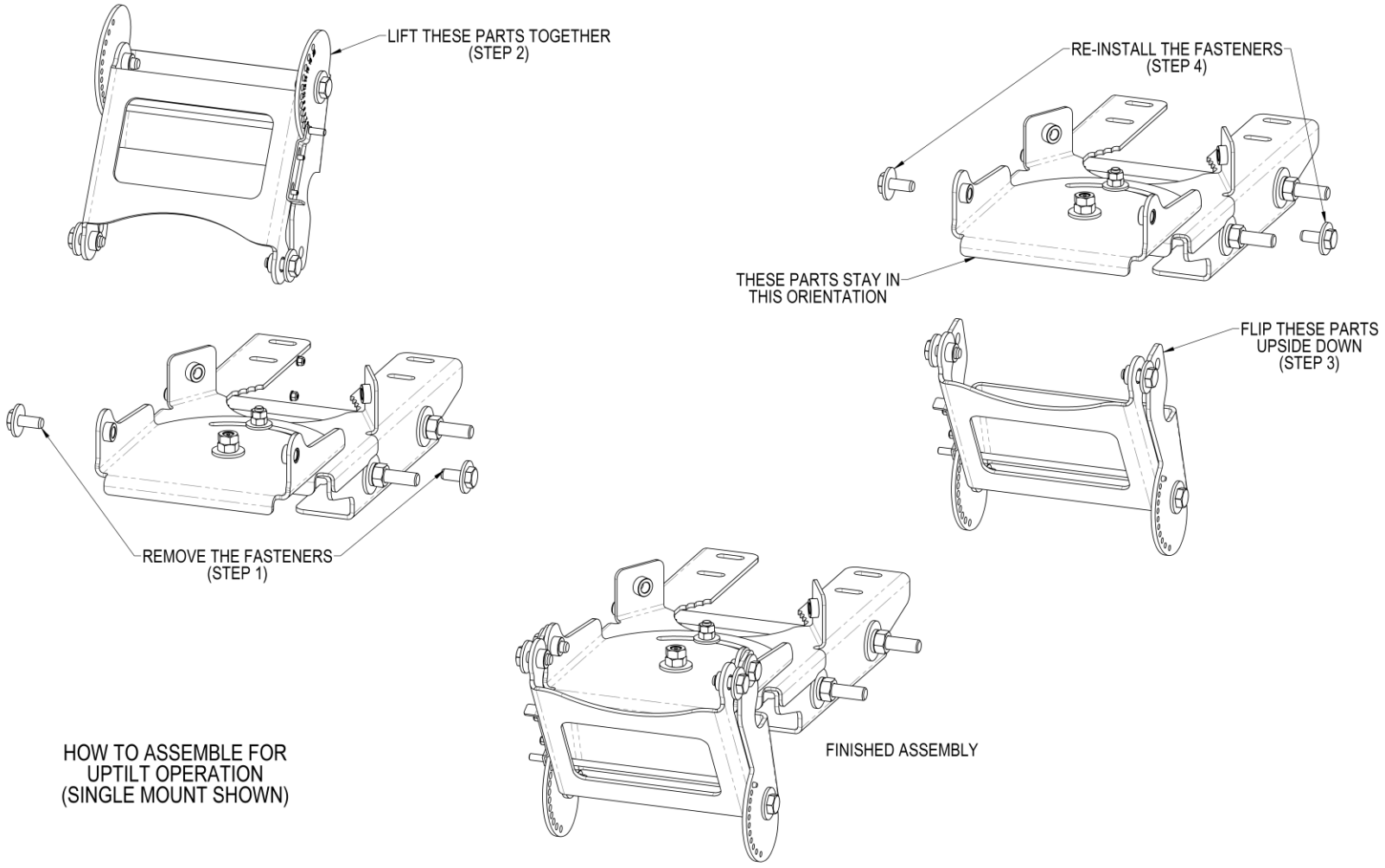


Fig. 11: Spacing Between Fixed and Adjustable Brackets – Uptilt Setup

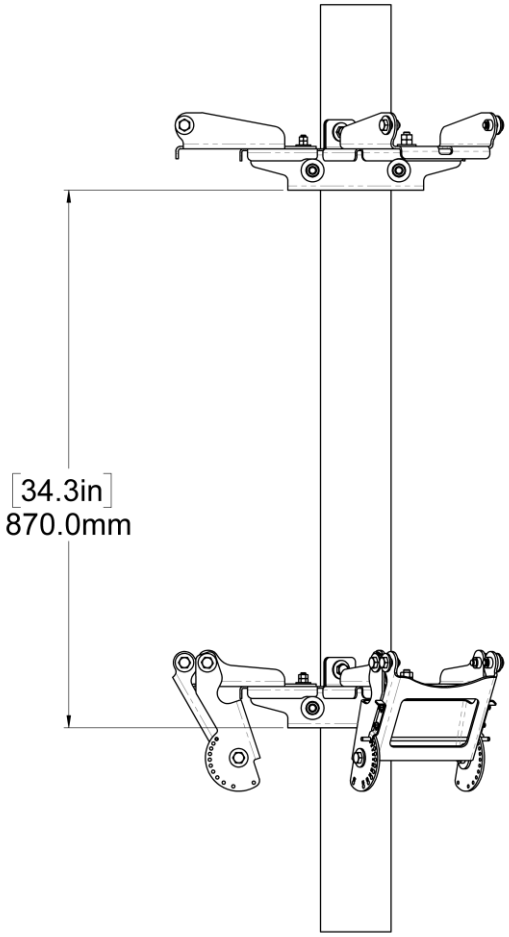


Fig. 12: Orientation of Fixed and Adjustable Brackets – Uptilt Setup

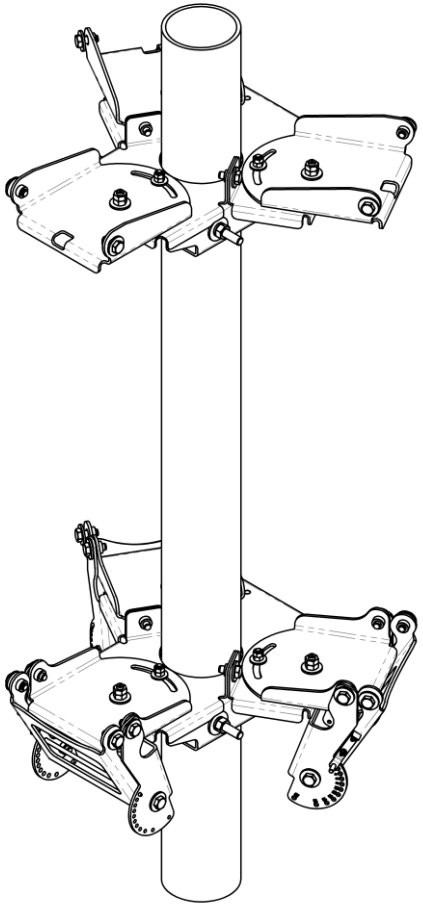


Fig.13: Installation of Antenna on Fixed and Adjustable Brackets – Uptilt Setup (ISO View)

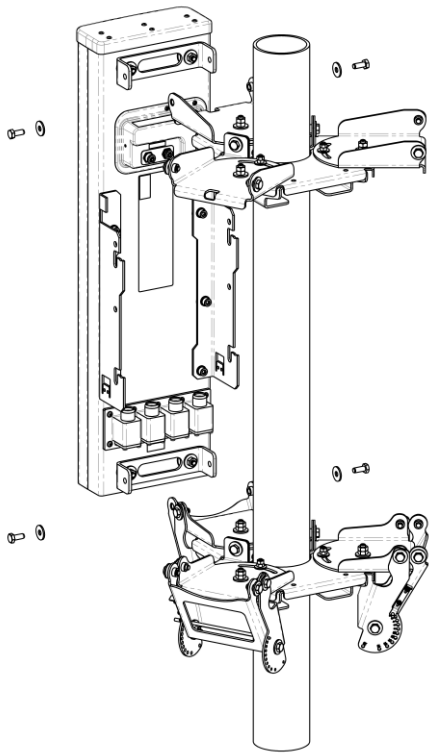
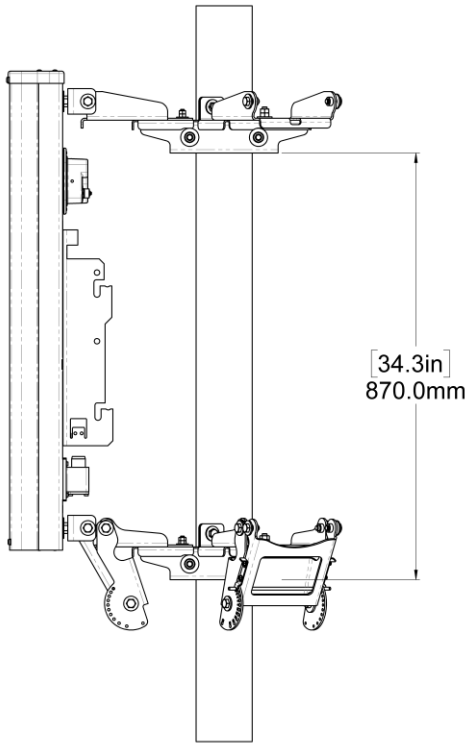


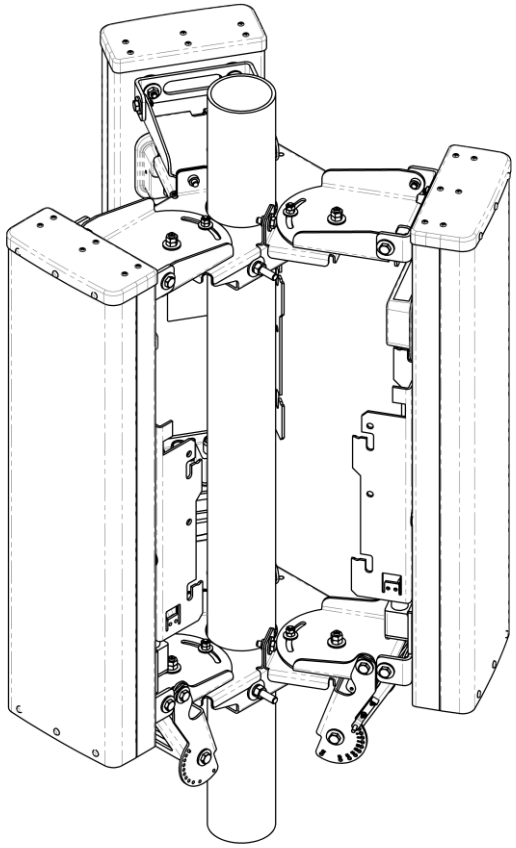
Fig.14: Installation of Antenna on Fixed and Adjustable Brackets – Uptilt Setup (Side View)



Step	Task
4	Install the antenna/radio assembly on to both the Fixed Bracket using 2 pcs. each of the M10 hardware, and the Adjustable Bracket using 2 pcs. each of the M10 hardware as shown in Fig. 13. Torque M10 hardware to 25±1.5 N-M (18.5±1.5 ft-lbs.). If further alignment is required loosen the M12 hardware holding the mast brackets in place and adjust the alignment of the antenna/radio assembly in the direction specified by the site engineer. The orientation of the Antenna is normal to the sector unless specifically required otherwise.

Step	Task
5	Once properly aligned torque M12 clamp hardware to 54±2.5 N-M (40±2 ft-lbs.).
6	Completed installation with 0° MDT (Mechanical Tilt) should appear as shown in Fig. 14.

Fig, 15 - Three (3) Antenna/Radio Assemblies on Fixed and Adjustable Triple Mount Brackets – Uptilt Setup (ISO View)



Step	Task
7	Install the 2nd and 3rd additional Antenna/Radio assemblies in an identical manner. The installation should appear as shown in Fig. 15.

Fig. 16: Begin Antenna/Radio MDT Adjustment

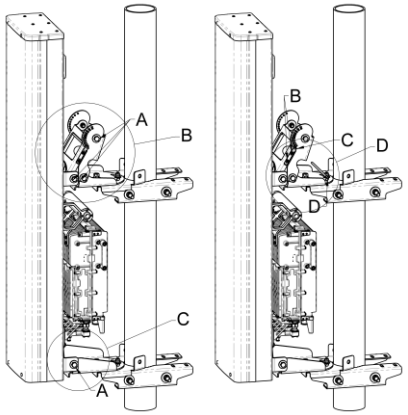
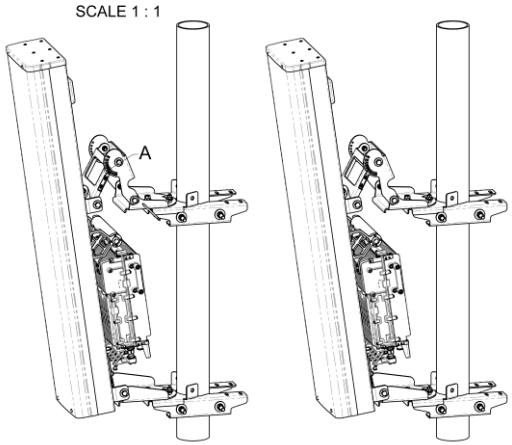
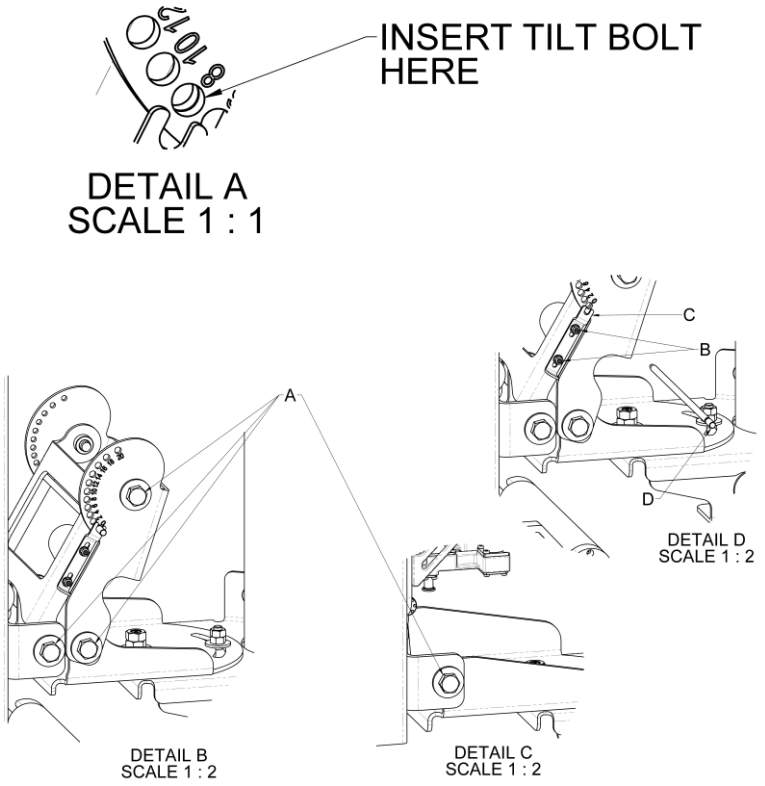


Fig. 18: Begin Antenna/Radio MDT Adjustment



Step	Task
8	Perform Steps 8 thru 11 on one antenna/radio assembly at a time. At the 0° MDT (Mechanical Downtilt) position, loosen all fasteners labeled ‘A’, on both sides of the brackets (Fig. 160). Repeat for individually for the 2nd and 3rd antenna/radio assemblies.

Fig. 17: MDT Adjustment Details A, B, C and D



Step	Task
9	Loosen two nuts labe9d ‘B’, slide back the latch ‘C’, support the antenna and remove the downtilt bolt ‘D’ (Fig. 16).
10	Allow the antenna to move such that the hole designated ‘8’ (8° MDT) lines up with the mating hole immediately behind (Fig. 17).
11	Insert the downtilt bolt all the way, slide the latch up to engage with the downtilt bolt (Fig. 18), and tighten the two nuts to a torque of 2.5±0.2 N-M (2.0±0.2 ft-lbs.). Then tighten the fasteners loosened in step 8 to a torque of 25.0±1.5 N-M (18.5±1.5 ft-lbs.).

Fig. 19: Begin Antenna/Radio Swivel Adjustment

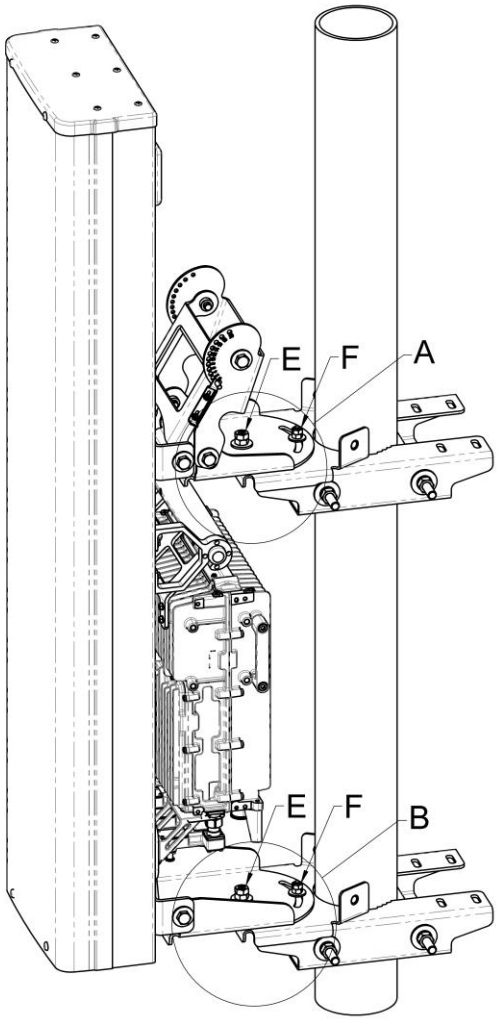
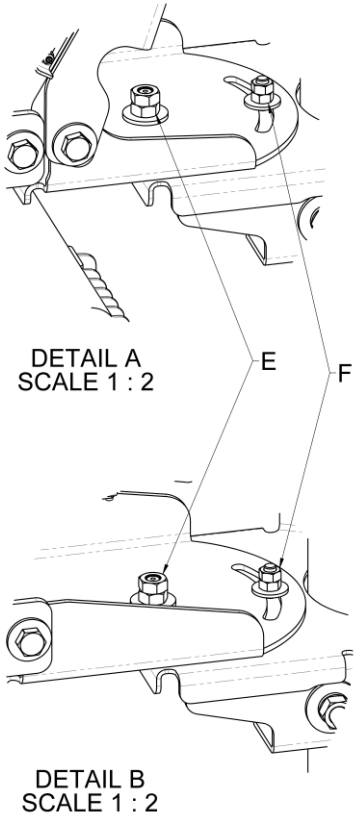


Fig. 20: Swivel Adjustment (Detail A and Detail B)



Step	Task
12	To adjust the azimuth direction, on one antenna/radio assembly at a time, loosen the four M10 nuts labeled ‘E,’ and the four M8 nuts labeled “F.”. Simply rotate the antenna to the desired position and tighten the four M8 nuts to a torque of 9.5±0.5 N-M (18.5±1.5 ft-lbs.). Then tighten the four M10 nuts to a torque of 25.0±1.5 N-M (18.5±1.5 ft-lbs.). This can be done at any MDT setting. Repeat as necessary for the other antenna/radio assemblies.