

Rev.	Description	EC number
01	Initial release	
02	Format change	73380
03	Kit #91900319 BOM update	77194
04	Updated JMA Logo.	ECO-00263 ECR02515
05	Updated HQ address.	ECO-00407 ECR02611
06	Removed references to internal part numbers.	ECO-00886 ECR02859
A	Adding information for 5-, 7-, 9-foot antennas.	ECO-01058 ECR03159
B	Changed the title and added references to 2 ft antennas.	ECO-02254 ECR04140

Antenna Brackets 91900318 91900319

Instructions for 2-, 4-, 5-, 6-,
7-, 8-, & 9-Foot Antennas

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*8' configuration shown

Brackets 91900318 / 91900319

Instructions for 2-, 4-, 5-, 6-, 7-, 8-, & 9-Foot Antennas



This is the installation guide for the 91900318/ 91900319 antenna brackets. Below is the bracket kit included with the antenna.

Kit #91900318: 2-, 4-, 5-, 6-, 7-, 8-, & 9-foot antennas		
Item #	Description	Qty. in kit
1	Back grip bracket	2
2	Anti-rotation bracket	2
3	Single mount adapter	2
4	Threaded rod	4
5	3/8" flat washer, HDG	38
6	3/8" lock washer, HDG	21
7	3/8" hex nut, galv.	25
8	Negative degree adj. bottom bracket	2
9	3/8" bolt, HDG	13
10	Tilt select arm	2
11	Antenna linkage arm	2
NOTE: These item numbers refer to Figures 1 and 2 on pages 4 and 5.		

Additional kit included with the 8-foot antenna.

Kit #91900319: 8- & 9-foot antennas		
Item #	Description	Qty. in kit
1	Back grip bracket	1
2	Anti-rotation bracket	1
3	Single mount adapter	1
4	Threaded rod	2
5	3/8" flat washer, HDG	18
6	3/8" lock washer, HDG	10
7	3/8" hex nut, galv.	12
9	3/8" bolt, HDG	6
12	Center link bracket	4
NOTE: These item numbers refer to Figure 3 on page 6.		

Other key details:

- The brackets were designed to handle pole diameters ranging from 2.5 to 4.5 inches.
- When tightening all hardware, use the torque setting 20 lb·ft.

Brackets 91900318 / 91900319

Instructions for 2-, 4-, 5-, 6-, 7-, 8-, & 9-Foot Antennas



Attach bottom bracket to antenna

1. Install bottom mount pieces—back grip bracket 1, anti-rotation bracket 2, single mount adapter 3, and bottom bracket 8—onto antenna as shown in *Figure 1* using threaded rods 4 and the following 3/8" hardware: 5, 6, 7, and 9.

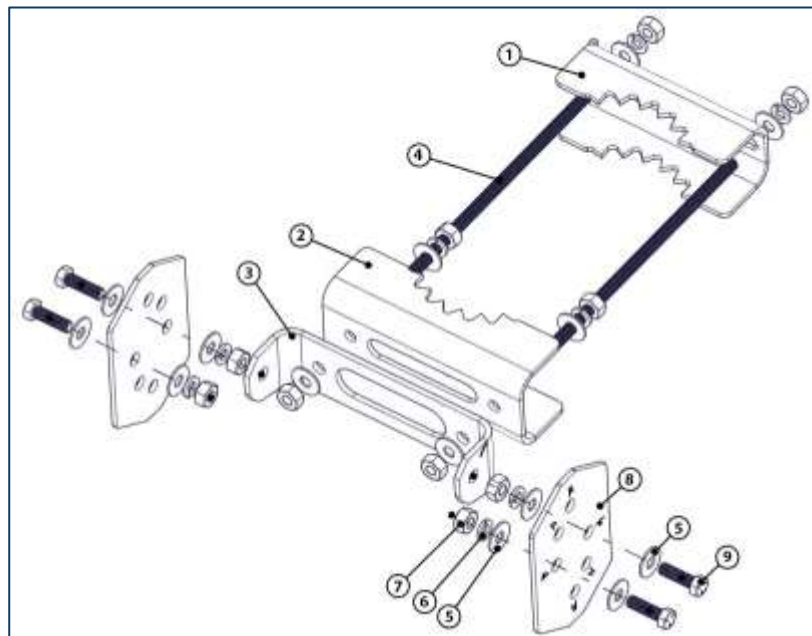


Figure 1: Bottom mount

2. Connect the single mount adapter 3 and bottom bracket 8 using the hole labelled "0." If you need to do a -1° or -2° tilt, use the labeled holes on the bottom bracket plate. Leave the fasteners associated with tilt and pole loose enough to allow free rotation of the parts. Make sure the threaded rods do not extend past the nut closest to the antenna.

Attach top bracket to antenna

3. Install top mount pieces—back grip bracket 1, anti-rotation bracket 2, single mount adapter 3, antenna linkage arm 11, and tilt select arm 10 onto antenna as shown in *Figure 2* using threaded rods 4 and the following 3/8" hardware: 5, 6, 7, and 9.

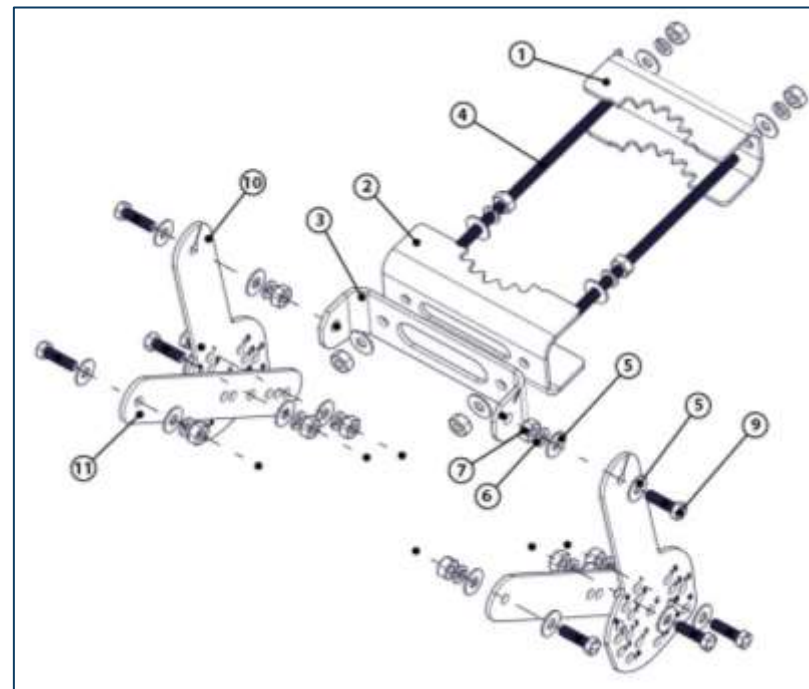


Figure 2: Top mount

4. Fasten antenna linkage arm 11 and tilt select arm 10 together using holes "C" and "1" for default tilt. Leave all fasteners associated with tilt and pole loose enough to allow free rotation of the parts. Make sure the threaded rods do not extend past the nut closest to the antenna.

Extended step for 8- and 9-foot antenna installation

5. Install center mount pieces—back grip bracket 1, anti-rotation bracket 2, and center link bracket 12—onto antenna as shown in *Figure 3* using threaded rods 4 and the following 3/8" hardware: 5, 6, 7, and 9. Leave all fasteners associated with tilt and pole loose enough to allow free rotation of the parts. Make sure the threaded rods do not extend past the nut closest to the antenna.

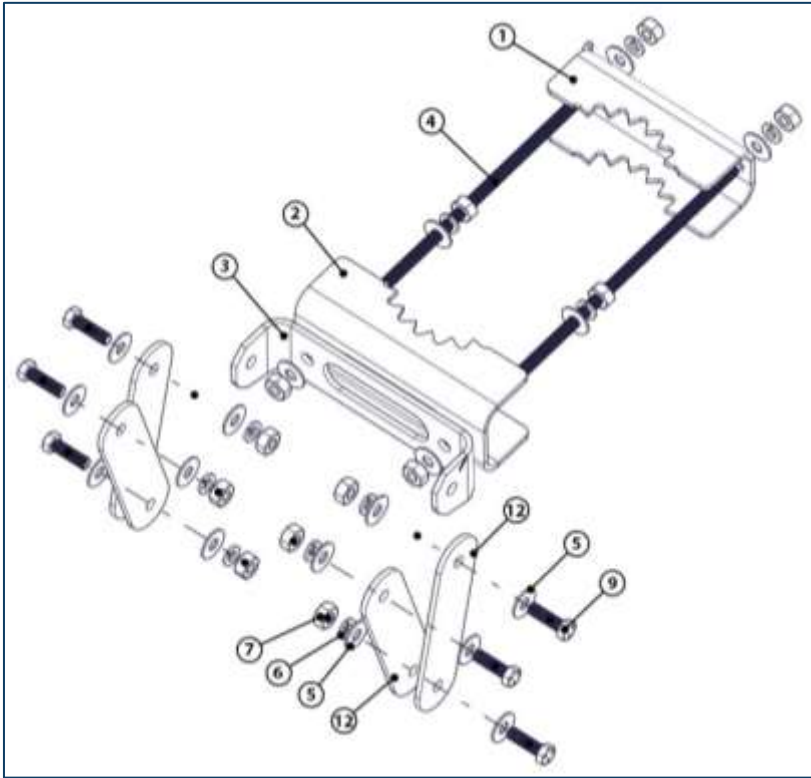


Figure 3: Center mount (8- and 9-foot antennas)

Mounting antenna to pole

6. Attach the antenna to the pole by placing the anti-rotation bracket 2 against the pole and sliding back grip 1 onto the back of the pole. Repeat attachment for each mount bracket. See *Figures 1, 2, and 3*.
7. Use measurements from *Table 1* and *Figure 4* to determine the distances between brackets.
8. Tighten all nuts on the threaded rods to 20 lb·ft.

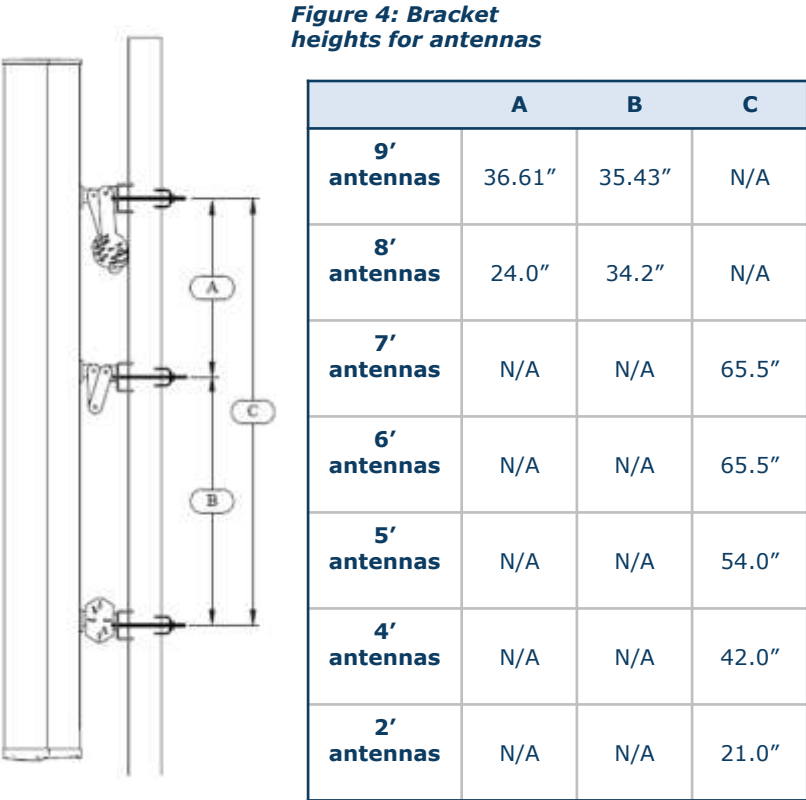


Table 1: Bracket height key

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Instructions for 2-, 4-, 5-, 6-, 7-, 8-, & 9-Foot Antennas



9. If a tilt other than 0 degrees is desired, reposition the antenna according to the hole numbering on tilt select arm 10, *Figure 5*, and downtilt *Table 2*. For bottom bracket 8, *Figure 6*, use 0 degrees for downtilt, and -1 or -2 degrees for uptilt. Then tighten all fasteners to 20 lb-ft.

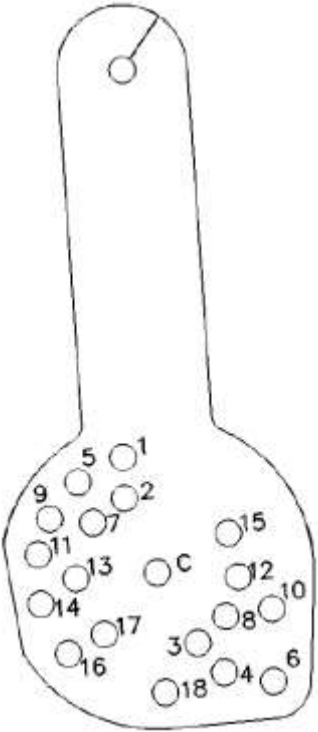


Figure 5: Tilt select arm

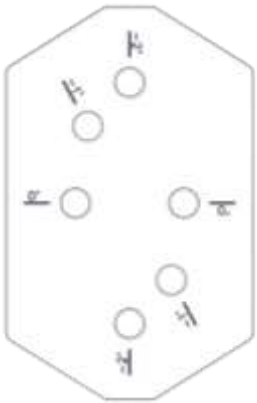


Figure 6: Bottom bracket

Downtilt table (degrees)				
Pin hole	4' & 5'	6' & 7'	8'	9'
1	0	0	0	0.03
2	1.3	0.9	1	0.8
3	2.3	1.6	1.8	1.5
4	3.0	2.0	2.3	1.9
5	4.2	2.9	3.2	2.6
6	5.1	3.5	3.9	3.2
7	6.0	4.1	4.6	3.7
8	6.8	4.6	5.2	4.2
9	7.7	5.2	5.9	4.8
10	9.0	6.1	6.9	5.6
11	10.3	7.0	7.8	6.4
12	11.0	7.5	8.4	6.9
13	11.9	8.1	9.1	7.4
14	13.2	9.0	10.1	8.2
15	14.6	9.9	11.1	9.1
16	15.8	10.7	12.0	9.8
17	16.3	11.0	No use	10.1
18	17.8	12.0	No use	11.0

Table 2: Table for adjusting tilt