



INSTALLATION INSTRUCTIONS
EM-MX0108-FT FIELD TUNABLE "X"-NUT™
ANTENNA & EM2A-108FTRP REPLACEMENT WHIP
108-960 MHz

*Congratulations on your selection of another quality antenna product from E/M Wave.
 E/M Wave is committed to continually provide the greatest antenna VALUE for your wireless applications.*

Please read instructions carefully before installing and tuning antenna.

1. Attach antenna to NMO mount (sold separately) with firm hand torque.
2. Refer to Table 1. Determine desired frequency and cut length.
3. **Note:** Vehicle ground-plane variations will affect final tuned length and VSWR match. Always make first cut longer than referenced in Table 1. The tuned length always includes the ball tip attached.
4. Loosen the ball tip from the whip using a 1/16" hex wrench.
5. Measure the cut length "W" as shown in Figure 1. The length includes ball tip.
6. Cut the whip longer than desired length using heavy duty wire cutters.
7. During the tuning process, attach the ball tip to the top of the cut whip using hex wrench.
8. Verify that reflected power is minimized for best performance at desired frequency using VSWR meter or similar device. If necessary, frequency tuning is achieved by cutting the whip in small incremental cuts until desired frequency match is verified.
9. Secure ball tip with hex wrench using firm hand torque.

Automatic Car Wash Feature - For optimal protection and extended reliability of the antenna and the NMO vehicle mount, **remove the whip only** from the antenna base (as shown in Figure 1) before entering automatic car wash. Before re-installing the whip, wipe the stud and base dry with a clean cloth. Attach whip to the antenna adapter with firm hand torque.

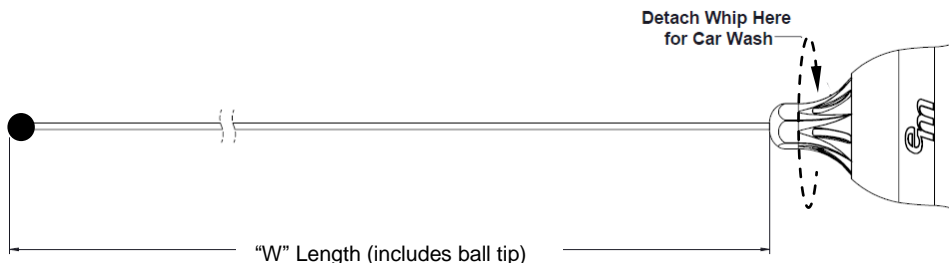


Figure 1

Freq. (Bandwidth) MHz	"W" Length inch (mm)	Freq. (Bandwidth) MHz	"W" Length inch (mm)
108	27-1/8 (689)	146 (±4)	17-5/8 (447)
120	23-1/8 (587)	157 (±5)	16-1/4 (412)
122	22 (559)	168 (±6)	15-3/16 (385)
124	21-5/8 (548)	222 (±14)	11-1/4 (285)
126	21-3/8 (542)	245 (±15)	9-7/8 (252)
128	20-5/8 (523)	418 (±30)	5-1/4 (133)
130	20-7/16 (518)	450 (±35)	4-13/16 (122)
132	20 (508)	480 (±35)	4-1/2 (114)
136	19-1/4 (488)	520 (±40)	4 (102)
138	18-7/8 (479)	746-894	2-1/8 (53)
140	18-1/2 (471)	890-960	1-5/8 (41)
142	18-1/8 (459)		

Table 1.

For Product and Warranty Information
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