

Flexi-Whip Antenna Installation Considerations

Magnet Mount, Field Tunable, with Flexible Mast, 136MHz -1GHz

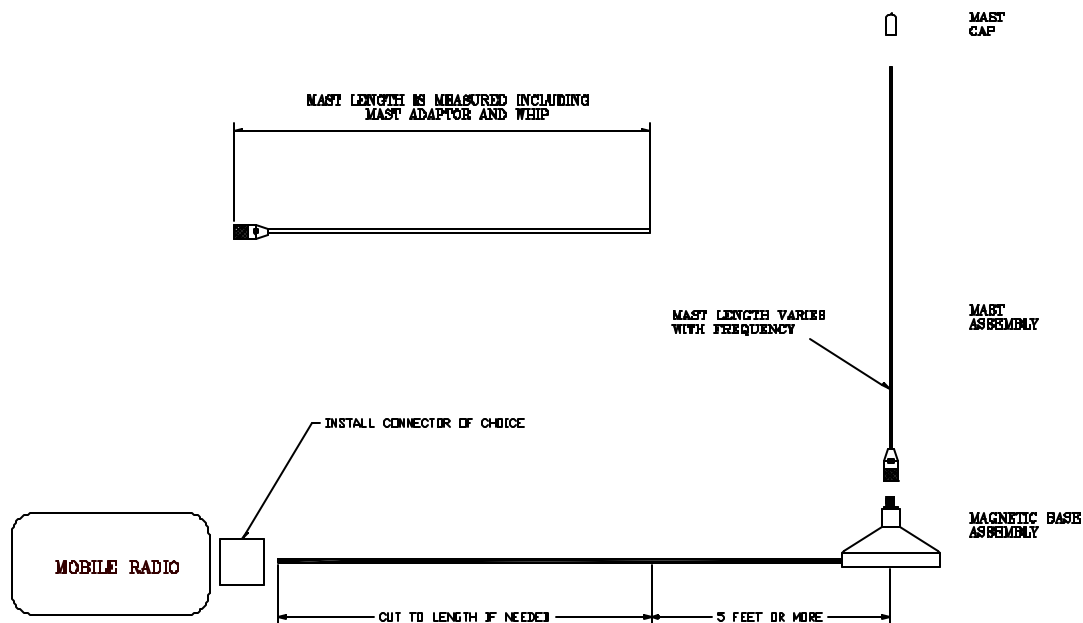
MODEL NUMBER: MGNT-FT-NITI

PLEASE VERIFY:

1. **Parts List:** This package consists of an antenna with attached cable, cap and a connector for the two-way radio. Use only the components supplied with the antenna system.
2. **Frequency and Bandwidth:** The frequency is determined by mast length. Bandwidth varies depending on the frequency. Please refer to the cutting chart included.

INSTALLATION:

1. **Placement:** Select the flattest surface in center of the roof or trunk lid. If the area is convex a rocking motion will result. A concave surface will reduce the magnet's holding power affecting the quality of the antenna's "RF" ground. *Keep in mind that some vehicles may have aluminum or composite trunk lids that will not engage the magnet.*
2. **Run Cable:** Route coaxial cable inside the window or trunk toward the two-way radio (see Magnetic Mount Antenna diagram below). Opening and closing the window or trunk will not normally damage cable. *Be careful not to tear the cable's sheath when pulling it through sharp body panels. Should a cut appear in the sheath, cover it with several layers of a high quality electrical tape.*



3. **Electromagnetic interference:** Do not coil feedline cable. Wind the cable upon itself or cut it rather than coiling it. Do not tape or secure feedline to data or vehicle cables during installation.
4. **Cable Cutting:** If preferred, cut the feedline cable to the length required to reach the transmitter leaving a minimum of at least 5 feet attached to the antenna base (see Magnetic Mount Antenna diagram).
5. **Install Connectors:** Refer to Cable Stripping Dimensions diagram.



6. **Mast Cap:** If mast had to be cut to frequency in the field, STI-CO recommends using epoxy to secure the mast cap. Note: If the antenna has been cut to frequency in the factory the cap will already be epoxied.

TESTING:

Installation testing if desired, must take place at the transmitter side of the feedline. Make sure all doors, hood, and trunk are closed while performing tests.

1. **Reflected Power:** When measuring reflected power using a wattmeter, you can expect a maximum of 11%. If results are greater than 11%, reposition antenna.
2. **SWR:** A measurement of SWR (**S**tanding **W**ave **R**atio) should yield better than 2:1. If greater than 2:1, reposition antenna.
3. **Continuity:** A test of continuity between the center pin and ground for this antenna will show as an open. This will ensure that the cable connectors and cables have the proper continuity.



MGNT-FT-NITI

CTR. FREQUENCY (MHz)	BANDWIDTH (MHz) SWR <2:1	LOW FREQUENCY (MHz)	HIGH FREQUENCY (MHz)	MAST LENGTH (INCHES)*
136	20.3	127.8	148.1	20.3
140	22.4	130.6	153.0	19.4
145	24.3	133.7	158.0	18.8
150	27.6	137.8	165.4	18.2
155	26.3	141.6	167.9	17.5
160	22.5	147.6	170.1	17.0
165	23.6	150.5	174.1	16.6
170	28.2	156.3	184.5	15.9
175	22.5	165.8	188.3	15.3
180	24.3	169.1	193.4	14.9
185	29.0	171.5	200.5	14.6
190	32.4	173.5	205.9	14.2
195	27.8	184.9	212.7	13.6
200	28.4	188.8	217.2	13.2
220	39.3	206.7	246.0	11.8
240	43.1	219.2	262.3	10.8
260	42.0	239.0	281.0	9.8
280	45.6	257.2	302.8	9.2
300	48.2	275.9	324.1	8.6
350	66.8	316.6	383.4	7.3
400	102.0	349.0	451.0	6.2
452	96.0	404.0	500.0	5.4
500	130.0	435.0	565.0	4.9
600	155.0	522.5	677.5	3.9
700	240.0	580.0	820.0	3.4
800	287.0	656.5	943.5	2.7
900	480.0	660.0	1140.0	2.35
1GHz	520.0	740.0	1260.0	2.15

*Cut masts with threaded adaptor attached.

Note: You may want to save excess mast material for possible future use.



This page left blank intentionally