



Flexi-whip Antenna Installation Considerations

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

MODEL NUMBER: ROOF-FT-NITI

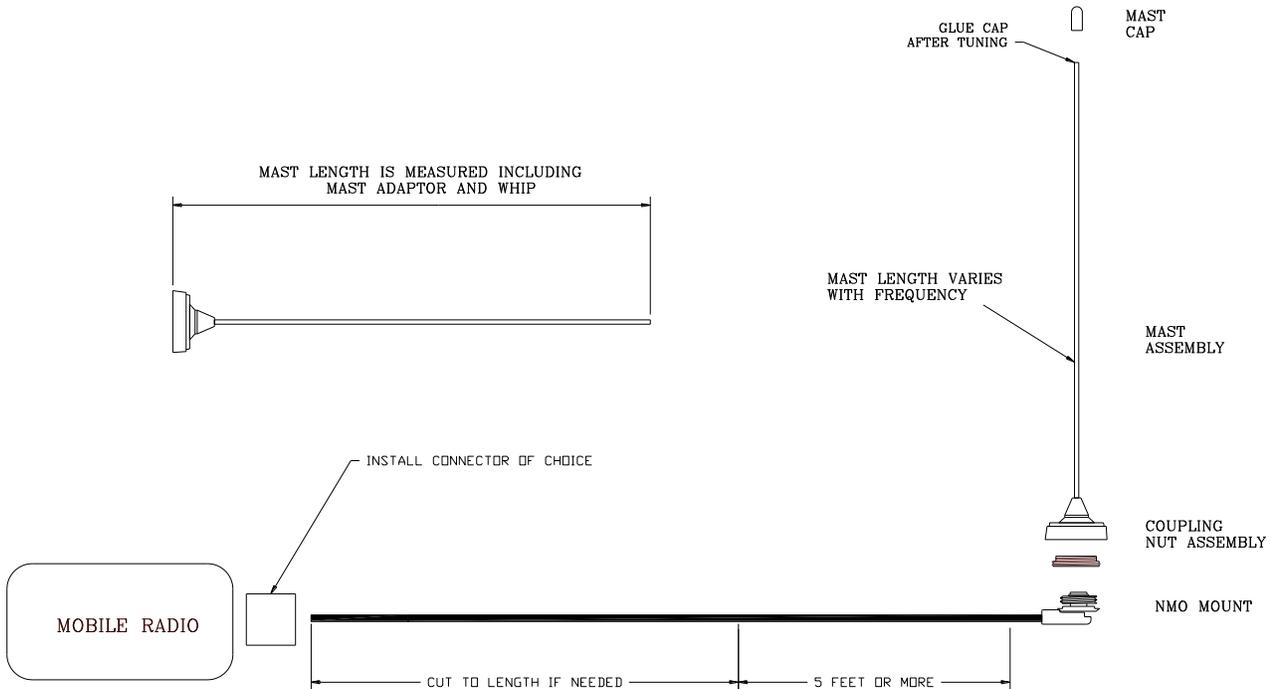
PLEASE VERIFY:

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. The bandwidth varies depending on the frequency. Please refer to cutting chart included.

INSTALLATION:

1. **Placement:** Select a desired location for the antenna on roof or trunk lid. When mounting antenna on the roof, remember to allow room for the feedline. Drill 3/4" hole. Remove any burrs above and below the hole. *Keep in mind that some vehicles may have composite trunk lids that will not provide a proper ground.*
2. **To install:** Insert RF cable through the hole from outside of vehicle. *Be careful not to tear the cable's sheath when pulling it through sharp body panels. If a hole appears in the sheath, cover it with several layers of a high quality electrical tape.*

Tilt the antenna base slightly and insert into mounting hole. Thread the locking nut, with "O" ring seated in groove, onto base and tighten. Make sure mounting base is centered and shoulder is seated properly. Locking nut must compress "O" ring and make contact with vehicle.



3. **Assembly:** Assemble the remainder of the antenna as shown.



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 the Roof 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, the hood, and trunk are closed.

1. **Reflected Power:** When measuring reflected power using a wattmeter, you can expect a maximum of 11%. If results are greater than 11%, recheck grounding.
2. **SWR:** A measurement of SWR (**S**tanding **W**ave **R**atio) should yield better than 2:1. If greater than 2:1, recheck grounding.
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.



ROOF –FT-NITI

CTR. FREQUENCY (MHz)	BANDWIDTH (MHz) VSWR <2:1	LOW FREQUENCY (MHz)	HIGH FREQUENCY (MHz)	MAST LENGTH (INCHES)*
136	24.0	129.0	153.0	20.7
140	22.8	131.0	153.8	20.3
145	24.9	132.4	157.3	19.8
150	28.3	139.7	168.0	18.9
155	25.9	143.4	169.3	18.6
160	25.1	147.7	172.8	18.1
165	27.5	150.9	178.4	17.6
170	26.3	156.6	182.9	17.2
175	26.4	161.7	188.1	16.5
180	27.6	169.6	197.2	16.0
185	29.5	172.2	201.7	15.7
190	26.2	177.4	203.6	15.3
195	33.6	181.2	214.8	14.8
200	30.8	185.3	216.1	14.6
220	35.6	201.9	237.5	13.4
240	37.0	221.7	258.7	12.0
260	37.6	242.4	280.0	11.1
280	44.1	257.1	301.2	10.4
300	45.4	277.9	323.3	9.6
350	59.8	318.5	378.3	8.4
400	76.6	370.0	446.6	7.3
450	93.8	408.6	502.4	6.6
500	113.2	445.4	558.6	6.0
600	133.8	542.1	675.9	5.0
700	138.5	632.8	771.3	4.4
800	149.7	732.6	882.3	3.8
900	115.3	843.1	958.4	3.4
1GHz	93.7	958.9	1052.6	3.1