

Flexi-whip Antenna Installation Considerations

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

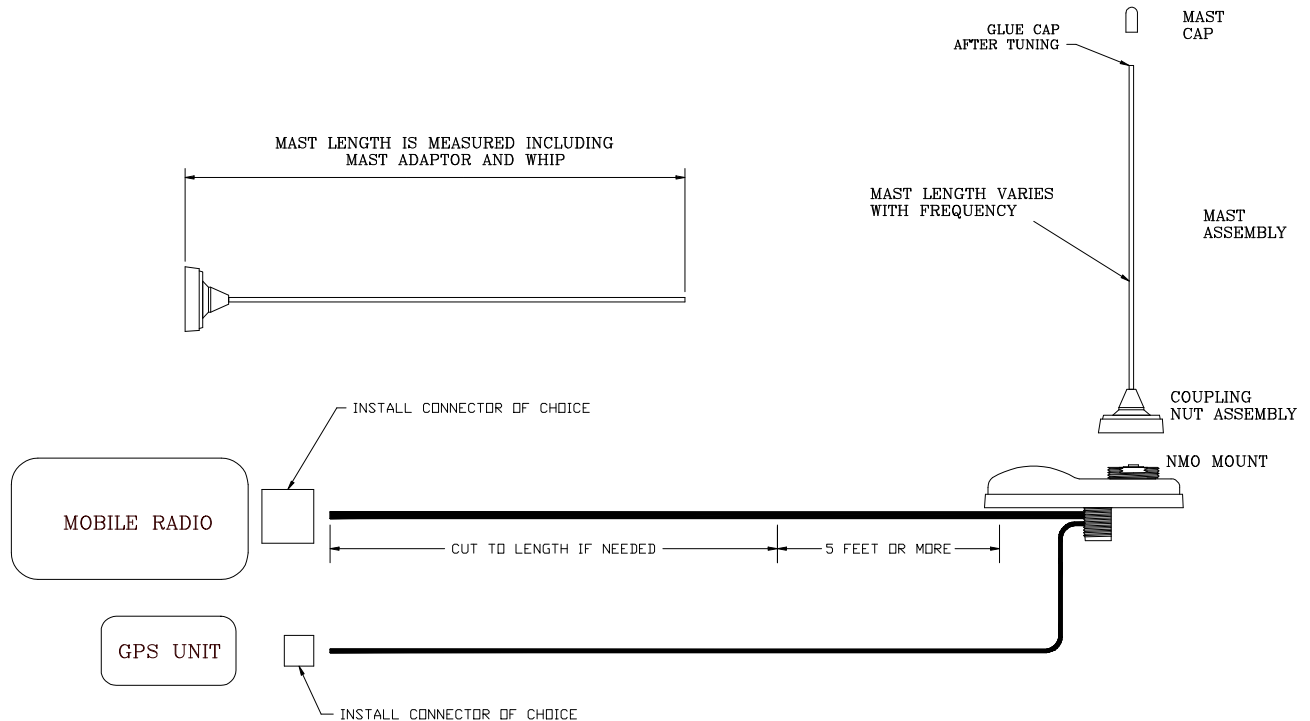
MODEL NUMBER: ROOF-DB-NITI/GPS

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.*



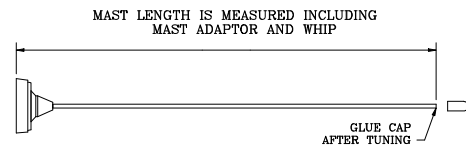
3. **Assembly:** Assemble the remainder of the antenna as shown.

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 (**Standing Wave Ratio**) 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-DB-NITI/GPS

CTR. FREQUENCY (MHz)	BANDWIDTH (MHz) VSWR <2:1	LOW FREQUENCY (MHz)	HIGH FREQUENCY (MHz)	MAST LENGTH (INCHES)*
136	21.7	124.4	146.1	20.5
140	16.5	131.3	147.8	20.0
145	12.2	138.9	151.1	19.3
150	20.6	142.7	163.3	18.5
155	22.7	143.9	166.6	18.2
160	21.9	151.4	173.3	17.2
165	23.5	153.2	176.7	16.7
170	28.5	155.4	183.9	16.3
175	23.5	163.0	186.5	15.9
180	21.6	172.0	193.6	15.2
185	25.5	175.0	200.5	14.7
190	25.0	177.1	202.1	14.5
195	33.0	178.3	211.3	14.3
200	30.0	187.2	217.2	13.9
220	26.2	209.8	236.0	12.5



240	43.6	222.3	265.9	11.4
260	47.8	241.4	289.2	10.4
280	53.5	261.2	314.7	9.8
300	63.9	272.8	336.7	9.2
350	84.6	315.0	399.6	7.9
400	115.0	364.9	479.9	6.8
450	129.8	398.6	528.4	6.2
500	145.3	447.5	592.8	5.6
600	181.6	528.0	709.6	4.6
700	195.7	625.0	820.7	3.9
800	144.5	706.5	851.0	3.8
850	90.0	806.0	896.0	3.5
900	96.5	886.3	982.8	3.3
1GHz	177.0	920.0	1097.0	3.1