

## Flexi-whip Antenna Installation Considerations Roof Mount, Field Tunable, with Flexible Mast, 136MHz - 1GHz

**MODEL NUMBER: ROOF-FT-NITI**

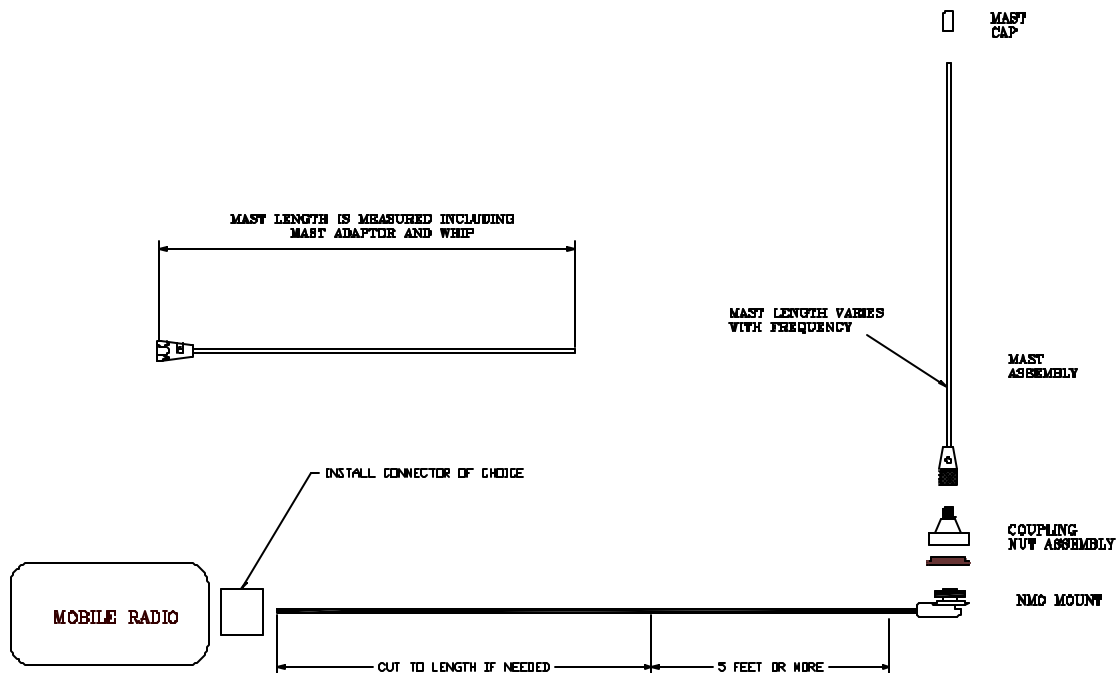
### PLEASE VERIFY:

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.

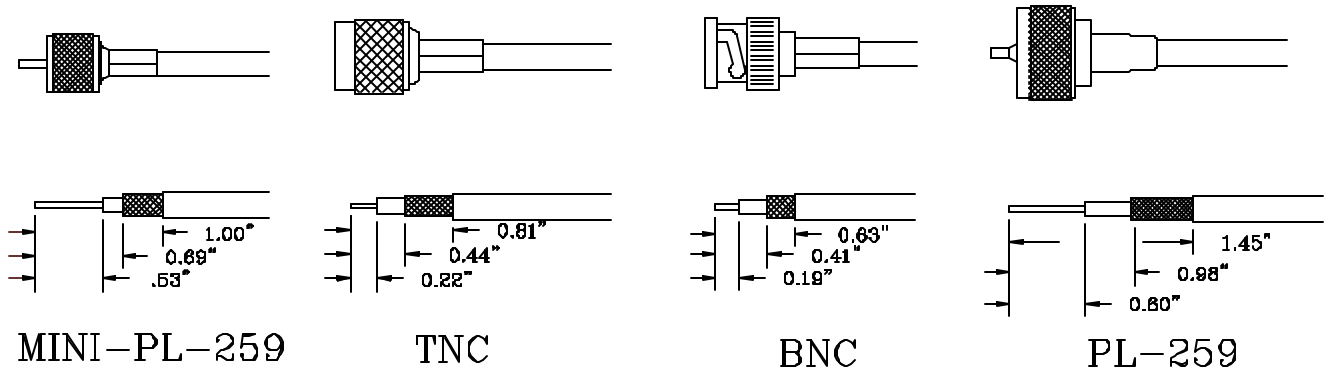
### INSTALLATION:

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 the Cable Stripping Dimensions on drawing (drawing not to scale).
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 allready be epoxied.



**Cable Stripping Dimensions**

**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	21.7	125.15	146.85	20.1
140	24.5	127.75	152.25	19.5
145	28.2	130.90	159.10	18.9
150	25.0	137.50	162.50	18.3
155	25.0	142.50	167.50	17.7
160	34.0	143.00	177.00	17.0
165	33.0	148.50	181.50	16.8
170	42.0	149.00	191.00	16.4
175	42.0	154.00	196.00	16.3
180	38.5	160.75	199.25	15.7
185	36.5	166.75	203.25	14.9
190	46.6	166.70	213.30	14.7
195	37.0	176.50	213.50	14.6
200	36.2	181.90	218.10	14.3
220	36.8	201.60	238.40	11.7
240	38.8	220.60	259.40	10.6
260	40.4	239.80	280.20	9.8
280	42.0	259.00	301.00	9.4
300	44.5	277.75	322.25	9.3
350	76.0	312.00	388.00	7.9
400	88.0	356.00	444.00	6.8
450	90.0	405.00	495.00	6.0
500	125.0	437.50	562.50	5.5
600	150.0	525.00	675.00	4.5
700	183.0	608.50	791.50	3.7
800	170.0	715.00	885.00	3.1
900	169.0	815.50	984.50	2.6
1GHz	70.0	965.00	1035.00	2.0

\*Masts are cut with threaded adaptor attached.

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

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