

INSTRUCTION MANUAL

ORDER NO. 579

Silver Rod 1/2-Wave,
Omnidirectional Base Antenna

PN 801112

General Description

This omnidirectional base station antenna is a half-wave, base fed, vertical radiator. Specially curved radials help to broaden the bandwidth and achieve a low SWR across the band. The feedline base uses an SO-239 coax receptacle. Use 52-ohm coaxial cables such as RG-58/U (runs under 50 feet), or RG-8/AU for lower cable losses. No dissimilar metals are used in the construction. Taper swaged, seamless tubing and self-tapping sheet metal screws provide perfect electrical and mechanical connections. The heavy guage, twelve-inch bracket provides two points of antenna support. This bracket fits masts up to 1 5/8" in diameter.

Theory of Operation

The extended one half wavelength design uses a shunt fed transformer for a perfect 52-ohm match. The antenna is at "DC Ground" which lowers the residual noise level. The greater length offers a lower angle of radiation due to pattern compression.

Specifications

Electrical

Gain 3.8 dB
SWR (at resonance) less than 1.2:1
Nominal input impedance 52 ohms
Pattern omnidirectional

Mechanical

Overall height 17'
Diameter of radiator 1 1/4" to 7/16"
Mast bracket accepts 1 1/4" to 1 5/8"
Net weight 5.1 lbs.
Wind survival 80 mph

Assembly

Unpack the parts and check them each against the parts list. Refer to the drawings for detailed assembly instructions.

CAUTION

Be sure to use the lower and upper U-bolt holes when installing the antenna. Attach the coax feedline to the SO-239 connector.

This completes your installation.

NOTE: Weather seal the coax fitting by covering it with neoprene or resistant compound.

Grounding

Proper grounding is essential for lightning protection. We recommend an 8' x 3/8" copper ground rod. Connect a copper wire (no smaller than #12) from the rod to the antenna supporting mast or tower. This will by-pass mast static charges direct to the earth.

Weatherproofing

To prolong the life of this product in or around coastal areas, all hardware should be encapsulated with silicone rubber compound such as DOW-CORNING silastic rubber or GE silicone seal to prevent atmospheric deterioration.

WARNING:

When installing your system, take extreme care to avoid any accidental contact with powerlines or overhead obstructions. Failure to exercise this care could result in serious or fatal injury.

Parts List

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	878869	base assembly, M1	1	7	543792	U-bolt, 5/16" x 1 1/8" x 2 1/4"	2
2	173832	tubing, 3/8" x 55" M2	1	8	556945	nut, 5/16"-18 hex	4
3	173834	tubing, 3/8" x 55", M3	1	9	567075	lockwasher, 5/16" int.	5
4	173837	tubing, 7/16" x 44"	1	10	556960	nut, 1/4"-20 hex	6
5	170310	radials	3	11	567110	lockwasher, 1/4" int.	7
	875795	Parts Pack		12	519386	screw, #8 x 3/8" hex, type A	5
6	455644	caplug, 7/16"	1	13	567135	lockwasher, #8 int.	6

ALL TUBING HAS BEEN PREDRILLED TO EXACT MEASUREMENTS. MATED SECTIONS ARE SECURED BY SELF-TAPPING #8 x 3/8" HEX. SHEET METAL SCREWS.

PLACE TWO U-BOLTS IN BRACKET AND INSTALL THE ANTENNA ON THE MAST; TIGHTEN SECURELY.

