



TECHNICAL MANUAL

VTM-11-004

AS-390/SRC COAXIAL STUB ANTENNA

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SCOPE

The scope of this technical manual is to provide the basic operational characteristics of the AS-390/SRC COAXIAL STUB antenna, as well as, provide installation and maintenance information for field use.

DESCRIPTION

The AS-390/SRC antenna is a UHF ground plane antenna intended for shipboard applications, offering wide frequency band capabilities in a ruggedized package. The antenna is ideally suited for any communications system operating between 220MHz and 400MHz, providing vertically polarized, omni-directional radiation patterns. It is designed to easily handle 200 W of RF input power with a VSWR of under 2:1.

The AS-390/SRC is comprised of a small cylindrical stub radiator and an eight bar-whip ground plane. It is designed to withstand the harsh environmental conditions unique to seagoing vessels. This antenna is ideally suited for mounting atop Valcom's AS-4163/URC Dual UHF Antenna. The antenna mounts via a 3/4-14 IPS threaded post.

This antenna comes from our factory assembled, ready for installation. The following table lists the major replaceable sub-assemblies of the antenna system:

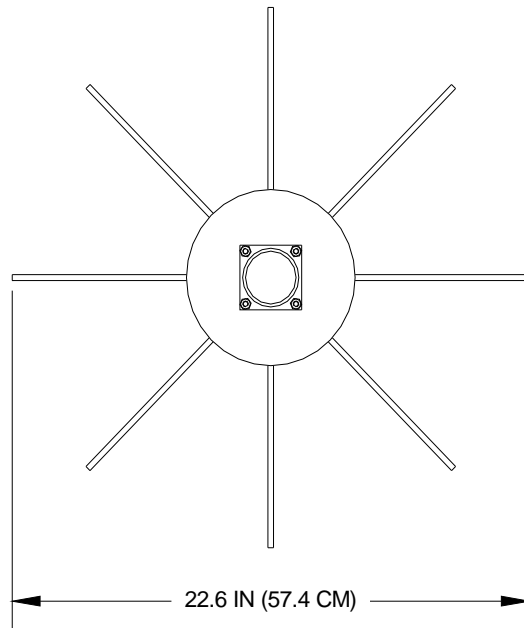
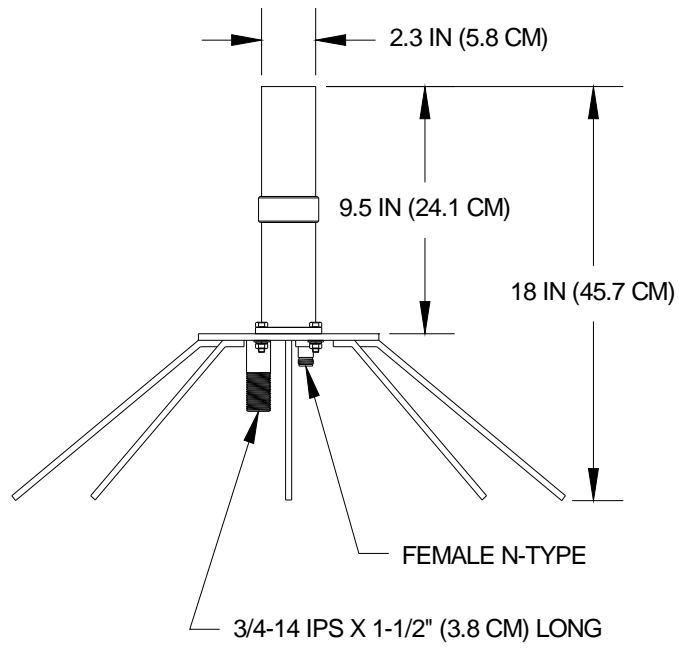
QTY	Part Number	Description
1 per	VC-10-00075-1	AS-390/SRC Assembly
optional	VC-00-00416-1	AS-4163/URC Antenna Mount

ELECTRICAL CHARACTERISTICS

Frequency	220 MHz to 400 MHz
Polarization	Vertical
Radiation Pattern	Omni-directional
Impedance	50 Ohms Nominal
VSWR	Less than 1.8:1
Gain	+1 dBi
Input connector	N-Type, female
Power Handling	200 W (Average)

MECHANICAL CHARACTERISTICS

Weight	3.6 lbs (1.6 kg)
Height	18.0 in (45.7 cm)
Diameter	22.6 in (57.4 cm) assembled
Temperature	-40°F to +300°F (-40°C to +150°C)
Finish	Haze Grey Epoxy Polyamide



ASSEMBLY INSTRUCTIONS

No Assembly Required.

INSTALLATION INSTRUCTIONS

As shipped, the AS-390 antenna is designed to mount atop the Valcom AS-4163/URC antenna via the optional mount. The antenna simply threads into the mount until firmly snug.

OPERATING INSTRUCTIONS

Connect a suitable RF coaxial cable (such as RG-142) from the vehicle's radio setup to the bottom of the antenna. An N-type connector is required for this.

There are no other user connections or settings required to use the antenna.

MAINTENANCE

The antenna is completely assembled, tuned and tested at the factory. There are no adjustments required after delivery of the antenna.

General maintenance would include inspecting the antenna for signs of physical damage, such as, bent or broken elements, cracked insulator section or damaged input connector. The input connector and cable should be inspected for signs of damage or loosening. All mechanical joints and fasteners should be periodically inspected for signs of loosening.

Take note: At the base of the antenna near the connector and mount is a small drain plug, which must be periodically loosened to allow trapped moisture to escape. When reinstalling, ensure the drain plug is snug.

Replacement parts may be ordered from the factory (subject to availability) using the contact information on page 7. The factory should be contacted if any substantial repair is required.

CONTACT INFORMATION

Postal address:	Shipping address:
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