



Active Monopole Antenna AM-741

Features

Range - 9 kHz - 30 MHz

Built in Amplifier

Flat Response - ± 1 dB

Battery Powered - NimH

Individual Calibration



*Stainless steel plate not shown.

Description

The Active Monopole antenna Model AM-741 was designed to measure electric field strength in the frequency range from 9 kHz to 30 MHz. This antenna includes a built-in broadband amplifier covering the frequency range of operation. The built in preamplifier improves the sensitivity of the antenna and also provides a 50 Ω matched output.

The antenna amplifier is enclosed in an aluminum enclosure. The 41 inch collapsible rod element is connected to BNC connector located on the top the amplifier enclosure. The amplifier enclosure is mounted on 60 x 60 cm stainless steel plate. The front panel of the AM-741 Monopole antenna has battery status and saturation indicators. A battery charger is included with each antenna.

The antenna has 1/4 inch x 20 threaded hole which allows the AM-741 to be mounted on an antenna tripod with matching threads. The antenna is individually calibrated using Aerospace Recommended Practice 958 standard or ANSI 63.4 ECSM method per customer request. The manual and certificate of calibration will be shipped with each unit.

Application

The 41 inch Monopole antenna is required for making electric field emission measurements below 30 MHz per Military standards (MIL-STD-461) and FAA (DO-160) specifications. This antenna is for emissions measurements only. It cannot be used for transmitting.

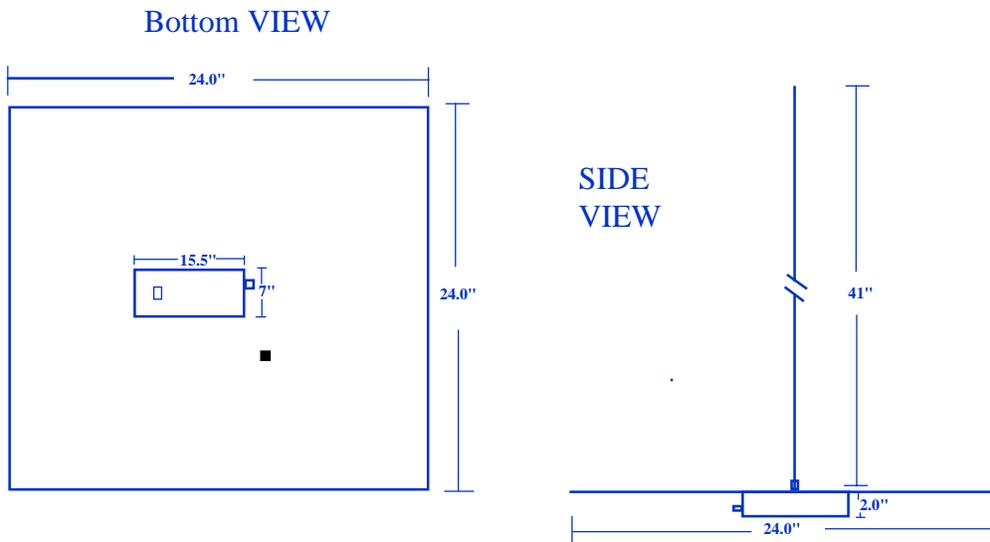
The Active Monopole antenna is generally used in a shielded room or in a screen room, with the equipment under test (EUT) placed on a metal ground plane. The 41 inch rod and the ground plane behave electrically as though a mirror image of the rod were located below the ground, and the ground removed. Since the stainless steel plate does not have enough surface area to mirror the entire 41 inch rod, it is bonded to the surrounding ground plane during use.

The antenna will be supplied with calibration data. Currently there are two calibration methods. One method is given ARP-958 and the other is given in ANSIC63.5. Both methods produce different antenna factors. The ARP-958 method is recommended for FAA-DO160 testing. The ANSI method equivalent capacitance substitution (ECSM) method is recommended for all other testing. The antenna will be calibrated and shipped with ANSI ECSM method unless specified otherwise by the customer.

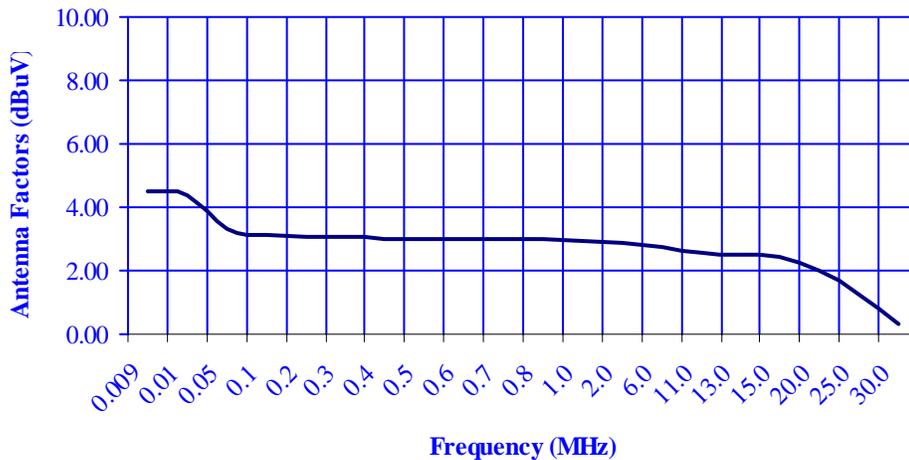
Specifications

Frequency Range:	9 kHz - 30 MHz
Flatness:	±1 dB
Output Impedance:	50 Ohm
Connector Type:	BNC (f)
Collapsible Element Length:	41 inches (fully extended)
Base Plate:	24 x 24 inches (60 x 60 cm)
Battery Type:	6 V NimH
Input Charger Input:	9 VAC, 1.0 AMP.
Tripod mount:	1/4 x 20 inch threads hole
Size:	see below
Weight:	19 lbs. (8.6 kg)

Mechanical Outline



Typical AM-741 Characteristics using ANSI C63.5 ESCM calibration method



Field strength (dBuV/m) = Output measured(dBuV) + Antenna factor(dB)

All values are typical values unless specified.
 Specifications are subject to change without notice.