

Features

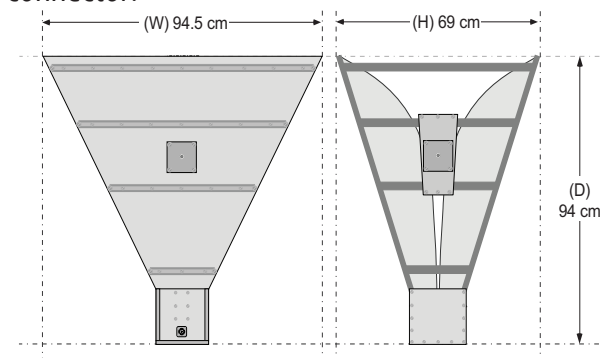
- **Frequency Range**
200 MHz to 2 GHz
- **Transmit & Receive Capabilities**
emissions/immunity applications
- **Individual Calibration Included**
per SAE ARP958 with NIST traceability
- **Three-year Standard Warranty**

Description

The AH-220 is a broadband, linearly polarized Double Ridge Waveguide Horn Antenna, operating over the frequency range of 200 MHz to 2 GHz. While it is designed to serve as the receiving antenna for radiated emissions tests between 200 MHz and 1 GHz, as specified within RE102 of MIL-STD-461, it can also be used as a transmitting antenna for radiated immunity tests.

Construction

The AH-220, due to its large size, is designed to be as lightweight an antenna as possible, without sacrificing its overall durability. The antenna is constructed using high grade aluminum with a corrosion resistant conductive coating. The antenna is fitted with a high quality N-type coaxial connector.



Calibration

Each antenna is individually calibrated per SAE ARP958 with NIST traceability. The calibration data and certificate is provided. Recognized ISO 17025 accredited calibration is available upon request.



Application

There is no mystery behind the primary application for this antenna. MIL-STD-461 specifies a double ridge horn, with a 69 x 94.5 cm opening be used for radiated emissions tests per RE102. The AH-220 Horn Antenna was designed specifically, from concept to production, to be that antenna; however, it's no one-trick pony.

The AH-220 is also suitable for use as a transmitting antenna for establishing radiated RF fields for product immunity tests. A graph with typical field strength values vs frequency, based on the antenna's isotropic gain and 800 Watts input (max. continuous power) is shown on the following page.

Notwithstanding the above applications, the AH-220 can also be used for chamber characterizations or comparisons, shielding effectiveness tests of large enclosures or chambers, field monitoring, site surveys, or other general purposes.

Mounting

Due to size and weight of the AH-220, care should be taken to ensure it is properly supported. The antenna has two mounting plates; one for the vertical polarization, and one for horizontal. In the center of each plate is a 1/4-inch x 20 mounting hole for securing the antenna.

Com-Power's AT-220 Tripod (pictured) is recommended support for the AH-220.



Specifications

Product Name	Double Ridge Horn Antenna
Frequency Range	200 MHz to 2 GHz
Polarization	Linear
Nominal Impedance	50Ω
Power Handling (CW)	800 Watts
Connector	N-type (female)
Antenna Factor	[see graph below]
Isotropic Gain	[see graph below]
VSWR/Return Loss	[see graphs below]
Impedance/Phase	[see graphs below]
Radiated Field Strength	[see graph below]
Specifications	MIL-STD-461
Dimensions (L x W x D)	27.2" x 37.2" x 37" [69 x 94.5 x 94 cm]
Weight	29.5 lbs. [13.4 kg]

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

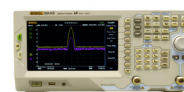
Accessories available from Com-Power:



PAM-103A Preamplifier (1 MHz to 1 GHz)



AT-220 Antenna Tripod

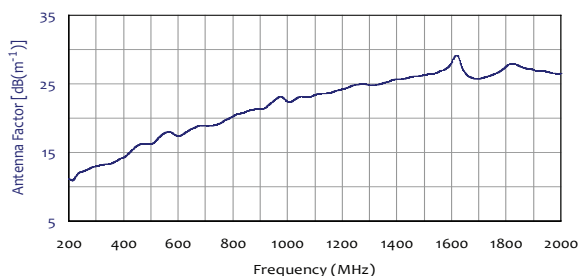


SPA-800 Spectrum Analyzer

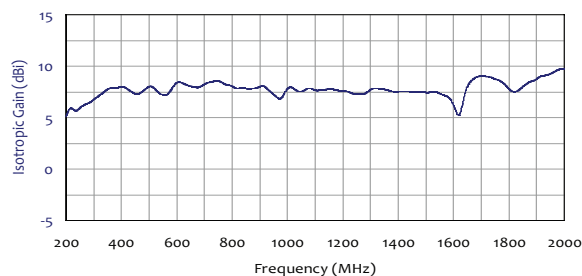
Also Available:

AH-826 Horn Antenna (18-26.5 GHz)
AHA-118A Active Horn Antenna (1-18 GHz)
AL-100, ALC-100, ALP-100 Log Periodic Antennas

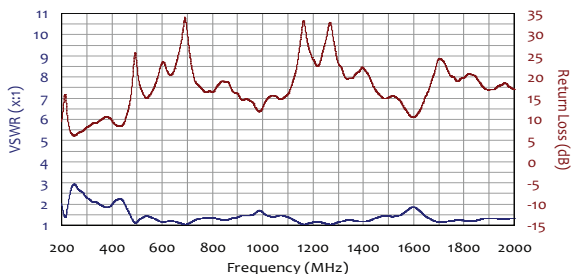
Antenna Factors



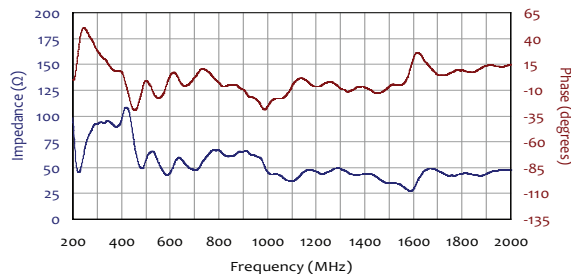
Isotropic Gain



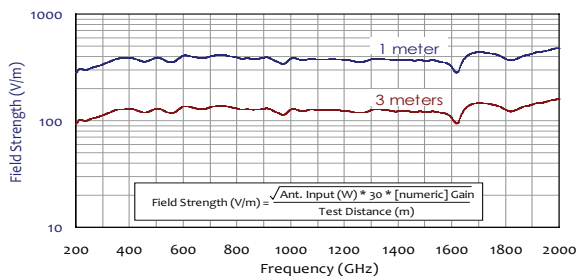
VSWR/Return Loss



Impedance/Phase



Field Strength with 800 Watts Input Power



Forward Power Levels

