

Features

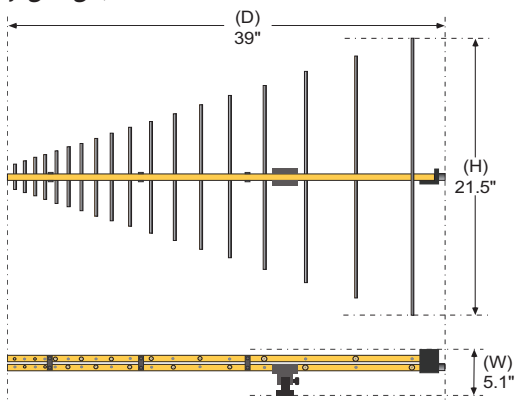
- **Frequency Range**
300 MHz to 1 GHz (useable from 200 MHz)
- **Transmit & Receive Capabilities**
emissions/immunity applications
- **Individual Calibration Included**
per ANSI C63.5 with NIST traceability

Description

The AL-100 is a broadband, linearly polarized Log Periodic Antenna Dipole Array (LPDA) Antenna, operating over the frequency range of 200 MHz to 1 GHz; and with excellent efficiency between 300 MHz and 1 GHz. It can be used as either a receiving antenna or as a transmitting antenna.

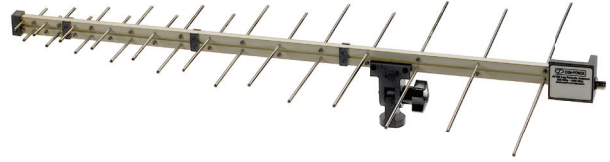
Construction

The AL-100 is designed to be extremely durable, making it an ideal choice for daily use in laboratory environments, both indoors and outdoors, and even under continuous exposure to extreme weather conditions. The antenna elements of the AL-100 are solid stainless steel. The “feeder tubes”, to which the elements are attached, are constructed from a heavy gauge, corrosion resistant aluminum.



Calibration

Each antenna is individually calibrated per ANSI C63.5 with NIST traceability. The calibration data and certificate is provided. Recognized ISO 17025 accredited calibration is also available upon request.



Application

The AL-100 Log Periodic Antenna is intended for use as an EMI test antenna for qualification-level regulatory compliance measurements (FCC, CE, RTCA DO-160, FDA, SAE Automotive, etc.).

The AL-100 can also be used in conjunction with an RF power amplifier (up to 50 watts) to generate RF fields associated with radiated immunity tests. For high power applications, Com-Power's **ALP-100 Power Log Periodic Antenna** is an excellent choice.

In addition, a pair of AL-100 Log Periodic Antennas can be used in lieu of dipole antennas for Normalized Site Attenuation (NSA) calibrations of Open Area Test Sites (OATS) or Semi-Anechoic Chambers (SAC); thereby avoiding the time-consuming process of tuning the dipole element lengths at each discrete frequency.

Notwithstanding the above applications, the AL-100 can also be used for test site comparisons, shielding effectiveness tests of large enclosures, field monitoring, site surveys and other general purposes.

Mounting

The mounting assembly for the the AL-100 incorporates a hinge mechanism to quickly and easily change the antenna polarization.

The assembly is equipped with a standard 1/4-inch x 20 mounting hole, which allows it to be affixed to Com-Power's **AT-812 Antenna Tripod**, **AM-400 Antenna Mast**, or any other similar structure with compatible mounting arrangements.

Specifications

Product Name	Log Periodic Antenna
Frequency Range	300 MHz to 1 GHz (useable from 200 MHz)
Polarization	Linear
Nominal Impedance	50Ω
Power Handling	50 Watts (continuous)
Connector	N-type (female)
Antenna Factor	12.3 to 23.2 (average: 18.8) [dB(m ⁻¹)]
Isotropic Gain	6.2 to 7.7 (average: 7.1) dBi
VSWR	1.03 to 1.89 (average: 1.24):1
Return Loss	10.2 to 35.5 (average: 21.3) dB
Radiated Field Strength	see graph below
Specifications	FCC, CISPR, EN, ETSI, FAA, MIL-STD-461, SAE, etc.
Dimensions (H x W x D)	21.5" x 5.1" x 39" [54.6 x 13 x 99.1 cm]
Weight	3 lbs. [1.4 kg]

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

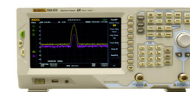
Accessories available from Com-Power:



PAM-103 Preamplifier



AT-812 Antenna Tripod

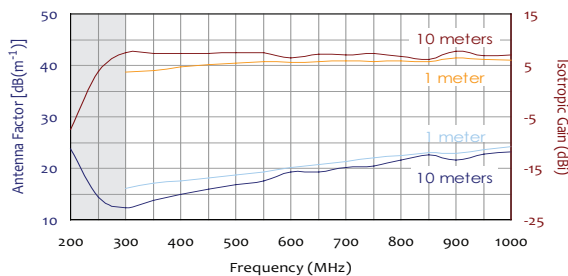


SPA-800 Spectrum Analyzer

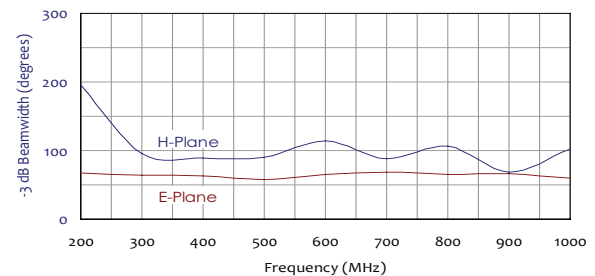
Also Available:

AB-900 Biconical Antenna
AM-741 Active Monopole Antenna
ALP-100 & ALC-100 Log Periodic Antennas

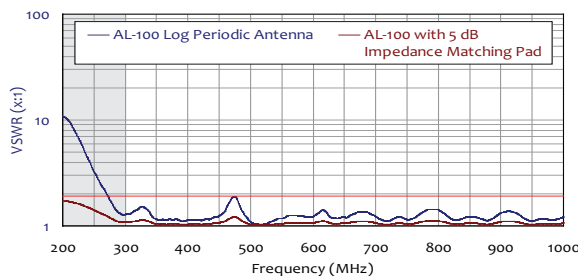
Antenna Factors / Isotropic Gain



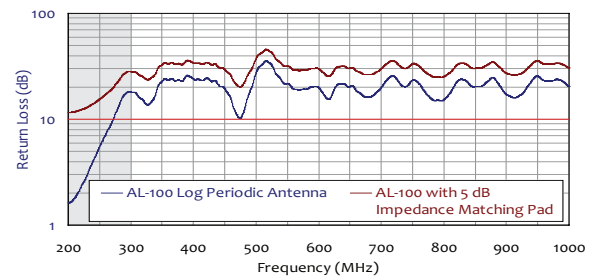
-3 dB [Half-Power] Beamwidth



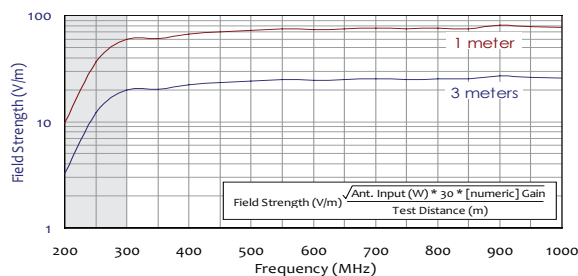
Voltage Standing Wave Ratio (VSWR)



Return Loss



Typical Field Strength with 50W Input Power



Typical Forward Power Levels

