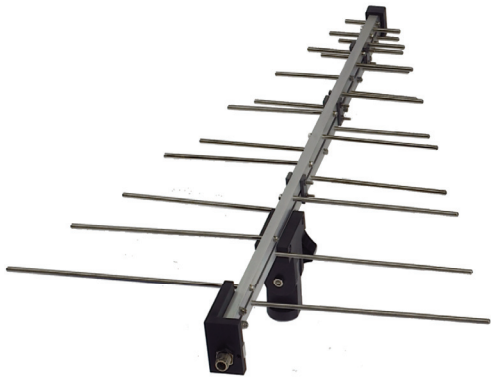
COM-POWER CORPORATION

Compact Log Periodic Antenna

ALC-100

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
- **Three-year Standard Warranty**

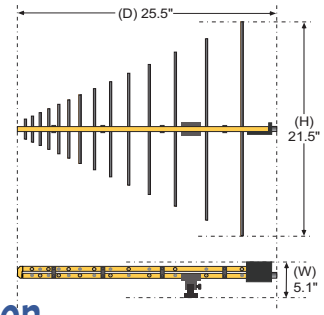


Description

The ALC-100 is a broadband, linearly polarized Log Periodic 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. This antenna is a compact version of the AL-100, in that the overall length of the antenna has been reduced by over 13 inches, with only a slight compromise in overall performance.

Construction

The construction of the ALC-100 is identical to that of the ***AL-100 Log Periodic****, in that it has been 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 are solid stainless steel, and the "feeder tubes" are constructed from the same heavy guage, 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 ALC-100 Compact 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 ALC-100 can also be used in conjunction with an RF power amplifier (up to 50 watts) to generate RF fields associated with RF immunity tests. For high power applications, Com-Power's ***ALP-100 Power Log Periodic Antenna*** *is an excellent choice.*

In addition, a pair of ALC-100 Compact 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 ALC-100 can also be used for site comparisons, shielding effectiveness tests of enclosures, field monitoring, site surveys and other general purposes.

Mounting

The mounting assembly for the the ALC-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.*

COM-POWER CORPORATION

Compact Log Periodic Antenna
ALC-100

Specifications

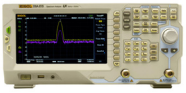
Product Name	**Compact Log Periodic Antenna**
Frequency Range	**300 MHz to 1 GHz** (useable from 200 MHz)
Polarization	**Linear**
Nominal Impedance	**50Ω**
Power Handling	**50 Watts** (continuous)
Connector	**N-type** (female)
Antenna Factor	***13.3*** *to* ***23.2*** *(average:* ***19.3****) [dB(m^{-1})]*
Isotropic Gain	***2.1*** *to* ***7.8*** *(average:* ***6.6****) dBi*
VSWR	***1.05*** *to* ***2.52*** *(average:* ***1.57****) :1*
Return Loss	***7.3*** *to* ***31.0*** *(average:* ***16.4****) 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 25.5"** [54.6 x 13 x 64.8 cm]
Weight	**2 lbs.** [0.9 kg]

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

Accessories available from Com-Power:

PAM-103 Preamplifier

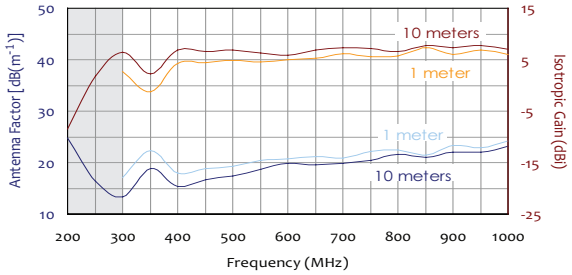
AT-812 Antenna Tripod



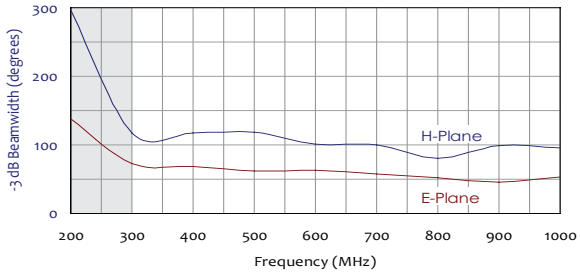
SPA-800 Spectrum Analyzer

Also Available:
AB-900 Biconical Antenna
AM-741 Active Monopole Antenna
ALP-100 & AL-100 Log Periodic Antennas

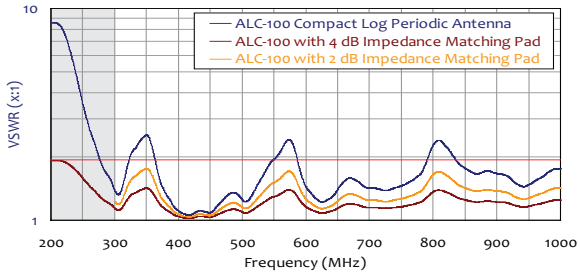
Antenna Factors / Isotropic Gain



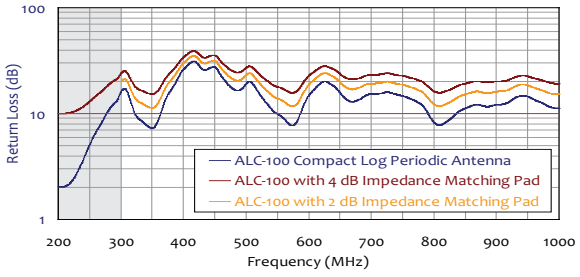
-3 dB [Half-Power] Beamwidth



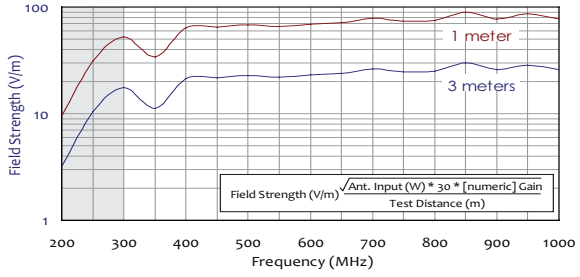
Voltage Standing Wave Ratio (VSWR)



Return Loss



Typical Field Strength with 50W Input Power



Typical Forward Power Levels