

## Features

- Quick, Pre-Test Site Validations
- Wide Frequency Range  
1 MHz to 1.5 GHz
- Battery Operated - Extended Battery Life  
operates >18 hours per charge
- Automatic Low-Battery Voltage Shut-off
- Stable RF Output
- Three-Year Warranty

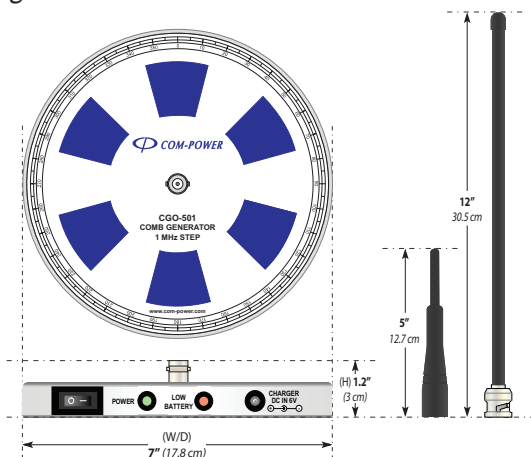
## Description

The **CGO-501** Comb Generator is a radiated and conducted reference signal source for the frequency range of 1 MHz to 1.5 GHz, at 1 MHz intervals. It is compact, lightweight, easy to operate. The comb generator is provided with one 12-inch antenna for frequencies up to 425 MHz, and one 5-inch antenna for higher frequencies.

The **CGO-501** is designed to operate on battery power in order to reduce the potential for unwanted reflections caused by external cabling. When fully charged, the internal battery pack allows for continuous operation of the Comb Generator for up to 18 hours.

In addition to the 'Low Battery' indicator, the generator also employs an auto-shut-off feature which disables the generator output before the battery voltage drops to the point at which the generator's output could start to change or become unstable.

The **CGO-501** is provided with a custom carrying case which houses the generator, both antennas, and battery charger.



## Application

Radiated emissions measurements for EMC are usually performed on an Open Area Test Site (OATS), Semi-anechoic Chamber (SAC) or Fully-anechoic Chamber (FAC). These test sites are typically calibrated annually or semi-annually by performing Normalized Site Attenuation (NSA) and Site<sub>VSWR</sub> calibrations. Tedious and time-consuming to say the least, these calibrations can take several days.

Successful completion of the site calibrations provides a high degree of confidence that your site is in proper working order. But what if the calibration results indicate a problem? How long ago did the problem occur? Or, what if a problem occurs after the calibration? An underground cable becomes compromised. A connector no longer makes a connection. The gain of your preamplifier changes. How would you know? Without regular site checks, daily or otherwise; to a large degree, you're flying blind.

Using a Com-Power Comb Generator, regular site checks can be performed in just a few minutes by taking readings on a few chosen output frequencies from the **CGO-501**, and comparing the values against your reference data. How many days, weeks or months of taking bad data could you easily avoid?

Employing the **CGO-501** Comb Generator for regular site checks is a cost-effective, efficient tool for ensuring the consistency and accuracy of your radiated measurement data.

The **CGO-501** can also be used as a signal source for insertion loss measurements of cables, attenuators, filters, etc., as well as test site comparisons.

## Specifications

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

Intended Application	<b>Radiated Reference Signal Source</b> (for OATS, SAC, FAC, etc.)
Frequency Range	<b>1 MHz to 1.5 GHz</b>
Frequency Step Size	<b>1 MHz</b>
Frequency Stability	<b>20 ppm</b>
Amplitude Stability	<b>± 0.1 dB</b>
Time Stability	<b>&lt;1 dB over 12 months</b>
Charging Adapter Output	<b>6 V<sub>DC</sub> (unregulated), 500 mA</b>
Battery Type	<b>6V NiMH, 1 Ah</b>
Battery Operation	<b>&gt;18 Hours Typical</b> (fully-charged battery)
External LED Indicators	<b>Battery Low, Power On</b>
Antenna Type	<b>(2) Monopoles (5-inch &amp; 12-inch)</b>
Generator Dimensions	<b>7 in. x 1.2 in.</b> (17.8 cm x 3 cm)
Weight	<b>1.5 lbs (0.7 kg)</b>

## Related items available from Com-Power:



**PAM-103 Preamplifier (1-1000 MHz)**

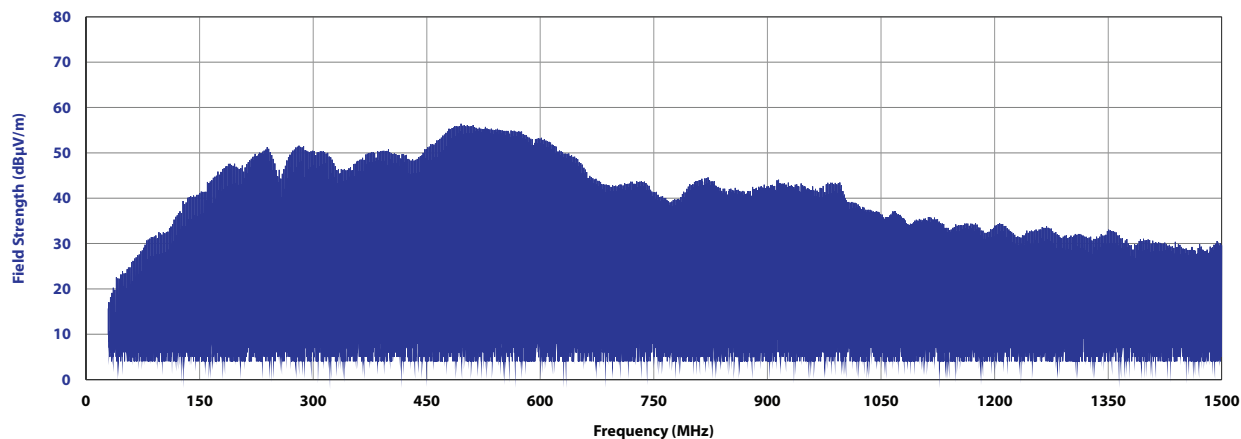


**CGC-255E Conducted Comb Generator**



**AHA-118 Active Horn Antenna (1-18 GHz)**

## Typical Radiated Output at 3-meter Distance (Antenna Height Fixed at 1 meter)



## Typical Direct (Conducted) Output

