

## Features

**Frequency range of 1 GHz to 18 GHz**

**Stable Frequency Output**

**Automatic Low Voltage Signal Shutoff**

**Battery Operated**

**Three-Year Warranty**



## Description

The CGO-5100B Comb Generator is a radiated reference signal source with a 100 MHz frequency step size. Unlike a signal generator, a Comb Generator radiates all the harmonics at the same time without tuning. The CGO-5100B has a frequency stability of 5 ppm and radiates signals up to 18 GHz.

This Comb Generators have a built-in antenna which is located on top of the circular chassis. The chassis shape helps the Comb Generator radiate the signal more uniformly in all directions in the horizontal plane. It can be turned on its side for vertical plane measurements, but is generally not recommended because of the influence of the ground plane on the radiation pattern.

The CGO-5100B is powered by rechargeable internal NimH batteries. Operating on battery power eliminates the need for external cabling that may interfere with the radiated signals. When fully charged, the battery allows continuous use of the Comb Generator for up to 18 hours. The Comb Generator and the charger are shipped with a custom storage/carrying case.

## Application

Most EMC laboratories calibrate their sites and test equipment annually. However, it is prudent to check the sites and test equipment more frequently to ensure the data taken on the site is accurate and consistent. The normal calibration methods are not practical for a quick check. The solution is to use a Comb Generator as reference signal source.

The test engineer can keep a regular log of Comb Generator measurement results. This data can be used to detect potential problems with site or equipment by monitoring for any significant changes. Using this method, costly measurements errors can be avoided. Without regular monitoring, a broken antenna, a bad cable, a blown preamplifier, or just a poor RF connection may go undetected. The Comb Generator can be also used compare several sites to determine the impact of the site on the test data.

Other applications for the Comb Generators include testing shielding effectiveness of an enclosure and materials.

## Specifications

<b>Intended Application</b>	EMI Radiated Site Reference Source
<b>Frequency Range</b>	1 GHz to 18 GHz
<b>Frequency Step Size</b>	100 MHz
<b>Frequency Stability</b>	5 ppm
<b>Amplitude Stability</b>	± 0.1 dB
<b>Time Stability</b>	<1 dB over 12 months
<b>Charger Output / Input</b>	6 VDC, 500 mA / 110VAC 60 Hz or 230 VAC 50 Hz
<b>Battery Type</b>	3.6V NiMH, 1 Ah
<b>Operating Time</b>	>18 Hours Typical With Fully Charged Battery
<b>External Indicators</b>	Battery Low and Power On
<b>Antenna Size</b>	Built-in Antenna
<b>Dimensions</b>	5.8 x 1 inches / 14.7 x 2.5 cm
<b>Weight</b>	1 lbs / 0.5 kg
<b>Polarization</b>	Vertical and Horizontal

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

### Typical Field Strength at 3-meters Distance - Antenna Height Fixed @ 1 meter

