

## Features

**Reference Signal Source for LISNs**

**User-Selectable Step Sizes of 100 and 500 kHz**

**Usable Frequency Range up to 115 MHz**

**Battery Operated**

**One-Year Warranty**



## Description

The CGC-510E Comb Generator is a conducted reference signal source for verification of conducted emissions measurement systems. The Comb generator output has the harmonics of the fundamental frequency. It has two user selectable frequency step sizes of 100 kHz and 500 kHz.

This Comb Generator simulates an EUT generating conducted EMI noise. The CGC-series Comb Generators have the standard NEMA 15-P three-prong connector that can plug directly into any LISN with a compatible power socket. It can be attached to any other socket type using a suitable adapter. The CGC-510E has high impedance to the external line voltage, AC or DC up to 230V. This feature allows the Comb Generator to be used while the LISN is connected to an external power source.

The CGC-510E is powered by rechargeable internal NiMH batteries. The battery power eliminates the need for an external cabling. 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

The main application of the CGC-510E Comb Generator is to quickly verify conducted emissions test setups. It is designed to plug directly into the EUT power socket of an LISN. The conducted noise output level of the Comb Generators are close to or above the CISPR 22 limits. Typical output plots are shown on the next page.

Most EMI labs typically calibrate LISNs and other equipment (spectrum analyzers, cables, connectors, etc.) in the conducted emissions test setup at regular intervals. However, test equipment malfunctions may occur between any calibration interval and may go undetected until the next calibration. In the meantime, these malfunctions may produce erroneous test results. The time and resources lost due to these unforeseen errors can be avoided with the help of Comb Generator. With the Comb Generator, the test engineer will be able to quickly perform verification of the conducted measurement system prior to each test to assure accurate test results.

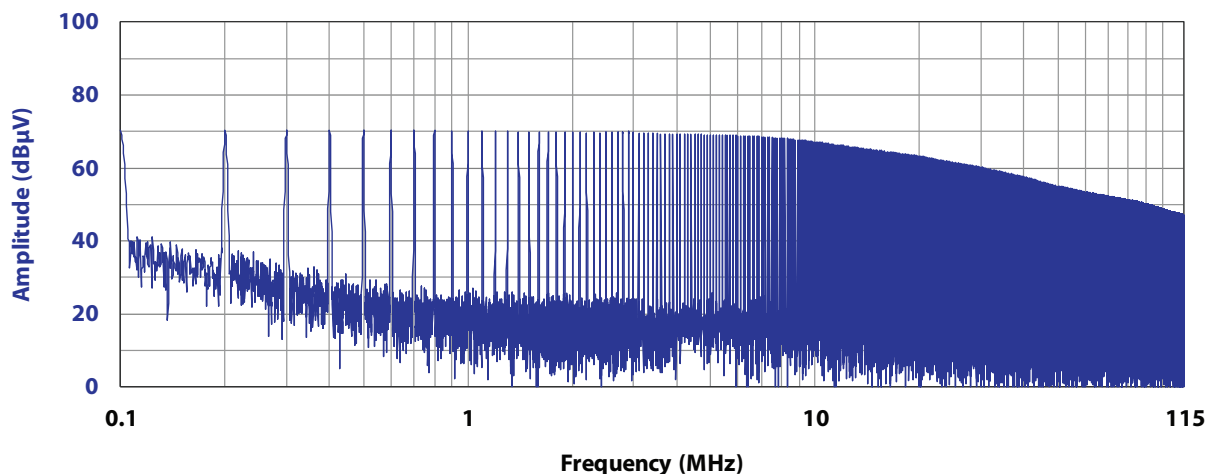
Other possible applications of the CGC-510E Comb Generator could include production evaluation of components, such as cable shields and filters.

## Specifications

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

<b>Intended Application</b>	Reference Signal Source for LISN verification
<b>Frequency Range</b>	100 kHz to 115 MHz
<b>Frequency Step Size</b>	100 kHz or 500 kHz ( <i>user-selectable</i> )
<b>Frequency Stability</b>	50 ppm
<b>Amplitude Stability</b>	$\pm 0.1$ dB
<b>Time Stability</b>	<1 dB over 12 months
<b>Charger Output / Input</b>	6 VDC ( <i>unregulated</i> ), 500 mA / 110VAC 60 Hz or 230 VAC 50 Hz
<b>Battery Type</b>	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>LISN Interface Plug</b>	NEMA 15-P type
<b>Dimensions</b>	5 x 2.2 x 2.2 inches / 13.2 x 5.9 x 5.9 cm
<b>Weight</b>	1 lbs / 0.45 kg

### Typical Output - 100 kHz Step Size



### Typical Output - 500 kHz Step Size

