

GL14

14 FUNCTION SINE WAVE GENERATOR

with

PHANTOM POWER INDICATOR

The compact design features a Microphone Level Output with 14 functions activated by a single push button. The internal amplifier in the GL14 utilizes phantom power from your XLR audio mic lines to generate the tone. It is easy to carry and easy to use and its' multiple functions will help you with the analysis and calibration of sound systems and will facilitate trouble shooting. The GL14 is a cost effective handy tool designed to optimize the performance of sound systems.

FEATURES:

Seven (7) Sine Waves: 100Hz, 250Hz, 315Hz, 400Hz, 1kHz, 2kHz, 10kHz

Seven (7) Specialty Functions: Low/High Sine, Delay Pulse, Cyclical Sine Waves, Cyclical Level 1kHz Test, 2kHz Pulse Test, Sweep Trace

Phantom Power Detection.

Output level - Unbalanced: 14mV (-37.1dBV) @ 1kHz; 21.4mV (-33.4dBV) @ 10kHz

Power Requirement: 12-48Vdc Phantom Power

I. SINE WAVE TESTS:

a. Phantom Power Test.

When the GL14 is plugged into a balanced line with phantom power, the red LED on the end of the XLR connector will light. If the LED does not light, turn on phantom power from your mixing console. This feature can be used to check floor jacks, consoles or cabling for phantom power.

b. 1kHz Test Tone.

The default mode when the GL14 is first plugged in is to generate a 1,000 Hz tone at microphone level. If plugged into a line level device, you may need to turn up the gain to hear the tone. The GL14 is not used for loudspeaker lines typically, as they are outputs and do not have phantom power.

c. Cycling through Sine Wave Tones.

Pressing the Red button on the side of the GL14 XLR Connector will cycle the GL14 through the sine wave tones. The default is 1kHz, followed by 2kHz, 10kHz, 100Hz, 250Hz, 315Hz and 400Hz. Each time you press the button, it will cycle to the next frequency. Individual tones are used as a quick test of loudspeakers in a cluster or array. 100Hz for subwoofers and for the Subwoofer crossover range, 250Hz and 400Hz for midrange and 1kHz, 2kHz and 10kHz for HF/tweeters.

II. SPECIALTY FEATURES:

a. Low/High Sine (40Hz/2,400Hz) {100Hz Feature Mode}

To enter the Low/High Sine test, Press the red button repeatedly to until the GL14 is in the 100Hz mode (lowest frequency). Hold the red button down for about 2 seconds. The GL14 will now generate two sine waves, 40Hz and 2.5kHz. The 2.5kHz will be 25dB lower in level than the 40Hz tone to protect the tweeters. The purpose of this test is to evaluate LFE/Subwoofers, and the 2.5kHz is a marker to confirm that the signal is being sent as it may be hard to hear the 40Hz on some audio systems. To Exit, press and hold the red button for about 2 seconds.

b. Delay Pulse {250Hz Feature Mode}

To enter the Delay Pulse mode, Press the red button repeatedly until the GL14 is producing 250Hz (2nd frequency). Now hold down the red button for about 2 seconds and the GL14 will enter the Delay Pulse mode. When setting digital delays it is useful to utilize a quick pulse of sound. Some engineers refer to this type of test as a "Click Test". When the delays are properly set you should hear one pulse. When delays are incorrectly set you will hear multiple pulses. This feature can also be used to check that gates are functioning and to evaluate effects. And, with a little practice you can teach yourself to recognize strong reflections from the room by listening to the decay of the pulse. To optimize the ability of your ears to discriminate, we use a pulse that is band limited to the 1kHz to 4kHz

range. The pulse will automatically cycle about every 10 seconds, or you can manually trigger the pulse by pressing the red button. To Exit, press and hold the red button for about 2 seconds.

c. Cyclical Sine Waves – {400Hz Feature Mode}

To enter the Cyclical Sine Wave mode, Press the red button repeatedly until the GL14 is producing 400Hz (4th frequency). Now hold down the red button for about 2 seconds and the GL14 will enter the Cyclical mode. This mode will sequentially produce all 7 of the sine waves from the basic mode, but will produce each one automatically without the need to press the red button to change frequencies. This mode is useful for confirming that all devices in a loudspeaker array are working.

d. Cyclical 1kHz Level Test. {1,000Hz Feature Mode}

To enter 1kHz Level Test mode, Press the red button repeatedly until the GL14 is producing 1,000Hz (5th frequency). Now hold down the red button for about 2 seconds and the GL14 will enter the 1kHz Level Test. In this mode the GL14 will produce four tones all at 1kHz, but varying in level by 20dB. When setting levels it is useful to be able to see a rapidly changing tone. The Cyclical mode cycles up and down in four steps over 20dB. This mode can be used to check clipping lights, gates, effects or can be recorded to sound tracks. To Exit, press and hold the red button for about 2 seconds.

e. 2kHz Pulse Mode. {2,000Hz Feature Mode}

To enter 2kHz Pulse Test mode, Press the red button repeatedly until the GL14 is producing 2,000Hz (6th frequency). Now hold down the red button for about 2 seconds and the GL14 will enter the 2kHz Pulse Test. In this mode the GL14 will produce a 2kHz pulse every second. To Exit, press and hold the red button for about 2 seconds.

f. Trace Mode. {10,000Hz Feature Mode}

To enter the Trace mode, Press the red button repeatedly until the GL14 is producing 10000Hz (7th frequency). Now hold down the red button for about 2 seconds and the GL14 will enter the trace mode. It is intended as an electrical test, and can be traced with a low cost inductive tester such as is used in the telephone industry. It can be used for acoustical testing, but please note that the tones sound somewhat similar to some fire alarm systems, so one must use care so as not to confuse building occupants. The tone is very easy to identify and can be useful when searching for defective loudspeakers in a distributed system. To Exit, press and hold the red button for about 2 seconds.

Exiting a mode by holding the red button down for two seconds or more will cause the GL14 to stop producing a tone until you release the button. It will then return to the frequency used to enter that Feature Mode.



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