

## ABOUT THE OFC-1

Thank you for your purchase of the OFC-1.

This sensitive and accurate tool allows you to identify and analyze pulsed light in the visible and near infra-red spectrum.

A growing number of people are suffering from eye fatigue, headaches and discomfort with computers, TVs, tablets, cell phones and modern indoor lighting.

New lights and display backlights are often pulsed on & off hundreds of times per second for brightness control. They "appear" to be a steady illumination, but they are actually flashing very quickly. These extreme pulses of light can be tiring and a source of discomfort for many.

The OFC-1 allows you to hear the sound of these light pulses and see their frequency in real time.

### Applications:

- ▶ identify problem light sources
- ▶ "hear" what your eyes are seeing
- ▶ measure the frequency of pulsed light
- ▶ TV, monitor, laptop display pulse width modulation (PWM) testing
- ▶ isolated frequency counting
- ▶ analog lightwave audio receiver

## OPERATION

To begin measuring, turn the power ON by rotating the volume control clockwise and set the range to Hz. Point the detector towards the light source that you wish to test. Adjust the volume of the speaker as needed. When the OFC-1 "sees" a unique pulsed signal, the display will "lock" to a fixed value. This number is the measured frequency in Hz or KHz depending on the range switch position.

If the display is showing a steady number of more than a few thousand Hz, switch the range to KHz for best stability and sensitivity.



## NOTES

In North America, many light sources will show "0120" in the Hz range, which is 120 Hz. This is normal for 60 Hz AC powering a light bulb because the light actually turns ON two times during each cycle of AC. In Europe, the display will show 100 Hz for a 50 Hz AC power source.

Steady (un-pulsed) light sources from a candle, natural sunlight, or a simple flashlight will cause the display to keep "searching" for a pulsed signal, and the speaker will emit a steady "hiss" sound with the volume at higher levels.

The OFC-1 is extremely sensitive to light. It can measure any light source that can be seen by the human eye. When using the OFC-1 in areas with lots of natural sunlight, the detector can become "de-sensed" from this bright ambient light. Move the detector closer to the light source, or take measurements in a darker environment.

If you hear sounds from the speaker, and the display is showing random numbers, try moving the detector closer to the light source. If the display is still showing these random values, the light source that you are measuring contains multiple pulse frequencies. Compact florescent bulbs and tubes emit many different frequencies of pulsed light at the same time.

Pulsed light frequencies above 15-20 KHz will not be heard through the speaker. They are ultrasonic, above the high frequency limits of human hearing.

Replace the battery when the display reads 0000.

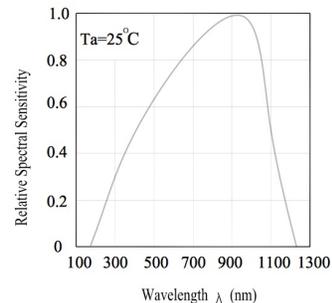
# OFC-1

Pulsed Optical Frequency Counter & Receiver

## Technical Specifications

Power Requirements	: 9V battery
Detector Sensitivity	: < 0.1 mW/cm <sup>2</sup>
Display Range	: 10 Hz to 100 KHz
Display Resolution	: 1 Hz or 10 Hz
Display Accuracy	: +/- 1%
Audio Power Output	: 500 mW
Dimensions	: 145x92x30 mm
Weight	: 200g (with battery)

## Spectral Responsivity



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Before using the OFC-1 for the first time, be sure to connect the included 9V battery.

Replace the battery when the display shows:



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## Operation Guide

