

What is a stroboscope and how to use one?

4/13/2015

By Jeff Myatt, Marketing Manager at Control Resources Inc

Stroboscopes are diagnostic inspection tools used to flash a high intensity light to create a stop motion effect on a moving part. The primary purpose is to measure the rotational speed (RPM) of a motor or fan when in operation at or above 300 revolutions per minute (RPM). The human eye won't interpret a stop motion effect below 300 RPM.

To measure the rotational speed (RPM) of a motor, the stroboscope must be able to see the full 360° rotation of a face on the part. The part should have some sort of marking that can be used as a reference point on the rotational face. Often a label or dot placed on the spindle of a fan or shaft of a motor will work. Assuming the stroboscope is capable of flashing within the range of the rotational speed of the product, known as the flash rate, you will be to adjust the stroboscope to make the reference point visible through stop motion. The flash rate is measured in flashes per minute (FPM). FPM is the equivalent to RPM. A FPM of 4X the true rotational speed will produce 4 reference points. A FPM of 3X produces 3 and 2X only two. By adjusting the flash rate down from the maximum setting, the reference point will eventually appear as a single viewable object. Once you see just one stationary reference point, the stroboscope is set to the true rotational speed (RPM) of the product. To confirm, divide the flash rate in half. You will still see a single image but the image will appear to phase or spin slow in the opposite direction.

[LabStrobe™ STB100-F](#) is a hand-held LED stroboscope. Its compact 4.9" X 2.8" X 1.3" size and battery (2 AA) operation makes it very portable. A six button membrane allows for easy and accurate flash rate and flash phase adjustments. The LabStrobe flash rate range is 20 to 20,000 FPM. The innovative microprocessor design and LUXEON LED technology incorporated into the **LabStrobe™** LED Stroboscope provides this pocket sized strobe with unparalleled brightness and battery life at this price point. An optional tripod is available. LabStrobe can be ordered directly from our website at <http://controlresources.com/labstrobe-handheld-digital-led-stroboscope/> (\$219.00 ea. – available now).

About Control Resources Inc:

Founded in 1984 and located in Littleton, MA, **Control Resources Inc** offers design and manufacturing services of microprocessor based and power electronics for original equipment manufacturers.

Applications:

- Irrigation Control
- Electronics Cooling
- Humidity Control
- Ventilation Systems
- Audio Amplifiers
- Radiant Heating
- Conveyor Belts
- Pressure Regulators
- Clean Room Pressurization
- Heating and Air Conditioning
- Equipment Rack Cooling
- LED Lighting
- Power Supplies
- Test Bench Equipment
- Motorized Lifts and Gates

11 Beaver Brook Road
Littleton, MA 01460
Tel: (978)-486-4160
Fax: (978)-486-4772

For more information about **Control Resources Inc** please visit www.controlresources.com or contact Jeff Myatt, Marketing Manager, at jmyatt@controlres.com.

###