

Micro-Mark #83432 Laser Guide

Instructions for Set Up and Use

Caution

Never look directly into the lens of the Laser Guide . . . the laser beam generated by this instrument could be hazardous to your eyesight.

Overview

Our Laser Guide projects a precisely aimed laser beam from the centerline of a drill chuck or milling machine collet. A highly focused red dot, projected by this beam on the surface at which it is aimed, is then used to optically align the chuck or collet with a workpiece or with another part of the machine, such as a tailstock spindle.

Energizing the Laser

3 batteries (enclosed in the barrel of the unit) power the laser. The laser is activated by turning in (clockwise) the small screw located on the tapered section of the barrel. The laser will now operate in a continuous mode until the screw is turned out (counterclockwise) and the laser turns off. Check for operation by pointing the lens at a surface about 4 inches away (do **NOT** look into the lens at any time), but please first review the next paragraph.

Power

If the laser is dim or will not operate at all, the batteries need installation or replacement. The battery compartment is located behind the black plastic cover on the side of the barrel. Pry off this cover. If the batteries have a protective strip that keeps them from making contact during shipment, remove the strip. To replace the batteries, install a fresh stack of 3 cells (LR44 or equivalent), making sure that the positive (+) sides all face the shank end of the barrel. Replace the cover.

Beam Alignment

For the instrument to perform properly, you will need to align the beam to the shank of the barrel. This is easily accomplished by the following procedure:

1. Install the shank of the Laser Guide in the chuck or collet of your machine tool. Secure it as you would a drill bit or other cutter with a 1/4" shank. **Do NOT power up the machine whenever the Laser Guide is installed.**
2. Position the drill press table or a piece of card stock about 4 inches away from the lens of the Laser Guide to act as a surface plate. Energize the laser.
3. Focus the lens to obtain a tiny, clear red dot on the surface. Do this by loosening the knurled lock ring surrounding the lens and, with the wrench provided, rotating the hex-shaped lens mount back-and-forth until a clear dot is obtained. Tighten the knurled lock ring and check the focus. Repeat as many times as required to retain sharp focus.
4. By hand, rotate the machine spindle and note the movement of the dot. Adjust the three thumbscrews located on the outside of the barrel in and out to shift the lens until the dot does not change position on the surface plate when the spindle is rotated. Gently tighten the thumbscrews to hold the lens in this position. The beam is now aligned with the axis of rotation of the spindle.

How to Use the Laser Guide to Set Up Machine Tools

To accurately locate a workpiece in a drill press, install the Laser Guide in the drill chuck and energize the beam. Place the workpiece under the spindle and locate it so that the red dot is located exactly at the spot you wish to drill a hole. **Clamp the workpiece in this position, then turn off the beam and remove the Laser Guide.** Install a drill bit and drill the hole.

To locate the edge of a workpiece, as may be needed in a milling machine, install the Laser Guide as above. Secure the workpiece to the milling table. Locate the milling table so that the laser beam is split by the edge of the workpiece. You will observe this when the laser beam appears as a thin line down the edge of the workpiece.

Note: To improve the visibility of the red dot, darken the surface with a black ink marker.

For technical assistance, call Micro-Mark Technical Service at 908-464-1094, Monday through Friday, 1 pm to 5 pm Eastern Time.