

# Turning Depth Finder

## A useful tool for your shop – easily made

Have you ever turned a piece which you were really pleased with, only to discover that at the very end, you cut a little too deep at the bottom, and wound up with a hole? Most every turner has had this disheartening experience. Especially if the turning blank was cocobolo, olive wood, ebony, or the like, the consequences - emotional, physical, and financial are best not even discussed!

Here's a great little gadget made by *Steve Duncan* from *Don Geiger's* design that can make that problem disappear. To make it, you'll need some  $\frac{3}{4}$ " plywood,  $\frac{1}{2}$ " copper tubing, and  $\frac{1}{2}$ " tubing tee, elbow, and end cap -presoldered - available at Home Depot. Also, an electric box cover with a  $\frac{1}{2}$ " threaded center, a  $\frac{1}{2}$ " pipe thread to  $\frac{1}{2}$ " tubing adapter, and a penlight laser pointer, available at an office supply store.

The assembly is shown in figures 1 and 2. Figure 3 shows the unit in use – note the laser beam dot.

The laser is held in a wood holder made of square stock. A hole is drilled in the stock at right angles to the stock axis to match the diameter of the laser penlight. A dowel end is turned to make a snug fit into the tubing. The height of the laser is set to clear any steady rest which you might use. The height of the depth probe (center horizontal arm) is located to match your lathe center height by holding it in a chuck while marking the vertical tube for the location of the center of the tee.

The length of the depth probe in *Steve's* model is 18", allowing a deep hollowed piece of that depth maximum to be measured. All fittings are soldered, (only needing heat and tube precleaning), except the vertical tubing entry into the pipe thread to tubing adapter at the base. This permits the depth finder to be rotated as needed relative to the work piece. For the final assembly, the laser is turned on, and the wood holder slid to a position so that the beam strikes the end of the depth probe. It is then fastened in place with epoxy or CA glue.

The dimensions of the plywood pieces are 6"x10" and 2  $\frac{1}{4}$ " x 10" to suit *Steve's* 3520 Powermatic lathe. These dimensions should be altered to suit your lathe bed and center slot.

Figure 1

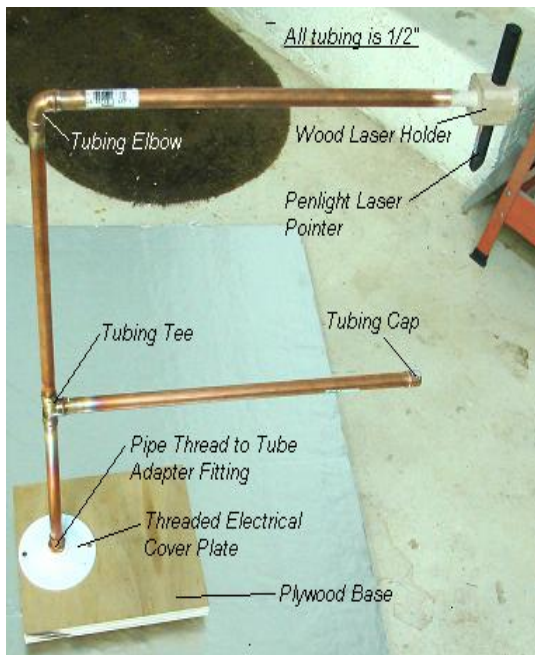


Figure 2

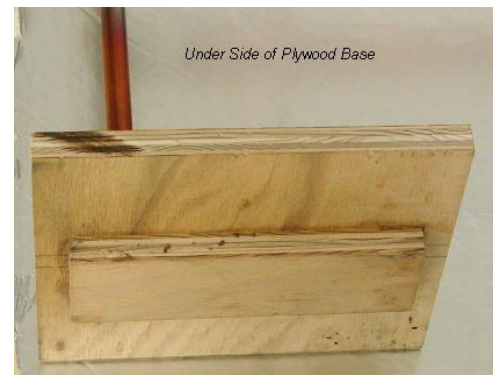


Figure 3

