

TOOL REVIEW: CORING WITH THE MONSTER LASER GUIDE

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INTRODUCTION: If you're a bowl turner and have had your hands on a particularly good or expensive piece of wood, then you've probably given some thought to coring. Coring makes maximum use of a blank, putting fewer shavings on the floor and more wood in the gallery. A number of coring devices are on the market, each with its supporters and detractors, but many turners, including myself, use the McNaughton system because of its assortment of knives and the variety of bowl profiles these knives make possible. The down side to the McNaughton is all that flexibility in profiles also gives you the opportunity to core through the bottom or side of your blank. After performing that ritual one too many times, I decided to look into a laser guide to mount on the McNaughton tool to alert me to the whereabouts of the cutting tip.

Woodturners are an ingenious lot, and there are a number of do-it-yourself plans out there on the web for laser guides. However, turners who build these systems report two chronic issues. First, coring produces an abundance of vibration, and building a system sturdy enough to maintain a steady, focused beam can be challenging, at least without resorting to metal work. Second, commonly available lasers (such as those from pet stores or office supply places) have a short lifespan at the tip of a coring tool, probably also due to those vibrations. These considerations led me to the Monster Laser System II.

The Tool: The laser guide arrived in a collection of plastic bags. With the bags stripped away, the assortment of components looked like **Figure #1**. The basic package comes with a bracket to mount the guide on a 3/4-inch bar, fitting my Don Pencil hollowing system and a wide array of hollowing tools from other manufacturers. To fit the McNaughton system, I had to purchase an additional mounting bracket, and these are available in either 1.25 or 1.5 inch diameter configurations, depending on your version of the tool.

Monster Lathe Tools are manufactured by Randy Privett, a turner and machinist who has been making lathe tools for more than a decade, and manufacturing components for the Big Three automakers for many more years. His tools are individually made in his shop and he clearly takes pride in his products. I've never met Randy, but I was flattered that he thought I was smart enough to assemble the laser guide without directions (I later spoke to Randy and he assured me this was an oversight—tools are supposed to go out with basic directions, which Randy supplied via e-mail). His misplaced confidence sent me back to his website for another look at the assembled tool, and from there I had mine together in short order (**Figure #2**).

In addition to the mounting bracket, the laser guide arrives with a round “upright” bar with threads on one end for attaching to the mounting bracket. With the aid of a height collar/stop ring, the height of the laser above the cutting tool is infinitely adjustable up to about 12 inches. The 12-inch length of the rod limits the diameter of the blank that you

can core (or hollow) to 24 inches—not a concern on my 16-inch lathe. A machined block (“laser bar clamp”) functions as the attachment point for the laser bar, to which the industrial quality laser comes affixed. The length of the laser bar is also infinitely adjustable, allowing the user to pin-point the tip of the cutting tool, or at any desired offset from the tool’s cutting tip (Figure #3).

The overall quality of the Monster Laser System is excellent. All components are neatly machined with tight tolerances (0.0005 inches, according to Randy)—just what you want to withstand the abuse of coring. Many design elements reflect careful thought on Randy’s part, his own experience, and feedback from other turners. The upright bar is machined flat on one side to assure that the set screw in the height collar has a good surface to register against. The mounting bracket for the McNaughton tool is thick enough to be sturdy, but slim enough to fit between the two set screws for mounting knives in the McNaughton handle (Figure #4). This may seem like an obvious point, but how many tools have you tried to use that frustrated you to the edge of tears because they overlooked an equally small but critical design point?

Metal Meets Wood: With all the pieces of the puzzle in place and the McNaughton knife honed, I took the laser guide for a spin. I put a 12 x 6-inch Siberian elm blank in the chuck and calculated my odds. Siberian elm is one of my least favorite timbers and this piece had languished in the back of the wood shed for enough years that it was certain to be both abrasive (Siberian elm takes-up silica as it grows) *and* bone dry. If I went through the bottom of the blank I’d happily toss the evidence on the firewood pile and never mention the incident again. Without the laser guide I might attempt two cores from the interior of a blank this size. Mike Mahoney might not be impressed, but going for a third core would be a step up for me.

With the lathe in motion I turned on the laser and began my first cut (Figure #5). The red laser dot almost immediately began a journey of its own, swinging off to the left as my cut proceeded to the right. I had been concerned about adequately tightening the upright bar when I assembled the guide. I resisted the temptation to lock a pair of vice grips on the bar and risk scarring the metal. The concern was warranted, because the cutting vibrations, augmented by the leverage of the laser bar, quickly loosened the rod and sent the laser wandering. Shutting off the lathe and pondering my options, I re-examined the tool. I had come to believe that everything about the tool was there for a reason, and the mysterious hole through the upright bar had to have a practical purpose. Inserting one of the set’s Allen wrenches through the whole immediately gave me a handle for leverage and the torque I needed to adequately tighten the bar (Figure #6).

With the vertical rod properly tightened, coring proceeded much more to my expectations. As one might predict, the laser guide still transmits vibrations to the tip, and this is reflected in the movement of the laser dot. However, I found the amount of movement of the dot to be minimal—I’d estimate less than a quarter inch-- and that doesn’t inhibit the guide’s usefulness. In my hands, at least, coring dry wood remains a rough process and a high degree of precision is not needed. Randy has updated the laser

guide since my purchase, and the new units come with a stabilizer bar that adds rigidity to the laser bar.

Using the Monster Laser System I was able to get my three cores and retain the outer blank (Figure #7). Wall thicknesses ran to about 1/2 inch on the three largest blanks. I did cut the last blank a little deeper than I had planned, but not so thin I couldn't complete the outermost bowl. This was not the fault of the laser guide, but rather my focusing on the point of the McNaughton knife's entry into the blank, where it was attempting to bind, rather than on the location of the laser and the cutting tip.

Wrap-up: Could you use the Monster Laser System and still ruin a bowl? Sure. And I will, someday. But the guide is a vast improvement over blind coring. There are actually two ways to ruin a bowl during coring. The obvious one is to cut too deeply and go through the bottom of the outer and largest blank. The other one is to over-compensate and not cut deep enough, thereby going through the side or bottom of the core you're trying to liberate from the larger blank. With one light, the laser guide tells you where the tip of the tool is, but it is up to you to decide whether the location of the tip is off course.

In the case of the McNaughton tool, the trick with the laser guide is to match the McNaughton knife with the bowl profile you want, then maintain a consistent distance between the outside of the largest blank and the cutting tip. In other words, if you start your cut two inches in from the edge of the blank, use the outside edge of the blank for reference and try to maintain that two-inch offset all the way through your cut. In practice the outer profile of your largest blank may not be reproducible with any of the McNaughton knives, so your cutting path may have to deviate from the ideal. Like all facets of woodturning, results improve with experience!

At a little more than \$200 for the system I am using, the price tag may be a deterrent to some. My rationale is that I can recoup that cost in a two bowls *not* ruined by coring through the bottom—an easy objective with this system. You have to keep in mind too, that you are paying for a handmade tool, made in America, by a guy who picks up the phone when you have a question. Combined with the quality of the tool, these are attributes worth their cost.

SOURCES OF SUPPLY:

MONSTER LASER SYSTEM II:	\$159.95, plus shipping
McNAUGHTON CENTER SAVER LASER MOUNT:	\$39.95, plus shipping

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PHOTO NARRATION:

- Figure #1: The components of the Monster Laser System II and the McNaughton Mounting Bracket.
- Figure #2: The components assembled on the McNaughton tool.
- Figure #3: The cutting tip of the McNaughton knife with the Monster Laser aligned with the outside of the tip.
- Figure #4: The McNaughton Mounting Bracket fits neatly between the adjusting screws on the McNaughton handle.
- Figure #5: Making a cut with the system. Maintaining a consistent distance from the outside edge of the blank throughout the cut assures an efficient cut, and no lampshades.
- Figure #6: Oh, *that's* what that hole is for; proper tightening of the upright rod.
- Figure #7: Four bowls from a single 12 x 6 blank. If only it was something other than Siberian elm....