

Angle Finder For Crown Molding

by Tom O'Brien

I'm still cutting crown molding the old fashioned way — upside down and backwards, on the angle. Years ago, I was excited when the arrival of sliding compound-miter saws promised the ability to cut crown on the flat — until I learned the hard way that their miter and bevel presets (31.6 and 33.9 degrees, respectively) don't work all the



Figure 1. The Bosch Miter Finder gives a digital readout of any angle with $\frac{1}{10}$ -degree accuracy. A hold button freezes the display for blind measuring.

time. In fact, they're only accurate for crowns with a 38-degree "spring angle" (the angle at which crown molding "springs" out from the wall) and corners that are perfectly square. If you work on old houses, like I do, you either have to be some kind of math whiz or burn up a lot of time and material before you get the joints to fit.

Now I'm excited again because of a new digital protractor and angle finder. The most basic feature of the Bosch DWM40L Miter Finder will measure any angle to within $\frac{1}{10}$ of a degree (see Figure 1). Simply turn it on, hold it against a corner — or between a stair

rail and newel post — and you'll get a digital readout of the angle. You can read the LED display from either side; if you're measuring blind, you can press the hold button to freeze the reading.

But that's only the beginning. This tool's "killer app" is crown molding installation. All you have to do is enter the spring angle and measure the corner — the tool will calculate the miter and bevel settings necessary to cut accurate miters on the flat. I tested it myself using three types of crown, all with different spring angles. I worked on two outside corners — one (almost) square, the other acute — and the results were perfect "paint-grade" joints in every case. Tweaking the settings a bit or a light touch with a sander would have brought the quality up to stain-grade.

Basic Operation

Calculating miter settings using the Miter Finder is a simple, four-step process. If you know the crown's spring angle, you open the tool's legs until the correct angle is displayed, then push the BV/MT (Bevel/Miter) button (Figure 2). Next, you measure the angle of the corner and hit the same button again. A third push calculates the miter, and a fourth gives you the bevel.

Simplicity is this tool's weakness as well as its strength. There is no way to program the spring angle into memory, so you have to repeat these four steps for every corner. If I was doing production work, I'd definitely cut a scrap of wood for a spring angle jig.

If you don't know the spring angle, the manual describes how to measure it using the Miter Finder. I found the pro-



Figure 2. The Miter Finder compensates for out-of-square corners. After entering the crown molding spring angle, hold the tool against the corner (top). A push of a button displays the miter angle; another push displays the bevel. Test cuts produced perfect paint-grade joints (bottom).

cedure unwieldy, given the size of the tool. It was much easier to use a sliding T-bevel to transfer the angle from the crown to the Miter Finder. To maintain accuracy and consistency, I made sure the back of the crown was flat and checked the angle in a few different places on the molding.

Mediocre Spirit Level

Bosch's literature proclaims this to be three tools in one: an angle finder, a protractor, and a spirit level. I'm not smart enough to know the difference between an angle finder and a protractor, but I do know that if you think this tool is going to replace your Stabila, you will be disappointed. At best, the plumb and level vials were included as a convenience; at worst, they're just a sales gimmick. You can't see the vials clearly unless the tool's legs are opened, and then they can only be read from one side, the bottom, because the pivoting elbow protrudes slightly on the top. This leaves no way to check the tool against itself for accuracy, and it means you have to think too hard before you use it. There's also no 180-degree locking feature, so it can't be used as a straightedge. It's usefulness is limited to that of a 16-inch level.

The Miter Finder is definitely a specialty tool. It will be invaluable to crown molding installers and to anyone who needs to calculate angles; for everyone else, it's a curiosity. Retail price is \$99.95, including 4 AA batteries. Accessories include a protective case and a sliding leg extension for measuring corners that are shorter than the legs of the tool. 

TOOLBITS

Fiber-Cement Circ Blade

Cutting fiber-cement board usually means making lots of dust and wasting lots of blades. The *Magna Fiber-Cement Blade* reduces the dust problem with a four-diamond-tooth design that cuts larger chips. And because the teeth are diamond-tipped, the manufacturer claims that these blades will last up to 100 times longer than standard carbide blades. If that's true, they might be worth the \$125 suggested retail price.

Contact: Magna Industrial Tool Co., 101 S. 5th St., #2300, Louisville, KY 40202; 800/624-9044; www.vermontamerican.com.



Nylon-Coated Tape Measure

We've all seen how an old tape ends up with hard-to-read, rusted-up spots where the paint has worn off — that's if it doesn't break first. The blade on the *Ultralife* industrial grade tape measure has a nylon coating that supposedly protects against corrosion and abrasion. In addition, the manufacturer claims that a blade wiper built into the tape housing keeps out dirt and moisture. The 1-inch-wide blade has a stand-out of about 7 feet and is available in 16-, 25-, and 30-foot lengths (\$12-\$18). The tape will also

be marketed under Husky and Master Mechanic labels.

Contact: U.S. Tape Company, 217 River Ave., Patchogue, NY 11772; 516/289-0500.

Drill/Countersink/Driver All-In-One

Available with various Phillips and square-drive bits, the *Jack Rabbit* is a combination drill/countersink/driver tool. By eliminating the need to reChuck various bits for drilling holes, countersinking for plugs, and driving screws, the Jack Rabbit can save time and hassle. The tool works by drilling and countersinking in a single plunge. Then, the drill/countersink portion of the tool can be grasped and pulled off, exposing the standard 1/4-inch hex driver bit. Drill depth can be adjusted and the collar on the drill/countersink portion of the tool locks it into place for wobble-free use. The \$20 kit includes one drill bit and one driver bit along with the built-in 3/8-inch countersink.

Contact: Giffin Tec Inc., P.O. Box 4057, Boulder, CO 80306; 800/445-5969.



Dump Truck Insert

Fitting into 1/2-, 3/4-, and 1-ton full-size truck beds, the *Dump "E" Hydraulic Dump Body* converts a pickup into a dump. The electrically controlled twin-cylinder lift can be mounted inside the truck cab. The tailgate opens from either the top or bottom, and also has a center slide chute for filling a wheelbarrow. The hydraulic pump is built into the dump frame and is powered via a direct connection to the truck battery. At \$2,700, the Dump "E" seems like a cheap way to get two trucks out of one. The manufacturer claims that installation is "hassle-free."

Contact: Highway Equipment Co., 616 D Ave. NW, Cedar Rapids, IA 52405; 800/363-1771; www.highwayequipment.com.

