

Toolbox

DeWalt LaserChalkLine

by James Snow

As a cabinetmaker, I'm used to building things square, but when I go on site to install cabinets and trim, I also have to get them level and plumb. Square is pretty easy, but extending accurate plumb and level lines around the room is time-consuming when all you have to work with is a spirit level.

For years now I've been seeing all kinds of laser levels hit the market at different price points. I never could justify the cost of a big rotating laser level, and I didn't know enough about small self-leveling line lasers to feel comfortable buying one. But all that changed last fall, when I received a DeWalt DW087 LaserChalkLine to review.

The tool came in DeWalt's standard black-and-yellow plastic case. When I opened it up, I was pleased to find that the interior was molded so that the level and wall mounting bracket won't bounce around inside. The level is very compact — small enough to fit in the palm of your hand. It has a magnetic, built-in swiveling bracket that hangs from a nail or screw in the wall; the magnets are strong enough to hang the tool from a steel stud or a metal drywall corner bead, or from the steel face of the wall bracket that comes with the tool.

Modes of Operation

Although I looked at the owner's manual, I didn't really need to, because the controls are so simple they are self-explanatory. On the side of the tool are two on/off



buttons; press the left one and the device projects a horizontal (level) beam that is visible as a red line wherever it hits something. Press it again and the beam turns off. The right button, which works the same way, controls a vertical (plumb) beam. You can turn on the beams separately or use them simultaneously.

The LaserChalkLine is self-leveling and will project a steady beam as long as it's oriented to within 5 degrees of plumb and level. If the device can't level itself, it continues to project the beam but flashes to let you know it's not level. If you bump or move the tool while it's on, it takes only a second for the pendulum inside to stop swinging and for the beam to come to rest.

Level layout. The day after I received the DW087 I had an installation job, so I brought it to the job site and used it to create level layout lines for wall-mounted cabinets. I found the floor's high spot and, measuring up from

there, marked the wall where the top of the base cabinets would be. Next, I went to the other side of the room and used a screw to hang the laser's wall bracket from the wall at about the same elevation as the mark for the top of the cabinets. Then I used the magnets on the swivel to hang the laser from the

DeWalt DW087K* Specs

Power: 3 AA batteries

Battery life: 20 hours

Self-leveling range: up to 5 degrees

Accuracy level: +/- 1/8" over 30'

Accuracy plumb: +/- 1/4" over 30'

Size (L x W x H): 4³/₈" x 2³/₈" x 4¹/₂"

Weight (with batteries): 1.2 pounds

Street price: \$200

DeWalt Industrial Tool Co.

800/433-9258

www.dewalt.com



*Includes kit box, batteries, and wall bracket

bracket and turned on the level beam. It was clearly visible on the opposite wall, but slightly below the mark.

Fortunately, the steel plate on the bracket is tall enough that you can raise or lower the laser on it without moving the bracket. I slid the laser up until the beam hit the layout mark. At first I worried about the magnetic connection — that bumping the laser would move it off the mark — but the magnets are very strong; in fact, it takes some effort to move the laser on the bracket.

I was pleasantly surprised to find that even though it was a sunny day and the blinds were open, the laser line was easy to see. I installed all the base cabinets to the line and then, just to be sure everything was okay, I put my 8-foot level across the cabinets. The bubble said they were dead on.

After making a mark where the uppers would go, I moved the level higher up the wall and used it to project a level line for the cleat. Doing this with a laser was faster and easier than doing it with a level.

Plumb layout. Since the cabinet boxes were square and set to a level line, I knew the sides were plumb. Still, I wanted to check out the plumb function of the device, so I aimed the vertical beam at the edge of the cabinet. Sure enough, the red line aligned perfectly with the edge.

From that point on, I started using the laser to set head casings, wainscoting, and just about anything else I could find an excuse to apply it to. An electrician friend of mine took it to a commercial job; he stuck it to a metal stud at switch-box height and set all his boxes without ever having to pull out a tape.

DW087 vs. PLS2

I loaned the LaserChalkLine to a carpenter I know who has a PLS2 (see “Pacific Laser Systems PLS2,” *Toolbox*, 04/05), a popular laser that came out 15 years ago to help with ceiling tracks or any other thin material,

two before the DW087.

According to him, the lasers are similar in many ways. For example, both project plumb and level lines that are bright enough to see indoors but not outdoors in strong sunlight. Too much ambient light washes out the beams.

But there are differences, too, he said. The PLS2 is smaller and comes in a belt pouch, making it easier to keep with you all the time. Though twice as heavy and half again as large, the DeWalt is not so big that you can't stick it in a nail pouch or hook the built-in swivel over your belt, as you would with a tape measure's clip.

Wide-angle beams. The most important difference, however, is that the beams fan out from the DeWalt device at a wider angle than they do from the PLS2. Wide-angle beams make it possible to use a line level in very tight quarters.

If you butt the DeWalt to a wall and turn the plumb beam on, it'll project a faint line up the wall. But the line will be clearly visible on the ceiling above, for about 2 feet out from the corner. If you pull it 6 inches away from the wall, the beam will be clearly visible all the way up and about 3 feet out onto the ceiling. The PLS2, by contrast, won't project a beam to the top of an 8-foot wall unless it's a good 6 feet away from the wall.

The DeWalt's horizontal beam, too, fans out wider than the PLS2's, but the difference is not that great. If you put the PLS model 2 feet off the wall and turn on the level beam, it'll project a horizontal line about 6 feet long across the wall. Do the same with the DeWalt and the projected line will be a little over 8 feet long.

Other Features

Not only can the wall bracket that comes with this tool be hung from a nail or screwed to the wall — it can also be clipped onto the edge of a suspended ceiling track or any other thin material,



Two on/off buttons control the DW087, one for level lines and the other for plumb. In this photo, the horizontal beam is on and the magnets are holding the unit to the wall bracket, which hangs from a nail in the wall.



This laser is about 6 inches off the wall with the plumb beam on. The vertical line is visible all the way up the wall and about 2 feet out onto the ceiling above.

thanks to a built-in spring clamp.

Accuracy. According to DeWalt, the LaserChalkLine can level with an accuracy of plus or minus $\frac{1}{8}$ inch over 30 feet. It's less accurate for plumbing: plus or minus $\frac{1}{4}$ inch in 30 feet. That's fine for the size of room I work in, but you would not want to use the tool if you needed to project much longer lines with a high degree of accuracy.

The largest room I used it in was 30 feet across; I set a long run of wainscot paneling. When the work was done, I checked the panels with a spirit level.

The bubble was right between the lines.

Durability. Although I didn't have this tool long enough to determine how long it lasts, it struck me as very well-made. Toward the end of the trial, I intentionally dropped it several times onto wood and concrete surfaces from about 5 feet up. That's not how I normally treat tools, and I hated doing it, but I needed to find out what would happen if there was an accident. The laser worked just fine after the drop test; it was just as accurate as before.

Verdict

At the end of the trial period, the only question left was how I had ever gotten along without the LaserChalkLine. It did exactly what I needed it to do without any extra bells and whistles to get in the way.

If you need a level that is compact, simple, and affordable, you should consider this tool. I'll definitely be purchasing one in the very near future for my toolbox.

James Snow owns Snow's Custom Cabinetry in Hesperia, Calif.

Bosch 14.4-Volt Impactor Cordless Impact Driver

by Marc Shapiro

I like to think that I keep up with building trends and new tools, so I was surprised to find a whole new category of power tools that I was completely unaware of: cordless impact drivers. While they look a little like conventional cordless drill/drivers, these tools aren't for drilling. They're designed solely for driving screws and tightening bolts.

Like their larger cousin, the impact wrench, impact drivers use a rapidly rotating hammer and anvil inside the gearbox. The force created by the spinning hammer striking the anvil explains how a relatively low-voltage impact driver can produce more torque than an 18-volt cordless drill. That force is also what gives impact drivers their distinctive rat-a-tat sound.

To see if a cordless impact driver was any better at driving screws than my cordless drill, I recently tested Bosch's 14.4-volt Impactor for *JLC*. Like other cordless impact drivers, this tool doesn't start impacting immediately; the impacting

starts when increased resistance makes it necessary.

When I first got the Bosch, I hustled out to my shop and ran a few 3-inch screws into some framing lumber. They went in nicely, but not noticeably better than they would have with my cordless drill; the biggest difference was the racket the Bosch made.

At this point, I wasn't so sure I'd like my new tool. However, first impressions can be misleading, so I decided to use it on an upcoming deck project. I figured that driving hundreds of deck screws would be an ideal way of putting it to the test.

Specs

The 14.4-volt Impactor is a very compact unit, just 6½ inches from the collet to the rear end. It weighs only 4 pounds and, in terms of power, ranks about midway in a line that includes 9.6-, 12-, and 18-volt models.

Its collet accepts ¼-inch hex-shank bits, which is typical for impact drivers designed for general use. The collet works smoothly; it releases and accepts bits with a sliding ring, and holds them securely while allowing fast changes from one type to another.

The tool has a metal gear case and produces a maximum torque of 1,150 inch-pounds.

Features

Well-balanced and comfortable to use, the Impactor boasts some really nice features. One of my favorites is a spring-loaded belt clip that pops up when a pair of buttons are squeezed. When you don't need it, the clip—which mounts on either side of the tool—can be left tucked into its housing.

Another nifty feature is the LED light located just above the battery; it shines a beam directly on the bit and fastener.

Other perks are a bit-holder at the rear of the tool and a nice rubberized grip.

The kit model I tested came with two batteries and a plastic case with extra compartments for bits and fasteners.



Bosch 14.4-Volt Impactor, Model 23614

Weight: 4.0 pounds (including battery)

Maximum torque: 1,150 inch-pounds

Rpm: 0-2,800

Impact rate: 0-3,200 blows per minute

Width: 6½ inches

Bosch Tool Corp.
877/267-2499
www.boschtools.com

Toolbox | Bosch 14.4-Volt Impactor Cordless Impact Driver



The Impactor features a unique horseshoe-shaped belt clip (above) that attaches to either side of the tool. Made from reinforced plastic, it slides into its housing when unneeded. A yellow LED mounted above the battery (above right) illuminates the driver bit and fastener for better visibility in dark closets and basements.



Tests and Results

My deck design included a double 2x8 girder supported on 6x6 posts and triple joists around the perimeter. These built-up beams, I reasoned, would provide a real test of the Impactor's strength and stamina.

When the tool drove in the 2¹/₂-inch square-drive screws for my girder, I was struck by how easily it did so and by how much control the impact action gave me. The added control means that you can set or countersink screws exactly where you want them. In my case, I wanted to bury the heads, and the tool did so effortlessly.

My next test was with 3-inch screws and the triple joists. Again, driving the screws was effortless and comfortable, and I could depend on the tool to drive them all the way. I was even beginning to get used to the impact sound; there was a certain comfort in knowing that the extra power had kicked in.

Perhaps the most revealing test was with the 5-inch LedgerLok screws commonly used — as the name suggests — for attaching deck ledgers. I needed them for some tricky corners and joist intersections. Once more, the Impactor drove the fasteners home without pilot holes or splitting. What was amazing was how it applied so much torque to the bolt yet very little to my wrist and arm.

When I tried using my cordless drill for the same task, it completely stalled, with the LedgerLok halfway in.

The Verdict

I'm a fairly critical guy and hold my tools to a high standard, so I generally have at least one complaint with any new tool. But in this case, I have none. Zero. Zilch. In fact, the Impactor has become one of my favorite power tools.

With a case and two 2.0 amp-hour batteries, it sells for \$220.

Marc Shapiro is a general contractor; he owns Quality Woodwork Construction in Alexandria, Va.



At only 6¹/₂ inches wide, the Impactor fits in spaces too small for conventional cordless driver/drills. And with 1,150 inch-pounds of available torque, it can drive 5-inch fasteners into southern yellow pine without predrilling.

Mega Bulb for Mini Light. Believe it or not, the Mini MagLite just got even better, thanks to TerraLux's after-market accessories. The neatest item is the *MiniStar 2*, a replacement LED bulb that purportedly lasts for 100,000 hours; compared with MagLite's conventional incandescent bulbs, it increases battery life by six times and brightness by 10. Friends in the hvac business tell me the bulbs are well worth the \$30 price.

TerraLux, 866/498-1564, www.terraluxcorp.com.

Circle #16

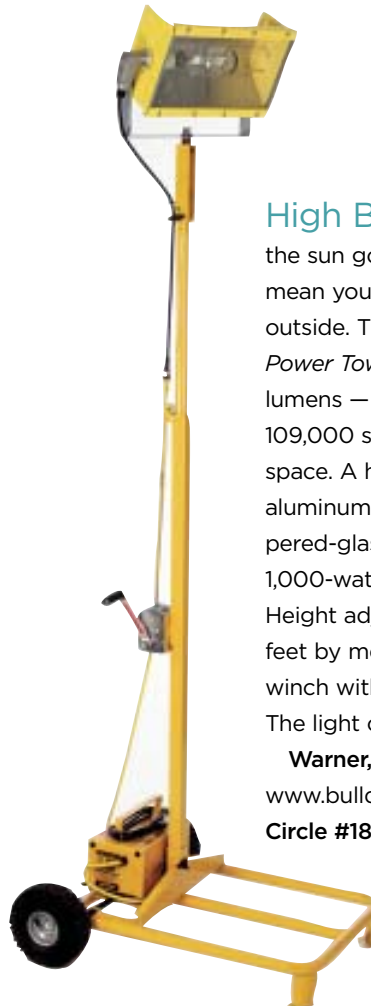


Pack-Powered Fluorescent.

Looking to upgrade the flash-light that came with your cordless combo kit? Check out the 18-volt *DC527* (shown) and the 12- to 14.4-volt *DC528* from DeWalt. These fluorescent work lights boast rotating and telescoping hooks that hang from 2-by stock, overmolded lens caps for durability, and a preheat function that prevents the bulb from blackening. DeWalt claims the 18-volt version (\$49) will burn for 3¹/₂ hours on a full charge and the 12/14.4-volt model (\$45) for 2³/₄ hours. Neither price includes a battery pack.

DeWalt, 800/433-9258, www.dewalt.com.

Circle #17



High Beam. Just because the sun goes down doesn't mean you have to stop working outside. The Bull Dog *P14000W Power Tower* produces 110,000 lumens — enough to brighten 109,000 square feet of outdoor space. A heat-dissipating cast-aluminum housing and a tempered-glass lens protect the 1,000-watt metal halide bulb. Height adjusts from 7 to 12¹/₂ feet by means of a manual winch with an automatic brake. The light costs about \$1,900.

Warner, 877/992-7637, www.bulldogpower.com.

Circle #18

Toolbox | Routers & Accessories

Power Horse. Don't let its small stature fool you: The 1-hp variable-speed Colt palm router from Bosch is much more than a laminate trimmer. This little tool can mortise hinges, profile edges, and perform many other common job-site tasks without breaking a sweat. The newest version of the router, the *Installers Kit Model PR20EVSNK* (\$265), includes fixed, tilting, and offset bases; edge and roller guides; and a plastic case. Its variable-speed motor adjusts from 16,000 to 35,000 rpm and features soft-start circuitry.

Bosch Tools, 877/267-2499, www.boschtools.com.

Circle #19



Bulletproof Bit Storage. Why keep hundreds of dollars' worth of router bits in a cardboard carton or makeshift container when you can buy the MTM Case-Gard R100 for less than \$12?

Originally designed to hold high-caliber ammunition for sport shooters, this polypropylene box makes a great router-bit case.

The holes are perfectly sized for 1/2-inch bits; with a little help from short pieces of vinyl hose, they'll accommodate 1/4-inch bits, too. The R100 is available from sporting-goods and firearms dealers or online from the manufacturer.

MTM Case-Gard, 800/543-0548, www.mtm-case-gard.com. **Circle #20**



Primo Plunge Base. Quite simply, the *Micro Fence Portable Three-Axis Mill* is a beautiful tool. The precision plunge-router base has a three-position depth stop, a four-position LED work light, dust-collection hoods, and micrometer-style adjustments. Optional accessories include a high-quality edge guide, a circle jig, and an ellipse jig. The tool accepts trim-router motors from Bosch, DeWalt, and Porter-Cable, and rotary tools from RotoZip, Dremel, and Proxxon. It sells for about \$400.

Micro Fence, 800/480-6427, www.microfence.com. **Circle #21**