

BY TIM UHLER

## Stabila Layout Station

**Accurate layout** is one of the most important elements in almost all construction tasks, including forming foundations, framing walls, hanging cabinets, setting tile ... the list goes on. I believe you should first master layout with a tape measure and construction calculator, but once you acquire and understand those traditional skills, there are faster ways to create a perfect layout. These days, laser levels make the tasks of finding level, plumb, square, and point-to-point alignment as simple as pressing a button.

There are a lot of laser level units on the market now that shoot plumb, level, and square lines and dots. But the square function typically only works on level surfaces. To shoot square with most laser units in an exterior setting, you need to use a receiver.

That requires moving the unit in small increments until the laser beam hits the detector dead center, which can be time consuming—in fact, sometimes pulling tapes is faster. However, the auto-alignment feature on the Stabila LA180L is the easiest option we've found yet for doing layout.

### KEY FEATURES AND FUNCTIONALITY

This goofy-looking laser shoots three plumb lines and one level line. Two of the plumb lines fan vertically 180 degrees from each other, and the third plumb line is perpendicular to them. There is also a plumb dot that shoots down and up, which helps align the laser when you're shooting square. Each of the lines pulse, so they can be used with any detector up to 328 feet away. But the LA180L also comes with a

special REC410 Line RF (radio frequency) receiver—and this is where this product gets interesting.

As with other layout lasers, you can adjust the unit until the receiver beeps, showing that you're aligned. The adjustable knob on the laser makes micro-adjustments easy. The standout feature with the RF receiver, though, is that when you press the receiver's cross-hairs button, the beam starts moving until it finds the receiver. This works very well—we checked it against a PLS, tape measures, and math, and found it to be perfectly accurate.

The range on the radio frequency is 150 feet. Beyond 150 feet, the receiver will still pick up the beams' pulse mode as long as you manually adjust the laser between 150 and 328 feet. I can manually adjust this



**Many lines, many functions.** The LA180L self-levels within 5 degrees, includes a 5/8-11 tripod mount, and can be affixed to a specialized saddle-type foundation bracket (sold separately for \$150). A control knob under the handle offers micro-adjustments for shooting square, but the unit can be auto-aligned with the REC410 Line RF receiver (included with the kit).

Photo: Tim Uhler

**A smart receiver and many lines.** The REC410 Line RF receiver (near right) communicates with the LA180L via radio frequency to auto-align it for square. A groove below the level vial shows the marking position. The unit projects plumb dots, two vertical plumb lines 180 degrees from each other, a third vertical plumb line for shooting square, and a level line. The lines all pulse to work with any receiver.



laser faster than the auto-alignment function can because I'm typically dealing with distances less than 60 feet on my jobsites. However, because the alignment feature is automatic, I can start the alignment process with the receiver, then go snap some other lines, roll out tools, and double-check numbers on the blueprints while the unit does its work. And with this unit, I don't need anyone's help setting up or establishing layout.

Once it's aligned, I can also use the up/down arrows on the receiver to move the laser. This is helpful when we are compensating for out-of-square conditions and want to quickly know how much an adjustment of one leg will affect the other. Here's an example: Sometimes, we have to adjust one side of the mudsill so that it will hang over the foundation wall. Ordinarily, we'd then have to re-square to find out how much this affects the other leg. At that point, we might find the other leg is too far out. But with this laser, I can check quickly without all the tapes, and so on; all I have to do is walk over and check each leg with the detector. There is no re-squaring, because the unit is always square and it instantly adjusts.

This laser also makes it easy to establish layout in basements with stepped walls. In addition, if we are framing partition walls, we don't need to snap lines; we can position

the laser and instantly have layout on the ceiling that directly matches the floor—without getting on a ladder.

As the general contractor, we always site in the footprint of the house after the lot is cleared so the excavator can dig the hole. This means we need two guys running three 300-foot-long tapes and one guy reading plans, calling numbers, and calculating square (and usually a boss, too, who makes the final decisions). Once we stake out the corners of the house, we nearly always make adjustments to how it is sited in, which means more measuring and running with tapes. With this laser, though, we can instantly get our largest square without running all three legs of a triangle. This means a process that is faster and less open to errors, with less aggravation. Because the laser will shoot level too, we can get rough ideas for elevation differences.

There are a couple of things about this laser that I found a little clunky. One is that while the shape of the laser makes it easier to fit into corners, it also makes the unit a bit cumbersome and awkward to place in some scenarios. It works best on a level surface plenty large enough for the base and is sometimes precarious on the edge of a stem wall foundation. Stabila does make brackets (\$150 each) for that application, but they add expense. The second quibble is that because

of the shape of the unit, it's awkward to handle when you're replacing batteries (it takes D Alkaline; a rechargeable battery kit is sold separately for \$100). It's easy to change them, but doing so puts the unit off balance, so you have to set it down gently.

Stabila has designed this unit for "long range layout," and the accuracy is excellent. Like most laser levels, it self-levels if it is within 5 degrees. Level accuracy is stated at  $\frac{3}{32}$  inch at 100 feet; line straightness at  $\frac{1}{8}$  inch at 100 feet (meaning there is little to no warping in the line); and plumb accuracy at  $\frac{3}{32}$  inch at 100 feet.

#### THE BOTTOM LINE

This kit sells on Amazon for \$1,500 (not including the foundation bracket or the rechargeable battery kit). If all I did was framing, I wouldn't bother, because I can lay out mudsills and partition walls quickly enough with other, less expensive units. But as a general contractor involved with the site layout, foundation forming, and all the framing, including multilevel decks, I can easily justify the purchase. For any company that does a lot of layout, I would recommend buying this laser.

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# Milwaukee Airsnake

BY CHRIS ERMIDES

**New cordless drain-cleaning options** available as of this month from Milwaukee include an 18V drum-style snake mounted as a backpack and a 12V porcelain auger system. The most interesting new offering, however, is a cordless drain cleaner that uses compressed air to blow out a drain clog. The concept of using compressed air for this task isn't new, but Milwaukee's is the first "air gun" on the market that's powered with batteries. The 12V Airsnake runs on one M12 compact battery and has an onboard compressor that blasts a burst of air up to 50 psi into the drain line once you pull the trigger. The company says that the air gun can reach clogs up to 35 feet away and works on drain lines ranging in diameter from 1 to 4 inches. It reportedly maintains pressure when blowing by a vent stack, as well.

At a media event, Milwaukee demonstrated the Airsnake on a clogged sink without removing the P-trap, which was mildly impressive (although you might want to evaluate the condition of other P-traps). This simple demo underscored the fact that there's no snake to get hung up in plumbing bends. The air gun can be equipped with plug-type attachments for use directly on the drain pipe, a sink attachment (so you don't have to remove the trap), and a toilet attachment. A 10-inch extension arm increases the working range of the gun up to 20 inches (the unit itself is 20 inches long), and a 15-degree offset adapter helps for tough-to-reach pipe access. Pressure can be dialed in, so you can fine-tune the power for more delicate pipe systems. The M12 Airsnake is available in two kits. The 2572A-21 kit (\$330) includes three drain-plug attachments (1 inch, 2 to 3 inches, and 3 to 4 inches), drain shroud for use in sinks, 15-degree offset connector, one 2.0-Ah battery, charger, and carrying case; the 2572B-21 kit (\$400) includes all that and adds a 10-inch extension arm and toilet-seal attachment. [milwaukeetool.com](http://milwaukeetool.com)

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## Klein Wire Stripper

Klein's K12055 Heavy Duty Wire Stripper is a cross between lineman's pliers and typical wire strippers. Most electricians carry both tools with them at all times, but this solution offers a nice alternative. Fewer tools in your pouch means less weight and less time putting one tool down to reach for another. The jaws have a wide face and deep knurls that are more common on traditional lineman's pliers. These make for a strong grip when grabbing and twisting wires, and they're wide enough to grab and twist up to three wires at a time. Unlike traditional lineman's pliers, the jaws taper slightly at the tip so you can loop wires with them, as well.

These pliers are made of a forged steel that Klein claims is four times stronger than that used in traditional strippers. You can feel that when gripping them—they're very stout. The blades are assembled with a hot-riveted joint that opens and closes smoothly. The stripping holes and cutting knives are induction-hardened, which is a noncontact method of electromagnetic heating that leaves the edges harder than the rest of the tool.

The pliers can cut and strip 10-18 AWG solid and 12-20 AWG stranded wire, as well as shear 6-32 and 8-32 screws. The cushion-grip handles lock and are spring-loaded, so you can keep them in whichever position you prefer (many electricians like them to always stay opened). The tool is manufactured in the U.S. and costs \$30. [kleintools.com](http://kleintools.com) —C.E.