



Electronic Tape Measures

by David Frane

No one thinks twice when they see electronic switches or controls on power tools. But hand tools are another story. Except for electronic levels and stud finders, hand tools are pretty much the way they've always been. Until now, that is. Recently, two companies introduced electronic tape measures, bringing high-tech to one of the most basic of hand tools.

Starrett's Digitape

The best-known example is Starrett Company's *Digitape*, an electronic tape that comes 16 or 25 feet long. I had a chance to use the 25-footer. Except for the digital display and mode buttons on top, it looks and feels the same as a standard tape. A series of black stripes run down the center of its inch-wide blade. When you extend or retract it, a sensor reads the stripes like a bar code. Measurements appear on the display, rounded to the nearest $1/16$ inch. A mode button allows you to measure and convert between inches, feet/inches, and centimeters.

Digitape's blade is marked with the usual graduations and stud centers, so you can use it the same way as a regular tape. But why spring for an expensive electronic tape, then use it manually? Well, for one thing, it's still faster to make outside measurements by simply reading off the blade. And anyone with

reasonably good vision can match or better the plus or minus $1/32$ -inch accuracy claimed for the digital readout.

But there's one situation where it's definitely faster and easier to read a digital display: when you're taking inside measurements. Measuring by eye, it's difficult to tell exactly where blade graduations are in relation to the edge of a tape's case. And once you have a number, you must remember to add the width of the case. It's easy to make math errors, especially if you get distracted or use an odd size tape.

This is where an electronic tape comes in handy. Set the inside/outside button on the *Digitape* to the inside mode and the length of the case is automatically added to the measurement. This makes taking inside measurements quick and relatively idiot proof.

Just above the blade-lock mechanism is a red button that's used to activate the tape's memory function. Pressing it freezes the current measurement on the display. According to the manual, this is useful for making measurements where it's too dark or cramped to read the tape. What I liked about it was that I could take a measurement, save it, and walk across the room to make the cut. I didn't have to write it down or worry about forgetting what the number was if I got interrupted.

Digitape's zeroing function allows you



High-tech tapes.

Starrett's Digitape (left) and Seiko's Protape (right) use electronic sensors to read the tape and display measurements on an LCD screen. Both tapes are only accurate to the nearest $1/16$ inch, but they take the guesswork out of inside measurements.

to lay off a number of precisely spaced marks without having to do math or move the end of the blade. At every mark, you hit a button, which turns the display back to zero. Extend the tape farther, and the distance from the previous mark is indicated on the display. This prevents the 1-inch mistakes when you "cut the one," or errors from trying to do the addition in your head as you measure from point to point to point.

Seiko's Protape

I also got to try out the *Protape* — a 16-foot model made by Seiko Instruments (the watch company). Protape has a large digital display and five mode buttons on the side of its case. Like the Starrett model, it measures and converts between inches, feet/inches, and metric. It too was accurate to the nearest $\frac{1}{16}$ inch (even after I took it apart).

Protape has an unusual blade. One edge is graduated in inches, feet/inches, and stud centers, while the other edge is marked off in metric denominations. There's a row of $\frac{1}{16}$ -inch-diameter holes down its center. An electronic sensor scans the holes and indicates measurements on the digital display. The metric markings on Seiko's tape are useful for laying out European hardware. But its graduations are harder to read than the ones on Digitape. Also, tapes with metric on one edge and imperial on the other are difficult to use because they don't let you read from both sides of the blade. Like most tradesmen, I'm used to reading a tape by looking down on it, so holding Protape so I could see it from the side felt awkward. And its spring-loaded blade-lock mechanism didn't have as much holding power as the clamping type on the Digitape.

The best thing about Protape is the way its memory works. It will store a particular measurement until you clear it. You can make subsequent measurements without losing the stored number. It can also store and total a series of measurements. This means you can do things like measure all the trim runs

in a room, and the tape will automatically total them up.

Digitape and Protape resist sawdust, but neither one should be used where they might get wet. I dropped both tapes a number of times. They continued to function, but it's obvious that Starrett's is more rugged. Its display and mode buttons are recessed into the case, so it would take a direct hit to smash them. Framers and guys roughing in mechanicals don't need the accuracy of electronic tapes, which is good, because they'd destroy either one in no time. Since they round to the nearest $\frac{1}{16}$ inch, neither tape is accurate enough for use in a cabinet shop. But I can see using these tapes for some interior finish work. They're useful for making interior measurements when trimming out closets and small rooms. I used Protape to measure scotia for a closed stringer stair. Many of the pieces came out a little short, but this may have been because I marked the actual cuts with another tape.

I'm told the Digitape sells like hotcakes to people who install replacement windows and do other jobs that require many inside measurements. Digitape's level of accuracy is more than sufficient for this, and you don't have to worry about making mistakes on all those inside measurements. The 25-foot Digitape and the 16-foot Protape both retail for around \$35. ■

Sources of Supply

L.S. Starrett Company
121 Crescent St.
Athol, MA 01331
508/249-5330

Seiko Instruments U.S.A. Inc.
Consumer Products Division
2990 W. Lomita Blvd.
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