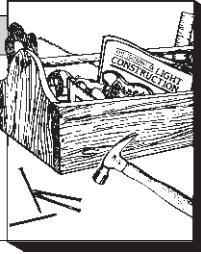


# Power-Packed Cordless Drills

by Clayton DeKorne



Porter-Cable and Black & Decker each have introduced new cordless drills with a lot more power than conventional models. The Porter-Cable model 850 Magnequench is powered by a 12-volt battery. The Black & Decker model 2661 Kodiak Holgun sports a big 13.2-volt battery. Each manufacturer takes a different approach to making a heavy-duty drill. Porter-Cable relies on a low speed, direct-drive motor with an adjustable clutch. Black & Decker eliminates the clutch and goes to a dual-range reduction gear driven by a high-rpm motor. This makes the Holgun a bit faster than the Magnequench, but the Porter-Cable is more efficient and will run longer. Both drills have an equal amount of torque, seemingly as much as most 120-volt plug-in drills.

## Field Tests

To evaluate these drills, I performed a couple of simple comparisons. To



*New cordless drills produce higher torque with higher voltage batteries. The Black & Decker Kodiak is driven by a 13.2-volt battery pack. The Porter-Cable Magnequench draws 12 volts.*

evaluate the torque of each one, I chucked both drills onto either end of the same length of hex stock. With the Porter-Cable in the "drill" position and the Black & Decker in the low-range setting, I ran them one against the other. They each stopped the other dead, indicating that they each develop an equal amount of torque. It's enough to drive 3-inch drywall screws and even 1/4x3-inch lag screws into pressure-treated 2x4s on edge.

To evaluate endurance, I drove as many 15/8-inch drywall screws as possible into several layers of CDX plywood. Here, the Porter-Cable outperformed the Black & Decker by almost 66%, driving in 350 screws on a single charge, compared to 211 for the Black & Decker. Since both manufacturers claim that the battery pack may take four or five complete charges before it will come up to full capacity, I was careful to run each battery down and charge it back up five times before beginning the tests.

Most of my testing was in the field, however. I carried both tools around for over a month, using them daily on remodeling and finish carpentry jobs. By the end, I preferred the Porter-Cable.

## Built to Last

The Porter-Cable model 850 drill is reasonably lightweight (4 1/2 pounds) and extremely well-balanced, making it comfortable to use. The drill is shorter than most low-voltage cordless

drills (8 1/2 inches along the handle), which makes it especially handy for getting inside cabinets. In fact, the tool is small enough to fit in its box with the battery and an extension bit in place. So when you open the box, it's ready to go. In addition to holding the charger, the box has a covered compartment to keep loose bits in. The box, only slightly larger than most drill cases, is made of a heavy gauge steel with riveted clasps and handles. It looks like it will last a lifetime.

## Brawn and Brains

The Black & Decker is no slouch for a cordless drill. It certainly doesn't lack power. Even though it doesn't run as long as the Porter-Cable, it runs longer than most other cordless drills. It is also very fast. The high-range setting runs up to 1,500 rpm, and the low range to 700. It is a good tool for heavy-duty production work, such as screwing down decking.

To adjust the torque, the Black & Decker drill has a dual-range reduction gear that resembles the transmission of a Model T Ford. To shift from high to low, a knob slides the drive gear from one ratio to another along a splined shaft. The knob is a bit sticky. You have to turn the chuck as you turn the knob to get the gears to mesh. But unlike the Model T, you shouldn't shift gears while the motor is running.

The drill combines this simple technology with a bit of modern electronics. The variable speed control uses a microprocessor to maintain the desired drill speed under load.

My main concern about the Black & Decker tool is its size. The tool weighs almost six pounds, which is a lot to hold up in one hand for an extended period of time. It's also nose heavy, due to the heavy-duty gearing in a cast aluminum housing. And it's almost 12 inches long, making it awkward to get into tight places. You also have to remove the battery from the handle to get the tool back in the case. And you can't keep a bit in the chuck. Thus, set-up time is longer than I'd like.

The Porter-Cable model 850 lists for \$230 but it can be bought for as low as \$129. With an extra battery, it can be obtained for \$162. The Black & Decker model 2661 lists for \$385 including an extra battery. The lowest I've seen it for is \$279. Unless you need the higher speed of the Black & Decker, I'd opt for the more compact Porter-Cable. ■