

Cordless Compound Miter Saws

by David Frane

About a year ago, I noticed a small Makita miter saw at the local lumberyard. It was a slide compound model with a 7 $\frac{1}{2}$ -inch blade. I didn't think it was anything special until I realized it was cordless.

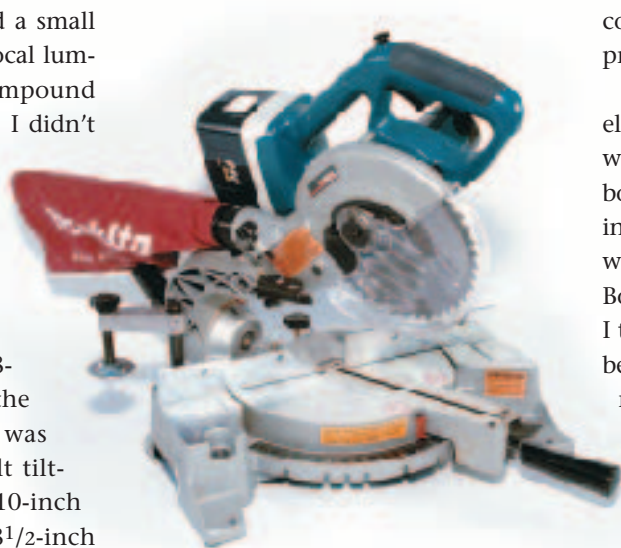
Recently, I got to try out two competing models. One was Makita's BLS712SFK, the 24-volt successor to the 18-volt machine I'd seen at the lumberyard. The other was Bosch's model 3924, a 24-volt tilting compound saw with a 10-inch blade. Makita also makes an 8 $\frac{1}{2}$ -inch tilting compound model, but with an 8 $\frac{1}{2}$ -inch blade it has much less capacity than either saw I tested.

I didn't expect much from these saws, because the whole idea of running a miter saw off a battery seemed crazy to me. But once I started using them, I was surprised how well they worked. Neither one is as powerful or will cut the same size stock as the average corded saw, but they cut well enough to be a legitimate choice for tradesmen who place a high value on being able to work without a cord.

Endurance

Cordless miter saws didn't happen sooner because batteries weren't up to running their power-hungry motors. But advances in cordless technology, especially batteries, have allowed manufacturers to produce cordless tools that were previously unthinkable.

Batteries and chargers. The amount of power a battery can hold is a function of its voltage and amp-hour rating. Voltage is determined by the type and number of cells in the battery pack. The amp-hour rating is a measure of how densely chemical energy can be packed into the individual cells. These days, most pro-grade tools have battery rat-



Makita's BLS712SFK is a slide compound saw with a 7 $\frac{1}{2}$ -inch blade. It can handle 1x8 stock but can't go thicker than 2 inches.

ings between 1.7 and 2.5 amp-hours. Most tools take nickel cadmium batteries (NiCad), but a couple of manufacturers have started using more advanced nickel metal hydride (NiMH) cells.

Both of the saws I tested use 24-volt batteries. Bosch's saw comes with a pair of 2.0-amp-hour NiCads, while Makita's comes with a single 3.0-amp-hour NiMH battery. The Bosch charger, which weighs just over a pound and is the size of a 5-pound box of nails, looks like any other charger. Makita's saw comes with an oversized fan-cooled charger that weighs around 4 pounds. The fancy charger is necessary because NiMH cells are particular about the way they get charged. According to the manufacturer, a memory chip in the charger interacts with the battery to maximize battery life. That's probably a good thing because spare batteries aren't cheap. The lowest price I found for a 24-volt Bosch battery was \$140. Makita's battery should retail for around \$180. Both batteries fit other

cordless tools in their manufacturers' product lines.

Run time. I was doing a small remodeling job when I got the saws. There wasn't a whole lot of trim to do, so both made it through without recharging. According to Makita, its machine will cut 314 2x4s on a single charge. Bosch says the 3924 will cut 140 1x6s. I tested the saws by counting the number of cuts they made in some dry 2x6 redwood that was kicking around my shop. The Bosch tool made 100 cuts, and the Makita made 120.

Standard moldings are much smaller than 2x6s, so you should be able to do a lot better cutting base, casing, and crown. Every job is different, but for many carpenters this should be enough cuts to go all day on a single charge.

Capacity

A sliding compound saw like Makita's is a different animal than a tilting model like Bosch's. A slide saw can make relatively wide cross cuts with a small-diameter blade. The only way for a tilting model to make wide cuts is to use a much larger blade. A larger blade also allows you to cut thicker stock.

Makita's saw can crosscut 1x8 stock, whereas 1x6 is the widest material the Bosch will do. This is a significant difference when you're cutting clapboards or oversized baseboard. The Makita saw will also miter 5 $\frac{1}{2}$ -inch-wide stock on the flat, which is handy when you're installing wide door casings. But the small, 7 $\frac{1}{2}$ -inch blade means it can't handle anything over 2 inches thick without cutting from both sides.

Because it has a 10-inch blade, the Bosch saw can cut all the way through a 4x4. And there's enough clearance to cut 4 $\frac{1}{2}$ -inch base or 4 $\frac{1}{4}$ -inch crown against the fence. The Makita can cut

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wide crown too, but it means making compound cuts with the stock flat on the table. Both methods work, so choosing one is a matter of personal preference. I'd rather stand the crown against the fence and make simple miter cuts because they're more intuitive and easier to tweak than compound cuts.

Power. Both cordless miter saws will make clean cuts in a variety of materials. I used them to cut pine, cherry, and maple trim. I also used them on 2x6 redwood. Although it's a subjective judgment, Bosch's saw feels like it has more power than Makita's. It cut faster, too. I think this is because it has a large blade that spins at 3,600 rpm. The Makita saw has a smaller blade that goes 2,300 rpm. The manufacturer told me that the lower speed produces higher torque so the blade doesn't slow down as much during cuts. In terms of accuracy and quality of cut, both saws were in the same ballpark as corded models.

Both saws are surprisingly light for tools that sport 3-pound batteries. The Makita is very compact and, at just over 24 pounds, easy to carry around a job site. Although the Bosch saw is larger, it's still only 30 pounds. The Makita saw comes in a sturdy, though somewhat bulky plastic case. The 3924 does not include a case, but a soft tote bag is available as an accessory.

One of my favorite things about the Makita saw is the depth stop on the tilt arm. It limits the maximum depth of cut in such a way that you can make dados by sliding the blade back



Bosch's 10-inch 3924 compound saw will cut a 4x4 but can't go wider than 1x6 on the flat or 4 1/2 inches against the fence.

and forth through the stock. The slide and pivot actions are especially smooth and clean. Everything about this tool looks and feels well made.

Bosch's saw also seems very well made. I like the detent override on the miter scale but wish the detent spring was a little less stiff. I cut a wide variety of materials, so I appreciate the ability to cut thick lumber and stand tall stock against the fence. If this saw had more power, using it would feel the same as using a corded model.

To Buy or Not?

I wouldn't want to depend on a cordless miter saw for all my cutting needs, but I could see having one as a second saw. I'd use the corded model for straight-ahead production work and for cutting oversized material. The cordless

saw would be reserved for special applications like punch work and small repair jobs. The most obvious benefit of going cordless is that it increases your mobility. But it also makes it easier to work near finished surfaces, because that dirty old cord with the metal junction box on it will be back in your truck where it can't hurt anything.

Considering what a cordless miter saw costs, I'd have to categorize it as a luxury item.

If I was in the market for a cordless miter saw, I'd probably give the nod to Bosch because I like being able to cut thick material and put crown against the fence. But if you need to cut wider material, you'd be better off with the Makita. The Bosch saw comes with two batteries and retails for less than \$500. Makita's saw comes with one battery and goes for around \$650.



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Manufacturers

Makita U.S.A

La Mirada, Calif.
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www.makitatools.com

S-B Power Tool

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