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- How-to photos with instructive captions.
- Tips to help you complete the project and become a better woodworker.

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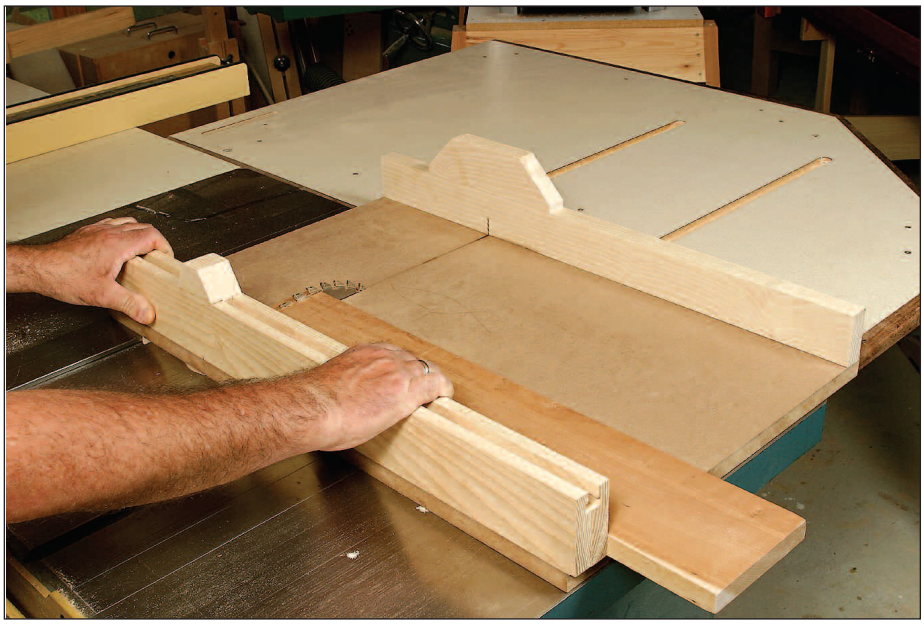
Crosscut Sled



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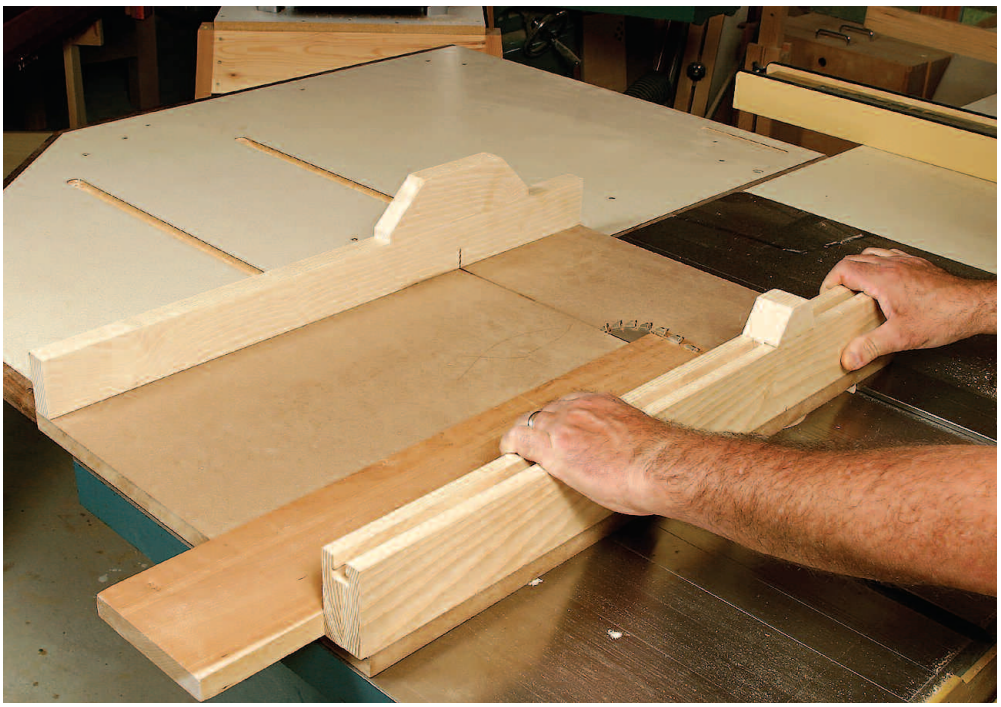


Table saws and crosscut sleds are a marriage made in heaven. A crosscut sled will add accuracy, ease of operation and safety to your work. Here's a great sled design you can build in a couple hours.

We all need a little help in the shop now and then. Sometimes it's just an extra pair of hands, but often what we need is a device of one sort or another that helps improve the accuracy of our work. That's when jigs come to the rescue, and the best of them tend to be the ones that are easy to build.

Even if you love your table saw, chances are the standard miter gauge that came with it sometimes disappoints. Most miter gauges just can't support workpieces longer than a couple feet for making accurate crosscuts. In these situations, a crosscut sled is the perfect solution. It cradles long workpieces and slides over the saw table along the saw's miter slots. A fence in back holds workpieces securely for dead-on crosscuts every time.

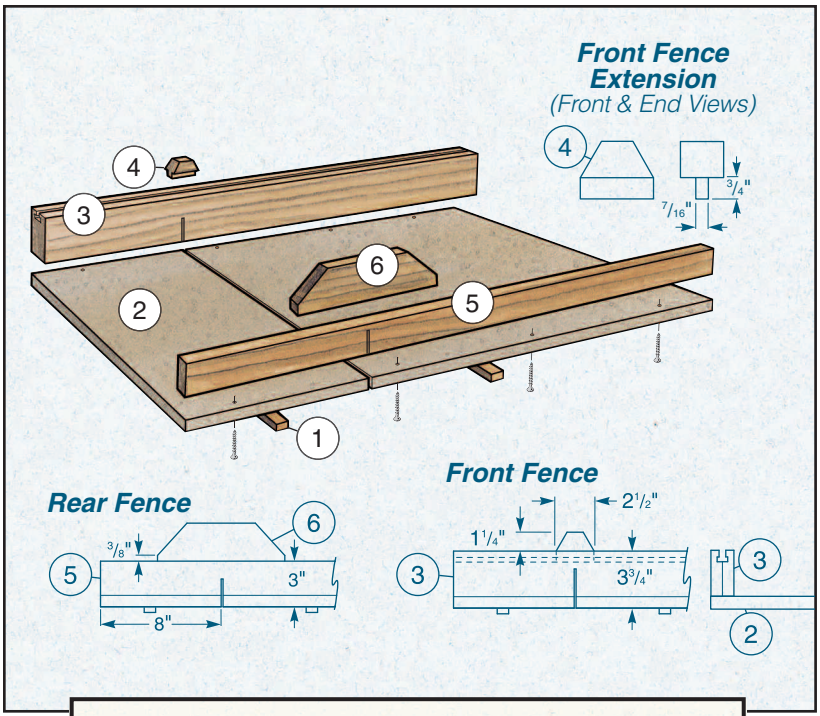
You'll run across many different crosscut sled designs in books and magazines, but this sled fulfills three important functions: It rides in both miter gauge slots instead of just one to keep it tracking accurately without slop. Second, it immobilizes the workpiece on a platform mounted to those slides, against a sturdy fence. And third, this sled isn't adjustable, so it won't get out of square. Here's how to build it.

Getting Started

Your first order of business is to rough out the two slides (pieces 1). They must be straight and made of stable stock. Quartersawn oak or hard maple make excellent slides, but be sure to use hardwood if you don't have either of these options in your scrap bin. You'll want to cut the slides to rough size, then let them acclimate for a day or two. Now rejoint and thickness them to final dimensions so the slides move along your saw's miter slots easily but without excess play.

While the slides settle, complete the machining of the base and fence parts (pieces 2 through 6). The back fence and its extension are straightforward, but the front subassembly is more involved; see the *Elevation Drawings*, next page. The extensions, which are glued into place later, reinforce the fences where the blade cuts through so they'll remain strong even when you cut through them with your blade at full height.

Next, drill four or five counterbores and pilot holes in each slide and install the slides on the base as shown in the first



MATERIAL LIST Crosscut Sled

		T x W x L
1	Slides (2)	¾" x ⅜" x 18"
2	Base (1)	¾" x 18" x 28"
3	Front Fence (2)	¾" x 3" x 28"
4	Front Fence Extension (1)	1½" x 2" x 2½"
5	Rear Fence (1)	1" x 2¼" x 28"
6	Rear Fence Extension (1)	1" x 2½" x 8⅜"

two photos below. You need to do this with the slides fitted in the miter slots.

Before mounting the fences, switch on the saw and raise the blade up through the base about midway across its width. Don't split the base yet; the blade is needed to square the front fence, as shown in the right photo, below. Drive a mounting screw up through the base into the end of the fence closest to the blade. Use this as a pivot while you align the fence to the blade with a square. Drill an oversized pilot for a screw at the far end of the fence and secure the fence. Now make a test crosscut with the sled on a piece of scrap and check the scrap for square. Tweak the fence position as needed and make additional test cuts until the sled fence is perfectly square to the blade. Then secure the fence to the base with additional countersunk screws.

The rear fence doesn't need to be exactly square. Just screw it to the base along the opposite edge. Use glue and clamps to install the extensions. Apply some paste wax to the slides, and you are ready to let that puny miter gauge gather some dust for awhile.

1. After tacking the slides from above (inset), slide the assembly partway off the saw table to drive screws up through the slides into the base. Do a couple of screws at the back of the saw, then repeat the process at the front.

2. Carefully raise the blade through the sled's base. This provides a reference with which to square the front fence. An absolutely 90° relationship between the blade and fence is essential, or the jig will never yield accurate cuts.

3. When you're ready to attach the fence, start with a single screw (on the fence end closest to the saw blade). This provides a pivot point as you adjust the other end of the fence to a perfect 90°.