



don't find on most people's sleds: First, you can square it to the blade and recalibrate it when necessary (such as when you drop the jig or your saw's settings change). Most sleds don't have this feature and need to be trashed when they eventually become inaccurate.

Second, there's a replaceable zero-clearance face on the jig's fence that makes cutting to a line a snap. All you do is mark directly on your work where you want to make your cut. Then you line up that line with the edge of your zero-clearance fence face and make the cut.

Third, we've added a couple tricks to that replaceable fence face that will help hold your work in place as you make your crosscut. The fence face is covered in adhesive-backed sandpaper, plus there are a couple nail points sticking out 1/3 2" from the fence to grip your work. Don't get too worried about the freckle-sized dimples left by these nails. If you're crosscutting plywood (a common chore), the holes will be covered by your edge tape or banding. If you're using solid wood, you can simply plane or sand the holes away or, for example, make sure they end up on the back edge of your cabinet sides.

Finally, this jig is quick and cheap to make. We spent \$22 on wood and hardware. (And, with the exception of the miter bar, we had enough stuff left over to build a second sled.) Construction time was three hours flat.

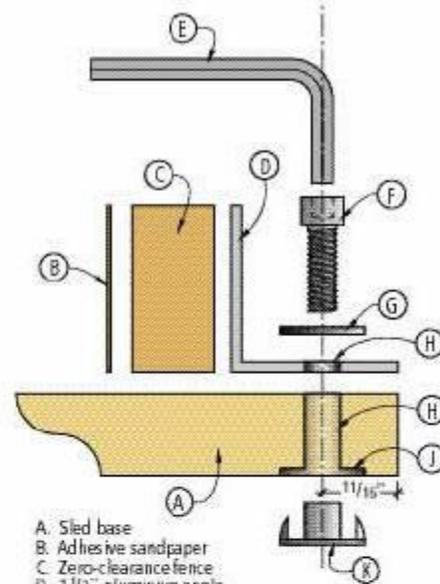
### Why MDF?

It's tempting to use workaday birch plywood for the sled's base, but I don't recommend it. We've

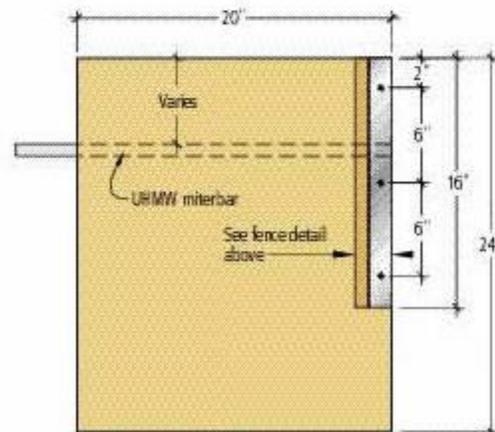
We recently moved our shop to a smaller location and had to get rid of several tools. One of the first casualties was a gargantuan sliding crosscut table attached to our table saw. Though it's a useful accessory, it has some serious drawbacks: It takes up more than its fair share of space and it needs to be recalibrated every time you attach it to the saw.

We already own a few nice jigs for crosscutting narrow stock, but for cutting wide panels – tabletops, cabinet sides and shelves for example – we needed to come up with another solution.

This jig is just the ticket. It can easily handle panels as large as 24" wide and 36" long, which should cover 99 percent of your crosscutting needs. It has a couple other useful features you



- A. Sled base
- B. Adhesive sandpaper
- C. Zero-clearance fence
- D. 1 1/2" aluminum angle
- E. Hex-head wrench
- F. 3/4" cap screw
- G. 3/4" nylon washer
- H. 5/16" through-hole
- J. 3/4" x 1/16" d. counterbore
- K. 1/4" x 20 T-nut



built quite a few sleds here, and some of the

plywood ones have warped and become unusable after a year or two of use. The plywood jigs that have survived well have been ones that are extra thick or have supplemental bracing to keep them flat.

Medium density fiberboard (MDF) is inexpensive, easy to work and stable (as long as you don't take it for a swim).

Begin by cutting your sled base to size and marking the line on the underside for attaching the miter bar. First measure the distance between your sawblade and your miter slot. Add 1/2" to that measurement and mark that line on the underside of your sled. Now drill 3/3 2" pilot holes on that line using your drill press. Make your first hole 1" from the end and then every 2" afterward.

Now drill corresponding 1/8" clearance holes and countersinks in the miter bar. Why so many screws? Two reasons: One, you don't want any flex in your miter bar. And two, the screws compress the Ultra High Molecular Weight (UHMW) plastic bar slightly. This allows you to remove some slack in the miter bar when it is in your table saw's miter slot. Tighten a few screws for a tighter fit; loosen a few for a sloppier experience.

Screw the miter bar to your base using #8 x 1" screws. Put the jig in place on your saw, raise the blade and trim the left edge of the sled to a perfect fit.

### Precision Drilling

Next you want to install the T-nuts that will hold the fence in place. T-nuts have a barrel that requires a 5/16" hole and a flange that needs a 1/16"-deep by 3/4" - diameter hole. Begin by drilling the 3/4" stopped hole in the locations shown in the diagram using your drill press. Now chuck a 5/16" bit into your drill press and drill the three through-holes you need. Tap the T-nuts in with a hammer.

### Easy Metalworking

Now you need to drill some corresponding holes in the aluminum fence. If you've never drilled in aluminum, you'll find it a lot easier than you expected (especially if you've ever drilled steel). The holes in the fence are also 5/16" in diameter. This is a bit larger than the 1/4" shank on the caps crews, but it's this little bit of play that will allow you to square this jig to your sawblade. Once those holes are drilled, drill a few 1/8" holes in the other wing of the aluminum-angle fence that replaceable zero-5/8" screws.

### Fence Face

The fence face needs to grip the work securely. Otherwise your cuts have little hope of being square. You can choose either of these following two options or use both together. Cover the face of the fence with 120-grit adhesive-backed sandpaper. Or knock in a couple finishing nails into the backside of the fence until the tips point out about 1/3 2" or so. Clip off whatever remains on the other side.



The number of screws looks like overkill, but they help prevent the bar from flexing and they allow you to take out any side-to-side play in the plastic bar by tightening the screws slightly

will allow you to attach the clearance fence with #8 x



Use a fence on your drill press's table when drilling the holes and countersinks in the miter bar. Though I'm sure some of us could freehand this operation, a fence ensures your success.

## Squaring and Modifications

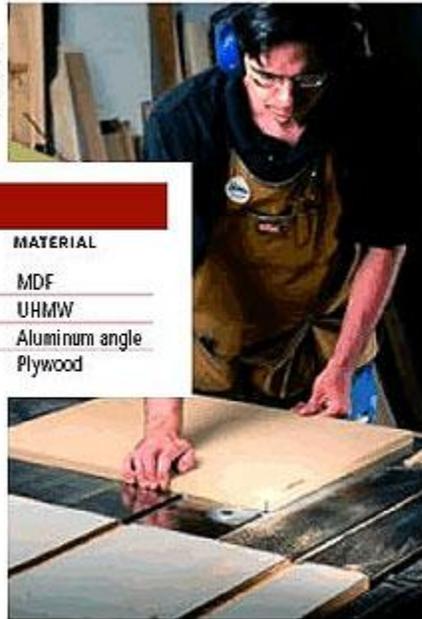
This jig is simple to square. First loosen the capscrews on your jig. Place the handle of an engineer's square against the edge of the sled's base that you trimmed earlier. Put the blade of the square against your fence and line things up. Tighten the capscrews. The nylon washers will allow you to snug them up really tight. Make a test cut and check your results with the square.

For me, it was square after the first time – a huge improvement compared to the fussing necessary with our sliding table.



T-nuts are easy to install using a hammer if you drilled your holes correctly in your base. Drill the  $\frac{3}{4}$ "-diameter hole for the flange using a Forstner bit. Then use the hole left by the bit's spur to center the  $\frac{5}{16}$ " bit for the through-hole.

If you followed the instructions carefully, you should trim only  $\frac{1}{8}$ " off the sled base during its first pass on your table saw.



### PANEL-CUTTING SLED

NO.	ITEM	DIMENSIONS (INCHES)			MATERIAL
		T	W	L	
1	Sled base	$\frac{3}{4}$	20	24	MDF
1	Miter bar	$\frac{3}{8}$	$\frac{3}{4}$	24	UHMW
1	Fence	$1\frac{1}{2}$	$1\frac{1}{2}$	16	Aluminum angle
1	Replaceable fence	$\frac{3}{4}$	$1\frac{1}{2}$	16	Plywood

As built, this jig works great. One modification you might want to consider on down the road is adding a handle at the back. If your arms are short, a handle will help you push the jig through the last part of your crosscut while still keeping the work pressed against the jig's fence. The handle can be as simple as a 3/4" - diameter dowel screwed to the tail end of the miter bar.

If you need to hang this sled on the wall, be sure to drill a hole or two in the sled's base. Finally, it's a good idea to clamp an extra piece of 3/4" MDF on the other side of your blade (as shown in the photo at the beginning of the article). This will catch falloff pieces, preventing them from getting flung back at you.

This newest addition to our shop works surprisingly well. In fact, the only time I miss the sliding table system is when I need to miter big panels (an infrequent operation in our shop). Now if only we could just find some way to shrink the scrap pile in our shop; then we'd really have some room to move around.