

# POPULAR Woodworking

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## \$19.99 Dovetail Jig

*You don't have to be a master craftsman or have deep pockets to cut perfect half-blind dovetails.*

Seems to me that most people think there are only two ways to cut half-blind dovetails: by hand or with a jig that can cost as much as \$300. As someone who makes a lot of custom furniture, I can tell you that neither method has ever worked well for me. Sure, the size and spacing of hand-cut dovetails are easily customized, and it's nice to sometimes work in a quiet shop. But the handwork just takes too long when time is money. Dovetail jigs, on the other hand, are fast. But the size of your drawers is dictated by all but the most expensive jigs on the market.

That's why I've come up with a method that's fast enough to use in a professional furniture shop but allows you to space the tails almost anyway you want. The price? Only \$11 for a template guide and \$8.99 for a carbide-tipped dovetail bit (you'd have to buy both for a dovetail jig, anyway). I've probably made more than 500 drawers using this method, and if you own a router, table saw and band saw you can make them this way this weekend.

In a nutshell, here's how it works. While you're ripping your drawer pieces to width, rip an extra piece of scrap to use as a template. Use a dado stack in your table saw to cut notches on one end of the template. One notch for each tail. Clamp the template to the back side of your drawer front. Install the template guide and dovetail bit in your router, set the depth and run the router in and out of the notches. Congratulations. You've just cut the pins.

Now use the pins to lay out the tails on one drawer side. Cut the tails on your band saw. It's simple work. Occasionally you'll then have a little fitting to do, but after a little practice your dovetails will fit snugly the first time.

### Get Started

When you're doing this for the first time, keep in mind that all the measurements and settings I'm about to give you apply to drawers with 3/4"-thick fronts and 1/2"-thick sides. I use a 23/32"-diameter template guide in my router (though 11/16"



**1** Tight-fitting dovetails don't require a big jig or years of experience with a back saw, just a few tricks, your router and a band saw.



**2** A dado stack in your table saw is all you need to make the template for routing the pins. Don't worry too much about tearout on the backside of the work. It's just a template.

or 3/4" will work fine, as well) and a 1/2"-diameter dovetail bit with sides that slope 14 degrees. See the "Supplies" box at the end of the article for ordering information.

Begin by making the template. They're real easy to make. So easy, in fact, that I've got dozens of them for almost every size drawer I need. While you're ripping out your drawer parts, rip an extra piece of 5/16"-thick stock for the template. Check the depth of your bushing because the thickness of your template needs to be slightly thicker than the depth of your bushing. For this particular drawer, my sides were 3" wide. Now go to your table saw and set up a dado stack. Don't worry about how wide the dado cut is, the idea here is to get a feel for how this system works. You'll see how to fine-tune the tails after you make a few templates. Set the height of the dado stack to 11/16". Now set your table saw's fence so there's 1/4" of space between the fence and blade. Using your miter gauge and a piece of scrap attached to it, run the template on end as shown in the photo.

Turn the template around and run the other side of the template. Now move the fence away from the blade and remove more material from the template until you have three teeth on the template, each 1/4" wide as shown in the photo.

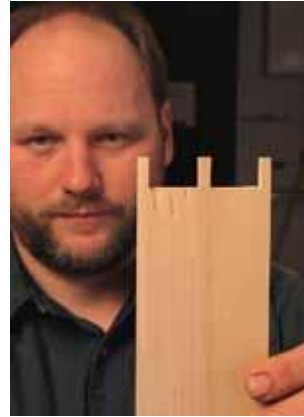
### Cut the Pins

Now set up your bench to cut the pins in the drawer front. Put the drawer front face down on your bench. Line up the template on top of it and clamp the two together to your bench. Install the bushing in your router and then the dovetail bit. Set the bit's height to 3/4" (including the bushing on the router's template guide). Different depths will work. I use 3/4" because the amount of carbide on my dovetail bit suits that depth perfectly. Cut the pins by running the router in and out of the notches.

### Cut the Tails

The hard part is now done. Unclamp your drawer front and place it on top of its mating drawer side as shown in the photo. Using a sharp pencil, trace the outline of the tails onto the drawer side. Cut the tails using your band saw or coping saw. Be sure to cut outside the lines for a tight-fitting joint. If necessary, pare the tails with a chisel. Then comes the moment of truth.

Let me say that after a couple attempts the truth won't hurt so much, so don't get discouraged. I think you can now see how easy it is to customize the location and size of your tails. Use a smaller-diameter bushing and you can make your tails even closer together. This will require some trial and error on your part. Basically, the outside teeth will have to be slightly wider than 1/4". And if you make different-sized notches in your template, you'll produce drawers that are impossible to



**3** When you finish making the template, here's what it should look like. For this 3"-wide drawer, I made two notches. Each of the teeth is 1/4" wide. You can make the notches almost any width you want. The spacing can be varied by using a smaller template guide in your router.



**4** Here you can see how the bushing rides against the template, while the bit cuts the pins. When you cut your pins be sure to stand in front of the work so you can better see what you're doing. I stepped aside for the photo.



**5** Now lay out the tails by tracing around the inside of your pins. A sharp pencil is

make with a \$99 dovetail jig. Best of all, you can stop planning your projects around a jig, and you'll be cutting dovetails fast enough to have some hope of finishing your project when you actually thought you would. **PW**

### Supplies

Bushings are available from many catalogs. Woodcraft (800-225-1153) carries several universal bushings that fit a wide range of routers. Price of the bushing: \$7.50. The lock nut costs \$3.50.

Carbide-tipped dovetail bits ( $\frac{1}{2}$ " diameter, 14 degree slope) are available from almost every woodworking catalog and home center. Expect to pay about \$8.99 on average, and a little more from specialty bit manufacturers.

By Troy Sexton

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**6** Cutting the tails on a band saw is a breeze once you get the hang of it.



**7** After a while you'll have enough templates to cut dovetails for almost any drawer.

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