



## drill press Table & Fence

An auxiliary table and an adjustable fence are the two best improvements you can make to a “bare bones” drill press. The ones shown above originally appeared in *ShopNotes* No. 38. But we thought this combo was worth revisiting due to the simplicity and effectiveness of its design. This table has been in use in our shop for a lot of years and is one of our favorites.

Let’s start with the table. It’s much larger than the metal drill

press table it’s attached to. So it offers plenty of support when working with long pieces.

The table also lays the groundwork for an adjustable fence. To allow positioning of the fence quickly and accurately, it slides along two T-shaped slots in the table. And a pair of flange bolts and knobs lock it in place.

### TABLE

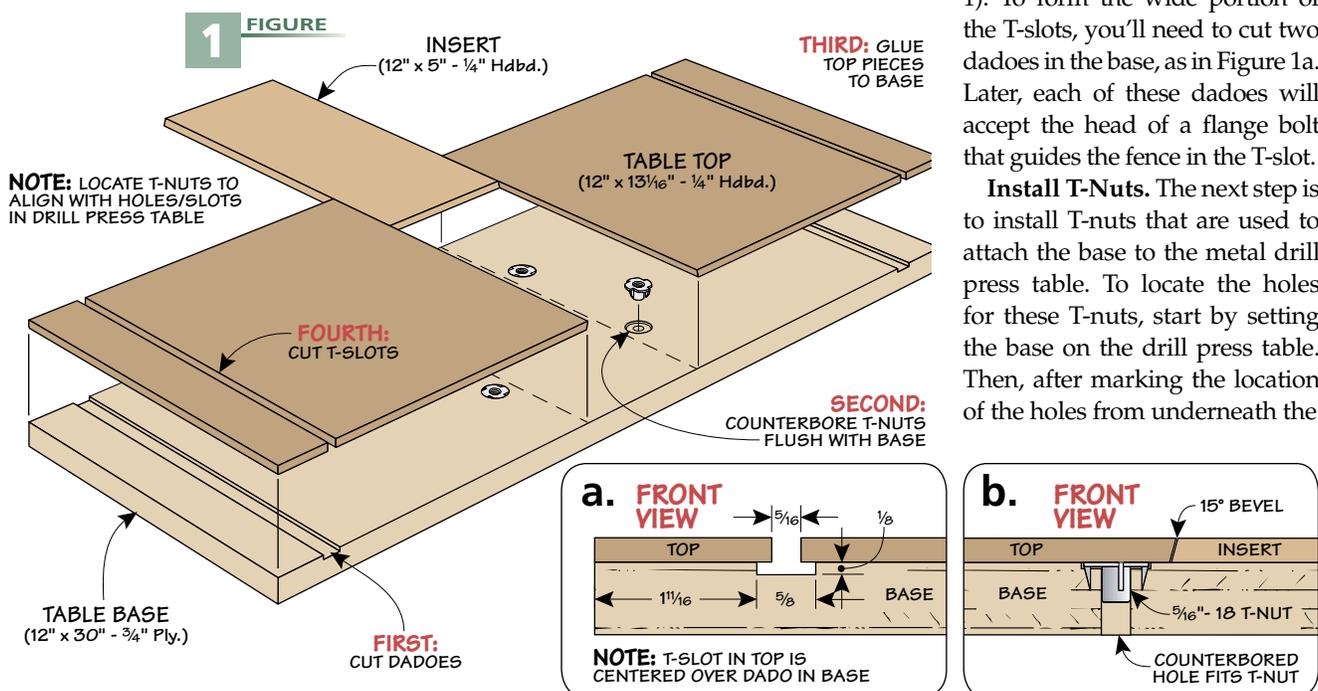
The table is made up of two layers. For rigidity, there’s a layer of

$\frac{3}{4}$ ”-thick plywood on the bottom. And a top layer of  $\frac{1}{4}$ ” hardboard creates a smooth and very durable work surface.

There’s another advantage to this double-layered assembly. The top layer has a removable insert, as shown in Figure 1. When this insert gets chewed up with use, simply slide it in or out to expose a fresh drilling surface. Or replace it with a new insert.

**Base.** I started on the table by making the plywood base (Figure 1). To form the wide portion of the T-slots, you’ll need to cut two dados in the base, as in Figure 1a. Later, each of these dados will accept the head of a flange bolt that guides the fence in the T-slot.

**Install T-Nuts.** The next step is to install T-nuts that are used to attach the base to the metal drill press table. To locate the holes for these T-nuts, start by setting the base on the drill press table. Then, after marking the location of the holes from underneath the



table, drill counterbored through holes and install the T-nuts.

**Top.** Now you can concentrate on the top of the table. It consists of two top pieces and the insert (Figures 1 and 3). Note: It's best to cut oversize top pieces and trim them flush later.

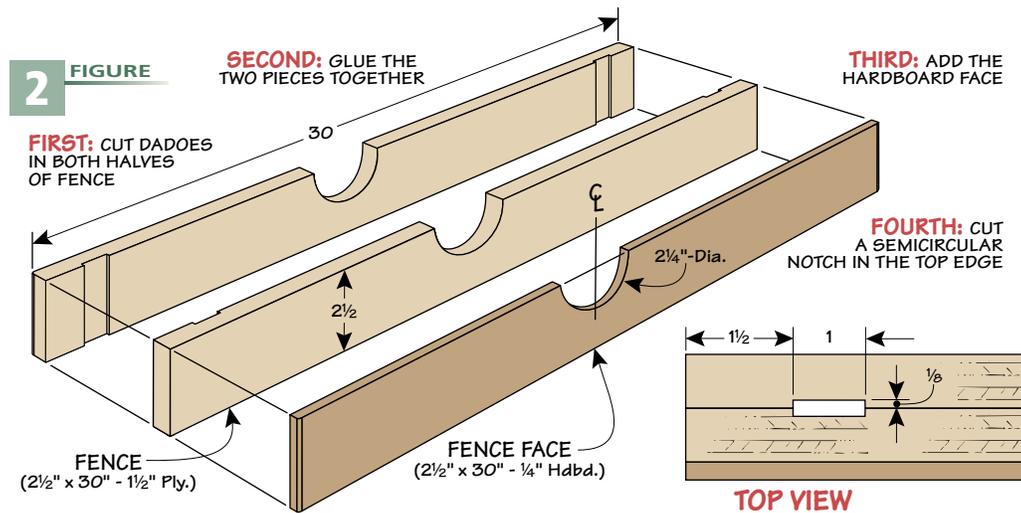
The insert is captured in a dove-tail-shaped opening in the top of the table. This opening is formed by cutting a bevel on the inside edge of the top pieces, as shown in Figure 1b on the previous page. To prevent the insert from binding, the beveled edges of the top pieces need to be parallel to each other. A simple solution is to use a spacer between them when gluing on the pair of top pieces.

After trimming the edges flush, you can complete the second half of the T-slots. This is just a matter of cutting dadoes in the top pieces (Figure 1a, page 1).

Now all that's left is to cut an insert to fit the opening in the table. To do this, you'll need to bevel both edges of the insert. While you're at it, it's a good idea to make several extra inserts so you'll have a few spares.

### FENCE

After attaching the drill press table with bolts, the next step is to add the fence. The thing I like best about this fence is you can



adjust it without having to coax first one end and then the other. The reason has to do with a narrow slot in each end of the fence. These slots form openings for the flange bolts that guide the fence.

Why not just drill holes for the bolts? After all, it would be quicker. The only problem is if you don't move both ends of the fence the same amount when making an adjustment, the bolts would jam in the holes and cause the fence to bind. But the slots provide clearance for the bolts. So even if both ends of the fence aren't perfectly aligned, it still slides nice and smooth.

**Fence Pieces.** To make the fence, start by cutting the two plywood fence pieces, as illustrated in Figure 2. The slot for the flange bolts is formed by first

cutting a pair of shallow dadoes in each piece, then assembling these so the dadoes align and form a slot for the bolt. The margin photo shows how to do this using a waxed key. After this assembly dries, you can add the hardboard face.

**Notch.** Before installing the fence, I cut a semicircular notch in the top edge. The details are shown in Figure 2. This notch provides clearance for the chuck when using shorter drill bits. I used a Forstner bit to drill the notch and then sanded it smooth.

**Attach Fence.** Now all that's left is to attach the fence to the table. After slipping the flange bolts in place, set the fence down over them. Tightening knobs on the ends of the bolts locks the fence in place. 



**▲ Glue Up Tip.** A waxed "key" ensures proper alignment when gluing up the fence pieces.

