



Woodsmith **PLANS**

TILE-TOP TABLE



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How do you build a sturdy outdoor table without any tricky mortise and tenon joinery? Using pocket screws makes it quick and easy.

Ceramic tile is normally meant for floors. But after seeing the dozens of beautiful colors, finishes, and textures available at the home center, I thought it would be perfect for a small outdoor table I'd been planning. The tile will withstand whatever the elements (or a drinking glass) can dish out.

You may be surprised by how quickly this table comes together. The secret is that it's made up of a half-dozen frames put together with pocket screws. Four frames form the base, and two more surround and support the ceramic tile.

BASE

The first set of frames to make are the ones that form the base.

STILES. I started by making the stiles (the longer pieces of each frame). There are four narrow stiles and four wide stiles, as shown in Figure 1 on the following page. When the base is assembled, the edge of a narrow stile will fit into a rabbet in a wide stile, as shown in Figure 1a. This way, the stiles all appear to be the same width.



After cutting the stiles to size, you can cut the taper at the bottom of each one, as shown in Figure 1b. Then rout chamfers on the edges with the tapers and also along the bottom edges (Figure 1b).

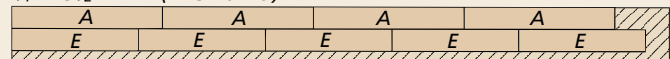
RAILS. Each pair of stiles is joined by a couple of rails. The rails are identical in size, with two pocket holes drilled near each end. (For help with this step, refer to the separate article about pocket-hole joinery.)

MATERIALS, SUPPLIES & CUTTING DIAGRAM

A Narrow Stiles (4)	$\frac{3}{4}$ x 2 - 16 $\frac{1}{2}$
B Wide Stiles (4)	$\frac{3}{4}$ x 2 $\frac{1}{4}$ - 16 $\frac{1}{2}$
C Rails (8)	$\frac{3}{4}$ x 2 $\frac{1}{4}$ - 10 $\frac{7}{8}$
D Cleats (2)	$\frac{3}{4}$ x $\frac{3}{4}$ - 13 $\frac{7}{8}$
E Slats (5)	$\frac{3}{4}$ x 2 $\frac{1}{4}$ - 13 $\frac{7}{8}$
F Molded Rails (2)	$\frac{3}{4}$ x 3 $\frac{1}{4}$ - 10 $\frac{3}{8}$
G Molded Stiles (2)	$\frac{3}{4}$ x 3 $\frac{1}{4}$ - 16 $\frac{7}{8}$
H Top Rails (2)	$\frac{3}{4}$ x 3 - 11 $\frac{7}{8}$
I Top Stiles (2)	$\frac{3}{4}$ x 3 - 17 $\frac{7}{8}$
J Spacers (4)	$\frac{7}{16}$ x 1 $\frac{1}{2}$ - 11 $\frac{7}{8}$

- (56) #6 x 1 $\frac{1}{2}$ " Coarse Thr. Pocket Screws
- (18) 1 $\frac{1}{4}$ " Deck Screws
- (1) 12" x 12" Ceramic Tile

$\frac{3}{4}$ " x 5 $\frac{1}{2}$ " - 72" (2.75 Bd. Ft.)



$\frac{3}{4}$ " x 5 $\frac{1}{2}$ " - 72" (2.75 Bd. Ft.)



$\frac{3}{4}$ " x 3 $\frac{1}{2}$ " - 72" (1.75 Bd. Ft.)



$\frac{3}{4}$ " x 3 $\frac{1}{2}$ " - 72" (1.75 Bd. Ft.)



$\frac{3}{4}$ " x 3 $\frac{1}{2}$ " - 72" (1.75 Bd. Ft.)



The differences between the top and bottom rails are that the top rails have two more pocket holes. These are used later to secure the top of the table. Also, the bottom rails have chamfers on all the edges, while the top edges of the top rails remain square, as shown in Figure 1b. (Square edges provide a broader surface for attaching the table top.)

The pocket screws make it quick and easy to fasten the rails to the stiles. Just make sure each assembly has two stiles of the same width.

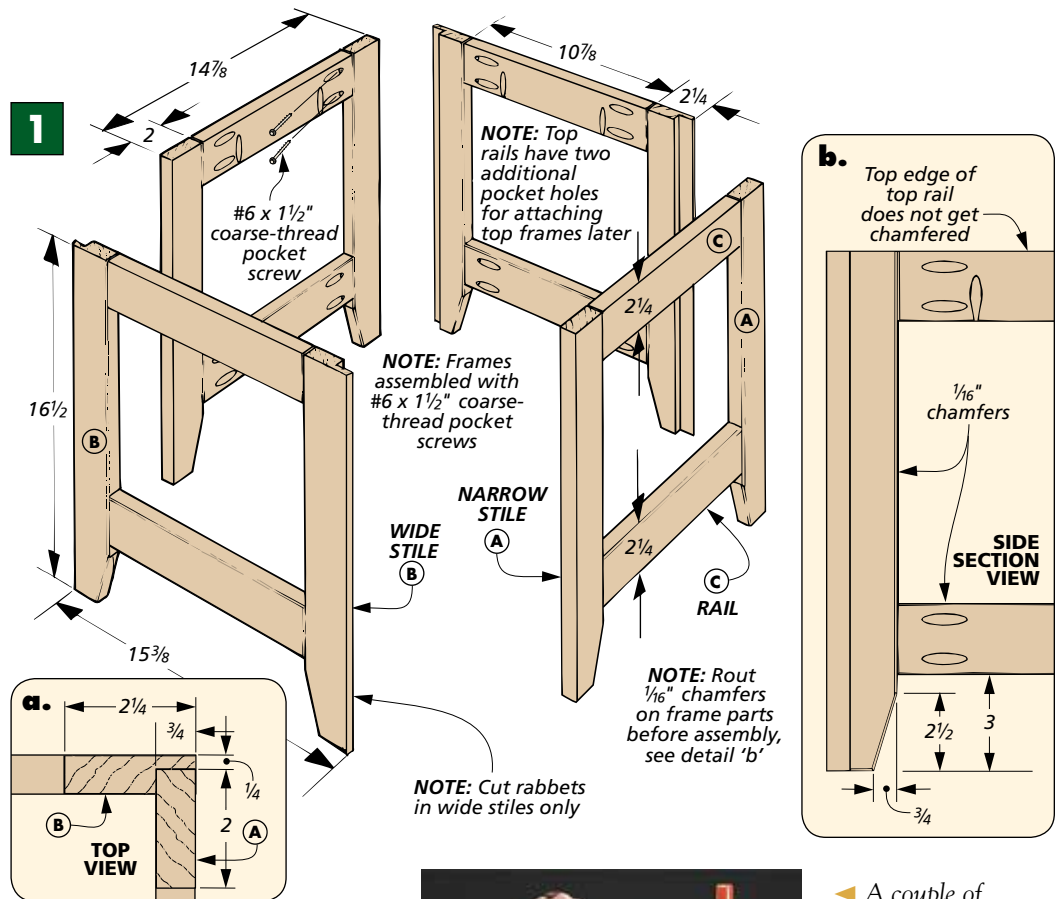
RABBETS. After the frames are screwed together, the wide stiles get a rabbet cut along the edge, as shown in Figure 1a. I did this with a dado blade, but it also can be done with a regular blade, as shown on page 4.

ASSEMBLY. When dry assembling the frames into a base, I had trouble keeping things square. A solution is shown in the photo at right.

Once the base is assembled, you can hide the joint lines with a little chamfering trick illustrated in Figure 2a. Simply adjust the height of the bit until it just touches the joint line.

CLEATS. The shelf in the bottom of the table is just a series of slats. To support them, I cut two cleats to fit inside the base (Figure 2b).

If you look at Figure 2c, you'll see that later, slats are screwed to the cleats. I drilled the shank holes and countersinks for these screws before



gluing the cleats in place. Finally, the cleats are glued to the base so the slats (added next) will sit flush with the top of the rails.

SLATS. Now you can move on to the slats (Figure 2). After the slats are cut to size and chamfered, they can be screwed to the cleats. To center the slats in the base, I secured the middle one first, and then spaced the remaining slats 1/2" apart (Figure 2c).



◀ A couple of squaring forms cut from scrap plywood help keep the base square while the band clamps are tightened. Use an exterior-grade glue when assembling the base.

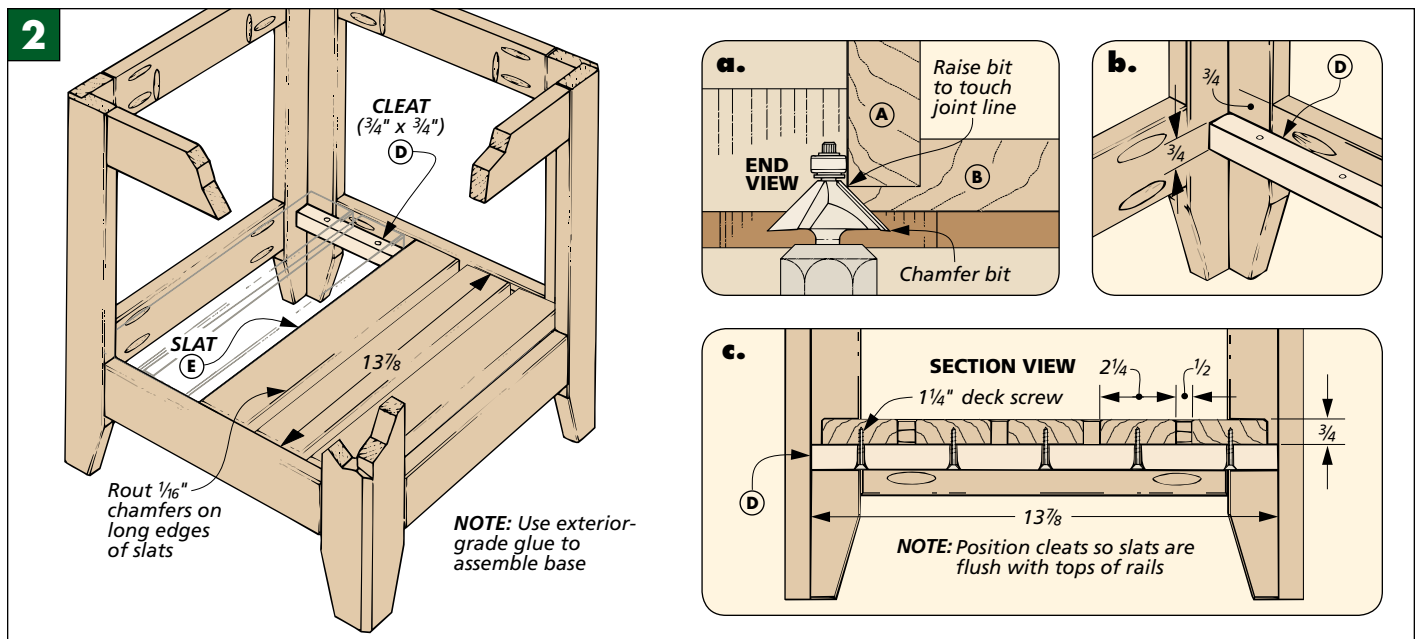


Table Top

The top of the table consists of two frames that support and surround the ceramic tile, plus some spacers that the tile will rest on.

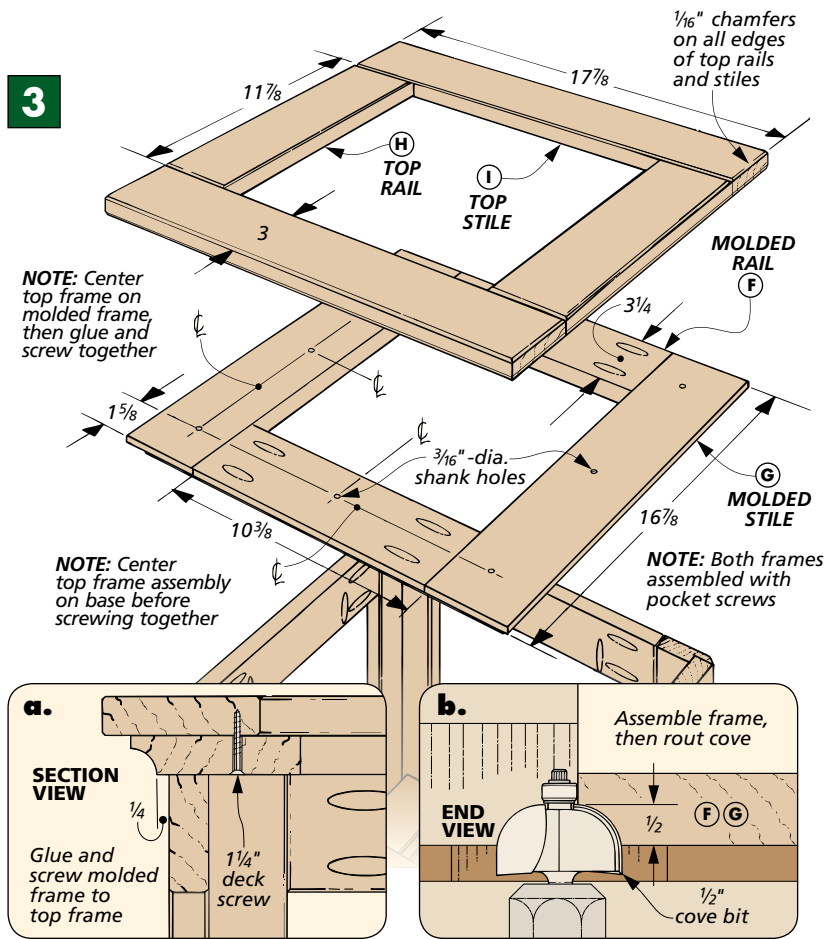
MOLDED FRAME. The first frame to make is the lower, molded frame. The molded rails have two pocket holes drilled towards each end and a shank hole for a screw centered on their width and length, as you can see in Figure 3. The molded stiles each get three shank holes.

After assembling the molded frame with pocket screws, rout a cove around the bottom edge (Figure 3b). With that completed, you can set the molded frame aside for now and move on to the top frame.

TOP FRAME. The exact lengths of the rails and stiles for the top frame will depend on the size of your tile. What you want to end up with is a $\frac{1}{16}$ " gap between each edge of the tile and the top frame. To accomplish this, just measure the width of the tile. Then add $\frac{1}{8}$ " to this measurement to find the length of the top rails. The top stiles should be 6" longer than the rails. (This accounts for the combined width of the rails.)

Before assembling the frame with pocket screws, rout a chamfer around both faces of each piece (Figure 3).

Once both frames have been assembled with pocket screws, they can be glued and screwed to each other. As you can see in Figure 3a,

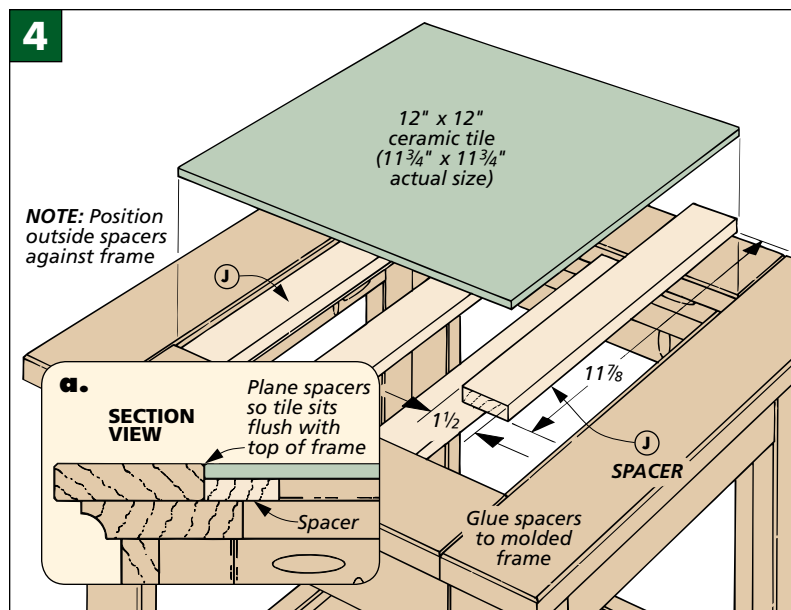


I used deck screws for this. The two things to keep an eye on here are that the molded frame is centered on the top frame and that the joints are offset. This strengthens the assembly. You can see what I mean in Figure 3.

Then center the frames on the base, and screw them in place using the two pocket holes in each of the top rails of the table base.

SPACERS. The spacers support the tile and lift it flush with the top frame, as shown in Figure 4a. For this reason, they have to be planed or resawn to thickness. Then they're glued to the molded frame (Figure 4).

FINISH & TILE. The table is just about complete. Before fastening the tile in place, I wiped on two coats of an outdoor oil to provide a weather-resistant finish. Then all that remains is to fasten the tile in place (photo below).



▲ To secure the ceramic tile, put a dot of silicone adhesive toward each end of each spacer, then press the tile firmly into place.

SHOP NOTES

Rabbeting with a Regular Blade

To cut the rabbets on the frames of the tile-top table, I used a dado blade. But these rabbets can also be cut in two steps with a regular blade.

First, cut a $\frac{1}{2}$ "-deep kerf, as shown in Figure 1. Here, the distance from the fence to the far side of the blade should equal the stock's thickness ($\frac{3}{4}$ ").

The second pass will require a tall auxiliary fence for extra support (Figure 2). Then just set the fence and blade to leave a $\frac{1}{4}$ "-thick tongue.

