



Easy, Reliable Router Table

This router table was born because I was sick of devising ad hoc ways of securing my compact router upside down when I wanted to do some quick roundovers on small pieces. A big router table isn't part of my workflow, but I became sold on the benefits of a small one without all the fancy bells and whistles. So I designed this one, which requires a small amount of materials and doesn't take much time to build. Although

A versatile and effective design that won't rob you of time or materials

BY LARISSA HUFF

I made it for my compact router, it will also suit midsize models.

I designed this router table so the sides are solid but the front and back are open. The lower stretchers provide an easy way to clamp the table to a work surface. The open area is sized so I can easily change the bit height or remove the motor from the base; if you'll use a different router than the one I use, measure yours and adjust the dimensions. Similarly, if you

BASE

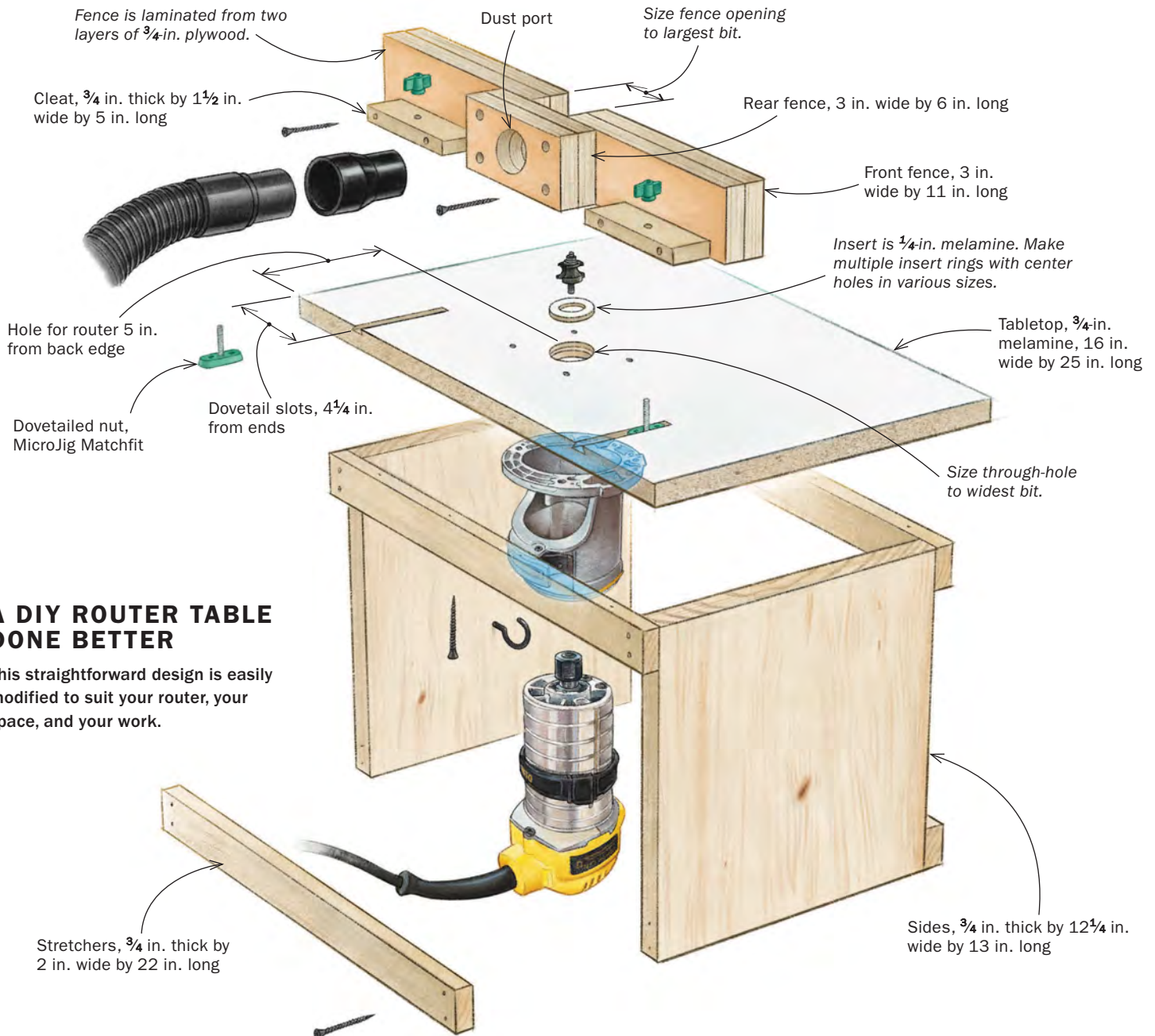
Simple open base



Use the stretcher's predrilled holes to mark the side, then drill. Locate these holes in the stretchers so they fall in the center of the side's thickness. The upper stretchers should also be drilled now for screws that will secure the top later.



Assemble the base. Having the sides predrilled makes it easy to align the stretchers and lightly hold them in place while you drive screws. As you assemble, make sure the stretchers are flush with the top and bottom ends of the sides.



A DIY ROUTER TABLE DONE BETTER

This straightforward design is easily modified to suit your router, your space, and your work.



Use the router's fixed base to mark the top for mounting screws. Huff places the center of the base roughly one-third the distance from the back edge of the top and centered along the length. If possible, orient the router so the on/off switch faces the front and the power cord goes out the back. If your router's mounting holes are asymmetrically arrayed, mark them on the top's bottom face, then transfer those locations to the top by drilling small through-holes.



Drill holes and counterbores for the mounting screws. Drill counterbores deep enough that the screw heads sit below the tabletop. With a twist bit, finish with through-holes, using the dimple left by the Forstner bit to line up your bit.



Use a straight bit and fence to remove most of the waste for the dovetail slots. Clearing most of the waste with a straight bit minimizes wear on your dovetail bit and router motor. Huff routs both slots by pushing forward and with the fence to her right, using the bit's rotation to help keep the fence tight to the board. This requires plunging in at the start of one slot.



Dovetail slot fits Matchfit hardware. Another reason to excavate the waste with a straight bit is to make the dovetail cuts easier to control. In one of the cuts (shown at right) you'll be routing with the bit's rotation, which will encourage the bit to wander. You minimize this risk by minimizing the material to remove.



Begin by locating the router base. I trace the base's mounting holes onto the top before counterboring and drilling for the screws. If your base's hole pattern is symmetrical, you can mark these locations on the top face of the tabletop. If the pattern's not symmetrical, mark the bottom face (since that's where you'll mount the router), then drill small through-holes from the bottom to the top. Use these holes to locate your Forstner bit as you counterbore for the screws.

The next step is to create the opening for the bit. Before drilling a through-hole big enough to fit your largest bit, drill a large counterbore to accept the ring-shaped

Drill stepped holes for your inserts and biggest bit. First, drill a counterbore so the inserts sit precisely flush with the top. Then drill a through-hole to fit your biggest bit. Center these holes within the router base area.



Create the blanks for the inserts. This is ideally done with a hole saw or fly cutter, but cutting at the bandsaw and sanding to fit works in a pinch. Huff uses 3/4-in. melamine for insert stock.



Drill out the middle of the insert blanks to suit your router bits. Use the hole from the previous step to center the drill bit. These blanks are small, so Huff uses a hand screw to hold them both securely and safely.



Inserts must fit snugly and flush. If the inserts are undersize, they'll dangerously move around during a cut. If they sit above or below the table's surface, they'll interfere with the cut.

Screw the base to the top. With the top and base done, it's time to secure them together. Four screws in each upper stretcher keep the top tight to the base and ensure a rigid structure.



FENCE

Stout split fence



Cut the laminated fence blank into sections. Make three sections for a split fence, two longer ones for the bearing surface, and a shorter one for dust collection and bit clearance.

Assemble the fence so the bottom edge is flush. While gluing and screwing the short section to the longer ones, Huff presses all three tight to a flat surface, ensuring the assembly remains true along its bottom edge.



Add cleats with Matchfit hardware. To work properly, the cleats must be positioned accurately. To locate one, install the dovetailed nut, insert it in the slot, and press the cleat to the fence. Mark the screw locations with an awl. Then drill the fence and mount the cleat.



Drill the short section for dust collection. Choose a bit that allows for a snug fit with your vacuum hose or hose adapter. Place the hole high enough from the bottom edge that the hose or adapter doesn't catch on the router table's top.

inserts. The inserts shrink the opening when you're using smaller bits, improving both safety and usability. I make the counterbore's diameter $\frac{1}{4}$ in. larger than the through-hole will be. Since the inserts need to be flush with the top, drill the counterbore precisely to the thickness of your insert stock. Be finicky here. Then cut the through-hole.

For the inserts themselves, I create disks using $\frac{1}{4}$ -in. melamine or MDF. You want them to fit snugly. Once they fit, drill holes through their centers sized to suit your collection of router bits.

I used to just clamp the fence to the top, but I've upgraded to MicroJig's Matchfit hardware. It works similarly to T-track, but instead of track, it uses dovetail slots you rout into the top and dovetail-shaped

USING Setting up and using



All router adjustments are done under the table. Changing bits requires removing the motor from the base, which stays fixed to the table. Changing the bit height is done via the router's onboard height adjustment.



Pick the right insert. The insert closes up the space around the bit, increasing the table's bearing surface and, more importantly, your safety, since stock could tip into this otherwise large opening.



Clamp the table to your bench. Clamps keep the table from scooting around while you're routing. The open base with lower stretchers on the front and back allows for options when securing the table.



Don't skip the dust collection. The dust port is an easy addition that will keep particulate out of your lungs, eyes, and shop.

nuts that slide in the slots. The depth of the slots must be precise, so home in on your cut in a scrap before routing the top.

Laminated fence with dust collection

The fence is simple but considered. To start, I laminate two long pieces of $\frac{3}{4}$ -in. plywood, which I prefer because solid wood can warp. Laminating them makes the fence beefier and gives it more reference surface on the bottom, helping it stay square to the tabletop. The fence's bottom edge needs to be straight and square.

After the glue dries, crosscut the laminated blank into two long pieces and a short one. Screw the short piece to the

longer pieces to create the break in the fence for router bits. Use your widest bit to determine that opening.

The cleats for the Matchfit hardware need to line up exactly with the slots on the table. To ensure that they do, first clamp the fence to the table. Install the hardware in the cleats, insert the dovetail nuts in their slots, and slide the cleats up the fence. Then mark their locations on the fence.

As a final step, I wax the fence's front face so workpieces slide smoothly. Then I rout away. □

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Add a hook for cable management. This keeps the power cord tidy and out of the way when you store your router in the table.