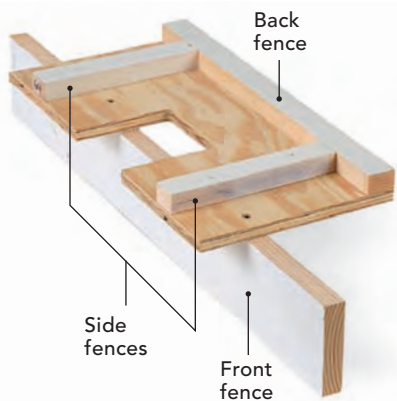


Routing hinge mortises



MAKE THE JIG

In most cases, carpenters buy doors that are prehung in their jambs with the hinges already in place. But sometimes, you end up hanging a new door in an existing frame and have to match the door's hinge locations to the frame's, or you find yourself hanging a door in a new frame on site. The old carpenters I learned from would have just chiseled out hinge mortises—and that can be fast if you have only one door to do, and if you have a sharp chisel. But if you have more than one door to hang, making a router jig doesn't take long, and the results are as close to perfect as a carpenter needs to get.

Jigs are single purpose—they work with one router and one size bit to cut a specific size mortise. If I find myself on a job without a jig, I'll sometimes freehand a hinge mortise or three with the router, cleaning up the edges with a chisel (it's easier to cut a mortise to a consistent depth with a router than with a chisel). But that's a last resort, because making



1 Measure the offset. Measure across the radius of the router base to the bit's edge. The smallest measurement is the right number.



2 Locate the side fences. Double the measurement from step 1 and add it to the hinge height to find the side-fence spacing.



3 Fasten the back fence. To create a back fence, align a scrap of 1x to the edge of the plywood and fasten it with screws driven from the bottom of the jig.



4 Attach the side fences. Clamp the side fences to the plywood along the lines made in step 2, and screw them home from the back.



5 Rout the opening in the jig. After setting the bit just deeper than the plywood, clamp the jig to a scrap and rout through the jig's base, moving clockwise for a controlled cut.



6 Test the fit. Right now, only the hinge height matters. To allow some vertical adjustment when hanging the door, $\frac{1}{32}$ in. of play is perfect.



7 Attach the front fence. Make a 1x4 fence 8 in. longer than the base, spaced the distance from the back of the cutout that you want the hinge to extend into the door.



8 **Locate the hinges.** Mark the hinge locations on the door and on the jamb, locating the hinges about $\frac{3}{32}$ in. lower on the jamb to create a clearance space between the door and the head jamb when the door is hung.



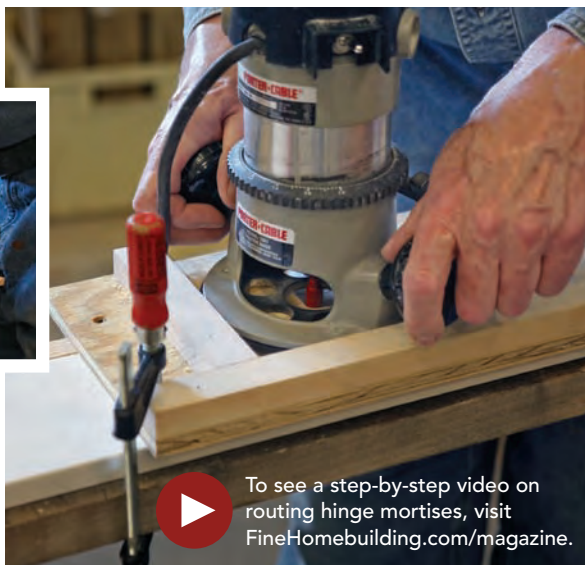
9 **Set the cutting depth.** Adjust the router's depth of cut so the bottom of the bit is flush with a hinge leaf held on a scrap from the jig base.



10 **Rout the door.** Clamp the jig to the door and move the router clockwise, beginning with the edges. The finished mortise should be clean with nothing left standing in the center.



11 **Rout the jamb.** In this case, the jig's base is the clamping surface. Again, be sure the hinge orientation is correct for the door's swing, and then rout away.



To see a step-by-step video on routing hinge mortises, visit FineHomebuilding.com/magazine.



12 **Attach the hinges.** The hinges should fit in the mortises with very little slop, and be flush with, or ever so slightly proud of, the edge of the door and the face of the jamb.

a jig is pretty easy. In this case, the edge of the round router base is guided by three fences on the jig. Other routers with bases that aren't a consistent distance from the bit can still work with a jig, though it's tougher. For example, my Bosch laminate trimmer has a square base with one side closer to the bit than the other three, so I need to remember which sides of the base should contact the jig's fences. You can also make jigs that work with guide collars or bearing-guided bits, but the approach shown here is simple and works with an inexpensive straight bit that you probably already have laying around. The one here is a $\frac{1}{2}$ -in. straight bit chosen to create a $\frac{1}{4}$ -in. radius at the corners to match the hinges.

The jig base used here is $\frac{1}{2}$ -in. plywood, but you could also use $\frac{3}{8}$ -in. or $\frac{3}{4}$ -in. stock. The base dimensions don't need to be exact, but the length should be about twice the diameter of the router base plus the height of the hinge, and the width approximately that of the router base plus the width of the hinge mortise. The fences are made from scrap 1x stock.

Andy Engel is a senior editor.
Photos by Rodney Diaz.