

# Flush Trim Jig

A hand-held router and a flush trim bit will make quick work of trimming the hardwood edging flush on a plywood panel — if you can keep the router steady. The problem is the edge of a panel just isn't much to balance the router on. This makes it very easy to tip the router and gouge the wood.

But with the flush trim jig shown in the photo at right, trimming the edging flush is almost automatic. After clamping the workpiece in a bench vise, you simply run the router along the edge — without feeling like a tightrope walker.

**The Jig.** As you can see in Figure 1, the router is attached to an *auxiliary base* that replaces the standard base on the router. Adding a vertical *guide* and *guide support* stabilizes the router and keeps the bit perpendicular to the edging at the same time. A *handle* attached to the jig provides solid control.

To make the auxiliary base, I used my existing router base as a template for marking the mounting holes. It's a good idea to drill and counterbore these holes a little oversize (Figure 1a). This way,

you can shift the router on the base when you need to “fine tune” the jig later on.

Both the guide and the guide support are the same width. But the guide is 1½" shorter than the support. This way, as you glue the two parts together, it forms a “step” for bit clearance, as you can see in the inset photo at right.

Before attaching the auxiliary base, you can cut the handle to shape from ¾"-thick stock and screw it to the guide support (Figure 1b).

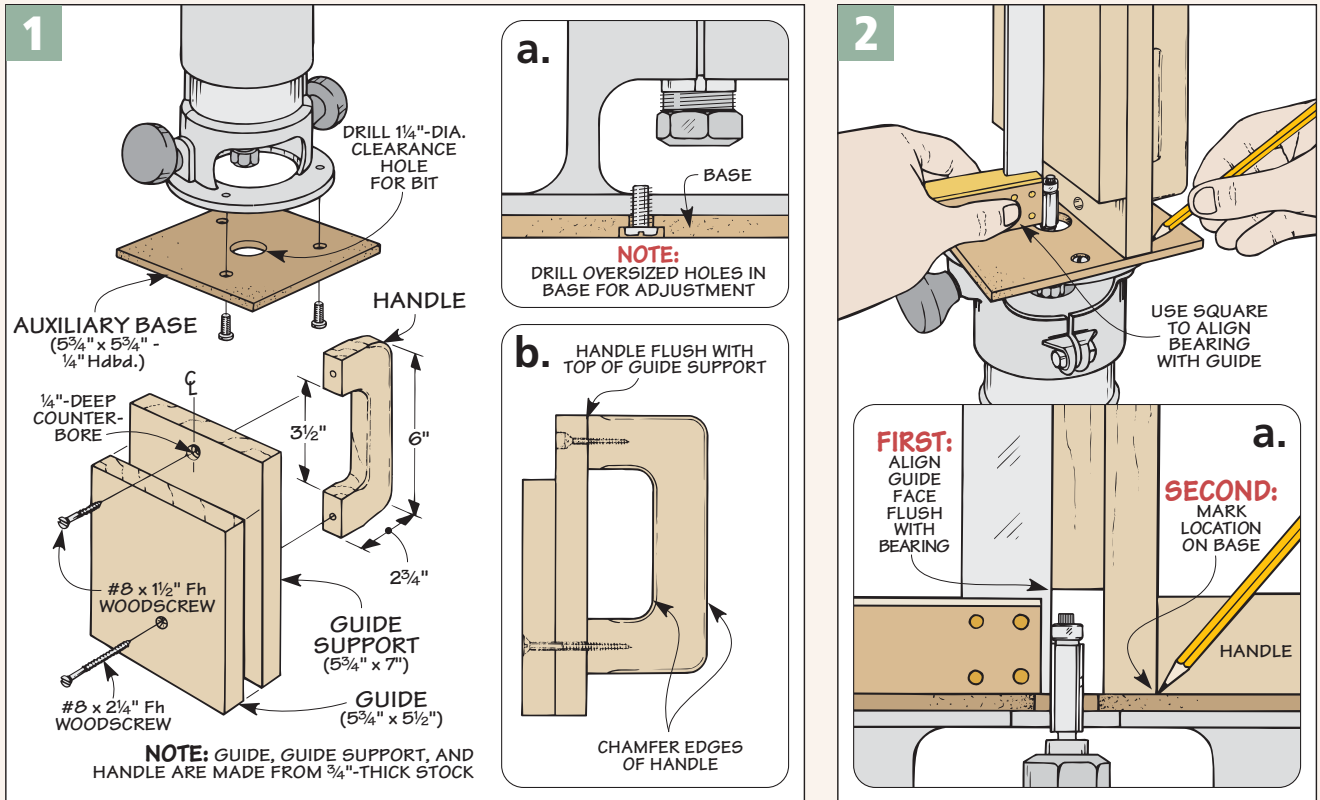
**Assembly.** When attaching the guides to the auxiliary base, it's important to align the inside face of the guide with the bearing on the bit. This way, the guide can do its job of stabilizing the router and the bit can do its job of trimming edge flush.

To do this, mount the router to the base and set the guide assembly in place. Then use a square to align the guide with the bearing as closely as possible and draw a line to mark the location (Figures 2 and 2a).



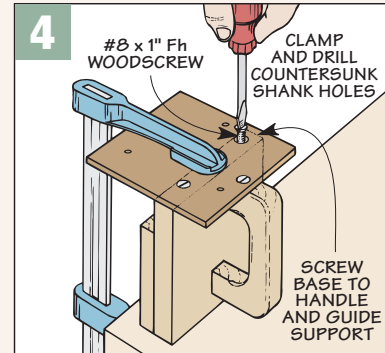
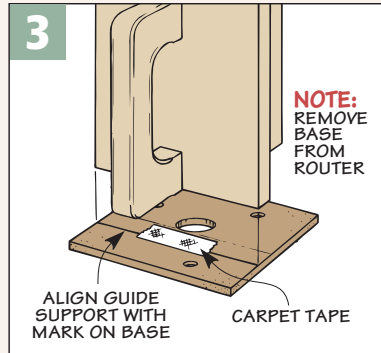
Now, remove the router from the base, turn the jig over and drill the pilot holes for the screws. To help keep the base from shifting out of place as you do this, attach a piece of carpet tape to the base. Then use the pencil mark on the base to realign the guide, as shown in Figure 3. Finally, remove the carpet tape and attach the guide to the base, like you see in Figure 4.

**Test Cut.** After screwing the router back on the base, it's a good



idea to make a test cut on some edging attached to a scrap piece. Simply run the router along the face of the scrap and verify that the edging is flush with the plywood.

If the edging isn't trimmed flush with the plywood, you'll need to adjust the position of the router. To do this, loosen the mounting screws, shift the router as needed, and then make a new test cut.



## Dado Cutting Jig

When cutting a dado, I typically use the table saw. But sometimes, the panel is just too large to handle. In that case, it's best to clamp the panel to a bench and *route* the dado.

To produce straight, accurate cuts, I use a hand-held router and a pair of guides like the ones shown at right. These guides allow you to cut a dado with perfectly straight edges. In addition, the piece that goes into the dado will fit precisely.

**Guides.** Each guide consists of two parts: a hardboard *base* that the router rides on and a wood *fence* to guide it (Figure 1). Note: I made my guides 50" long so I could rout across the full width of a sheet of plywood.

Also, it's best to start with an extra-wide base. This way, once the fence is glued in place, you can trim the base to match your router perfectly. This creates a reference edge for aligning the guide during use. But there are two things to keep in mind here.

First, you'll want to use the same router bit you plan to use when cutting the dados. I like to use a 1/2" spiral downcut bit (see margin).




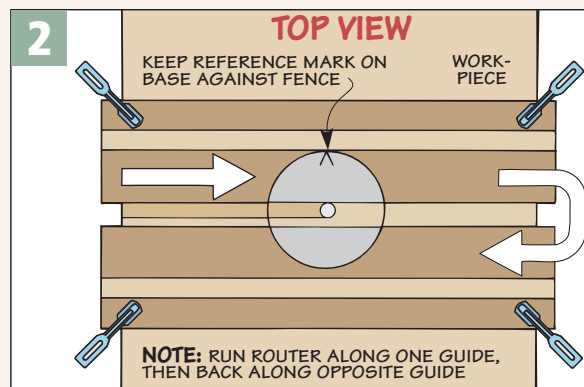
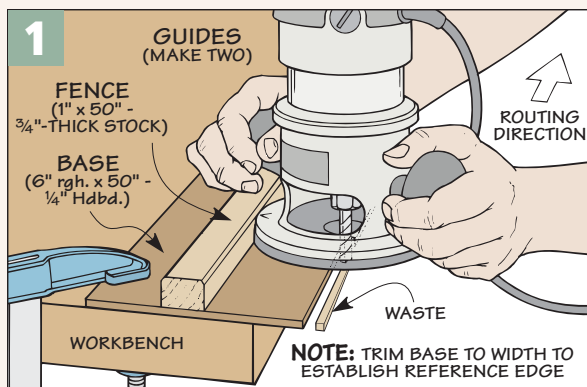
The other thing to keep in mind is that the bit may not be perfectly centered in the router base. So be sure that the same side of the router base is against the fence when you trim each guide to width.

**Setup.** Once the guides are complete, positioning them on the workpiece only takes a second. Start by laying out the location of one side of the dado. Then align one of the guides along that mark and clamp it in place (Figure 2).

Positioning the second guide is even easier. Instead of a layout line, all you need is a *spacer* that matches

the thickness of the piece that fits in the dado. After "sandwiching" the spacer between the guides, clamp the second guide in place and then remove the spacer, as in the inset photo above.

**Route Dado.** At this point, routing the dado is just a matter of making a series of shallow (1/8") passes. To define one side of the dado, run the router along the fence of the first guide (Figure 2). Then with the reference mark against the second fence, run the router down the second guide for a perfect fit. 



▲ **Spiral Downcut Bit.** To get smooth cuts in plywood without "lifting" the veneer, try using a spiral downcut bit.