



ROUTER JIGS

Routers and jigs go hand in hand. Here are two great jigs for getting the most out of any router.

TEXT AND PHOTOS BY ROSARIO CAPOTOSTO



Surfacing Jig

Experienced woodworkers know that there's more to building than cutting lumberyard stock to length and width. Sometimes the two or three standard thicknesses just won't work. And other times, the wood is cupped or warped to the point that it's unusable. If you own a router, however, you don't have to live with either of these problems. In conjunction with this surfacing jig, your router will level rough or warped stock, and trim it to the thickness that's right for your job.

The jig is comprised of two L-shaped tracks that hold the work. An adjustable carriage that holds the router rides on top of the tracks. In operation, the router, equipped with a large-diameter straight bit, moves across the work on its carriage while the bit levels a strip across the surface. After each pass, the carriage is moved along the L-shaped tracks for the next pass.

We dimensioned our surfacing jig to handle work up to 18 x 30 in., but its capacity can be modified by changing the size

of the carriage and the length of the tracks.

Begin by cutting the stock for the carriage tracks and the track joiners to size. You can use your router to cut the track rabbets, but a table saw is faster. Make each rabbet in two passes--the shallow cut first, followed by the deep cut that removes the waste.

The dadoes in the joiner pieces are positioned to suit the size of your router base. To ensure accurate placement, set the tracks parallel to each other on the joiner pieces and space them so the router fits in between (**Photo 1**). You can use your router to cut the dadoes, or a table saw equipped with a dado blade.

Attach one end of each track to one joiner piece with screws (**Photo 2**) - the other joiner is adjustable. Cut the clamp blocks for the adjustable joiner to size, and use a sharp chisel to shape the recesses for the 1/16-in.-thick iron clamping bars.

Then, attach the clamping blocks to the adjustable joiner with screws. Bore the holes through the clamping bars as shown, and attach the bars to the blocks with 1-in. No. 10 pan head screws. Using the bolt hole in the clamping bar as a guide, bore a corresponding bolt hole through each end of the joiner. Install the bolts and T-knobs. Make and install stops on the joiners that limit router travel. Set these back 1/4 in. farther than the router-base-to-cutter distance so the cutter travel extends past the work edge.

To make the tracks, rip the track members to width and assemble both L-shaped pieces with screws and glue. Then, bore and countersink the holes for the drywall screws that hold the stock.

To install the workpiece, first make four stepped leveling blocks as shown.

Use these to support the work while the L-shaped tracks are screwed to the work edges (**Photo 3**).

Then adjust the carriage to fit over the tracks, tighten the clamps and set the bit depth for the first pass (**Photo 4**).



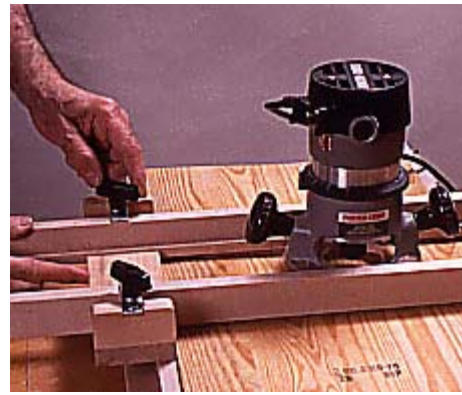
1--Make the carriage tracks and place them on the track joiners. Adjust spacing and then mark for joiner dadoes.



2--After the dadoes have been cut in the joiners, secure one joiner with glue and screws. Opposite joiner is adjustable.



3--Use drywall screws to secure the work to the tracks. Stepped blocks shown in the drawing (left) hold work at correct height.



4--Position router carriage over L-shaped tracks and lock sliding jointer. Then adjust bit depth for shallow cut.

Edge Guide

Of all the jigs that you can buy or make to enhance your router, a basic edge guide, or fence, is the most essential. Considering its usefulness, however, it's surprising that many routers don't come with one--you have to buy it as a special accessory.

Actually, you don't have to buy one, you can make it yourself. Our edge guide is based on an oversize clear-acrylic baseplate with a pivoting fence that's adjusted at one point.

Begin by cutting a sheet of 1/4-in. acrylic plastic to 12 in. square. Leave on the protective paper. You'll use this for marking layout lines. You can cut the curved edge freehand with a scroll saw, band saw or sabre saw, but it's best to use a stationary tool equipped with a simple pivoting jig to guide the cut. First, bore a small nail hole at the base-plate pivot point. Then, drive a nail through this hole into a board clamped to the scroll saw or band saw table. Align the hole with the front edge of the scroll or band saw blade. P Remove your router's baseplate, place it on the acrylic sheet and trace the screwholes and central router-bit hole (**Photo 1**). Use a 2-in. hole saw to bore the center hole. Then, bore and countersink the screwholes.

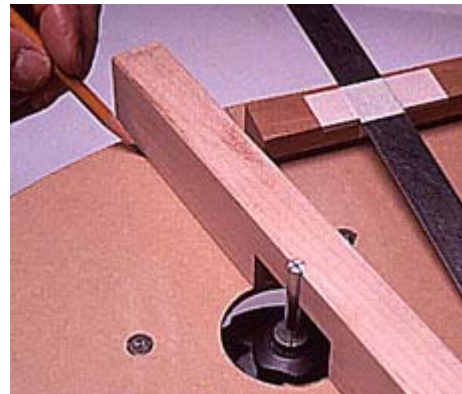
Cut the fence to size and bore the pivot hole with a 1/4-in.-dia. bit. To bore the 1/4-in. half hole, first mark the hole location. Then, clamp a piece of scrap wood to the face of the fence and use the seam between the two pieces as a centerline for the hole.

Shape the clamp recess by first boring a 1/2-in.-dia. hole into the end as shown. Then, remove the remaining waste by boring a 5/16-in. hole and finishing the slot with a sharp chisel.

Attach the router and fence to the new baseplate and secure a 1/4-in.-dia. alignment rod (cut from a bolt) in the router collet. Glue a piece of paper to the end of the alignment rod and mark centerlines on the end.



1--Remove the base from the router and use it to mark the screwholes and the router-bit hole on the acrylic sheet.



2--Install a 1/4-in. rod in router and attach router and fence to the new base. Seat rod in half hole to find zero mark.

Tape a rule with fine graduations to a small block of wood to act as a square. Align a whole number on the rule with the inside edge of the block.

To make the zero mark on the baseplate, align the fence so the alignment rod is seated in the half hole (**Photo 2**). Subsequent graduations are marked in 1/4-in. increments. However, they are offset from the original zero mark by 1/8 in. to align with a similarly offset index mark on the fence.

Using the shopmade square, pivot the fence 1/8 in. from the alignment rod center and mark a 2-in.-long line on the baseplate. From this position, mark lines on the baseplate that indicate fence positions as you move it in 1/4-in. increments (**Photo 3**).

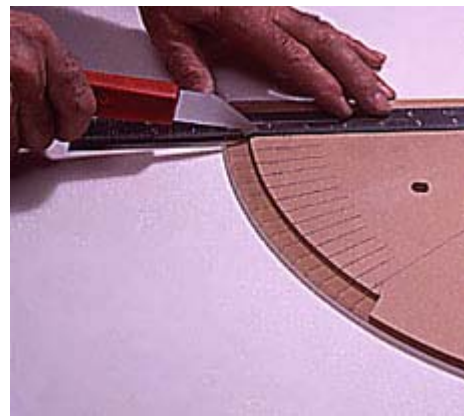
Peel away a 5/8-in.-wide strip of the protective paper from the arc edge. Use a rule and a plastic-laminate scoring tool (available where laminate is sold) to scribe a line at each graduation (**Photo 4**). Then, ink the scribed lines with a black felt-tipped pen, and wipe away the surplus ink with an alcohol-dampened cloth.

Peel away the remaining protective paper. Use 3/8-in. self-stick vinyl numerals, available at stationery and art supply stores, to designate each graduation. To create bars between the numerals, use the waste centers from the zero self-stick numerals.

Fill the clamp recess with Durham's Water Putty, then firmly seat the clamp in the recess. Paint a white spot on the fence end, and mark the index line on the white spot 1/8 in. from the fence edge.



2--Install a 1/4-in. rod in router and attach router and fence to the new base. Seat rod in half hole to find zero mark.



4--Peel away a 5/8-in.-wide strip of protective paper at the arc edge. Then, continue graduation lines by scribing on acrylic.

