Scribing with a Router

by Art Betterly

A router is one of the most versatile tools ever developed, but it rarely is used to its full potential.

Because the router has a fixed dimension from the outside of the base to the opposite side of the bit (figure 1), it is an ideal tool for scribing. For many applications, this is much quicker than the alternative: marking with a divider or scriber, then sawing, sanding, coping or filing to that line.

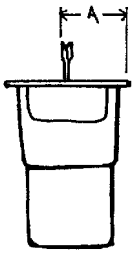


Figure 1

The fixed distance (A) from the edge of the base to the other side of the bit, makes the router an ideal tool for scribing. Use a small router or laminate trimmer.

Scribing should be done with a small router—called a laminate trimmer. Choose one of sufficient power to cut through the material, using the smallest-diameter router bit that won't break—in most cases ¼ inch to 3/8 inch.

Always cut with the router moving clockwise, so it pulls against the surface that you are scribing (figure 2).

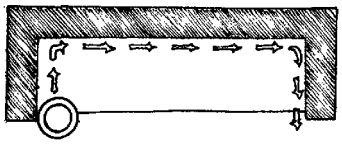
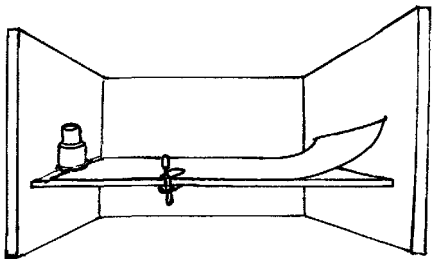


Figure 2

When scribing with a router, always move the router clockwise so it pulls against the scribed surface. For example, to fit a piece of laminate into a space enclosed on three sides, follow the direction shown at left.



The sheet of laminate is temporarily clamped in place, and curved up the right wall (right).

Between Three Walls

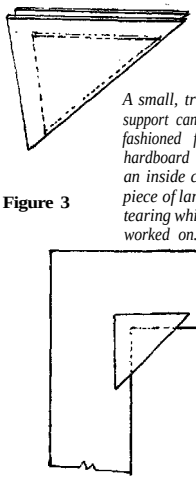
Often, you need to scribe a piece of laminate to a countertop that is enclosed by walls on three sides—the back and two ends. In this case, you should start with a sheet that is one or two inches oversized in each dimension. The sheet should be clamped about 1½ inches (about half the diameter of the router base) from the left wall, making sure that the front of the sheet is parallel to the front of the counter. The gap between the wall and laminate should be set so that, at its widest point, a bit of the laminate will be trimmed off when away from you—and it will cut the plastic laminate to fit perfectly.

The two inches in the corner (where the router won't travel) can easily be cut with a hand shear. You can scribe the corner area with a small piece of laminate cut to the right width, rather than using a divider.

After the end is cut, place the sheet of laminate against the left wall and back wall. Put a mark on the back wall and on the laminate at the same point. Then move the sheet to the left (it now curves up the left wall) so the two marks are separated by the exact dimension from the outside of the router base to the opposite side of the bit.

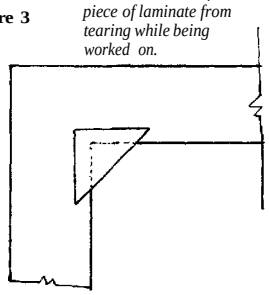
Again, clamp the base, making sure that the sheet stays parallel to the front of the counter. The router should then travel clockwise (toward you) on the right wall—and, again, hand cut the two inches in the corner. The sheet now fits both ends. (You can make the sheet fit more loosely by allowing more space between marks.)

Next, pull the sheet out and run the router across the back wall to make the final cut. The sheet will fit perfectly to all three walls. If the back wall is very irregular, a partial cut should be made before trimming either end to fit.



A small, triangular support can be fashioned from hardboard to protect an inside corner of a piece of laminate from tearing while being worked on.

Figure 3



If the top is U-shaped, first make a rough cut in the center of the sheet so a clamp can be fastened. Also, when working with U- or L-shaped pieces of laminate, it's wise to protect the inside corners against cracking by reinforcing them with small, triangular sleeves. Make each sleeve from two pieces of tempered hardboard glued together with a thin triangular separator (figure 3) in between. Once the sheet is in place, the protective corners can be removed. This eliminates the chance of twisting the sheet and starting a radial crack at the inside corner.

Fitting Pre-Finished Counters

You can use similar techniques to fit postformed countertops or other fully formed tops with a backsplash. If you are working with an L-shaped top, it is simple to pull out the top each way and ride the router on top of the backsplash, trimming the scribe strip at the top of the backsplash.

In the case of U-shaped tops, the top must be scribed before assembling the miters. If it is preassembled, cut a template with the router and transfer the line to the top.

Cabinets and Paneling, Too

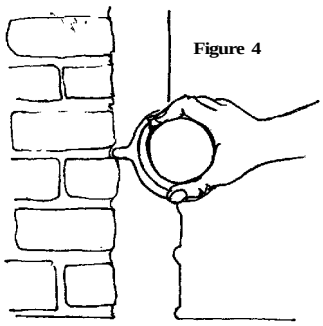
Scribing and fitting pre-finished cabinets, case goods, and paneling is always a problem because the pencil mark is hard to see. Using a router will eliminate this problem.

Base cabinets can be scribed to the wall by pulling out the cabinet and running the router against the wall. Obviously, you can't scribe a cabinet if it fits between two walls, but you can make a template by scribing a piece of thin plywood or hardboard with a router. Then clamp the template to the cabinet and ride the shank of the router bit against the template. This directly transfers the cut from the template to the cabinet.

To scribe wall cabinets, place the cabinets on a framework or "saddle" that can hold the cabinets in place while they are slid out and scribed. Again, the distance depends on the diameter of the router base.

Paneling can be scribed by tacking the paneling the correct distance and running the router against the wall for a perfect fit. The panel can be fitted between an existing panel and the wall by lapping the panel over the existing panel the correct distance. As with the plastic laminate, set the cutter in the router just deep enough to cut through the stock.

Figure 4



A small "finger" attached to the router base allows you to scribe to irregular surfaces, such as bricks.

Scribing to Brick, Block, and Rock

If you have to scribe against a block, brick, or rock wall, attach to the router base a tempered-hardboard plate with a ¼-inch finger sticking out a few inches. Using a ¼-inch bit, you can scribe an irregular-shaped wall (figure 4), but you must hold the router perpendicular to the wall at all times. Make sure the finger is long enough to scribe the deepest point on the wall.

Straight Lines

You can also cut straight lines and cutouts by using pieces of ½-inch plywood or particleboard as templates. Don't use metal, because riding the shank of a router bit against metal will crystallize the bit and it will break. The wood edge cushions the bite.

For a straight cut, glue plastic laminate to both sides of a ½-inch plywood straightedge. Using double-faced tape, place the straightedge on the sheet of laminate wherever you want. Now ride the shank of the router bit against the plywood edge, giving you a smooth, straight cut.

If you don't laminate the faces, apply a coat of contact cement to them instead, or the double-faced tape will not stick. If the tape stays clean, it can be used over and over. You can speed up laminate installation by using double-faced tape and templates for receptacle cutouts and other cuts. ■

Art Betterley operates Art Betterley Enterprises, Inc., Blaine, Minn., which makes specialized router accessories for cutting and trimming plastic laminates.