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A Picture Frame for Two

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A Picture Frame for Two

Build a simple router jig from scrap and you can create enough picture frames to satisfy everyone on a holiday gift list. While you're at it, you'll also get a little practice with Corian®, a nice alternative to wood for this accent project.

High-end countertop material meets weekend woodworking in this easy-to-build picture frame project.

This elegant picture frame may be the perfect answer to last-minute gift giving. It's easy to build and, with the help of a simple routing jig described on the next page, you can turn out a dozen frames in a weekend. The double-sided frame features Corian® solid-surface material (see *sidebar*, page 103) and bird's-eye maple.

Get started on this project by selecting some of your nicest maple scraps and cutting your bases (pieces 1) to overall size. Now rout a 1/4" radius cove around the top of each base. We used Corian® turning blanks (available through lathe-turning supply catalogs) for the tops and sides (pieces 2 and 3). These are fairly small pieces to machine, but with the help of a sled, you'll have no problems.

Building and Using the Sled

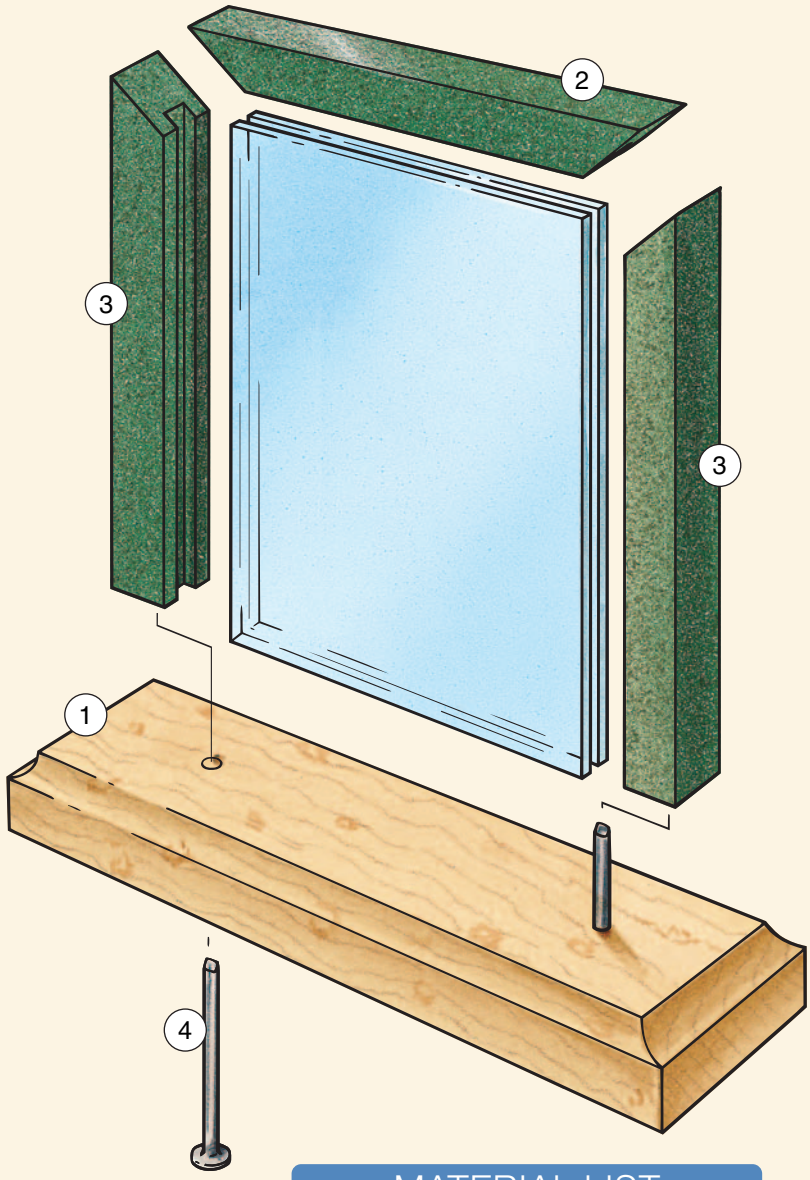
The sled is designed to hold each Corian® blank safely on your router table as you cut the dado for the glass (see *Figure 1*). Using a stop block to limit your length of cut to 5", plow a 1/2"-wide by 7/16"-deep dado in the center of the sled. Now insert a Corian® blank in the dado. (Note: your turning blanks probably have two dull surfaces and two shiny surfaces. Make sure you cut your dadoes on one of the dull surfaces.) Without moving the fence, switch to a 1/4" straight bit and plow a 1/8"-deep dado in your workpiece. Continue this process, creating three dadoed pieces (a top and two sides) for each frame.

Assembling the Frame

Using a sharp carbide-tipped blade (with at least 40 teeth) in your table saw, form the miters on the tops of the sides and then trim these pieces to length. Move on to cut the two miters on the ends of the top, making sure to back up all these cuts with scrap wood to avoid tearout.

End-boring the frame sides for the two studs (pieces 4) requires an accurate fence setup on your drill press. Set the fence 3/16" from the center of the bit and clamp a square 1x4 stop exactly 1/4" to the left of the bit center, as shown in the *Figure 1* inset. Now rip a piece of scrap wood to the exact size

Picture Frame Exploded View



MATERIAL LIST

		T x W x L
1	Base (1)	3/4" x 1⅞" x 5¾"
2	Top (1)	1/2" x 1/2" x 4⅛"
3	Sides (2)	1/2" x 1/2" x 4⅞"
4	Studs (2)	8d Common Nails

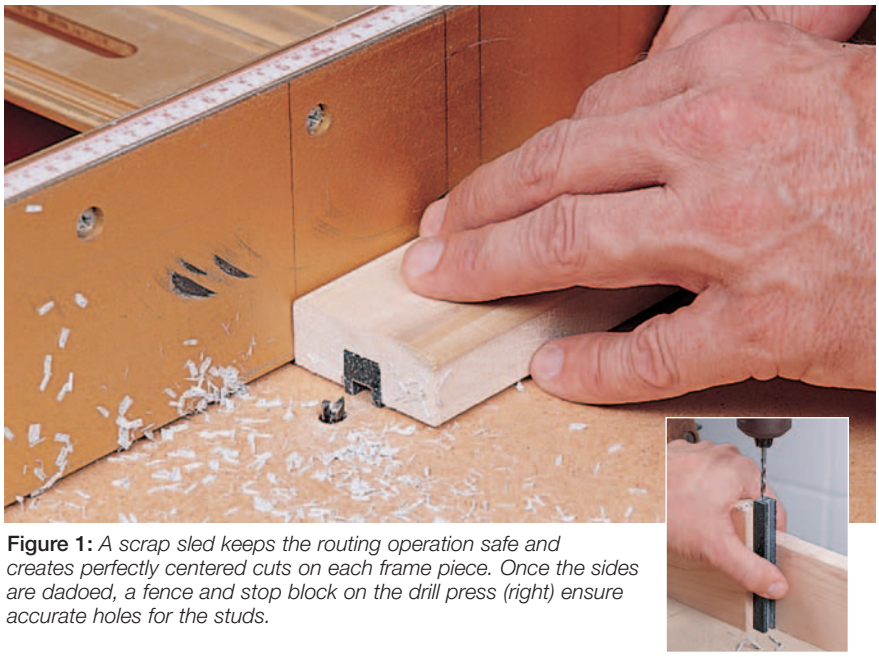


Figure 1: *A scrap sled keeps the routing operation safe and creates perfectly centered cuts on each frame piece. Once the sides are dadoed, a fence and stop block on the drill press (right) ensure accurate holes for the studs.*

of your frame sides and hold a 5"-long piece tight to the fence and stop block to test your setup. An 8d common nail has a diameter of about 1/8" so use a 9/64" bit to drill these holes. When you're satisfied with your setup, move on to the Corian® sides and, with the dado facing out, drill a 1¾"-deep hole in the base of each one.

While you're at the drill press, drill the holes in the base for the nails using a countersink bit to recess the heads. Bend each nail slightly toward the center to provide the necessary tension for a good friction fit.

Now you're ready to glue up your miters. Corian® requires Special "T" glue, a thick adhesive that fills gaps and sets almost immediately. If your miters are clean, you'll get a virtually invisible joint in about 20 seconds.

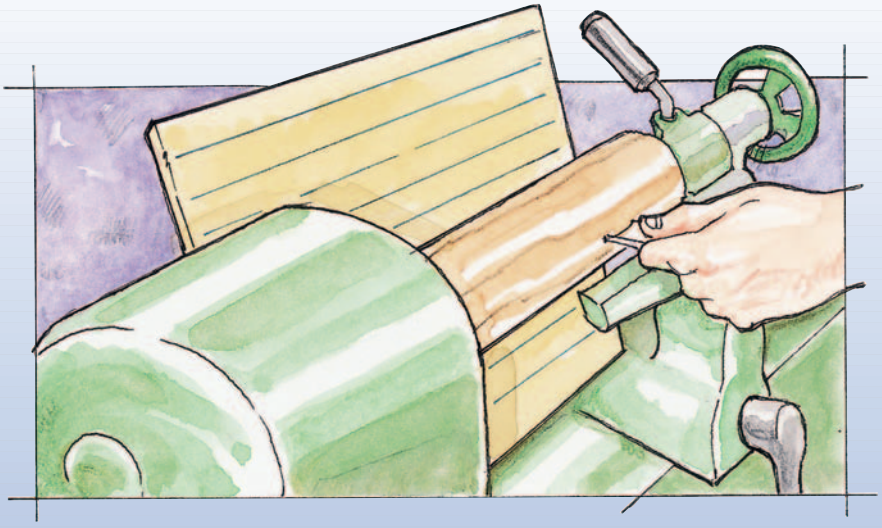
Finishing Up

Use non-reflective glass and a piece of cardboard between the two glass pieces keeps everything tight. As noted in the *sidebar* (next page), you have to sand Corian® in four stages. Start with 180 and wrap up with 400-grit silicon carbide open coat paper. Follow up with a buffing, using a green Scotchbrite pad. Then finish the maple base with a few coats of oil.

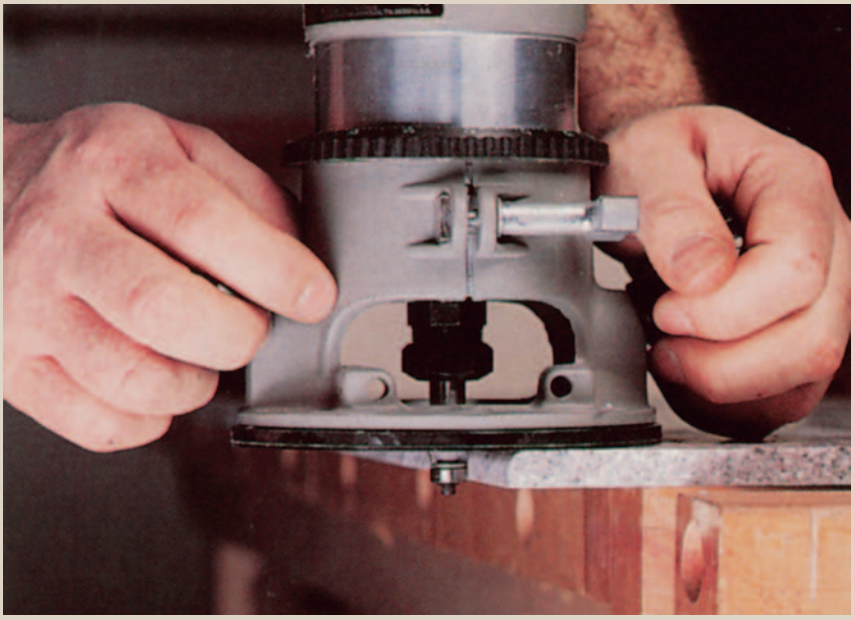
QuickTip

Production Turning Aid

To gauge the accuracy of cylinder turnings, here's a homemade jig that's easier to use than calipers. The jig amounts to a 1/4"-thick plywood panel with lines spaced 1" apart and parallel to the lathe bed. While turning, simply sight over the top edge of your workpiece to compare its shape with the lines, which reveals any high or low spots immediately.



WORKING WITH CORIAN®



Carbide bits are essential when routing Corian®, which is a synthetic material three times more dense than most hardwoods.

Corian® is the most popular brand name of a family of products called solid-surface materials—plastics with color patterns that permeate the material. They usually come in 1/4", 1/2" and 3/4"-thicknesses. Originally, it was used just for countertops, but innovative fabricators have found many new uses for Corian®: from showers and plaques to cutting boards and wall panels.

What once was a specialized product for countertop installers is now becoming increasingly available to the general public. This picture frame project, for instance, uses Corian® blanks you can buy from pen turning suppliers in various colors and patterns.

Corian® is relatively easy to work. Standard woodshop equipment is quite adequate, but to achieve quality results, you must equip your machines with carbide blades or bits. Sharp cutters are essential to prevent chatter and surface irregularities, because Corian® is three times as dense as most hardwoods.

Cutting straight lines in Corian® is best done with a router. If you use a table saw, the cut will have kerf marks that will have to be removed with a router anyway, so you may as well use the right tool to begin with. Also, when using a router and a straightedge, the tool moves across the surface of the material.

A table saw, on the other hand, requires that you push the entire surface of the workpiece across the tabletop, so scratches are far more likely to occur.

Wearing protective gear is a must with Corian® and similar products. Although the dust is chemically nontoxic, it can be pervasive and constitutes a respiratory nuisance. Eye protection is also recommended by the DuPont Corporation, which manufactures Corian®. The product, though extremely durable, is somewhat brittle, so particles can fly under certain circumstances. It's also heavy. And that density prompts one more piece of advice: When routing a decorative edge, or using a router to cut Corian®, make several passes rather than removing all the waste in a single pass. This is easier on your tools and improves the quality of the cut.

Achieving a matte finish on Corian® is also easy. Start sanding with 180-grit paper and work your way through 400. Use a silicon carbide open coat paper, and change papers often as the fine dust tends to clog even open coats rather quickly. Wash off the excess dust with cold water, and buff with a green Scotchbrite® pad to achieve a smooth, polished luster.