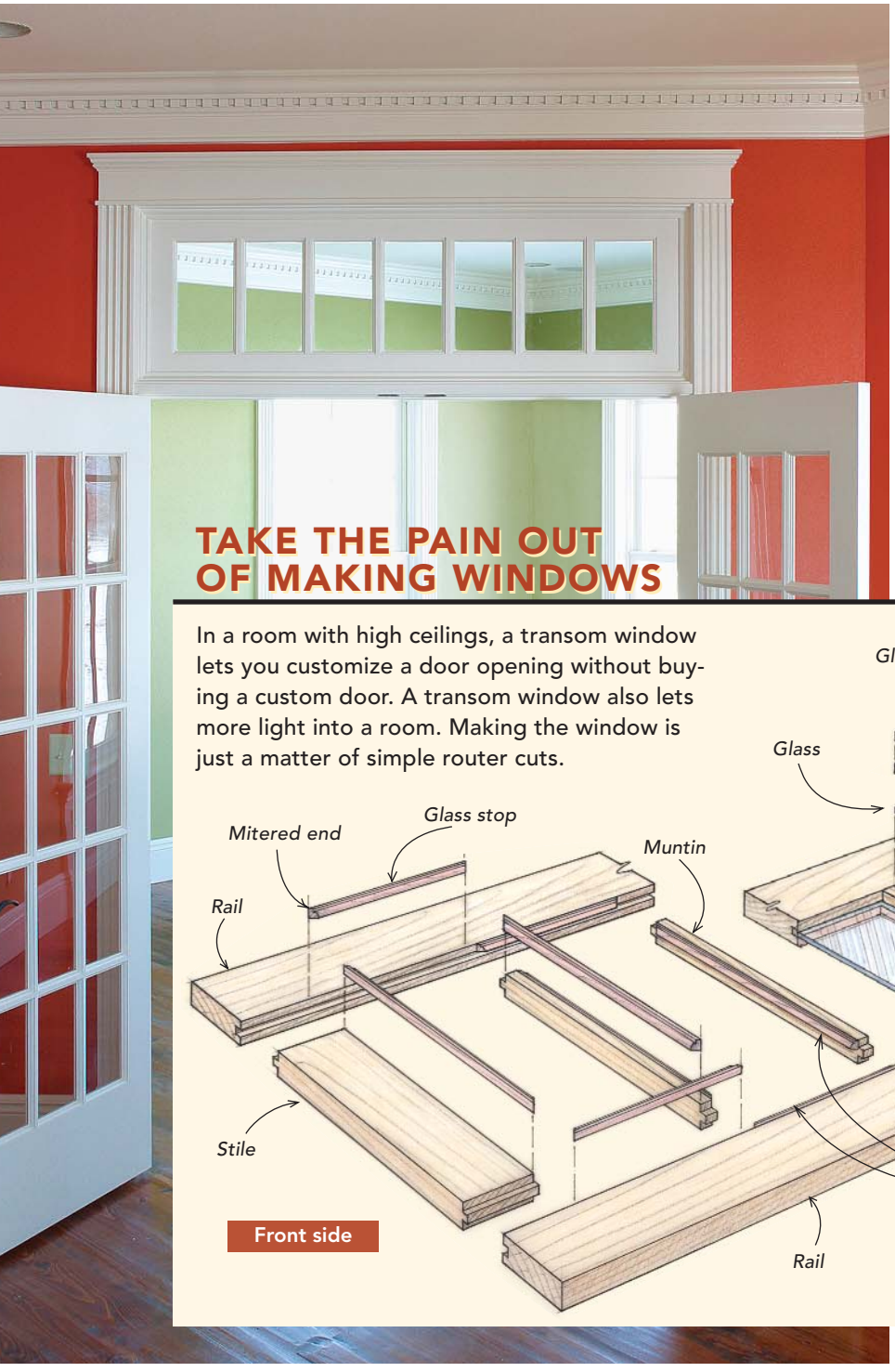
BY GARY STRIEGLER

Handsome transoms



TAKE THE PAIN OUT OF MAKING WINDOWS

In a room with high ceilings, a transom window lets you customize a door opening without buying a custom door. A transom window also lets more light into a room. Making the window is just a matter of simple router cuts.

Drawings: Vince Babak

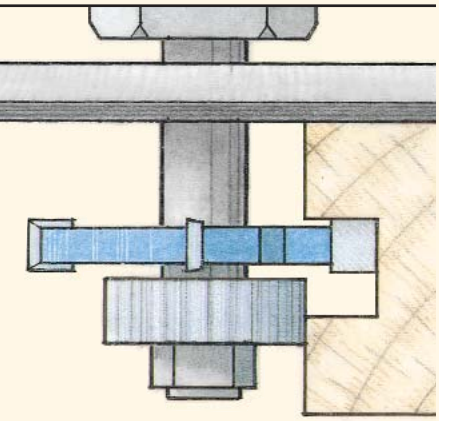
Traditionally, a transom window (photo left) is made with special matching shaper cutters that mill the parts so that they interlock. Instead, I make transom windows using just three common router bits: a slot cutter, a rabbeting bit, and a roundover bit.

The trick to building a transom window successfully is making a strong joint where the muntins (vertical dividers between panes of glass) and the stiles (side members) join the rails (top and bottom members). These pieces usually are too small for biscuits or pocket screws, so I opt for a modified mortise-and-tenon joint instead.

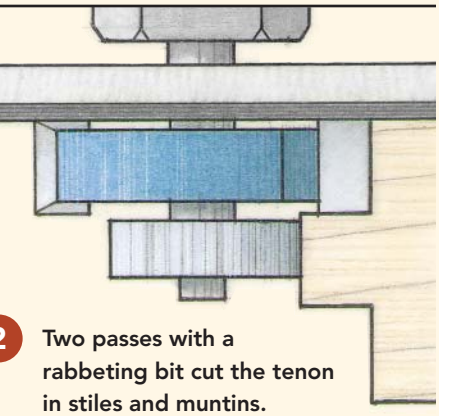
Layout: sizes that make sense

The width of the transom should be the same as the width of the door below it; the width of the stiles on both also should match. On the window, I try to make the glass openings 2 in. to 3 in. taller than they are wide. The

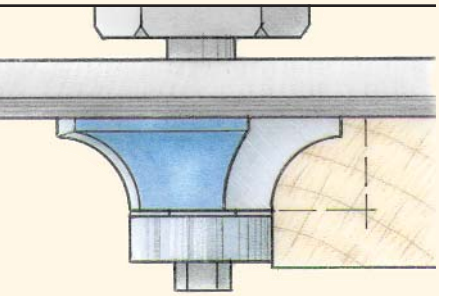
THREE ROUTER BITS AWAY FROM PERFECT TRANSOMS



1 A slot-cutting bit makes the groove or mortise in the rails. Run the router on each face to center the groove.



2 Two passes with a rabbeting bit cut the tenon in stiles and muntins.



3 A roundover bit creates the profile for the glass stop. Make two tablesaw cuts to complete the stop.

muntins should be at least ½ in. wide (without the glass stop), but I think ⅝-in.-wide muntins look better in most cases and make a stronger joint. Using these various dimensions as a guide, I adjust the exact size and the number of openings to get the rail width. Shorter transoms (for shorter ceilings) may need rails as narrow as 2 in.

Foolproof routing in logical steps

The first big step is planing all material to the same thickness, in this case 1½ in. The next step is milling the pieces in a logical progression of router cuts. The first cut I make is a groove in the rails, using a slot-cutting bit (top photo). Router passes on each face keep the groove centered. A bearing sets the depth of the groove at ⅜ in.

Next, I make the tenons on the stile and muntin stock. (For the muntins, I rip the narrow widths after tenons are cut in wider stock.) I use a bearing-guided rabbeting bit for these cuts (center photo).

A rabbeting bit causes a little tearout on the edges, so I leave the pieces slightly wide and clean them up later with a planer. Again, a series of cuts from each face centers the tenon. Instead of measuring the

No measuring needed. *The most accurate way to cut the stop is by marking it in place on a stile. The only measuring so far has been for the spacing of the muntins.*

tenon width, I dial in the final passes until the tenon fits snugly in the groove.

After the tenons are cut, I clean up the stiles and rip the muntins to their finished widths. To space the muntins on the rails, I set the stiles and muntins in the groove of a rail at one end and measure the rail length that remains. Dividing that number by the number of panes gives the muntin spacing between stiles.

Window stop is a separate piece

With shaper cutters, the glass stop is part of an interlocking profile. For these transoms, I make the glass stop separately with a roundover bit dropped slightly to create a shoulder (bottom photo, p. 136). Two passes on the tablesaw rip the glass stop to the right size.

Before assembling the transom, I glue stops along one face of the verticals. I get the length of the vertical stops directly from a stile (photo top left) and cut enough pieces for the stiles and muntins. A gauge block makes quick work of positioning the stop ("Trick of the Trade," right). Then it's just a matter of assembling the transom with glue and clamps. A pin nailer helps to hold everything together while I set the clamps (photo top right).

Finally, I fill in the remaining stop along the rail (center photo). If I've been careful, the cuts should be repeats. A second set of stops is nailed on after the glass goes in, and a molding holds the transom in its frame.

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Headless pins speed assembly. *After the stop has been applied to the stiles and muntins, headless pins help to hold the pieces in position until the window is clamped.*

Fill in the blanks. *While the glue dries, the last pieces of the stop go in along the rail. After the transom is installed and the glass panes are set, additional stops are applied to the other side.*

TRICK OF THE TRADE

A GAUGE BLOCK POSITIONS THE STOP

PERFECT PLACEMENT

To position moldings such as this window stop perfectly every time, use a gauge block with a shoulder cut along one edge. The shoulder rides on the back of the stock. The glass-stop molding butts against the vertical face of the block while it's glued and nailed in place.