Mitered Edging Made Easy



Most articles skip over this tricky process—until now

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FIT THE FIRST PIECE

On the first piece, you'll cut 45° angles on each end and focus on fitting the length to the panel. But on subsequent pieces, you'll custom-fit each angle to the last one until you reach the final corner.



P LINE IT UP



After you make your first cut, but before you move the workpiece, pull back the miter gauge and use the end of the piece to mark a line on the throat plate. Use this mark to align workpieces perfectly for subsequent cuts.

hen I teach veneering at the Center for Furniture Craftsmanship, students often need to apply a solid edge with miters to the beautifully veneered panel that they have just worked hard to make. Sometimes the panel is not perfectly square, so getting those miters to close up perfectly on all of the corners requires some attention. Here is a step-by-step procedure that will work every time. This method also can be used to edge plywood, make frames, and apply moldings. And it works for angles other than 90°, as in hexagons and octagons.

The secret lies in perfecting one joint at a time as you work your way around the piece. The quick "tacking" nature of yellow glue and its ability to temporarily "swim" or shift helps in this process. I prefer Titebond Original or Elmer's Wood Glue. You can lightly clamp a piece, fine-tune its location, and then lock down the clamps. By the time the next piece has been cut to fit, the clamps can be temporarily removed to accommodate the next glue-up.

I'll walk you through the process for a square or rectangle, where the angles are 45°. If you are working on a hexagon or octagon, you'll have to adjust the miter angles (60° for a hexagon and 67.5° for an octagon). Always use edge stock that is ¹/16 in. thicker than the panel. This way, you don't have to worry about attaching



for the second cut. Hold the edging in place, eyeballing and feeling that the mitered corner lines up perfectly (left). Strike a pencil line on the edging (below) where the second corner ends. Then trim away the other end at 45 ° until both ends

Position and mark



ATTACH THE FIRST PIECE

Use biscuits so you only have to worry about alignment in one direction.





Two tips for biscuiting. A ¹/₃₂-in. shim taped to the base of the biscuit joiner compensates for the edging being thicker than the tabletop (left). Schlebecker made a quick jig to hold the narrow edging in place while he cut biscuit slots (right).

Glue allows time for adjustment. With the biscuits in place, you only have to worry about aligning the edging horizontally and not vertically. Before the glue sets completely, you can slide the edging back and forth until the miters line up exactly with the corners of the panel.



the edging flush on the top and bottom. Apply it slightly proud of both the upper and lower surfaces and trim it flush later.

It looks best if the grain runs right around the corners, so use one long piece of wood and waste as little material as possible between pieces. Once you cut the first piece to size, the remaining piece will already have the correct angle, and it can be tempting to just flip the piece and use it for the next side. Don't give in to that urge, because you will flip the grain and the corners won't match. Fitting one long strip of edging around the piece will give you three matched corners, but the final corner won't match. Put that corner at the back of the piece if you can.

First edge first

I cut the stock for the first edge to fit corner to corner precisely, with 45° angles on both sides (see photos, p. 55). To cut the miters, I use a quality miter gauge on a tablesaw with a zero-clearance fence, but you could use a tablesaw sled, a sliding tablesaw, or even a well-tuned chopsaw.

When the corners of the miters line up perfectly with the corners of the panel, glue the edging into place, using biscuits or splines to help with alignment. Clamp pressure should be moderately strong. Begin with light pressure, which allows the edging to "swim" before it tacks. You can adjust the positioning before the full pressure is put on and the glue goes into full





Get rid of squeeze-out right away. Use a slightly damp rag to remove glue so it won't get in the way of fitting the next miter. This also lets you see that the corner of the panel is aligned with the mitered angle.

Drawings: John Tetreault

THE NEXT TWO SIDES

On each of these pieces, leave the stock long, custom-fit one end to the adjacent miter, and cut the other end to true 45° .





Tweak the first end to fit perfectly. Cut the next piece at 45°, and hold it up to the existing miter. If the miter appears open in any way (left), change the angle slightly on the miter gauge (above), and recut the miter until the fit is perfect. Now mark and cut the other end to length.





tack, but you have only about a minute. Apply pressure as close to the center of the edge thickness as possible, to avoid gaps at the top or bottom edges.

Fit the next pieces one miter at a time

Cut the next adjacent side piece with a 45° angle, and then hold it up to the existing miter. Keep this piece slightly long. If the miter appears open in any way, take the piece back to the saw, change the angle slightly on the saw fence, and repeat the

process until the miter is perfect. Holding this piece in place, mark the location of the miter on the opposite end and cut it at true 45°. Again, make sure all the corners are precise, sneaking up on it and eyeballing the final fit. This piece can now be biscuited, glued, and clamped in place.

Repeat the process on the third side. You'll have to temporarily remove the clamps that were used for the first piece to inspect and glue the third piece in place. The glue tacks so quickly that this is not an issue. When the third piece fits well, you can glue it on with the clamps holding the opposite edge in place, too.

Even with the joint cut properly, it is difficult to force the two sides of the miter together. Here's a trick: Slide the edging over toward the miter joint just a little too far during the glue's "swim" period, with light clamping pressure at the opposite end of the edging and none at the miter end. The miter will ramp up the opposing surface a little bit and cause a gap between

THE FINAL SIDE

Because you are matching miters on both ends of this piece while cutting it to perfect length, there is a slightly different approach.



Fine-tune the first angle. Cut a 45° angle on a test piece that is shorter than the side. Match the angle to the existing miter. Then cut one end of the edging.



Mark the length, perfect the angle, and cut the final miter. Holding the edging against the panel with the first miter bumped against its mate, mark the second side for length (above). Moving back to the test piece, find the precise angle for the last mitered corner (right) and then cut that angle on the final piece, leaving it slightly long.



the edging and the panel. Tighten the far clamp a bit, apply a clamp close to the miter, and watch the pressure force the miter surface to slide down the opposing miter until the gap closes. Tighten the far clamp and the rest of the clamps on this piece, too. This should give you tight miters with even pressure inside the joints.

The last side is different

The fourth side requires an extra test piece of the same dimensions but cut a little shorter. Cut 45° miters on the test piece and slide it up to one of the miters on the fourth side. If needed, adjust the angle on the saw until the joint fits perfectly. Without changing the setup of the saw, cut that angle on the end of the actual piece of edging that will go in this spot.

Now take the test piece to the opposite and final corner to see if it fits, and adjust as necessary, leaving the saw angle at that setting. Put the actual piece of edging in place on the panel with the first miter in the corner, and get a mark for the last miter. Now take this piece to the saw and cut the last miter, but leave the piece a little long. Test the fit. Go back to the saw and take off a very small amount from the last miter. It may take a few tries to sneak up on the perfect fit, which should be just a little tight so that the clamps will pull the

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Sneak up on the fit. The miters should match perfectly, but there will be a gap along the length of the edging where it meets the panel. Go back to the tablesaw and shave off a little at a time until you get the length just right.



piece snug against the panel. Biscuit, glue, and clamp this piece in place.

How to trim it flush to the panel

After the glue has hardened, take off the clamps and begin planing the edge flush to the panel. This is scary because you could rip or sand through the veneer. I hold the leading surface of the plane sole on the panel with the following surface hanging over the edge, and I skew the plane (see photo, above). I use a handplane set for a medium cut until I get close, and then take

light passes with a sharp blade, followed by a card scraper. Sand with a randomorbit sander in a tight circular motion. Don't use a belt sander. Finally, smooth the outside of the edged panel (up the mitered corners if necessary), using handplanes or sandpaper blocks. Always work from the corners to the middle to avoid catching the end grain and breaking off a corner. Now you can add a profile.

Peter Schlebecker teaches woodworking at The Center for Furniture Craftsmanship in Maine.

FLUSH THE EDGING TO THE PANEL

A series of careful steps will ensure that you don't sand through the veneer as you level the edging.



Start quickly, finish slowly. Set a handplane to remove material quickly, and then take light passes to go the rest of the way. Follow that with a card scraper (above) and light sanding (below). Be careful not to sand through the veneer on the panel.





Profile the edge? One reason for using solid-wood edging is that you can profile it. Now is the time to do that with a router or handplane.