

## Veneering tight curves

BY CRAIG THIBODEAU

My clients prefer figured or exotic woods that aren't readily available as lumber, so I do a lot of veneering. Luckily, I enjoy the creative freedom this gives, allowing me to run the grain in eye-catching directions—around curves, for example. When I started out, I found any number of articles on how to veneer flat or gently curved panels for doors and tabletops, but not much on the tighter curves I saw in my mind's eye. So I forged ahead, mixing and matching techniques I found in various places. In this article I'll show how I veneer coves, half-rounds, and quarter-rounds.

The tools and methods are well within the reach of an ambitious amateur. You'll need a vacuum bag, veneer (the thin, commercial kind), white Styrofoam insulation (available at home centers), plastic sheeting, and neoprene rubber (mcmaster.com; No. 9455K46). I use the foam both as a clamping caul and to make flexible sanding blocks for smoothing substrates and the veneered surface. I use Titebond I



### HALF-ROUNDS

Thibodeau veneered this modern bench in myrtle burl, including a half-round molding around the seat.



### QUARTER-ROUNDS

The feet end in a sleek quarter-round profile.

### LARGE COVES

Dramatic coves, veneered in Macassar ebony, frame the chessboard on Thibodeau's Art Deco game table.

# How to handle any cove

**Start with a dry run.** Rehearse the clamp-up without glue to make sure the veneer and all the parts of the sandwich are sized right and working correctly. This assembly includes the MDF substrate, glue, veneer, a plastic sheet, 1/4-in.-thick neoprene rubber, white foamboard, and a narrow plywood caul.



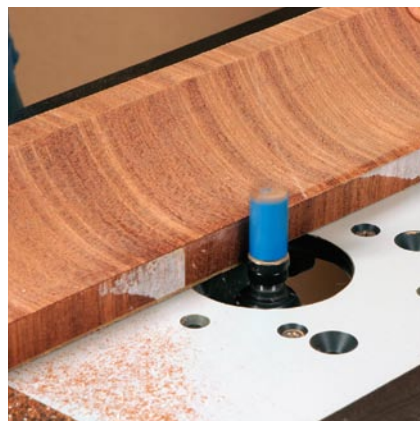
**Mix and spread glue.** Use urea-formaldehyde glue for coves. Spread it evenly on the substrate using a roller designed for adhesives. Wait a few minutes for some to be absorbed, and then apply a thin second coat.



**Flip check.** Clamp the assembly firmly and uniformly along its length. Turn over the glue-up and check the squeeze-out to be sure all of the edges are clamped. The white foam will continue to compress, so come back in 10 minutes to retighten the clamps.



**Remove the tape.** Thibodeau uses thin, wide gum tape to join sections and reinforce curves. It comes off easily when dampened and allowed to soften.



**Two ways to trim.** If the veneer is sticking straight out, a flush-trimming bit works great (left). But if the veneer bag has flattened the edge, use a machinist's "float" to file the corner (right) until the excess drops away, then sand it flush with a hard block and P100-grit paper.



## Half-rounds with no worries



**Measure for the veneer.** Make the workpiece extra wide at this point, and use a flexible ruler or a strip of paper to see how much veneer is needed. Cut the veneer about ½ in. short to allow it to expand when it hits the yellow glue.



**Tape outside curves.** The wet gum tape prevents splintering and keeps the veneer flexible. Burnish the tape with a brass-bristle brush to improve its bond. Cover the veneer temporarily with a piece of MDF to keep it flat and moist.



**Lock it down.** After applying glue, tape down the veneer (left) to keep it from sliding around. Then tape down the layer of plastic sheeting and neoprene (right).



**Press and wrap.** Thibodeau adds a layer of white breather cloth to help the airflow. He smooths the wrinkles and wraps the bag tightly around the bottom corners as the air escapes.

for outside curves; it cures within hours. But it allows too much creep for coves. For those I use Unibond 800, a two-part urea-formaldehyde-based glue (available from Vacuum Pressing Systems; [vacupress.com](http://vacupress.com)). It allows more open time, creates a very rigid glueline, and cures within 24 hours. Wear a proper respirator, not a dust mask, to protect yourself from the formaldehyde fumes. I use MDF for the substrate because it is stable in all directions and it creates a dead-flat surface.

My veneer tape of choice is thin, 2-in.-wide “water gum” tape ([dilegnosupply.com](http://dilegnosupply.com)). It comes off easily when dampened and allowed to soften for a minute or so. I use it to assemble joints and to reinforce veneer on outside curves, where it keeps the veneer flexible and prevents splintering. I also used it on the cove veneers in this article, which have vertical grain and had to be assembled from multiple pieces. Quick tip: After applying the tape, burnish it with a brass-bristle brush to improve its bond.

Veneered coves can be used facing upward, as on my Art



TIP

### BUBBLE TROUBLE?

If you find bubbles, pockets, or small wrinkles, slice them open with a scalpel, work glue into the recess, and reclamp the assembly in the vacuum bag.

## Quarter-rounds aren't much different



**Flat landing strip.** To keep the veneer tight against the entire curve, Thibodeau screws on an extra tape-wrapped block flush with the lower edge.



**Lock it down.** As before, tape down the edges of the veneer, and then the layers above it.

Deco chess table, or downward as in crown molding. I laminate a stack of MDF for the substrate. I use the method described in *FWW* #168 ("Cutting Coves on the Tablesaw") to lay out and cut the coves. They usually need some sanding afterward to smooth the tablesaw cut. I don't use a vacuum bag to press large coves; I find it easier to clamp them manually. Before veneering the cove in this case, I veneered the flat edges adjoining it. Those are also easy to veneer with clamps and cauls.

### Use a vacuum bag for convex edges

Half-round pieces can be used as a frame (as on my bench) or to create half-round columns to be applied to furniture.

My techniques for outside curves work well all the way down to a  $\frac{3}{8}$ -in. radius. Since the bag does most of the work, the sandwich is simpler. But instead of sitting the glue-up on a flat platen inside the bag as some would do, I use breather cloth (called EvacuNet by Vacuum Pressing Systems) to carry the air from around the workpiece to the hose, and then a layer around the glue-up to help the airflow.

On half-rounds, I make the substrate extra wide for two reasons: It gives me extra support on the router table when forming the round edges, and it leaves room for the veneer to expand a bit when glue and pressure are applied; you don't want it to hit the bag and break or wrinkle. You can just trim away the excess substrate later on the tablesaw.

The other type of outside curve is a quarter-round. I use these for table edges, door edges, and feet. □



**Press and tuck.** As the pressure increases, smooth out the wrinkles on top and be sure the bag wraps under the curved edge.



**Another way to trim.** A sharp veneer saw leaves a perfect edge under the curve.

*Craig Thibodeau, a woodworker in San Diego, specializes in veneered work.*