



Six Ways to Edge Plywood

The choices vary in their complexity and durability and the time they take to execute

BY MARIO RODRIGUEZ

To the world of woodworking, the innovation of plywood ranks right up there with the invention of the tablesaw. It's hard to imagine building some furniture and cabinetry without it. Plywood gives you the relative stability and flatness of a 4x8 panel, combined with the beauty of select veneers. You also get a variety of thicknesses, from $\frac{1}{4}$ in. to $\frac{3}{4}$ in. on stock items and up to $1\frac{1}{2}$ in. on special orders—and you get all of this at a reasonable price. The challenge when using plywood is, of course, what to do about that ugly laminated edge. The goal is to create an edge treatment that looks like a continuation of the veneered surface without an obvious seam. You can achieve that goal with a simple layer of veneer or a more complex edge treatment that requires sophisticated joinery techniques.

The decision about how to treat a plywood edge can be influenced by a number of factors—esthetic and design considerations (how do you want it to look?), function and durability (what kind of wear and tear will this edge face?), time and labor (how much of either do you want to spend?). The choice should depend on the planned use of the furniture piece or cabinet component. For example, a thick, solid edge would be appropriate for the exposed edge of a cabinet carcass. But for shelves contained and protected within a cabinet, an iron-on veneer edge would probably be sufficient. What follows is a look at the choices, from the easiest to apply but least durable to the more complicated versions that take longer but offer more protection. □

Mario Rodriguez is a contributing editor.

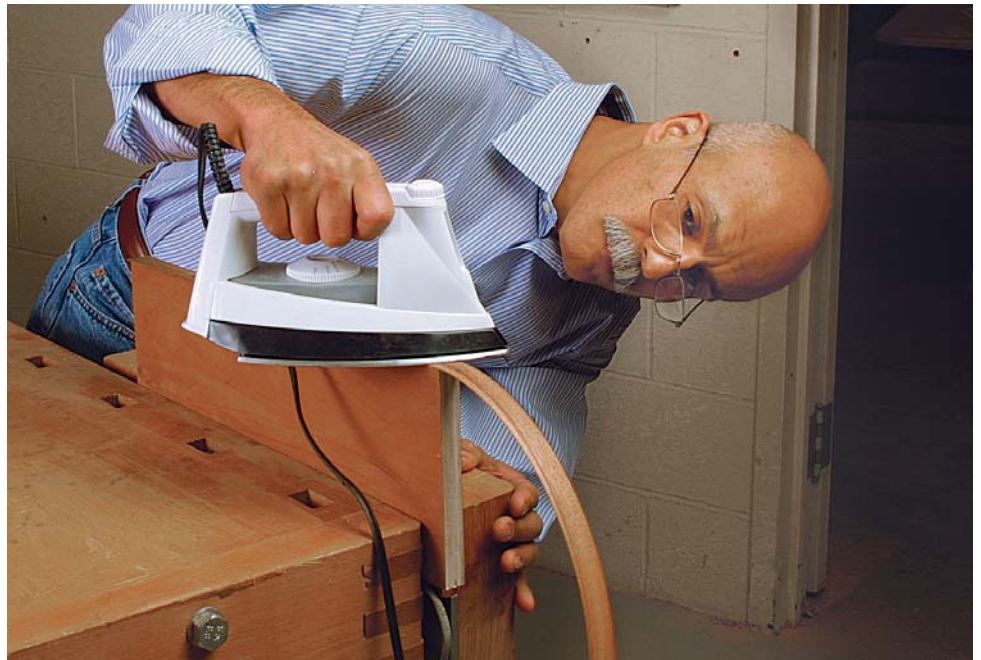
IRON-ON VENEER IS EASY TO APPLY



This material, also called edge tape or edge-banding, commonly measures $\frac{3}{16}$ in. wide for use with $\frac{3}{4}$ -in.-thick plywood. It is sold in rolls from 8 ft. to 250 ft. long, and it is available in a number of different woods. Birch, cherry, mahogany, red oak and walnut are fairly easy to find, but you can also buy it in ash, maple, pine, white oak, teak and just about any other species of hardwood plywood that is made. Because it's so thin, edge-banding isn't suitable for furniture components that will be subject to heavy use. But once the heat-sensitive glue has melted and cooled and the edge-banding has been trimmed, the seams are virtually invisible. Just remember that heat causes the glue to release, so don't choose edge-banding for pieces that will be exposed to heat.

A standard household iron is the tool of choice for most people who use edge-banding. Set the iron to a medium heat level. While it's warming up, you can cut lengths of banding to size, allowing a little overhang on both ends. Move the iron slowly back and forth, applying a steady pressure until the heat-sensitive glue melts and bonds the edge-banding to the plywood. Some people burnish the banding with a scrap of wood, but I haven't found that technique necessary to get a good bond.

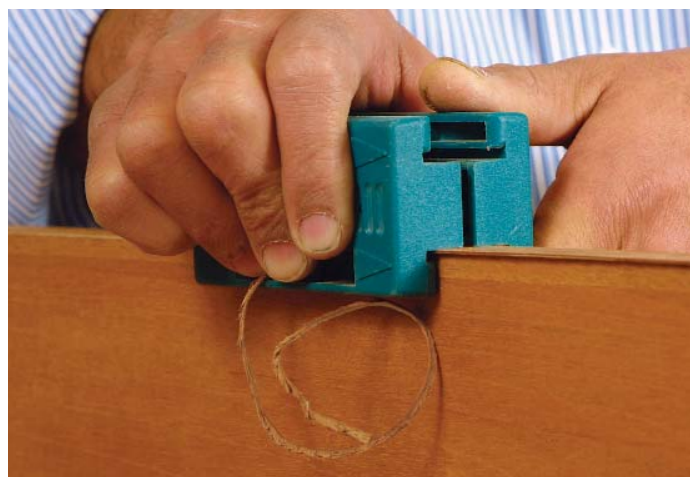
The glue needs to cool before you can trim the banding; otherwise, you end up with a gooey mess. You can trim the edge-banding overhang with a razor blade, a veneer saw, a file or a specialty tool designed for the job (see the photos at right).



Ironing is simple and straightforward. A regular household iron set on medium heat is all you need to melt the heat-activated glue on the back of manufactured edge-banding. The material is available in just about any hardwood veneer that is also used to make plywood.



Plywood guides the cut. Rodriguez uses a sharp veneer saw to trim edge-banding on small workpieces that he can easily hold with one hand. To direct the cut he keeps the bottom of the saw flat against the plywood.



The right tool for the job. For trimming large quantities of edge-banding, invest in a spring-loaded edge trimmer designed for this task. The one shown here is made by Virutex and sells for about \$10.

SOLID EDGING

With solid edging you get a thicker edge than you do with iron-on edge-banding, and it requires only a little more work. For $\frac{3}{4}$ -in.-thick plywood, begin by jointing a straight, square edge on a $\frac{7}{8}$ -in.-thick thick piece of solid lumber, then rip as many $\frac{1}{8}$ -in.-thick strips of lumber as you'll need.

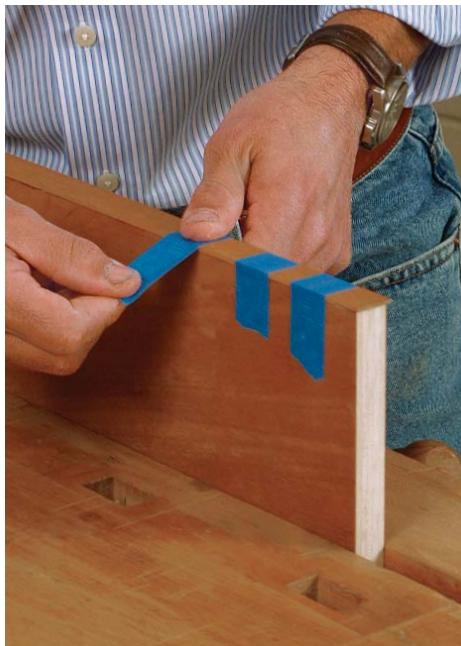
I use a sharp 40-tooth rip blade, but a good alternate top bevel (ATB) blade can also do the job. Be sure to back up the cuts with a sturdy push stick to prevent the thin strips trapped between the spinning blade and the fence from shooting back at you. Before ripping each $\frac{1}{8}$ -in.-thick strip, joint the edge of the lumber. Place the jointed edge against the plywood edge when you glue it up.

After applying a swath of glue to the plywood edge, use a good-quality masking tape to clamp the edging strips in place. Inspect each edge after you tape it. A tight seam with a little bit of glue squeeze-out along the length of the joint indicates a good job. After the glue has dried, trim down the overhang with a block plane and a cabinet scraper.

This method offers a couple of important benefits. The V shape has an extremely low profile at the seam, making it nearly invisible; and the increased thickness toward the center offers more durability than you get with edge-banding (p. 57) or even the $\frac{1}{8}$ -in.-thick treatment (left).

Shape the solid-wood edging first, using a board wider than you need, which makes the process easier and safer. First mark the exact center of the edging material with a marking gauge, then transfer that mark to the bottom edge of a sacrificial plywood fence. Set the tablesaw blade to an angle of 25° , and set up the fence so that the spinning sawblade advances into the sacrificial fence just below the scribed line. Once this setup is ready, you can shape as many edgings as you need, beveling the top and bottom of each piece of lumber by flipping and turning each board around and passing it against the sawblade.

To cut the V shape into the edges of the plywood, leave the blade set at 25° and shift the fence to the other side of the blade. As with any finicky setup, it's best to have some scraps on hand to make adjustments as needed until the cut is aligned. When all of the angled cuts have been made, return the blade to 90° and rip the final pieces of V-molding from all of the lumber that you shaped. You can use masking tape to hold the V-molding in place when you glue it up. Once the glue sets, trim the edges with a block plane and a cabinet scraper.



Masking tape makes a good clamp. Numerous short pieces of masking tape provide plenty of pressure for gluing wood edging.

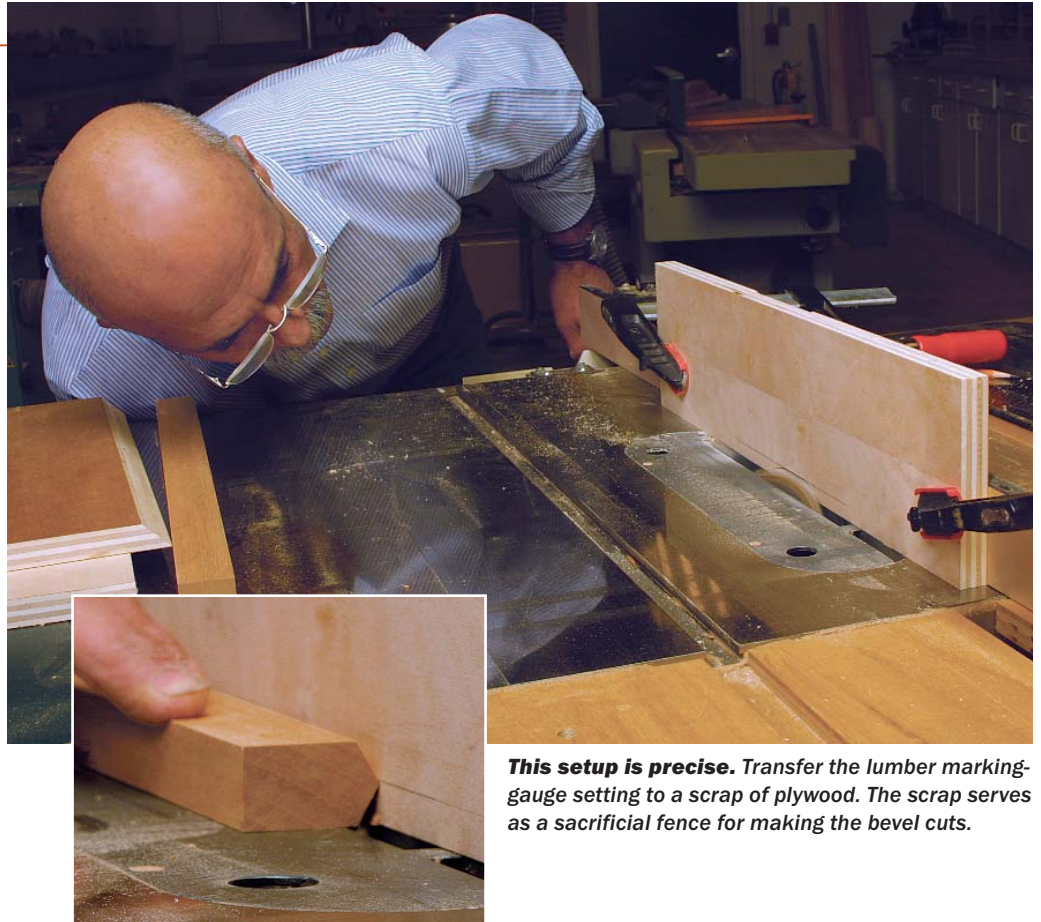
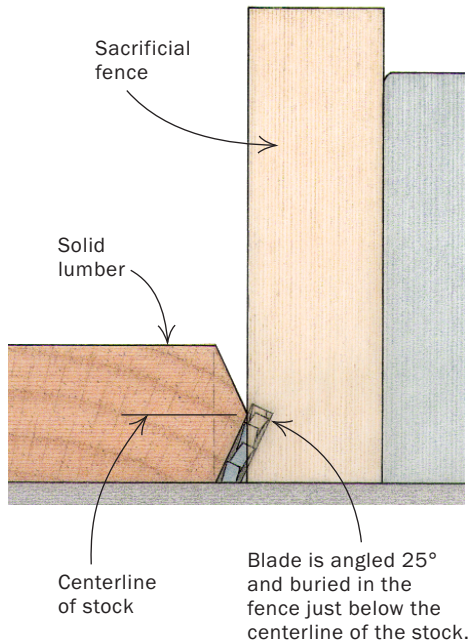


Tools for trimming. Use a block plane to trim most of the excess edging flush to the plywood surface (left). Angle the sole of the plane to achieve a cleaner cut. A cabinet scraper finishes the job (above).

V-SHAPED EDGING IS DURABLE AND PRACTICALLY SEAMLESS

CUTTING THE BEVELS

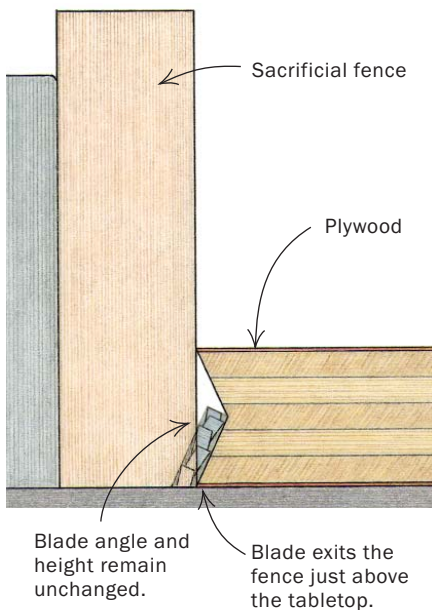
Use a 7/8-in.-thick piece of lumber to make a V-shaped edging for 3/4-in.-thick plywood.



This setup is precise. Transfer the lumber marking-gauge setting to a scrap of plywood. The scrap serves as a sacrificial fence for making the bevel cuts.

SHAPING THE PLYWOOD

Move the fence to the other side of the blade to set up the cuts for the V-shape into the edge of the plywood.



A nearly invisible seam at the edge. This alternative edging offers the advantage of showing very little wood at the edge where veneer meets lumber, unlike the effect you get with tongue-and-groove edges (see pp. 60-61).

THREE TONGUE-AND-GROOVE EDGE TREATMENTS



The three common versions of a tongue-and-groove lumber edge for plywood offer the most protection for a plywood edge. A significant advantage of adding a substantial piece of lumber to the edge of plywood is that you can shape that edge in any number of decorative configurations, such as a bullnose, an ogee or a bevel.

But these edge treatments have a couple of drawbacks. They are time-consuming to carry out, and each of them produces a visibly discernible seam.

You can go about cutting these joints a couple of different ways. You can buy a matched set of router bits to make the required cuts, or you can make all of the necessary cuts on a tablesaw using either a combination blade or a stacked dado set, or both. There's not a lot of room for mis-

takes when you're setting up these cuts—you must be precise.

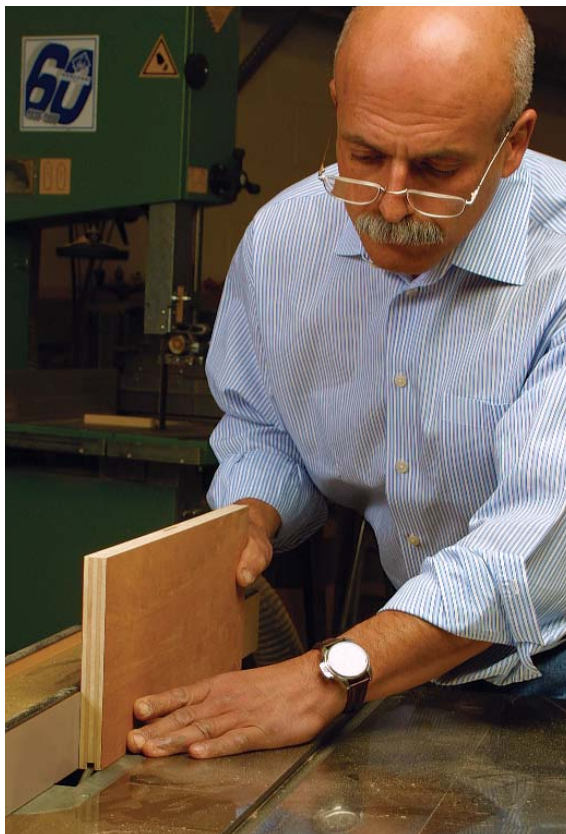
I usually begin by plowing the grooves first, using a stacked dado set. Naturally, you must be prepared to make allowances for plywood that is not a full $\frac{3}{4}$ in. thick, because it rarely is. Plowing the groove from both sides guarantees that it will be perfectly centered, regardless of the actual thickness. After plowing the grooves, clamp a plywood scrap to the fence and reposition it to cut the tongues to fit. I prefer to make the shoulder cuts first, using a combination blade for a clean cut. When gluing up any of the three versions shown here, a clamped, slightly concave batten will give you tighter seams, distribute the pressure more evenly across the span of the edge and will require fewer clamps.



1. GROOVED PANEL

This version provides the most solid wood at the center, for shaping the edge later.

Two options for plowing grooves. A stacked dado set or a straight-toothed rip blade each works well at cutting grooves into the edges of either plywood or solid lumber.



Shaping lumber tongues on the tablesaw. Make the shoulder cuts first, with the edge stock flat on the tablesaw. Then turn the stock to a vertical position and run it through the blade again to cut the tongue to size.



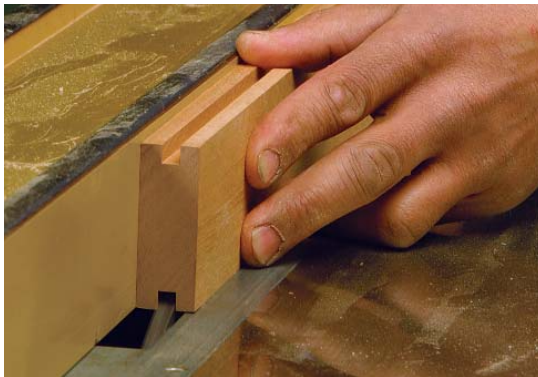
Start with lumber larger than needed. When cutting joints in lumber edge stock, use wider boards and rip the edging down to width later, after shaping all of the joints.



2. GROOVED LUMBER

This method is a little simpler to make but might limit the shapes you can mill into the edge.

Same process, but the materials are reversed. A grooved lumber edge fitting over a plywood tongue is set up and cut just like its mirror-image cousin (facing page).



Cut the shoulders carefully. The quality of the joint where the plywood veneer meets the lumber edge is defined by how well the two materials come together. Maintain an even, steady cut for the best results.



3. PLYWOOD SPLINE

A separate spline serves as the tongue to join plywood to lumber.

Matching grooves. This is the easiest and fastest of the three tongue-and-groove treatments to set up and cut. It reduces the joint-making time by half. Properly glued in place, the 1/4-in.-thick plywood spline is plenty strong.



Concave batten aids clamping



A concave batten minimizes the number of clamps. A scrap of wood with a slight bow in it (above) requires fewer clamps to get even pressure along an edge being glued up. A block plane (left) makes quick work of leveling the solid wood.