

# Something Old *into* Something New

*A traditional step-back design is a perfect fit for flat-screen TVs*

BY PAUL LEWIS

**T**HE DESIGN FOR this cabinet brings together two of my favourite things: the classic look of an antique step-back cabinet and the weathered beauty of silver-grey barnboard. I always marvel at the longevity of vertically hung, unfinished barn siding—especially considering the time we woodworkers normally take in protecting and preserving our projects with a finish. • One of the keys to this cabinet is planing all the boards to a uniform thickness; barnboard thicknesses easily vary by  $\frac{1}{8}$ " or more, and that's too much for furniture. Just be careful to plane only one side to preserve that prized weathered face. Don't forget to tailor the design for your particular gear or whatever you wish to store in it.

## MAKE THE CARCASS

Start by edge-gluing boards to make the side panels. One of the nice things about working with barnboard is that its rough texture makes it more forgiving than other materials. Jointing the edges of the boards is not necessary—clean, tablesawn edges work just fine. Each side panel is made from three boards: two long and one short. Rip the boards to their final width, then position them on your workbench. Apply glue to the sawn edges and clamp them together. Be careful to align the outer faces of the boards and avoid visible glue squeeze-out since you can't scrape the weathered surface later.





“Customization is one of the many great advantages of woodworking and building things yourself”



PHOTOGRAPHY: ROGER YIP

Next, cut the top, bottom and interior shelves on the tablesaw. I used paint-grade maple-veneered plywood for these parts. This material is cheaper than barnboard and the smooth surface is better suited to cupboard shelves.

When the glue on the side panels has dried, remove the clamps and draw out the feet. Cut them using a jigsaw fitted with a fine blade.

Mark the position of each of the shelves on the planed interior surface of the side panels. Join the side panels and interior shelves using glue and #20 biscuits. Plunge biscuit slots on the interior faces of the panels while they are lying flat and side by side on your bench.

Bringing together the shelves and side panels to make the cabinet carcass is a tricky bit of wood juggling; you might want to enlist some help. Make sure all the biscuit slots line up and check that the shelves sit where they should. I bored a couple of pocket holes on the underside of the shelves (away from the biscuit slots) to make assembly easier. Add glue to the biscuit slots, position a shelf and drive in two pocket screws to pull everything together. Repeat this process for all the shelves on one side of the cabinet. Now, with the ends of the shelves all pointing up toward the ceiling, add glue and biscuits and wrestle the right-hand side of the cabinet into position. It's important that you install this side of the project now to ensure that the shelves dry in a square orientation.

Drive the screws to complete the carcass. To ensure the assembly stays square while the glue is drying, I clamped four 90° steel brackets temporarily into the corners of the cabinet. The brackets are made by Simpson Strong-Tie, and you can buy them at a home-improvement store.

#### MAKE THE FACE FRAME

Rip the wood for the face frame—the rails and stiles on the front of the cabinet—to width on the tablesaw and cut to length using a compound

### → You Will Need

PART	MATERIAL	SIZE (T x W x L <sup>2</sup> )	QTY.
Long side panels	barnboard	3/4" x 16 5/8" x 72"	4
Short side panels	barnboard	3/4" x 6 1/2" x 32 1/4"	2
Top	plywood	3/4" x 10 1/4" x 28"	1
Upper shelf	plywood	3/4" x 10 1/4" x 28"	1
Middle shelf	plywood	3/4" x 17 1/2" x 29 1/2"	1
Lower shelf	plywood	3/4" x 16 3/4" x 28"	1
Bottom	plywood	3/4" x 16 3/4" x 28"	1
Rails	barnboard	3/4" x 1 1/2" x 26 1/2"	3
Bottom rail	barnboard	3/4" x 3" x 26 1/2"	1
Upper stiles	barnboard	3/4" x 1 1/2" x 40"	2
Lower stiles	barnboard	3/4" x 1 1/2" x 31 1/4"	2
Upper door rails	barnboard	3/4" x 2 x 10 1/4"***	4
Upper door stiles	barnboard	3/4" x 2 x 15 1/4"***	4
Upper door panels	barnboard	1/2" x 10 1/4" x 12 1/4"***	2
Lower door rails	barnboard	3/4" x 2" x 10 1/4"***	4
Lower door stiles	barnboard	3/4" x 2" x 18 3/4"***	4
Lower door panels	barnboard	1/2" x 10 1/4" x 15 3/4"***	2
Side trim	barnboard	3/4" x 1 1/2" x 8"	2
Front trim	barnboard	3/4" x 1 1/2" x 31"	1
Top short trim	barnboard	3/4" x 3" x 15"	2
Top long trim	barnboard	3/4" x 3" x 31 1/2"	1
Back panel strips	T&G pine	1/4" x 3" x 66"	10

\*Length indicates grain direction \*\*Doors are fitted to final size to fit the opening before installing



#### RECOMMENDED TOOLS

Tablesaw, thickness planer, jigsaw, biscuit joiner, drill/driver and mitre saw



**THE KEY** to this project is the unique materials. The rough texture and weathered colour of barnboard create a rustic yet elegant place to house your entertainment centre (above). Create access holes on the back panel so you can fish media cords through (above, right). A simple shape on the legs creates feet to match the clean design of the entire cabinet (right)

# → PLANS FOR THE BARNBOARD MEDIA CABINET

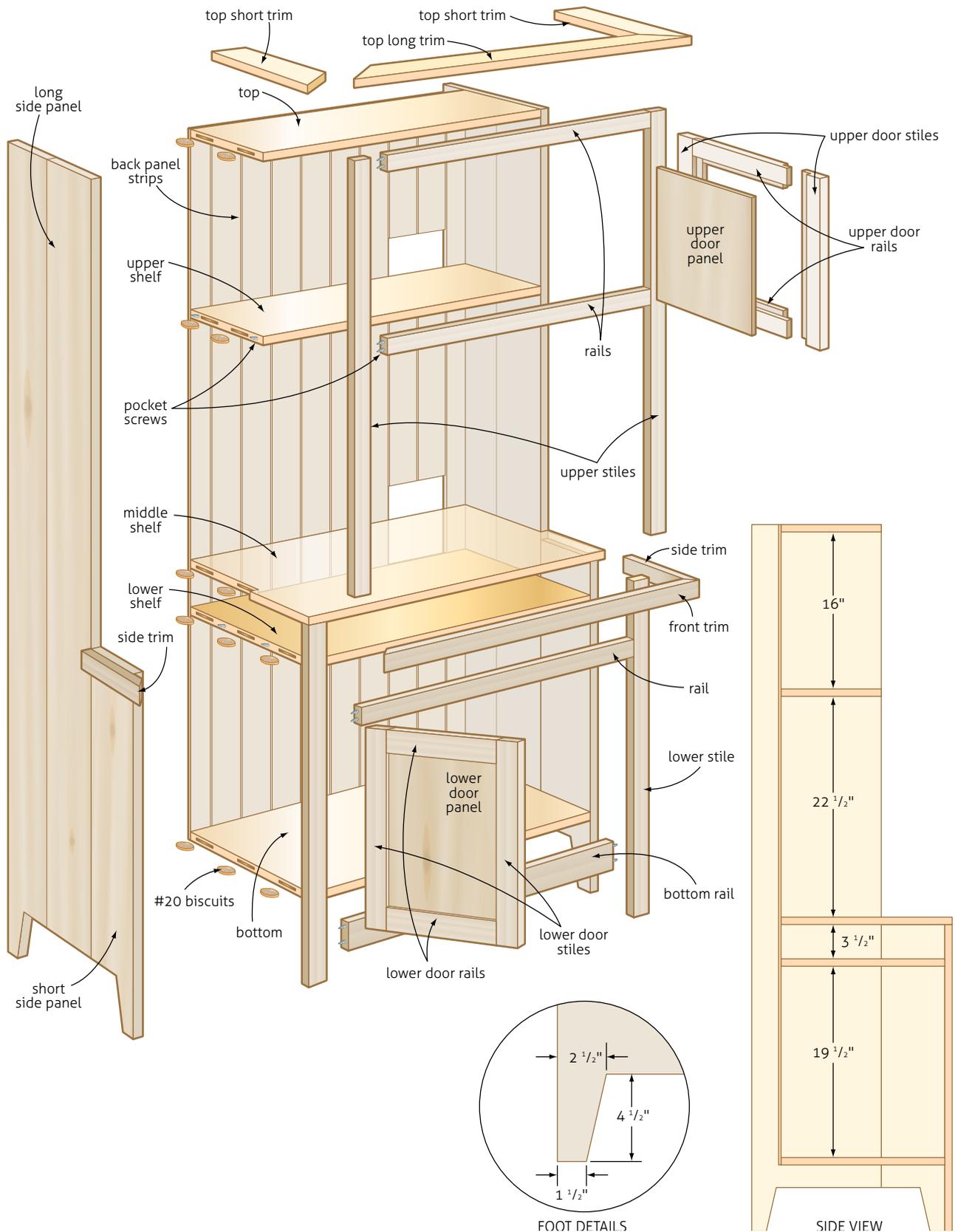


ILLUSTRATION: LEN CHURCHILL

mitre saw. Mark the position of the rails on the stiles by holding each stile against the finished carcass. That way, you can be sure the face frame's rails line up with the shelves. Bore pocket holes on both ends of each rail; add glue and bring all the pieces together with screws. Dry-fit the face frame to the carcass front, and, if everything looks good, add glue and clamp the face frame to the carcass.

### MAKE THE DOORS

Rip the wood to width for the door rails and stiles on the tablesaw, then cut to length using a mitre saw. I made the door panels so they fit into rabbets on the back of each door frame, and these are best made using a tablesaw. (However, just about any other door joinery option works.)

Start by setting the height of the blade to  $\frac{1}{4}$ " and set the fence at  $\frac{1}{2}$ " less than the thickness of the blade. Run all the stock for the rails and stiles through on the wide faces first, then adjust the blade height to  $\frac{1}{2}$ " and set the fence to  $\frac{1}{4}$ " less than the thickness of the blade. Run through the pieces on their edges. To mill the rabbets on the ends of the rails, use the mitre gauge set at  $90^\circ$  to the fence and the blade height set back to  $\frac{1}{4}$ ". Clamp a scrap of wood to extend the face of the fence toward the blade, then cut the rabbets with several passes. Dry-fit, then assemble the door frames with glue and clamps.

The door panels fit into their rabbets from the back. Plane enough stock down to  $\frac{1}{2}$ "-thick for the door panels, then rip the panels to width on the tablesaw and cut to length with a mitre saw. Fit the panels into the doors with a small dab of glue applied only at the centre of each edge of the panel, where it meets the rabbet. This allows the panels to expand and contract seasonally. Secure the edges of the panels with small brads driven at an angle through to the rails.

### THE FINAL STRETCH

The back of my cabinet is made with 10 lengths of new tongue-and-

groove pine panelling strips. Cut these strips to length, then rip 1" off the tongue side of one. This piece will be your starting strip. Snug up this strip to one side panel of the cabinet, then attach it with a small finishing nail to the back of each shelf. Note that the back panel is recessed in from the rear edges of the side panels to allow space for cords and a power bar. Continue securing the back panel strips until there is only one remaining. Measure the last space and cut the final panel to width before installing it. You can leave access holes for power cords as needed by leaving spaces in the ends of the tongue-and-groove strips, or by boring holes with a hole saw later.

Install the doors using non-mortise hinges. Purists may recoil at the use of these, but I find them great for utility-style furniture such as this. Simply screw one leaf of each hinge to the door frame first, then position

the door and mark the location of the matching hinge leaves on the cabinet stiles. Take the time to trim the doors for a snug fit. (I used a few business cards as shims to determine the exact size of the door based on the opening.) Once the doors are installed, drill holes for and install the knobs and door catches.

### TRIM IT OUT

To complete the cabinet, add the top and front trim pieces. Measure and mark the mitre cuts directly off the cabinet, then attach the trim pieces with glue and finishing nails.

One of the great things about barnboard is the beautiful silver-grey surface that develops after many years of exposure, which will remain stunning indefinitely. I did brush a couple of coats of satin polyurethane on the horizontal interior shelf surfaces. The rest of the cabinet is beautifully finish-free. 

## WEATHERING THE STORM

IF YOU WANT wood that's reminiscent of authentic barnboard without the trouble of sourcing antique material, consider treating new wood to look old. There are products available in Canada that help you to achieve this look. Lifetime Wood Treatment ([valhalco.com](http://valhalco.com)) and Eco Wood Treatment ([ecowoodtreatment.com](http://ecowoodtreatment.com)) both come as a powder that you mix with water before applying to wood. Although these products are designed for exterior use, they work on wood for furniture projects too. The mixed liquid looks like weak tea, and you can apply the liquid with a brush or any kind of sprayer. (Strain the liquid before putting it in any spray tank.) Either way, all that matters is that you get complete coverage. The watery liquid dries without being sticky and is completely non-toxic.

Although this spray has no initial effect, 30 minutes later the wood starts to turn slightly grey. Time and moisture continue the greying process, progressing over weeks or months. Repeated wettings with plain water and exposure to sunlight cause the weathered colour to develop, and that's why you might consider treating your boards outdoors before building. Leave the wood in the weather, turning it every few days for a couple of weeks for exposure on both faces.

Alternatively, you can spray your completed project after it's built, wetting it several times afterward with water to maximize the colour transformation. You won't get the surface cracking of real barnboard with this method, but the colour is convincing and the finish is maintenance-free.

Even if you're working with authentic barnboard, you'll still find greying wood treatments worth using on the fresh, bright, sawn edges of newly cut parts. —Steve Maxwell