

Smooth Tambours

Flat, veneered slats give the illusion of solid-wood doors

BY MIKE WEISS

Tambours are universally recognized for their rounded, canvas-backed slats and may be found on everything from rolltop desks to appliance garages. But there's a lesser-known type of tambour that masquerades as a smooth, solid-wood door. The first time I came across a door constructed this way, I pulled on it, assuming it was hinged, to the amusement of the desk's owner.

Suitably impressed with the illusion, I set out to make a set of these tambours for a contemporary entertainment center. My tambours are made of veneered medium-density fiberboard (MDF) cut into slats and held together by canvas, like traditional tambours. The biggest challenge of this project was figuring out how to rip apart the slats with minimal kerf loss and without interrupting the grain on the front of the tambours.

Tambours demand lots of planning

When building tambours, allowances must be made for the considerable loss of material that results from ripping stock into lots of narrow slats. Then the slats must be dimensioned so that they

Designing a cabinet for tambours



The finished cabinet appears to have solid-wood doors. The panels on both edges conceal the parting of the slats as the doors are opened.

operate smoothly when going around the interior corner of the case. And the end slat should be double the width of the others so that a handle may be attached.

I used a full-sized drawing to figure out the dimensions. The slats for the entertainment center are $\frac{5}{8}$ in. wide with $1\frac{1}{2}$ -in.-thick pins, which ride in the tracks. The end slats (handle attachment points) are $1\frac{3}{4}$ in. wide. The tracks are $\frac{3}{8}$ in. wide to allow for smooth operation without excessive play. Where each track enters the case, it makes a 90° bend through a 2-in. radius. (For more on machining the tracks and making a carcass for tambours, see the story below).

Veneer the back and cut slats

Use $\frac{1}{2}$ -in.-thick MDF as the substrate for the slats. MDF is stiff enough for doors of this size ($31\frac{1}{2}$ in. high), and the material's uniform density allows it to hold up well where it makes contact with the track.

To begin, cut an MDF panel oversized and glue a backing veneer to one side. The substrate must be veneered on both sides to prevent it from warping (the face veneer goes on later).

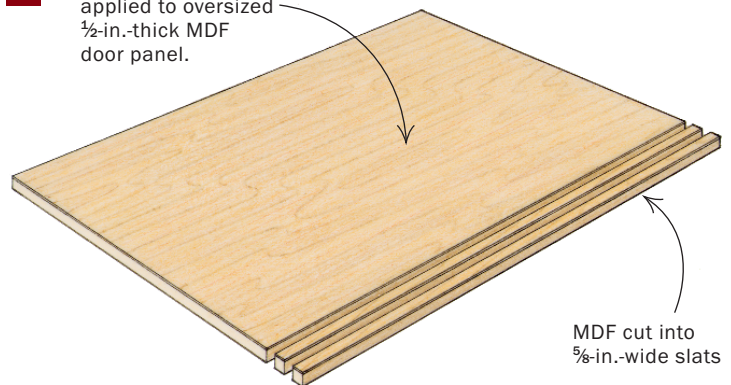
Next, rip the panel into slats. I made up a double-thickness push stick that allowed me to apply uniform pressure on both sides of the sawblade. The added control of such a push stick produces clean cuts. After cutting, number the slats on their ends and sand away any saw marks. When assembled in order, it is critical that the slats fit together tightly; otherwise, excess glue may find its way into the gaps when applying the face veneer.

Glue the face veneer onto the slats

To hold the slats in position, I built a jig from two layers of $\frac{1}{2}$ -in.-thick MDF (see the bottom left photos on p. 60). The jig is slightly oversized to allow for sawing the slats to the final length. A wedge provides clamping pressure to the slats. And to prevent damage to the veneer bag, I rounded over all the hard edges of the jig. I have used two-part liquid urea resin glue for its slow setting properties,

1 RIP THE PANEL INTO SLATS

Backing veneer is applied to oversized $\frac{1}{2}$ -in.-thick MDF door panel.



Cut the slats. After applying backing veneer to one side, rip the panel into slats. A double-width push stick and a slow, steady feed rate help keep the slat tight against the fence.

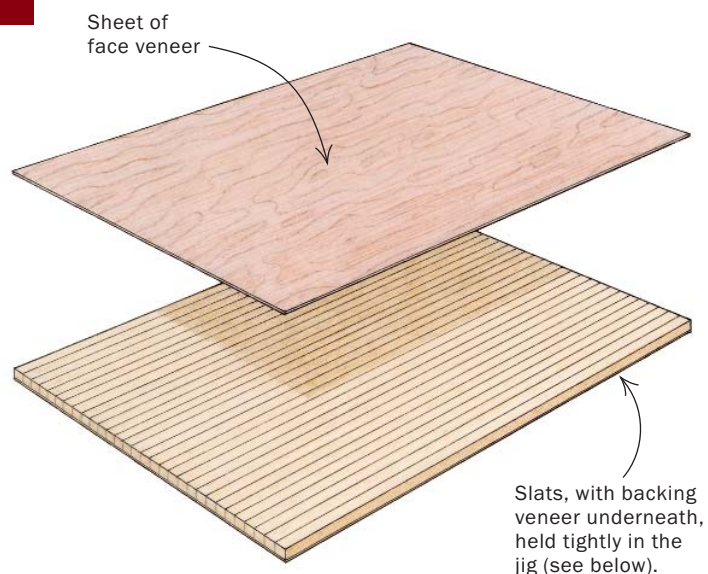
A cabinet made for tambours requires a track on the inside top and bottom panels. The track must break through the rear on one side of the cabinet so that the tambours may be installed. To ensure that the tambours slide smoothly in their tracks, use a template when routing the grooves so that both the top and bottom tracks are exactly in line.

To hide the back of the tambours when they are opened, I add two partition panels dadoed into the top and bottom of the cabinet and slid in from the rear. I also place two panels at the front of the cabinet on both sides of the tambours. By hiding the corner of the tambours, the doors simply disappear into the case as they are opened.



See how they run. With the back of the cabinet removed (far left), the two tambours can be fed in from the right rear side and slid around to their respective positions. Then the two partition panels are fitted so that the tambours are concealed when the doors slide into the case (near left).

2 GLUE ON THE FACE VENEER



Simple jig keeps slats aligned



The jig is made from two layers of $\frac{1}{2}$ -in.-thick MDF. The tambour slats are held tight by a sliding wedge that is tapped home.



Roll an even coat of yellow glue onto the slats in the jig. Carefully align the face veneer, top with a caul of melamine-coated particleboard and place the assembly in the vacuum press.



After the glue has set, trim the face veneer. Use a router and a flush-trimming bit to remove the face-veneer overhang. To remove the veneer tape, first moisten it with water, then scrape it off.

but on this occasion I used yellow glue. Once the slats are all positioned tightly together, spread the glue, lay on the face veneer and place the assembly into a vacuum press.

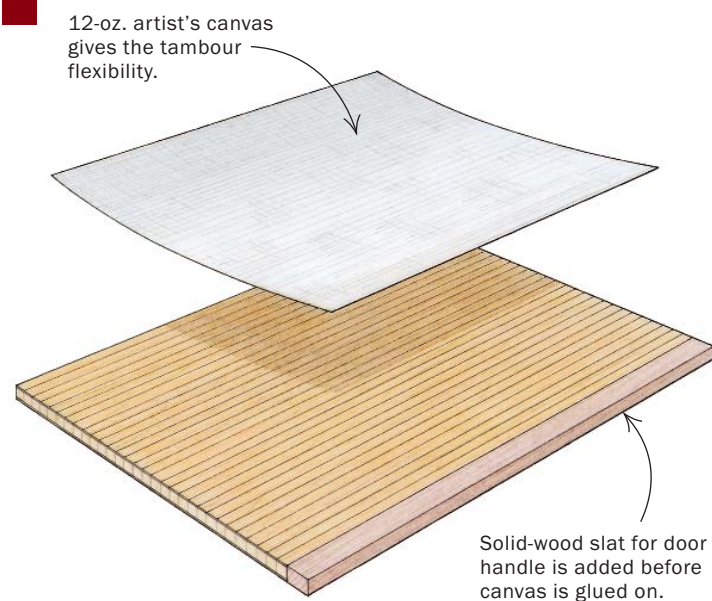
After carefully removing the door from the vacuum press (remember, it is a bunch of individual slats joined together only by a continuous sheet of face veneer), trim the face veneer flush with the substrate using a router. Moisten the veneer tape with water, then scrape and sand away the tape and any traces of glue.

Trim the face veneer with a knife

I achieve the nearly seamless appearance of the tambours by cutting apart the slats using a fine knife and another jig. The jig employs an acrylic rod partially embedded in a piece of MDF.

To cut the face veneer, place the slat assembly on the jig, backside up. Then flex apart two adjacent slats over the length of the acrylic rod, and cut the veneer using an X-Acto knife (see the

3 SLICE APART THE SLATS AND GLUE ON THE BACKING



The key to continuous grain



Apply the canvas backing. Cut the canvas a little oversized to allow for shrinking after the glue dries. The slats are held tight in the same jig used for applying the face veneer.



Cut the pins. Because the slats are held together only by the canvas, an antikickback device applies downward pressure while the pins are cut. Featherboards would work, too.



Reduce the drag. Chamfer the front edges of the top and bottom pins. In addition, ease the side edges of the bottom pins.

photos above). Gentle pressure with repeated strokes seems to produce the cleanest cuts. Replace the blade often and rotate the acrylic rod slightly for each new cut so there is a fresh, smooth surface supporting the veneer as it is sliced.

Apply the canvas, machine the pins, then apply a finish

Once the slats have been separated and the edges cleaned of any glue, reassemble them in the holding jig face veneer down. Then add the solid-wood handle-attachment slat to one end of the tambour. Because you are unlikely to find a piece of solid stock to match the face veneer, you may want to make the handle slat contrast with the rest of the door.

For the backer, I use 12-oz. artist's canvas, cut slightly wider than needed, and fasten it with yellow glue. To prevent the canvas from sticking to the vacuum bag, place melamine-coated particleboard or plywood over it.

With the glue-up completed, cut the tambour to its final size on the tablesaw. Then machine the rabbets on the upper and lower edges to form the pins, which guide the door along the tracks. Cut the rabbets on the faces of the tambours so that the panel overhangs the bottom track, hiding it, when the tambours are shut.

To minimize friction, chamfer the front edges of all the pins with a chisel. Additionally, ease the side edges of the bottom pins.

I sprayed a lacquer finish on the tambours and cabinet shown here. If you use a rubbed-on finish, I suggest that you place the tambours in the jig to keep the slats tight and to lessen the chances of tearing an edge of the face veneer.

After the finish is dry, apply wax to the pins and track to further reduce friction. Last, glue a narrow strip of wood to the back of the hardwood handle slat to cover the edge of the backing canvas. □

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