Sleek Console Built for

Low enough to fit under a flat screen, big enough to store piles of components and media

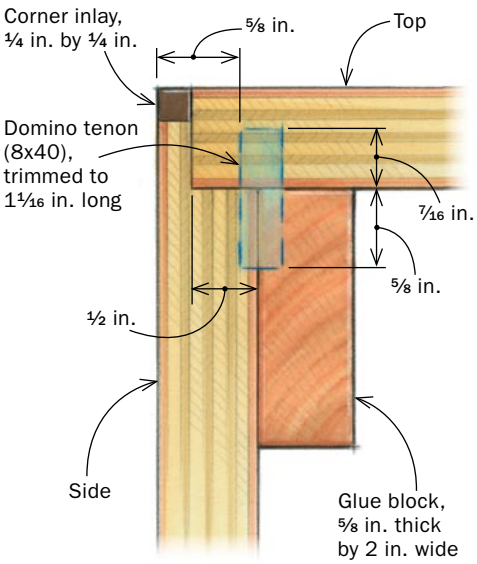
BY ANATOLE BURKIN

Photo, this page: Michael Pekovich

Today's TVs

SUPER-STRONG CORNER JOINT FOR PLYWOOD

DETAIL OF CASE CORNERS



Glue blocks beef up the corners. *The glue blocks, attached to the top and bottom of each side, increase strength against racking.*

More tenons, more strength. *Festool's Domino creates rows of slip-tenon joints in minutes. In the sides, Burkin moved the mortises partway into the glue blocks to accommodate the rabbet that follows.*

I was the last man on my block, maybe in the entire country, to buy a wide-screen digital television. Like many people, I used to hide my television in an entertainment armoire, but the latest flat-screen televisions have a modern look that I find attractive. Also, it takes a pretty huge cabinet to contain them. So instead of hiding the TV, I hung it on the wall and decided to build a sleek entertainment credenza to go under it.

Made of ¾-in.-thick sapele plywood and solid sapele and wenge, the piece fits into the modernist style—with its clean, crisp lines, no exposed joinery, no frame-and-panel doors, just long expanses of beautiful sapele grain framed by darker wenge.

Style, however, does not trump function. This credenza offers plenty of storage. Inside are three compartments hidden by three sliding doors. The center section holds the electronics: DVD player, receiver, cable box, and a laptop. The outer sections have banks of drawers to store CDs, DVDs, and other accessories, like headphones and cables. If you don't own a lot of CDs and DVDs, you could easily eliminate the drawers and use that space to hold game consoles or other electronic

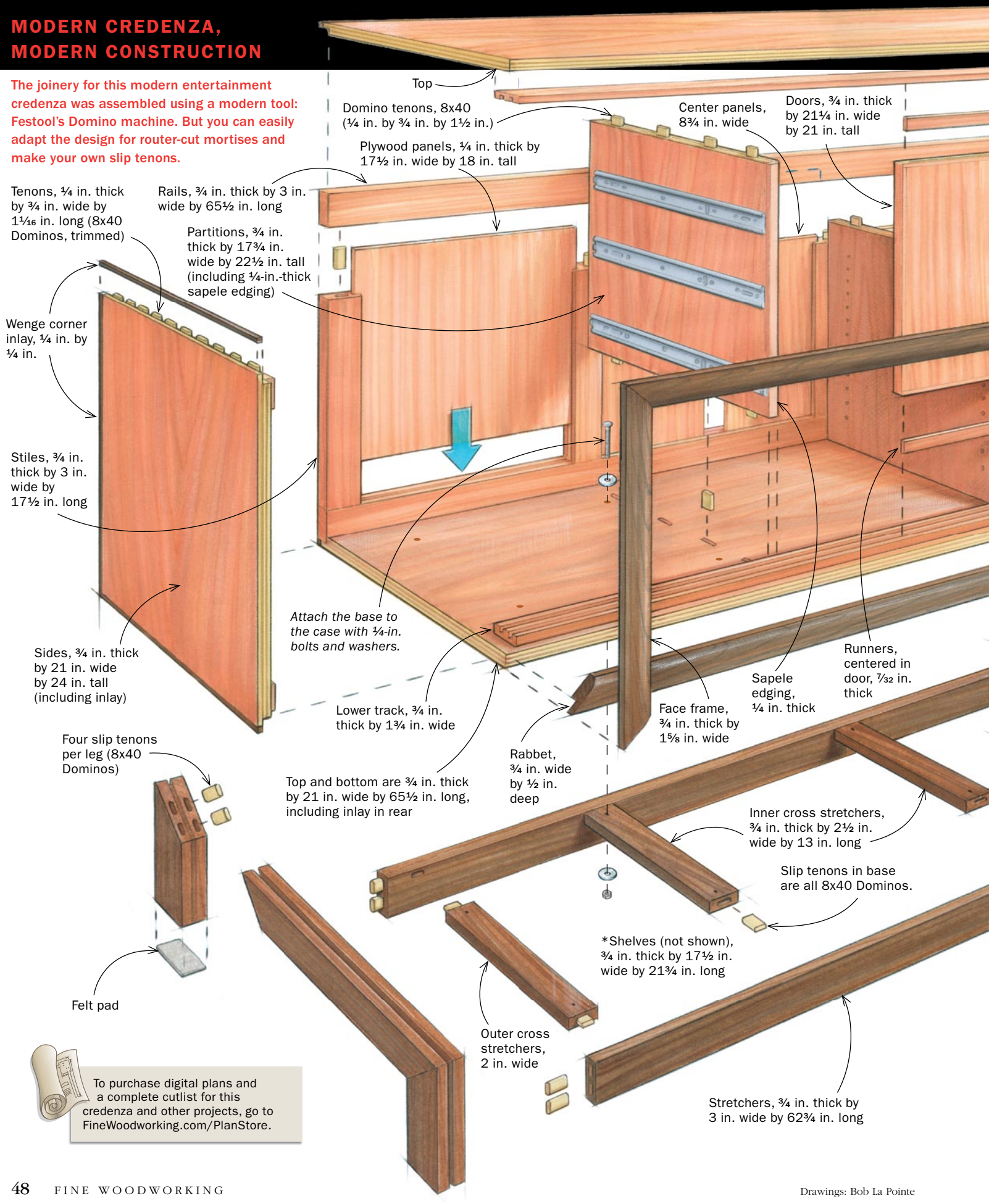
Use a dado set to rabbet the sides. *Bury the blade in a sacrificial fence to dial in the width. Place an offcut from the glue-block stock under the workpiece to stabilize it.*

Trim the top. *After cutting the mortises in the top and bottom, trim those parts to fit inside the rabbets in the sides.*

Photos, except where noted: Thomas McKenna

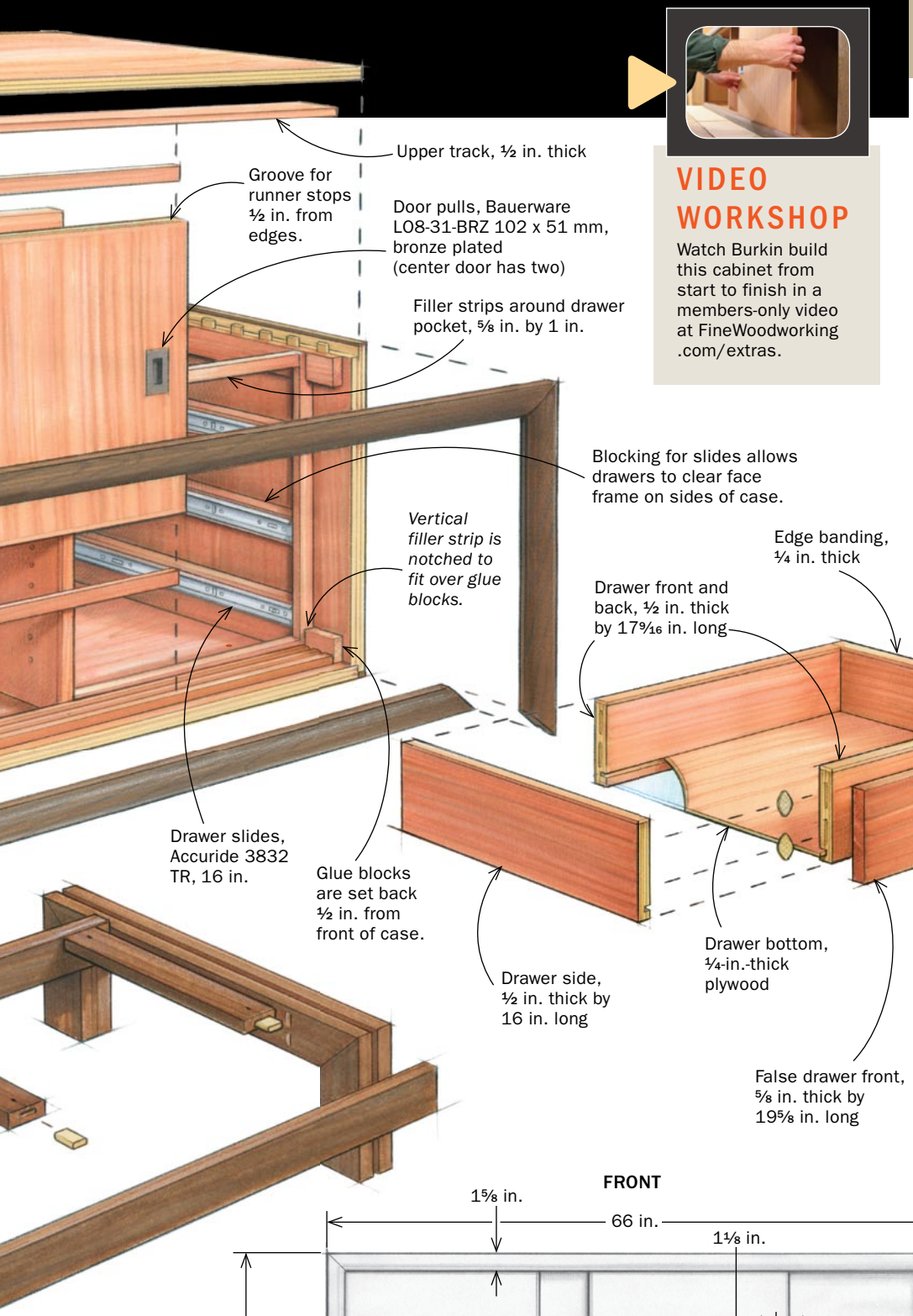
MODERN CREDENZA, MODERN CONSTRUCTION

The joinery for this modern entertainment credenza was assembled using a modern tool: Festool's Domino machine. But you can easily adapt the design for router-cut mortises and make your own slip tenons.



To purchase digital plans and a complete cutlist for this credenza and other projects, go to FineWoodworking.com/PlanStore.

Drawings: Bob La Pointe



VIDEO WORKSHOP

Watch Burkin build this cabinet from start to finish in a members-only video at FineWoodworking.com/extras.

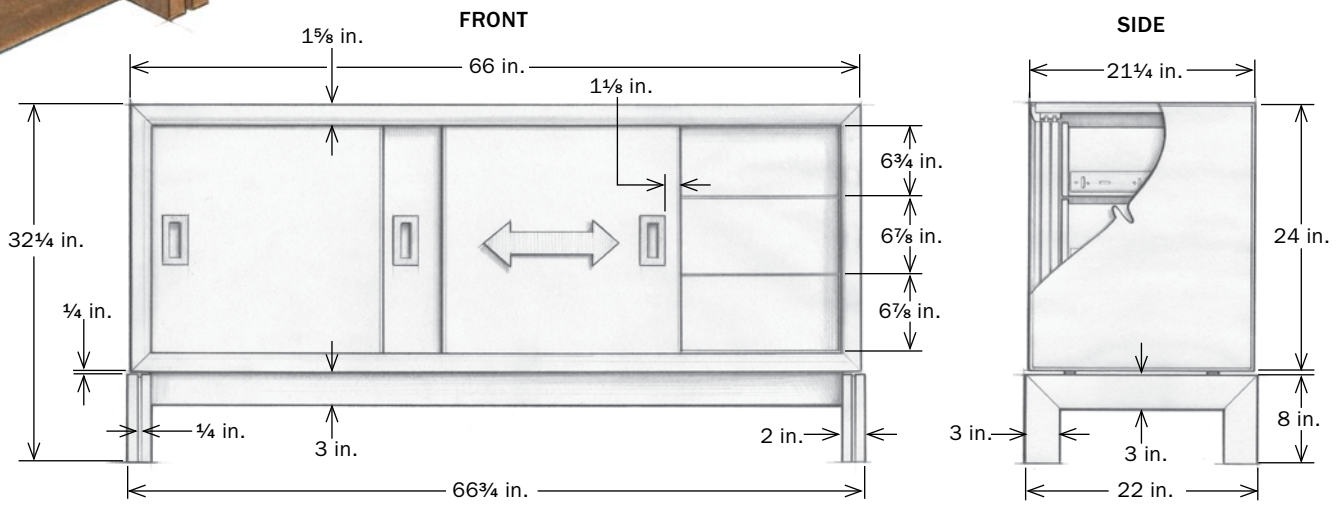
gear or even change the overall dimensions. The design is quite versatile.

Start with the carcase joinery

Rough-cut the plywood to manageable pieces using a circular saw and an edge guide. Make the final cuts using the tablesaw and a sled. You'll need to cut the top and bottom ½ in. longer than shown in the drawing. I did this to make the joinery simpler to cut. These two pieces will be trimmed ¼ in. on each end after cutting the mortises. Use a block plane to clean up any sawmarks on the edges.

Next, use a dado set to rabbet the back of all four carcase parts. Glue blocks on the inside corners strengthen the case and provide a stable platform when routing the mortises in the sides. Mill up the blocks and glue them flush to the top and bottom edges, and ½-in. back from the front edge to allow for the face frame.

Cut mortises for the slip tenons—A fence-equipped router works fine to cut the mortises for this project, but I splurged last year and bought a Festool Domino joiner (to get the lowdown on this machine, see Tools & Materials in *FWW* #190), which makes really fast work of mortise-and-tenon joinery. The tool cuts a deep mortise in one plunge, like a biscuit joiner. I used the Domino's medium-thickness bit and



Case assembly

Before clamping the entire case together, glue the tenons into the sides and partitions. Then dry-fit the case to get the parts to mate perfectly.

GLUE UP THE CASE, THEN ADD THE CORNER TRIM

Cut the partition joinery. *To align the mortises in the top and bottom, use a spacer board to guide the Domino joiner. Reference the spacer board off the side, which should be dry-fitted in place.*

tenons, set to cut as deeply as possible into the sides, but just shy of blowing through the top and bottom panels.

No matter what tool you use, mark out the joinery using a story stick. Once that's done, go ahead and start cutting mortises. Use the outside faces of the carcase components as reference points for the fence of your router or Domino.

I put ¼-in. wenge inlay in each corner of this plywood case, which not only adds a nice contrast but also offers a more durable edge. The rabbet joints are designed to leave a pocket for this inlay.

Rabbet the top and bottom of the sides using a dado set, sneaking up on a good fit. You will have removed some of the mortise depth, hence the deep initial cuts. Next, trim ¼ in. off each end of the top and bottom to accommodate the rabbets.

Finally, cut the partitions to size and drill the shelf-pin holes in them for the adjustable shelves. Add the solid-wood edging on the front, and cut the mortises in the

Get the glue on. *Begin by gluing the slip tenons to the vertical members. Then apply glue to the mortises of the top and bottom. Clamp along the edges and use cauls to bring home the partitions.*

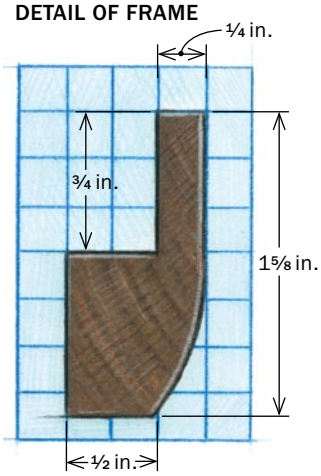
Fill the rabbets. *Glue and nail (or tape) the wenge inlay strips to the corners and back edges of the case. Trim them flush after the glue dries.*

MAKE AND INSTALL THE BACK

Glued-in panels create a rigid assembly. *A sturdy back helps strengthen the case against racking. The two outer panels are glued into their grooves; the two center panels (not shown) are removable. The frame is connected with slip tenons and screwed into the cabinet.*

MITERED WENGE FRAME FOR THE FRONT

DETAIL OF FRAME



Roundover on the router table. *Rout the profile on the stock before cutting the miters. Fair the shape with hand-planes, scrapers, and sandpaper.*

Sled makes better miters. *After rabbeting the back of the stock, cut the miters using a sled. Place a scrap piece in the rabbet to support the workpiece (above). Glue the frame to the front. Rather than fussing with clamps, Burkin used pins to hold the pieces in place (below). Pieces are cut, fit, and nailed one at a time.*

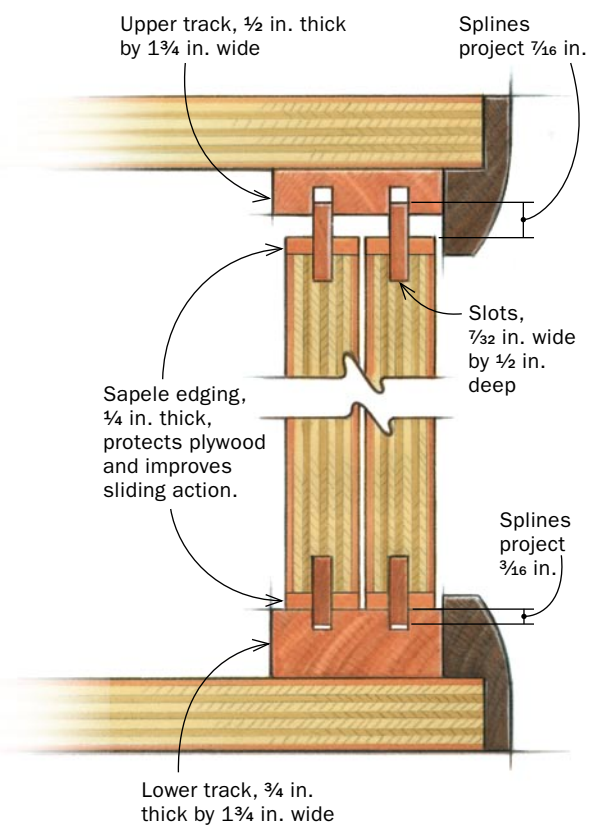
partitions and the top and bottom for the slip tenons.

Dry-fit and glue up the case

When it comes to gluing up the case, a dry run is critical. It gives you a chance to rehearse the steps, check the joints, and be sure you have enough clamps at the ready. Because the rabbets effectively reduce the depth of the mortises on the sides, stock Domino tenons have to be trimmed.

Glue the tenons into the sides and partitions, then fit them to the top and bottom. Assemble the case, making sure to check for square. For the inlay along the top, bottom, and back, mill up strips of wenge just a hair over ¼ in. square and glue them in; I used a pin nailer instead of clamps to

Smooth sliding doors



Make tracks. *The top track is thinner than the lower track. After cutting the grooves on the tablesaw, screw the tracks inside the case.*

Install the runners. *Rout stopped grooves in the top and bottom of the doors. Dry-fit the runners, then check the fit and action of the doors. You may have to adjust the height of the runners to get them to fit nicely. Once that's done, glue them in.*

hold the pieces in place. The pins are set deep enough to be out of the way later when I planed the inlay flush.

Add the back—The back assembly is a solid-wood sapele frame with ¼-in.-thick sapele-faced MDF (or plywood) panels. The end panels are fixed; the center panels are removable for easy access to wiring.

Plane the frame assembly to fit the carcase, then screw it in place. I didn't glue the frame, figuring that in a few years I might want to change the inside of the case due to technology updates.

Attach the front face frame—A solid wenge face frame decorates the front of the case. The frame is mitered and rabbeted to fit over the plywood. I also shaped the front face with a massive roundover bit (2 19/32 in., Freud No. 99-027) to soften the look of this otherwise squarish credenza.

Mill up the frame pieces, rabbet them, miter the corners, then glue them in place. Again, a pin nailer comes in handy.

Tackle the doors, drawers, and shelves

The sliding doors are ¾-in. plywood edged with solid sapele. Cut the plywood to size and apply the edging. The corners of the doors will be mostly hidden, so don't bother mitering the edging. Cut stopped grooves in the top and bottom edges using a slot-cutting bit in a router table. Insert runners or guides of resawn solid sapele, but don't glue them yet.

Make the tracks from solid stock. Note that the top track is thinner than the lower track. Cut the grooves on the tablesaw, making them a hair wider than the guides for smooth operation. Screw the tracks in place. The doors are inserted from the front by tipping them into the center bay (without shelves in place), then lifting them to engage the top track first, and dropping them into the lower track. You may have to adjust the height of the splines to get the doors to fit.

There should be a slight gap, 1/16 in. or so, between the front

TIP

LIFT AND DROP

The doors are inserted from the front by tipping them into the center bay (without shelves in place). Lift the door to engage the top track first, then drop it into the lower track.

Photo, this page (bottom): Michael Pekovich

and rear doors, as well as the face frame. Once you have the doors fitted to your liking, glue the guides into the doors.

I used bronze-finished metal pulls because I like a bit of metal on a modern piece. After excavating the mortises for the pulls, I used epoxy to bond the metal to the wood.

To continue the clean look inside, the drawers have no pulls. Instead, I chose full-extension touch-release slides that pop out the drawer when you push on the front. The slides provide smooth action and full access to the drawer. The drawers are ½-in. sapele plywood edged with solid sapele, with solid sapele false fronts. Shelves are ¾-in.-thick sapele plywood edged with solid wenge on the front.

Tenons brace the corners. *Each miter gets four slip tenons (left). Glue up the mitered feet first (above), then attach them to the stretcher assembly (below).*

Solid-wood base can handle the load

The case sits on solid wenge legs joined with stretchers, all laminated for extra thickness (I could find only 4/4 stock locally). The legs are slightly proud of the case on the front, sides, and rear, and the stretchers are inset to give the illusion that the case is floating. To add a shadow line, the center lamination is ¼ in. narrower than the outside pieces. It is glued flush to one side, and indented ¼ in. on the show face. Plane and sand the show edge before glue-up, because it won't be easy to do later.

Building the base is straightforward. The corners are mitered and joined with quadruple slip tenons. A pair of stretchers ¼-in. proud of the top of the legs join the leg assemblies. Four short cross-stretchers provide support and attachment points for the case.

For the finish, a Danish Modern look goes well, nothing too glossy or grain filling. Good choices are wipe-on finishes such as Minwax Poly or Waterlox. Wax the door bottoms and guides for smooth action. □

Bolt the base to the case. *Drill clearance holes through the base and bottom of the case, then bolt the assembly in place.*

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