

Anniversary Desk



With all the business involved in running a home, it's no wonder most of us run out of space to handle the paperwork. We do the monthly bills at the kitchen table, spread out tax forms after the dinner dishes have been cleared away, and commandeer the kitchen counter for everything from sorting mail to reconciling the checkbook. But, if coffee cup rings on your important papers is not part of the image you'd like to project, it may be time to bring your woodworking skills to bear on the problem--it may be time to build a desk.

A good desk does more than provide a central work surface for paperwork.



Making The Legs And Rails

The desk is made up of two pedestal units with drawers. The pedestals are joined at the front by an assembly called the modesty panel.

Cut 2-in.-square stock for the desk legs to exact length. Then, use your band saw to cut the tapered profiles at the bottom of each leg (Photo 1). Smooth the sawn surfaces with a sharp hand plane (Photo 2).

Make the rails and stiles from 1-in. stock and lay out the mortise-and-tenon joints. Rout the mortises using extra rails clamped to the side of each workpiece to provide solid router support (Photo 3). Square the mortises with a sharp chisel. Reset the router bit depth and rout the panel grooves in both the rails and stiles (Photo 4). Use a dado blade in your table saw to cut the stile tenons (Photo 5), and then test fit the joints.

Veneering The Panels

It's best to make the panels oversize and trim them after veneering. To cut the veneer, use a veneer saw guided by a straightedge. Make a series of light passes while holding the saw tight to the guide (Photo 6). It's most efficient to stack a few sheets and cut them together.

Note that most of the panels have sapele veneer on the face and plain mahogany on the back. Only the modesty panel requires sapele on both faces. Cut the MDF (medium-density fiberboard) panel cores to match the size of the veneer sheets. If you wish, you can use veneer-core hardwood panels, but make sure to align the face grain of the panel with the grain of the sapele and mahogany veneers.

Because the panels are small, you can easily veneer all like-size pieces at the same time. Use a foam roller to spread glue on one face of a panel core (Photo 7). Place the glued surface on a veneer sheet, then roll glue on the opposite face. Place the second veneer sheet in place and cover both faces with wax paper. Repeat this procedure for each panel of the same size, and then stack the panels together with all edges aligned. Place 3/4-in.-thick plywood cauls on the top and bottom of the stack and apply clamps (Photo 8). Position the first clamp at the center of the stack, and work your way toward the edges.

Let the glue cure overnight. Then, rip and crosscut the panels to finished dimension, and use your router table to cut the rabbet around the inside edges of each panel. Sand the panels with 120-, 150-, 180- and 220-grit sandpaper, dusting off thoroughly between grits.



Mark the tapers on one face of each leg and cut with a band saw. Then, mark and cut the tapers on the adjoining faces.



Use a sharp plane to smooth the tapers. Reverse the direction of the plane at the bottom to avoid splintering the foot.



Lay out the rail mortises in 1-in. stock. Use a spiral up-cutting bit and edge guide to rout the mortises. Then, square the mortise ends with a sharp chisel.



Readjust the bit depth and rout the panel grooves. Spare pieces clamped to the work help support the router.



Use a dado blade and table saw to cut the stile-tenon cheeks. Readjust the blade height to cut the shoulders.



Cut veneer with a veneer saw guided by a wooden straightedge. Make light passes to avoid tearing the wood.



Spread glue onto the panel core using a foam roller. Flip the panel onto a veneer sheet and repeat on

Assembly

Starting with the modesty panel, spread glue in the rail mortises and on stile tenons, join the stiles to the bottom rail, and slide the panels into place (Photo 9). Next, add the top rail, clamp, and compare opposite diagonal measurements to ensure that the assembly is square. Repeat the process for each of the pedestal side and front panels.

Cut blanks for the pedestal bottoms and stretchers from 3/4-in. mahogany-veneer plywood, MDF core or similar panel stock. Cut edge-banding strips from solid mahogany, and glue them to the exposed edges of the bottom panels and top stretchers as shown in the drawing (Photo 10). Allow the 13/16-in.-wide edging strip to overhang the panel on both the top and bottom faces. After the glue sets, use a sharp plane to trim the edging flush. Mark the notches in the bottom and stretcher panels, and make the cuts on your band saw.

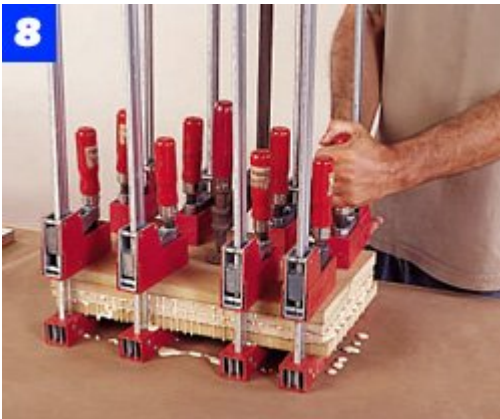
Lay out the joining-plate slots in the desk legs, modesty panel and pedestal parts. Use spacer blocks underneath your plate joiner to locate the slots in the legs and panel edges (Photo 11). Clamp a straightedge guide to the inner pedestal sides to locate the plate joiner when cutting the slots for the modesty panel joints. Bore and countersink screwholes in the inner pedestal sides for fastening the modesty panel.

Use a chamfer bit in the router table to shape the edges of the desk legs (Photo 12). Note that the inside corner of each leg should be left square from the top end to a height of 8 in.

Cut wenge trim strips to size, and chamfer the edges with a sharp block plane or sanding block. Sand the leg surfaces and wenge strips to 220 grit, then mark the outline of each strip on the legs with light pencil marks. Spread a light coat of glue on the back of a strip, and clamp it in place on a leg. After about 20 minutes, carefully remove any excess glue. Repeat for each wenge strip.

Begin each pedestal assembly by gluing the front legs to the front panel (Photo 13). Then, join the pedestal bottom and stretchers to one of the pedestal sides (Photo 14). After the glue sets, add the opposite side to the assembly. Next, join the front leg/panel assembly to the sides (Photo 15). Cut the inner plywood blocking panels to size and screw them in place.

Install joining plates in the modesty panel slots, and use screws to fasten the panel to both pedestals. It's not necessary to use glue on these joints since the screws provide plenty of holding power. Bore and countersink screwholes in the top stretchers for fastening the desktop.



Clamp like-size veneered panels together and separate with wax paper. Use cauls to distribute pressure.



Apply glue and join the pedestal stiles to a rail. Slide the veneered panels into place and add the second rail.



Cut mahogany edge-banding strips and glue them to plywood blanks for the pedestal bottoms and top stretchers.



Mark the position of the slots in the legs, and use spacer blocks under the joiner to properly locate the cuts.



Use a router table to chamfer the leg corners. At the inside corner of each leg, chamfer only the tapered section.



Begin assembling both pedestals by gluing each front panel to a leg. Apply clamps and let the glue cure.



Join a case bottom and pair of stretchers to each pedestal side. Clamp, and check the assembly for square.

Drawer Details

Cut drawer parts to size. Install a 1/2-in. x 14° dovetail bit in your router, and use it to cut the slots in the drawer faces and drawer sides (Photo 16). Then, use a 1/4-in. straight bit and edge guide to rout the drawer-bottom grooves.

Install the dovetail bit in your router table and use a tall fence to cut the dovetails on the ends of drawer sides and backs. Clamp a backup board to each workpiece to provide additional stability and to keep the ends of the cuts from splitting out (Photo 17). Cut the notches at the top front ends of the drawer sides.

Use a small brush to spread glue in the dovetail joints and assemble the sides to the faces and the backs to the sides. Check that each drawer box is square, and set it aside for the glue to set. Cut the drawer bottoms to size, slide them in place and fasten with screws.

Install drawer slides to both the pedestal and drawer sides following the manufacturer's instructions. Note the centerlines of the slides as shown in the drawing. Use only the slotted holes for initial fastening so you can adjust the slides as required. You should have a uniform margin of 1/16 in. around each drawer when it's closed. Bore holes for the knobs in each drawer face, but don't install the hardware until after finishing.

Finishing Touches

Cut the plywood desktop panel and mitered mahogany edging to size, and add the joining-plate slots. Apply glue and clamp the edging in place (Photo 18). Mark guidelines for the angled top edge, and use a sharp block plane to shape the edge. Sand the top edging and bottom face of the desktop panel to 220 grit.

For best results, finish the desk before installing the leather. Because it's important to keep the finish from the top plywood surface, carefully apply masking tape around the perimeter of the plywood panel against the edging.

We finished our desk with Waterlox Original Sealer/Finish. Apply it with a brush or rag and let it sit for about 30 minutes. Wipe away the excess and let the surface dry

overnight. Lightly sand with 320-grit paper and dust off before applying the next coat, using the same technique. After several coats, use 4/0 steel wool to burnish the surface and remove any dust nibs.

Remove the masking tape from the desktop panel, and inspect the plywood to make sure that there are no depressions or raised areas. Fill any holes with wood filler and carefully sand the panel. Remove any dust, and use a paintbrush to spread a coat of vinyl wallpaper paste (Photo 19). Be sure to coat the entire surface, especially along the edges and in the corners of the panel. Allow the paste to dry at least 1-1/2 hours and then apply another coat.

Roll up the leather panel with the finished surface inside. Align one of the short edges against the desktop edging. Then, unroll the leather a few inches at a time, using your hands to smooth it out (Photo 20). The leather will stretch if necessary, so take the time to produce a tight fit against the mahogany edging. Work out any air bubbles and apply firm pressure to ensure a good bond. After 10 minutes, smooth the top again. If you find any paste on either the leather or wood, wipe it off with a soft, moist cloth. Let the paste dry overnight.

Place the top on the pedestal base and adjust it so there is an equal overhang on all sides. Bore holes and screw the top to the pedestals. Finally, install the drawer knobs and slide the drawers into the pedestals.



Apply glue, and clamp together the front leg/panel subassembly and the side-panel subassembly. Let the glue set.



After routing the dovetail slots in the drawer fronts and sides, use a 1/4-in. straight bit to rout the bottom groove.



Install the dovetail bit in your router table and cut the dovetails on the sides and backs. Then, test fit the joints.



Use plate joints to assemble the top panel and mitered mahogany edging. Panel top is 1/16 in. below top of edging.



Brush two coats of wallpaper adhesive onto the desktop panel, paying extra attention to the edges and corners.



Position the end of the leather on the top. Unroll a few inches at a time while pressing it in place. Then smooth the top.