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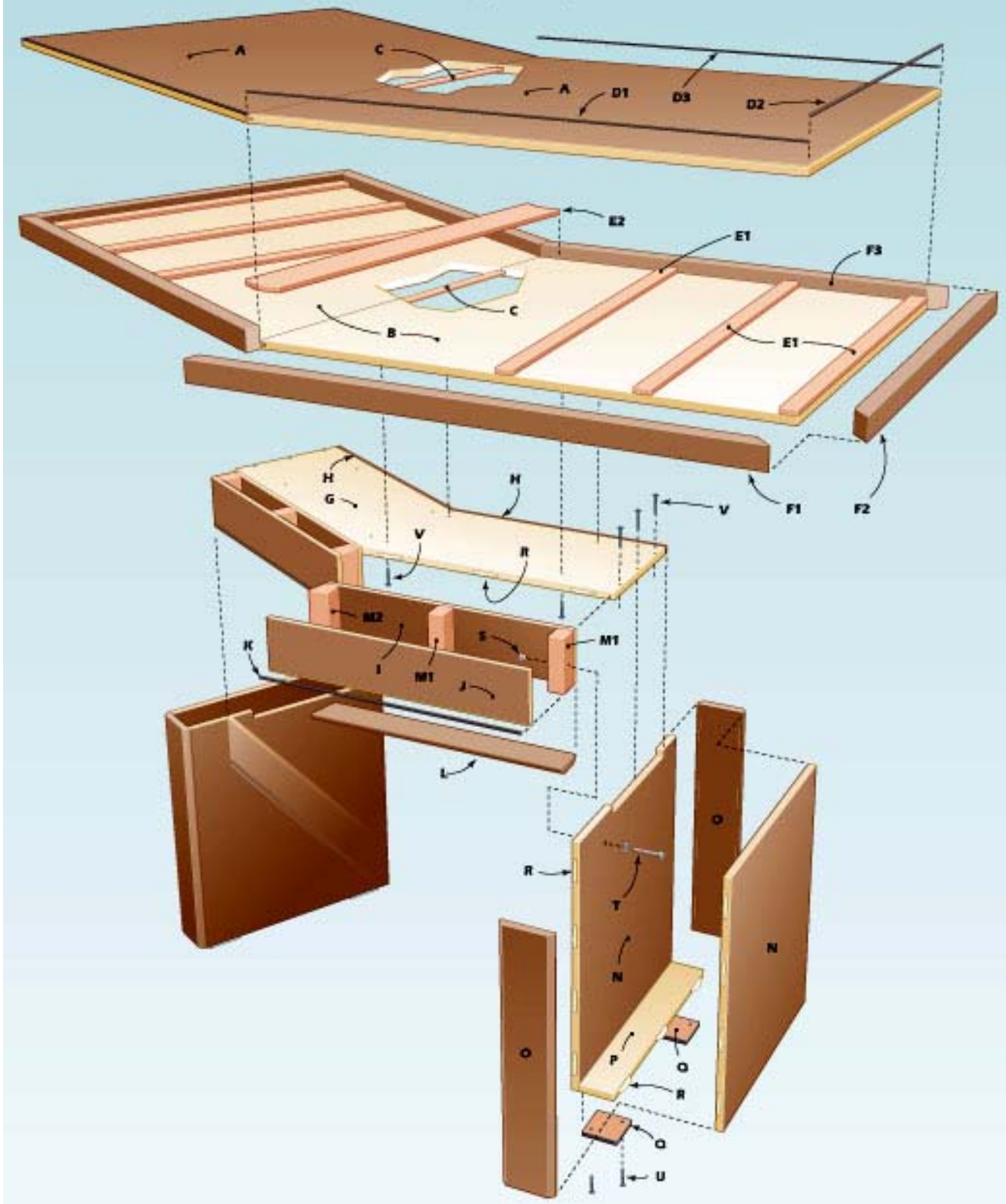
# OFFICE DESK





# DESK

29" HIGH X 49-1/2" DEEP X 95-3/4" WIDE



## **MATERIALS LIST—OFFICE DESK**

<b>Key</b>	<b>No.</b>	<b>Size and description (use)</b>
<b>A</b>	<b>2</b>	<b>3/4 X 35 X 47-5/8" walnut panel stock* (upper top)</b>
<b>B</b>	<b>2</b>	<b>3/4 X 35 X 47-5/8" panel stock** (lower top)</b>
<b>C</b>	<b>2</b>	<b>1/4 X 1 X 36-3/8" maple (spline)</b>
<b>D1</b>	<b>2</b>	<b>1/8 X 1/4 X 47-5/8" maple† (inlay)</b>
<b>D2</b>	<b>2</b>	<b>1/8 X 1/4 X 35" maple† (inlay)</b>
<b>D3</b>	<b>2</b>	<b>1/8 X 1/4 X 38-5/16" maple† (inlay)</b>
<b>E1</b>	<b>6</b>	<b>1/2 X 1-1/2 X 35" poplar (spacer)</b>
<b>E2</b>	<b>2</b>	<b>1/2 X 4 X 36-3/4" poplar (spacer)</b>
<b>F1</b>	<b>2</b>	<b>1-1/2 X 2 X 49-9/16" walnut (edge)</b>
<b>F2</b>	<b>2</b>	<b>1-1/2 X 2 X 38" walnut (edge)</b>
<b>F3</b>	<b>1</b>	<b>1-1/2 X 2 X 39-3/4" walnut (edge)</b>
<b>G</b>	<b>1</b>	<b>3/4 X 17-13/16 X 48-15/16" panel stock** (subtop)</b>
<b>H</b>	<b>2</b>	<b>3/8 X 3/4 X 22-1/4" walnut (edge band)</b>
<b>I</b>	<b>2</b>	<b>3/4 X 5-1/4 X 24-11/16" walnut panel stock (inner panel)</b>
<b>J</b>	<b>2</b>	<b>3/4 X 5-1/4 X 25-3/8" walnut panel stock (outer panel)</b>
<b>K</b>	<b>2</b>	<b>1/8 X 1/4 X 25-3/8" maple† (inlay)</b>
<b>L</b>	<b>2</b>	<b>3/4 X 3 X 25-3/8" walnut (bottom cap)</b>
<b>M1</b>	<b>4</b>	<b>1-1/2 X 2 X 5-1/2" poplar (block)</b>
<b>M2</b>	<b>2</b>	<b>2 X 2 X 5-1/2" poplar (block)</b>
<b>N</b>	<b>4</b>	<b>3/4 X 22-1/2 X 26-1/2" walnut panel stock (pedestal side)</b>
<b>O</b>	<b>4</b>	<b>3/4 X 5 X 26-1/2" walnut (pedestal endcap)</b>
<b>P</b>	<b>2</b>	<b>3/4 X 3-1/2 X 22-1/2" poplar (pedestal base)</b>
<b>Q</b>	<b>4</b>	<b>1/2 X 3-1/2 X 3-1/2" maple†† (foot)</b>
<b>R</b>	<b>50</b>	<b>No. 20 joining plate</b>
<b>S</b>	<b>2</b>	<b>3/8" T-nut</b>
<b>T</b>	<b>2</b>	<b>3/8 X 2-1/2" hexhead bolt and washer</b>
<b>U</b>	<b>8</b>	<b>1-1/4" No. 8 fh woodscrew</b>
<b>V</b>	<b>14</b>	<b>2" No. 8 fh woodscrew</b>

The modern executive office desk isn't simply a place to hold a telephone. These days, it's the launching platform for grand ideas and big decisions. It's the basic real estate for projects, proposals, plans and programs. And, like any other business commodity, the more you have, the more work you get done.

Our custom desk is designed with a generous surface area and is ideal for those who need to spread out their work. While the broad V shape imparts a strong, dynamic visual effect, it also makes the space more accessible.

Of course, a high-end desk needs to look the part, as well. Our design features matched walnut-veneer panels with a decorative black inlay. The result is an elegant surface that's as functional as it is eye-catching.

To achieve the mirrored effect of the matched veneer panels, you'll need to order stock that has walnut veneers cut sequentially from the log. When you order the panels, specify that they be "sequence matched



and numbered." The panel manufacturer will glue each veneer to its panel substrate in the same order that the veneers were cut. Each panel has a number that indicates its place in the sequence. When you plan the material for your desk, lay out your cut lines to make the best use of matching grain.

For our piece, we used walnut veneer on an MDF (medium-density fiberboard) core. These panels tend to be flatter and more stable than those with a veneer core (plywood). They also are about twice the weight of veneer-core panels, so you'll need a helper to move the parts around the shop.

## The Pedestals

The two pedestal bases that support the desktop are constructed of veneered side panels with solid-walnut caps, all joined over a solid-poplar base. Study the plans to be sure you understand the construction details, then cut the pedestal sides (N), endcaps (O) and bases (P) to exact size. Mark the position of the joining plate slots in these pieces and use a plate joiner to make the cuts.

Lay out the notches on the two inner pedestal panels and cut these with a sabre saw. Then lay out and bore the hole in each panel for the bolt that connects each pedestal to the modesty panel assembly.

Apply glue to the slots, plates and edges of one of the poplar base pieces (P), install the plates and join two sides to the base. Use clamps to pull the joints tight and let the glue set. Repeat the process for the second pedestal.

Next glue the endcaps to the pedestal subassemblies using plate joints as shown. When the glue has dried, use a router and chamfer bit to cut the 1/2-in. bevel along the vertical edges of the pedestal faces.

## The Modesty Panel

Cut the parts for the modesty panel to size. Pay close attention to the veneer on the front panels (J) so that, when assembled, one side of the modesty panel is a mirror image of the other. Begin assembly by joining the two mitered poplar blocks (M2) that form the core of the panel. Apply glue to the mating surfaces and clamp the blocks together. While the glue is drying, bore the 1/2-in.-dia. holes in the two end blocks (M1). Install a 3/8-in. T-nut on the inner surface of each block by tapping it into the hole with a hammer.

Next, glue and clamp one of the inner panels (I) to the center block assembly. Join the end and middle spacer blocks in the same way. Note that the end block must have the T-nut on its inner surface. Join the opposite inner panel to the center block and add the two spacers. When the subassembly is dry, glue the outer panels in place. Pay close attention to the quality of the miter joint at the front as this spot is quite prominent.

Use a router with straightedge guide to cut the rabbet along the bottom front edge of the modesty panel. Cut pieces of 1/8 X 1/4-in. black inlay strips (K) to size, and then apply glue to the rabbet and position the strips. Use pieces of masking tape placed about 2 in. apart to clamp the strips in place. Let the glue set for about 30 minutes, then remove the tape and scrape off any excess glue.

Apply glue to the bottom edges of the modesty panel and to the solid-walnut bottom caps (L). Then clamp the caps to the panel. After the glue sets, use a chamfer bit in the router to bevel the bottom edges of the cap.

Cut the subtop (G) to size and shape. Rip 3/8 X 3/4-in. edgeband strips of solid walnut (H) and glue them to the exposed edge of the subtop. Lay out and cut the joining-plate slots in the subtop edge and on the inside surface of the modesty panel. Then apply glue and join the parts. Bore and countersink holes in the subtop for fastening it to the pedestals and to the desktop.

## The Desktop

In order to guarantee accuracy in cutting the desktop parts, make a template for one-half of the assembled desktop panel. You can then use this template to first outline and then cut the panel parts to finished dimension. Use a sheet of 1/4-in. tempered hardboard for the pattern, trimming it to exact size with a router and straight bit guided by a straightedge.

Lay out the desktop panels (A, B) by tracing around the template. Pay particular attention to achieving a good veneer match across the center joint of the top panel pieces. The bottom panels can be made out of a less expensive material or you can stick to walnut for consistency.

To accurately cut the panels, first use a sabre saw to rough cut them within 1/4 in. of finished dimensions. For final trimming, clamp the template to the panel and use the router with a flush-trimming bit to make the cuts. This leaves the smoothest possible surface with the least chance of chipped veneer.

Use a slotting cutter in the router to cut the spline grooves along the central panel joints. Then cut the poplar blocking strips (E1, E2) and maple splines (C) to size. The splines should be snug in their grooves, but not so tight that they need to be forced into place.

Join the two halves of the bottom panel first, so that you can get the feel for the process before moving on to the more critical top joint. Apply glue to the spline, spline groove and mating edges. Insert the spline and bring the two halves together. Use long bar clamps to gently pull the joint tight. Place pads under the clamp jaws to be sure that the clamps don't damage the panel edges. Follow the same procedure for the top panel. Handle these panels very carefully because the joint is rather fragile until the entire top is assembled.

Apply glue to the poplar spacing blocks and position them on the top surface of the bottom panel as shown in the drawing. Use clamps to hold the blocks in place until the glue sets. Then apply glue to the top of the blocks and position the top panel. Carefully check that the top and bottom panels are perfectly aligned before clamping them together.

Use long cauls across the width of the top to distribute the clamping pressure. The cauls work best if they have a slight bow and are used with the convex side toward the work. If the cauls happen to be straight, place a veneer shim under the center of each caul to ensure adequate pressure in the middle of the panel.

Use a router and straightedge guide to cut the rabbet around the desktop. Cut the black-dyed inlay strips (D1, D2, D3) to size, then apply glue to the rabbet, position the strips and use masking tape to clamp them until the glue sets. Carefully scrape off any excess glue from the top and edge of the panel.

Cut the solid walnut edge (F1, F2, F3) for the desktop from 2-in. stock. Installing one walnut edge at a time, apply glue to the mating surfaces and clamp each piece in place. At the ends, use special edging clamps that grip the panel surfaces to apply pressure on the edge.

## Finishing

Sand the desktop, modesty panel and pedestals with 120-, 180- and 220-grit sandpaper, dusting off thoroughly between grits. Be sure to ease all edges and corners. Remove all sanding dust, then wipe the surfaces with a tack cloth.

In order to achieve a glass-smooth finish on the desktop, we used a paste filler on the top to fill the open grain of the walnut. These open pores are not a problem on the vertical surfaces, but on a horizontal surface, they would catch the light and be a distraction from the veneer pattern.

We used Behlen's Pore-O-Pac paste wood filler in Van Dyke Brown. Spread the filler across the grain of the top with a brush or rubber squeegee. Then, lightly reapply the filler with the grain. When the filler takes on a dull appearance, use a plastic scraper to remove the excess, and vigorously wipe the surface with burlap cloths to remove any remaining filler. Let the top dry overnight to allow any solvent to evaporate.

To provide a tough, yet attractive, finish for the desk, we used three coats of Behlen's Rockhard Table Top Varnish. Thin the first coat approximately 20% with the appropriate reducer and use a quality bristle brush to apply the finish. Allow the finish to dry at least 12 hours, then sand lightly with 400-grit paper and dust off thoroughly. Allow the second coat to dry overnight, then lightly sand before flowing on the final coat.

While you wait for the finish to dry between coats, you can cut, bore and countersink the maple feet for the pedestals. Sand the edges smooth, then use black enamel paint to finish the feet. Apply two or three coats as required for a good finish. When the paint and varnish are dry, screw the feet to the bottom of the pedestals.

To achieve a smooth, satin finish, you should rub out the varnish, especially on the desktop. Since this varnish is extremely hard, it should be rubbed and polished within 20 hours of applying the last coat. First, sand the top with 600-grit waterproof paper, using paraffin oil as a lubricant. When all dust particles and uneven spots are leveled, wipe the surface with a clean cloth and use No. 0000 steel wool to burnish the surface to an even satin glow. Polish the top with a soft cloth.

Join the modesty panel to the two pedestals. Use 3/8 X 2-1/2-in. hexhead bolts with washers to connect the parts. Then install screws through the subtop into the pedestal sides. Position the desktop over the base and fasten it with 2-in. No. 8 screws.

\*Walnut-veneer MDF or veneer-core panel

\*\* Walnut-, maple- or birch-veneer MDF or veneer-core panel

† Black-dyed inlay strips available from Dover Inlay Mfg. Co. Inc., Box 151, Williamsport, MD 21795

†† Painted black

**Misc:** Glue; 120-, 180-, 220- and 400-grit sandpaper; 600-grit waterproof paper; Behlen's Pore-O-Pac paste wood filler (Van Dyke Brown) No. B744-IF346; Behlen's Rockhard Table Top Varnish No. B603-28507; Behlen's Rockhard Varnish Reducer; black satin enamel paint.