

# The Rolltop Desk Base

**Eight side drawers and a generous sized lap drawer give you plenty of storage for all your important office supplies**

Have you ever considered building a major piece of furniture like this handsome roll top desk ? It's not really difficult – just a matter of making some basic saw cuts, fitting, drilling, dadoing, gluing...operations that are basically very simple. The secret is — TAKE YOUR TIME ! Pay careful attention at every step along the way. “Measure twice and cut once.” If you follow these simple rules of furniture construction, you'll be surprised at how smoothly the job will go, and how proud you'll be of the results you achieve.

Since this is a rather difficult project, we've decided to present the plans and procedures for building it in two parts. First, we'll tackle the pedestal desk base. Then, in the upcoming March/April edition of Hands-On, we'll build the rolltop unit that goes with it.

Once the base is completed, you'll have an extremely functional and beautiful piece of furniture. Then, when the rolltop section is finished and attached to the assembled desktop (no special joinery is required), you'll have a true family heirloom that you'll be proud to pass along to future generations.

## **1: PLANNING**

The most important aspect of building any piece of furniture is planning. Start by looking over the printed plans very carefully. Read all the how-to information. Review the List of Materials and the drawings.

While you're looking over the plans, be sure to take some notes regarding special operations, tools you might be needing, assembly techniques and shop safety — “building” the project in your mind, step-by-step.

The original plans for this desk were purchased from one of the major furniture plan developers, then modified to our liking after clipping photos of some desks we liked from magazines and other sources. Some minor changes were made to suit our special needs. For example, we used 3/4" lumber for the pedestal base pieces instead of the 1/2" used in the printed plan...then added three drawers on the rolltop section.

We often use available project plans for certain projects, then modify their features and measurements to suit our special needs.

## **2: GETTING STARTED**

To build this project, you'll need two sheets of 3/4" oak veneer plywood. When buying the plywood, try to select two sheets with a similar grain pattern. For the drawers and other interior parts, you'll need some poplar or pine. Remember, if you select blemished or damaged materials when you're beginning, you'll probably wind up with discouraging results in the end. Choose your materials carefully. If you go to a lumber retailer who refuses to let you choose your pieces, walk out and go to a different lumber retailer who will.

### **3: CUT THE PEDESTAL SIDES (B)**

Start by laying out the sides (B) and pull-out drawboards (P) on a piece of your 3/4" plywood. Make sure the grain direction follows the longest dimension of the parts. Start by cutting the plywood into manageable sized pieces, then trim them to their finished size. Shopsmith's Crosscut Sliding Table will help you crosscut larger sized pieces with improved accuracy

### **4: CUT THE DADOES & RABBETS**

in the sides (B), using your Dado Attachment or Router Package. Note that all dados are to be cut to 1/4" deep. Since you'll be performing the same operation on a total of four pieces, keep your MARK V at the same setting until you finish the identical cuts on the remaining three.

### **5: MAKE THE DUST PANELS**

Again, use production techniques to make all of the parts of these panels at once. First, rip parts D, E, F, G, H & J to the same width. Note that the edges of the (8) front frame pieces (D) will be exposed and therefore, should be made from the same wood as the exterior of the desk.

Next, cut the frame pieces to final length, then form a 1/4" wide by 1/4" deep groove in one edge of each piece. You'll need to take two of the front frame pieces (D) and form a groove on the top back side (see drawing detail "A").

Form 1/4" by 1/4" long stub tenons on the ends of the frame sides (F, G, H). Cut the 3/4" wide by 1/4" deep notches in the corners of the front frame pieces (D) to accept the pedestal facing strips (T).

Next, cut the plywood dust panels (U, V, W) to size and glue up the dust panel assemblies. Use yellow woodworker's glue, being careful not to get any glue on the plywood panels, since they should "float" loosely in the frame pieces. When clamping the pieces, make sure they remain square and flat. Set the center panel aside.

### **6: ASSEMBLE DUST PANELS TO SIDES (B)**

with glue and clamps. The frames mount flush with the back edge of the sides. Be sure to line up the notches on the fronts of the frames with the front edges of the sides.

Cut the bottom rails (C) to size and attach these with glue and 6-penny finishing nails.

### **7: ASSEMBLE THE REMAINING PARTS OF THE BASE PEDESTALS**

First, attach the pedestal facing strips (T) to the exposed edges of the sides. Next, cut the pedestal backs (Y) to size and attach with 2-penny nails.

Make the pedestal base pieces (L & M) and use your Shaper or Router Package to form a decorative edge on the tops of these pieces, if desired. If you're using a Shaper set-up, try the 1/4" and 1/2" Combination Quarter-Round Cutter or an Ogee Cutter. If you're working with your MARK V Router Package, you could use a 3/8" Round-Over Bit or the 5/32" Roman Ogee Bit.

Miter the pieces to fit the Base, then use your Disc Sander to "shave" the mitered edges down for a perfect fit. Attach the pieces to the base with glue and 6-penny finishing nails. Use a nailset to countersink the nail heads, then fill the holes with a high-quality, stainable wood putty.

## **8: ASSEMBLE THE DESK CASE**

Start by cutting the back apron (K) to size and then cutting the contoured lower edge with your Bandsaw or Scroll Saw. Drill three dowel holes in each end of the back apron (K) and locate their positions on the pedestals. A set of dowel centers will make easy work of accurately transferring the hole locations from the ends of the back apron to the sides (B) of the pedestals. Once the hole locations are marked, you can use your hand-held drill to bore the dowel holes in the sides (B)

Next, cut the center frame supports (N) to finished dimension and attach them to the pedestal sides using #8 x 1-1/4" flathead wood screws. Attach the back apron with 3/8" dowel pins but do not glue them ! Then, fasten the center dust panel to the frame supports with #8 x 1-1/4" flathead wood screws.

## **9: MAKE THE TOP (A)**

We used veneered plywood for our top because plywood is straight, easy to work with and stable. When cutting this and other large plywood parts to final dimension, it's best to have someone assist you for added safety. If you don't have this option, be sure to use Roller Support Stands or a MARK V Support Table to help you hold and guide your stock through the cuts safely and accurately.

Once you've squared the top, drill four dowel holes into the top edges of each of the four pedestal sides...then drill mating stopped holes into the underside of the top (A). Again, an inexpensive set of dowel centers will save a lot of time in matching-up these hole locations.

Apply the edge strips (R & S) to the top with glue and 5/8" brads. A set of 3-way edge clamps (link to 555803 in on-line catalog) will help you hold these edge strips in position until the glue sets-up.

Mount the top to the two pedestal sides with the dowels. If you choose not to use glue, you'll be able to remove the top from the pedestals easily for moving, if necessary.

**10: MAKE THE DRAWERS** following the drawings and the list of materials as guides. Since drawers look and work best when they're made to fit, dimensions given will vary slightly from the actual measurements. Be sure to **measure twice** before making any cuts.

Form the raised panels on the drawer fronts by tilting your MARK V saw table to 12-degrees and using a crosscut blade. You'll also need a raised panel jig for making this cut. Plans for this jig can be found in the Sept/Oct 2000 on-line issue of Hands-On under "Academy Notes" – STEP 6.

After forming the raised panels on the fronts, cut the required dados, rabbets and grooves for the remaining parts. Use production techniques to take full advantage of machine set-ups. Glue the drawers together, being careful **NOT to glue** the drawer bottoms. Check for squareness as you assemble each drawer.

At this time, assemble the slide-out drawboards, glue and clamp. Use your Shopsmith Molding Set-Up with a Nosing cutter to form the finger pull on the drawboard nosing (Q).

**11: FINAL TOUCHES** Finish sand the entire project and apply the finish of your choice.

List of Materials  
(finished dimensions in inches)

DESK CASE

<b>A</b>	Top	3/4 x 29-1/2 x 51-1/2
<b>B</b>	Sides (4)	3/4 x 28 x 29-1/4
<b>C</b>	Bottom Rails (4)	3/4 x 3-5/8 x 13-1/4
<b>D</b>	Front Frame pcs. * (8)	3/4 x 2-1/4 x 13-3/4
<b>E</b>	Back Frame pcs. * (8)	3/4 x 2-1/4 x 13-3/4
<b>F</b>	Bottom Side Frame (4)	3/4 x 2-1/4 x 24-1/2
<b>G</b>	Upper Frames (12)	3/4 x 2-1/4 x 24
<b>H</b>	Center Frame (2)	3/4 x 2-1/4 x 21
<b>J</b>	Center Frame Sides (2)	3/4 x 2-1/4 x 22-1/2
<b>K</b>	Back Apron	3/4 x 5-5/8 x 21
<b>L</b>	Pedestal Base (4)	3/4 x 4 x 15-3/4
<b>M</b>	Pedestal Base Sides (4)	3/4 x 4 x 29-1/2
<b>N</b>	Center Frame Supports (2)	3/4 x 3/4 x 25-3/4
<b>P</b>	Drawboards (2)	3/4 x 12-5/8 x 26-1/4
<b>Q</b>	Drawboard Nosing (2)	3/4 x 3/4 x 13-1/8
<b>R</b>	Top Edge Strips (2)	1/4 x 3/4 x 52
<b>S</b>	Top Edge Strips (2)	1/4 x 3/4 x 30
<b>T</b>	Pedestal Facing Strips (8)	1/4 x 3/4 x 29-1/4
<b>U</b>	Upper Dust Panels (4)	1/4 x 9-3/4 x 24
<b>V</b>	Lower Dust Panels (2)	1/4 x 9-3/4 x 24-1/2
<b>W</b>	Center Dust Panel	1/4 x 17 x 22-1/2
<b>X</b>	Drawboard Edge Strips (4)	1/4 x 3/4 x 12-5/8
<b>Y</b>	Pedestal Backs (2)	1/4 x 13-3/4 x 25-1/8

DRAWERS

<b>AA</b>	Drawer Fronts (8)	3/4 x 5-1/2 x 13-3/4
<b>BB</b>	Center Drawer Front	3/4 x 4-7/16 x 20-7/8
<b>CC</b>	Center Drawer Sides (2)	1/2 x 3-3/16 x 23-1/2
<b>DD</b>	Center Drawer Back	1/2 x 2-7/16 x 20-3/8
<b>EE</b>	Drawer Sides (8)	1/2 x 5-3/16 x 23-3/4
<b>FF</b>	Drawer Backs (4)	1/2 x 4-7/16 x 12-5/8
<b>GG</b>	File Drawer Sides (4)	1/2 x 11-3/16 x 23-3/4
<b>HH</b>	File Drawer Backs (2)	1/2 x 10-3/8 x 12-5/8
<b>JJ</b>	File Drawer Joiners (2)	1/2 x 1-1/4 x 13-3/4
<b>KK</b>	Center Drawer Bottom	1/4 x 20-3/8 x 23-3/8
<b>LL</b>	Drawer Bottoms (6)	1/4 x 12-5/8 x 23-5/8

\*Front Frame Pieces (D) are exposed and should be made out of the same stock as the rest of the exterior. Back Frame Pieces (E) are NOT exposed and therefore may be made of secondary wood