

# The Rolltop Desk Top

## Here's the *crowning piece* for our classic Rolltop Desk

Here's the compartmented roll top for the Pedestal Desk base we presented in the January/February, 2003 edition of "Hands-On!". This attractive and functional *topper* offers a total of eight Drawers and 11 Cubbyholes that will help it soon become the virtual *Center of Organization* for your home or office. And, as with the Pedestal Base covered in our previous issue, you can build the Top using only basic woodworking operations.

The Rolltop unit features two major components – 1) the Frame with its Tambour and 2), the Drawer/Cubbyhole insert. We suggest that you complete the Frame with the Tambour first, then build the insert. Let's get started.

**1. Select your stock.** The materials for this unit should be cut as you progress through the construction steps. We used a high-quality, 3/4" oak veneer plywood for the Sides (D), but you could use solid 3/4" oak, glued up to the appropriate sizes, if you prefer. Just be careful to match the grain as closely as possible with the grain pattern on the Pedestal Sides you built in our last installment.

**NOTE:** Whether you use plywood or solid wood, to achieve the best appearance, the grain direction on these Sides should be vertical.

**2. Make the Rolltop Frame.** Start by cutting out parts A through E, according to the List of Materials. **NOTE:** If you're planning to use glued-up oak hardwood for the Top (A), make this assembled piece 13-1/2" wide instead of 13", since you won't be needing the Top Front Strip (B) to edge your plywood.

Next, make a cardboard template for the curved tops of the Sides (D), then transfer this pattern to your stock. Use double-stick tape to attach the two Sides together temporarily so you can cut them both at the same time, using your Bandsaw, Scroll Saw or hand-held Saber Saw.

Once you've cut the curves on the two Sides (D), use your Drum Sander to smooth the edges. The Shopsmith Oscillating Spindle Sander Attachment will make this smoothing job go faster and help you "get more mileage", out of your sanding sleeves, as well.

If you've used plywood to make your Sides, once you've cut them out, finish off all exposed edges (including the back edges and the curved top edges) using matching 3/4" oak veneer tape. Although you could use masking tape or duct tape to hold these veneer strips in position while they dry, special 3-Way Edging Clamps will do a much better job and provide access to the edges so you can wipe off any glue squeeze-out before it dries.

**Make a Rolltop groove template.** Next, following the dimensions provided in the Side View Drawing, make a 1/4" or 3/8" thick hardboard or plywood template to guide your hand-held router as you cut the 9/16" wide x 3/8" deep groove on the insides of each Side (D) for the Tambour. Use a 9/16" diameter straight bit for this job and a router guide bushing with a 5/8" **INSIDE** diameter.

**NOTE:** The **OUTSIDE** diameter of these bushings is typically about 51/64", so you'll have to make

your **groove** template dimensions slightly smaller than the actual groove dimensions shown on the Side View Drawing to compensate for this and be certain your finished grooves are positioned properly on the Sides. Here's a tip. **IMPORTANT:** To be sure your template is the correct size, subtract the difference between your router bit's radius and the outside radius of your Guide Bushing from the dimensions given for the track template.

Next, using your Dado Set-Up (link to 505548 in on-line catalog), cut the rabbets in the rear edges of the Sides (D) that will accept the back (E). Drill 3/8" or 1/2" dowel holes in the bottom edges of the Sides (D). You can either measure the locations of these holes very carefully or use dowel centers to transfer these hole locations to the Desktop once you're ready to attach the Rolltop unit to the Pedestal Base.

**3. Make the Dust Panel.** Cut out parts F through J for the Dust Panel. Cut the 1/4" grooves in the Rails (F) and Stiles (G) using your Dado Set-Up, your Shopsmith Router Table Kit or Shopsmith Pro Fence System Router Table with a 1/4" Straight Router Bit to form these grooves.

Next, form the tenons on the Rail ends. Your Dado Set-Up is the best tool for this job. Drill 1/4" or 3/8" dowel mounting holes in the outside ends of each end Rail (F) for mounting the assembled Dust Panel to the Sides (D). Again, you can either measure the locations of these holes very carefully or use dowel centers to transfer these hole locations to the Sides once you're ready to fasten the Dust Panel into position.

Assemble the Dust Panel with glue, but **do not** glue the plywood pieces (H & J) to the rails and stiles, so everything can expand and contract with changes in temperature and humidity without splitting.

**4. Drawer Partitions.** Cut the Drawer Partitions (K) to size and drill two 1/4" or 3/8" dowel holes on each bottom and top edge. Locate and drill matching holes in the two mating inside Dust Panel rails (F).

**5. Rolltop Frame assembly.** Glue and clamp the Sides (D) and Dust Panel together...then glue the Drawer Partitions (K) in place. Drill the three dowel holes in the tops of each Side (D), and mating holes in the bottoms of the Top (A) ends...then assemble the Top (A) to the Sides (D) with glue and clamps. If you have made your Top (A) from 3/4" plywood, you'll need to attach the Top Front Strip (B) to the front edge of your Top (A) at this point. You can either screw this piece to the Top using counterbored #9 x 1" flathead wood screws covered with screw plugs...or simply glue it into position. Again, 3-Way Edging Clamps are the perfect tool for holding this piece in position while the glue sets up.

**6. The Tambour.** Follow the steps outlined in the special *Making Tambours* sidebar article (link to sidebar article on making tambours) to create the Tambour for your desk.

**7. The Insert.** To make the Insert, you'll either have to purchase 1/4" and 1/2" thick stock for the pieces or use your Bandsaw to resaw these pieces from thicker 3/4" stock, then run them through a Thickness Planer. The Back (O) can be made from 1/4" plywood.

Start by cutting all Insert parts (O through Z) to size. Next, carefully lay out all the rabbets and dadoes required for these pieces. Be sure to measure everything twice as **the accuracy of all cuts is critical**. Cut the dadoes and rabbets in parts P through Z. Using your Bandsaw or Scroll Saw, cut

the contours on the front edges of parts S, V and Y. Sand the scrolled edges carefully using your Drum sander.

Prior to assembly, mark all pieces for location. Begin the assembly process by gluing together parts P, Q, R & S. Next, glue and clamp the left Side pieces (T & Z) into position. Allow the glue to set up, then follow the same procedures for the right Side pieces (T, X, Y & Z).

**8. Insert Drawers.** Cut out all Drawer parts (AA through HH). Using your Dado or Route set-up, cut the 1/4" grooves and dadoes in the Drawer sides and fronts, as shown in the Drawer Construction drawings. Tilt your Saw Table to 15-degrees and bevel the edges of the Drawer Fronts to create a *raised panel* look. **CAUTION:** This is a potentially dangerous operation since the parts are small. Be sure to use a combination of Push Blocks, Push Sticks and Feather Boards to keep your hands clear of the Saw Blade at all times.

A Panel Raising Jig will make this job much simpler and safer. Assemble the Drawers with glue, then use your Belt Sander to smooth them to finished dimension.

**9. Top Drawers.** A locking drawer joint is used on the Top Drawers (see Top Drawer Construction drawing). For parts JJ through QQ, repeat the same construction procedures as in step 8.

**10. Finishing.** Prior to final assembly, apply the finish of your choice to the Insert, Tambour and Frame.

**11. Assembly.** Insert the Tambour into the grooves in the Sides (D). Attach the Rolltop to the Desktop with dowels, **but do not glue**, as this makes the desk easier to disassemble in the event you have to move it. Have someone help you lower the assembled Rolltop onto the dowel holes in the Desktop.

Next, attach the Bottom Rail (C) to the Desktop using #9 x 1-1/4" flathead wood screws. Nail the back (E) into place using small brads or 2-penny nails. Finally, select and install the hardware of your choice and enjoy!

## List of Materials

(finished dimensions in inches)

<b>A</b>	Top	3/4 x 13 x 53*
<b>B</b>	Top Front Strip	1/2 x 3/4 x 50*
<b>C</b>	Bottom Rail	3/4 x 4-1/8 x 50
<b>D</b>	Sides (2)	3/4 x 18 x 28-1/2
<b>E</b>	Back	1/4 x 18 x 50-3/4
<b>F</b>	Dust Panel Rails (4)	3/4 x 1-1/2 x 9-1/4
<b>G</b>	Dust Panel Stiles (2)	3/4 x 1-1/2 x 50
<b>H</b>	End Dust Panels (2)	1/4 x 9-1/4 x 17
<b>J</b>	Center Dust Panel	1/4 x 9-1/4 x 11-1/2
<b>K</b>	Drawer Partitions (2)	3/4 x 4-1/8 x 11-3/4
<b>L</b>	Tambour Strips (27)	3/4 x 3/4 x 50-5/8
<b>M</b>	Tambour Bottom	3/4 x 2 x 50-5/8
<b>N</b>	Canvas Cover Strip	1/4 x 3/4 x 49-3/4

## **INSERT**

<b>O</b>	Back	1/4 x 8-1/2 x 49-3/4
<b>P</b>	Top	1/2 x 8-1/2 x 49-3/4
<b>Q</b>	Panels (4)	1/2 x 8-1/2 x 10-5/8
<b>R</b>	Bottoms (2)	1/4 x 4-3/8 x 8-1/2
<b>S</b>	Scrolled Divider	1/4 x 8-1/2 x 10-1/2
<b>T</b>	Panels (5)	1/4 x 8-1/2 x 12-1/2
<b>U</b>	Panel	1/4 x 8-1/2 x 14-1/4
<b>V</b>	Scrolled Panel	1/4 x 8-1/2 x 14-1/4
<b>W</b>	Partitions (2)	1/4 x 2-3/4 x 8-1/2
<b>X</b>	Partition	1/2 x 4-3/4 x 8-1/2
<b>Y</b>	Scrolled Dividers (3)	1/4 x 4-3/4 x 8-1/2
<b>Z</b>	Partitions (2)	1/2 x 7-3/8 x 8-1/2

## **SMALL INSERT DRAWERS**

<b>AA</b>	Fronts (3)	1/2 x 2-7/16 x 4-7/16
<b>BB</b>	Backs (3)	1/4 x 1-15/16 x 4-3/16
<b>CC</b>	Sides (6)	1/2 x 2-7/16 x 8-3/16
<b>DD</b>	Bottoms (3)	1/4 x 4-3/16 x 8-3/16

## **LARGE INSERT DRAWERS**

<b>EE</b>	Fronts (2)	1/2 x 2-3/16 x 12-1/8
<b>FF</b>	Backs (2)	1/4 x 1-15/16 x 11-7/8
<b>GG</b>	Sides (4)	1/2 x 2-3/16 x 8-3/16
<b>HH</b>	Bottoms (2)	1/4 x 11-7/8 x 8-3/16

## **SIDE TOP DRAWERS**

<b>JJ</b>	Fronts (2)	3/4 x 4-1/16 x 19-1/8
<b>KK</b>	Backs (2)	1/4 x 3-9/16 x 17-7/8
<b>LL</b>	Sides (4)	1/2 x 4-1/16 x 11
<b>MM</b>	Bottoms (2)	1/4 x 10-3/4 x 17-7/8

## **CENTER TOP DRAWER**

<b>NN</b>	Front	3/4 x 4-1/16 x 12-3/8
<b>OO</b>	Back	1/4 x 3-9/16 x 11-1/8
<b>PP</b>	Sides (2)	1/2 x 4-1/16 x 11
<b>QQ</b>	Bottom	1/4 x 10-3/4 x 11-1/8

\* **NOTE:** If you're planning to use glued-up oak hardwood for the Top (A), make this assembled piece 13-1/2" wide instead of 13", since you won't be needing the Top Front Strip (B) to edge your plywood.