135
ROLLTOP DESK

For the person who hates to clear off a desk, who wants to leave everything where it is overnight yet still have the clutter hidden, a rolltop desk is a godsend. The tambour hides everything! Our design, a modern interpretation of the 19th-century design, goes well with contemporary or traditional furnishings.

Lumber-core plywood is used for most of the desk, supplemented by solid hardwood stock: walnut, maple, oak, or cherry. The edges of the plywood are covered with a matching veneer tape.

The need for extreme accuracy in measuring and cutting cannot be stressed too strongly. With one exception, all the construction is ambitious but straightforward—that exception is the tambour, which is made up of thirty 3/4-inch-wide hardwood slats. A scant 1/4-inch tongue at

Parts list

Part	Name	Quantity	Thickness	Width	Length	Material
Tambour case						
A	Side	2	¾"	15½"	30¼"	Plywood
B	Back	2	¼"	14⅝"	56"	Plywood
C	Top	1	¾"	11½"	56"	Plywood
D	Rail	1	¾"	⅞"	55½"	Plywood
Cubbyhole unit						
E	Top	1	¾"	10"	55½"	Plywood
F	Shelf	1	½"	9¾"	28¾"	Plywood
G	Shelf	4	½"	9¾"	10¼"	Plywood
H	Side	2	½"	9¾"	12¼"	Plywood
I	Back	1	¼"	12¼"	55½"	Plywood
J	Divider	2	½"	9¾"	12¼"	Plywood
K	Divider	5	½"	9¾"	3⅛"	Plywood
L	Divider	2	½"	9¾"	8¼"	Plywood
M	Cleat	1	¾"	¾"	55½"	1 x 6 hardwood
Tambour						
N	Handle	1	1½"	1⅝"	56"	2 x 8 hardwood
O	Slat	30	¾"	¾"	56"	1 x 6 hardwood
P	Retaining strip	1	¼"	1"	55½"	1 x 6 hardwood
Q	Backing	1	—	23⅝"	55½"	Canvas
Desk-top unit						
R	Top	1	¾"	29¼"	60"	Plywood
S	Bottom	1	¾"	29¼"	59"	Plywood
T	Side	2	¾"	5½"	29¼"	Plywood
U	Back	1	¼"	4¾"*	59¼"*	Plywood
V	Partition	2	¾"	4½"	29"	Plywood
W	Horizontal trim	2	¾"	¾"	60"	1 x 6 hardwood
X	Side trim	2	¾"	¾"	5½"	1 x 6 hardwood
Y	Partition trim	2	¾"	¾"	4¼"	1 x 6 hardwood
Z	Spline	2	⅛"	¾"	29¼"	1 x 6 hardwood
Base units						
AA	Top	2	¾"	16"	26¼"	Plywood
BB	Bottom	2	¾"	16"	25½"	Plywood
CC	Front	2	¾"	3¾"	16"	Plywood
DD	Side	4	¾"	24½"	27½"	Plywood
EE	Back	2	¼"	16¼"*	24⅛"*	Plywood
FF	Pin	8	¼" dia.	—	¾"	Hardwood dowel

*Measurement is approximate; cut to fit during construction.

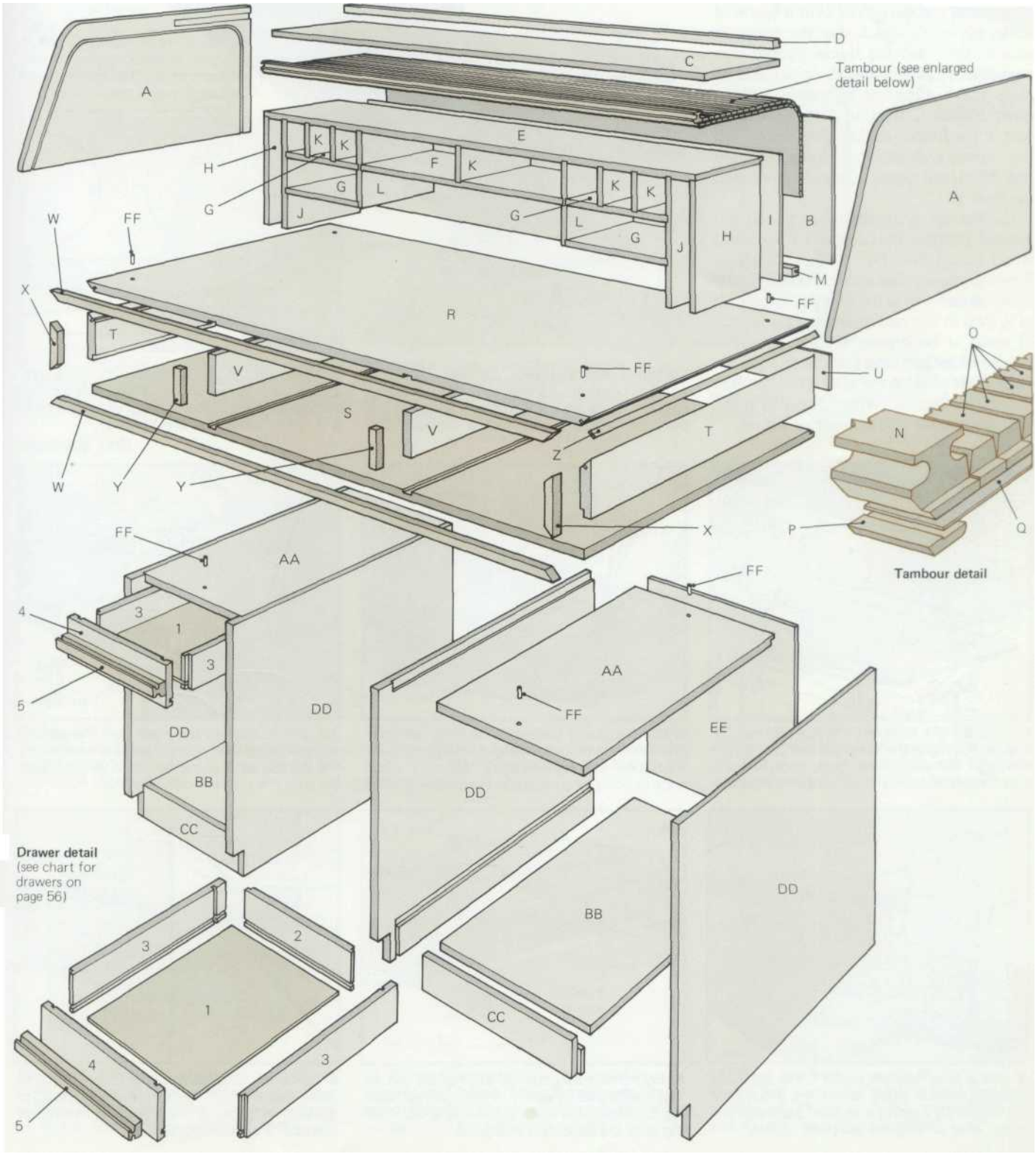
Tools and materials: Radial arm or table saw with carbide-tipped or planing blade and dado head. Saber saw. Router with 1/4" straight bit and 5/8" cove bit. Drill with 1/4" twist bit. Hammer, mallet, screwdriver. Two web clamps. Framing square, steel tape rule. Orbital sander and sanding block with Nos. 100, 150, and 220 sandpaper. Hide or resin glue, adhesive sponge. Wood stain, varnish, paste wax. Candle stub. 1 2/3 yd. of canvas at least 26" wide. Veneer tape. Lumber-core plywood: one panel 1/4" x 4' x 8', 1 1/2 panels 1/2" x 4' x 8', three panels 3/4" x 4' x 8'. A 1/8" x 4' x 8' panel of tempered hardboard. Six 5' lengths of 1 x 6 hardwood boards, one 5' length of 2 x 8 hardwood board One 1/4" dowel. Four 1/4" dowel centers. Nine pairs of drawer slides (metal or hardwood). A 55 1/2" length of weather stripping. Four 1/2" No. 6 brass wood screws, four 1 1/2" No 10 brass wood screws, 1" box nails.

each end of each slat allows the tambour to slide up and down in 1/4-inch grooves that have been routed in the sides of the tambour case (see diagram, p. 55). Where the grooves curve, they will have to be widened a bit to accommodate the width of the slats as they make the turn.

The tambour slats should be finished and waxed before they are glued to the canvas backing; it would be impossible to finish them once they are glued down. However, do not finish the bottoms of the slats; these must accept the glue.

The finish you choose depends on the hardwood you select for the desk. For light woods, such as oak or maple, you may want to apply a stain, followed by varnish and wax. But darker woods may need no more than light sanding and tung oil.

You may find it easier to finish the individual sections of the desk—the tambour and case, desk-top unit, base units, drawers, and cubbyhole unit—before assembly. If so, take extra care during assembly that you do not mar the finish. Build the cubbyhole unit after the tambour case has been built and fitted to the desk top in order to be sure that the cubbyhole unit fits perfectly within the case.

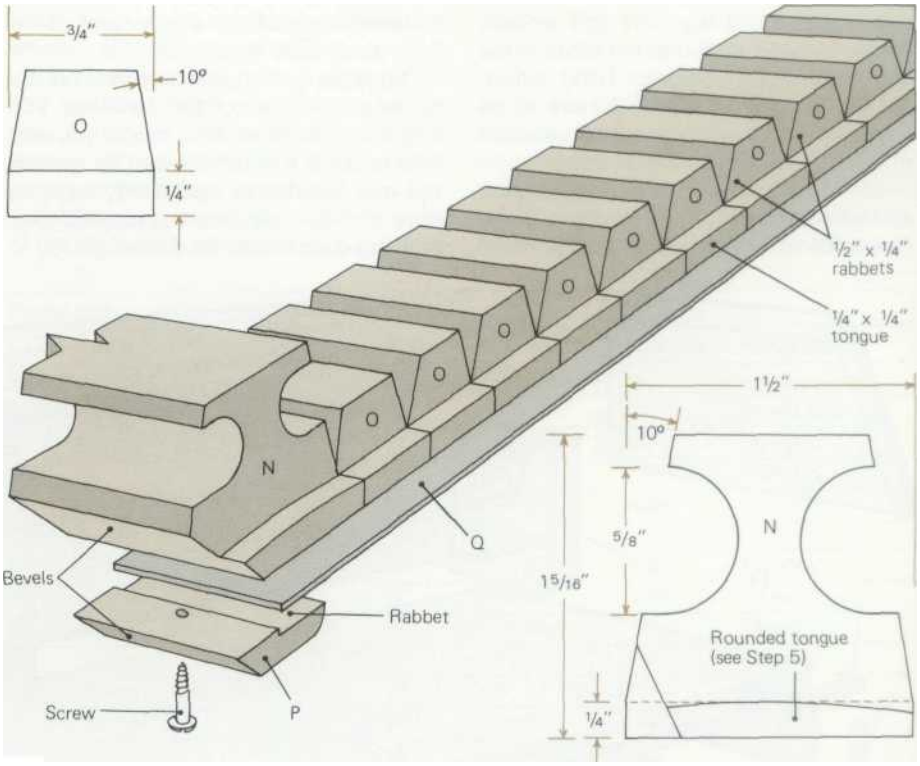


Tambour and case

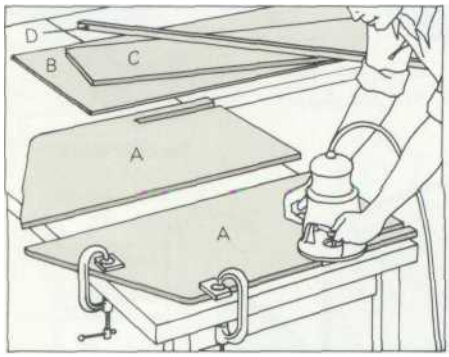
Cut 30 slats (O), 3/4 inch square and 56 inches long, from 1 x 6 hardwood boards. Set the table saw blade at a 10° angle and position the fence so that the blade will cut a 10° bevel, ending 1/4 inch above the base of each slat. Cut a rabbet 1/2 inch deep and 1/4 inch wide into each end of each slat. Finish the slats.

Build a frame of scrap lumber with inside dimensions of 25 x 56 inches. Stretch the canvas tightly over a piece of scrap plywood; check that the frame is square, then nail the frame through the canvas and to the plywood. Apply hide or resin glue to a third of the canvas and put down 10 slats. Clamp the slats against one end of the frame, holding them down on the canvas with weights. When the glue has dried, put down 10 more slats, then the final 10,

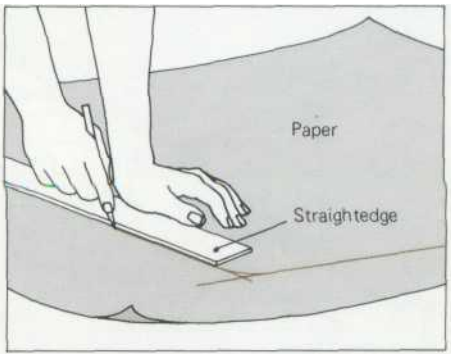
Cut slats for the tambour handle (N) and drawer handles by ripping a 2 x 8 hardwood board into l 1/2- x l 5/16-inch strips. Bevel as shown. Use a 5/8-inch cove router bit to cut grooves in the handles to a depth of 1/2. inch in two passes, removing 1/4 inch of wood at each pass. Cut the tambour handle 56 inches long and cut a rabbet in each end to match the slats. Glue the handle to the canvas. When the glue dries, trim the canvas to the tambour edges.



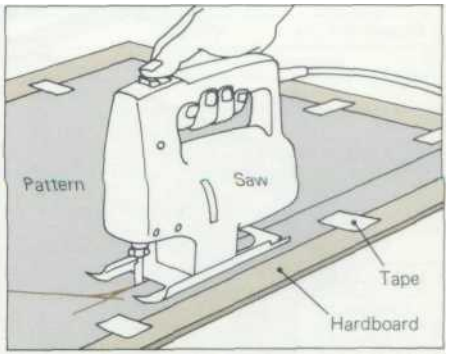
Tambour detail shows canvas (Q) sandwiched between handle (N) and retaining strip (P). Bevel front edge of strip to match the bevel on handle. Cut a shallow rabbet in the retaining strip to accommodate the thickness of the canvas. Finish the lower side of the strip, then glue it to the canvas. Drill pilot holes and screw parts N and P together



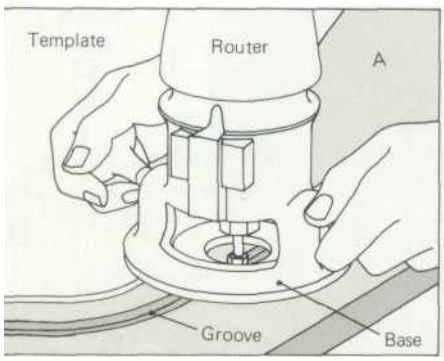
1. Cut sides (A), back (B), top (C), and rail (D) to size. Following the diagram at top of opposite page, cut a 1/4 x 3/4-in. blind dado in each side for top and 1/8- x 3/8-in. rabbet for back.



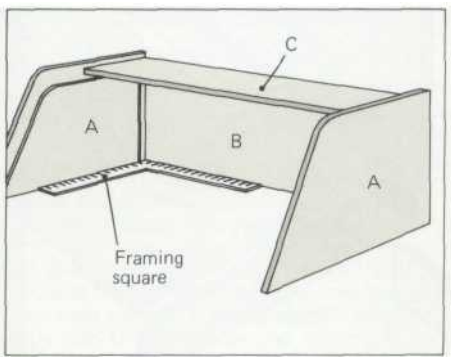
2. Make a paper pattern for cutting tambour grooves with a router and template guide (see illustration, opposite page), allowing clearance needed by your guide



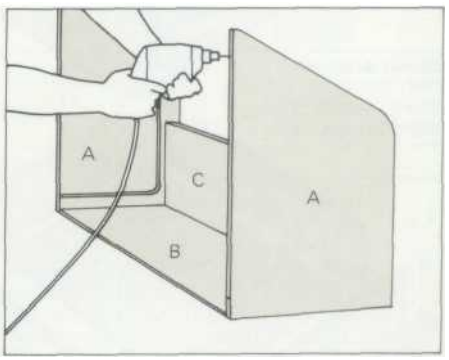
3. Cut a hardboard template from the pattern, using a saber saw. A 2-in. radius is needed on the curves so that the tambour will not bind Be sure the curves flow smoothly.



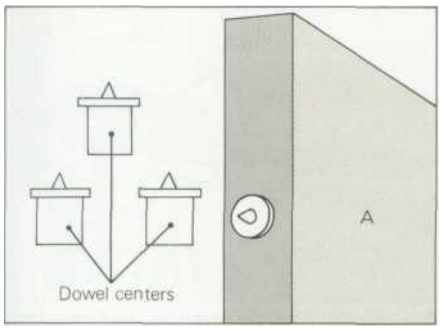
4. Use a 1/4-in, straight router bit to cut 1/4-in.-deep grooves in sides. Widen the grooves at the curves by making a second pass with the router after shifting the template slightly



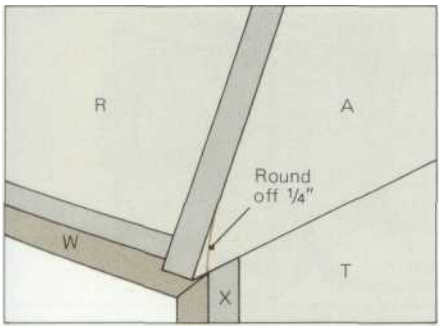
5. Round the tongues on the handle (N) so that it will travel smoothly in the grooves. Glue top to sides. Glue back to sides and top, making sure the assembly is square.



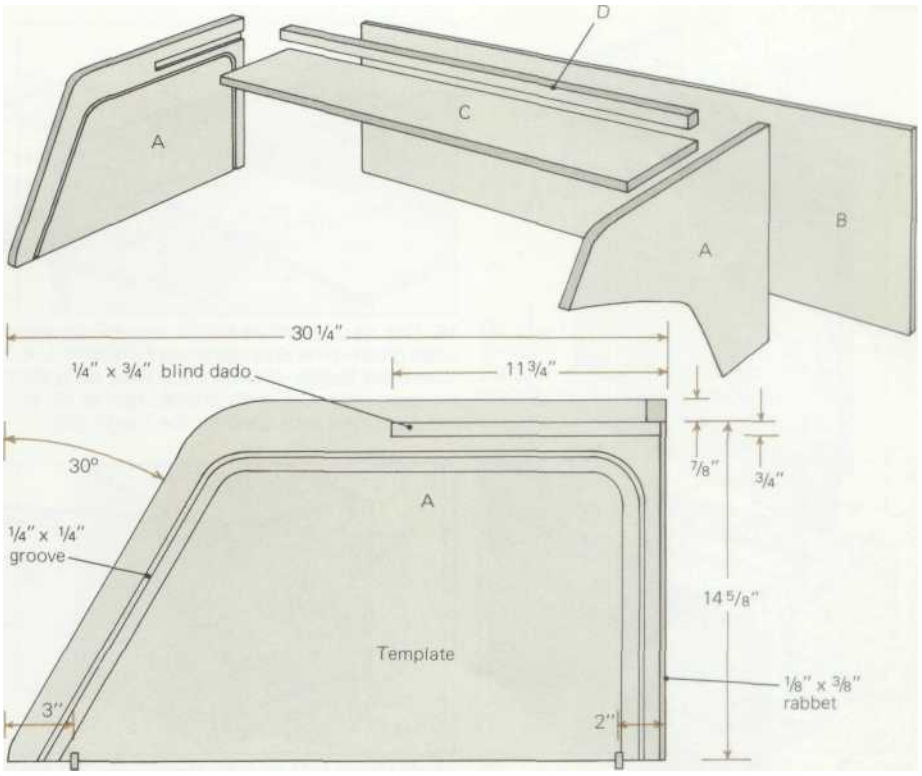
6. Nail back to sides and top. Glue rail (D) to sides and top. Drill 1/4-in. holes *1/4* in, deep in the bottom edges of the sides 2 in. from back corners, 3 in. from front



7. Purchase four Win, dowel centers to insert into the holes drilled in Step 6. These will be used in Steps 23-26 to mark the positions of the dowel holes in the desk top.

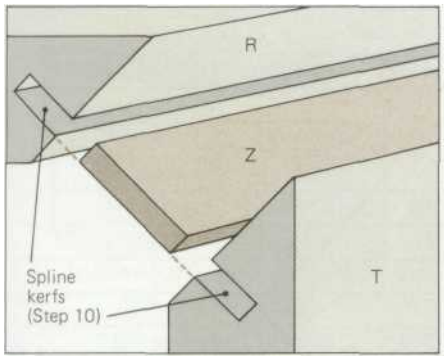


8. After completing desk-top unit (below), position tambour case on desk top (R). Round off front corners of case flush with top. Apply veneer tape to exposed plywood edges.

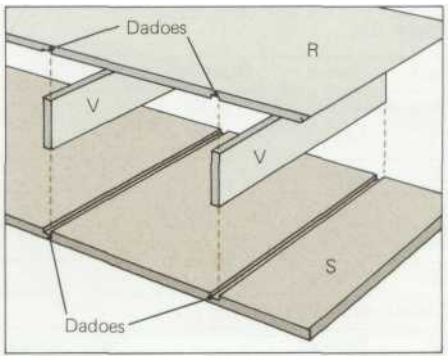


Drawings show assembly of parts for tarnbour case (top) and dimensions and locations for dowel holes, dado, and rabbet (bottom), The template for cutting the grooves in the sides (A) must be made to conform to the thickness of the template guide for your router . Use a 2-in radius for the curves of the grooves

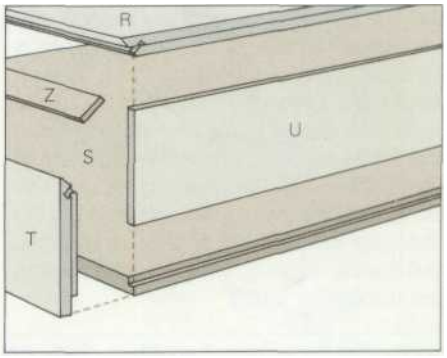
Desk-top unit



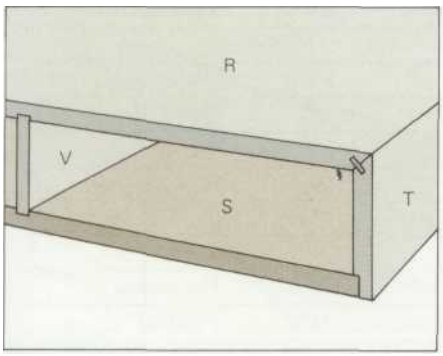
9. Cut parts R-Z to size (see chart, p.52), but do not cut the back (U) yet. Grain must run the length of splines (Z). Cut 45° bevels in top (R) and sides (T) as shown



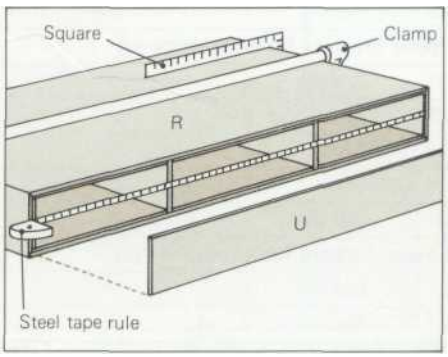
10. Cut 1/8-in.-wide spline kerfs 3/8 in. deep into the top and sides Cut dadoes 1/4 in. deep and 3/4 in. wide into the bottom (S) and top (R) for partitions (V).



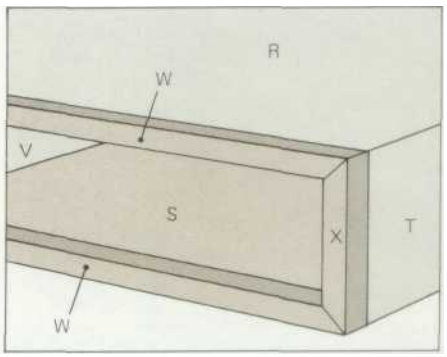
11. Cut a 1/4- *x 3/4*-in. rabbet into the bottom edges of the sides (T) to accept the bottom (S). Cut a $^{3}/_{8}$- x 1/4-in rabbet into the back edges of parts R, S, and T for back (U)



12. Test-fit all pieces, check for squareness, make adjustments; assemble with glue. Glue splines (Z) to top and sides (T); glue partitions (V) to top Glue bottom to parts T and V

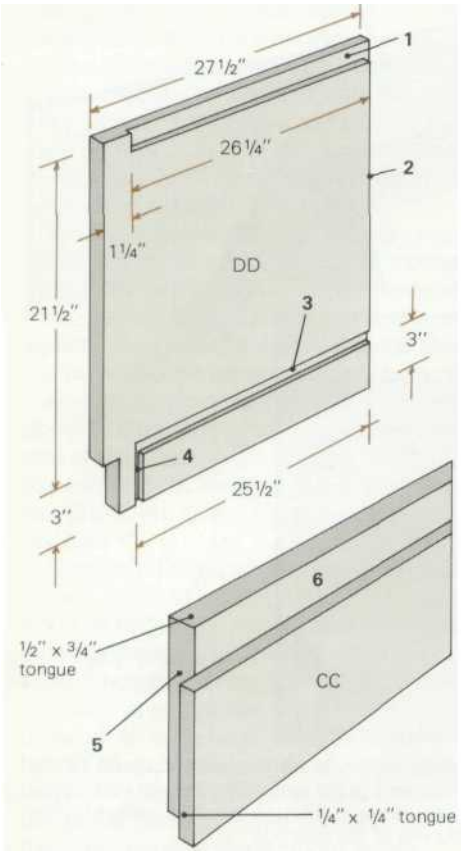


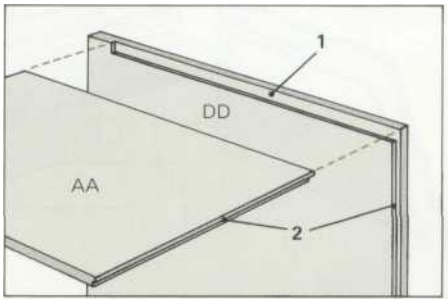
13. Clamp assembly, making certain front is square, and brace it diagonally with scrap wood. Measure opening inside rabbets, then cut back (U) to fit opening exactly



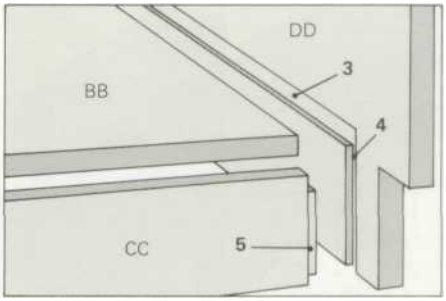
14. Glue the back to parts R, S, T, and V. Check that assembly is still square and nail back piece in place. Test-fit the trim (W, X and Y), then glue trim in position.

Base units

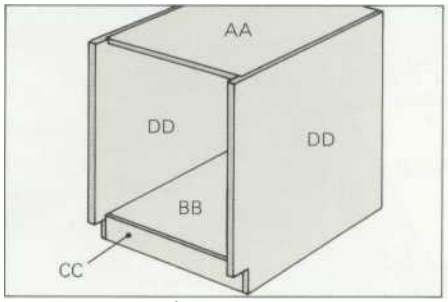




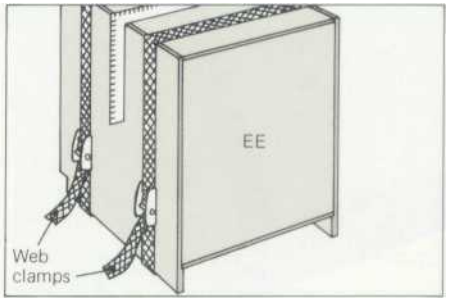
15. Cut base parts (AA-DD and FF) to the sizes given in the chart on page 52. Cut a 1/4- x 3/4in.blind rabbet (1) into each side (DD) for the tops (AA). Cut a 3/8- x 1/4-in. rabbet (2) in the sides and tops (AA) for the backs (EE).



16. Cut a 1/4- x 3/4-in. blind dado (3) into the sides for the bottoms (BB). Cut a 1/4- x 1/4-in. dado (4) in the sides for the fronts (CC) Cut a 1/4- x 1/2-in. rabbet (5) at each end of the fronts (CC) to make 1/4- x 1/4-in. tongues



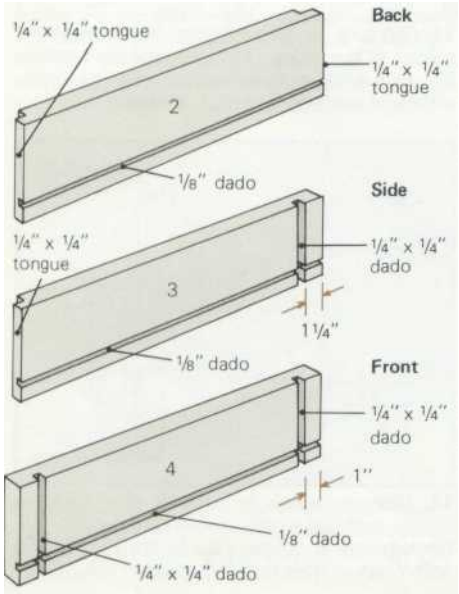
17. Cut a *1/4-* x 3/4-in. rabbet (6) along the top of each front (CC). Test-fit pieces and make any necessary adjustments. Glue the fronts to the bottoms; then glue these and their tops (AA) into dadoes in sides.



18. Clamp each base assembly with web clamps. Square the fronts with a framing square and prop up with diagonal braces. Measure openings and cut backs (EE) to fit. Glue and nail backs in place

Drawers

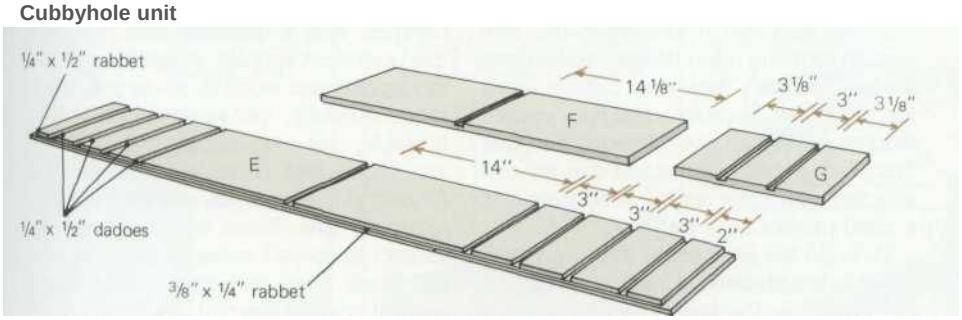
Cut the drawer fronts from 3/4-*inch* plywood, the sides and backs from /2-inch plywood, and the bottoms from /8-inch hardboard (see chart at right). Cut dadoes and rabbets into the backs, sides, and fronts, following the drawings below. The drawer handles were shaped at the same time as the tambour handle and must now be cut to length.

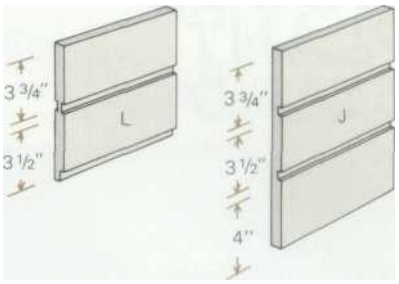


Parts list

Part	Name	Quantity	Thickness	Width	Length	Material
Side desk-top drawers (2)						
S1	Bottom	2	⅛"	15½"	23⅛"	Hardboard
S2	Back	2	½"	3½"	15½"	Plywood
S3	Side	4	½"	3½"	23⅛"	Plywood
S4	Front	2	¾"	4"	17"	Plywood
S5	Handle	2	1½"	1⁵⁄₁₆"	17"	2 x 8 hardwood
Center desk-top drawer (1)						
C1	Bottom	1	⅛"	21½"	23⅛"	Hardboard
C2	Back	1	½"	3½"	21½"	Plywood
C3	Side	2	½"	3½"	23⅛"	Plywood
C4	Front	1	¾"	4"	23"	Plywood
C5	Handle	1	1½"	1⁵⁄₁₆"	23"	2 x 8 hardwood
Upper drawers for base units (4)						
U1	Bottom	4	⅛"	14"	23⅛"	Hardboard
U2	Back	4	½"	3½"	14"	Plywood
U3	Side	8	½"	3½"	23⅛"	Plywood
U4	Front	4	¾"	4"	15½"	Plywood
U5	Handle	4	1½"	1⁵⁄₁₆"	15½"	2 x 8 hardwood
Lower drawers for base units (2)						
L1	Bottom	2	⅛"	14"	23⅛"	Hardboard
L2	Back	2	½"	11½"	14"	Plywood
L3	Side	4	½"	11½"	23⅛"	Plywood
L4	Front	2	¾"	12"	15½"	Plywood
L5	Handle	2	1½"	1⁵⁄₁₆"	15½"	2 x 8 hardwood

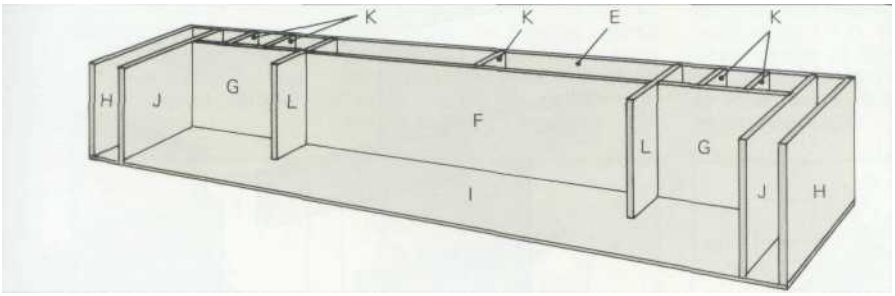
Cubbyhole unit

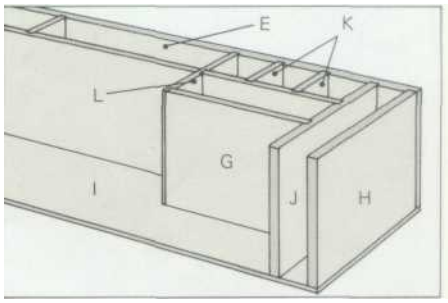




19. Cut the top (E), the shelves (F and G), the sides (H), the back (I), the dividers (J, K, and L), and the cleat (M) to size (see chart). Cut dadoes and rabbets 1/4 in. deep and 1/2 in wide into the top (E) for parts H, J. K, and L. Cut a rabbet 3/8 in. deep and 1/4 in. wide into the top for the back (I). Cut 1/8- x 1/2-in. dadoes into the shelves for dividers K

20. Cut 1/8- x 1/2**-in.** dadoes and rabbets into dividers L to receive the shelves (F and G). Cut 1/8- x 1/2-in. dadoes into dividers J for shelves G Set pieces aside

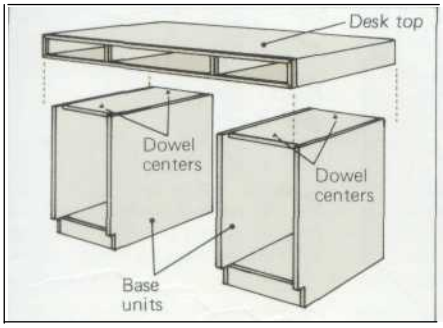


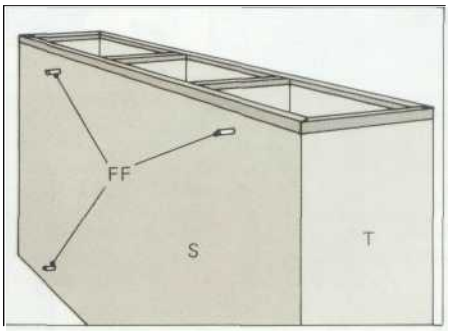


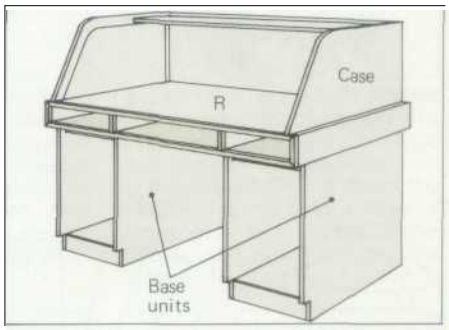
21. Test-fit all pieces and check the fit of the unit within the tambour case. Then glue and nail top (E) to sides (H). Glue back (I) to top and sides; square assembly, then nail. Glue parts L, F, and center divider K to each other and to top. Glue remaining dividers K to top, and upper shelves G to dividers K and L. Then glue dividers J to top and upper shelves G.

22. Glue remaining shelves G to dividers J and L. Square up assembly, draw center lines of parts F, G, J, K, and L on the back (I) Then nail through I into F, G, J, K, and L

Final assembly



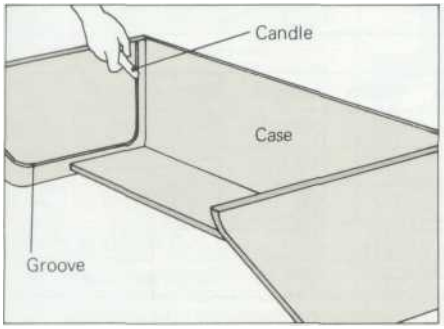


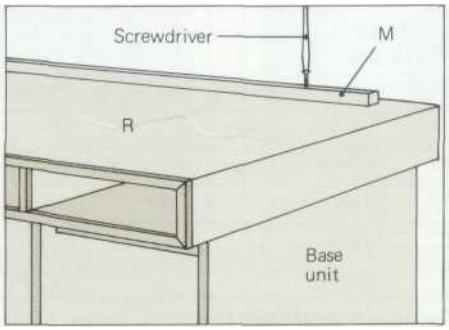


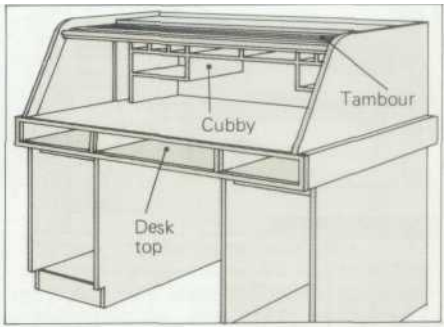
23. Drill 1/4i-in. holes 12 in. deep in the center of the base tops (AA) near the front and back edges Place dowel centers in the holes. Set base units against a wall, 23 in. apart, and carefully center desk-top unit over bases.

24. Press down on desk-top unit, then remove it; dowel centers will make marks on underside of desk-top unit Drill Win. holes 1/4 in deep at these marks. Insert 1/4- x 3/4-in. pins (FF) into holes and set desk-top unit on bases.

25. Place dowel centers into the holes drilled in the tambour case in Step 6. Lightly position the case on desk top (R). When it is in the proper position, press down firmly on the case so the dowel centers mark the top below







26. Remove the case and the dowel centers. At the marks drill four 1/4-in. holes 1/2 in. deep and insert 3/4-in,-long pins. On a clean surface invert the tambour case and rub a candle stub in the tambour grooves

27. Center the cleat (M) on the desk top (R) 2 1/2 in. from the rear edge of the top. Tape or clamp the cleat in place, drill four 7/64-in pilot holes 1 1/2 in. deep, and attach the cleat to the top with No. 10 brass screws.

28. Rub candle wax on tongues of tambour Carefully feed tambour into its case from the front. Lower the case over the pins (FF) in the desk top. Position the cubbyhole unit so that its back touches the cleat (M).