WOODWORKER'S JOURNAL

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Classic Project

In this plan you'll find:

- Step-by-step construction instruction.
- A complete bill of materials.
- Construction drawings and related photos.
- Tips to help you complete the project and become a better woodworker.

Router Storage Cabinet

PROJECTS

If you're like many woodworkers, you've probably got a cabinet, some drawers or perhaps a chest for your most prized hand tools. But when it comes to power tools, if the item didn't come with a factory-supplied plastic case, you'll probably store it wherever space and convenience dictate. Often the router sits on an open shelf, perhaps below the workbench. And who among us hasn't had to waste time looking for a misplaced router collet wrench or guide bushing?

This handy Router Storage Cabinet—designed and built by contributing editor Dennis Preston—solves the problem of not only storing your routers, but also of organizing all your bits and accessories. The interior dimensions will store both a full-size plunge router and a standard-size router. Bits and accessories fit in the two drawers. The door back is a good place to hang the edge guide. The storage cabinet can either sit on a flat surface or be wall-mounted. The integral wall mount allows the cabinet to be hung on an angled bracket and lifted off the wall when needed. Although our cabinet was designed specifically for router storage, it's handsome enough to fit just about anywhere in the home.

ROUTER STORAGE CABINET by Dennis Preston

This unit was designed to be a companion to the portable tool cabinet in the September/October 1990 issue. It uses the same simple edge-banded plywood case construction. This is also an ideal practice project if you plan on making larger cabinets, since it includes many basic cabinet-making operations, though on a modest scale. I used a combination of birch plywood, oak and bird's-eye maple. The bird's-eye maple may seem extravagant for a shop project, but given the small amount of stock required, it only adds a few dollars to the project cost. And if you make the cabinet for a kitchen or living room, the figured wood is a sure eye-catcher.

For starters you'll need a piece of ¾ in. thick plywood, 1 ft. wide by 8 ft. long. I used birch plywood because its high-quality core is very stable, has almost no voids, and is more suitable than fir construction plywood for cabinetwork. The 1 ft. wide by 8 ft. long section will yield the sides (A), top and bottom (B), and shelf (C). To maintain grain uniformity, sequentially mark and cut the four parts. The shelf must be ripped to 11 ¾ in. wide to allow for the ¼ in. thick back (E).

Now, using the table saw with a dado head, cut the ½ in. by ½ in. rabbets on the ends of the sides, and the corresponding ¼ in. by ½ in. rabbets on the ends of the top and bottom. Also cut the ¼ in. by ¼ in. rabbet in the sides, top and bottom for the back, and the ¼ in. by ½ in. and ¼ in. by ¾ in. dadoes in the sides for the drawer guides (D) and shelf. Note that the rabbets in the top and bottom for the back should be stopped (Fig. 1). Use a router table for most of this back rabbet work, then square the ends of the cuts with a chisel. Final sand the inside surfaces, then glue and assemble the cabinet. The assembly is simple: spread a generous amount of glue on all the joints, join the sides to the shelf, then add the top and bottom. Use finishing nails through the sides to anchor the top and bottom joints, then cut, fit and glue the back into its rabbet. Finish nails also hold the back in place. Wipe off any glue squeeze-out and set the case aside to dry.

Next, cut the various edgings, all of which are oak. Start with the top back edging (F), which has an angled lower edge (see side elevation). This angled edge nests within a similar piece mounted to a wall, should you choose to hang the cabinet (see Bill of Materials for wall-mounting details). Add the top side edging (G), followed by the top front edging (H). Now move on to the bottom edging, which is nearly identical to the top with a few exceptions. The bottom back edging (I) has no angled edge, and the 1 in. width of it and the bottom side edging (J), along with the 1 in. thickness of the bottom front edging (K) lend the bottom of the cabinet a slightly heavier look. The assembly procedure is identical to the top, with the back edging applied first, followed by the side and then the front pieces. All these edgings are applied with a generous amount of glue and are held in place with finishing nails, set and later filled. As before, wipe away any glue squeeze-out with a damp rag before allowing to dry.

All that remains of the edging work is the front/back/shelf edging (L). Rip about 10 ft. of ¼ in. thick by ¾ in. wide oak, then cut and fit it to the remaining exposed plywood edges, specifically the front and back edges of the sides and the front edge of the shelf. Bevel the top ends of the back edging to match the angle on the bottom edge of part F.

While you are waiting for the edging to dry, you can go to work on the door. Use care in the selection of stock here, since

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by Dennis Preston

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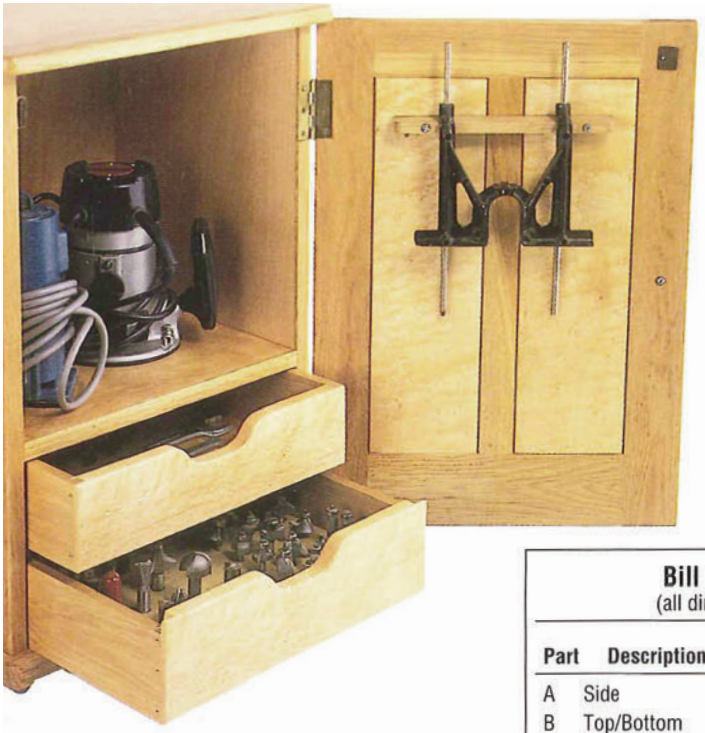
For starters you'll need a piece of 3/4 in. thick plywood, 1 ft. wide by 8 ft. long. I used birch plywood because its high-quality core is very stable, has almost no voids, and is more suitable than fir construction plywood for cabinetwork. The 1 ft. wide by 8 ft. long section will yield the sides (A), top and bottom (B), and shelf (C). To maintain grain uniformity, sequentially mark and cut the four parts. The shelf must be ripped to 11 3/4 in. wide to allow for the 1/4 in. thick back (E).

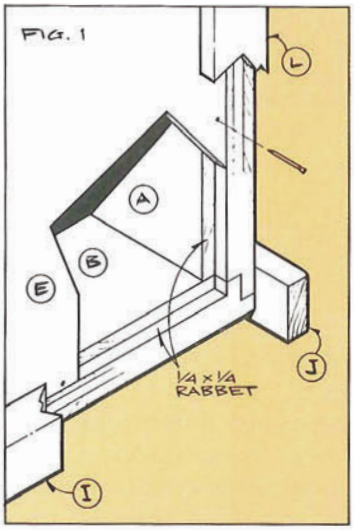
Now, using the table saw with a dado head, cut the 1/2 in. by 1/2 in. rabbets on the ends of the sides, and the corresponding 1/4 in. by 1/2 in. rabbets on the ends of the top and bottom. Also cut the 1/4 in. by 1/4 in. rabbet in the sides, top and bottom for the back, and the 1/4 in. by 1/2 in. and 1/4 in. by 3/4 in. dadoes in the sides for the drawer guides (D) and shelf. Note that the rabbets in the top and bottom for the back should be stopped (Fig. 1). Use a router table for most of this back rabbet work, then square the ends of the cuts with a chisel. Final sand the inside surfaces, then glue and assemble the cabinet. The assembly is simple: spread a generous amount of glue on all the joints, join the sides to the shelf, then add the top and bottom. Use finishing nails through the sides to anchor the top and bottom joints, then cut, fit and glue the back into its rabbet. Finish nails also hold the back in place. Wipe off any glue squeeze-out and set the case aside to dry.

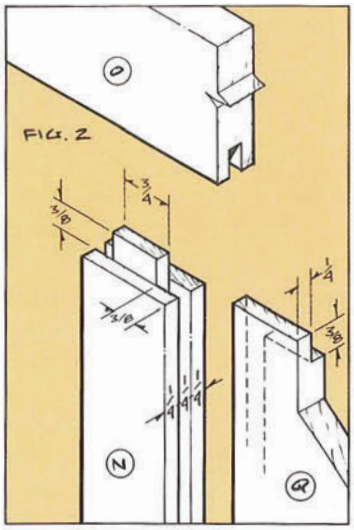
Next, cut the various edgings, all of which are oak. Start with the top back edging (F), which has an angled lower edge (see side elevation). This angled edge nests within a similar piece mounted to a wall, should you choose to hang the cabinet (see Bill of Materials for wall-mounting details). Add the top side edging (G), followed by the top front edging (H). Now move on to the bottom edging, which is nearly identical to the top with a few exceptions. The bottom back edging (I) has no angled edge, and the 1 in. width of it and the bottom side edging (J), along with the 1 in. thickness of the bottom front edging (K) lend the bottom of the cabinet a slightly heavier look. The assembly procedure is identical to the top, with the back edging applied first, followed by the side and then the front pieces. All these edgings are applied with a generous amount of glue and are held in place with finishing nails, set and later filled. As before, wipe away any glue squeeze-out with a damp rag before allowing to dry.

All that remains of the edging work is the front/back/shelf edging (L). Rip about 10 ft. of 1/4 in. thick by 3/4 in. wide oak, then cut and fit it to the remaining exposed plywood edges, specifically the front and back edges of the sides and the front edge of the shelf. Bevel the top ends of the back edging to match the angle on the bottom edge of part F.

While you are waiting for the edging to dry, you can go to work on the door. Use care in the selection of stock here, since







this is the front of the cabinet. The door is a very basic construction, just a pair of stiles (M) and a center stile (N) held together with top and bottom rails (O, P). The door panels (Q) are 1/2 in. thick bird's-eye maple, which is a nice highlight to the oak door frame and case edging.

The door construction uses a single groove for both the joinery and the panels. The fussiest part of the door is the center stile (see Fig. 2), which has grooves along both edges to house the panels, and a tenon on both ends to fit within the grooves in the top and bottom rails. The table saw and dado head can be used for cutting both the tenons, grooves, and the rabbet on the panels. The only variance in the setups will be the fence settings and the use of a tenon jig to safely hold the center stile, rails and panels when the cuts on the ends of these parts are made.

Sand the face of the panels, then glue up the door assembly. Remember, use glue only on the stile and rail joints, not on the panels. The panels are captured within the grooves in the stiles and rails, but must float freely to allow for seasonal expansion/contraction. The door knob (R) is a hardware store item, and the cleat (S) must be drilled to fit your edge guide.

Next up are the drawers. Note that both drawers are identical—just two sides (T), a back (U) and bottom (V), with the exception being the drawer fronts (W, X). The top drawer front is 3 1/2 in. wide—the same dimension as the sides and backs, but the bottom drawer front is 4 in. wide.

Bill of Materials
(all dimensions actual)

Part	Description	Size	No. Req'd.
A	Side	3/4 x 12 x 23 1/2*	2
B	Top/Bottom	3/4 x 12 x 16	2
C	Shelf	3/4 x 11 3/4 x 15	1
D	Drawer Guide	1/2 x 3/4 x 11 3/4	2
E	Back	1/4 x 15 x 23	1
F	Top Back Edging	3/4 x 1 7/8 x 16**	1
G	Top Side Edging	1/2 x 3/4 x 12 3/4	2
H	Top Front Edging	3/4 x 1 1/4 x 17	1
I	Bottom Back Edging	3/4 x 1 x 16	1
J	Bottom Side Edging	1/2 x 1 x 12 3/4	2
K	Bottom Front Edging	1 x 1 1/4 x 17	1
L	Front/Back/Shelf Edging	1/4 x 3/4 stock	10 ft.
M	Door Stile	3/4 x 2 1/2 x 22 1/2	2
N	Door Center Stile	3/4 x 1 1/2 x 17 1/2*	1
O	Door Upper Rail	3/4 x 2 3/8 x 11 3/4*	1
P	Door Lower Rail	3/4 x 3 3/8 x 11 3/4*	1
Q	Door Panel***	1/2 x 5 3/8 x 17 1/2*	2
R	Door Knob	1 dia.	1
S	Cleat	1/2 x 1 x 9	1
T	Drawer Side	1/2 x 3 1/2 x 11 7/8	4
U	Drawer Back	1/2 x 3 1/2 x 14*	2
V	Drawer Bottom	1/4 x 11 1/4 x 14	2
W	Top Drawer Front	3/4 x 3 1/2 x 14 1/2	1
X	Bottom Drawer Front	3/4 x 4 x 14 1/2	1
Y	Router Bit Board	3/4 x 10 3/4 x 13 1/2	1
Z	Hinge	1 5/8 x 2 1/2 long	2
AA	Magnetic Catch	1 x 2 long	1
BB	Foot	3/4 dia.	4

* Length includes tongue or tenon.
** To make a wall mount bracket, cut a length of stock identical to part F, but size it at 14 1/2 in. long. The bracket must be screwed securely to the wall, preferably into several studs. For a masonry or plaster wall, use wall anchors with a load rating of at least 60 pounds.
*** Panel width is 1/8 in. less than groove-to-groove dimension to allow for wood movement.

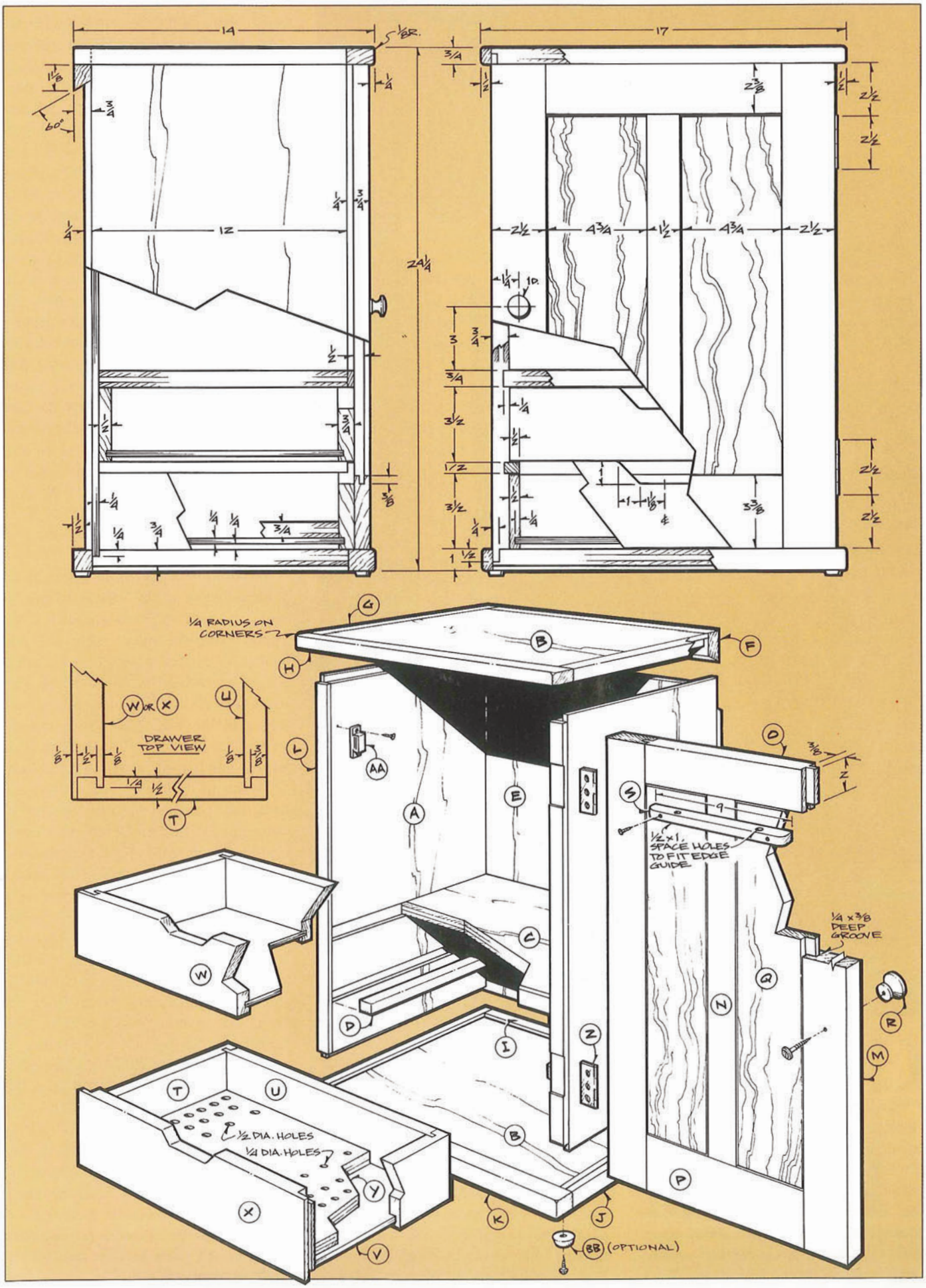
The extra 1/2 in. covers the space that would otherwise show between the two drawers. The drawer bottoms are plywood, the sides and backs can be just about any hardwood, and the drawer fronts are bird's-eye maple, matching the door panels. The cutouts in the drawer front top edges serve as pulls. Cut and glue the two drawer guides in place in their respective dadoes, then assemble and test-fit the drawers, using small brads or finishing nails to secure the drawer joinery. The 3/4 in. thick router bit board (Y) should be drilled to match your router bit collection.

After the glue on the door, drawers, cabinet and edging is dry, test-fit the door. But before final mounting the door, round the cabinet edges as shown. The top and bottom edgings have a 1/8 in. radius roundover, and the corners are shaped to a 1/4 in. radius. The 1/8 in. radius roundovers can be either router-applied or sanded by hand. Hand sand to soften the edges of the door and drawer fronts.

Next, apply the finish. I filled all nail holes first with a colored putty, available at any hardware store, sanded that smooth, and then applied a sanding sealer. After sanding the dried sealer, I followed up with a coat of varnish.

All that remains are a few details. I used a pair of hardware store hinges (Z) and a magnetic catch (AA) to hang the door and keep it closed. If you plan on standing the cabinet on a floor or some other surface—instead of wall-mounting it—you'll need four rubber feet (BB), also available at your local hardware store.

Now get your router, laminate trimmer, bits and accessories, put them in your new cabinet and step back to admire. You've got a router storage cabinet that not only organizes all your router equipment, but also displays your fine craftsmanship.



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