

shop-in-a-box tool cabinet



Keep tools, hardware, and supplies organized in this space-saving, 4-door cabinet. Though it occupies little more than 7 square feet of wall area, it offers a full 26 square feet of storage on the perforated-hardboard panels alone!

Looking for an easy-to-build project that makes a really big impact on reducing shop clutter and improving work efficiency? Here it is. With identical case and door construction using simple rabbet-and-groove joinery, you can make this cabinet in a few evenings or a weekend. For materials, you need only a 4x8 sheet each of 1/4" perforated hardboard and 3/4" plywood, plus a quarter-sheet of 1/4" hardboard.

Start with the case

1 From 3/4" plywood, cut the sides (A) and top and bottom (B) to the sizes listed in the **Materials List**. (We used Baltic birch plywood, which we found at a local home center, and applied a clear finish. If you plan to paint the unit, you can use less-expensive type AC or BC plywood.) Because the thickness of plywood varies, you may need

to slightly adjust the sizes of some parts and the mating dadoes and rabbets.

2 Mark centerpoints for 1/4" holes 3/8" deep for shelf supports on the *inside* faces of the sides (A), where dimensioned on **Drawing 1**. Drill the holes using a brad-point bit in your drill press. Adjust the depth stop for consistent drilling depth.

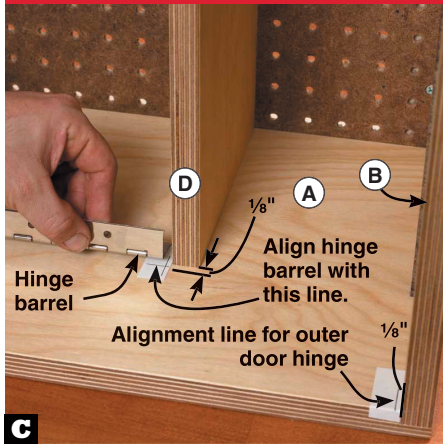
3 Fit your tablesaw with an auxiliary fence and dado blade that matches the thickness of your 3/4" plywood. Then cut a 3/8"-deep rabbet across the *inside* faces of the sides (A) at each end, as shown in **Photo A**.

4 To cut a 1/4" groove 3/8" deep in the sides (A) and top and bottom (B) to fit your 1/4" perforated hardboard for the back (C), where dimensioned on **Drawings 1** and **2**, switch to a standard 1/8"-kerf blade in your tablesaw. Position the fence 3/4" from the *inside* of the blade. Then cut a groove along



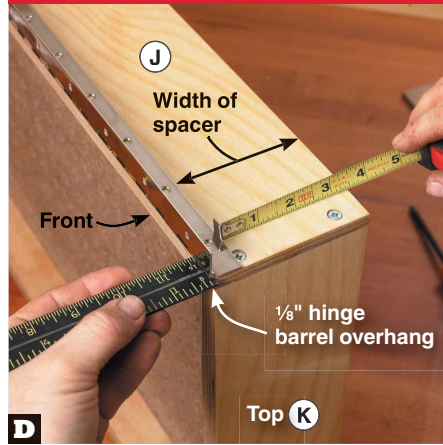
Though the case measures just 12 5/8" deep, it houses all four doors when closed.

CASE-MOUNT THE HINGES



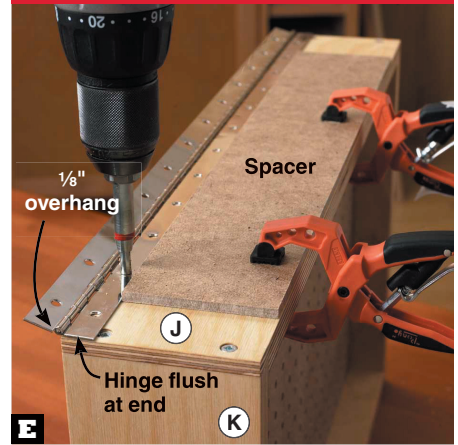
Align the inner-door hinge with the marked lines, and press the taped hinge in place. Then drill the mounting holes.

MEASURE FOR A HINGE SPACER



Position a hinge on an inner-door side (J) with a $\frac{1}{8}$ " overhang. Measure from the back to the hinge to find the spacer width.

MOUNT HINGES TO THE DOORS



Clamp the spacer to the door, flush with the back edge. With the hinge tight against the spacer, drill the mounting holes.

same way, glue and screw the spacer (F) to the back, tight against the bottom (B).

9 From $\frac{1}{4}$ " hardboard, cut a $\frac{1}{2}$ "x31" strip for the bin stop (G). Glue and clamp the stop to the bottom (B), $\frac{1}{4}$ " from the front edge, where dimensioned on **Drawing 2**.

10 From $\frac{3}{4}$ " plywood, cut the shelves (H) to size, and set them aside.

Now build the doors

1 To ensure that the outer and inner doors fit into the case with $\frac{1}{8}$ " clearance at the top and bottom, where shown on **Drawing 1**, measure the openings between the top and bottom (B) for the outer doors and the top and shelf (D) for the inner doors. Then, from $\frac{3}{4}$ " plywood, cut the outer-door sides (I) and inner-door sides (J) to the sizes listed and lengths equal to your measured openings minus $\frac{1}{4}$ ". (Our sides measured $30\frac{3}{4}$ " for the outer doors and $24\frac{1}{2}$ " for the inner doors.) Also, cut the tops and bottoms (K) for the outer and inner doors to size.

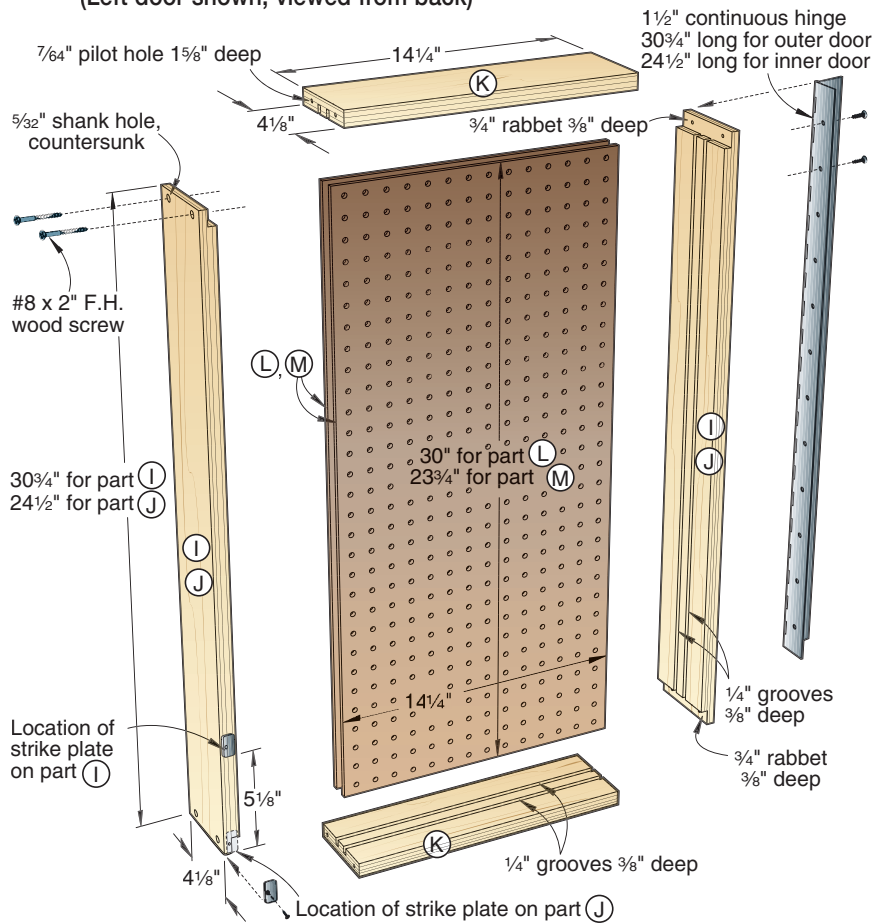
2 From $\frac{1}{4}$ " perforated hardboard, cut the outer- and inner-door panels (L, M) to the sizes listed.

3 Using a dado blade in your tablesaw, cut a $\frac{3}{4}$ " rabbet $\frac{3}{8}$ " deep across the ends of each outer- and inner-door side (I, J) on the *inside* face, where shown on **Drawing 3**.

4 To cut $\frac{1}{4}$ " grooves $\frac{3}{8}$ " deep in the door sides (I, J) and tops and bottoms (K), where dimensioned on **Drawing 3a**, switch to a standard $\frac{1}{8}$ "-kerf blade. Position the fence $1\frac{1}{2}$ " from the *inside* of the blade. Then cut a pair of grooves along the *inside* face of each part, rotating the part end to end between cuts. Now move the fence away from the blade as needed, and cut the parts again to widen the grooves and achieve a snug fit with your perforated-hardboard panels (L, M).

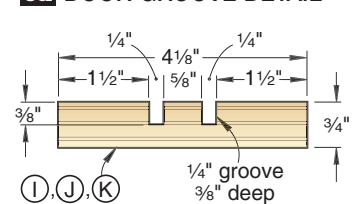
5 Sand the door sides (I, J), tops and bottoms (K), and panels (L, M) to 180 grit.

3 DOOR (Left door shown, viewed from back)



Then glue and clamp each door together, checking for square. Drill mounting holes through the sides and into the tops and bottoms, where shown on **Drawing 3**, and drive the screws. For ease in mounting the hinges and installing the doors later, identify the top (K) of each door and the side (I, J) that you'll hinge-mount to the case.

3a DOOR GROOVE DETAIL



6 To mount magnetic catches to hold the doors closed, where shown on **Drawing 2**, position the strike plates on the back edges of the inside door sides (I, J), where dimensioned on **Drawing 3**, noting the different locations for the outer and inner doors. Drill the pilot holes, and drive the screws supplied with the catches.

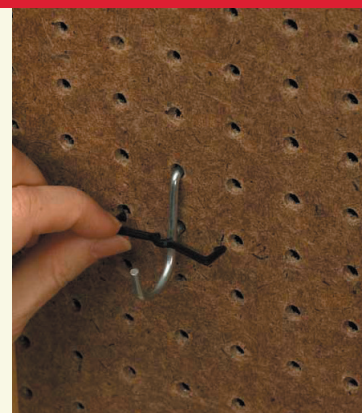
Next, mark the center of the shelf (D) on a piece of masking tape positioned behind the inner doors, as shown in **Photo G**. Mate a catch to the strike plate on the left inner door. Holding the front of the door and shelf flush, align the catch with the centerline, as shown. Mark the centers of the mounting slots. Drill the holes, remove the tape, and screw-mount the catch. In the same way, mount the catch for the right inner door, tight against the left-door catch. Then mark the center of the shelf (D) on the *bottom* face at the front edge. Now mount the catches for the outer doors, aligning the catches with the centerline.

7 To mount the unit, hold the remaining mounting cleat (E) level on your wall with the beveled edge positioned where shown on **Drawings 2** and **2a**. Drill counter-

SHOP TIP

Lock hooks to perforated hardboard in a snap

Here's a simple and inexpensive way to secure standard, nonlocking hooks to perforated hardboard so they won't come out. Strap them in place with M-style hook holders. Just center a holder over the hook shank, and press the barbed ends into an adjacent pair of holes, as shown. You easily can release the holders to reposition the hooks. The holders fit standard 9-gauge and heavy-duty 5-gauge hooks used in $\frac{1}{8}$ " and $\frac{1}{4}$ " hardboard with $\frac{3}{16}$ " or $\frac{9}{32}$ " holes spaced 1" apart. A bag of 50 clips, no. 1169A85, costs \$11.89 from McMaster-Carr, 404/346-7000, mcmaster.com.



sunk mounting holes through the cleat into the wall studs, and fasten with #8x2½" flathead wood screws. Using a helper, hang the unit. Then, from inside the cabinet, drill mounting holes, centered in holes in the back (C), through the case mounting cleat (E) and spacer (F) into the studs to anchor the assembly to the wall.

8 Finally, install the shelves (H), where you wish, using ¼" shelf supports. Place the bins in the cabinet behind the bin stop

(G), where shown on **Drawing 5**. Now tidy up your shop by filling the cabinet with tools, hardware, and supplies, hanging items on the perforated-hardboard panels using suitable ¼" metal hooks, available at your local home center or hardware store. For a simple way to keep hooks securely in place, see the sidebar, *above*. 🐿

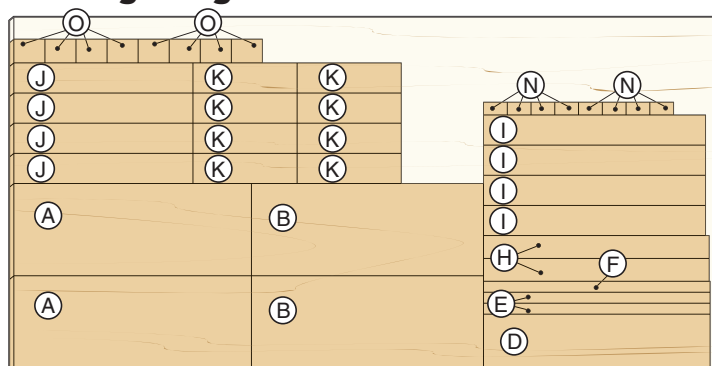
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Project design: **Jeff Mertz**

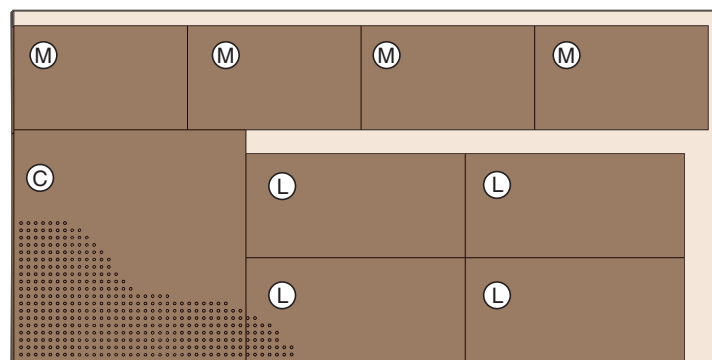
Illustrations: **Roxanne LeMoine; Lorna Johnson**

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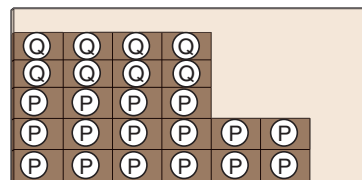
Cutting Diagram



¾ x 48 x 96" Baltic birch plywood



¼ x 48 x 96" Perforated hardboard



¼ x 24 x 48" Hardboard (G)

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Materials List

Case	FINISHED SIZE			Matl.	Qty.
	T	W	L		
A sides	¾"	12½"	32½"	BP	2
B top and bottom	¾"	12½"	31¼"	BP	2
C back	¼"	31¾"	31¾"	PH	1
D shelf	¾"	7¾"	31"	BP	1
E mounting cleats	¾"	1½"	31"	BP	2
F spacer	¾"	1½"	31"	BP	1
G bin stop	¼"	½"	31"	H	1
H shelves	¾"	3½"	30¾"	BP	2
Doors (2 outer and 2 inner needed)					
I outer-door sides	¾"	4½"	30¾"	BP	4
J inner-door sides	¾"	4½"	24½"	BP	4
K tops and bottoms	¾"	4½"	14¼"	BP	8
L outer-door panels	¼"	14¼"	30"	PH	4
M inner-door panels	¼"	14¼"	23¾"	PH	4
Bins (8 needed)					
N fronts	¾"	1¾"	3¼"	BP	8
O backs	¾"	3¼"	4¼"	BP	8
P sides	¼"	4¼"	6¾"	H	16
Q bottoms	¼"	3¾"	6¾"	H	8

Materials key: BP—Baltic birch plywood, PH—perforated hardboard, H—hardboard.

Supplies: #8x¾" flathead wood screws (6); #8x2" flathead wood screws (48); #8x2½" flathead wood screws (2); #8x3" flathead wood screws (4); cloth-backed, double-faced tape; 1½x48" continuous hinges (2) and 1½x30" continuous hinges (2); paintable wood putty; magnetic catches (4); ¼" shelf supports (8); ¼" perforated-hardboard hooks.

Blade and bit: Dado-blade set, ¼" brad-point bit.