



Still the best Workbench

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Still the best Workbenches

Back by popular demand, it's **easy** to build and **easily customized** to fit your workshop.

by **Mac Wentz**

This workbench was first featured in 1993, and back then we dubbed it “The Best Workbench.” Now that we’ve used it daily for almost four years—and heard lots of praise from readers who built their own—even the skeptics among us agree that it deserves that title. Our workbench no longer looks as perfect as it used to: Paint spills and power tools have left their marks, but the workbench and all its handy features are as useful as ever.



Deep Storage
LAZY SUSAN

Extension **TABLE**

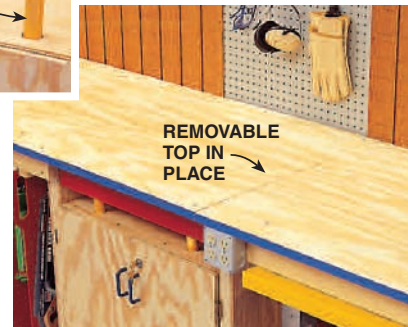


Peg-Board **SLIDERS**



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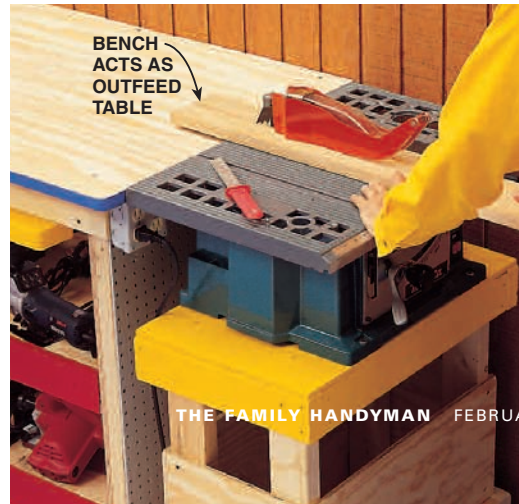
Power tool **DROP-IN**



Doors and **DRAWERS**



Table saw **ROLL-AROUND**



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Still the best Workbench

So for those of you who didn't see it the first time, here it is again. And for those of you who did see it—but haven't gotten around to building it yet—we've included a few optional changes to the original design (see "What We'd Change," p. 67).

PLANNING YOUR WORKBENCH

If this workbench looks too complex for you to build, take a moment to study the photos and illustrations and you'll see how simple it really is. Intermediate-level DIY skills and common tools (a circular saw, jigsaw and drill) are all it takes.

All the materials you need are available at home centers. To build a workbench similar to ours, expect to spend from \$300 to \$500 (see "Price Guide," p. 75). If you include all the features we show, plan to spend three or four (enjoyable) weekends on this project.

Our intention here is not to show you how to build a workbench just like ours, but how to use our modular design to build a bench just right for you. And that will take some careful planning on your part. So resist the urge to start building right away, and spend some time with this article and a sketch pad first.

BUILDING THE BASIC FRAME

Fig. A and Photos 1 through 4 show how to assemble the basic workbench unit, the structure that supports everything else. This is the fastest, easiest part of the project—you can assemble it all in one day, even if you're building a large workbench. Here are some tips to help you along:

- Buy the straightest 2x4s you can



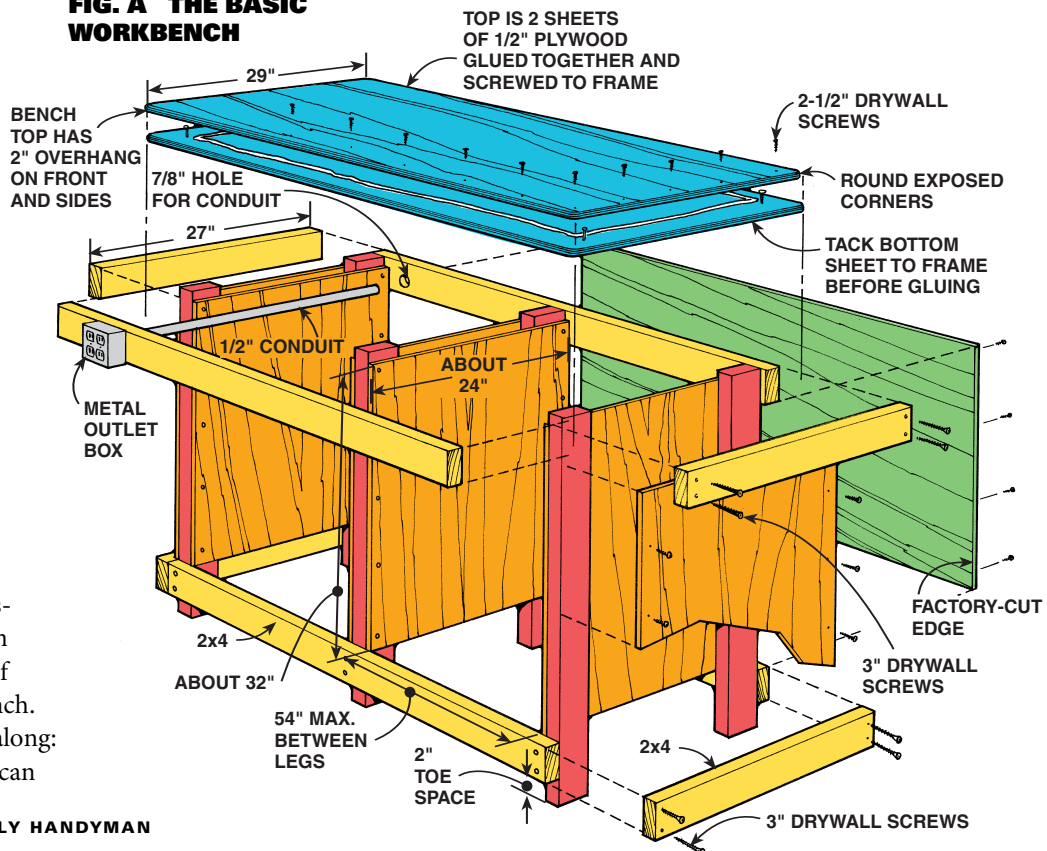
MARK the positions of the legs and any bench features on the long 2x4s you'll use to make the frames for the workbench. To assemble the frames, just screw 27-in. 2x4s to the ends of the long 2x4s.



ASSEMBLE the legs by sandwiching 2x4s between pieces of 1/2-in. plywood. **Tip:** By cutting a 4x8 sheet of plywood exactly in half lengthwise, and then cutting the half-sheets into thirds, you'll get six pieces of plywood slightly smaller than 24 in. x 32 in.—just right for building the legs.

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FIG. A THE BASIC WORKBENCH



Still the best Workbench

find and build the frames (**Photo 3**) from 2x4s that are as long as the bench, so you don't have to splice them together. Most home centers carry 2x4s up to 16 ft. long.

- When driving screws near the ends of 2x4s, predrill 1/8-in. holes to avoid splitting.

- To make straight cuts in plywood, clamp a straight 2x4 to the sheet and hold your saw's shoe (the metal base the saw rests on) against the 2x4 as you cut. Measure the distance from the edge of the blade to the edge of the shoe, and clamp your guide board that same distance from the line you want to cut.

ATTACHING THE BENCH TOP

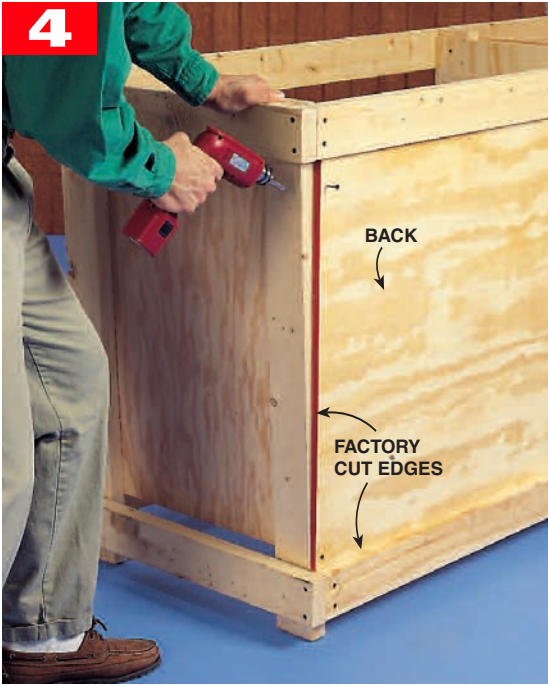
The bench top is two layers of 1/2-in. plywood glued together (**Fig. A**). Use "BC" plywood (which has one



LAY the frames on the floor and screw the legs into position from one side. Then roll the frame over and do the other side. Remember to leave a 2-in. toe space at the bottom of the frames. Finally, stand the bench upright so you can attach the plywood back.

smooth side) for the top layer and rougher, "CDX" plywood for the bottom layer. First, tack the bottom layer into place with a few nails and spread wood glue over the plywood—lay it on especially thick around the edges. Then add the top piece, driving

screws through both layers and into the frame. Screw 2x4 filler blocks to the frame wherever two sections of bench top meet. **Note:** For easier access to the inside of the bench, install the top after features like shelves or lazy Susans are finished.

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SCREW the plywood back to the legs, using the factory-cut edges (which are perfectly perpendicular) to square up the bench. You can cut the backs from full sheets of plywood, or you can save on materials by using the scraps left over from cutting the 29-in. wide bench-top pieces.

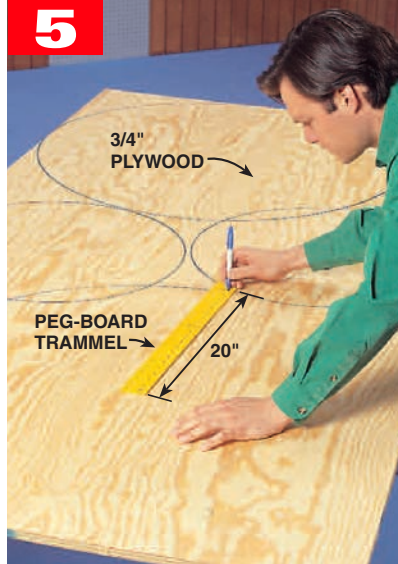
What we'd change

Those of us who use this workbench agree on only one thing: It's not big enough. (No workbench is big enough!) We have other suggestions, but none we can all agree on. So here are some of those suggestions—you be the judge:

- In the original article, we said the bench top should reach the middle of the user's hip. Those of us with bad backs prefer a bench that's waist-high.
- The neat freaks would like doors over all the storage spaces and 2-in. strips of plywood that cover the gaps at the toe space. That way, sawdust wouldn't gather in the drawers and under the workbench. The slobs say that doors would make getting into the drawers a hassle. And who cares what's under the workbench anyway?
- Using one layer of 3/4-in. plywood, instead of two 1/2-in. layers, would make building the bench top a lot easier and a bit cheaper.
- Using 1/4-in. hardboard, instead of 1/2-in. plywood, for the legs and back of the bench could cut costs substantially. But moisture can make hardboard swell, so it's not ideal for damp basements or musty garages.

Deep Storage LAZY SUSAN

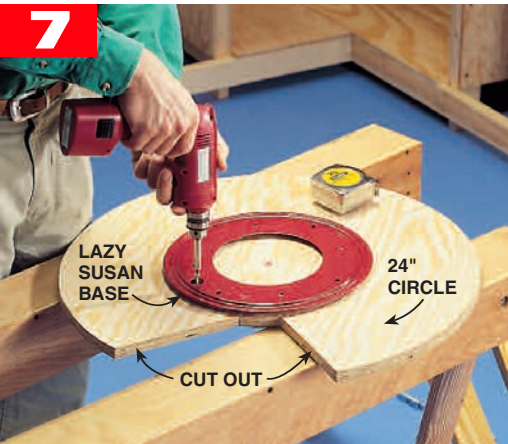
Making the most of corner space by installing lazy Susans is the trickiest part of this workbench (Fig. B and Photos 5 through 8). You have to set back the legs on one section of the bench, bolt adjoining frames together, cut circles and carefully align all the parts. Expect to spend a whole day making two lazy Susan shelves.



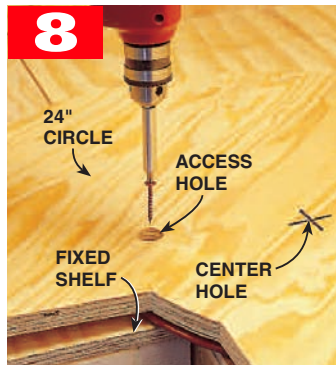
DRAW one 24-in. and one 40-in. circle for each lazy Susan, using a Peg-Board trammel screwed to the plywood. It's OK if the circles overlap slightly (in one place only), since you'll later cut a section out of each circle. After you cut out the circles with a jigsaw, drill a small center hole through the plywood where the screw held the trammel.



POSITION a 24-in. circle in the center of the L-shaped opening and mark the area to be cut out—where the circle protrudes from the opening—with a pencil. To complete the cutout marks, flip the circle over, center the lazy Susan base on it and trace around the base. After you've cut a section out of the 24-in. circle (see Photo 7), set it on the 40-in. circle, align their centers by inserting a nail through their center holes, and use the smaller circle to mark the cutout on the large circle.



DRILL a 3/4-in. access hole through the 24-in. circle (following the instructions that come with the base) and screw the lazy Susan base to the underside of the 24-in. circle.



MOUNT the lazy Susan to the shelf, using the access hole to drive each screw through the base and into the 1/2-in. plywood. Finally, attach the 40-in. circle to the 24-in. circle, again using a nail to align the circles.

FIG. B LAZY SUSAN

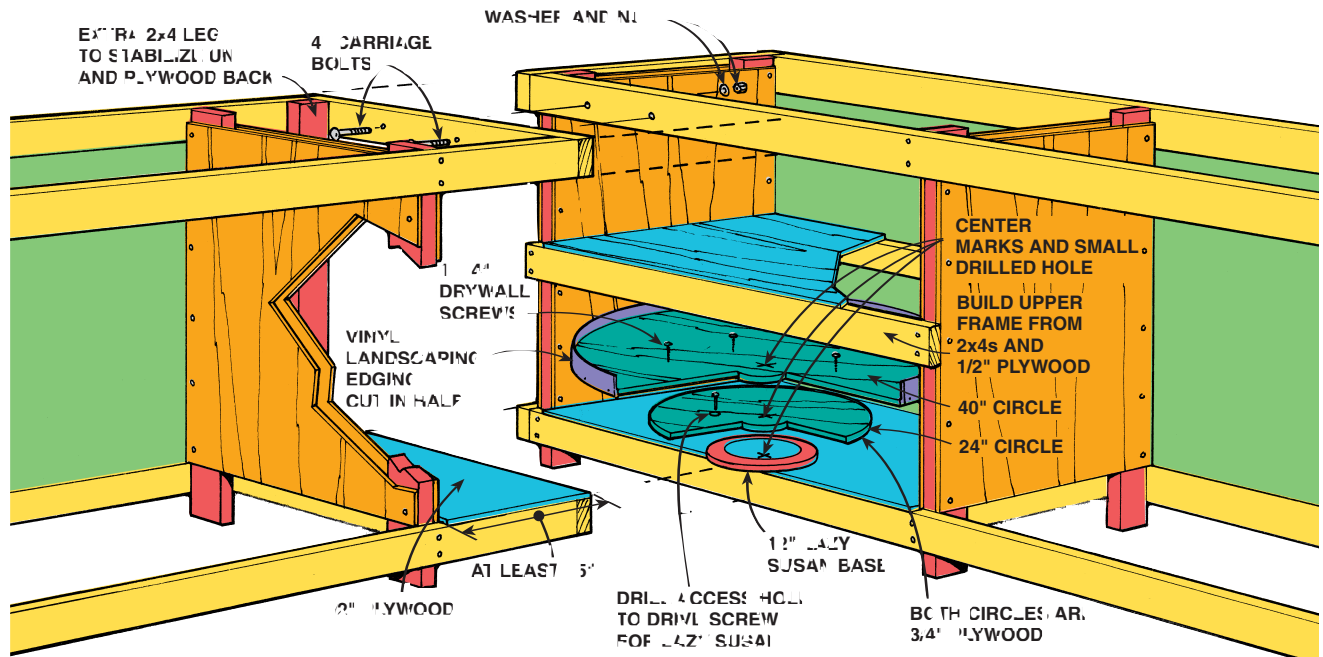
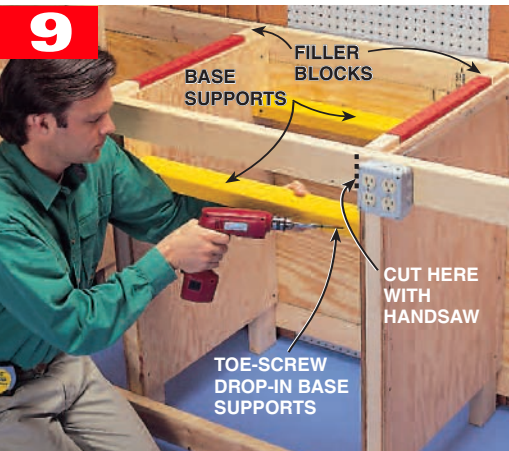


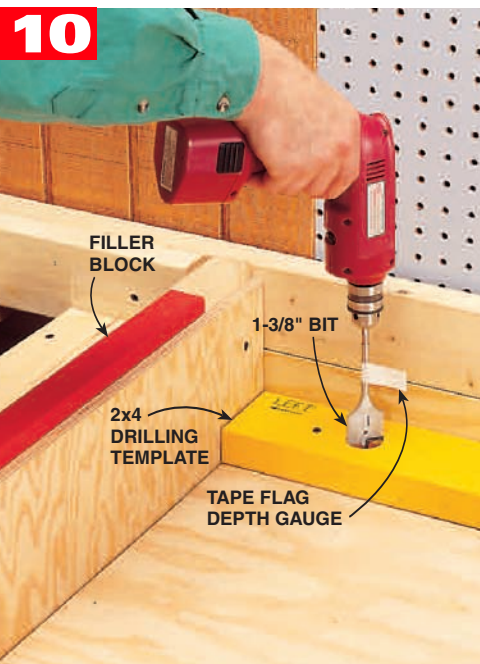
FIG. C DROP-IN

Power tool DROP-IN

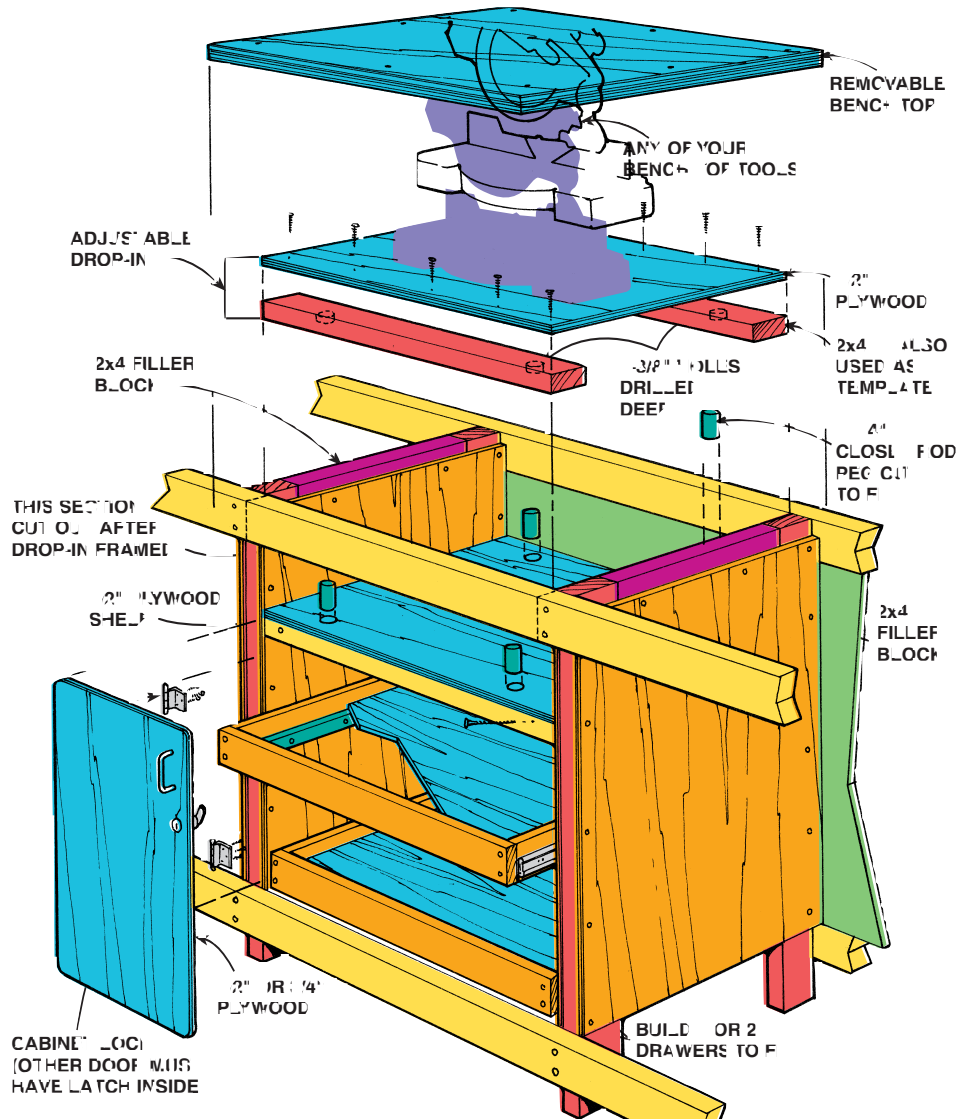
The drop-in (**Fig. C and Photos 9 and 10**) provides a surface that can be adjusted in height. By using a different set of pegs for each of your bench-top tools, the worktable of each tool can stand level with the bench top, which makes working with long or large stock easier. When the drop-in's not in use, you can place a section of bench top over it, giving you a continuous work surface.



BUILD a base for the drop-in by toe-screwing 2x4 supports to the legs. Also install 2x4 filler blocks, flush with the tops of the legs. Then cut out a section of the upper frame using a handsaw and screw a 1/2-in. plywood shelf to the supports.



DRILL four 1-3/8 in. holes in the base using templates to position the holes. Make two templates from 2x4s cut to the width of the drop-in opening, drill holes 5 in. from the ends and mark the ends "left" and "right." To make the holes exactly 1 in. deep, attach a tape flag to the drill bit 2-1/2 in. up the shaft. **Important:** Make all the holes as perfectly vertical as you can, so the drop-in fits easily into place. When the four holes are drilled, use the templates and 1/2-in. plywood to make the drop-in. Finally, cut a set of pegs from 1-1/4 in. closet rod for each of your bench-top tools.



Doors and DRAWERS

Drawers provide easy access to those deep storage spaces under the workbench, and the locking doors keep children from getting into paints, solvents and other dangerous stuff. **Fig. C** shows you how to make both.

We used 22-in., full-extension, ball-bearing drawer slides (about \$17 per pair). You can use less expensive slides if you like, but they should be rated to support 100 lbs. or more. And be sure to make the shelves 1 in. narrower than the opening they'll fit into (to allow space for the slides).

Peg-Board SLIDERS

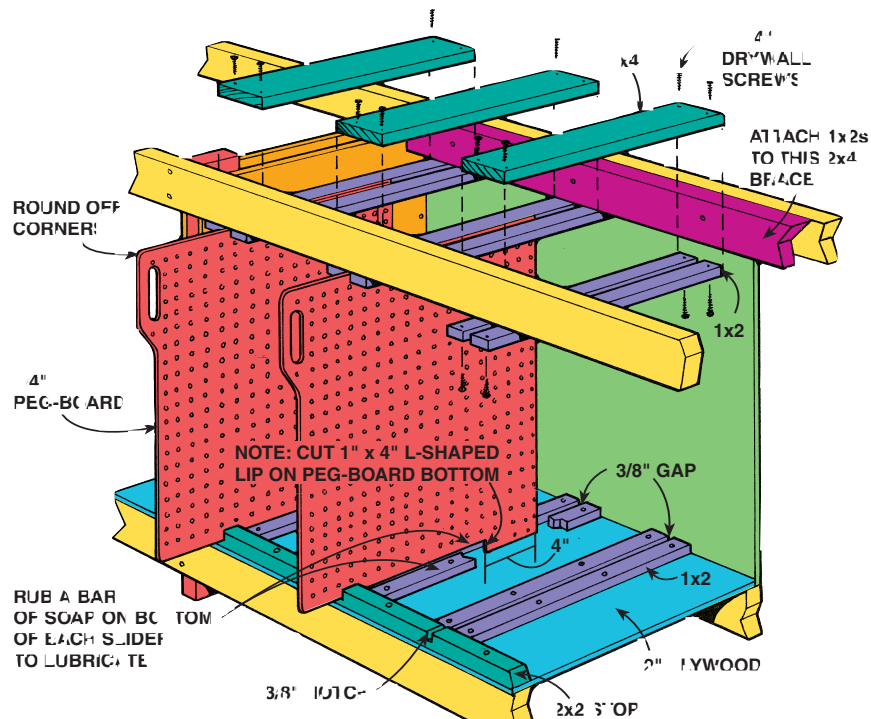
There's never enough Peg-Board in a workshop, but sliders help by allowing you to use both sides of the Peg-Board. And making them is easy (see Fig. D).



- Use 1/4-in. thick Peg-Board. The 1/8-in. stuff is too flimsy.
- To make sliding sections, first cut the Peg-Board into rectangular pieces with a circular saw. Also use a circular saw to cut the front and bottom of the slider (remember to leave a 1 x 4-in. lip at the rear end). Then cut out the curved handles with a jigsaw.
- Install the sliders as close together or far apart as you like, depending on the length of hooks you'll want to use, and the size of the stuff you want to store.

CUT the straight sides of the sliders with a circular saw. When cutting flexible material like Peg-Board, be sure to put stiff supports under it.

FIG. D PEG-BOARD SLIDERS

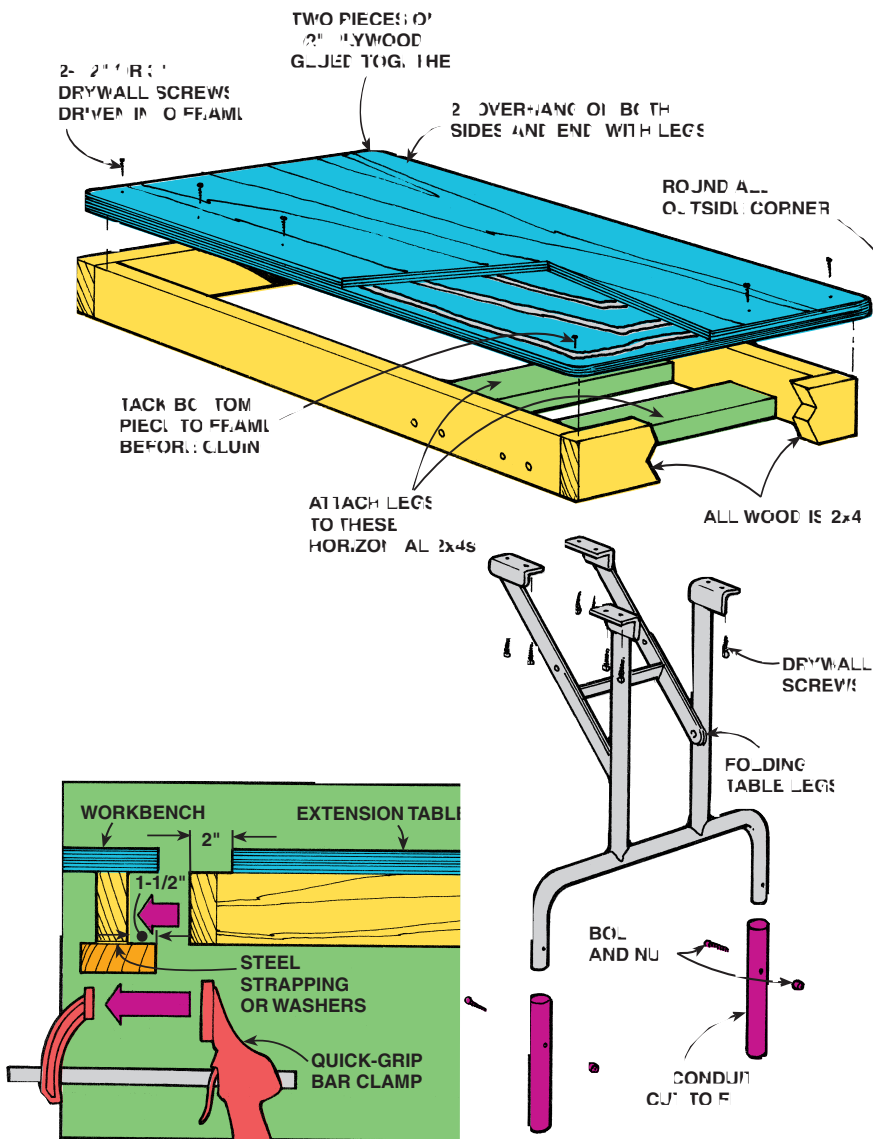


Extension TABLE

The extension table (Fig. E) is handy when you need to get at two or three sides of a workpiece, or when you just need more space. It also makes a great outfeed table for a table saw.

Since the extension table has folding legs, you can store it in a 5-in.-high space below a drawer (see p. 62). Or you can hang it on sturdy wall hooks. The steel folding-table legs (about \$20) must be extended with metal conduit to match the height of your workbench.

FIG. E
EXTENSION TABLE



USING the extension table is simple. The table's edge rests on the lip built onto the workbench edge, with a quick-closing clamp locking it in place.

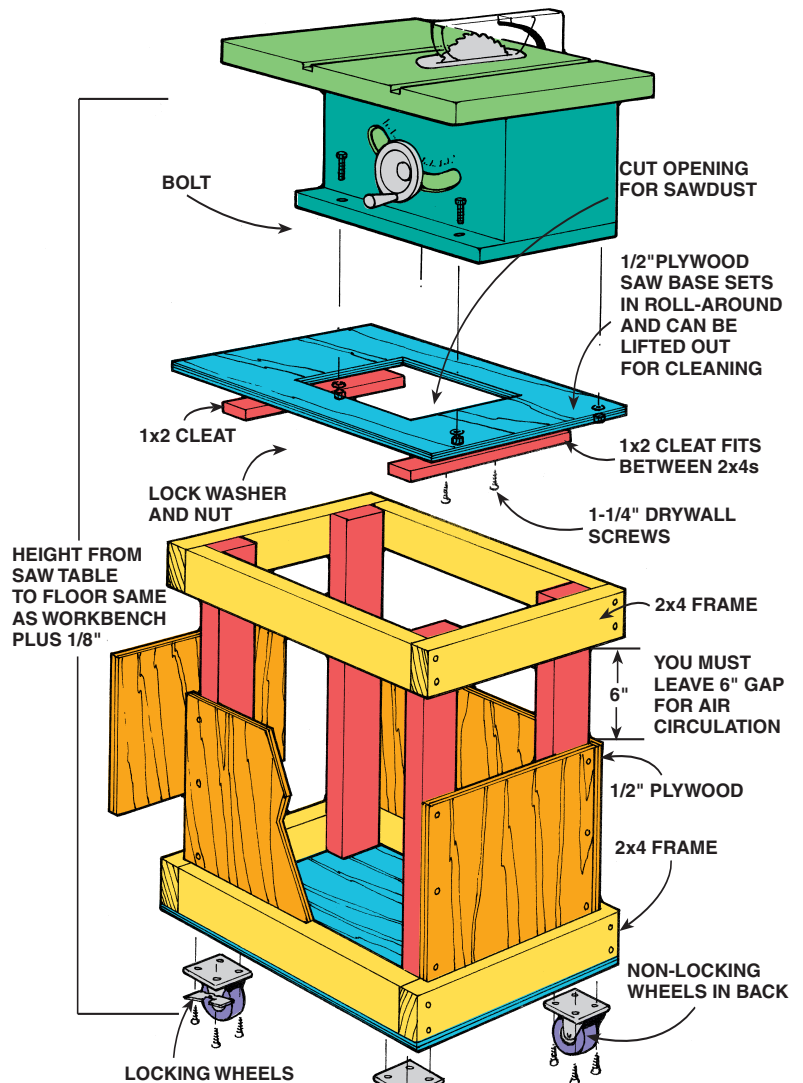
Table saw ROLL-AROUND

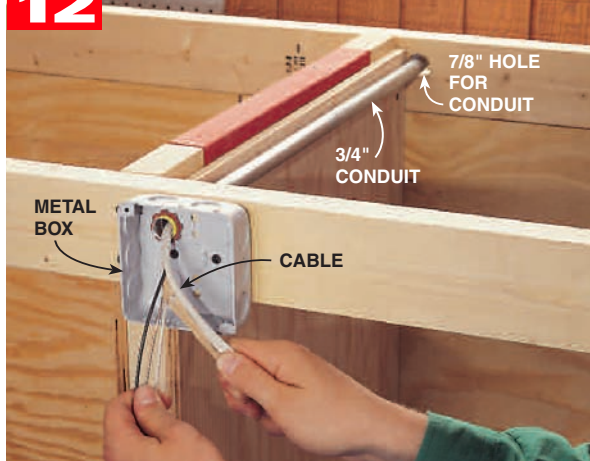
A roll-around (**Fig. F**), built to a height that puts the table of your saw about 1/8 in. higher than your bench top, lets you use the bench top as a side-support or outfeed table when you're cutting large pieces. The roll-around also catches sawdust. **Warning:** Don't prevent air circulation by completely enclosing the roll-around. Airborne sawdust, ignited by a spark from the saw's motor or blade, could explode.

FINISHING TOUCHES

- Avoid splinters by taking a few minutes to round over all the rough edges with sandpaper.
- If your floor isn't flat, shim the legs after the workbench is in place.
- A couple of coats of polyurethane will make the bench top tougher and easier to clean. Paint or polyurethane will keep the rest of the workbench cleaner looking.
- Mount outlets on the workbench (**Photo 12**) or install a surface-wired series of wall outlets (see "For More Information," p. 75).

FIG. F ROLL-AROUND





PROTECT all the electrical cable running to, through or behind your workbench with metal conduit and metal boxes. Flexible metal conduit with the cable already inside (known as "BX") is an easier, but more expensive, alternative to rigid conduit.

Price Guide

The cost of your workbench will depend on your design. So we can't give overall estimates. But to help you make your own estimate, here's a rough price guide to the materials you might need:

LUMBER

- 2x4 x 10' \$3.60
- 2x4 x 16' \$5.60
- 1x4 x 8' \$2.50

4x8 SHEET GOODS

- 1/4-in. hardboard \$8
- 1/4-in. Peg-Board \$9
- 1/2-in. CDX plywood \$15
- 1/2-in. BC plywood \$18
- 3/4-in. BC plywood \$22

HARDWARE

- 12-in. lazy Susan base \$9
- 22-in. full-extension ball-bearing drawer slides \$17
- Folding table legs \$20
- Wheels for roll-around \$12

For a bench similar to ours, all the screws, glue, hinges, etc. will cost around \$30.

For More Information

- "Install a New Outlet," April '92, p. 39.
- "The Easiest Way to Add an Outlet," July/Aug. '96, p. 63.
- "Surface Wiring," Sept. '95, p. 81.
- "Solutions for a Comfortable Workshop," Nov. '95, p. 66.
- "Woodworking Bench," March '96, p. 84.

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