entertain anywhere with this multiuse table

Enjoy this complimentary issue of Lowe’s The Wood Post magazine. To sign up for your FREE membership, see details on the back cover.
Summer outdoor entertaining offers the chance to combine great food, great friends, and memorable experiences. Our multispace table provides the perfect centerpiece for your favorite dishes, as well as a focal point for your guests. The project, a multipurpose adjustable table, is ideal for tailgating events and outdoor concerts, plus it can serve as a dining table. Its ability to collapse gives folks with limited space the option to have a large table for entertaining.

Our garden bridge is a great outdoor project that makes a big impact on any landscape. Strolling across this piece will give you a sense of the craftsmanship that goes into a project that’s both decorative and functional. A router table is one way to make a highly versatile tool even more useful and help any woodworker achieve amazing results. This project makes it easier than ever to create decorative profiles and cut precise joinery.

Speaking of joinery, in Put It Together we take a look at one of the strongest joints used in creating furniture—the mortise and tenon. In the Workshop column our tips on saw blades will help you maintain these vital accessories and give them a long life by keeping their edge. As always, please tell us about your woodworking projects—what you have created on your own or constructed from this issue, or any issue, of The Wood Post. Write to me with your comments and suggestions, or visit us online at Lowes.com/Woodworkers.

P.S. Tell us about your projects or how you became interested in woodworking. Send your responses c/o Sandy Culver, P.O. Box 523, Birmingham, AL 35201. If we profile you in an upcoming issue of The Wood Post, you’ll receive a free Hitachi 14.4-volt 1/2-inch cordless drill/drive kit.

FREE TO MEMBERS!
As a member of Lowe’s Woodworkers, you are entitled to a free woodworking plan with each issue of The Wood Post. Try our plan for this tile-top table (shown at left). It’s perfect for your outdoor space and is available online until August 14, 2006. Log on to Lowes.com/FreePlan.

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Q: Are there particular instances when I should and should not predrill to assemble projects with nails and screws?

A: You can almost never go wrong predrilling for assembly when using either nails or screws. As long as the hole that you drill is slightly smaller than the diameter of your fastener, you’ll find that the fastener will go in more easily and accurately. In some instances, however, it’s imperative that you predrill. If you don’t predrill when you’re driving a fastener into the end of a board, for instance, the fastener most likely will cause the end to split. Likewise, if you’re screwing or nailing into the edge of a board, predrilling prevents the fastener from splitting the workpiece along its edge. Finally, some engineered materials, particularly particleboard and medium-density fiberboard (MDF), require predrilling; if you skip this important step, the edges certainly will split.

When I use my router, I often get dark marks on the edge of the piece that I’m routing. Is there a technique that I can use to prevent this from happening?

A: The dark marks that you’re experiencing are most likely burn marks caused by excessive friction. When there’s too much friction, it creates overheating, which can burn or scorch wood fibers. Friction can occur when using too slow a feed rate, a dull bit, or the wrong type of pilot (for piloted bits). A feed rate that’s too slow allows a sharp bit to rub against the wood fibers enough to cause burning. A dull bit has a tendency to tear wood fibers. Because it doesn’t cut cleanly, you generally have to slow the feed rate, which contributes to the problem. Use a sharp bit and a moderate feed rate, and the burn marks should go away.

Although most burn marks are caused by the bit’s cutting edge, the pilot (if you’re using a piloted bit, such as a rabbeting bit) also can be the culprit. The pilot may have either a ball bearing or a rub collar. For the most part, a ball-bearing guided bit leaves no burn marks because the bearing rolls along the wood surface, allowing the bit to spin independently. Rub collars by their very nature cause burning during a slow feed rate. To eliminate this problem, replace rub collars with ball bearings.

Finally, it’s important to note that some wood types have a reputation for burning, even with a sharp bit and moderate feed rate. For the best results, make a series of light cuts rather than one full-depth cut.

Sometimes I need multiple pieces cut to the same size for a project. Can I do this efficiently, and accurately, without cutting one piece at a time?

A: Production shops use a simple technique known as gang cutting to cut multiple identical workpieces quickly and accurately. Whether you’re using a miter, table, band, or scroll saw, stack two or more workpieces on top of one another for the cut. On a table saw, push the stacked parts past the blade using the miter gauge. With a miter saw, press the stack right up against the fence, and lower the blade. In either case, be sure to use some form of a stop to keep individual pieces from shifting during the cut, just make sure that the stop is as tall as your stacked pieces.

For cuts on a band saw or scroll saw, your best bet is to attach the pieces of the stack temporarily with double-sided tape to keep them from shifting. One advantage of stacked cuts on the band or scroll saw is that you will need to affix only one pattern to the top piece to make the cut, rather than duplicating the pattern for each workpiece.

Gang cutting produces multiple identical workpieces.
Multiuse Table

This project can play many roles in your outdoor and indoor entertaining activities. A sturdy and adjustable table is a must-have for tailgating, outdoor meals at home, or summertime events such as open-air concerts. Our activity table offers needed flexibility for all these functions — and more — with its adjustable legs and a collapsible center. It also makes a terrific auxiliary dining or gaming table for folks with limited space. Simply tuck in the legs, fold the table in half, and store it away when not in use. You can finish the project with your favorite team’s colors for tailgating, or substitute oak for poplar and apply a stain for a more sophisticated look.

Instructions:

**General:** Cut all parts as you assemble the project, using the Cut List as a guide and adjusting as needed for fit. Attach all parts with glue and 6d finishing nails unless otherwise specified.

**Step 1:** Build the skirt assemblies. Note that you will construct two assemblies from the two halves of the table. Refer to Figure 1 for placement.

- a. Cut the side skirts, end skirts, and center braces, and label the pieces for reference.
- b. Following the positioning and measurements shown in the side skirt layout in Figure 1, drill holes in the side skirts for the locking pins and leg assembly attachment.
- c. Attach one end skirt to the end faces of a pair of side skirts; repeat for the other half of the table.
- d. Attach two center braces to the opposite end faces of the side skirts; repeat.
- e. Attach the three sash locks under the tabletop, spacing them equidistant from each other. Be sure to place them proportionally for maximum stability. The sash locks will secure the tabletop in its extended position.

**Step 2:** Build the legs, and install the stiffeners.

- a. Attach two upper legs flush together, and then drill a 1⁄4-inch hole and a 1⁄4-inch hole through both pieces as shown, finish cutting per the upper leg detail. Repeat for the remaining upper legs.
- b. Clamp the upper legs to a work surface. Using a router with a 1⁄4-inch straight bit, rout a 1⁄4-inch slot into each (see the upper leg detail in Figure 2).
- c. Clamp the lower legs to a work surface. Using a router with a 1⁄4-inch straight bit, rout a 1⁄4-inch slot into each (see the lower leg detail in Figure 2). Also drill a 1⁄4-inch hole and cut a notch in each, as shown in the detail.
- d. Sand, and finish as desired prior to assembling the leg pieces.
- e. Apply self-adhesive sandpaper to the inside face of each upper leg assembly (see Figure 2, upper leg detail). Note: The sandpaper will help grip the lower leg in any position (especially when extended).
- f. Attach lower legs to upper legs using hex bolts, fender washers, and bar knobs as shown in Figure 2.
- g. Attach upper legs to side skirts using hex bolts, flat washers, flat nylon washers, and crown hex nuts as shown in Figure 2.
- h. Clamp a framing square onto a leg assembly to hold it square with its side skirt. Then, using the 1⁄4-inch hole in the side skirt as a guide, drill a 1⁄4-inch hole through the upper leg for the locking pin.

**Step 3:** Complete the top assembly, and add hardware. Note: See Figure 3 for placement.

- a. Cut the top panels per the Cut List.
- b. Scribe the long and short nosings, and miter cut to fit. Attach the nosings per Figure 3.
- c. Attach the upper legs to the side skirts using hex bolts, flat washers, and bar knobs as shown in Figure 2.
- d. Attach the stiffener to the side skirts.
- e. Attach a second stiffener to each side skirt and the face of the first stiffener so that the bottom edges of the stiffeners are flush.
- f. Repeat Steps 2j–2l for the second leg assembly.
- g. Attach the leg spacers to the lower legs at the locations shown in the lower leg detail in Figure 2.

**Step 4:** Apply a finish.

- a. Fill all nail holes, sand, and finish as desired. See the photographs on page 6 if you plan to stain your project. For our painted version of the table, we used American Tradition, Homecoming Blue #4009-9, semi-gloss.

**Hardware & Supplies**

- 4 (1⁄4 x 3) hex bolts
- 1 (10-foot-long) 1 x 4, poplar
- 3 sash locks
- 1 (1⁄2 x 30-inch) piano hinge
- 1 6-ounce tube stainable wood filler
- wood glue
- 3 3⁄8-inch self-adhesive rubber washers
- 1 quart stain or paint
- 1⁄4-inch straight bit, rout a 1⁄4-inch slot into each (see the upper leg detail). Note: The sandpaper will help grip the lower leg in any position (especially when extended).
- f. Attach lower legs to upper legs using hex bolts, fender washers, and bar knobs as shown in Figure 2.
- g. Attach upper legs to side skirts using hex bolts, flat washers, flat nylon washers, and crown hex nuts as shown in Figure 2.
- h. Clamp a framing square onto a leg assembly to hold it square with its side skirt. Then, using the 1⁄4-inch hole in the side skirt as a guide, drill a 1⁄4-inch hole through the upper leg for the locking pin.

**Lumber**

- 1 (6-foot-long) 1 x 2, poplar
- 2 (8-foot-long) 1 x 2, poplar
- 2 (8-foot-long) 1 x 4, poplar
- 4 (8-foot-long) 1 x 4, poplar
- 1 (10-foot-long) 1 x 4, poplar
- 1 (48 x 96-inch) sheet of 1⁄8-inch-thick birch plywood

**Cut List**

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<td>center braces</td>
<td>(6-foot-long)</td>
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<td>center spacer</td>
<td>1 x 2</td>
<td>1 x 2 x 22</td>
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</tr>
<tr>
<td>stiffeners</td>
<td>x 2</td>
<td>x 1 x 20</td>
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</tr>
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<td>lower legs</td>
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<td>leg spacers</td>
<td>x 3</td>
<td>x 2 x 16</td>
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<td>top panels</td>
<td>(5-inch) plywood</td>
<td>5 x 28 x 34</td>
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</tr>
<tr>
<td>long nosing</td>
<td>(6-foot-long)</td>
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<tr>
<td>short nosing</td>
<td>(6-foot-long)</td>
<td>1 x 4</td>
<td>2</td>
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**TOOL LIST**

- table saw (or circular saw with a straightedge guide)
- miter saw (or mitre box and handsaw)
- router with 1⁄4-inch straight bit
- band saw for jig saw
- drill driver and bits
- power sander and various grits of sandpaper
- framing square
- clamps
- tape measure
- pencil

*Availability varies by market.

Photographs: John O’Hagan

The 1⁄4-inch slot in each leg piece allows the height of the table to be adjusted.
**Finished Dimensions:**
- **Height:** 18–30 inches
- **Depth:** 72 inches
- **Width:** 30 inches

**Figure 1**
- **Top assembly**
- **Top panel/sash lock detail**
- **Leg spacers**
- **Center braces**
- **Spacers 3/16" x 3/4" applied to one assembly only**
- **1/16" spacer and two stiffeners**

**Figure 2**
- **Upper leg detail (8 required)**
- **Lower leg detail (4 required)**
- **Leg spacers**
- **Center braces**
- **Spacers 3/16" x 3/4"**
- **1/4" hole**
- **1/4" wide slot**
- **Leg spacer**
- **1" x 3/4" notch**
- **3/8" hole**
- **1/4" hole**
- **1/4" wide slot**
- **1/4" hole**
- **1/4" wide slot**
- **1/4" hole**
- **1/4" wide slot**
- **1/4" hole**
- **1/4" wide slot**
- **1/4" hole**
- **1/4" wide slot**

**Figure 3**
- **Top assembly**
- **Side skirt layout**
- **Side skirt**
- **Center braces**
- **3/8" hole**
- **1/4" slot**
- **3/8" hole**
- **1/4" slot**
- **3/8" hole**
- **1/4" slot**
- **3/8" hole**
- **1/4" slot**
- **3/8" hole**
- **1/4" slot**
- **3/8" hole**
- **1/4" slot**

**Step 2 1/4" fender washer 1/4 x 20 bar knob**
- **1/4 x 3 hex bolt**
- **3/8" crown hex nut**
- **1 x 13/32 x 1/16 flat nylon washers**
- **1/4 x 20 wing nut**
- **1/4 x 3 1/2 hex bolt**
- **3/8" flat washer**
- **3/8 x 3 hex bolt**

**Step 2g**
- **3/8" crown hex nut**
- **1/4 x 1/2 hex bolt**
- **1/4" flat washer**
- **1/4" x 3/16 hex bolt**
- **1/4" slot**
- **1/4" hole**
- **1/4" wide slot**
- **1/4" hole**
- **1/4" wide slot**
- **1/4" hole**
- **1/4" wide slot**
- **1/4" hole**
- **1/4" wide slot**
- **1/4" hole**
- **1/4" wide slot**

**ABOVE, LEFT:** Besides being painted, the activity table also can be stained. Here, we used Olympic, Golden Oak. If staining, be sure to substitute oak for the poplar.

**ABOVE:** The lower legs of this table are adjustable from the full height of 30 inches down to 18 inches.

**LEFT:** Sash locks along the centerline of the table stabilize the top when it is in the extended position.
Router Table

Simplify edges and joinery and expand your capabilities by mounting your router in this table.

A portable router by itself is a versatile tool. But you won’t know everything it can do until you mount your router to a table. When you flip a router upside down, mount it, and add fences, you basically turn it into a shaper. You’re able to cut joinery with precision and rout decorative profiles with ease. Our router table features independent, adjustable sliding fences and a push bar that glides along a groove in the tabletop. By mounting your router to an acrylic base plate recessed into the table, you can lift the router up and out conveniently to change bits and make adjustments.

Instructions:

General: Cut all parts as you assemble the project, using the Cut List as a guide and adjusting as needed for fit. Use glue and the appropriate length nails to attach all parts unless otherwise specified.

Step 1: Build the fences. See Figure 1.

a. Drill a 5/16-inch hole 1 1/4 inches in from each end of the slide bottom; center the holes horizontally as shown.
b. Attach two slide sides to the slide bottom per Figure 1.
c. Drill a 3/8-inch hole 2 inches in from each end of the slide face.
d. Center and attach a slide face from side to side on the slide assembly.
e. Insert a bar knob and elevator bolt into the two holes in the slide face.
f. Attach the face, face spacers, and face backs per Figure 1. This assembly attaches to the slide face with the elevator bolt.
g. Repeat Step 1 to create a second fence.

Step 2: Build the push bar. Note: The push bar is similar to the miter gauge on a table saw. It’s built just like the sliding fences in Step 1, except that the face is replaced with a sacrificial board, and it has a guide that fits in a groove in the tabletop. See Figure 2. a. To make the base of the push bar, repeat Steps 1b and 1d for the bar sides, bottom, and face.
b. Using glue and screws, attach the guide to the bottom of the push bar assembly so that it is centered and perpendicular to the face. Routing the corners slightly will help the guide slide smoothly in the tabletop.
c. Attach the sacrificial board to the bar face using screws; with use, it will get chewed up and need to be rotated and/or replaced.

Step 3: Build the top assembly. Note: Before you begin assembling the top, you may want to measure your router to verify that it will fit through a 7-inch-square hole; if it will not, modify the hole dimensions as needed. See Figure 3.

a. Locate and draw centerlines on the sub-top. Lay out a 7-inch square that’s centered on the centerlines.
b. Drill an access hole within the square, and cut it out. The mid-top and the sub-top should be the same height as the edges are flush.
c. Attach the mid-top to the sub-top so that the mid-top is square with the sub-top.
d. Use a chisel to square up the corners of the routed area. The most accurate way to rout this recess is to use a template to create a 1/4-inch-deep recess around the 7-inch hole. Lay out the top as shown in the layout detail. Measure and mark a line 9 inches plus twice the offset, centered on these centerlines. Repeat Step 3g on the top.
e. Drill a 1/4-inch hole at the intersections of the 9- and 12-inch centerlines. This allows you to attach the toe of the router from your router, and center it on the hole in the acrylic base plate. Use a laundry marker to mark the mounting hole locations of your base plate on the acrylic plate. Then drill the appropriate size screw holes at these locations, countersinking these holes so that the mounting screws will sit flush with the surface of the acrylic.
f. Attach the acrylic base plate to your router with the mounting screws, and test how the plate fits in the recess; trim as needed with a chisel.

Step 5: Build the stand; see Figure 4. a. Using a pocket hole jig, drill two holes for pocket hole screws in each end of the top assembly. Repeat for each side assembly.
b. Position a side stretcher so that its bottom edge sits 4 inches up from the base of the legs; attach to the legs with glue and pocket hole screws. Repeat for the other side assembly.
c. Position a skirt between the two side assemblies with top edges flush, and attach with glue and pocket hole screws. Place a stretcher under the skirts per Step 3f.

tool list

- table saw
- power miter saw (or hand saw with miter box)
- router with 1/4-inch straight bit
- router with 1-inch straight bit
- power sander and various grits of sandpaper
- drill/driver and bits
- countersink bit
- 1/4-inch hole saw attachment
- 1/2-inch hole saw attachment
- Kreg ProPack Pocket Hole System
- jigsaw
- chisel
- hammer
- bar clamps
- framing square
- straight edge
- tape measure
- laundry marker
- pencil

Lowes’ Worksheet

Lumber*

- 2 (3-foot-long) 1 x 2s, poplar
- 2 (4-foot-long) 2 x 2s, poplar
- 1 (8-foot-long) 1 x 4, oak
- 1 (48 x 96-inch) sheet of 1/4-inch-thick birch plywood
- 1 (48 x 96-inch) sheet of 3/8-inch-thick medium-density fiberboard (MDF)

Hardware & Supplies

- 8 (5/16-inch x 18) bar knobs
- 8 (3-inch-long) 3/16-inch-18 x 24-inch clear acrylic sheet
- 1 box (11/16-inch) Kreg pocket hole screws (fine thread)
- 1 (1/8-inch) 18-gauge wire and 22-gauge
- wood glue
- 1 quart polyurethane

*Availability varies by market.

cut list

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</tr>
<tr>
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<td>3 x 15 x 24</td>
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<tr>
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<tr>
<td>corner boards</td>
<td>MDF</td>
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You don’t need to have a babbbling brook in your backyard to find the perfect location for this simple, yet elegant, garden bridge; build it over a small pond, uneven terrain, or even a low patch. The bridge shown is 8 feet, 4 1/2 inches long, but it can be longer than labeled to allow for squaring. For example, an 8-foot-long board usually measures slightly longer than labeled to allow for squaring. So it is better to assemble this bridge on-site rather than to build it in the shop and then transport it to its final location.

Instructions:

**General:** Cut all parts as you assemble the project, using the Cut List as a guide and adjusting as needed for fit. Note that it is best to purchase treated wood a few weeks before you plan to use it. Stack your treated boards, with spacers, in a dry place and turn on a fan. Allow the boards to air dry. Also note that even when it is no longer damp, pressure-treated wood tends to be quite heavy. So it’s better to assemble this bridge on-site rather than to build it in the shop and then transport it to its final location.

**Step 1:** Make the joist/box sill assembly.

a. Use a framing square to verify and cut one end of each joist so that it is square. If any of the boards is out of square, trim only the amount necessary to form a right angle. (Boards usually measure slightly longer than labeled to allow for squaring. For example, an 8-foot-long board usually measures 96 inches long.) Cut and square the other joist ends so that all measure 96 inches long.

b. Use 16d galvanized finishing nails to attach the two box sills to the outside joists (see Figure 11).

c. Measure 13 inches from the inside faces of both outside joists for placement of the other two. Attach with 16d galvanized nails.

d. Check the assembly for square by measuring diagonally at the corners, and adjust as needed until the two diagonal measurements are equal.

**Step 2:** Prepare the location for installation of the bridge.

a. Lay out, stake, and square the location of the four posts. The centers of the posts are 94 1/4 inches apart in length and 44 1/4 inches apart in width.

b. At each marked corner, dig a hole that measures approximately 12 inches square and 22 inches deep. Add sand to the bottoms of the holes until they are 18 inches deep.

**Step 3:** Secure the posts.

a. Place the posts in the holes, and use a level to check for plumb both vertically and horizontally. Uses stakes and scrap lumber to temporarily secure each post, and add enough dry concrete mix to the holes to stabilize the posts. Tamp the concrete mix in place.

b. Mix enough wet concrete per the manufacturer’s instructions to fill the balance of the holes. Pour concrete into the holes until it is just above ground level, and then trowel the top of the concrete to slope it away from the posts in all four directions. Let the concrete cure overnight.

**Step 4:** Install posts and cleats.

a. Using 16d galvanized nails and lag screws, attach the posts to the joist/box sill assembly (see Figure 2). Drive in the top or bottom nailers first, and then use a level to check each post for plumb vertically before driving in the remaining nails.

b. Use a framing square to scribe a line on the interior faces of each post at the point where the posts meet the top of the joist; these lines will allow you to position wood to support the decking.

c. Using 16d galvanized nails and 2 1/2-inch outdoor wood screws.

**Step 5:** Add the decking.

a. Lay an end piece of decking against a pair of end posts with the decking overhanging the box sill and the outside joists by 6 inches on each side.

b. Scribe the locations of the posts on the piece of decking (see Figure 33). Use a jigsaw to cut a 3/8-inch-deep notch for each and post (see Figure 3, Detail A2). Repeat this process for the other end piece of decking.

c. Use a drill/driver with the appropriate bit to attach the end decking to the joist/box sill assembly with 2 1/2-inch outdoor wood screws.

d. Use 16d nails as spacers between the end piece and second piece of decking at both ends of the bridge. Attach each second piece of decking with outdoor wood screws.

**Step 6:** Final assembly.

a. Center the top assembly on the stand, and secure it by driving screws up through the corner blocks.

b. Fill all nail holes, sand, finish as desired.

c. Position the push bar in its groove.

d. Install the fillers between the legs at the top of each side assembly so that the top edges of the fillers are flush with the top edges of the side skirts.

e. Position the push bar in its groove.

f. Secure the sides and back to the nailers and skirts using glue and brads.

g. Install the filler assembly forms slot for elevator bolt.

h. Use a framing square to verify and cut one end of each joist so that it is square. If any of the boards is out of square, trim only the amount necessary to form a right angle. (Boards usually measure slightly longer than labeled to allow for squaring. For example, an 8-foot-long board usually measures 96 inches long.) Cut and square the other joist ends so that all measure 96 inches long.

i. Use 16d galvanized finishing nails to attach the two box sills to the outside joists (see Figure 11).

j. Use 16d nails as spacers between the end piece and second piece of decking at both ends of the bridge. Attach each second piece of decking with outdoor wood screws.

k. Install the two center pieces of decking next by repeating Steps 5a-5e. Cut the notches for the center posts to fit, about 1 1/8 inches
deep on each center piece, as shown in Figure 3, Detail B.

4. Lay the remaining 12 pieces of decking in place. Space them with even gaps, and then attach using outdoor wood screws. Remove the nails serving as spacers between the first and second pieces of decking.

Step 6: Install the rails and handrails.

a. Identify a centerline on each post to guide when positioning the fence rail brackets. Also measure and mark a line on each post that’s 8 inches up from the top of the decking; repeat at 19 1⁄2 inches and 31 5⁄16 inches above the decking (see Figure 4).

b. Attach the fence rail brackets to the posts using Simpson Strong-Drive wood screws so that the bottom of each bracket aligns with your marks on each post and the bracket is centered on the centerline.

c. Mark or scribe each rail, and cut to fit (approximately 42 inches from post to post). Use three Simpson Strong-Drive screws at each bracket to install the rails.

d. Mark or scribe the handrail pieces, and cut to fit. Attach the handrails to the top railing with 16d galvanized nails.

Step 7: Apply the finishing touches.

a. Attach a copper postcap to the top of each end post.

b. Identify a centerline on each post to guide centered on the centerline.

c. Mark or scribe each post using a small amount of construction adhesive and 4d galvanized finishing nails.

d. Apply the exterior stain of your choice.

CUT LIST

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TOOL LIST

- circular saw or hand saw
- jigsaw
- drill/driver and bits
- framing square
- level
- caulking gun
- tape measure
- pencil

LOWE’S LIST

- 7 (8-foot-long) 2 x 4s, treated southern yellow pine (TYP)
- 6 (8-foot-long) 2 x 6s, TYP
- 6 (12-foot-long) 2 x 6s, ChoiceDek
- 12 (8-foot-long) 2 x 4s, woodgrain decking
- 2 (12-foot-long) 1 1⁄2 x 31⁄2-inch ChoiceDek gray handrails
- 1 box (SD8) Simpson Strong-Drive wood screws**
- 1 box (16d) galvanized nails
- 2 (12-foot-long) 13⁄16- x 31⁄2-inch ChoiceDek Premium gray handrails
- 5 (8-foot-long) 4 x 4s, treated southern yellow pine (TSYP)
- 7 (8-foot-long) 2 x 8s, TSYP
- 6 (12-foot-long) 2 x 8s, ChoiceDek gray handrails
- 8 (3⁄8-inch x 4-inch) lag screws
- 1 box (#8 x 21⁄2-inch) Phillips head screws
- 1 box (SD8) Simpson Strong-Drive wood screws**
- 2 (12-foot-long) 11⁄2 x 3⁄4-inch ChoiceDek gray handrails
- 5 (8-foot-long) 2 x 4s, treated southern yellow pine (TYP)
- 1 box (16d) galvanized finishing nails
- 1 box (80-pound) bags all-purpose concrete mix
- 4 (ISO) Simpson Strong-Drive wood screws**
- 6 Maine Ornamental 4 x 4 Victory Copper High Point Postcaps
- construction adhesive
- exterior stain
- paint (American Tradition, exterior latex, white)

Hardware & Supplies

- 1 box (160) galvanized finishing nails
- 1 box (16d) galvanized finishing nails
- 1 box (80-pound) bags all-purpose concrete mix
- 4 (ISO) Simpson Strong-Drive wood screws**
- 1 box (16d) galvanized finishing nails
- 1 box (ISO) Simpson Strong-Drive wood screws**
- 6 Maine Ornamental 4 x 4 Victory Copper High Point Postcaps
- construction adhesive
- exterior stain
- paint (American Tradition, exterior latex, white)

*Availability varies by market.
**Selection varies by market.

Table Saws and Accessories

38-979 Industrial Contractor’s Saw

This 10-inch left-tilt table saw (T33718) has a 1-horsepower motor, 115/230-volt induction motor that can handle tough cutting operations. The 0- to 45-degree bevel tilts the blade away from the fence (left tilt) in ripping applications to prevent tear-out on the outside corner of mitered joints. The saw features cast-iron extension wings measuring 40 x 27 inches for maximum material support. It also includes a mobile bottom that attaches directly to the base for full saw support and mobility. The saw accommodates multiple fences, including the TS 30-inch fence system, the 30-inch Unifence, and the Biesemeyer 30-inch commercial fence system.

TS350 ShopMaster 10-inch table saw

Make precise cuts with this sturdy table saw (T33718). It features a 1-hp, 120-volt, single-phase induction motor for plenty of power. The miter gauge has adjustable stops at 90 degrees and 45 degrees, left and right, for precise straight and angle cutting. It has a self-aligning 3-square fence with a single control handle for convenient accuracy. For safety, it features a see-through blade guard with a splitter and antikickback fingers, as well as a removable on/off switch to prevent unauthorized use of the machine. In addition to a cast-iron carriage, which allows for precision and minimal vibration, a sold-undertable features a cast-iron trunnion, motor, and trunnion support brackets.
the right tools

Fence Systems
These offer a three-point T-square locking system with a hairline pointer to assure that the fence is parallel to the blade and accurate to within 1/64 inch. All three of these fence systems fit the 36-979 Industrial Contractor’s Saw (#237665).

NEW

36-T30 T2 30-inch fence system
The face of the T2 fence (#237669) is made from extruded aluminum and attaches to the solid-steel angle iron and tubing for years of durability. The fence clamps to both the front tongue and rear rail of your table saw to accommodate various fence attachments. The easy-gliding fence body can handle quick, repetitive cutoff work, precision ripping, and squaring cuts. It includes an additional rear hold-down support for use with jigs and featherboards.

NEW

36-U30 Unifence fence system
The Unifence system (#237666) includes the fence, rail, leg set, adjustable stop, and 14-inch-wide tableboard. The dual-position fence rotates from 3 1/2-inch-tall stock to 9/16-inch-thin stock for maximum versatility of materials, including laminated boards that overhang the fence. The fence can be positioned forward for larger panels better during ripping and to function as a stop for repetitive crosscuts. The infinitely adjustable stop, with flip-down bypass, positions the fence at preset measurements for the right and consistent fence adjustments. The tableboard offers 30 inches of material support to the right of the blade.

NEW

36-B30 Biesemeyer 30-inch commercial fence system
The Biesemeyer system (#237669) includes the fence, rail, leg set, and 14-inch-wide tableboard. It has a rugged construction of high-impact laminated birch plywood that is hand-fitted to the solid-steel angle iron and tubing for years of continuous use. The fence and head are made of heavy-gauge steel for longevity accuracy with no deflection.

Planers and Jointers

JT360 6-inch deluxe jointer
Ensure that your wood surfaces are flat with this deluxe jointer (#60009). The 1/2-hp model features a 4 1/2 x 35-inch fence that mounts in the center for maximum work support and tilts for beveling and chamfering operations. It is also includes a heavy-gauge steel stand and wide footprint for sturdy support and a built-in dust chute to direct dust and chips away from the operator. The safety cutterhead guard pivots out of the way of work during operation. The 46-inch-long table can handle extra-long stock. The equipment features a cast-iron wedge bed for solid support, and fully adjustable infeed and outfeed tables that operate on gibbed dovetailed ways to compensate for tear. The infeed table also has a cast-iron, 2 1/2 x 3-inch support ledge for rabbeting operations.

JT160 ShopMaster 6-inch variable-speed bench jointer
This jointer (#33781) has variable speed ranges of 6,000 to 11,000 revolutions per minute (rpm), or 12,000 to 22,000 cuts per minute (cpm). It allows you to select the correct speed for the size and hardness of the material that you cut. The center-mounted fence gives support throughout the cut for accurate edge jointing. The fence tilts 0 to 45 degrees outward for bevel jointing and chamfering and features positive stops at 45 and 90 degrees. The Poly V belt drive offers maximum transmission of power to the cutterhead with minimum belt slippage. Balanced for smooth operation and a maintenance-free life, the two-knife cutterhead has a jackscrew-knife leveling arrangement for easy replacement and adjustment of individual knives. The built-in chip chute directs dust and chips away from the operator, motor, and electrical components, while the extra-large table provides ample work support for surfacing stock up to 6 inches wide.

TP305 ShopMaster 12-inch portable planer
Follow up your surfacing efforts with this portable planer (#36274). The powerful 15-amp, 120-volt motor offers superior stock removal. The two-knife, quick-change, solid-steel cutterhead is mounted on ball bearings for smooth operation and long life, and high-speed steel, two-edge/reversible knives double the cutting life. The patented cutterhead elevation on four precision-ground columns offers superior cut stability. The planer includes a convenient wood-return roller and adjustable infeed and outfeed tables.
Drill Press and Accessories

DP300L 12-inch bench drill press with laser
Featuring a 1/3-hp, 120-volt induction motor that is ideal for contour cutting, straight cutting, and resawing operations. It features the Rapid-Release tension lever and a nine-spoke wheel. The 16 x 16-inch cast-iron table lifts 3 degrees left and 45 degrees right for beveling operations. The lower blade guides will angle to support the blade to within 1/2 inch of the table work surface to ensure accurate cutting. The saw includes a 4-inch integral dust port.

Miter Saw

36-322L Industrial TwinLaser 12-inch compound miter saw
The TwinLaser cut lines show both sides of the blade kerf when the blade is rotating or at rest. The saw (1#B03861) features a large rear-blade access for cutting baseboard, vertically, up to 6 inches or crown molding up to 5 1/4 inches. The saw comes with a high-quality carbide-tipped 12-inch blade and features a 15-amp, 3,500-rpm motor for maximum cutting power. The front bevel lock has adjustable positive stops at 0, 33.9, and 45 degrees left and a large readable scale that makes it easy to accomplish quick and accurate compound cuts. The quick-action cam-lock miter knob has nine positive detents and a large chemically etched scale for maximum accuracy and ready adjustability. The saw also features a large, stainless-steel detent plate for durability.

Scroll Saw

SS350LS Industrial 16-inch variable-speed scroll saw with leg set
This scroll saw (1#78013) offers a heavy-duty, 2-amp, 120-volt induction motor. The patented upper and lower blade chucks feature the Quickset II Blade Chuck System for quick, tool-free blade changes. The tear-dropped-shaped, cast-iron table tilts to 0 to 45 degrees and extends the full length of the throat for maximum workpiece support. The variable speed control of 600 to 1,650 cutting strokes per minute (cspm) is designed for cutting wood, metal, and plastics. A built-in air blower keeps the cutting line free of dust, and the saw includes a removable dust-collection box with a 1/4-inch dust port. Also included are a convenient carrying handle and blade storage area.

Band Saws

BS150LS 10-inch band saw with stand
This band saw (1#33307) features a heavy-duty, 1/4-hp ball-bearing motor and upper and lower tire brushes for improved blade tracking. The cast-iron frame and table offer improved stability, and the large, two-wheel design extends blade life. The rack and pinion table-tilt adjustment positions the table at any angle from 3 degrees left to 45 degrees right, and the upper blade guide adjustment allows for precise height positioning. The band saw has a maximum capacity of 10 inches from frame to blade.

Miter Saw

28-276 Industrial 14-inch band saw with stand
This model (1#3964) has a capacity of 13 inches from frame to blade and features a 1/4-hp, 120-volt motor that is ideal for contour cutting, straight cutting, and resawing operations. It features the Rapid-Release tension lever and a nine-spoke wheel. The 16 x 16-inch cast-iron table lifts 3 degrees left and 45 degrees right for beveling operations. The lower blade guides will angle to support the blade to within 1/2 inch of the table work surface to ensure accurate cutting. The saw includes a 4-inch integral dust port.

Belt/Disc Sander

3195 6-inch belt/9-inch disc sander
This sander (1#201450) features a 1-hp, 120-volt induction motor that is completely enclosed for protection against dust. The belt unit is adjustable so that the sander can operate vertically, horizontally, and at in-between angles, and the belt guard removes to allow for contour sanding. The 9-inch disc is perfect for sanding large curves or rounding out sharp corners. The cast-aluminum table can tilt 45 degrees for bevel sanding, and it accommodates either the belt or disc unit. A belt-tracking knob provides tool-free belt alignment, and a belt-tensioning lever loosens and tightens the belt instantly for quick belt changes. The sander also features a 2 5/8-inch-diameter dust outlet for adaptation to a dust-collection system or shop vacuum.

Scroll Saw

SS350LS Industrial 16-inch variable-speed scroll saw with leg set
This scroll saw (1#78013) offers a heavy-duty, 2-amp, 120-volt induction motor. The patented upper and lower blade chucks feature the Quickset II Blade Chuck System for quick, tool-free blade changes. The tear-dropped-shaped, cast-iron table tilts to 0 to 45 degrees and extends the full length of the throat for maximum workpiece support. The variable speed control of 600 to 1,650 cutting strokes per minute (cspm) is designed for cutting wood, metal, and plastics. A built-in air blower keeps the cutting line free of dust, and the saw includes a removable dust-collection box with a 1/4-inch dust port. Also included are a convenient carrying handle and blade storage area.
the right tools

Protect Yourself

Follow these helpful workshop safety tips from the Home Safety Council.

Eye Protection

Be sure your eyes are protected every time you turn on a machine. If you’re in the shop with someone else running equipment, you should wear eye protection. Remember, everyday prescription glasses probably don’t qualify. Check your local safety council website, www.homesafetycouncil.org, for more tips.

Face Shield

A face shield is a good final tip: To prevent your safety glasses from getting covered with sawdust, wipe them with a dry cloth before making cuts. This will reduce static and help your lenses stay clear while you work.

Safety Gear

To help prevent injuries, the HSC recommends stocking your home shop with the following items.

- Safety glasses or goggles
- Hearing protection, such as earplugs or earmuffs
- Face shield or mask to keep sawdust and other small particles away from your mouth and nose
- First-aid kit
- Safety gloves appropriate for multiple tasks

The HSC is the only national nonprofit organization dedicated solely to preventing home-related injuries, which result in nearly 20,000 deaths and 21 million medical visits on average each year. Through national programs, partnerships, and volunteer support, the HSC educates people of all ages to be safe in and around their homes. The council is a 501(c)(3) charitable organization located in Washington, D.C.

Lowe’s is the founding sponsor of the HSC. For more tips to keep you and your family safe at home, please visit the HSC Web site, www.homesafetycouncil.org.

workshop

Maintaining Saw Blades

These vital accessories will keep their edge when you follow a few simple tips.

Safety Glasses

Safety glasses have come a long way from those old “frog-eyed” goggles you wore in chemistry class. With a little shopping, you can find a pair that’s attractive and comfortable.

- Be sure to look for plastic glasses that are impact tested. If you wear prescription glasses, find a pair that’s attractive and comfortable.
- If you’re in the shop with someone else running equipment, you still should wear eye protection.
- With a little shopping, you can find a pair that’s attractive and comfortable.
- If you wear prescription glasses, find a pair that’s attractive and comfortable.

Cleaning Blades

Saw blades pick up pitch and gum from the wood they cut. If you cut a lot of softwood, the blades can pick up resin as well. Any buildup on your blades will decrease cutting efficiency and sometimes cause burning and ragged cuts. Consider making a blade-cleaning kit that includes a shallow pan large enough for the blade, a toothbrush, rubber gloves, a can of pitch and gum remover, and a cloth. Keep some contractor’s paper on hand, as well, to protect surrounding work surfaces.

Sharpening Carbide-Tipped Blades

If you don’t have a local sharpener, consult a woodworking club or saw-blade manufacturer. Make sure to use a sharpening service recommended by a woodworker.

Sharpening High-Speed Steel Blades

As with any other high-speed steel (HSS) blade in your workshop, such as a plane or handsaw blade, a HSS saw blade can be sharpened. We advise you to have this done professionally, because if you don’t sharpen every tooth identically and set, or bend, each alternate tooth perfectly, the blade will not run true.

Proper Storage

Finally, you can increase the life of any saw blade by storing it properly. This includes replacing a blade in its original packaging or setting it in a simple storage rack. Both of these methods keep the teeth from coming in contact with metal. When teeth touch, HSS versions will dull, and carbide-tipped blades will fracture or chip.

Allen Lillard

Allen Lillard believes that the biggest life obstacle most people face is fear of failure. That fearfulness, he says, often keeps people from chasing their dreams.

The retired real estate developer has built more than 50 pieces of furniture for family and friends, including baby cribs, side tables, dressers, and cabinets. Last year he built three secretaries. “Each time I built one, I think I improved,” he says. “You keep learning to do things a little better.”

Allen’s woodworking endeavor began in the 1970s as he started making frames for a friend who was an artist. Three power tools made up his small shop: a table saw, a router, and a miter saw. Since then, his shop has expanded into roughly 35 hours building the mantel. The next project on his list is a classic family heirloom—a grandfather clock.

Allen estimates he’ll have spent about $4,000 on portable bases so that he can move them around as needed. Allen first enjoyed woodworking. It was a way to relieve stress. Now he says it’s the most satisfying thing he does.

The greatest reward in woodwork is learning at a finished piece and saying, “I built that,” he explains.
**put it together**

**Mortise and Tenon**

Use this joinery method for strong, long-lasting furniture.

The mortise and tenon is one of the strongest joints in furniture construction. That’s why it’s used almost exclusively for connecting high-stress or high-load parts, such as the sides of a chair or bench. The mortise and tenon joint has two parts: A square hole called a mortise is cut in one part, and a tenon, or protrusion, is cut on the mating part. The tenon, which fits into the mortise, can be glued in place or attached with dowels, fasteners, or even a wedge.

**Where to Start**
The best way to fit a mortise and tenon together tightly is to cut the mortise first, and then cut the tenon to fit. That is because it’s easier to resize a tenon than to recut a mortise. Tenons can be cut using a manufactured or shop-made tenoning jig that’s attached to a table saw or router.

**Cutting the Mortise**
A simple way to cut a square hole for the mortise is to use a drill press with a mortising attachment. The attachment consists of a fitting that presses the workpiece against the table and holds it steady as a square-edged hollow chisel moves up and down to cut a hole. With a specialized bit in its center, the chisel punches the corners square. Both parts must be very sharp for a precise mortise.

**Squaring the Hole**
Chisels come in a wide variety of sizes; the most common include the ¼-inch, ⅜-inch, ½-inch, ⅜-inch, and ¾-inch. Although a mortising bit quickly removes most of the wood from the piece, the chisel that shears the sides square requires good old-fashioned elbow grease, supplied by you.

**Cutting the Tenon**
Once the mortises are ready, you can cut the tenons to fit. The quickest way to do this is to use a tenoning jig on the table saw. You will want to measure and mark the shoulder and cheek lines, which represent the wood that will be removed from around the tenon. The shoulder lines indicate the tenon’s width, while the cheek lines indicate its length and depth. Test the fit of the tenon in the mortise, and adjust the jig as necessary to get a tight fit.

For step-by-step instructions on how to create mortise and tenon joints—including a short animated video, visit Lowes.com/Mortise.

**PHOTOGRAPH: JOHN O’HAGAN**

Enjoy this complimentary issue. To continue receiving this FREE, no-obligation newsletter, sign up today at Lowes.com/Woodworkers, call toll free 1-877-LOWES-04 (569-3704), or send your name and address to Lowe’s Woodworkers, P.O. 35256, Greensboro, NC 27425-5256, Attn: Bill Sawyer. Your invitation code is 1603.