



the

An Exclusive Lowe's
Woodworkers Publication

woodpost

Spring/Summer 2007

Create a Child's Table and Chairs

Give the little ones
outdoor furniture
that's just their
size. PAGE 4



8 Side Table 10 Pergola 14 Elevated Pet Dish

Let's build something together

Welcome to the spring/summer issue of *The Wood Post*. We thought this would be an ideal season to reintroduce you to our woodworking publication. You might notice that in this issue we are introducing several changes designed to begin transitioning the newsletter into the *Lowe's Creative Ideas* family of publications.

You'll see brighter, more attractive photography and design included with all of our projects. We also introduce Skill Sets as part of our projects. These columns highlight the basics as well as more difficult techniques, including detailed step-by-step instructions and photography.

We're also using a new indicator to rank project difficulty. Using this symbol , we rank our projects as Beginner , Intermediate  , and Advanced   .

You'll also notice more creative finishes. For example, the artistic treatment on the Elevated Pet Dish could be enjoyable for the whole family—and it's a project that beginners will be able to complete with confidence while learning new skills. We hope you like our new approach. Please share your comments and suggestions when you visit us online at Lowe'sCreativeIdeas.com/Woodworkers. Also, please send us your questions for the regular Q&A column on page 3.

IN THIS ISSUE

4 | **FEATURE PROJECT**
Child's Table And Chairs

8 | **WEEKEND PROJECT**
Side Table

10 | **FEATURE PROJECT**
Pergola

14 | **WEEKEND PROJECT**
Elevated Pet Dish

16 | **SHOP SMART**
Workshop Workhorses

19 | **WORKSHOP**
A Handle on Angles

19 | **MEMBER PROFILE**
Mike Ryan

20 | **PUT IT TOGETHER**
Outdoor Fasteners

How-To Plan

To download project and How-To plans such as our straightening jig, visit us at Lowe'sCreativeIdeas.com/Woodworkers. The project will help you true up board edges using your table saw. It's available online until May 15, 2007.



MELISSA
MELISSA BIRDSOING,
VICE PRESIDENT, TREND, DESIGN & BRAND
LOWE'S COMPANIES, INC.

CONTRIBUTORS

HOSEY HUTSON
The first project our *Wood Post* designer created was a fishing boat he built while a sophomore in college. In the more than 40 years since then, Hosey has worked as a contractor, a wood-carver, a cabinetmaker, and an award-winning artist. His creative designs are integral to all of our projects. In this issue, his skill and experience shine through in the three projects featured on pages 4–13, as well as in the How-To Plan project.



CHRIS HILL
He caught the woodworking bug in his early teens from his father, who is a power-tool fanatic. Now, as editor of *The Wood Post*, Chris enjoys combining his love of woodworking with his talent as a journalist. He frequently sharpens his skills by designing and building a variety of furniture projects for family and friends. The project featured on pages 14–15 of this issue highlights Chris' handiwork.



Safety Is Your Responsibility

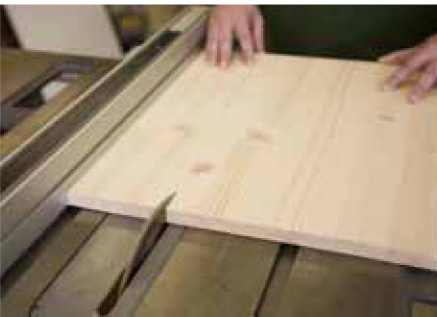
Lowe's Companies, Inc., and its subsidiaries ("Lowe's"), and SPC Custom Publishing, the Publisher of this issue of *The Wood Post*, have made every effort to be complete and accurate in the instructions and other content contained in this Publication. However, neither Lowe's nor the Publisher assumes any responsibility or liability for damages or losses suffered, sustained, or incurred in the course of your home improvement, woodworking, or repair project or in the course of your use of the item you create or repair. Further, improper use of handtools or power tools can lead to serious and permanent injury or even death. In some issues of *The Wood Post*, the guards and safety equipment have been removed in illustrations and photos only to provide a better view of the operation of the tool. Do not attempt any procedure or project unless all guards and safety equipment are in place. Always follow manufacturer's operating instructions in the use of tools. Check and observe all standard safety precautions.

With the Experts at

Q How do I determine angles for woodworking projects? What tools are required?

A Design decisions for woodworking projects usually involve aesthetics and function. However, tools and techniques are equally important when making angled cuts. Basic layout tools, such as a combination square, are helpful for cutting 45- and 90-degree angles. For general carpentry, the Swanson Speed Square allows you to pivot the tool on its heel for marking angles, up to 90 degrees. For precision work with intermediate angles, Swanson also makes the Accur-8 folding miter square, which has positive stops every 22.5 degrees. A standard desk protractor also provides a detailed scale for marking angles.

When making cuts, work with existing features on the tool. For example, power miter saws have built-in scales with positive stops for the most common angles. Most table saw miter gauges offer a similar feature. It is best to use standard angles such as 15, 22.5, and 30 degrees in project designs to achieve accuracy and consistency. Odd angles can require frequent manual resetting.



Q How can I ensure straight cuts when I rip a board?

A Remember that your rip cut is only as good as your guide is straight. In some cases, the workpiece must be straight at the outset; otherwise, any irregularities will be transferred to the cut. Straightening an edge can be done with a jointer, a router, or a circular saw with a straightedge guide. The Straightening Jig plan available online at Lowe'sCreativeIdeas.com/Woodworkers shows you how to build another tool that can be used to straighten an edge.

Technique is also important to ensure straight cuts. Maintain consistent pressure against the guide throughout the entire cut, and make sure debris such as sawdust does not interfere with the movement of the saw or workpiece.

Q How can I manage power tool cords? Are cordless tools a better option?

A Cordless tools are convenient and constantly improving, but it probably will be awhile before they replace their corded cousins in the workshop. Cordless tools are best used for tasks such as drilling holes or driving screws that require intermittent and brief power bursts. Going cordless also makes sense for making short cuts with a jigsaw or circular saw. The DeWalt 36-volt cordless circular saw (#95272) and the DeWalt Heavy-Duty XRP 18-volt cordless circular saw (#98145) are a couple of tools that can be used for short cuts. During sustained use, most batteries quickly lose their charge. As a result, routing, sanding, and prolonged cutting are tasks better handled by corded tools.

Woodworkers develop various techniques for managing electrical cords. Solutions can be as simple as wrapping the cord around the tool when not in use. Installing a hook for the coiled cord where the tool is stored is another common fix.



Child's Table And Chairs

Give the little ones outdoor furniture that's just their size.

Sturdy and strong, this matching table and chairs set provides the perfect place for the kids to help with gardening, do arts and crafts, and play board games. They will love having an outdoor seating area of their own.



Instructions:

GENERAL: Cut and label parts as needed, using the Cut List as a guide and adjusting for fit. All grooves and dados are $\frac{1}{4}$ inch wide by $\frac{7}{16}$ inch deep unless otherwise specified.

Table Instructions

1 PREPARE THE TABLE TOP

- Using either a table saw fitted with a $\frac{1}{4}$ -inch dado blade or a router with a slot-cutting bit, cut grooves on both long edges of each (01) top board.
- Similarly, cut a groove on one long edge of each (02) edge board. Also cut a groove on one long edge of each (03) breadboard.
- Cut six (04) table splines to match the length of the (01) top boards.
- Glue the (01) top boards, (02) edge boards, and (04) table splines together per Figure 1. Clamp the parts together, and then drive $\frac{5}{16}$ -inch galvanized staples from the underside of the (01) top boards passing through the (04) table splines on both sides of each butt joint; allow the glue to dry completely.
- Working from both centerlines, trim the assembly to 33 inches long by 24 inches wide. Using a router with a slot-cutting bit, cut a dado along both 24-inch sides.
- Cut two (04) table splines to match the length of the (03) breadboards.
- Attach the (03) breadboards and (04) table splines to the top/edge board assembly using glue and $\frac{5}{16}$ -inch galvanized staples as described above.
- Sand the top assembly flat, and then round over the perimeter edges using a router fitted with a $\frac{1}{8}$ -inch roundover bit.

2 BUILD THE TABLE LEG/SKIRT ASSEMBLY

- For the (07) table legs, the taper is created by leaving 1 inch of width at the bottom and tapering 6 inches up the leg. Cut the taper on the two inside edges of each leg.
- Attach the (05) side skirts and the (06) end skirts to the (07) table legs, using glue and pocket hole screws, as shown in Figure 2. Check for square by measuring both diagonals, and attach temporary braces at the corners if necessary.
- Attach the top assembly to the leg/skirt assembly using pocket hole screws.

Figure 1

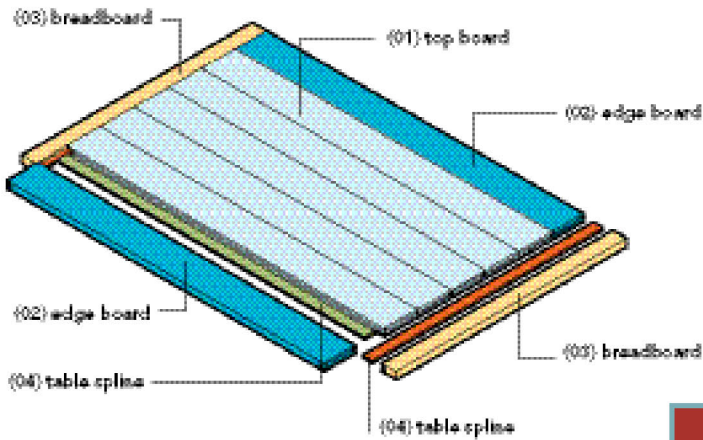
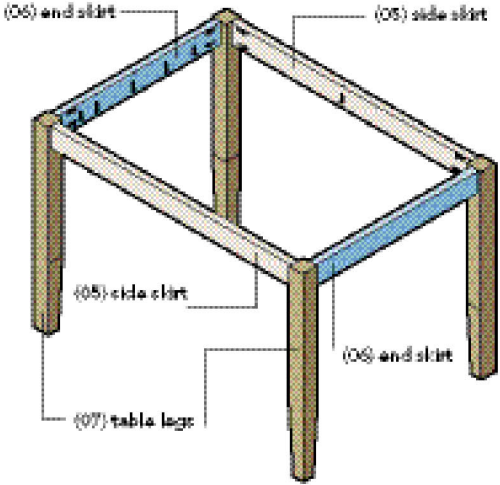


Figure 2



**TABLE
FINISHED
DIMENSIONS**
HEIGHT
19½ inches
DEPTH
24 inches
WIDTH
36 inches

TOOLS YOU'LL USE



TABLE SAW



MITER SAW



ROUTER

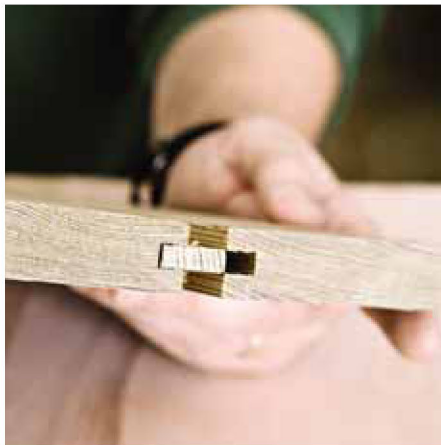
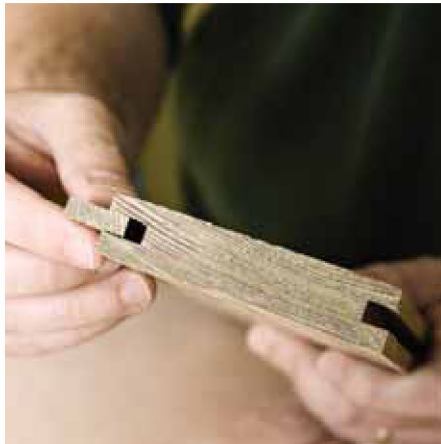


BAND SAW



POWER SANDER

- ◆ TABLE SAW WITH A $\frac{1}{4}$ -INCH DADO BLADE (OR CIRCULAR SAW WITH A STRAIGHTEDGE GUIDE)
- ◆ MITER SAW (OR HANDSAW WITH MITER BOX)
- ◆ ROUTER WITH SLOT-CUTTING AND $\frac{1}{8}$ -INCH ROUND-OVER BITS
- ◆ BAND SAW
- ◆ JIGSAW
- ◆ POWER SANDER AND VARIOUS GRITS OF SANDPAPER
- ◆ DRILL/DRIVER WITH BITS AND #10 COUNTERSINK BIT
- ◆ K3MS KREG JIG K3 MASTER SYSTEM
- ◆ PNEUMATIC STAPLE GUN AND $\frac{5}{16}$ -INCH GALVANIZED STAPLES RECOMMENDED
- ◆ CLAMPS WITH A 48-INCH CAPACITY
- ◆ TAPE MEASURE
- ◆ PENCIL



SKILL SET

Grooves & Splines

To prepare the table top, cut grooves in the (01) top boards, (02) edge boards, and (03) breadboards per the description in **Step 1**. Assemble these parts with splines that fit into the grooves. The same process is used to construct the chair seats.

d. Predrill holes to prevent splitting, and then attach a nail-on furniture glide to the bottom of each table leg.

Instructions for Each Chair

1 PREPARE THE BACK LEGS AND BACK SLATS

- a. Separate the (08) back legs into four pairs; label the outside faces of each pair, and then number the pairs.
- b. Lay out the locations of the (09) back slats and the (10) back rung on a pair of (08) back legs as shown in Figure 4.
- c. Lay out the leg shape as shown in Figure 4, and cut the legs to size with a jigsaw or band saw; sand the edges smooth.
- d. Clamp the pair of (08) back legs together, and round over the top corners with a sander.
- e. Round over the long edges of the top angled portion of the (08) back legs using a router fitted with a 1/4-inch roundover bit.

- f. Cut the (09) back slats to length. Use the detail in Figure 4 to lay out the curve.
- g. Remove the waste using a band saw, and sand the curved surface smooth.

2 CONSTRUCT THE FRAME

- a. Attach the (09) back slats to the (08) back legs using glue and countersunk screws.
- b. Drill pocket holes at each end of the (11) side rungs.
- c. Cut tapers on the two inside edges of the (12) front legs by leaving a 3/4-inch width at the bottom and tapering 2 3/4 inches up.
- d. Attach the (11) side rungs to the (08) back legs and (12) front legs 3 inches up from the bottom and flush with the outside edges using glue and pocket hole screws.
- e. Attach the (13) front rung to the back side of the (12) front legs, 3 inches up from the bottom, using glue and countersunk screws.

- f. Drill pocket holes at each end of the (10) back rung, and attach it to the (08) back legs 3 inches up from the bottom and flush with the outside edges using glue and pocket hole screws.
- g. Drill pocket holes at each end of the (14) chair side skirts, the (15) front skirt, and the (16) back skirt, and at the top inside edge of each of these, for attaching the seat later.
- h. Attach these parts to the (08) back legs and (12) front legs as shown in Figure 3 using glue and pocket hole screws.

3 BUILD THE SEAT

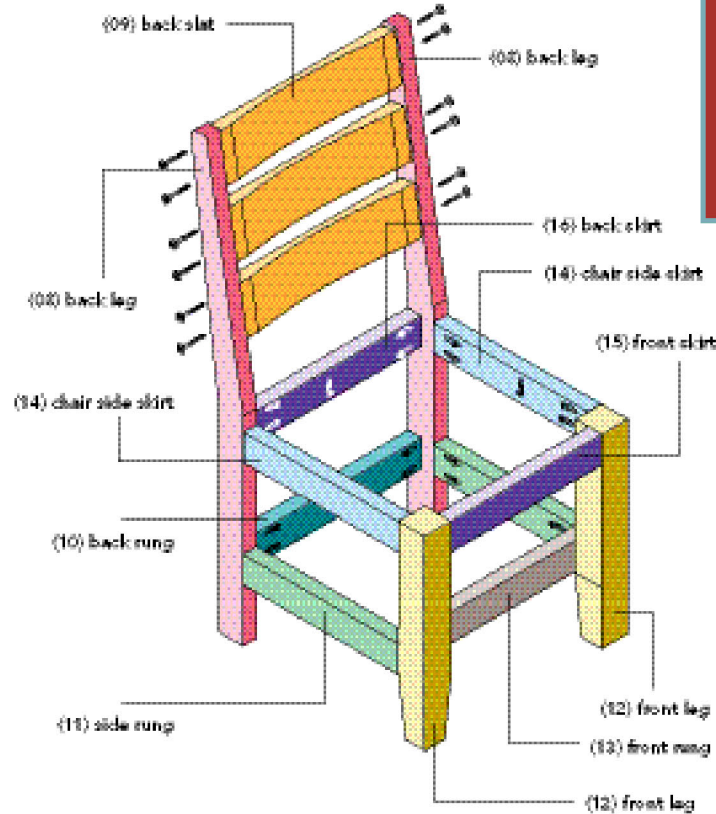
- a. Cut grooves on both long edges of each (17) seat slat, and cut a groove on one long edge of each (18) edge slat.
- b. Cut three (19) seat splines to match the length of the (17) seat slats.
- c. Glue the (19) seat splines into the grooves in the (17) seat slats and the (18) edge slats. Clamp the pieces together, and staple from the underside through the slats and the splines at the butt joints.
- d. Trim the seat slat assembly to 13 inches wide. Cut a dado along both 13-inch sides.
- e. Cut the (20) seat nosing to match the seat width. Cut a groove along one long edge of the (20) seat nosing. Cut a (19) seat spline to match the width of the nosing. Attach the (20) seat nosing and the (19) seat spline to the seat slat assembly using glue and staples as described above. Repeat for the (21) seat back and the last (19) seat spline, ensuring that the (21) seat back is centered along the back edge.
- f. Sand the seat flat, and sand or round over the front corners of the (20) seat nosing as shown in Figure 5.
- g. Round over the top perimeter edges of the seat assembly using a router fitted with a 1/8-inch roundover bit.
- h. Attach the seat assembly to the chair frame with glue and pocket hole screws.
- i. Predrill holes, and then attach a nail-on furniture glide to the bottom of each leg.

Finish Instructions

1 FILL, SAND, AND STAIN OR PAINT

- a. Fill all holes. Sand the assemblies smooth.
- b. Apply exterior paint. We used Valspar Ultra Premium, Ivory Brown 6006-1C, semi-gloss.

Figure 3



CHAIR
FINISHED
DIMENSIONS

HEIGHT
23 1/8 inches

DEPTH
14 inches

WIDTH
13 inches

Figure 4

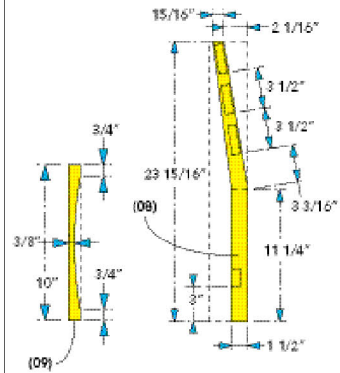
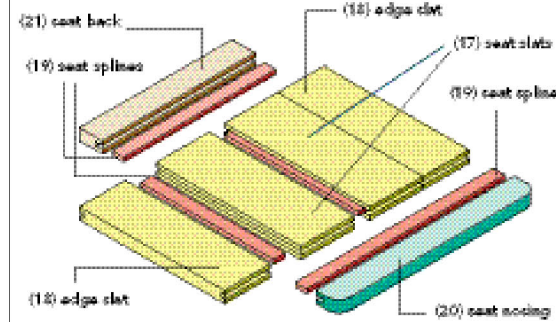


Figure 5



Lowe's List

PROJECT #WSprSum071

LUMBER*

- 6 (6-foot-long) 1 x 4s
- 2 (8-foot-long) 1 x 4s
- 4 (8-foot-long) 1 x 6s
- 1 (8-foot-long) 2 x 4

HARDWARE & SUPPLIES

- 1 box (1 1/4-inch) Kreg pocket hole screws (coarse thread)
- 1 box (2 1/2-inch) Phillips II pressure-treated screws
- 1 package (5/8-inch) galvanized staples
- 5 packages (3/4-inch) nail-on furniture glides

- stainable wood filler
- wood glue rated for exterior use (Titebond III)
- 1 quart exterior paint

*Availability varies by market—cedar and redwood are appropriate for this project.

Side Table



FINISHED DIMENSIONS
HEIGHT
18 inches
DEPTH
18½ inches
WIDTH
18 inches

This project keeps items close at hand while you lounge outdoors.

TOOLS YOU'LL USE

										
TABLE SAW	MITER SAW	ROUTER	POWER SANDER	DRILL/DRIVER						
◆ TABLE SAW (OR CIRCULAR SAW WITH A STRAIGHTEDGE GUIDE)	◆ MITER SAW (OR HAND SAW WITH MITER BOX)	◆ ROUTER WITH ¼-INCH CHAMFERING BIT	◆ POWER SANDER AND VARIOUS GRITS OF SANDPAPER	◆ DRILL/DRIVER WITH COUNTERSINK BIT	◆ K3MS KREG JIG K3 MASTER SYSTEM	◆ FRAMING SQUARE	◆ PNEUMATIC NAIL GUN (OR HAMMER)	◆ CLAMPS	◆ TAPE MEASURE	◆ PENCIL

Made with pressure-treated lumber, screws, and exterior-rated glue, this sturdy side table can handle anything Mother Nature dishes out. The stout piece will look great on your deck, patio, or lawn, and it is designed to last a lifetime.

Instructions:

GENERAL: Cut and label the parts as needed, using the Cut List as a guide and adjusting for fit.

1 BUILD THE BASE AND TOP FRAME ASSEMBLIES

- a. Using glue and pocket hole screws, join two (01) short frames and two (02) long frames, with the (01) short frames positioned inside of the (02) long frames.
- b. Repeat, and attach this second assembly to the first—with the (02) long frames of one overlapping the (01) short frames of the other—and attach using glue and 1 ¼-inch screws.
- c. Repeat to build the top frame.

2 ADD THE LEGS

- a. Cut 1 ½-inch square (03) legs from the 2 x 4s per the Cut List.
- b. Countersink pilot holes in the top and base frames for screws.
- c. Attach the top and base frame assemblies to the (03) legs using glue and 2 ¼-inch screws. Use a framing square to keep the legs square with the top and base frame assemblies.

3 MARK THE CROSS-BRACE PARTS

Just like the top and base frame assemblies, the cross braces consist of two layers. Because the cross braces are installed on diagonals, the most accurate way to make them fit between the (03) legs is to cut the parts roughly to length and scribe

WEB FOR MORE
Illustrations make this project easier. Go to LowesCreativeIdeas.com/Woodworkers to download the side table figures.

them to fit. However, this step is only necessary once. Use the first cross brace as a template for cutting the others to size. Also refer to "Skill Set: Scribing Angles," at right.

4 ASSEMBLE THE CROSS BRACES

- a. Without using glue, temporarily assemble the cross braces with pocket hole joinery.
- b. Test-fit the assembled cross braces into the four side openings on the frame/leg assembly. If any of the openings are out of square you'll need to follow the Skill Set steps to mark and cut a cross brace assembly for that particular opening.
- c. Disassemble the cross brace pieces, and then use them as a template to cut the rest of the cross brace pieces.
- d. Assemble a (04) long cross brace and two (05) short cross braces using glue and pocket hole joinery.

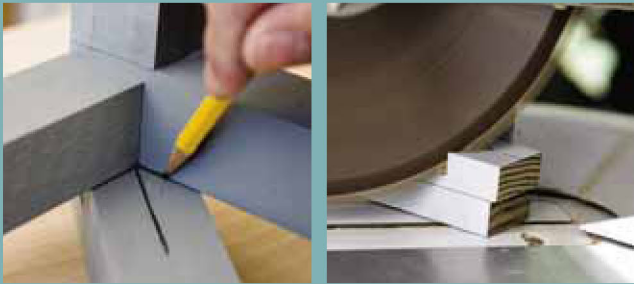
- e. Add a (04) long cross brace to the assembly perpendicular to the (04) long cross brace of the first assembly, using glue and countersunk 1 ¼-inch screws. Attach the (05) short cross braces in the same manner. Build three more cross brace assemblies.
- f. Attach the cross brace assemblies to the frame/leg assembly using glue and countersunk 1 ¼-inch screws.

5 BUILD THE TOP

- a. Cut the (06) top boards ½ inch longer than what is indicated in the Cut List.
- b. Butt all of the (06) top boards together, number them, and then make a mark across adjacent (06) top boards to simplify the reassembly process.
- c. Drill offset pocket holes on the back of each (06) top board. On the backs of the two outside (06) top boards, also drill pocket holes along the outside edges to be used for attaching the (07) edge boards.
- d. Attach the (07) edge boards to the two outside (06) top boards using glue and pocket hole screws. Trim the assembly to 16 ½ inches square.
- e. Using a router fitted with a chamfering bit, rout a ⅜-inch chamfer along one edge of the (08) edging.

SKILL SET

Scribing Angles



- A. Cut 16 cross braces to a rough length of 23 ¾ inches.
- B. Mark a centerline lengthwise on two of the pieces.
- C. With the frame/leg assembly turned on its side, place a (04) long cross brace beneath the assembly, aligning the centerline with the corners of the assembly (see photograph above). Mark the corners on the (04) long cross brace, and make the angled cuts on the ends. Note: Make sure you cut to the scribed lines.
- D. Test-fit the (04) long cross brace in the table assembly opening. Slip the second underneath the centerline marks to align with the frame/leg assembly corners. Scribe the inside corners onto the (05) short cross braces, and mark where the ends butt against the (04) long cross brace.
- E. Cut the pieces for the (05) short cross braces, and test-fit to check for accuracy.

- f. Miter cut the (08) edging pieces to fit the perimeter of the top assembly, and attach them with glue and nails.
- g. Attach the (09) cleats to the top inside center edge of the top frame using glue and screws.
- h. Attach the top assembly to the frame/leg assembly using glue and nails, nailing into the (09) cleats and through to the (08) edging. Note: The top should overhang the base by ⅛ inch on all four sides.

6 APPLY A FINISH

- a. Fill all holes.
- b. Sand, and paint the finished assembly with a solid-color stain. For this project we used Cabot O.V.T. Solid Color Stain in Driftwood Gray.
- c. Predrill holes, and attach nail-on furniture glides to the base.

Lowe's List

PROJECT #WSprSum072

LUMBER*

- 1 (8-foot-long) 1 x 4
- 2 (8-foot-long) 1 x 6s
- 1 (8-foot-long) 2 x 4

HARDWARE & SUPPLIES

- 1 box (1 ¼-inch) Kreg pocket hole screws, fine thread
- 1 box (1 ¼-inch) exterior-rated wood screws
- 1 box (#8 x 2 ½-inch) Phillips II outdoor wood screws
- 1 box 4d galvanized finishing nails
- 1 package (¾-inch) nail-on furniture glides
- stainable wood filler
- wood glue for exterior use (Titebond III)
- 1 quart solid-color wood stain

*Availability varies by market—cedar and redwood are appropriate for this project.

Cut List for one table

#	PART NAME	QTY.	MATERIAL	SIZE (in inches)
01	short frames	8	1 x 6	¾ x 1½ x 15
02	long frames	8	1 x 6	¾ x 1½ x 18
03	legs	4	2 x 4	1½ x 1½ x 13½
04	long cross braces	8	1 x 6	¾ x 1½ x 20¾*
05	short cross braces	16	1 x 6	¾ x 1½ x 9¼*
06	top boards	4	1 x 4	¾ x 3½ x 16¾
07	edge boards	2	1 x 4	¾ x 1¾ x 16¾
08	edging	4	1 x 6	¾ x 1½ x 18½**
09	cleats	4	1 x 6	¾ x ¾ x 4

*Scribe to fit.

**Measure length from long point to long point.

Pergola

Have it made in the shade with this classic garden structure.

Pergolas have been used all around the world to create secluded nooks, train climbing plants, and create extensions from buildings. These structures are great for providing shade while permitting air circulation on hot days.

Instructions

GENERAL: Cut and label parts as needed, using the Cut List as a guide and adjusting for fit. Pre-stain the parts and assemblies prior to the final assembly to make finishing cleaner and easier. We used Cabot O.V.T. Solid Color Stain in Redwood.

1 PREPARE FOUR LEG ASSEMBLIES (A-D)

NOTE: If your pergola will be freestanding, use (01) 4 x 4s measuring 2 feet longer than those used here, and anchor them in the ground with concrete. The pergola pictured was anchored to an existing concrete slab using 4 x 4 bolt-downs.

- a. Cut the (01) 4 x 4s to length, and use a hammer to drive a 4 x 4 bolt-down into one end of each. Do not secure the bolt-down with the lag screws provided by the manufacturer until indicated in Step 4.

b. After cutting the **(02)** 1 x 4 covers to length, ensure that they will fit flush at the tops of the **(01)** 4 x 4s. Attach the **(02)** 1 x 4 covers to two opposing faces of each of the **(01)** 4 x 4s using glue and 8d galvanized finishing nails.

c. Rip the (03) $\frac{3}{4}$ x 5 covers from a 1 x 6, adjusting the width to equal that of the leg assembly (see Figure 1). Attach as in the previous step.

d. Cut the (04) spacers from a 1 x 6, and center them on top of the leg assemblies as shown in Figure 1. Attach using glue and 8d galvanized finishing nails.

e. Cut the (05) caps; attach in the same way.

2 PREPARE THE BRACES, NAILERS, AND RAFTER TAILS

a. Follow the photographs and instructions at right in "Skill Set: Repeating Patterns," to create the (07) braces.

b. Cut the (06) nailers per the Cut List.

c. Referring to Figure 3, cut the **(08)** band tails from a 2 x 8.

d. From a 2 x 6, cut the (09) bottom rafter tails per Figure 3.

e. Cut the (10) top rafter tails the same as the (09) bottom rafter tails, but slightly longer per the Cut List.

f. Sand the **(08)** band tails, the **(09)** bottom rafter tails, and the **(10)** top rafter tails using a belt sander.

Figure 1

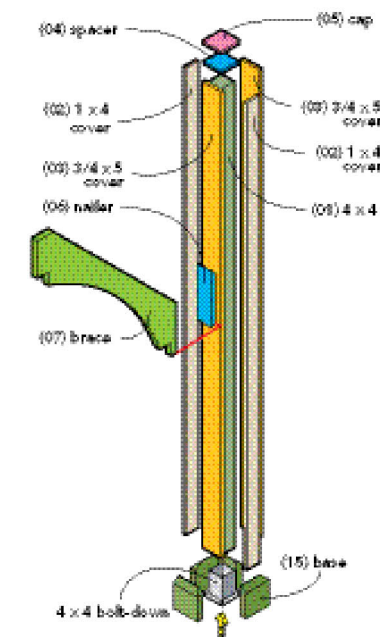
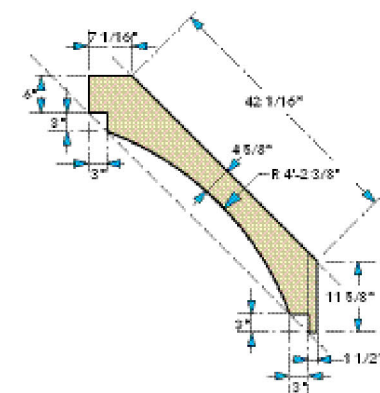


Figure 2



3 ATTACH THE BANDS AND BRACES

NOTE: You will need two assistants for this phase of assembly. Our pergola is adjacent to two walls of the house. Assembly order may be different if your pergola is freestanding or adjacent to a different number of walls. You also may need to add or eliminate rafter tails, depending on your project.

a. Lay leg assemblies (B) and (C) on the concrete approximately 10 feet apart with

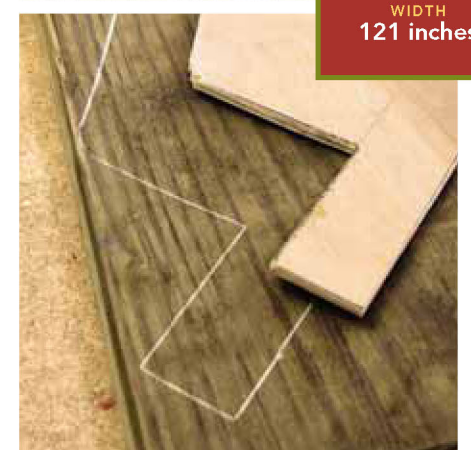


**FINISHED
DIMENSIONS**

HEIGHT
108 inches

DEPTH
129 inches

WIDTH
121 inches



SKILL SET

Repeating Patterns

Using the measurements shown in Figure 2, lay out a pattern for the (07) braces on a scrap piece of plywood. Using a jigsaw, cut the first (07) brace, and use it as a pattern for the rest of the (07) braces. Sand the curved area of each (07) brace using a belt sander.



TOOLS YOU'LL USE



CIRCULAR SAW



JIGSAW



ROTARY HAMMER DRILL



PNEUMATIC NAIL GUN

- ◆ TABLE SAW
- ◆ CIRCULAR SAW WITH STRAIGHTEDGE GUIDE
- ◆ MITER SAW (OR HANDSAW WITH MITER BOX)
- ◆ JIGSAW (OR BAND SAW)
- ◆ POWER SANDER AND VARIOUS GRITS OF SANDPAPER
- ◆ BELT SANDER
- ◆ ROTARY HAMMER DRILL AND MASONRY BIT
- ◆ DRILL/DRIVER WITH BITS
- ◆ PNEUMATIC NAIL GUN (OR HAMMER)
- ◆ PNEUMATIC PALM NAILER
- ◆ FRAMING SQUARE
- ◆ TAPE MEASURE
- ◆ POWDERED CHALK
- ◆ PENCIL

the bolt-downs positioned next to the wall. In this project, leg assembly (B) was placed far enough away from the second wall to allow enough space for attaching the (12) short band.

NOTE: Turn the bolt-down so that you can secure it with the lag screws provided by the bolt-down manufacturer once the pergola is in its final position against the house.

b. Using 3-inch screws, attach one of the (11) long bands to leg assemblies (B) and (C) 9 3/4 inches below the tops of the assemblies (see Figure 4). Make sure the (11) long band is flush with the outside faces of the leg assemblies. Check for square.

c. Stand the leg/band assembly in an upright position. Attach a (12) short band to the band/leg assembly, flush with the top and outside edges of the (11) long band.

d. Attach the (12) short band to leg assembly (A) 9 3/4 inches below the top. The (12) short band should extend 1 1/2 inches beyond the outside face of the leg/band assembly.

e. Use 2 1/2-inch screws to attach temporary bracing (scrap lumber) at the corners from bands to leg assemblies, as well as from band to band.

f. With the help of two assistants, slide the entire assembly into its final position so that

the bands are touching the walls of the house and the leg assemblies are 1 1/2 inches from the walls. Check the leg assemblies to make that sure they are plumb. Loosen and reattach any temporary bracing as necessary. The locations of the bolt-downs can be adjusted slightly before final tightening of the concrete anchors.

4 SET THE BOLT-DOWNS

a. Mark the holes in the bottom plate of the bolt-downs onto the concrete.

b. Slide the band/leg assembly to one side so that the marked hole locations can be accessed with a rotary hammer drill. Per the manufacturer's instructions, drill the proper-size holes for the type of masonry anchor you are using for the project. Ask a Lowe's employee about the appropriate concrete anchors for your situation. **NOTE:** Vacuum the concrete dust from the holes prior to removing the masonry bit.

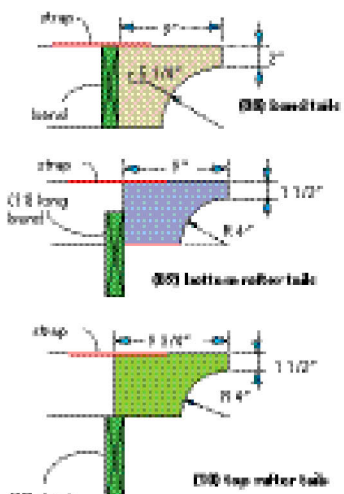
c. Slide the band/leg assembly back into place, and attach the bolt-down with concrete anchors.

d. Plumb the leg assemblies, and attach them to the bolt-downs with the lag screws supplied by the manufacturer.

Cut List

#	PART NAME	QUANTITY	MATERIAL	SIZE (in inches)
LEGS				
01	4 x 4s	4	4 x 4	3 1/2 x 3 1/2 x 106 1/2
02	1 x 4 covers	8	1 x 4	3/4 x 3 1/2 x 100%
03	3/4 x 5 covers	8	1 x 6	3/4 x 5 x 100%
04	spacers	4	1 x 6	3/4 x 4 3/4 x 4 3/4
05	caps	4	1 x 6	3/4 x 5 x 5
06	nailers	4	(8-foot-long) 2 x 6	1 1/2 x 3 1/2 x 13 3/4
07	braces	4	2 x 10	1 1/2 x 9 3/4 x 57 3/4
TAILS AND BANDS				
08	band tails	4	(12-foot-long) 2 x 8	1 1/2 x 7 1/4 x 9
09	bottom rafter tails	8	(8-foot-long) 2 x 6	1 1/2 x 5 1/2 x 9
10	top rafter tails	4	(8-foot-long) 2 x 6	1 1/2 x 5 1/2 x 9 3/4
11	long bands	2	(12-foot-long) 2 x 8	1 1/2 x 7 1/4 x 117
12	short bands	2	(10-foot-long) 2 x 8	1 1/2 x 7 1/4 x 112
RAFTERS				
13	bottom rafters	8	(10-foot-long) 2 x 6	1 1/2 x 5 1/2 x 120
14	top rafters	8	(10-foot-long) 2 x 6	1 1/2 x 5 1/2 x 111 1/4
15	bases	16	(10-foot-long) 2 x 8	1 1/2 x 6 1/2 x 7 1/4

Figure 3



e. Stand leg assembly (D) in its approximate location on the concrete.

f. Attach the final (11) long band and (12) short band in place using one 3-inch screw at each end.

g. Plumb leg assembly (D), and then mark the location of the holes in the bottom plate of the bolt-down.

h. Disassemble as much of the leg/band assembly as necessary so that holes can be drilled into the concrete for the remaining bolt-down.

i. Reassemble, using at least four 3-inch screws through the bands into leg assembly (D).

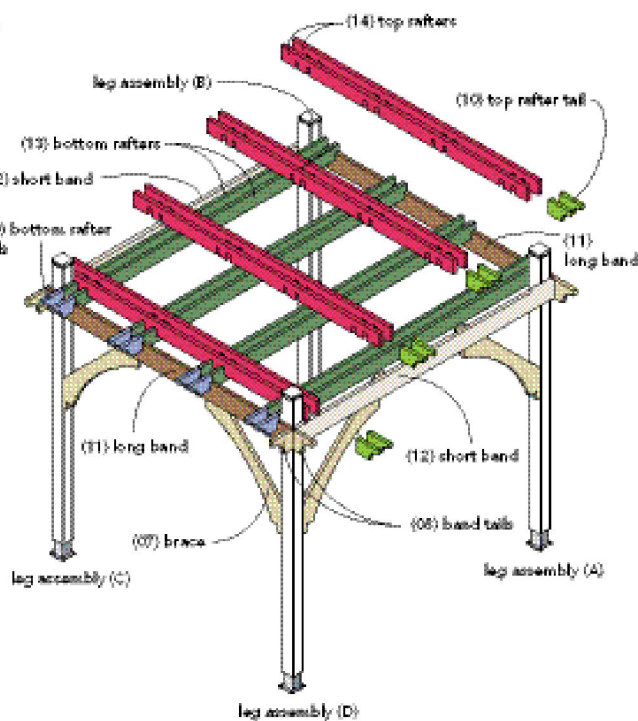
j. Check again to ensure that leg assembly (D) is plumb, and then attach the bolt-down with concrete anchors. Now attach the bolt-down to the leg assembly using the lag screws provided by the manufacturer.

k. Use 16d galvanized finishing nails to attach the (06) nailers to the leg assemblies. The bottoms of the (06) nailers should be positioned 40 3/16 inches below the bottoms of the bands.

l. Use glue and 2 1/2-inch screws to attach the (07) braces to the (06) nailers and to the bands, positioned 2 3/4 inches below the tops of the bands.

m. Remove any temporary bracing.

Figure 4



n. Attach the (08) band tails using a flat Simpson strap and 1 1/2-inch Simpson nails on top of the (08) band tails and the bands (see Figure 4). A pneumatic palm nailer can be used for this step.

5 ADD THE RAFTERS

a. Cut the (13) bottom rafters and the (14) top rafters to length. Cut slots in the (14) top rafters as shown.

b. Position all rafters before attaching them to the bands with 3-inch screws.

c. Attach the (09) bottom rafter tails and the (10) top rafter tails to the (13) bottom rafters and the (14) top rafters using flat Simpson straps and 1 1/2-inch Simpson nails.

d. Attach the (15) bases to the leg assemblies and to each other using glue and the appropriate-length nails.

6 APPLY A FINISH

a. Touch up any places that are scarred, scratched, or drilled, using the same solid-color wood stain that was used on the full assembly. We used Cabot O.V.T. Solid Color Stain in Redwood.

Lowe's List

PROJECT #WSprSum073

TREATED LUMBER*

- 8 (10-foot-long) 1 x 4s
- 8 (10-foot-long) 1 x 6s
- 2 (8-foot-long) 2 x 6s
- 16 (10-foot-long) 2 x 6s
- 3 (10-foot-long) 2 x 8s
- 2 (12-foot-long) 2 x 8s
- 2 (10-foot-long) 2 x 10s
- 4 (10-foot-long) 4 x 4s

HARDWARE & SUPPLIES

- 20 (9-inch) flat Simpson Strong-Tie straps
- 1 box 8d galvanized finishing nails
- 1 box 16d galvanized finishing nails
- 2 boxes (1 1/2-inch) Simpson Strong-Tie nails
- 1 box (2 1/2-inch) Phillips II pressure-treated screws
- 1 box (3-inch) Phillips II pressure-treated screws
- 4 bolt-downs for 4 x 4s
- 16 concrete anchors
- wood glue rated for exterior use (Titebond III)
- 1 gallon solid-color wood stain

*Availability varies by market—treated southern yellow pine, cedar, and redwood are appropriate for this project.

Elevated Pet Dish

Pamper your pet with ergonomics for feeding time.



If Begonia could talk, she might ask you to build a raised pet dish. Beyond aesthetics, many veterinarians recommend it to prevent, relieve, or solve health issues. Ask your vet if this is a good idea for your pet.

TOOLS YOU'LL USE



CIRCULAR SAW



JIGSAW



DREMEL



DRILL/DRIVER

- ◆ CIRCULAR SAW WITH A STRAIGHTEDGE GUIDE
- ◆ JIGSAW
- ◆ POWER SANDER AND VARIOUS GRITS OF SANDPAPER
- ◆ DRILL/DRIVER WITH BITS
- ◆ DREMEL
- ◆ K3MS KREG JIG K3 MASTER SYSTEM
- ◆ PNEUMATIC NAIL GUN (OR HAMMER AND NAIL SET)
- ◆ FRAMING SQUARE
- ◆ RULER AND FLEXIBLE TAPE MEASURE
- ◆ COMPASS
- ◆ PENCIL

Instructions:

GENERAL: Cut and label the parts as needed, using the Cut List as a guide and adjusting for fit.

1 DETERMINE DISH DIAMETER AND HEIGHT

- a.** Measure the diameter of the pet dish(es) with a flexible tape measure wrapped directly below the rim. Divide the diameter by 3.14. For example, our dish measured 20 inches. Dividing this by 3.14 gave us a diameter of 6 3/8 inches, a measurement rounded to the nearest sixteenth of an inch.
- b.** Determine the right height for the dish holder by measuring your pet's height from floor to the top of its withers (front shoulders). Then subtract 6 inches. Begonia measured 14 inches to her withers, resulting in a dish height of 8 inches.
- c.** If your pet dishes are small, consider reducing the dimensions in the Cut List as needed to ensure good proportions.

2 MAKE THE TOP

Follow the directions for the dish holes in "Skill Set: Centered Holes," at right.

3 BUILD THE DISH HOLDER

- a.** Cut the (02) legs to the length determined in Step 1b (remember to account for the thickness of the top).
- b.** Cut the (03) sides to length, 1 1/2 inches less than the length of the (01) top board.
- c.** Drill pocket holes in the (03) sides, and attach them to the (02) legs with glue and pocket hole screws.
- d.** Attach the (01) top board to the side/leg assembly using glue and 6d finishing nails.

4 APPLY A FINISH

- a.** Set all nail holes, and fill all holes and gaps with wood filler.

b. Sand, apply primer, and paint. For our project, we used a Dremel Two-Speed MultiPro Kit (#94681) and Dremel High Speed Cutter with a 1/4-inch tip (#72788) to carve the pet's name on the (03) sides.

c. Drill pilot holes for the nail-on furniture glides into the bottom of the legs, 1 inch in from each end. Drive the glides into the pilot holes.

Lowe's List

PROJECT #WSprSum074

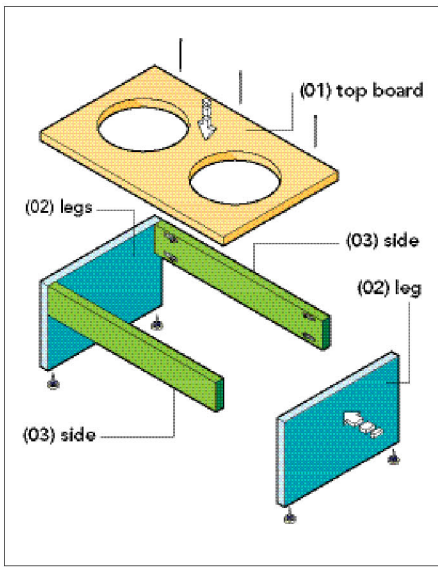
LUMBER*

- 1 (4-foot-long) 1 x 3, poplar
- 1 (4-foot-long) 1 x 12, poplar

HARDWARE & SUPPLIES

- 1 box (1 1/4-inch) Kreg pocket hole screws, fine thread
- 1 box 6d finishing nails
- 1 package (3/4-inch) nail-on furniture glides
- stainable wood filler
- wood glue
- 1 quart primer
- paint as needed

*Availability varies by market.



Cut List

#	PART NAME	QUANTITY	MATERIAL	SIZE (in inches)
01	top board	1	1 x 12	3/4 x 11 1/4 x 18
02	legs	2	1 x 12	3/4 x 11 1/4 x 7 1/4
03	sides	2	1 x 3	3/4 x 2 1/2 x 16 1/2

SKILL SET

Centered Holes

A. Locate the (01) top board's center along its length. Using a framing square, draw a centerline across the board's width.

B. Determine the center of the two holes by drawing a pair of diagonal lines from the centerline at both edges of the (01) top board to the two opposite corners. Repeat for the other side.

C. Set a compass to half the pet dish diameter from Step 1a, and then draw circles for the openings. Note: To ensure proper fit of the dishes, first cut a test hole in a scrap piece of lumber, plywood, or cardboard.

D. Starting with a central access hole for the jigsaw blade, cut out the openings.



PHOTOGRAPHY BY MICHAEL HANSON

Workshop Workhorses

Miter saws, table saws, and circular saws are cutting champions for woodworkers.

Nearly every woodworking project requires the use of a miter saw, table saw, or circular saw. You've probably have noticed them shown as "Tools You'll Use" in many of our projects in *The Wood Post*. If you are planning to add any of these tools to your shop, read our overview to get a handle on your needs before you buy.

Miter Saws

Many woodworkers use their miter saw more than any other saw. Well suited for cutting the various sizes of stock used in *The Wood Post* projects, miter saws typically provide the most accurate crosscuts. They're also used to cut trim and moulding, and as a result, are excellent for repairs and remodeling. As the name indicates, miter saws are designed for cutting mitered corners. Many models feature stops for cutting specific angles, and some allow the user to tilt the blade to make compound miter cuts. Anyone who has ever used a handsaw and miter box will appreciate the time saved with a miter saw.

♦ **SHOWN:** Hitachi 10-inch compound miter saw with laser marker (#40806)



Table Saws

Central to many workshops, table saws have fences that help guide material accurately during cuts. With their blades visible above the cutting surface, table saws offer a good vantage point during the cut, as well as the ability to adjust cutting height according to material thickness. These tools offer the greatest advantage for ripping, which refers to cutting lengthwise along a board, but crosscuts, which run perpendicular to the wood grain, are also possible. For angled cuts, such as miter and bevel cuts, table saw blades are easily tilted.

♦ **SHOWN:** Delta ShopMaster 10-inch, 13-amp table saw (#232975)

Circular Saws

Many woodworkers begin using a circular saw as their primary cutting tool. Handheld and space-efficient, circular saws can be used to rip and crosscut, as well as bevel and miter with blade-angle adjustments. Most circular saws are versatile enough to cut through wood species ranging from soft pine to hard oak and treated lumber. Cordless circular saws eliminate tangled cords for improved shop safety. Plus, they can be taken to any site to use.

♦ **SHOWN:** DeWalt Heavy-Duty XRP 18-volt cordless circular saw (#98145)

GOOD TO KNOW

Portable, cordless circular saws can save a lot of space in your shop.



Win Norm's Shop Sweepstakes

It's a woodworkers dream—the chance to have a shop outfitted like Norm Abram's in *The New Yankee Workshop*. Simply visit Lowes.com/WinNormShop to complete the online registration form.

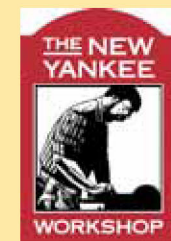
Four prizes will be awarded:

- ★ **GRAND PRIZE:** \$10,000 in Delta tools
- ★ **FIRST PRIZE:** \$5,000 in Delta tools
- ★ **SECOND PRIZE:** \$3,000 in Delta tools
- ★ **THIRD PRIZE:** \$2,000 in Delta tools

Hurry—the contest ends May 15!

Sweepstakes is sponsored by DELTA® International Machinery Corporation. NO PURCHASE NECESSARY TO ENTER OR WIN. Void where prohibited. Sweepstakes begins on or about 11:59:59 p.m. Eastern Time (ET) March 15, 2007, and ends at 11:59:59 p.m. ET on May 15, 2007 ("Sweepstakes Period"). Odds of winning depend on number of eligible entries received. Open to legal residents of the 50 United States and the District of Columbia who are at least 18 years of age (19 in AL and NE). See Lowes.com/WinNormShop for more details and for official rules.

DELTA proudly sponsors



with host Norm Abram



It's what separates you from the have knots.



LESS WANE.
LESS WARP.
AND FEWER KNOTS.

Top Choice lumber is hand selected at the mill and quality is verified by third-party inspectors. Plus, our treated lumber has a limited lifetime warranty against rot and decay. So whether you're adding a deck or a room, insist on Top Choice for your next project.

EXCLUSIVELY AT:



WORKSHOP

A Handle on Angles

Technique and quality machinery make cutting miters and bevels a snap.



Thanks to the versatility of table saws and power miter saws, making angled cuts requires only simple adjustments on a single machine. However, when the blade or workpiece angle varies from a basic 90-degree cut, different techniques are required. For safety and accuracy it is important that your workpiece does not shift during the cut. Techniques for accomplishing this depend on the tool.

Table Saw

Angled crosscuts typically require using the miter gauge on a table saw. Workpieces are more likely to slide against the miter gauge when cutting sharper angles. There are a few ways to hold a workpiece in place while making cuts. You can apply adhesive-backed sandpaper to the miter gauge face, or attach a sacrificial backer board to the miter gauge and fit it with a stop block. You also can clamp the workpiece to the miter gauge if the tool design allows it. Any of these methods should help prevent the workpiece from slipping during a miter cut or a compound angle (bevel and miter together) on the table saw.

Beveled rip cuts require keeping workpieces flat. Applying downward pressure to the workpiece helps reduce the chances of binding or burning the edge. When doing this, be sure to keep your fingers away from

the blade. When possible, tilt the blade away from the table saw fence.

Circular Saw

Using a handheld circular saw for angled cuts requires the same accessory guides and techniques as are used during normal operation. For simple miter cuts, you can use an angle square or shop-built jig as a guide. Clamp the guide to the workpiece to keep your fingers a safe distance from the blade. For beveled cuts, use the adjustment feature on the saw base. Remember that maximum cutting depth decreases with larger angles.

Miter Saw

Miter saws excel at angled cuts without any specialized techniques or accessories. The center table pivots for miter cuts. With a compound miter saw, the motor assembly also swings downward to make beveled cuts. Make sure the workpiece is secured against the table and fence by applying pressure with your hand or a clamp. Many saws feature a standard removable clamp or have the clamp as an optional accessory. When steeply angled cuts are necessary, secure the workpiece with clamps.

MEMBER PROFILE | MIKE RYAN

Building Ingenuity

Padlocks. An apple press. Antique trucks. These aren't typical wood projects—but Mike Ryan of Felton, Pennsylvania, isn't a typical woodworker. In fact, the 59-year-old says his favorite part about the hobby is its limitless creative possibility.

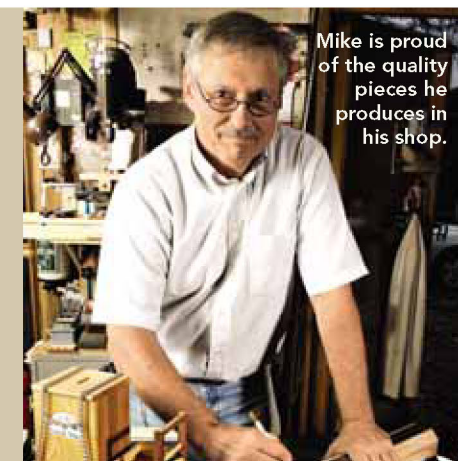
"Wood is a very flexible medium," Mike explains. "I like to find an object typically made of a different material, and create it using wood."

After 35 years in telecommunications, Mike spends much of his retirement in his large workshop. To date, his proudest accomplishment is building the body of a 1929 Model A Ford truck—a tribute to his hometown of York, Pennsylvania,

where the majority of the wooden mail trucks manufactured during the 1920s and 1930s were made.

"When I bought the truck, it consisted of four wheels, a steering wheel, and an engine," Mike recalls. "My wife took one look and said, 'You actually see possibility here?'" After he built a solid oak body and maple steering wheel, the possibility was apparent: The truck runs smoothly and has won awards at shows.

When he needs supplies for a project, Mike heads to the Lowe's store near his home. "I like the variety at Lowe's," he says, "and I like being able to get so much of what I need in one place." He also enjoys reading *The Wood Post*. "I



Mike is proud of the quality pieces he produces in his shop.

save every issue," he says, adding that he refers back to the columns periodically.

And Mike has another goal: instilling his love of woodworking in grandsons Johnathan, 4, and Zachary, 3. "When the boys get older I'd like them to do this with me," he says. "We need to share what we know."

PHOTOGRAPHY BY MICHAEL HANSON (TOP) AND RICHARD KELLY (RIGHT)



Outdoor Fasteners

Make the best choice for long-lasting results.

It's the rare woodworker whose plans don't eventually include an outdoor project. Picnic tables, patio chairs, and decks all are fun to build and add value to a home's outdoor living spaces. But outdoor conditions often can aggravate any dimensional instability in wood. As a result, the fine joinery used for interior projects isn't sturdy enough for outdoor furniture.

Adhesives and fasteners must provide the holding power, so it's important to use fasteners designed especially for outdoor use. Here are some guidelines:

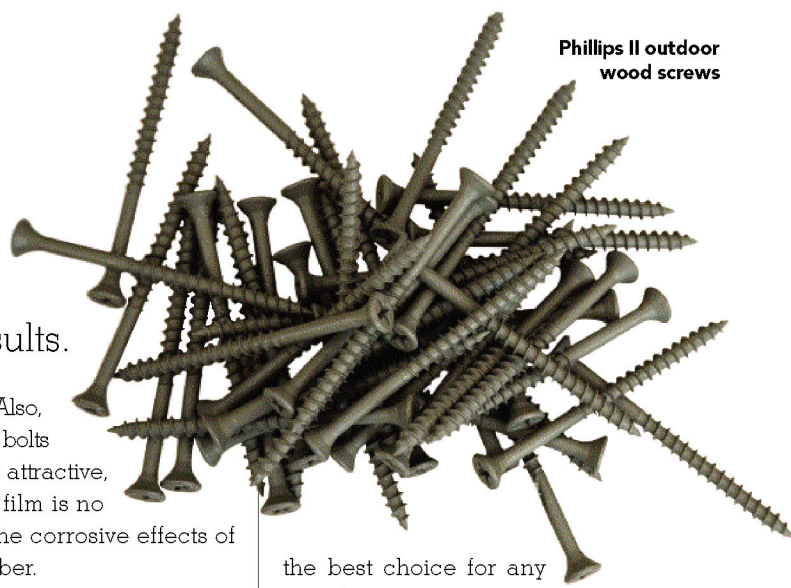
■ **Avoid under-protected steel fasteners**, including electroplated and unplated (bright), as well as hardware coated with black oxide (such



as drywall screws). Also, smooth-plated silver bolts and screws may be attractive, but their thin zinc film is no match for the corrosive effects of treated lumber.

■ **Use hot-dipped galvanized bolts and nails** for deck construction and other projects involving pressure-treated lumber. For larger fasteners, hex-head bolts, carriage bolts, and lag screws are available with this durable coating.

■ **To avoid black streaks** and other tannin reactions with cedar and redwood, use stainless steel screws and nails. Eventually even hot-dipped galvanized fasteners will corrode and cause these stains. Stainless steel fasteners are also



Phillips II outdoor wood screws

the best choice for any waterfront environment.

■ **Newer generation "deck" screws** are coated with polymer (plastic composite) resins that protect steel screws against corrosive reactions in most wood. For example, Phillips II® outdoor wood screws hold up well under a variety of conditions. Lengths ranging from 1½ inches to 3½ inches give them versatility. As a result, these are a good choice for decks and outdoor furniture.

■ **Never use aluminum nails** or screws with pressure-treated lumber. The copper-based preservative in the wood causes a corrosive chemical reaction.

PHOTOGRAPHY BY MICHAEL HANSON



Enjoy this complimentary issue. To continue receiving this FREE publication, sign up today at LowesCreativeIdeas.com/Subscribe or call toll free 1-877-LOWES-02 (569-3702).

If your address has an error that needs to be corrected or you would like your name added or removed from our mail list, please send your request with your address label to: Lowe's Mail Preference, P.O. Box 35256, Greensboro, NC 27425-5256.

PRSR.T. STD.
U.S. POSTAGE
PAID
PERMIT NO. 1455
PEWAUKEE, WI

