

the

An Exclusive Lowe's
Woodworkers Publication

woodpost

Fall 2006

Be nice to your TV...
build this handsome
TV Stand

Enjoy this complimentary issue of Lowe's The Wood Post magazine. To sign up for your FREE membership, see details on the back cover.

We'd like to hear about any projects you create from this and past issues of *The Wood Post*. Send your comments and suggestions, and visit us online at **Lowes.com/Woodworkers**.

Melissa Birdsong
Vice President, Trend, Design & Brand
Lowe's Companies, Inc.

If we profile you in an upcoming issue of *The Wood Post*, you'll receive a free Hitachi 14.4-volt 3/8-inch cordless drill/driver kit.



table of contents	
The Pros Know	3
TV Stand	4
Gate-Leg Table	8
Plate Rack	10
The Right Tools	12
Put It Together	14
Workshop	15
Handle on Hardware	16



PHOTOGRAPH: BRYAN JOHNSON

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 sleek butler's tray (shown at left). It is available online until October 23, 2006. Simply log on to **Lowe's.com/FreePlan**.

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.

Q&A

With the Experts at



I've tried a few projects that call for using dowels, and I'm having difficulty getting them to line up so that they fit properly and are not crooked. How can I accomplish this?

A: There are several specialized tools for aligning and drilling dowel holes, but it's possible to get good results just by carefully measuring, making a few shop-built jigs, and using some techniques that will guarantee alignment. Dowels or dowel pins often require a series of holes, and small errors accumulate to create alignment problems. To avoid this, always use the same tape measure when marking the workpieces. If the holes travel all the way through at least one of the parts, you also can clamp or tape the pieces together, and drill them both simultaneously.

A drill press especially enhances accuracy for this technique, and the tool also can be used to make guide blocks for working with larger pieces. Drill a scrap block (1 to 2 inches thick) with the hole size and spacing you need, and if necessary, fit it with some sort of indexing feature—an end stop or edge stop, or a dowel in one of the end holes. Then use the block with a handheld drill to ensure consistent hole placement on your workpiece. See the plate rack project on page 10 for the application of this technique.



I want to make sure that I select the correct hinge for the job every time, whether I am adding a door or connecting a large moving part. What should I look for in a hinge with my projects?

A: You're on the right track in recognizing that no one size or type of hinge works best for every situation. Here's some of what you have to consider: What kind of door, lid, or other part is the hinge supporting, and how much weight is involved? Where will the hinge mount, and do the parts align flush or with an offset? Is a self-closing feature useful or necessary? Will quick

disassembly and reassembly of the attached parts be required? Sorting out these issues will help point you toward the right hardware. And to make it easier, most manufacturers label hinges designed specifically for certain uses, such as entry doors, toy-box lids, cabinetry doors, and gates. Follow those guidelines to narrow your search.

The basic function of allowing one part to pivot or swing away from another part often can be handled with a simple butt hinge, either surface-mounted or nested in a shallow recess called a mortise. Entry doors and other large moving parts call for loose-pin hinges, with separate halves that can be mounted independently; carefully measuring and aligning is critical here. For furniture or cabinetry, concealed or decorative hinges often are favored. Some, such as European-style "cup" hinges, have adjustment features that let you fine-tune the door placement. Another example, the continuous hinge, is used in our gate-leg table project on page 8.

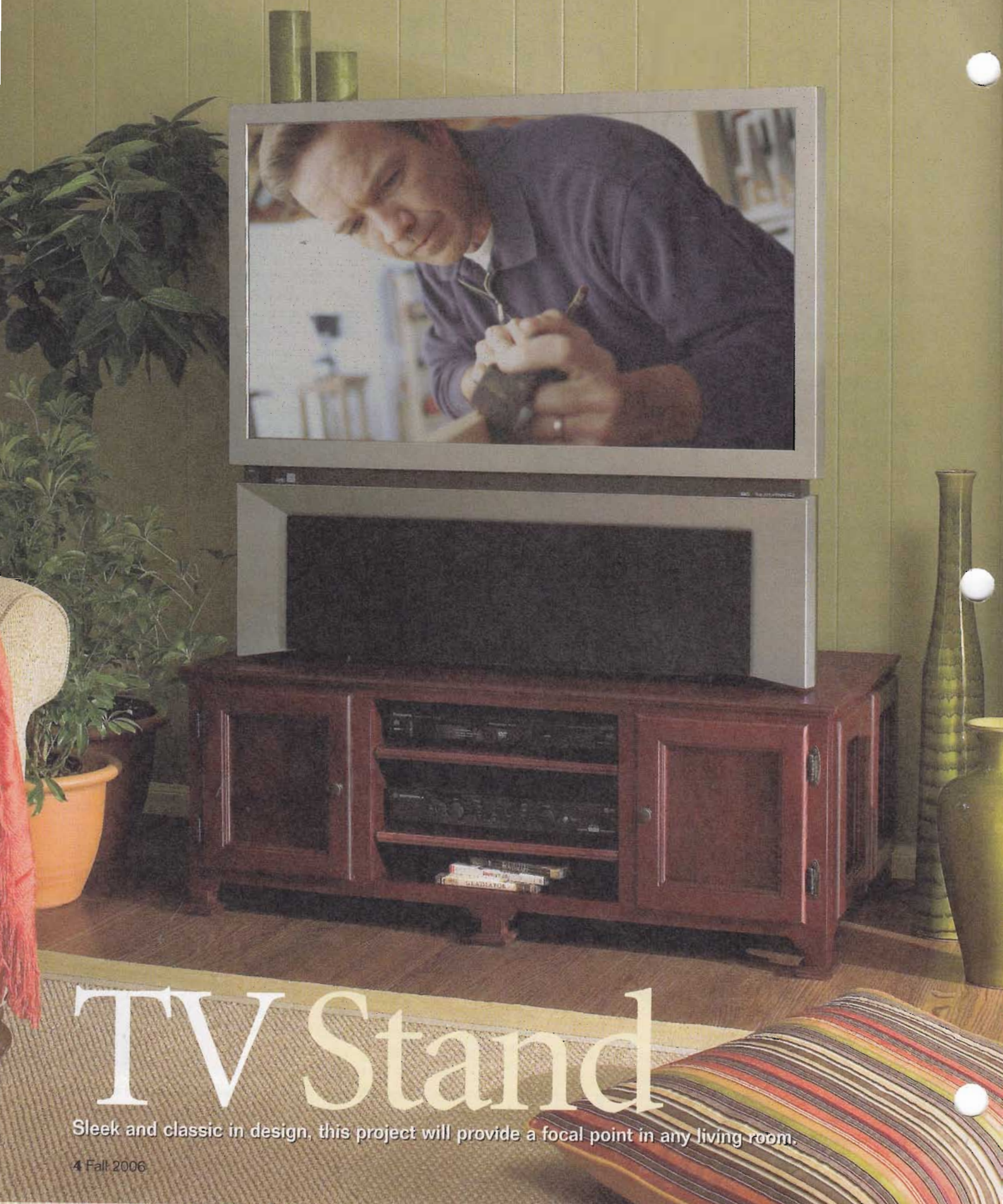
Sometimes I find that my jigsaw cuts aren't even from top to bottom, and the bottom of the cut is not perpendicular to the top of the cut. Can you give me any tips on how to get better results with my jigsaw?

A: Good jigsaw cuts depend on three things—the tool itself, the blade, and the user's technique. For the jigsaw, its blade should be sharp and have a well-defined set to the teeth so that the blade body can turn freely without binding. It's the binding pressure that's partly responsible for the deflection you can get when cutting thick lumber. Next, you need the right technique, as well as a bit of patience. Set the saw's orbital action to 0 or 1; a more aggressive orbit (set at 2 or 3) allows faster cutting but makes blade deflection more likely in curved cuts. Exert only enough pressure to guide the saw. Don't force the cut or "side-load" the blade with excess pressure by trying to steer the tool rather than the blade; instead, let the blade lead the tool. A jigsaw is used in our TV stand project on page 4.



PHOTOGRAPHS: JOHN O'HAGAN/SPC

feature project



TV Stand

Sleek and classic in design, this project will provide a focal point in any living room.

For many, the ultimate in home entertainment is a big-screen television, but it may be difficult to find a stand to hold it that won't break the bank. And, why buy when you can build? The clean lines and attractive design of this big-screen TV stand will fit any decor. Besides being super sturdy, it also features adjustable shelves and plenty of storage for all your audio and video gear.

Instructions:

General: Cut and label the parts as needed, using the Cut List as a guide and adjusting for fit. Use glue and appropriate-length nails for assembly unless otherwise specified. The shopping list calls for oak, but if you plan to paint this project use poplar boards and birch plywood.

Step 1: Build the front face frame.

a. Assemble the front rails and front stiles with glue and fine-thread pocket hole screws as shown in Figure 1.

Step 2: Build the back face frame.

a. Attach the back rails to the back stiles with glue and pocket hole screws as shown in Figure 2.

b. Attach the back mid stiles to the back rails in the same manner.

c. Attach the back panel to the back face frame assembly so it's flush with the top and ends; this leaves a $\frac{3}{4}$ -inch space at the bottom of the frame for the floor panel that's added later.

Step 3: Build the end face frame.

a. Attach the end stile to the end rails with glue and pocket hole screws as shown in Figure 3; repeat for the other end face frame.

Step 4: Prepare the skirts. The front and end skirts are made from lengths of 2 $\frac{3}{4}$ -inch-wide stock that are ripped in half to make matching pairs as shown in Figure 4.

a. Rip the stock for the skirts to width, and cut it $\frac{1}{2}$ inch longer than shown in the Cut List; you'll cut the skirts to the finished length later.

b. Draw a line centered on the width of each skirt along its full length; measure in 1 $\frac{1}{2}$ inches from each end along the centerline, and make a mark.

c. Drill a 1 $\frac{1}{2}$ -inch hole at each mark, and then rip the board in half along the centerline.

d. With a straightedge, draw a line connecting the apex of each hole; remove the waste between the holes using a jigsaw.

Step 5: Assemble the stand.

a. Attach two leg pieces using glue and nails to form a 1 $\frac{1}{2}$ -inch square, creating each leg. Make the front and back center legs in the same manner.

b. Using glue and pocket hole screws, attach the front face frame, the back face frame, and the end face frames to the legs so that their outer surfaces are flush as shown in Figure 5.

c. Cut $\frac{3}{4}$ -inch squares at each corner of the floor panel so that it will fit around the legs.

d. Attach the floor panel to the legs and all face frames using glue and nails; drive the nails through the frames and into the floor panel.

e. Attach the front center leg and the back center leg flush with and centered along the face frames.

f. Each divider must have pairs of holes drilled in one face to accept the shelf pins that support the shelves. To lay out these holes, first label the top and bottom of each divider. Then mark a vertical line 2 inches in from each end on the best face of each divider. Measure and mark up 3 inches from the bottom on these lines. Now make seven additional marks at 1 inch on center from the 3-inch mark. Drill holes for the shelf pins at these locations.

g. Attach the dividers using glue and nails so that the face of each divider with the holes is flush with the inside (center section) edge of its corresponding front stile, as shown in Figure 5.

Step 6: Add the shelf cleats, shelves, and the top panel.

a. Just like the dividers described in Step 5f, the shelf cleats must have holes drilled in them for shelf pins to support the side

shelves. Label the top and bottom of each shelf cleat; draw a line centered on the width of each piece along its full length.

b. Use the pin spacing described in Step 5f to lay out the shelf pin hole locations on the shelf cleats. Drill the holes for the shelf pins.

c. Attach the shelf cleats to the dividers and the end face frames as shown in Figure 5. Butt the cleats up against the legs and face frames so that the tops are flush; secure the cleats with glue and nails.

d. Attach the side shelf nosing to the front edge of each side shelf with glue and nails. Then attach the edging to the front edge of each of the center shelves.

e. Insert the shelf pins into the dividers and the shelf cleats, and then install the side shelves and the center shelves.

f. Cut the top panel to fit so that its grain runs parallel to the long dimension. Attach the top panel to the frame rails with glue and nails.

g. Scribe and miter cut the edging to fit along the front and sides of the top panel, and secure with glue and nails.

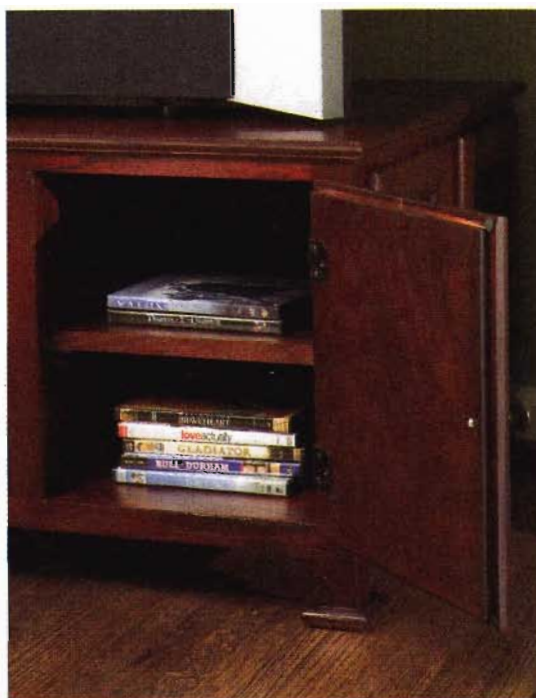
Step 7: Finish the legs, and install the skirts.

a. Scribe and miter cut the edging to fit around the base of each leg; attach the edging to the legs with glue and nails. (This is not necessary on the back center leg.)

b. From the skirt pieces prepared in Step 4, scribe to length, cut to fit, and attach the skirt pieces between the legs on the front and sides only with glue and nails.

Step 8: Build and install the doors and false doors. Note: The construction techniques used to build the doors and false doors are the same.

PHOTOGRAPHS: JOHN O'HAGAN/SPC



a. Build each door frame by attaching the rails to the stiles using glue and pocket hole screws as shown in Figure 6. Note: Because the perimeter of each frame will be rabbeted with a $\frac{3}{8}$ -inch rabbeting bit, make sure to locate the heads of the screws at least $\frac{1}{2}$ inch in from the outside edges of the frame.

b. Cut the door panels the same dimensions as the frames so that the grain runs parallel to the long dimension; then attach the door panels to the frames using glue and nails, taking care again to stay at least $\frac{1}{2}$ inch in from the perimeter edges.

c. Miter cut and attach the edging to the inside perimeter of each door frame with glue and brads.

d. Ease the outside edges of each door frame using a router fitted with a $\frac{3}{8}$ -inch roundover bit.

e. Cut or rout a $\frac{3}{8}$ -by- $\frac{3}{8}$ -inch rabbet on the outside perimeter edges of each door using a table saw with a dado blade, or a router fitted with a $\frac{3}{8}$ -inch rabbeting bit.

f. Attach $\frac{3}{8}$ -inch offset hinges and knobs to the doors; mount the doors to the stand using the screws provided with the hinges.

g. Attach the false doors to the end face frames using glue and nails.

Step 9: Apply a finish.

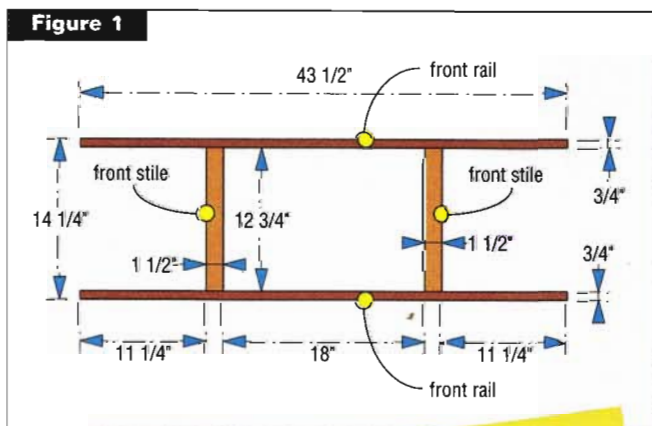
a. Fill all nail holes, sand smooth, and finish as desired. We used Olympic Red Mahogany stain, coated with wipe-on polyurethane, and then waxed.

Project #Fall061 ■

CUT LIST

Part Name	Material	Size (in inches)	Quantity
front rails	1 x 6	$\frac{3}{4}$ x $\frac{3}{4}$ x 43 $\frac{1}{2}$	2
front stiles	1 x 6	$\frac{3}{4}$ x 1 $\frac{1}{2}$ x 12 $\frac{3}{4}$	2
back rails	1 x 6	$\frac{3}{4}$ x 1 $\frac{1}{2}$ x 40 $\frac{1}{2}$	2
back stiles	1 x 6	$\frac{3}{4}$ x 1 $\frac{1}{2}$ x 14 $\frac{1}{4}$	2
back mid stiles	1 x 6	$\frac{3}{4}$ x 1 $\frac{1}{2}$ x 11 $\frac{1}{4}$	3
back panel	$\frac{1}{4}$ -inch plywood	$\frac{1}{4}$ x 13 $\frac{1}{2}$ x 43 $\frac{1}{2}$	1
end rails	1 x 6	$\frac{3}{4}$ x $\frac{3}{4}$ x 20 $\frac{1}{2}$	4
end stiles	1 x 6	$\frac{3}{4}$ x 1 $\frac{1}{2}$ x 12 $\frac{3}{4}$	2
legs	1 x 6	$\frac{3}{4}$ x 1 $\frac{1}{2}$ x 17 $\frac{1}{4}$	8
back center leg	1 x 6	$\frac{3}{4}$ x 1 $\frac{1}{2}$ x 3	2
front center leg	1 x 6	$\frac{3}{4}$ x 1 $\frac{1}{2}$ x 3	2
floor panel	$\frac{3}{4}$ -inch plywood	$\frac{3}{4}$ x 22 $\frac{1}{2}$ x 45	1
top panel	$\frac{3}{4}$ -inch plywood	$\frac{3}{4}$ x 24 x 46 $\frac{1}{2}$	1
dividers	$\frac{3}{4}$ -inch plywood	$\frac{3}{4}$ x 13 $\frac{1}{2}$ x 22 $\frac{1}{4}$	2
shelf cleats	1 x 6	$\frac{3}{4}$ x 1 $\frac{1}{2}$ x 13 $\frac{1}{2}$	8
front skirts	1 x 6	$\frac{3}{4}$ x 1 $\frac{1}{2}$ x 21	2
end skirts	1 x 6	$\frac{3}{4}$ x 1 $\frac{1}{2}$ x 20 $\frac{1}{2}$	2
side shelves	$\frac{3}{4}$ -inch plywood	$\frac{3}{4}$ x 11 $\frac{1}{16}$ x 20 $\frac{1}{2}$	2
side shelf nosing	1 x 6	$\frac{3}{4}$ x $\frac{3}{4}$ x 11 $\frac{1}{16}$	2
shelves	$\frac{3}{4}$ -inch plywood	$\frac{3}{4}$ x 17 $\frac{1}{2}$ x 22	3
door panels	$\frac{1}{4}$ -inch plywood	$\frac{1}{4}$ x 11 $\frac{1}{2}$ x 13 $\frac{1}{2}$	2
door rails	1 x 6	$\frac{3}{4}$ x 1 $\frac{1}{2}$ x 8 $\frac{1}{2}$	4
door stiles	1 x 6	$\frac{3}{4}$ x 1 $\frac{1}{2}$ x 13 $\frac{1}{2}$	4
false door stiles	1 x 6	$\frac{3}{4}$ x 1 $\frac{1}{2}$ x 13 $\frac{1}{2}$	8
false door rails	1 x 6	$\frac{3}{4}$ x 1 $\frac{1}{2}$ x 7 $\frac{1}{16}$	8
false door panels	$\frac{1}{4}$ -inch plywood	$\frac{1}{4}$ x 10 $\frac{1}{16}$ x 13 $\frac{1}{2}$	4
edging	shelf edging	$\frac{3}{4}$ x $\frac{1}{2}$ x scribe to length	50

Figure 1



Strong joinery in this TV stand can make the difference. See Put It Together on page 14 for helpful joinery tips.

Figure 2

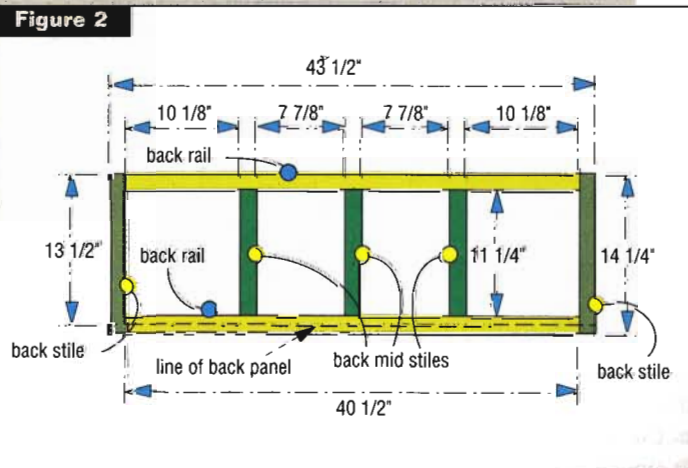


Figure 3

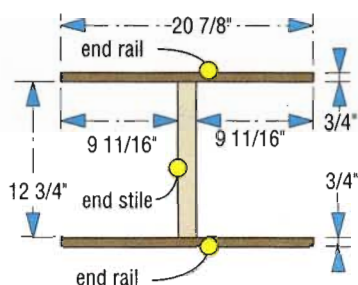


Figure 4

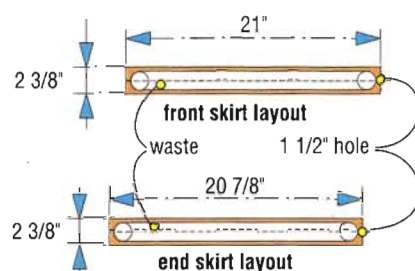
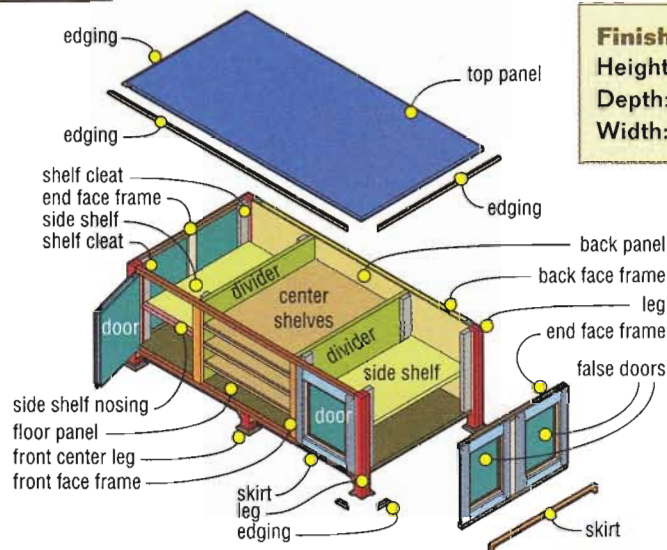


Figure 5



Finished Dimensions:

Height: 18 inches

Depth: 25 inches

Width: 47 1/2 inches



TOOL LIST

- table saw (or circular saw with a straightedge guide)
- miter saw (or handsaw with miter box)
- jigsaw (or band saw)
- router with 3/8-inch rabbeting bit and 3/8-inch roundover bit
- power sander and various grits of sandpaper
- drill/driver (or drill press) and 1 1/2-inch Forstner bit, and a 1/4-inch brad-point bit
- K3MS Kreg Jig K3 Master System
- pneumatic nail gun (or hammer)
- clamps
- tape measure
- pencil

LOWE'S LIST

Lumber*

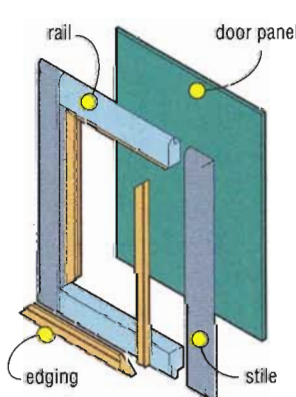
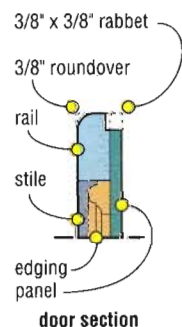
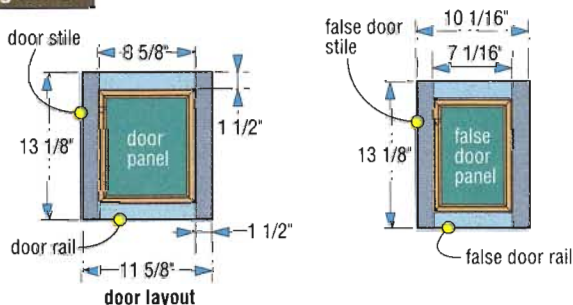
- 4 (8-foot-long) 1 x 6s, oak
- 1 (48- x 96-inch) sheet of 1/4-inch-thick oak plywood
- 2 (48- x 96-inch) sheets of 3/4-inch-thick oak plywood
- 6 (8-foot-long) pieces of 3/4- x 1/2-inch oak shelf edging

Hardware & Supplies

- 1 box 4d finishing nails
- 1 box (#18 x 3/4-inch) wire brads
- 1 box (1 1/4-inch) Kreg pocket hole screws (fine thread)
- 1 package (20) shelf pins
- 4 (3/8-inch offset) self-closing hinges, antique brass*
- 2 cabinetry door knobs, antique brass
- stainable wood filler
- wood glue
- polyurethane
- stain (Olympic, Red Mahogany)
- paste wax

*Availability varies by market.

Figure 6



Gate-Leg Table

Enjoy games or hobbies on this space-saving piece.

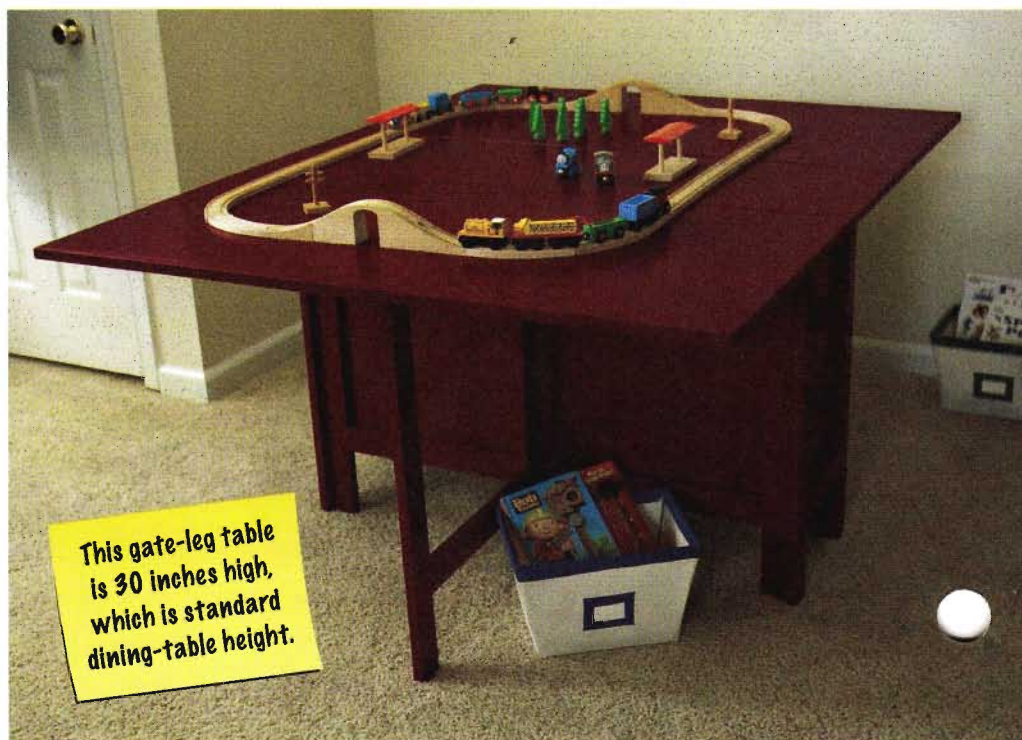
If your dining room table is not ideal for tabletop activities, our folding gate-leg table is the perfect solution. In its stored position, it can serve as a narrow hall table or sofa table. But open one or both of its leaves, and you will have a large work surface for crafts, sewing—or even model railroading.

Instructions:

General: Cut and label the parts as needed, using the Cut List as a guide and adjusting for fit. Use glue and appropriate-length nails for assembly unless otherwise specified. The shopping list (on opposite page) calls for poplar, hardboard, and birch plywood, but if you plan to stain this project use oak and oak plywood instead.

Step 1: Build the base assembly.

- a. Drill two pocket holes in each end of the side center stiles, side rails, and end rails.
- b. Build the end face frame by attaching the end rails to the end stiles using glue and pocket hole screws. Note: The top of the end rail should be flush with the top of the end stiles, and the bottom of the lower end rail should be 6 inches above the bottom of the stiles. (See Figure 1.)
- c. Using glue and wire brads, attach the end panel to the inside face of the end face frame (the face of the rail/stile assembly with the pocket holes). The end panel should be centered on the width of the end face frame and flush on top. Repeat for the other end assembly.
- d. Build the side assemblies using the same process as described for the end assemblies. Attach each side center stile centered on the side rails (see Figure 1).
- e. Attach the end assemblies to the side assemblies; the face of each side assembly should be set back $\frac{3}{4}$ inch from the edges of the end face frames (this allows clearance for the swinging leg assemblies as shown in Figure 5).
- f. Assemble the legs in the same manner as the end/side frames using glue and pocket hole screws (see Figure 2).



PHOTOGRAPHS: JASON WALLIS / STYLING: MOLLY CLARK

- g. Attach one half of a piano hinge (and the screws provided) to the back edge of each leg hinge stile. Note: A self-centering punch will ensure that the screws are perfectly placed. (You will need to cut the hinges with a hacksaw to match the length of the leg hinge stile.)
- h. Position each leg assembly $\frac{1}{8}$ inch from the end panel and $\frac{1}{8}$ inch below the top of the side panel. Refer to Figure 5 for swing of the legs. Then attach the other half of the piano hinge to the side assembly.

Step 2: Build the table top and leaves.

- a. Rip enough $\frac{3}{4}$ - x $\frac{3}{4}$ -inch material from the 1 x 6 for the long and short top nosing.
- b. Scribe and miter cut the nosing to fit, and attach it to the table top with glue and brads (see Figure 3).
- c. Repeat this process to build the two table leaves (see Figure 4).

Step 3: Assemble the table.

- a. Attach the table top to the base assembly.

- b. Attach the table leaves to the table top using piano hinges and the screws provided (see Figure 5).

- c. Attach a nail-on furniture glide to the bottom of each leg stile and end stile.

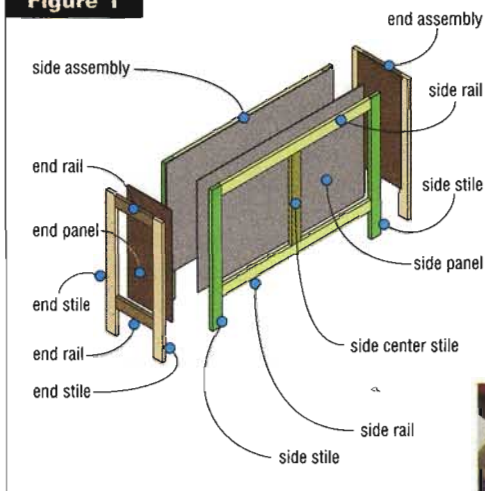
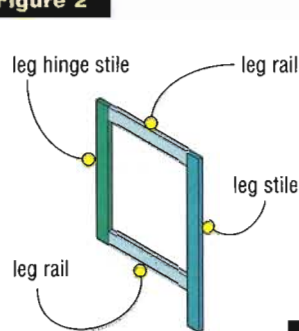
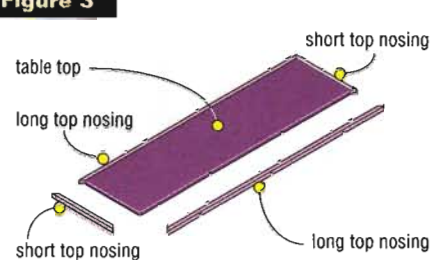
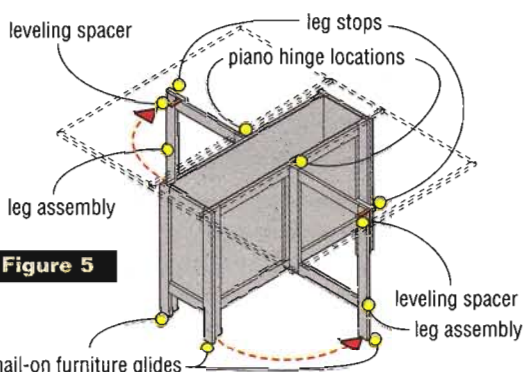
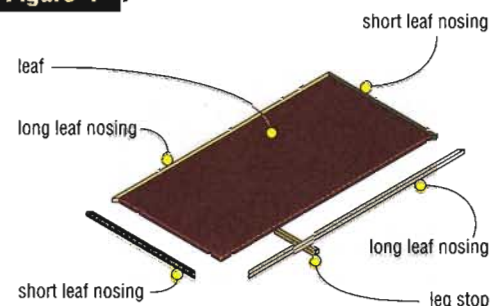
- d. Lift up both leaves, and extend the legs. Adjust the legs until they are perpendicular to each side assembly. Then attach a leg stop to the underside of each table leaf adjacent to the legs and flush with the end of each leg stile.

- e. Place a straightedge across the top of the table, and clamp the leaves to the straightedge. Carefully measure the space between the top of the legs and the bottom of the leaves. Cut a spacer $\frac{3}{4}$ -inch wide by 3-inches long to that measured thickness. Attach the spacer adjacent to and perpendicular to the leg stop, ensuring a flat work surface.

Step 4: Apply a finish.

- a. Fill all nail holes. Then sand and paint in the color of your choice.

Project #Fall062 ■

Figure 1**Figure 2****Figure 3****Figure 4****Figure 5**

TOOL LIST

- table saw (or circular saw with a straightedge guide)
- miter saw (or handsaw with miter box)
- K3MS Kreg Jig K3 Master System
- power sander and various grits of sandpaper
- drill/driver with bits
- hacksaw with a metal cutting blade
- pneumatic nail gun (or hammer)
- self-centering punch
- straightedge
- clamps
- tape measure
- pencil



Finished Dimensions:

Height: 30 inches
Depth: 48 inches
Width: closed, 15½ inches;
 open, 62 inches

LOWE'S LIST

Lumber*

- 5 (8-foot-long) 1 x 6s, poplar
- 1 (48- x 96-inch) sheet of ⅝-inch-thick hardboard
- 1 (48- x 96-inch) sheet of ¾-inch-thick birch plywood

Hardware & Supplies

- 1 box (1¼-inch) Kreg pocket hole screws
- 1 box 4d finishing nails
- 1 box 6d finishing nails
- 1 box (#18 x ¾-inch) wire brads
- 2 (30- x 1½-inch) piano hinges, brass
- 2 (48- x 1½-inch) piano hinges, brass
- 1 package (¾-inch) nail-on furniture glides
- wood glue
- stainable wood filler
- 1 quart of red paint (American Tradition by Valspar, Posh Red #1011-4, semi-gloss)

*Availability varies by market.

CUT LIST

Part Name	Material	Size (in inches)	Quantity
end rails	1 x 6	¾ x 2¼ x 9	4
end stiles	1 x 6	¾ x 2¼ x 29¼	4
end panels	hardboard	¼ x 10½ x 23¼	2
side rails	1 x 6	¾ x 2¼ x 36	4
side stiles	1 x 6	¾ x 2¼ x 29¼	4
side center stiles	1 x 6	¾ x 2¼ x 18¾	2
side panels	hardboard	¼ x 24¼ x 40	2
leg rails	1 x 6	¾ x 2¼ x 15½	4
leg hinge stiles	1 x 6	¾ x 2¼ x 23	2
leg stiles	1 x 6	¾ x 2¼ x 29	2
table top	birch plywood	¾ x 12½ x 46½	1
long top nosing	1 x 6	¾ x ¾ x 48	2
short top nosing	1 x 6	¾ x ¾ x 14	2
leaves	birch plywood	¾ x 22½ x 46½	2
long leaf nosing	1 x 6	¾ x ¾ x 48	4
short leaf nosing	1 x 6	¾ x ¾ x 24	4
leg stops	1 x 6	¾ x ¾ x 3	2
leveling spacers	1 x 6	¾ x scribe to fit x 3	2

weekend project

Plate Rack

Create a piece that's designed for both storage and display with this simple project.



PHOTOGRAPHS: JOHN O'HAGAN/SPC

Whether your home has an eat-in kitchen area or a formal dining room, a plate rack is a great way to showcase your dinnerware while keeping it readily accessible. Our easy-to-make version holds a dozen plates in the rack, and it features a lower shelf for small dishes or bowls. Additionally, you can install hooks under the shelf for hanging cups or mugs.

Instructions:

General: Cut and label the parts as needed, using the Cut List as a guide and adjusting for fit; measure the plates that you intend to store, and alter the rack's height if necessary. Use glue and appropriate-length nails to attach all parts unless otherwise specified. The shopping list (on opposite page) calls for poplar, but if you plan to stain this project use oak.

Step 1: Build the base assembly.

Make the plate rails, which will hold the dowels that separate the plates. The simplest way to ensure the dowels line up is to stack all four rails together, and then drill the holes at once.

a. Scribe a centerline along the length of a plate rail. Lay out the locations of the $\frac{3}{8}$ -inch-diameter holes; they start 2 $\frac{1}{2}$ inches from

each end and are spaced 2 $\frac{1}{2}$ inches apart (see Figure 1).

b. Stack the plate rails on top of each other with the marked rail on top, and then clamp the rails together. If you don't have a bit long enough to drill through all four rails, drill the rails in pairs.

c. Slip a scrap of wood under the stacked rails, and drill $\frac{3}{8}$ -inch-diameter holes through the entire stack at each marked location. For tips on this step, see The Pros Know on page 3.

Step 2: Prepare the side panels.

a. Lay out the curved recess on one of the side panels as shown in Figure 2.

b. Clamp the two side panels together with the marked panel on top, and cut both pieces at the same time so that they will match exactly.

c. Mark the locations of both sets of plate rails on both faces of the side panels, per Figure 2, to aid in assembly later.

Step 3: Assemble the plate rack.

a. Attach the side panels to the top and bottom panels with glue and screws (see Figure 3).

b. Glue one pair of plate rails to the underside of the top panel as shown in Figure 1.

c. Glue the dowels into the holes in the plate rails that you just attached to the top panel. Apply a small dollop of glue inside each hole before you slip in a dowel; once in place, rotate the dowel to spread the glue evenly.

d. Slip the remaining pair of plate rails over the ends of the dowels; start at one end, and angle the rail slightly to align the dowels with the holes. Tap the plate rail in place using a mallet until the dowels bottom out in the holes in the plate rails.

e. Attach the plate rails to the side panels at the marks made in Step 2c using glue and screws. Note: Countersink the screws approximately $\frac{1}{4}$ inch below the surface of the side panel. (See Figure 4.)

f. Plug the plate rail holes with scraps of dowels. Apply glue inside the countersink, and then insert the dowel, rotating as you insert it.

g. After the glue has set, use a handsaw to cut the dowels flush with the side panels. Tip: To keep the saw teeth from scoring the side panels, drill a $\frac{1}{8}$ -inch-diameter hole into a couple of old playing cards (or note cards), and slip these over the dowels before you saw; the cards will protect the side panels as you saw off the excess dowel. Remove the cards, and sand the plugs flush.

h. Add nosing to the top and bottom panels and the side panels as shown, scribing and cutting them to length.

Step 4: Apply a finish.

a. Fill all nail holes.

b. Sand, and then paint the plate rack in the color of your choice.

Step 5: Attach to the wall.

a. Attach picture hangers to the back of the top panel.

b. To attach the plate rack to a wall, locate studs to drive in nails or screws for the picture hangers, or install a suitable hollow-wall anchor.

c. Use cups or mugs to determine your desired spacing for the cup hooks, and then screw the hooks into the underside of the bottom panel.

Project #Fall063 ■



TOOL LIST

- table saw (or circular saw with a straightedge guide)
- miter saw (or handsaw with miter box)
- jigsaw (or bandsaw)
- power sander and various grits of sandpaper
- drill/driver with bits and #10 countersink bit
- handsaw
- pneumatic nail gun (or hammer)
- mallet
- clamps
- tape measure
- old playing cards or note cards
- pencil

LOWE'S LIST

Lumber*

- 2 (6-foot-long) 1 x 2s, poplar
- 2 (6-foot-long) 1 x 12s, poplar
- 2 (8-foot-long) pieces of $\frac{3}{4}$ x $\frac{1}{2}$ -inch half-round moulding
- 8 (4-foot-long) $\frac{3}{8}$ -inch-diameter dowels

Hardware & Supplies

- 1 box (#7 x $1\frac{1}{2}$ -inch tan) Phillips II composite screws
- 1 box 4d finishing nails
- 1 box 6d finishing nails
- 1 box (#18 x $\frac{3}{4}$ -inch) wire brads
- 1 package of cup hooks
- 1 package of picture hangers
- wood glue
- stainable wood filler
- 1 quart of blue paint (American Tradition by Valspar, Quarry Pond #5011-10, semi-gloss)

*Availability varies by market.

Figure 1

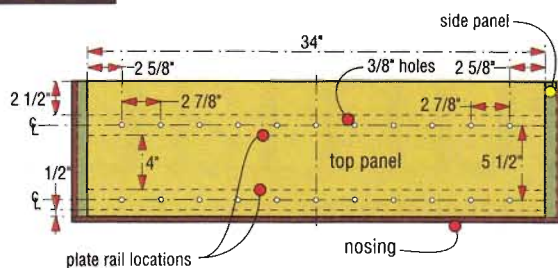


Figure 2

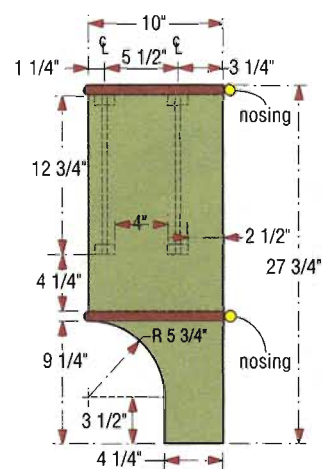


Figure 4

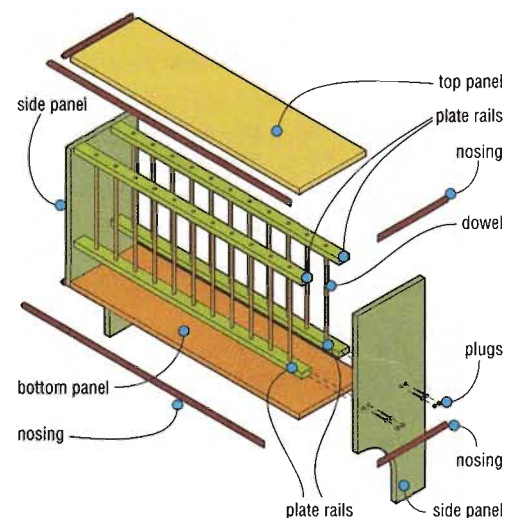
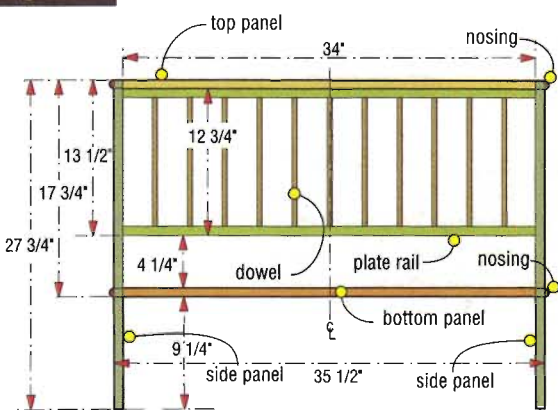


Figure 3



Finished Dimensions:

Height: 27 inches
Depth: 10 1/2 inches
Width: 36 1/4 inches

CUT LIST

Part Name	Material	Size (in inches)	Quantity
plate rails	1 x 2	$\frac{3}{4}$ x $1\frac{1}{2}$ x 34	4
top panel	1 x 12	$\frac{3}{4}$ x 10 x 34	1
bottom panel	1 x 12	$\frac{3}{4}$ x 10 x 34	1
side panels	1 x 12	$\frac{3}{4}$ x 10 x 27 3/4	2
dowels	dowel	$\frac{3}{8}$ x $\frac{3}{8}$ x 12 3/4	22
long nosing	half-round moulding	$\frac{3}{8}$ x $1\frac{1}{2}$ x 36 1/4	2
short nosing	half-round moulding	$\frac{3}{8}$ x $1\frac{1}{2}$ x 10 1/2	4
plugs	dowel	$\frac{3}{8}$ x $\frac{3}{8}$ x 1/4	8

Pneumatic Tools

Project assembly and trim installation are a snap with a compressor and nailer.

If you're considering upgrading your tool collection, a pneumatic nailer might be a good place to start. It will turn time-consuming tasks into streamlined dreams. Think of the last time you assembled a project using a hammer and nails—with a pneumatic nailer, you'll save your back (and possibly a thumb), as well as tons of time.

With a nailer, you also will experience a "cool factor," which is a satisfying whoosh of air as a nail is driven into the wood and the knowledge that you are using a gadget the pros rely on every day.

The Air Tool Advantage

While they've been a standard for professionals, pneumatic, or air tools, are frequently becoming more common for many do-it-yourselfers as well as woodworkers. The tools are lightweight, easy to use, and efficient. Compared to their electric-corded counterparts, they also have a higher power-to-weight ratio. Plus, they heat up while being used—a great feature when you are putting together one of our projects featured in this issue or adding quarter-round trim to the baseboards in your kitchen.

The Right Equipment

In order to become a pneumatic nailer guru, however, you'll need to procure an air compressor. It's the lifeblood of all air tools, supplying a constant flow of air (and power) to your tool of choice.

Hand in hand, the compressor and nailer will see you through any household project. Before you start, it's important to understand the key components of these two pieces of equipment.

Parts of a Compressor

① Pressure Switch

Essentially the on/off switch, this piece controls the compressor's power. When turned on, the motor and pump compress air until the tank's operating pressure reaches the limit set at the factory. The "cut in" pressure also is established during manufacturing. When the pressure in the tank falls below this predetermined setting, the compressor compresses air automatically to reach the operating pressure again.

② Tank Pressure Gauge

Displayed in PSI (pounds per square inch), this gauge shows how much air pressure is in the tank at any given time.

③ Regulated Pressure Gauge

This instrument will display the quantity of air pressure that is allowed into the discharge line.

④ Regulator Knob

The amount of air pressure available at the discharge line is set by this device. It maintains constant pressure to the tool connected to the air compressor.

⑤ Drain Cock

Condensation moisture is formed during the process of mechanically compressing air, and this valve's job is to drain it from the tank. Draining can be done once a day in dry climates, but it will need to be done several times a day in hot and humid weather.



Parts of a Nailer

Using a pneumatic nailer will make creating the projects in this issue a breeze!

1 Trip

Located where the nail leaves the nailer, the trip must be pressed against a surface in order to release a nail when the trigger is pulled. Bostitch nailers offer two types of trips—a Contact Trip and a Sequential Trip. Contact Trips rapidly drive nails when the trigger is pulled and held and the trip is repeatedly bumped against the work surface. Sequential Trips will only drive another nail when the trigger is continually pulled.

2 Trigger

This mechanism activates the nail gun. Bostitch Contact Trip Nailers feature black triggers, while Sequential Trip Nailers have silver-gray ones.

3 Magazine

Nails are contained in this component prior to delivery, and held in place by a spring mechanism.

4 Fitting/Hose Connection

This is the location where the hose from the air compressor connects to the nailer.



All-In-One

This Bostitch 3-Tool Compressor Combination Kit (#236551) includes a 6-gallon air compressor, 16-gauge finish nailer, 18-gauge brad nailer, 18-gauge narrow crown stapler, hose, and compressor accessories.

Air Tool Tips

- Always wear proper ear and eye protection.
- Avoid carrying the tool with the trigger pulled.
- Never point the tool toward yourself or anyone else.
- Disconnect the air supply when the tool is not in use.
- Always use regulated compressed air. And set the compressor for the appropriate air pressure for the tool being used; you should not exceed this rating.



put it together

Pocket Hole Joinery

Learn the secret to making strong wood joints the fast and easy way.

Professional furniture makers have used pocket hole joinery for years ... and for good reason. It's a simple way to achieve a strong, permanent joining of two pieces of wood. Now you can easily make pocket hole joints for your projects at home. All it takes is a pocket hole jig and your portable drill.

Pocket Hole Basics

So exactly what is a pocket hole, and what's so special about it? A pocket hole is simply a hole drilled at an angle that forms a "pocket" for the screw to sit into. Think of it as a "highly engineered" toe-nailing technique. What makes it precise is the design of the pocket hole jig that guides the drill bit into the wood at a specific angle to produce an "engineered" hole to house the screw head.

After the pocket hole is drilled, a specially designed fastener is used to assemble the joints. These case-hardened screws are designed with self-drilling tips that will not split the wood while the screws are driven in, even in hardwoods such as oak and maple.

One of the advantages of pocket hole joinery is that you only need to use one clamp to complete a project—because each joint is assembled individually.

Another advantage is that there's no need to wait for the glue to dry before continuing on with your project. Once you drive the screws, the joint is permanently assembled, allowing you to continue building and giving you the opportunity to complete your project in hours rather than days!



Two Simple Steps to Wood Joinery

These two steps will allow you to create strong, professional wood joints in a fraction of the time needed with other joinery methods.

First, drill the pocket hole. A special step drill bit not only drills the pocket hole, but it also drills the guide hole for the screw in one quick motion. Simply clamp the pocket hole jig securely to your wood, and drill the hole.

The second step is to align the pieces to be joined; temporarily clamp to hold in position; and then drive the screws. A variety of specialized clamps for assembling pocket holes are available, and a standard version comes in the Rocket™ Jig Kit or the Kreg Jig® K3 Master System shown below.

Who can use pocket hole joinery?

Everyone from the do-it-yourselfer to the trim contractor and the professional cabinetmaker can use pocket hole joinery to build stronger, more professional wood joints in less time. The practical applications are endless. Cabinets, bookshelves, tables, chairs, and even simple garage storage can all be joined easily. Once you realize how fast, strong, and simple pocket hole joinery is, you'll wonder how you ever got along without it!

Choose from three different pocket hole jig options (pictured below), all available at Lowe's.



Mini Kreg Jig® Kit (#205297)
A starter kit for pocket hole joinery. Great for repairing tables and chairs.



Rocket™ Jig Kit (#205289)
Extremely portable mid-range tool—perfect for on-site applications.



Kreg Jig® K3 Master System (#168410)
The ultimate package for the serious do-it-yourselfer.

The Grip on Clamps

A variety of clamps is a must for the well-equipped woodworking shop.

It's an obsession—and the more wood-working you do, the stronger it becomes. Clamps are available in a dizzying array of shapes and sizes, and eventually you'll want them all. Simply think of each clamp as an extra pair of hands, and you'll know just what we mean.

For applying concentrated pressure during any project, clamps are great tools to have in the shop—and using various kinds simultaneously will prove handy. While many clamps can perform a number of tasks, most excel at only a few. That's why variety and quantity are both so important.

Not only can clamps provide pressure on glue joints, but they also can be used to secure guide boards to a drill press or router table, clamp workpieces to a jig base for machining, or coax tight-fitting parts together.

Our plate rack project on page 10 is a good example. Also, projects that require gluing often involve numerous clamping points, requiring multiples of the same clamp.

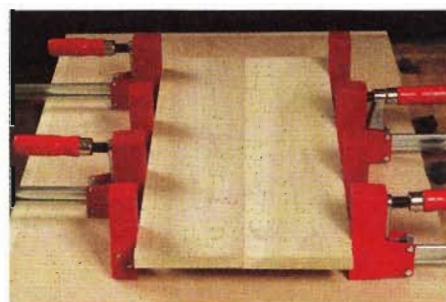
The Basic Menu

There are a few types of clamps with specific functions. C-clamps are inexpensive and especially useful for securing stop blocks, portable fences, and other cutting-guide hardware. Pipe clamps feature interchangeable heads and jaws fitted to standard ½- or ¾-inch plumbing; buy pipe in lengths of up to 10 feet, and switch it out as the project dictates.

The low jaw height of pipe clamps limits their use to mostly edge gluing, so have a few bar clamps on hand for greater reach. Bar clamps typically come equipped with a flat steel bar and a swivel head jaw or, in the case of the Bessey K-Body clamps (shown at right), a set of rigid parallel jaws that ensure better workpiece alignment. Get at least one pair of bar clamps with reversible jaws (great for furniture disassembly) and a pair that can be set or adjusted with just one hand; Irwin's Quick-Grip series offers a variety of clamps of this type. Add a few spring clamps to the mix, and you'll have a good starter set.

Specialty Clamps

For some projects, you may need holding power that your standard clamps cannot provide. That's where specialty clamps can help. Band (or strap) clamps feature a long nylon band that accommodates the irregular shapes, such as chair frames or cylinders, found in more complex projects. Handscrews are traditional joiner's clamps with wooden jaws; these will allow you to vary the angles of the jaws and even offset them to accommodate unusual assemblies.



PHOTOGRAPH: JOHN O'HAGAN/SPC

**STRONGER &
3X
FASTER***



*Test consisted of bonding Beech to Beech. Sumo Glue™ clamp time was 3 times shorter than the leading brand.



**FREE
SAMPLE!**
Of 2oz Sumo™ Glue.

Download a coupon by going to Lowes.com/Promotions and enter your personal PIN number located on the address panel. Limited time only.

Loctite® Sumo™ Glue is a revolutionary polyurethane adhesive that is **stronger and 3X faster!***

- Bonds wood, stone, metal, ceramic, brick, foam and much more
- Foams 60% less*
- Reduces clamp time
- Cures translucent white

LOCTITE®



**SUMO
GLUE™**

handle on hardware

Continuous Hinges

Large moving parts are a cinch with these powerhouse pieces of hardware.

Making something bigger is not always the key to improving it; just ask the crew that built the *Spruce Goose*, Howard Hughes's enormous wooden seaplane. For some woodworking hardware, however, that strategy works just fine. Take an ordinary butt-hinge design and stretch it to 4 feet in length, and you have the continuous hinge—the strong and versatile performer we feature in our gate-leg table project on page 8.

Most commonly used to mount the “fall board” that covers the keys of a piano, this hinge type became known generically as a piano hinge, but its uses are much broader.

Continuous hinges excel at supporting large, heavy lids and similar furniture components that would stress an ordinary pair of hinges. Commonly available lengths are 12, 24, 30, and 48 inches; industrial versions can be much longer.

Surprisingly, the steel plates, or “leaves,” on standard-duty versions are not any wider or thicker than those of a small, lightweight butt hinge. The key to their strength lies in the



PHOTOGRAPH: JOHN O'HAGAN/SPC

multiple points of attachment to the wood (a long row of screw holes) and the uninterrupted support of the long hinge pin. By spreading the stress and weight load along its entire length, a continuous hinge can keep a low profile and still perform like a powerhouse.

Installation Tips

- Unless there are compelling aesthetic reasons to downsize the hardware, use as wide a hinge as the edge of the workpiece will accommodate. This helps keep the screws in the center of the stock so there's less risk of splitting.
- Clamp the hinge to at least one workpiece to hold it securely while you get the screws in. Fasten the far ends of the hinge first, and then intermittently along the length until you're satisfied that the hinge is straight and properly aligned. Then remove the clamp, and fasten at the remaining screw holes.
- Use a spring-loaded center punch to create accurate starter holes for the hinge screws. Too many off-center screw placements can force the hinge out of alignment.



Enjoy this complimentary issue. To continue receiving this FREE, no-obligation newsletter, sign up today at Lowe's.com/Woodworkers or call toll free 1-877-LOWES-04 (569-3704).

1005-03

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.

Print. Std.
U.S. Postage
PAID
Permit No. 1455
Pewaukee, WI