

# Easy Glider

Build a comfortable outdoor seat in time for spring

by Vern Grassel



*Our glider features metal swing arms that are easy to install and provide a smooth gliding motion.*

When you're choosing a spot to enjoy a spring morning, you can't beat the gentle rhythmic motion of a glider. Combining the looks of a bench with the action of a rocker and a swing, gliders appeal to just about everyone. And because they don't require a structure above for support, gliders offer more placement flexibility than swings.

The most common glider designs incorporate a bench-style seat frame that rides on four swing arms attached to a base frame. Glider swing arms can be made of wood or metal. We used metal swing arms (see SOURCES ONLINE) because they feature enclosed bearings for smooth operation and long life and were inexpensive and easy to install.

Building a glider isn't difficult. This

design is intended to be attractive and comfortable but simple enough that anyone with basic woodworking skills can build it. I used dado and half-lap joinery for most of the connections and fastened the joints with exterior wood glue and deck screws. These joints are stronger than plain butt joints but are not difficult to create. I used a table saw and router for most of the milling operations, but you could achieve similar results with a circular saw.

All parts are cut from standard dimensional lumber (1x6s, 2x4s and 2x6s) available at most home centers. The seat slats are shorter than 4 ft. to allow the use of common 8-ft. boards. Because this glider was destined for a semiprotected porch location, we made it from poplar and applied exterior-grade paint. If

you plan to place the glider outside, use a more weather-resistant lumber such as cedar, redwood, cypress or white oak.

## Cut out the parts

When milling the stock, first cut it to length; then rout any dadoes or rabbets and rip it to the final width or cut the shaped profiles. Next, cut the frame pieces to length. Note the 2-degree miter cuts on the ends of the three seat supports and the bottom of the center backrest.

Locate the rabbet and dado positions on each piece (see drawing, p. 14). I used a router equipped with a 3/4-in.-dia. straight bit to cut the dadoes and rabbets. Clamp matching parts together, making sure that the layout lines are aligned, and rout them at the same time (photo 1,

PHOTOS BY MARK MACEMON AND DAN CARY

# PORCH GLIDER

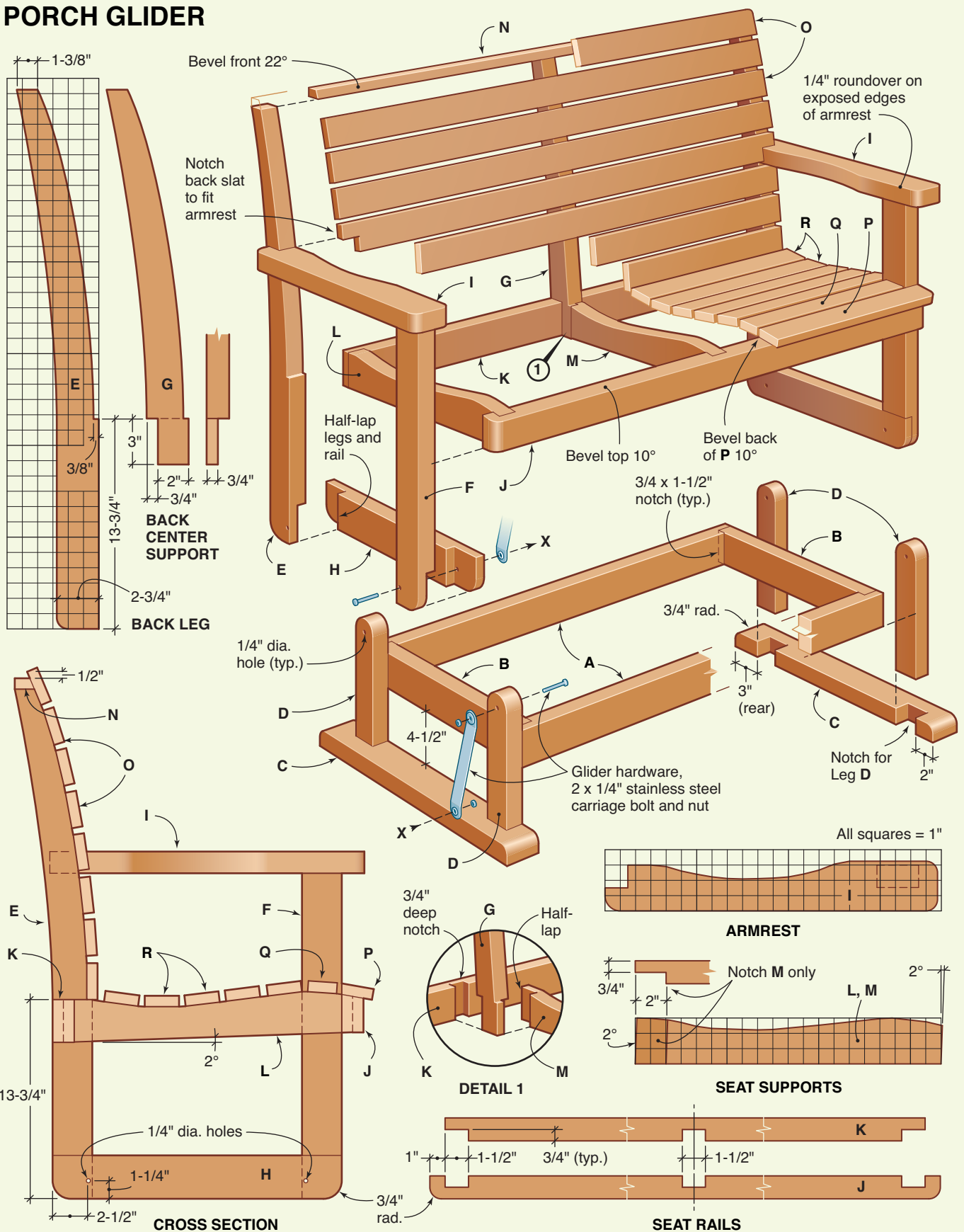
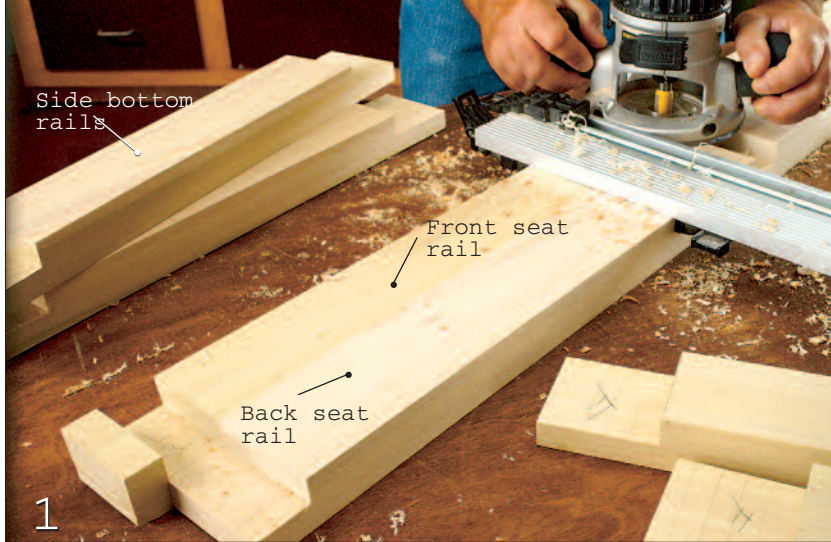


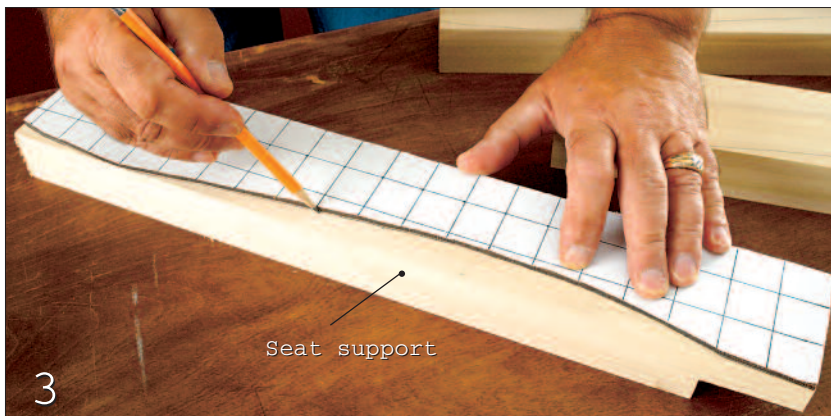
ILLUSTRATION BY GABRIEL GRAPHICS



Use a straightedge to guide the router while cutting the rabbets and dados. Make several passes, lowering the router 1/8 to 1/4 in. with each pass.



Rip a 10-degree bevel along the top edge of the front seat rail J (pictured) and the back edge of the front seat slat P, and rip a 22-degree bevel along the front edge of the top crosspiece N.



Make templates for each shaped piece by transferring the drawings to a 1 x 1-in. grid adhered to hardboard. Then trace the template onto the workpiece.

above). If you don't have a router, you can cut the dados and rabbets with a circular saw (see "Circular Saw Option," p. 16).

Once you've cut all the dados and rabbets, rip the straight pieces to their final widths. Rip a 10-degree bevel

along the top edge of the front seat rail J (photo 2) and the back edge of the front seat slat P. Rip a 22-degree bevel along the front edge of the top crosspiece N.

Next, you'll need to cut the shaped pieces. I made hardboard templates

(photo 3) first before drawing the curves on the actual stock. I transferred the pattern for each piece (see drawing) to a full-scale grid of 1-in. squares that I drew on paper.

Draw the patterns on the full-scale grids as they appear in the illustrations. Fasten the patterns to 1/4-in. hardboard with spray adhesive and cut them out with a jigsaw. Sand the edges of the templates smooth and trace them onto the stock. Then cut out each piece with a jigsaw (photo 4, p. 16).

**Tip:** To make cutting the stock easier, I placed a piece of rigid-foam insulation that is thicker than the maximum blade cutting depth under the workpiece. The foam supported the workpiece and waste, allowing me to stop and reposition during cuts without reclamping along the edge of the table.

After shaping the parts, clamp the matching pieces together and sand them so that they are identical. Sand all surfaces smooth and ease the edges — I used a 1/8-in. roundover bit on all edges that did not mate with other pieces.

## MATERIALS AND CUTTING LIST

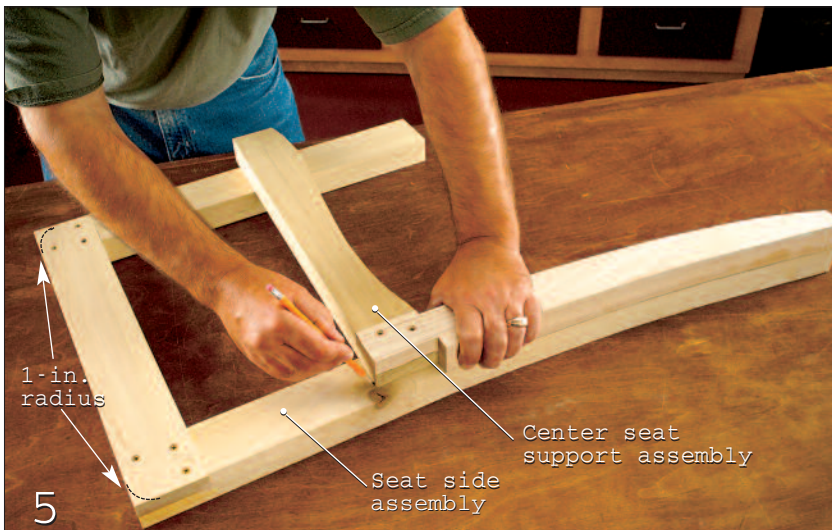
Key	No.	Description	Size
<b>Base Frame</b>			
A	2	Front/back base rails	1-1/2 x 3 x 39 in.
B	2	Side base rails	1-1/2 x 3 x 18-1/2 in.
C	2	Base feet	1-1/2 x 3 x 25 in.
D	4	Base legs	1-1/2 x 2-3/4 x 12 in.
<b>Seat Frame</b>			
E	2	Back legs	1-1/2 x 5-1/2 x 35-1/4 in.
F	2	Front legs	1-1/2 x 2-3/4 x 22-1/2 in.
G	1	Center back support	1-1/2 x 5-1/2 x 24-1/2 in.
H	2	Side bottom rails	1-1/2 x 3 x 20 in.
I	2	Armrests	1-1/2 x 3-1/4 x 21-3/4 in.
J	1	Front seat rail	1-1/2 x 2-5/8 x 46-1/2 in.
K	1	Back seat rail	1-1/2 x 3 x 44-1/2 in.
L	2	Side seat supports	1-1/2 x 3 x 20 in.
M	1	Center seat support	1-1/2 x 3 x 20 in.
N	1	Top crosspiece	3/4 x 1-3/8 x 47-1/2 in.
<b>Seat slats</b>			
O	8	Back slats	3/4 x 2-1/2 x 47-1/2 in.
P	1	Front seat slat	3/4 x 2-1/4 x 47-1/2 in.
Q	1	Second seat slat	3/4 x 2 x 44-1/2 in.
R	5	Seat slats	3/4 x 2-3/8 x 47-1/2 in.

## SHOPPING LIST

1x6 x 8-ft. poplar (4)  
 2x4 x 8-ft. poplar (6)  
 2x6 x 8-ft. poplar (1)  
 Glider hardware (Rockler No. 58330; 1)  
 1-1/4-in. exterior-rated screws  
 1-5/8-in. exterior-rated screws  
 2-1/2-in. exterior-rated screws  
 1/4 x 2-in. exterior-rated carriage bolts (8)  
 1/4-in. exterior-rated locknuts (8)  
 Exterior-grade wood glue  
 Exterior satin or semigloss paint



**4** Cut the profiles with a jigsaw. Support the workpiece with 1-1/2-in.-thick rigid-foam insulation. The foam and workpiece must be thicker than the maximum cutting depth of the blade (see inset).



**5** Use the center seat support assembly to mark the position of the seat supports on the seat side assemblies.



**6** Assemble the base and seat frames. Fasten the joints with exterior-rated glue and screws.

**Assemble the frames**  
Assemble the base frame first. Position the base sides in the rabbets cut in the base stretchers and fasten them with glue and 1-5/8-in. screws. Then fasten the base legs in the notches of the base feet with glue and 2-1/2-in. screws. Complete the base assembly by gluing and screwing the base sides to the base legs.

Assemble the seat frame by fastening the legs to the side bottom rails and the center seat support to the center back support with glue and 1-1/4-in. screws. **Note:** Keep the screws clear of the glider hardware bolt holes. Use the center seat support assembly to locate the position of the side seat supports on the side assembly (photo 5). Attach the side seat supports to the side assemblies with glue and 2-1/2-in. screws. Trim the bottom corners

## Circular saw option

If you don't have a router, a circular saw and chisel work well for cutting large rabbets and dados.



Clamp identical pieces together and gang cut each joint with a circular saw. Make several passes to remove the bulk of the waste material. Use a speed square as a saw guide.



Break out the wood remaining between the kerfs with a hammer, and clean up the half-lap mortises with a sharp chisel. Hold the chisel flat to avoid digging deeper into the stock.



**7** *Mark the position of the armrests on the fourth back slat. Cut notches in the back slat to fit around the armrests.*

of the side assemblies to 1-in. radius.

Next, fasten the front and back rails to the center seat support assembly with glue and 2-1/2-in. screws. Fasten the seat support assembly to the seat side assemblies with glue and 2-1/2-in. screws (photo 6). Finish the seat frame by fastening the top crosspiece to the back legs and the armrests to the front and back legs.

Attach the slats to the seat frame with 1-5/8-in. screws. Drill pilot holes and countersinks through the slats for



**8** *Fasten the swing arms with 1/4 x 2-in. galvanized or stainless steel carriage bolts and locknuts.*

each screw. Start with the bottom backrest slat and work up, leaving about 1/2 in. between slats. Notch the fourth slat around the armrests (photo 7). Fasten the remaining backrest slats and then move to the seat slats, starting at the front of the seat. The second slat must be cut to 44-1/2 in. to fit between the front legs.

Install the glider hardware.

Attaching the metal swing arms is the easiest step of this project. The manufacturer recommends installing the swing

arms parallel to each other and perpendicular to the floor. However, we found that positioning the arms with the bottom bearings inside of the top bearings produced a much better gliding motion. We usually do not recommend deviating from manufacturer recommendations, but in this case we doubt the change will affect the life of the swing arms.

Drill a 1/4-in.-dia. hole at each swing arm mounting position (see drawing). Fasten the swing arms with 1/4 x 2-in. galvanized or stainless steel carriage bolts and locknuts (photo 8).

Before applying any finish, test the glider's operation. If everything is working properly, remove the hardware and apply exterior finish. I applied one coat of primer and three coats of exterior or satin latex paint with an HVLP sprayer. If you chose a rot-resistant wood, you could apply exterior stain and sealer instead. ♦

**SOURCES ONLINE**  
For online information, go to [www.HandymanClub.com](http://www.HandymanClub.com) and click on SOURCES ONLINE.

Rockler Woodworking and Hardware (glider brackets, No. 58330), 800-279-4441

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