

## Build a Patio Chair

Project Level: **Intermediate**

Enjoy the beauty of the great outdoors from the comfort of a chair you build yourself. This chair is great for lounging on a relaxing afternoon, reading or adding entries to your daily journal. You can build the chair exactly as specified in our instructions, scale it down for a child or change the measurements to create a fully customized outdoor lounging experience.



This chair is so comfortable, you'll want to build a whole set.



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### Tools

- [Circular saw](#)  or [table saw](#) 
- [Router](#) 
- [Combination square](#) 
- [Drill/driver](#) 
- [Jig saw](#) 
- [Level](#) 
- [Palm sander](#) 
- [Clamps](#) 
- [Tape measure](#) 
- [Dust mask](#)
- [Goggles](#)
- Hearing protection

### Materials

- 1"x4"x8' cedar — 10 pcs
- [Wood glue](#) 
- Finish nails
- 1 1/4" galvanized screws
- [Sandpaper](#) 

### Make the Side Frames

1. [Face glue](#) the seat assembly supports to the inside [faces](#) of one front side frame upright and one back side frame upright. Use 3d finish nails to hold the boards together while the glue dries.
- 2.

3. Measure and mark 2 1/2" in from each [end](#) of one of the upright connectors and draw a seat contour on it that connects



The upright connector with seat slats already installed.

- the marks. (The contour's exact shape is a personal preference.) Use a jigsaw or band saw to cut along the contour line. Use the connector as a pattern to mark the remaining upright connector and the center seat support. Mark the front end of each piece for future reference. Face-clamp the pieces together and [gang sand](#) them so their contours match.
4. Lay the uprights on your workbench with the inside faces up. Lay an upright connector across a set of front and back uprights so that its bottom [edge](#) abuts the top ends of each seat assembly support. Leave 3/4" between the upright connector's ends and the outside edge of each upright. Remember to orient the connector so that the end marked "front" is toward the front upright.
  5. Square the uprights and connector. [Predrill](#) holes through the connector and secure it to the uprights with glue and screws.
  6. Use the remaining uprights and connector to assemble the second side frame as a mirror image of the first.

### **Install the Seat Rails and Center Seat Support**

1. Predrill [countersink](#) holes near the ends of the seat rails so you can screw through the rails into the ends of the upright connectors.
- 2.

3. Secure the rails to the side frames with glue and screws. Check the assembly for square and adjust as needed.
 

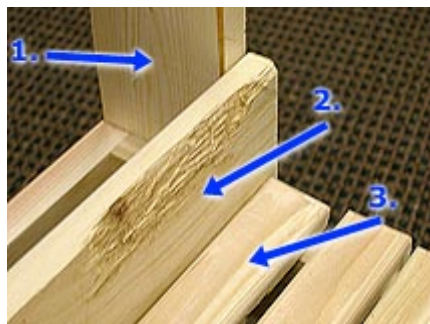
Secure the rails to the side frames with glue and screws.
4. Measure to the center of each rail and mark the inside face of the rail.
5. Screw and glue each of the 6" long 3/4"x3/4" support blocks flush with the bottom of the rails, centered on the marks from step 3.
6. Cut a 3/4"x3/4" notch in the bottom of each end of the center seat support. Position the center seat support centered on the rails. Bore countersink holes in the front and back seat rails and secure the center seat support with glue and screws.

### Install the Seat Slats

1. Use a router and a 1/4" round over bit to [round over](#) the 1 1/2" seat slats and the 3 1/2" seat slats.
2. Position the front 3 1/2" slat on the chair so it overhangs the front seat rail by 3/8". Secure the slat with finish nails and glue.

3.

4. Lay a piece of 1x4 on edge so its back face abuts the front edge of each back upright. This piece is a spacer. Position a 1 1/2" slat so its back edge abuts the front face of the spacer. Secure the slat with finish nails and glue. Remove the spacer.



1.) Back upright  
2.) Spacer  
3.) Rear 1 1/2" slat

5. Install the rest of the 1 1/2" slats equally spaced to fill in the area between the front 3 1/2" slat and the rear 1 1/2" slat.

### Install the Backrest

1. Rout or cut a 1/4" wide by 3/4" deep groove centered on one edge of the backrest top rail. Use a router and a 1/4" round over bit to round over the rail's edge on the opposite edge from the [groove](#). The edge with the groove is the bottom and the rounded edge is the top.

2. Position the rail so the top corner is 5/8" in from the back edge of the back uprights and the bottom corner is 1 1/8" in from the back edge of the back uprights. Bore countersink holes in the back uprights so you can drive screws into the ends of the rail. Secure the rail in place with screws and glue.
3. Mill 3/4" long by 1/4" thick [tenons](#) into one end of each backrest slat. The tenoned end of the slat is the top.
4. Use a router and a 1/4" round over bit to round over the edges of the 1 1/2" backrest slats.

5.

6. Place a slat at each end of the top rail 1 1/2" in from the end of the rail. Secure the slats by gluing the tenons into the rail's groove and driving 4d finish nails through the slat into the rear 1 1/2" seat slat.



Install the backrest slats.

7. Install the remaining backrest slats, evenly spaced across the backrest.
8. Position the back 3 1/2" seat slat in place so its front edge abuts the back faces of the backrest slats. Secure the slat in place with finish nails and glue.

### Attach the Armrests

- 1.
2. Attach two 3 1/2" long 3/4"x3/4" [cleats](#) to each front upright with 4d finish nails and glue. The top edges of the cleats should be flush with the ends of the uprights.
3. Attach one 3 1/2" long



Attach cleats to both sides of each front upright.

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3/4"x3/4" cleat to the outside face of each back upright, level with the cleats on the front uprights.

4. Bore a 3/16" diameter hole vertically in the center of each cleat.
5. Measure in from the back end of one armrest 3 1/2" and use a square to make a line across the armrest. Measure in from the inside edge of the armrest and mark it at 1" and 1 3/4". Use a square to mark lines from the back edge of the board to the line you've already drawn across the board. Use a band saw or jigsaw to cut out the 3 1/2" by 3/4" notch made by the lines.

6.

7. Test fit the armrest. The notch should fit around the back rail with the wide tail over the back cleat. The front of the armrest should overhang the front rail by 3/4" to 1".



Test fit the armrest.

8. Make the second armrest as a mirror of the first.
9. Secure the armrests in place with glue and screws driven through the cleats into the bottom faces of the armrests.
10. Lay the 2" by 3/4" backrest stiffener across the tops of the narrow armrest tails. Glue and nail the stiffener in place with 4d finish nails.
11. Once the chair is built, [sand](#) and [finish](#) it as you like or leave uncoated and allow it to weather to a beautiful silver-gray.