

BEACH CHAIR Part 1

Made of lightweight cedar, these beach chairs fold for easy transport

Portable beach chairs are perfect for this summer's trips to the shore. If camping is more your thing, they're also handy for sitting around the campfire while roasting marshmallows. The chairs are made of lightweight cedar, they fold up flat for convenient storage and their easy-to-build design means you can make a few this weekend and still have time to relax in them when they're done.

Lines in the Sand

I used a technique called "pattern routing" to make identical pairs of the curved backrest and seat supports. It's a useful procedure whenever a project calls for perfect copies of irregular-shaped parts. To begin, prepare full-sized templates by transferring the backrest and seat support shapes onto 1/4" Baltic birch plywood or medium-density fibreboard (MDF). You can easily complete the elongated curved sections by tracing along a thin strip of wood, flexed to form the required shape. The expanded profiles don't have to be identical to the plan versions, but they should be as close as possible. After marking the locations of the pivot bolts, cut out the patterns and sand the edges to smooth out any bumps or indentations. Every imperfection left on your patterns will be repeated faithfully on the workpieces you make.



Lightweight cedar and compact design make these chairs a pleasure to take along to the beach

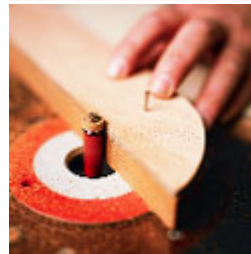
Choose Your Weapons

Arrange the patterns on 3/4"-thick cedar boards to find a layout that makes the most efficient use of your material. Avoid knots and other flaws that can weaken the pieces. Trace around the edge of the patterns with a pencil, then cut out the parts, leaving approximately 1/16" of waste material around the edge. A bandsaw is the best tool for this task, but a scrollsaw or jigsaw also gets the job done. Next, reposition the templates on the blanks and tack them in place with three or four finishing nails. Go ahead and install one of the finishing nails at the pivot bolt location to mark the spot for the hole you'll drill later. Leave the nail heads slightly proud of the surface for easy removal; you'll take them out after routing is complete.



Trace your pieces onto cedar from your template. Be as space-efficient as possible. Cut out each of the pieces with a bandsaw. A scrollsaw or jigsaw also does the job.

Install a bearing-guided flush trim bit in a table-mounted router and adjust the height so the bearing runs directly against the edge of the pattern. Using the templates as your guide, run the edges of the parts over the bit, trimming the waste material as you go. If tearout or splintering occurs, try correcting the problem by slowing down the feed rate and taking the cut in several shallow passes. When both pairs of supports are done, drill a 1/4"-dia. hole at the marked locations (the places where those finishing nails were located) to receive the pivot bolts. Avoid tearout when drilling by using a piece of scrap underneath as a backer board.



A spindle sander removes any tool marks and creates a splinterless seat

| You Will Need | | | |
|-------------------|----------|-----------------|------|
| Part | Material | Size | Qty. |
| Backrest supports | cedar | 3/4" x 6" x 42" | 2 |
| Seat supports | cedar | 3/4" x 3" x 28" | 2 |

| | | | |
|----------------------|-----------------|---------------------|----|
| Seat slats | cedar | 3/4" x 2" x 12 1/4" | 5 |
| Backrest slats | cedar | 3/4" x 2" x 14" | 7 |
| Curved backseat slat | cedar | 3/4" x 2 1/2" x 14" | 1 |
| Cross braces | cedar | 3/4" x 2" x 14" | 2 |
| Hardware | | | |
| Pivot bolts | brass | 1/4" -dia. x 2" | 2 |
| Washers | brass | 1/4" -dia. | 8 |
| Cap nuts | brass | 1/4" -dia. | 2 |
| Screws | stainless steel | #8, 1" | 30 |

BEACH CHAIR (part 2)

Cut the Slats

Turn your attention to the slats for the seat and backrest. Begin by cutting out blanks for these parts from 3/4" cedar. It's a good idea to prepare a few extra slats to use as test pieces, or just in case you blow an important cut later. Leave the blank for the wider curved slat at the top of the backrest square for now.

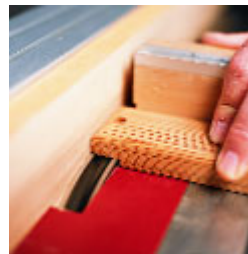
The ends of the slats are notched to fit over the edge of the supports. I made these 1/8"-deep x 3/4"-wide rabbets using my mitre gauge to guide the parts over a dado blade installed in my tablesaw. A sacrificial board clamped to the fence and positioned flush against one side of the blade serves as a positive stop to determine rabbet widths. Use the spare blanks, prepared earlier, to fine-tune this setup before you go to town on the parts destined for the project.

With the rabbets done, complete the curved profile on the top seat slat. To create the arc, trace along the edge of a flexed strip of wood, then cut out the profile with a bandsaw or scrollsaw. Sand to remove any tool marks before rounding over the edges on the top face of all of the slats using a bearing-guided 1/4"-rad. bit in a table-mounted router.

Put it All Together

Using the arrangement of brass bolts, washers and cap nuts shown in the plans, attach the seat supports to the backrests. Now you're ready to install the slats using weatherproof glue and one inch stainless-steel #8 pan-head screws. The approximate spacing for the slats is shown in the plans. Just be sure your arrangement allows the end of the seat to clear the bottom backrest slat when the chair is folded. Predrill for screws, countersinking the heads 3/8" deep to accommodate tapered wooden plugs. I cut my own plugs from scrap using a drillpress cutter. Before you move on to the next step, take a minute to sand the tips of the backrest supports to conform to the curved profile on the top slat.

The cross braces are located on the front and rear sides of the backrest assembly. They will support the seat when someone is relaxing on it. Notice that the plans show one edge of each brace is bevelled 20° to approximate the slope of the seat supports. With the chair unfolded, and the bottom of the legs sitting flat on your bench, hold the braces in place and mark their position. This is much easier to accomplish with an extra pair of hands, so don't be a lone hero. Now, fold the chair and install the braces at the marked locations using glue, screws and tapered wooden plugs, as before. Make sure the bevelled edges are oriented in the proper direction.



Cut slat rabbets on your tablesaw with a dado blade. Clamp a stop strip to your saw fence to control rabbet widths.

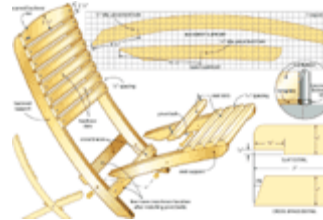


Install the brass bolts, washers and cap nuts to join the seat supports to the backrest.

Almost Beach Time

Unfold the chair and test it while you consider your finishing options. Cedar stands up well to wet conditions with no finish at all. It will weather to a light grey over time, and some cracking may occur. I chose to wipe on a couple of coats of Circa 1850 Tung'n Teak oil. This is my favourite finish for outdoor projects because it has provided good protection over the years and it is easy to apply. I will give the chairs a fresh coat at the beginning of each season to keep the wood looking great.

Before you put these chairs in the trunk of your car and head on down to the beach, be sure to label the routing templates and put them in a safe place. Trust me, once you're spotted in public with these chairs, you'll need to get your hands on the patterns again.



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