

# The Barley Harvest

## 2 PIECE, 2 POSITION BEACH CHAIR

### Adirondack Beach Chair Plans

#### Materials List

3/4" x 7.5" (1.9cm x 19.05cm) redwood, cedar or pine boards. Five to six, 4' (1.22m) boards should make one chair depending on knots and layout.  
 8, 5/16" x 2" (8mm x 5cm) brass Allen Key furniture screws from Home Depot.  
 34, 1 5/8" # 6 (3.8cm) exterior wood screws.

Parts List - labelled images on last page

(the measurements for the templates are listed below, but it is not recommended that you cut your stock to these lengths first, but trace the patterns onto the stock for the best use of space)

Part	Description	Quantity	Size (standard)	Size (metric)
A	Side back panel (template)	2	37" x 2 7/8" x 3/4"	94cm x 7.3cm x 1.9cm
B	Side seat panel (template)	2	32 5/8" x 2 7/8" x 3/4"	83cm x 7.3cm x 1.9cm
C	Top back support (template)	1	19" x 3 1/2" x 3/4"	48.4cm x 9cm x 1.9cm
D	Bottom back support (template - leave a little wider for now)	1	12 13/16" x 2 13/16" x 3/4"	32.7cm x 7.1cm x 1.9cm
E	Back section cross braces (dowel)	3	1" x 13 3/8"	2.54cm x 34cm
F	Seat section cross brace (dowel)	1	1" x 11 3/4"	2.54cm x 29.8cm
G	Center back slat (template)	1	30" x 2 3/4" x 3/4"	76.3cm x 7cm x 1.9cm
H	Second back slat (template)	2	29 3/4" x 2 3/4" x 3/4"	75.6cm x 7cm x 1.9cm
I	Third back slat (template)	2	28 3/4" x 2 3/4" x 3/4"	73.1cm x 7cm x 1.9cm
J	Outer back slat (template)	2	27 1/8" x 2 3/4" x 3/4"	68.9cm x 7cm x 1.9cm
K	Back seat slat (template)	1	16" x 3 1/4" x 3/4"	40.6cm x 8.3cm x 1.9cm
L	Seat slats ( straight cut, no template needed )	7	16" x 1 3/4" x 3/4"	40.6cm x 4.5cm x 1.9cm
M	Storage slats (optional, straight cuts leave longer for now)	3	12 11/16" x 1 1/2" x 3/8"	33cm x 3.8cm x 1.25cm

Templates, Cutting & Drilling: (click on the images below, for expanded views through your browser. If your Adobe Reader asks if this is a trusted site, click YES, and all other images will open when clicked) The table saw fence was removed for image clarity. Please follow all tool and workshop safety requirements.



1 -Cut out all patterns, and trace or spray glue onto 1/8" (3mm) hardboard for permanent templates. Cut out, sand the edges smooth, & label all pieces. Trace all templates onto the final stock, and cut each one out with a sabre, table, or band saw. Double check the dimensions from the sizing chart.

NOTE: Parts D & M, should be left slightly longer to be trimmed later for a snug fit.



2 - A taper jig on the table saw, works best for the tapered back slats G, H, I & J. A shop built sled is the quickest, easiest and safest taper jig. Use a scrap length of 9" (22.9cm) wide plywood fastening clamps at each end, leaving 36" (91.4cm) between the clamps for the longest part. Line up the pattern line to the edge of the jig, and run it through the blade. You can see I extended the pencil line of the part to align it with the edge of the sled. My sled is shown on-line at [www.plansinwood.com/taper\\_jig.html](http://www.plansinwood.com/taper_jig.html)



3 - For all tapered back slats, cut to the rough dimensions of part G, the longest slat. Then trace on template G, and taper the one side for all parts G, H, I & J. The templates for H, I & J can be traced onto the tapered stock, so all parts are the same width at the bottom. Only one template of each is necessary. Just flip each over for the opposite direction of the curve. When you have cut & planed or sanded all slats, assemble & clamp as shown, so you can sand the curve smooth and even.

4 - A drum sander on your drill press, is the easiest way to clean up the edges unless you have an oscillating spindle sander. Try to cut out the pieces to the outside of your pencil marks, then sand smooth to the pattern line. Or you can attach the template to the parts with 2 sided tape after rough cutting to the lines, and use your router table and straight bit with roller guide, to clean the edges. Sand all part edges smooth before assembly.



5 - For parts A & B, be sure to trace the 1" (2.54cm) holes opposite on both pieces, to allow the dowels to be inserted correctly. Drill the holes 1/4" (6mm) deep with a 1" (2.54cm) Forstner bit. Then drill holes completely through the centers with a 1/4" (6mm) drill bit using a sacrifice board at the drill press to eliminate tear out. These will accept the brass furniture screws.



### Assembly:



1 - Begin assembly by making a raised square edge on your assembly table or table saw like mine shown. If you are making multiple chairs, a permanent box would help. Clamp Parts A & E together for a rough fit. Not many dowels will be a pure size diameter, so adjusting for square will be easy.



2 - Cut scraps to fit under Parts E, to ease in the glueing assembly. Apply waterproof glue to dowel ends and holes, and insert into the mating Parts A. Clamp in place being sure to check for square against your assembly table edges as well as perpendicular to the table.



3 - It is recommended to let the glue dry completely before drilling the pilot holes for the furniture screws, since if you are drilling by hand, there may be a tendency to wander off square. If this happens and you haven't let the glue set, the side panels may go out of square after the clamps are removed....take a break, have a coffee...or whatever !



4 - Next do the same as step 3 for side panels Parts B and dowel Part F. Cut a spacer to fit at the front end and clamp to be sure the frame is square. Add a blocker to the far end, and a scrap under the front as shown....this will allow you to centre the first seat slat Parts L, flush with the front edges of Parts B. Drill pilot holes, or use your counter sink bit, if plugging the holes, and screw in place.



5 - You can now take the assembled back and seat and test fit together in the high position.



6 - Do the same in the low position. If cut and assembled correctly, the dowel should line up square and solid in the grooves in Parts B.



7 - Add a spacer between the tops of Parts A, being sure they are parallel, and clamp Part C centered flush with the front of Parts A. Drill pilot holes, or use your counter sink bit, if plugging the holes. Screw in place.



8 - Trim Part D, the lower back support, so it fits flush between parts A, resting on the top Part E dowel. Use back slat Part G to be sure Part D is on the same plane as the top back support C. Drill pilot holes on each side of Parts A, or use your counter sink bit, if plugging the holes. Screw in place with 2 screws on each side.



9 - Mark the center point on Parts C & D, align Part G the center back slat with the marks, and screw in position being sure it does not extend past the first dowel E. The template holes should align correctly.



10 - Lay the back section on your assembly table, then cut up small sections of 1/4" (6mm) MDF or plywood to use as spacers for the back, as well as the seat slats. Lay all slats in position with the spacers between, aligning the top curve.



11 - All slats should align correctly, but the outer slats Parts J, will not lay flat against the edges of Parts A. Mark a notch as shown on the bottom underside of each part J, and cut out a small notch with a hand saw, until the back of the slat fits flush.



12 -After marking the center points of each slat and clamping them together to prevent movement, drill pilot holes, or use your counter sink bit if plugging the holes, and screw all slats in place into Part C & D.



13 - After marking the center points on parts L, laid in line with the first slat, use the spacers and line up all parts.



14 - Fit Part K, the back seat slat, and fine tune if needed to fit perfectly to the curve in the back slats, using the spacers to the last Part L. Drill all pilot holes into parts A, and screw in place.



15 - If you are using plugs to hide the screws, I recommend a tapered plug cutter, like the Veritas Cutter from Lee Valley Tools. Glue the plugs in place with exterior waterproof glue, let dry, then cut off the excess with a chisel or Japanese saw, and sand smooth with a random orbital sander.



16 - If you are adding the magazine rack Parts M, trim to fit snugly between Parts A, 1/16" (1.5mm) set in, and 1 1/2" (3.8cm) apart as shown. Drill pilot holes for the brads, and glue and tack in place. Fill the holes and sand smooth..



The chair is now assembled, and ready for finishing. If you are painting the chair, it is best to prime all surfaces first before assembly, to ensure longer life against moisture. Use an oil based paint like Varathane Colors, for the final coat. You can either countersink and plug the screw holes before final painting, or use brass screws left exposed if staining.

Enjoy!!!

Phil Barley



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