

HART™



Modern Wood Chair

PROJECT PLAN

Finished Dimensions: 43"W x 32-1/4"H x 31-1/2"D


Skill Level: Intermediate


Materials

Item	Qty
2" x 4" x 8' Board*	8
2-1/2" Coarse Square-Head Pocket Hole Screw	
Sandpaper**: 150g, 220g & 320g	
Chair Pads, (2) 44" wide x 22" deep x 5" thick (Plans are designed to fit these pads)	

* Board Dimensions are "nominal". Actual dimensions are smaller due to lumber industry standards. Cuts are actual length.

** Starting grit will depend on board surface condition, a rough surface will require starting with a coarse grit first.

 Grit is measured in the coarseness of the particles on the sandpaper. The lower the grit number, the coarser the paper. Heavy sanding would require 60 to 80 grit, medium sanding would require 120 to 220 grit, and finish sanding would require 320 to 400 grit. Super fine sanding would be 600 grit and higher.

 A select/premium board or plywood comes with a smoother surface finish. It is clear or has very few tight knots, and it will have straight and sharp edges. This grade of wood pairs well with other boards or panels better and requires less time to sand and finish.

Tools Used



Miter Saw

or



Circular Saw



Drill/Driver



Orbital Sander



Tape Measure



20V 1.5Ah Battery



20V 4.0Ah Battery



Charger



Safety Glasses



Countersink Bit



#2 Square Dr. Bit

Also Needed:
Clamps



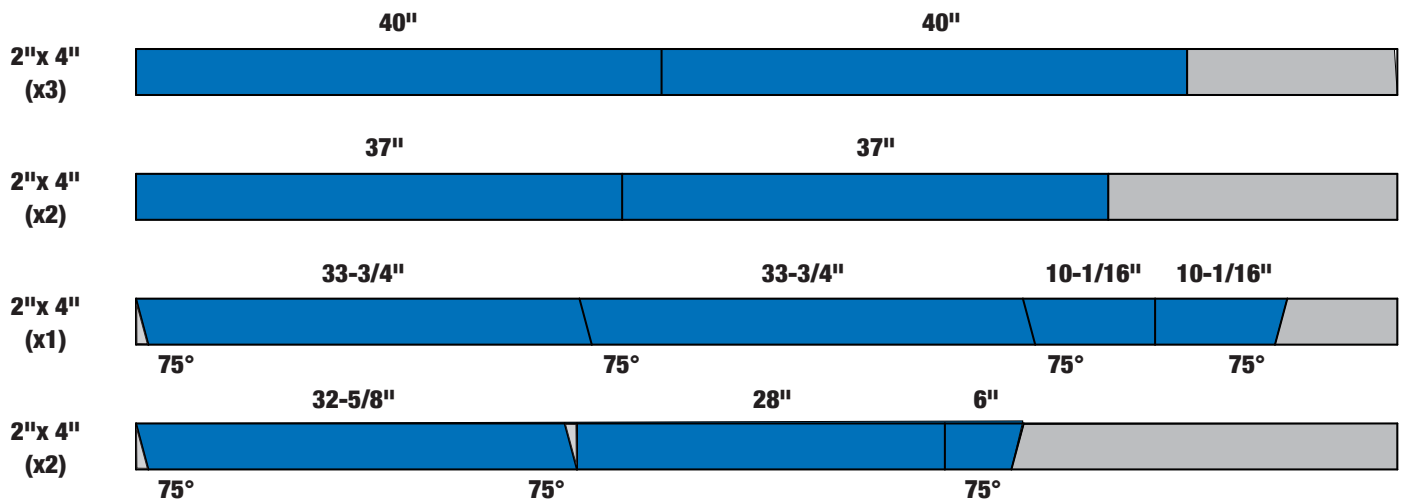
Battery Tip: A 4.0 Ah battery is recommended to be paired with high amp draw tools for maximum efficiency.

Lumber Cut List

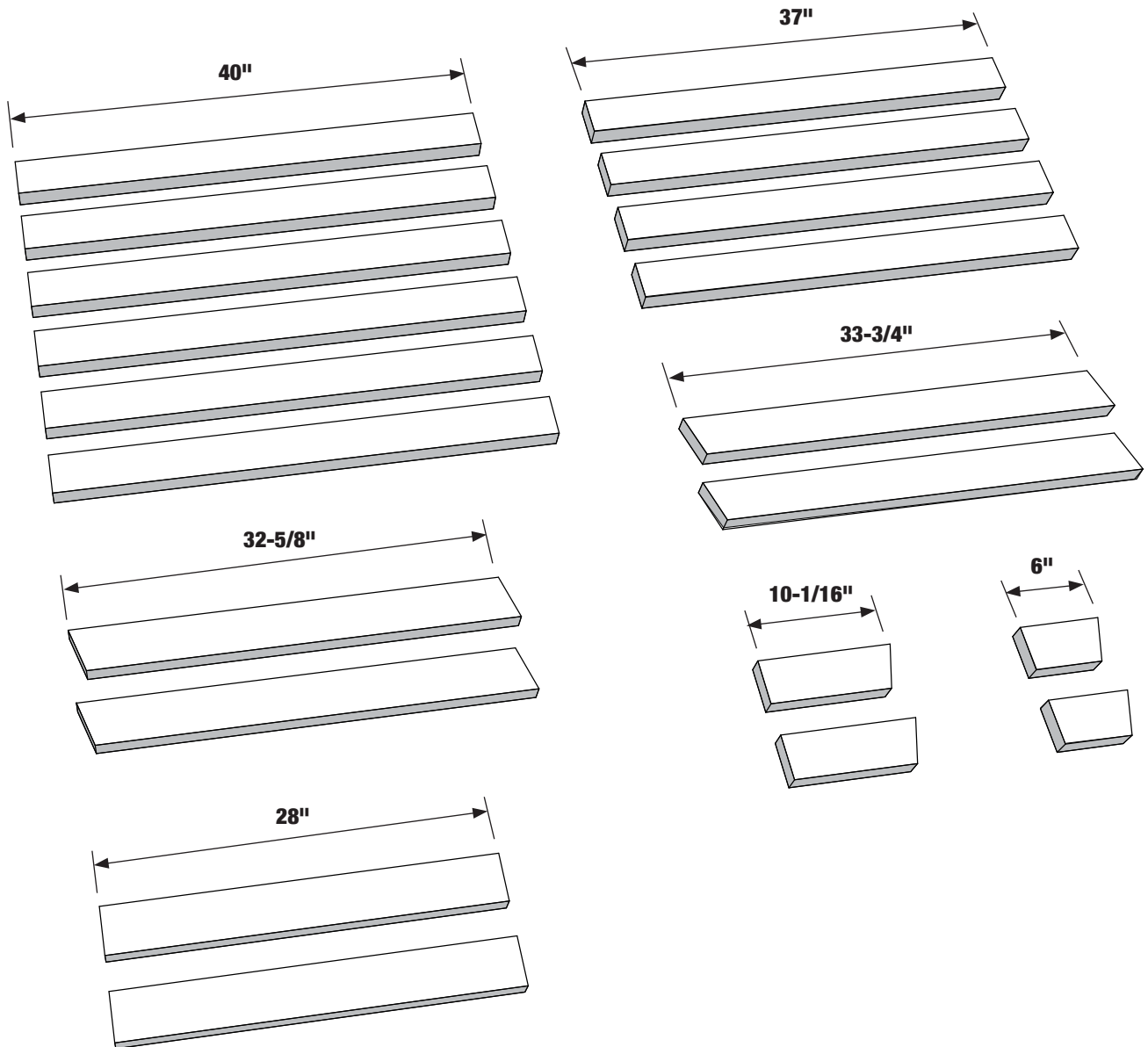
Board*	Description	Cut to	Qty
2" x 4"	Seat Slats	40"	6
2" x 4"	Backrest Slats	37"	4
2" x 4"	Side Top Rails	32-5/8"	2
2" x 4"	Side Base Rails	28"	2
2" x 4"	Front Rails	10-1/16" (LD)	2
2" x 4"	Backrest Rails	33-3/4"	2
2" x 4"	Stop Blocks	6" (LD)	2

* Board dimensions are "nominal." Actual dimensions are smaller due to lumber industry standards. Cuts are actual length.

Lumber & Sheet Layout Guide



Lumber & Sheet Cut Layout Guide



Assembly Instructions

Step 1

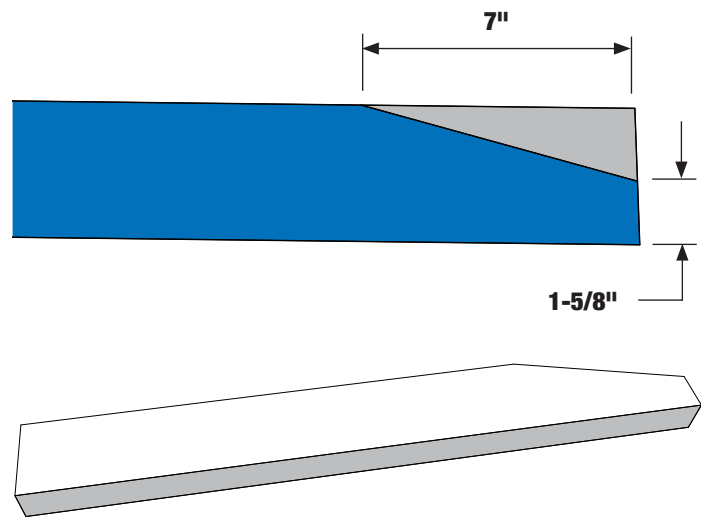
Cut out all material using the Lumber & Sheet Cut Layout Guide.

Sand and soften edges before beginning assembly. Refer to Step 20 for sanding information.



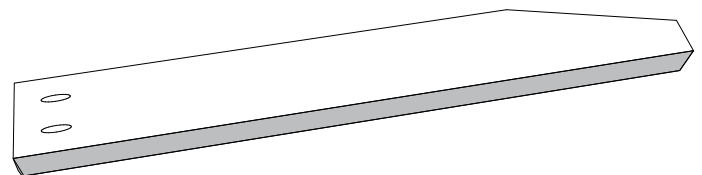
Step 2

Take the 28" seat base and cut it according to the measurements in the diagram. Use a Circular Saw to trim off the excess material.

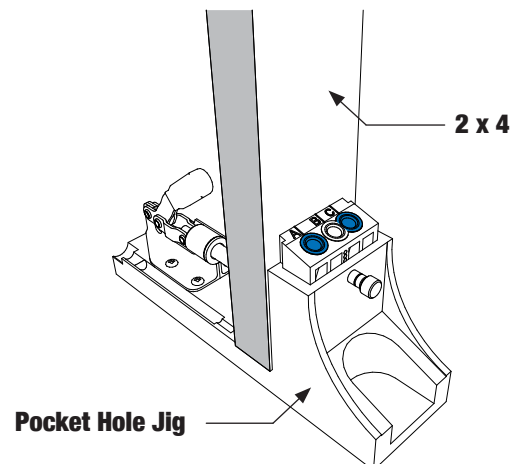


Step 3

Next, add pocket holes on the flat end of the seat board. Center the 2" x 4" in the Pocket Hole Jig and drill two holes using the (A&C) guide holes.

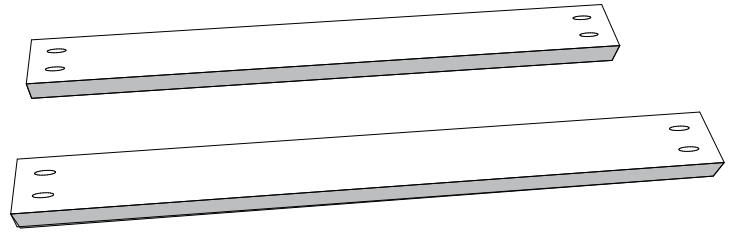


Pocket holes will also need to be drilled in a mirrored set to create left and right sides on the (2) side top rails and the (2) side base rails. Use the (A&C) guide holes.



Step 4

Add pocket holes on each end of the 40" and 37" slats.
Use the (A&C) guide holes on the Pocket Hole Jig.

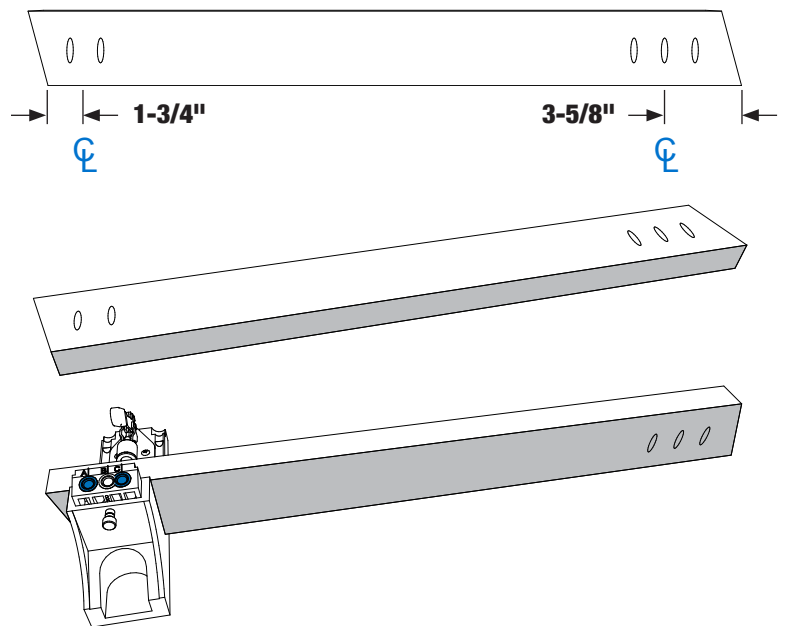


Step 5

The (2) 32-5/8" top rails will have pocket holes drilled on (1) side. A set of (2) will be drilled in the front and (3) will be drilled in the back. The front (2) will be 1-3/4" between the (A&C) guide holes.

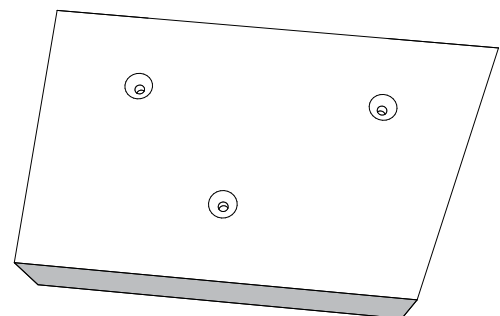
For the back holes, start by drilling the center pocket hole. Align the (A) guide at 3-5/8" from the long end of the board. Drill at the (A&C) guide hole locations.

Next, realign the (C) hole to the 3-5/8" location. Drill the new (A) location for the third pocket hole.



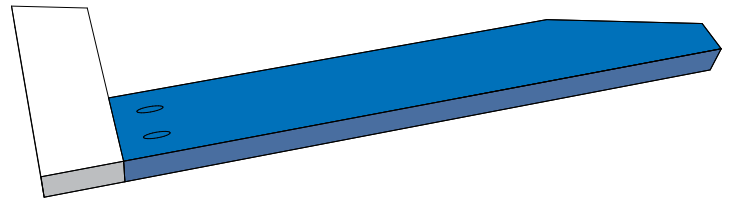
Step 6

Add (3) countersink holes to the stop block as shown in the diagram. Specific measurements are not necessary. Drill a mirrored set of holes in the second stop block.



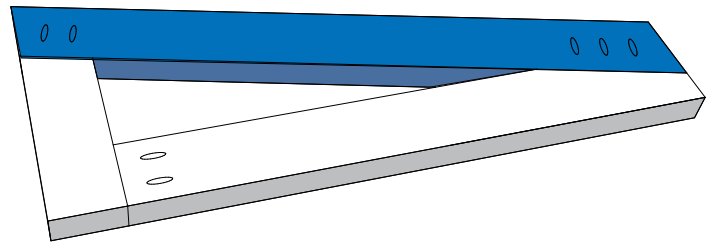
Step 7

Attach the side base rail to the front rail using the 2-1/2" pocket screws. These screws will be used throughout the assembly.



Step 8

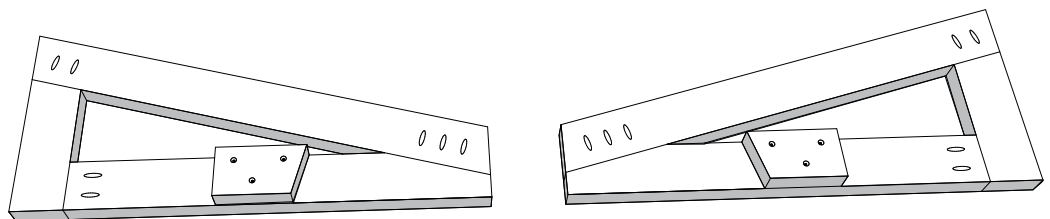
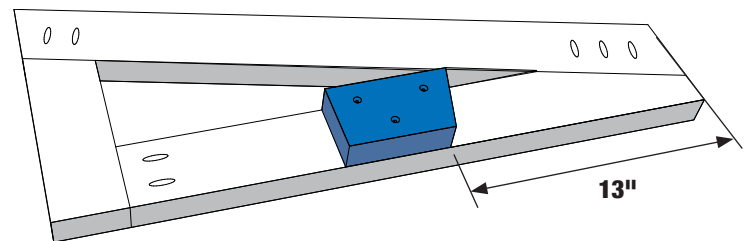
Attach the top rail to the front and base rails.



Step 9

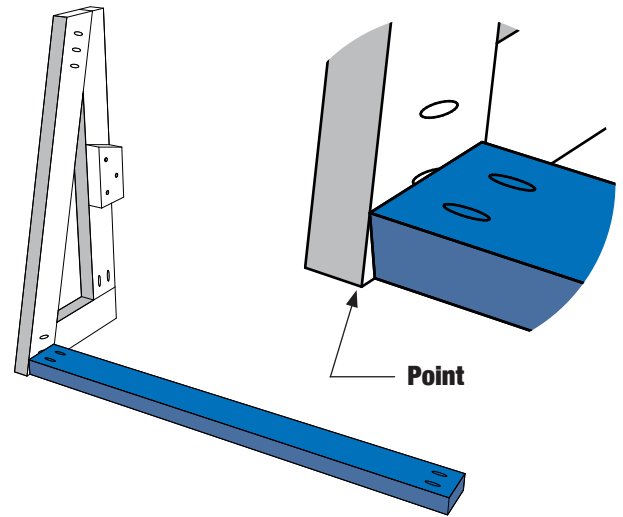
Measure and mark a line on the base rail that is 13" from the back. Align the short side of the stop block to the mark and attach it to the assembly.

Repeat on the second mirrored side.



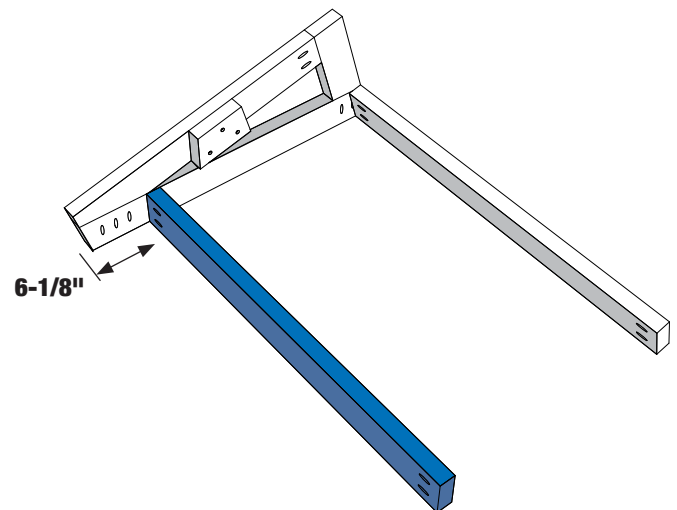
Step 10

Add (1) of the 40" seat slats to the right side of the assembly. The 40" slat will be screwed to the top rail. Align the face of the slat with the front edge of the top rail. Allow the point of the side assembly to extend above the top front edge of the slat. The point will be removed later (Step 15).



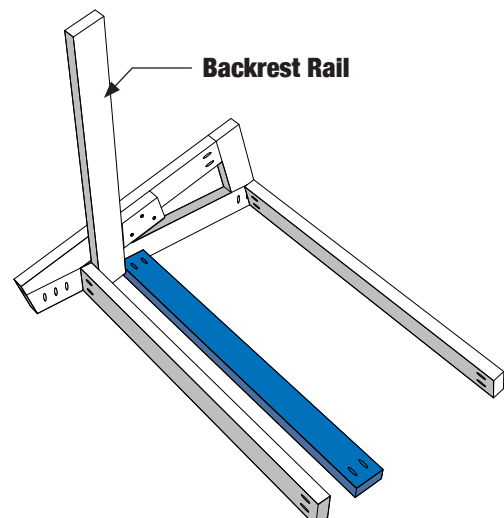
Step 11

Attach the rear slat 6-1/8" from the back. Make sure it is standing on edge.



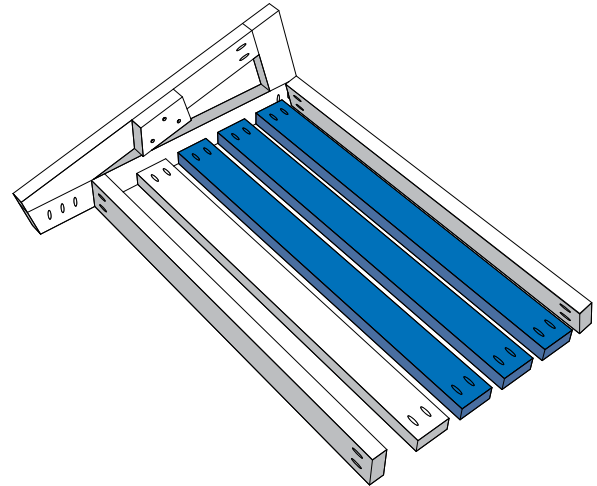
Step 12

The next slat will lay flat. In order to get the spacing correct, insert the backrest rail in between the stop block and the rear slat with an 1/16" extra gap. Attach the slat to the side assembly. This gap will allow for the backrest to freely slide in and out.



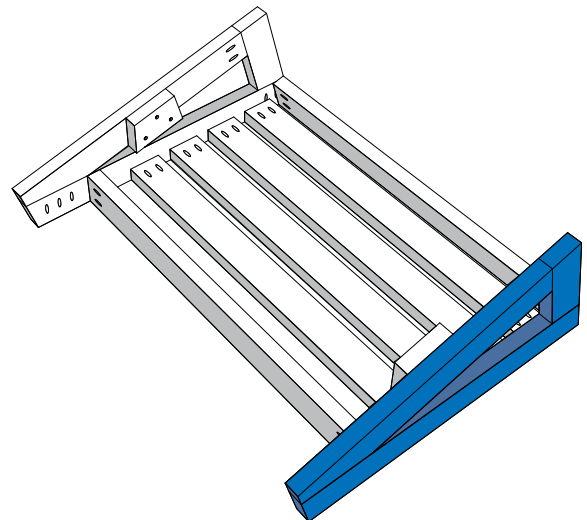
Step 13

Add the remaining seat slats to the assembly. Make sure the spacing of the boards is equal. The spacing should be approximately 1-1/2".



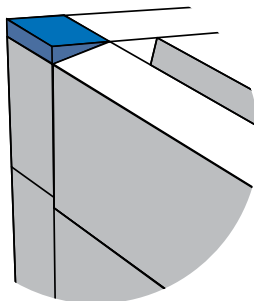
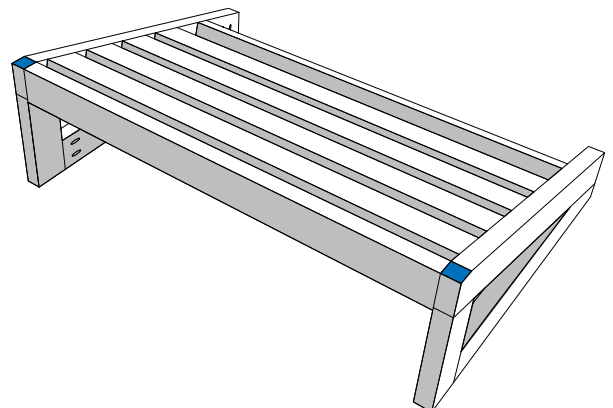
Step 14

Repeat Steps 10-13 to attach the left side.



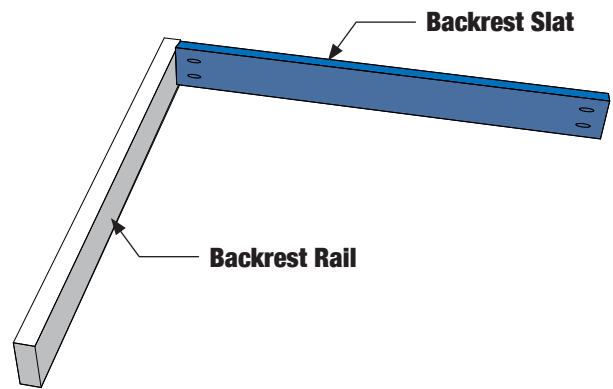
Step 15

Use the Orbital Sander to get rid of the sharp points on both sides of the top rail. Align the edges with the front slat.



Step 16

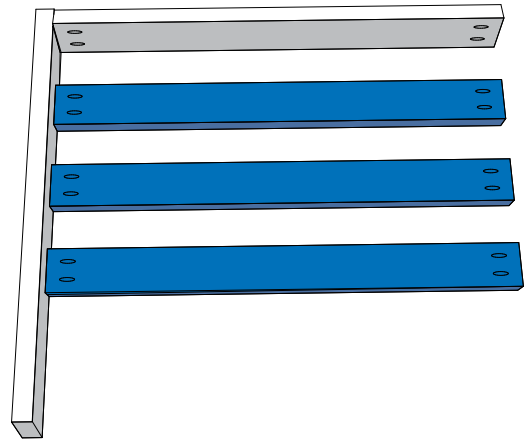
Attach (1) of the 37" backrest slats to the 33-3/4" backrest rail. Align the slat to match the 75° on the rail. This will be the top of the backrest.



Step 17

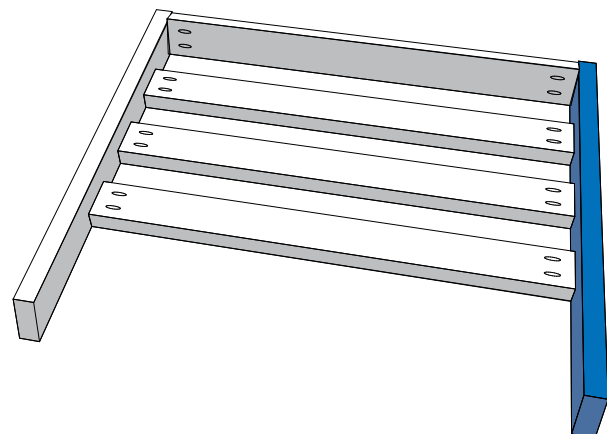
Position the backrest assembly so the top slat is facing inward and the long end of the rail bottom is down.

Attach the remaining 37" slats with a 3-1/2" gap in between them.



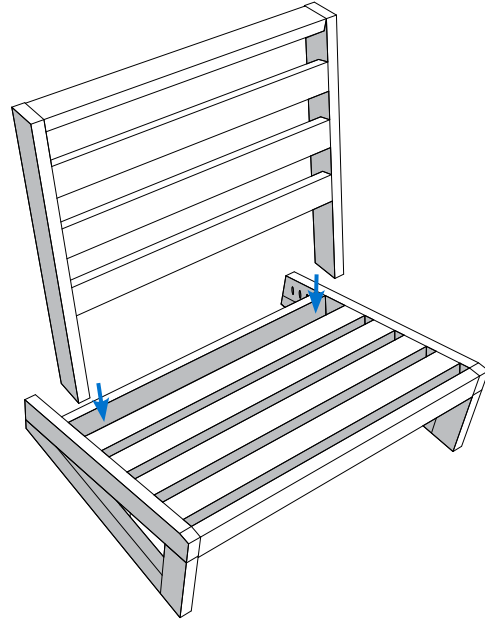
Step 18

Repeat Step 17 and attach the opposite side.



Step 19

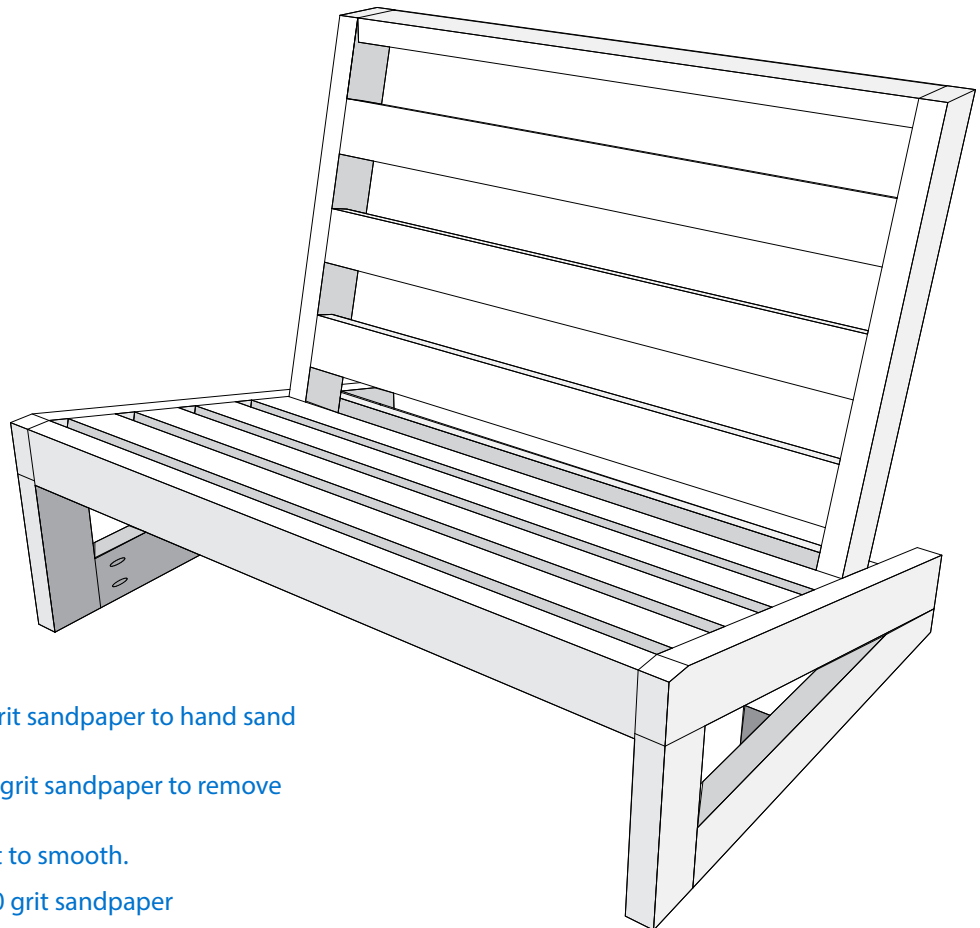
Insert the backrest assembly through the gap in the slats in the seat base.



Step 20

Sand and finish to your desire.

Project complete!



Rougher finish – Use 60-80 grit sandpaper to hand sand with the grain of the wood.

Smoother finish – Use 60-80 grit sandpaper to remove scratches & imperfections.

Followed by using 120-220 grit to smooth.

Finish Sanding – Use 320-400 grit sandpaper

Super fine sanding – Use 600+ grit sandpaper

