



# How to Make a Chair - Part 2

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If you have followed How to Make a Chair part 1 you are four steps away from completing the chair.

The four key steps are: The Side Rails, Assembling the Frame, The Seat, and Finishing.

**STEP 1: The Side Rails.**

Place the front legs 40 cms away from the inside of the back legs, ensuring both sides are perpendicular.

Place the side rail on top and mark out the inner edges of the front and back legs and transfer the line to the second side rail, as shown.

Measure the depth of the mortise and set the height of the tenons.

Here, they measure 3 cms.

Saw off the extra length from the rails.

Cut out the tenons with the router and clean up the sides with a chisel and mallet.

Plane the front legs and the front rail.

Clean up the mortises if needed.

Plane the back legs, the back slats and the back rail so that they are level.

Place the tenon of the side rail on the back leg to mark the width of its mortise.

Scribe the walls of the mortise with a mortise gauge.

Use a router to make the mortise and clean it up with a chisel and a mallet.

Do the same on the second back leg.

Use a saw to taper the front tenons of the side rails so they sit flush with the tapered tenons of the front rail.

**STEP 2: Assembling the Frame.**

You are now ready to assemble the front legs, the side rails and the back legs.

Apply adhesive inside the 4 mortises and onto the tenons of the side rails.

Insert the tenons of the side rails into the mortises of the back legs.

Now, slide the mortises of the front legs onto the opposite tenons of the side rail.

Flip the chair so that it is standing on all four legs and clamp the front and back rails together with a t-bar clamp.

Use a mallet to ensure the pieces are aligned at the joints.

Measure the diagonal distance between the opposite corners of the seat.

Here, it measures 57.

2 cms.

You should find the same distance along both diagonals.

In case you find a variation in the lengths make necessary adjustments with the clamp.

Drill two holes through the joints where the side rails meet the back legs and one hole where they meet the front legs, as shown.

Hammer square pegs into the drilled holes and saw off the protruding section of the pegs.

Plane the chair so that all joints are level.

Use a chisel whenever necessary.

Use a file to round all the edges and corners.

**STEP 3: The Seat.**

Place the first slat on one side of the seat so that it extends 1.

5 cms past the edge of the side rail, and clamp it in place.

Mark a gap of 1.

5 cms from the first slat and draw a line with a try square to set the position of the second slat.

Draw a line 6.

8 cms past the 1.

5 cms line to mark the width of the second slat.

Mark all the slats in this way with a gap of 1.

5 cms between each of them, adding up to a total of 6 slats covering the entire seat.

Measure the length of the seat between the outer edges of the front and back rails.

Here, it measures 43.

5 cms.

Add 1.

5 cms to this measurement to include the distance by which the slats will extend past the front rail.

Draw a line on one end of the slat.

Now, draw a second line 45 cms towards the other end to set the length of the slat.

Saw the extra length past the marks on the slats.

Place the side slat in position at the end of the seat so it extends 1.

5 cm past the side rail.

Draw a straight line from the inside edge of the back leg, as shown.

Now, place the slat in position but against the inner edge of the back leg and draw the line from the front face of the back leg.

Mark the section between the two lines for removal.

Saw off the marked sections from the side slats so that they accommodate the back legs of the chair.

Clean them up with a chisel and a mallet.

Next drill holes on the front and back rails for the 5 mm screws that will secure the slats.

Make sure the drill bit is square with the seat and reaches right through to the opposite side of the rail.

Now, drill three holes for the side slats on the side rails.

Remember that the screws need to extend past the thickness of the rails to hold down the slats.

For this, you will have to make large countersink holes from the bottom.

This will also ensure that the head of the screws are flush with the workpiece.

Here we have used a spade bit to create the countersink holes.

Apply a masking tape on the bit to mark the depth to which the countersink hole has to be drilled.

Proceed to drill the countersink holes.

Apply adhesive on all surfaces with which the first slat will make contact and clamp the slat in place.

Tap it with a mallet so that it is well aligned.

Drill a small hole through the countersunk holes and into the slat using a 3 mm bit.

Use a screwdriver to tighten the screws before removing the clamp.

Apply adhesive on the opposite side rail and fit the last slat the same way as the first.

Now, apply adhesive on the front and back rails for the middle slats.

Clamp each slat on top, drill through with the 3 mm bit and drive in the screws.

STEP 4: Finishing.

Mark 1 cm on either side from the corners of the seat.

Round the corners of the seat with a chisel and mallet, followed by file.

Use a router to Chamfer the edges of the seat.

Where the router can't reach, chamfer the edge with a file.

Sand the chair with a random orbital sander Now that the chair is ready, apply wood sealer and leave to dry, To learn more about applying sealer, watch the video How to Polish Wood.

You now know how to build a chair.

<https://www.sikana.tv/en/diy/woodworking/how-to-make-a-chair-part-2>