

DIY CHAIR

by Max Lamb

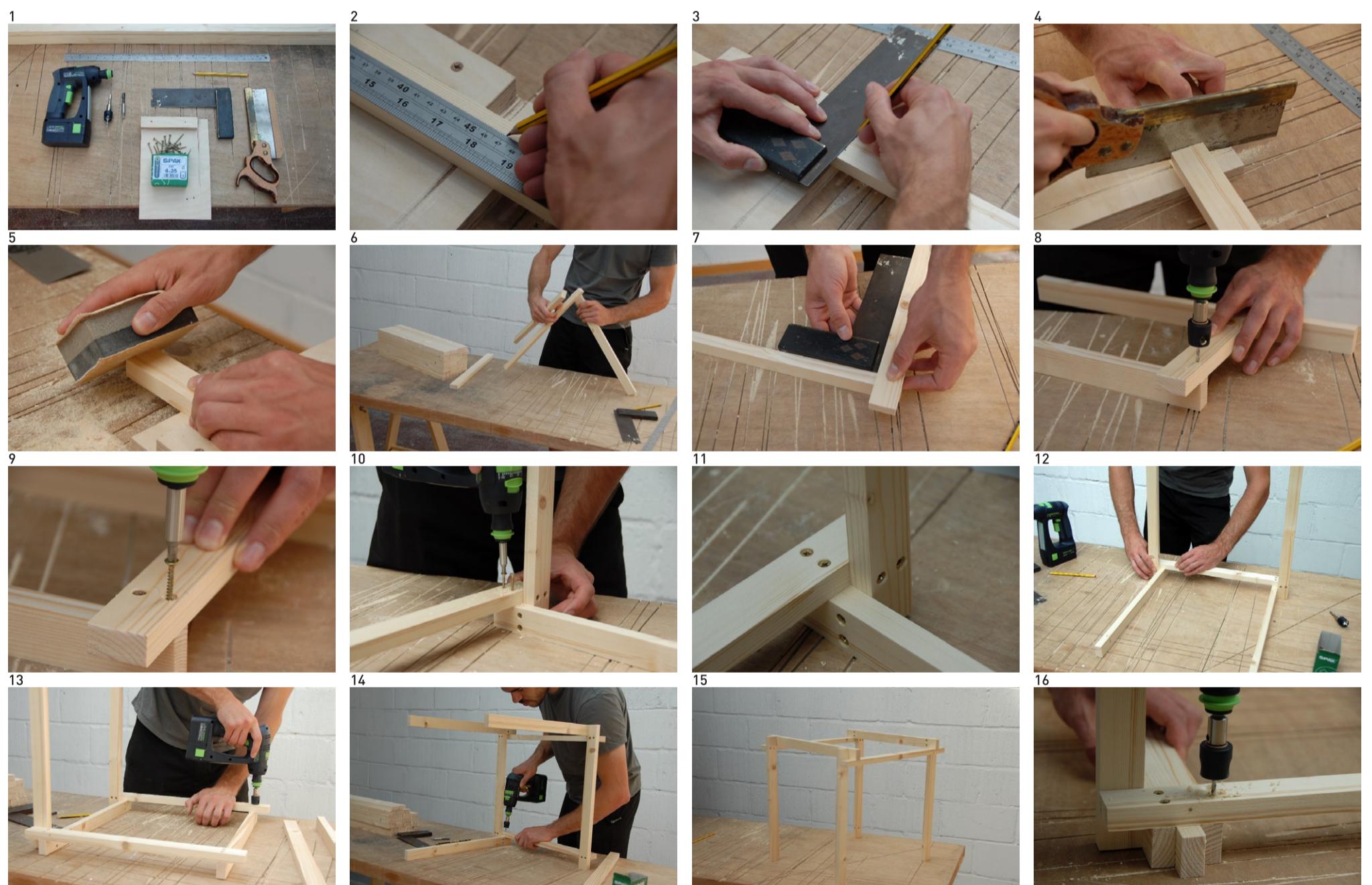
I designed the DIY Chair to be constructed using very cheap and basic building materials readily available from your local DIY (do-it-yourself) shop or hardware store, using simple hand tools and joinery methods, by you. A design for everyone and anyone; mass-production in fact, but production by the masses rather than machines.

My DIY Chair was inspired by lots of things I suppose. Of course I am familiar with Enzo Mari's 'Autoprogettazione' ('Self-design-project) of 1974 and the 'Rough and Ready' furniture by Tord Boontje in 1998, and there is no doubt that my DIY Chair has both aesthetic and sociological similarities, but I hope that my personal approach to a single material and method of construction (a common thread with all my work) in conjunction with the current industrial and economic climate, provides adequate justification for my DIY Chair to exist and enough incentive for people to make one if necessary. My DIY Chair provides a template for affordable and functional design easily constructed by both the highly technical and less practical person alike, using the most basic of tools and materials. But nobody need make the chair if they don't require one. This is partly the point. The number of DIY Chairs produced will coincide directly with the number of DIY Chairs people want or need. Supply and demand in synergy, controlled quite naturally by the consumer.

The design consists of 31 pieces of wood all of which are exactly the same size (47cm). During construction one piece of wood is used to measure the spacing between the slats and to help locate all the other pieces. I suggest using 'Smooth Planed Pine' which is a softwood commonly used by the building industry and has a smooth, splinter free surface. The idea is to use a local or indigenous wood that is easily obtained, affordable and sustainable. The dimension of wood required is 34mm x 18mm and typically available in lengths from 2 metres to 2.7 metres. I bought seven lengths of 2.7 metre pine. The critical dimension is the 18mm x 34mm cross-section of the wood as this dictates the width and depth of the DIY Chair and also the spacing between the seat surface and backrest slats. If this is not available as standard in your hardware store, a second option is to contact your local timber merchant or saw mill who will be able to offer you wood with the exact dimensions. This can be a surprisingly rewarding option allowing you to select your favourite type of wood from a plethora of soft and hardwoods available. Alternatively you can simply use my DIY Chair instructions as a template to design and build your own chair, table, stool etc. You can edit the design and assembly as much as you like. The possibilities are infinite.

In England, where I designed and built the original DIY Chair, the wood and the screws required to make one chair cost just £9.77. Thus it is possible to self-construct a dining set of eight chairs for less than £80. The point is, the DIY Chair is a piece of furniture that you can construct yourself, sit on and be proud of.

Please follow the instructions below and send me a picture of your DIY Chair once finished.



1. Tool list: tri-square, ruler, sharp pencil, fine tooth tenon or panel saw, sand paper (180 grit is perfect), cordless drill, 3mm drill bit, countersink, cross-head screwdriver, and 124 screws (4 x 35mm).
2. Using a pencil and ruler mark a line on the first length of wood at 47cm.
3. Place the tri-square against the edge of the wood in line with the pencil mark and scribe the line across the width of the wood.
4. Carefully cut along the pencil line with the edge of the saw to the outside edge of the line, making sure you hold the saw vertically to ensure a square edge.
5. Sand the edges clean to remove splinters. Repeat steps 2-5 until you have a pile of 31 identical pieces of wood, all 47cm long.
6. Position two pieces of wood at right angles with the wide edge on top of the narrow edge, and use the longest width (34mm) of a third piece as a measuring guide.
7. Use the tri-square to check the two pieces are at 90° and ensure the lower piece of wood is still 34mm away from the end of the top piece of wood.
8. Hold the two pieces of wood steady and drill two vertical holes next to each other evenly spaced apart, approximately 25mm deep. Then countersink both holes.
9. Screw the two pieces of wood together. If possible, set the clutch of your drill so that it automatically stops when the screws are tight.
10. Rotate the two joined pieces of wood so the lower piece stands vertically. Place a third piece overlapping the other two ensuring its end is flush with the edge of the vertical piece.
11. Drill, countersink and screw the third piece of wood, as in steps 8 and 9. Repeat through the face of the vertical piece of wood to form a perfect triangle with 6 screws.
12. In a similar manner, join a further two pieces of wood to the opposite end of the third piece of wood.
13. Drill and screw a sixth piece of wood at the opposite ends of the two parallel horizontals to create a square frame, ensuring a 34mm gap remains at the end.
14. Two additional legs can be drilled and screwed to the square frame.
15. You should now have a square frame and four legs consisting of eight pieces of wood and twenty-four screws.
16. Flip the frame upside-down and using a spare length of wood as a measuring guide, drill and screw another piece of wood parallel to the front edge of the frame at both ends.



17. Repeat step 16 eight more times leaving the last remaining gap free.
18. Stand the frame upright and you should have a total of eleven slats across the top surface of the frame. This is the seat of your DIY Chair.
19. Create a new square frame using four pieces of wood. Place the two lower pieces on their thin edge and the other two adjacent on top on their wide edge.
20. Use a spare piece of wood as a measuring guide so the two upper pieces overlap by 34mm.
21. Using eight screws, join the four pieces of wood together. Remember to check they are at right angles.
22. Slide the frame up the legs of the original frame and use the width of four pieces of wood as a guide before drilling, countersinking and screwing the frame permanently.
23. Sixteen screws should be used to attach the support frame – two screws though every wide edge of the wood – four per corner.
24. Begin the backrest. Repeat steps 6 & 7 to create a right angle with two pieces of wood. The upper piece should overlap the lower by 34mm (the wide edge of the wood).
25. Drill, countersink and then screw the two pieces of wood together. Place another piece of wood on its thin edge at the opposite end of the upper piece of wood.
26. Place a second horizontal across the thin edge of the lower pieces of wood and use the narrow width (18mm) of a spare piece of wood as a spacing guide.
27. Hold the second slat in position whilst you drill and countersink.
28. Screw the second slat in place and then repeat steps 26 & 27 twice more.
29. Your backrest should have four horizontal and parallel slats in total.
30. Flip the backrest onto its side and add another piece of wood for the right armrest. This should be placed directly beneath the lowest backrest slat and joined using four screws.
31. Two screws through the wide edge of the vertical piece into the side of the armrest, and two screws through wide edge of the armrest into the vertical of the backrest.
32. Repeat steps 30 & 31 to attach the second armrest. This completes the back and armrest of your DIY Chair.
33. Return to the chair frame and legs. Turn the unit onto its side. Place a piece of wood towards the front of the chair parallel with the leg but pointing in the opposite direction.
34. See picture for exact position. This piece of wood forms the vertical support for your armrest. Join the vertical piece of wood to the frame using four screws.
35. Attach a second armrest support to the opposite side of the chair frame using a further four screws.
36. Take the back and armrest section and slide the two vertical pieces of wood through the large gap in the seat slats.
37. Lean the backrest backwards as far as it will go and slide it up or down until the front ends of the armrests are in contact with the vertical armrest supports (see image 39).
38. Using your final eight screws join the two vertical pieces of wood of the backrest to the inside of the chair frame (image 37), and screw the top edge of the armrest supports to the side edge of the armrests.
39. Your DIY Chair is now complete and ready for sitting on.
40. Designed by Max Lamb, made by you. Enjoy.