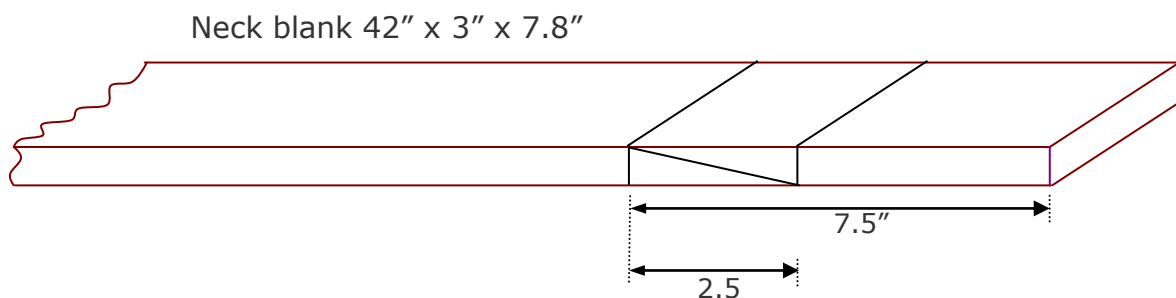


Classical Guitar Neck Construction.

The Scarf Joint

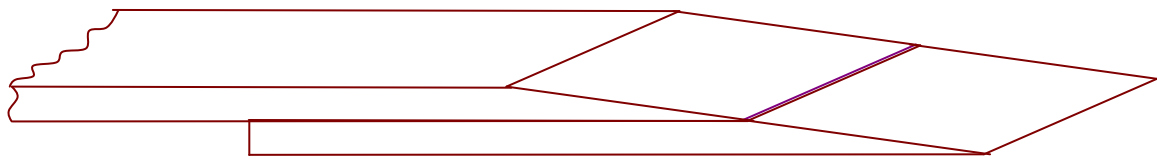
A scarf joint is a traditional way of joining the headstock to the neck. Making this joint by hand requires sharp tools and a bit of practice so try it first on a scrap piece of wood. The angle of the headstock to the neck is around 15 deg. Any less than around 13 and there is not enough downward pressure between the string and the nut. Any more than 17 deg and the amount of wood surface in the glued joint is reduced and the joint may well fail under string tension.



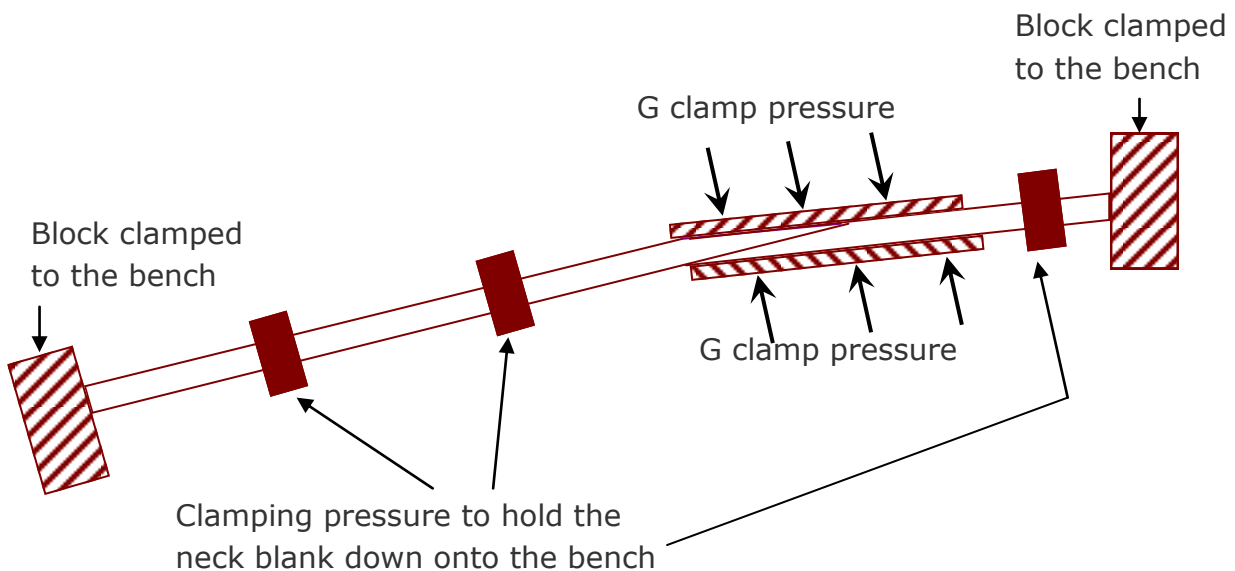
Make sure the edges are square to the face and the neck blank is flat across its length. The neck blank should be prepared to 7/8" thickness.

Then mark a line around the blank 7.5" from one end, using a try square and sharp pencil. Mark a second line around the blank, 2.5" in from the 7.5" mark. Now draw a diagonal line connecting the opposite corners of this 2.5" x 7/8" rectangle. This is the line to saw down to create the headstock angle.

Turn the blank onto its edge and clamp it firmly in a vice, or to a bench top. Now, carefully, saw along the diagonal, keeping an eye on the two parallel lines to make sure the cut doesn't wander. Nice gentle strokes of the saw should yield a straight cut.



Stack and clamp the two pieces to the bench so that you can plane along the diagonal surface to achieve a flat slope, parallel to the length of the neck blank. Use a straight edge to check the flatness and a try square to make sure the slope stays parallel. When you have these two faces absolutely in line you can set up to glue them.



Before you get the glue bottle out, have a dry run through of the clamping process. The two end blocks clamped to a bench or work-board are there to stop the joint from slipping under G clamp pressure. Lay some newspaper on the bench or board to prevent the glue bonding to the bench. Clamp the long section of neck on its edge, lightly. Then using G clamps and wooden cauls, clamp the joint lightly together. Finally clamp the headstock lightly to the bench so it doesn't slip. When the dry clamping looks to be in place, tighten the clamps on the long neck piece. Release the other clamps, coat the two gluing surface in glue, and repeat the clamping set up. When the joint looks to be in the right place, tighten the clamps and leave for a couple of hours to set. Once the glue has dried, clean up any excess glue and you are ready to create the stacked heel block.