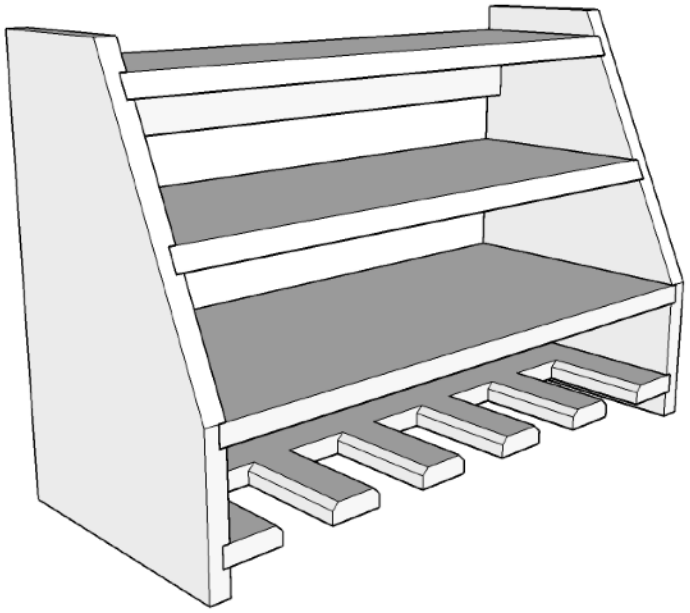
# Drill Charging Station

A wall-mountable charging station with enough room for 5 drills, 2 chargers and all of the drilling accessories you own. Please watch the accompanying video before embarking on the build. https://www.thewoodwhisperer.com/videos/drill-charging-station/



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Plans: Marc Spagnuolo & Brian Benham

Version 1

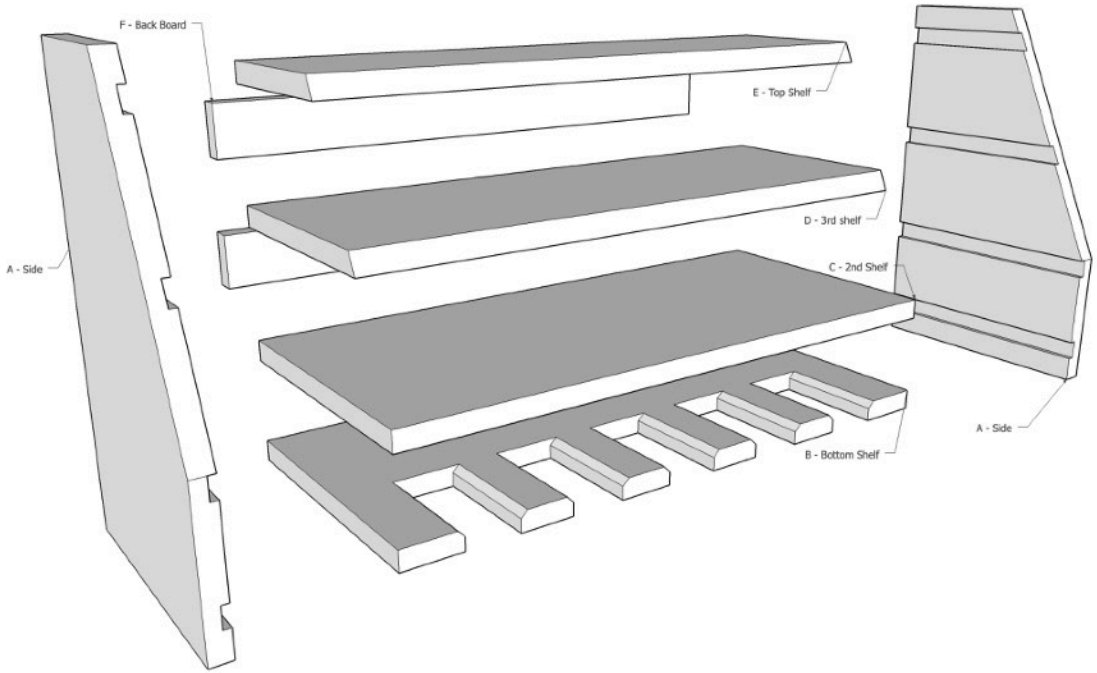
TWW®

# Cut List

| Part ID | Part Description | Material | QTY | Width | Length | Thickness |
|---|---|---|---|---|---|---|
| A | Side | 19mm Plywood | 2 | 254mm | 406mm | 19mm |
| B | Bottom Shelf | 19mm Plywood | 1 | 254mm | 572mm | 19mm |
| C | 2nd Shelf | 19mm Plywood | 1 | 254mm | 572mm | 19mm |
| D | 3rd Shelf | 19mm Plywood | 1 | 208mm | 572mm | 19mm |
| E | Top Shelf | 19mm Plywood | 1 | 152mm | 572mm | 19mm |
| F | Back Board | 19mm Plywood | 2 | 51mm | 559mm | 19mm |

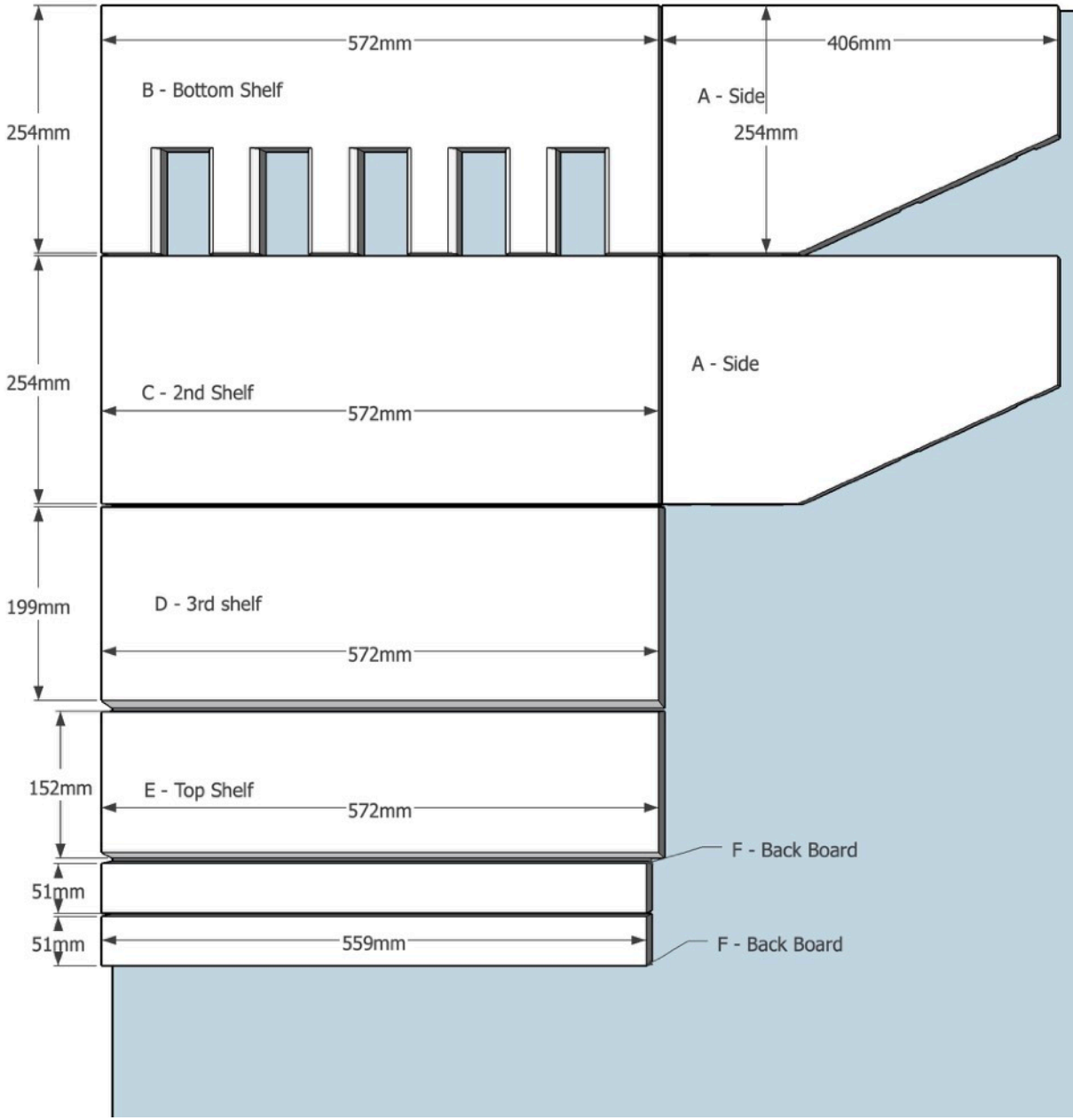
## Materials List

Half Sheet - 19” Plywood (Baltic Birch if you can get it)



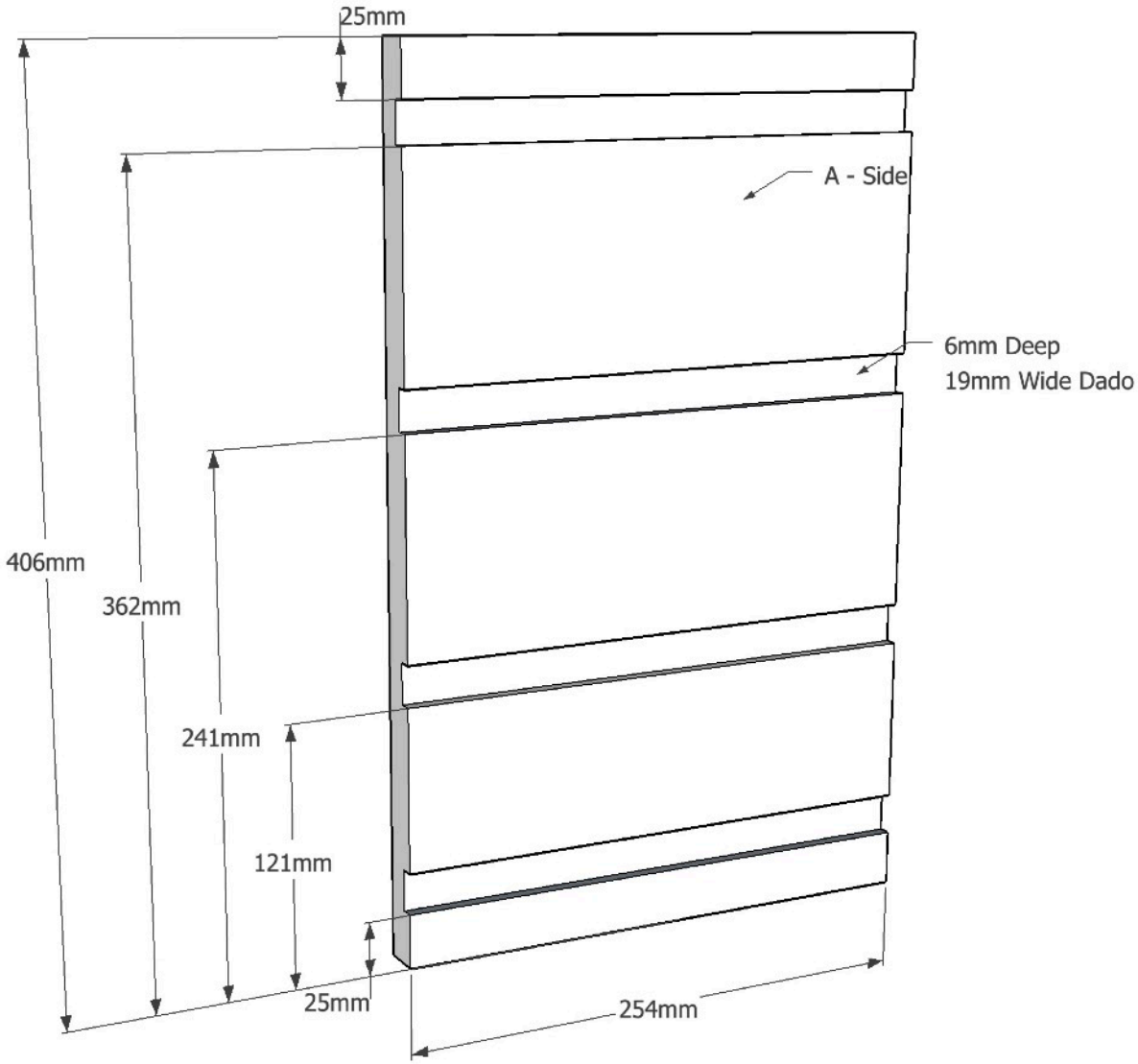
**Step 1**
Cut all parts out of a half sheet of plywood. I like to use a circular saw and a cutting guide to cut the parts about 3mm oversized in each direction. I then use the table saw to get the parts to final size, using a cross-cut sled or miter gauge to ensure the pieces are square. Also, be sure to batch out same-size parts all at once for the sake of precision.

Details such as the cut-outs in the Bottom Shelf and the angle cut in the Sides are added later. Don't worry about cutting them just yet.



**Step 2**
Cut the 19mm dados in both side pieces. While I am referring to them as 19mm you'll want to size the dados to the actual thickness of your plywood. This can be done by dialing in the perfect fit at the table saw with a dado stack or by using an undersized plywood-cutting bit with a router.

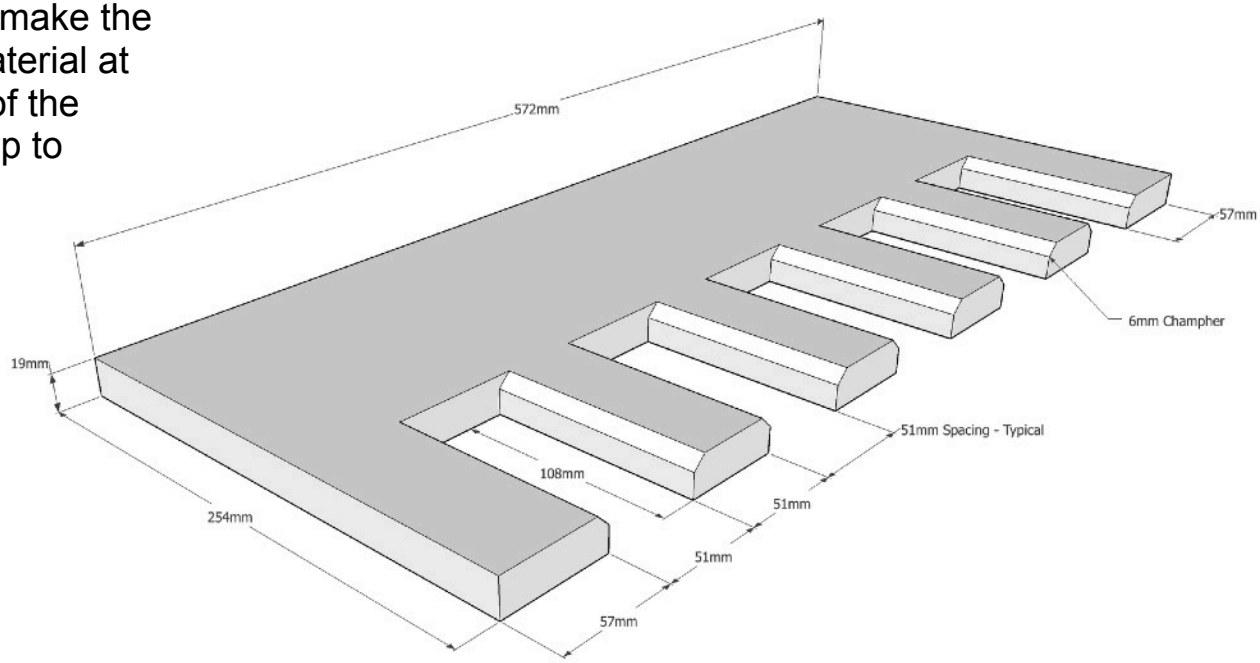
The shelf spacing measurements don't need to be perfect. The most important thing is that they are all exactly the same on both side pieces. Also, feel free to space your shelves to suit your needs and equipment.



**Step 3**
Lay out the slots in the bottom shelf to accommodate the drills you have in your collection. Mine are spaced at 51mm to accommodate the Milwaukee drills I own, though I'm sure these measurements will fit most drills. Modify as needed.

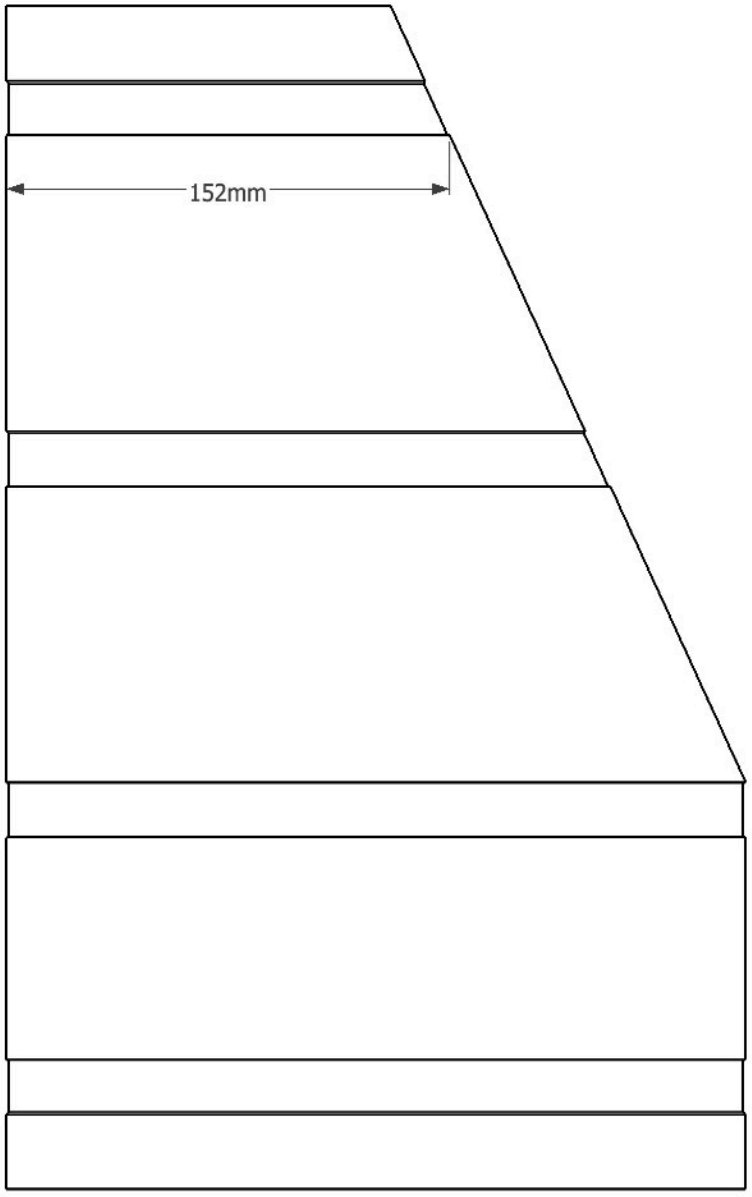
Use a bandsaw or jigsaw to cut out the slots and then use a chamfer bit to cut a nice chamfer that will help give the drills a better fit.

Note: In the video you'll see how you can make the drills fit even better if you relieve some material at the back of the cutout on the top surface of the bottom piece. Use a spindle sander or rasp to accomplish that.



**Step 4**
To create the taper on the side pieces, measure in 152mm from the back edge along the bottom of the top dado and place a mark. Using a straight edge, draw a long line from that mark down to the top of the second dado. Be sure the line extends all the way through the top of the side piece.

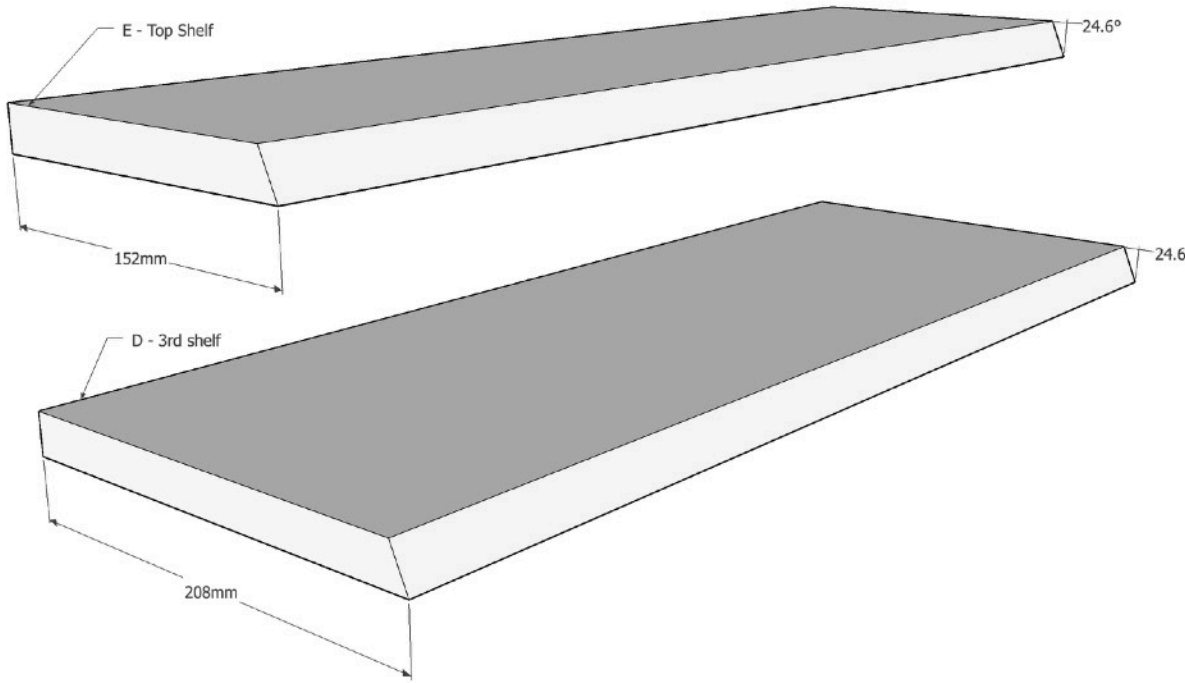
Cut the line at the bandsaw and clean up with sanding or a hand plane. It's a good idea to clamp the two side pieces together when doing this final smoothing as that will ensure they are exactly the same.



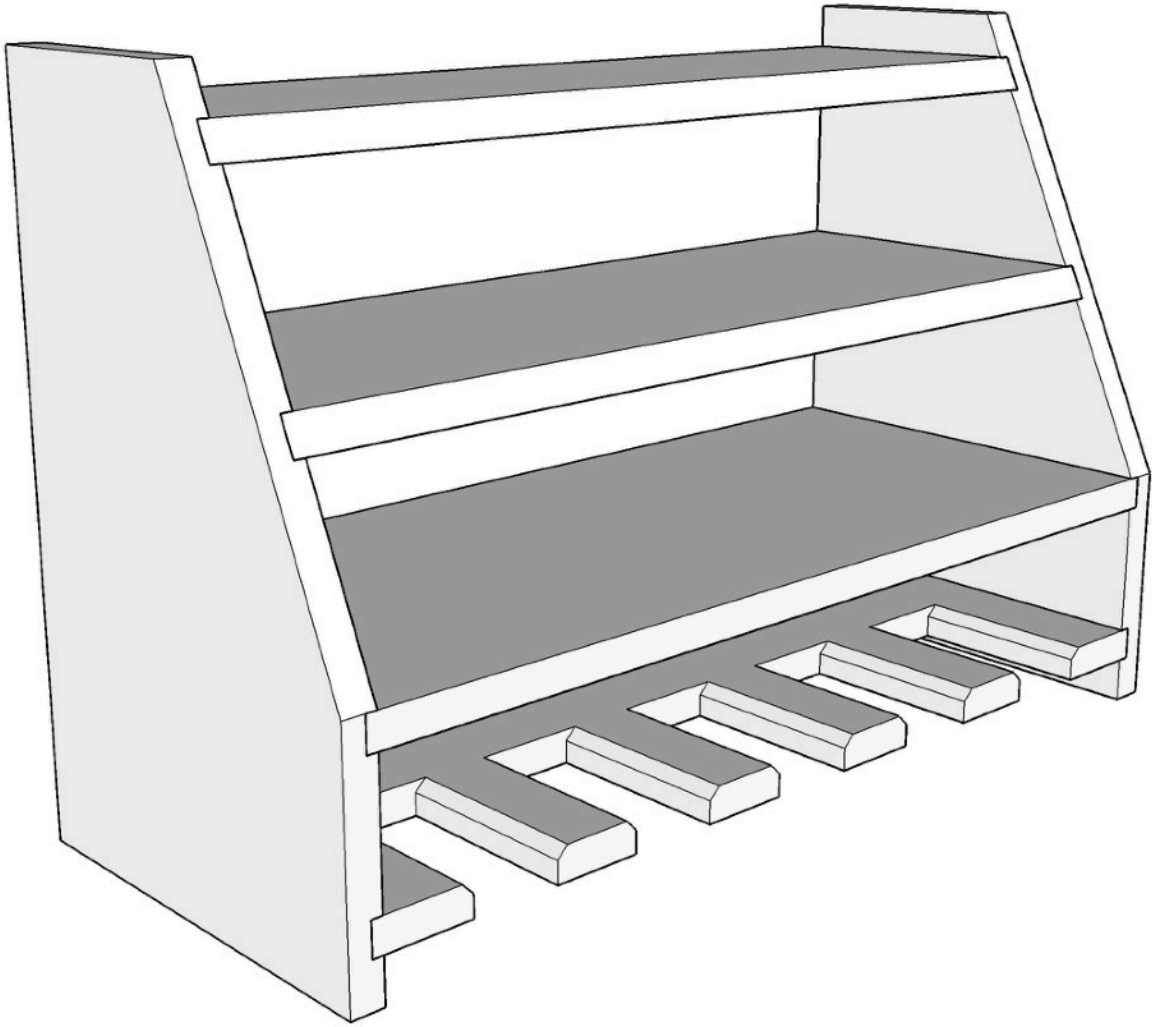
**Step 5**
Bevel the top two shelves to match the angle cut on the side pieces. While the image at the right gives you numbers you can use to do this, it's always best to use the actual workpieces to mark the cuts. Place the top two shelves into one of the side pieces so they are flush at the back and mark the overhanging area at the front edge. This line tells you both the width of the shelves and the angle of the bevel without ever having to worry about the actual numbers.

Tilt the table saw blade to the angle that matches the pencil line and make the cut on each shelf.

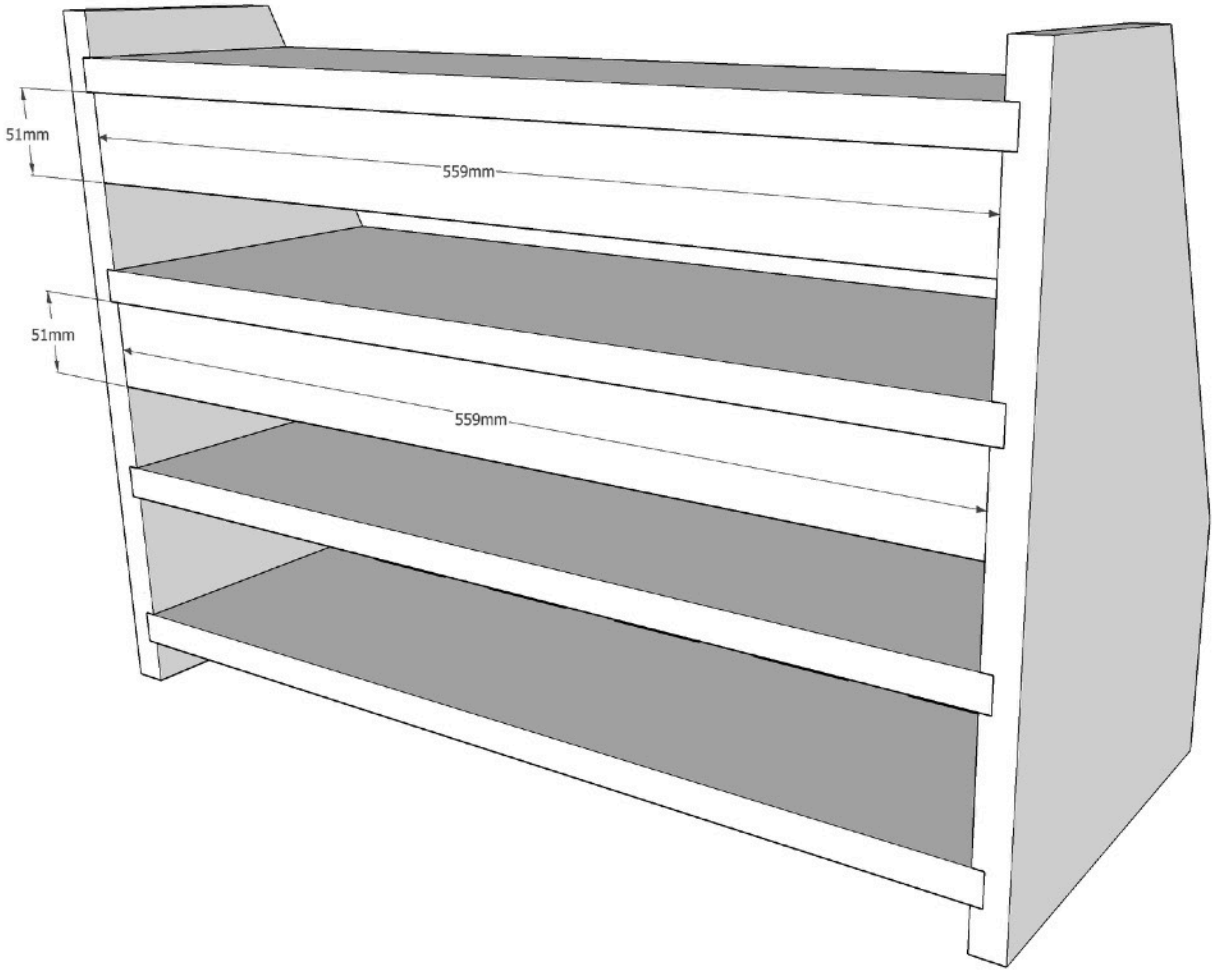
Note: While the bevel angle will be the same on both shelves, the width of the boards is different, so remember to adjust the fence accordingly.



**Step 6**
After doing a test assembly to confirm everything fits, it's time for the glueup. Start with the sides down on the bench and add glue to the dados. Next, bring in the shelves and bottom and drop them into the dados of one of the side pieces. Finally, cap it off with the other side piece. Apply enough clamping pressure to close the joints.



**Step 7**
After the glue dries on the main assembly, bring in the two back strips and glue them to the undersides of the two top shelves. These back boards help stiffen the structure but also act as cleats for attaching to the wall. Glue is sufficient but driving some brad nails or screws into the back boards will provide some additional reinforcement.



**Step 8**
Sand all faces and edges, taking care to make sure the front edges are flush around the joinery. Plywood edges can splinter easily so be sure to soften them with sanding. On a piece like this, finish is totally optional but shop projects are a great place to practice with new finishes, simply because the end result doesn't need to be perfect.

Have fun loading up your new Drill Charging Station! Thanks for following along.

If you have any questions or problems with the build or the plan, feel free to drop me a comment here: https://www.thewoodwhisperer.com/videos/drill-charging-station/

Marc Spagnuolo