

When I grill, I grill big. I like to have plenty of friends over and then treat them to big burgers, jumbo brats, and plenty of fresh grilled onions to top them off. It's quite a production and it demands a lot of space.

So with grilling season nearing its peak, I was anxious to build a custom grill cart that I'd been promising myself for quite sometime. SKIL had asked me to preview their upcoming X-Bench Portable Workstation, so when that arrived, I knew this was the year I'd make good on that promise.

The X-Bench seems almost designed for building a cart like this. It has a large and expandable work surface so the project never outgrew the bench. It also accepts an insert plate, which meant I was able to mount my jigsaw, router, and belt sander right in the work surface as I needed them for the project.

Maybe best of all, though, is that the bench folds down into something about the size of a large suitcase, so I was able to take the bench to the work instead of vice versa. And if that seems like a small thing, just think of it this way: What better place to build an outdoor project than outdoors?



Those are just a few examples of how the X-Bench helped me complete this cart in one weekend with enough time left over to actually do some grilling. And now you better get started on yours before the weekend gets away!

Get Started

Here's how to build my custom, tile-top grill cart:

Start by ripping and cutting the legs from 2'x6' cedar. I ripped both edges of this material to create straight, square sides.

Now rip and cut the side, end, and top rails to size from 5/4 x 6 cedar deck boards. Here again, by ripping both sides, you'll get the cleanest edges.

Drill pocket holes in the legs to attach the end rails. Drill these in the outside faces of the legs so the side rails will cover the screw heads.

Add the Legs and Rail

Now assemble the legs and end rails. Use a good exterior glue at these joints. I prefer Titebond II because it has plenty of "open time" so I don't have to rush through aligning these pieces, and it's easier to clean up than polyurethane glue.

From here, you can add the side rails. You'll need to drive screws from the inside of the legs and into the rails. Locate the screws so that the cleats and slats will cover them up later. Here again, glue these joints before screwing them together.

Next up are the top rails. But before you can attach those, you'll need to add a couple details.

Mid-Project Details

First, taper the ends of the boards. To do this, lay out the cut lines on the boards, and make the cut with your jigsaw mounted in the insert plate in the X-Bench. Now swap out the jigsaw and insert for your belt sander, and sand the taper to the layout line.

Second, drill the counterbores for the copper towel bars. Locate the center of these counterbores by measuring 1 inch from the top edge of the board and 1 inch from the end of the board. Drill a 5/8-inch diameter counterbore about 3/4-inch deep.

Set the top rails aside for just a minute and cut the copper towel bars to length. These towel bars are made from 3/4-inch diameter copper pipe. You can cut these with a hacksaw or a pipe cutter.

Start Assembly

Now gather up the top rails, copper pipe and a couple of clamps to get started with this part of the assembly. The first step is to attach just one of the top rails to the cart assembly using glue and screws. Take note that the top of the rails sits 1 inch higher than the top of the legs. This provides space for a plywood top and tile that will complete the cart.

When you have one leg glued and screwed to the cart assembly, temporarily clamp the second top rail in place. This is where it gets a little tricky. What you'll need to do in order to get the copper pipe between the top rails is to unclamp one end of the rail. This will let you flex the rail just far enough to get some glue between the rail and the leg and also fit the copper pipe into the counterbores. If you can recruit an extra set of hands for this, it would be a big help.

After spreading glue into this joint as best you can and then nesting the copper pipe in its counterbores, clamp the end of the rail back in position. Then drive screws through the inside of the leg and into the rail, and permanently attach this piece. Now repeat that process for the other end of the top rail.

Shelf Cleats & Shelves

Now you can make the shelf cleats by ripping and cutting 2x4s. Note that the cleats for the top surface are a little bit wider than those for the middle and bottom surfaces. Once again, rip both edges of these pieces to put nice square edges on each side. Then cut the cleats to length on your miter saw and glue and screw them in place (the bottom edges of the cleats should align with the bottom edges of the matching rails).

With the cleats secured, you're ready to attach the slats that make up the middle and lower shelves. I made these from 5/4 deck boards, just like the rails. As you you've probably surmised, there's quite a bit of cutting to make all these slats. Here's how I did it:

First, cut 14 pieces of 5/4 decking to exactly 24½ inches (check the inside dimension of the cart just to be sure, but this is the size I used so the slats would fit between the rails with a little bit of wiggle room).

Now rip one edge of each of those 14 deckboard pieces just to square it up. Then set the rip fence on your table saw to rip the 1½-inch wide slats from these boards. You can get three slats from each 14-inch deckboard piece, so you'll have exactly 42 pieces when you're done. The final touch on these slats is to rout a roundover on each of the top edges. Mount your router, with a 1/8-inch roundover bit chucked in, into the X-Bench.

When you've routed all 42 slats, cut eight of them down to 21-inches long so they will fit in between the legs. Next, starting with the bottom shelf, run a bead of glue along each of the three cleats. Then arrange the slats inside the cart frame, resting on the cleats. To ensure consistent spacing between each of the slats, I used 1/4-inch tile spacers. When you're satisfied with the arrangement of the slats, fasten each slat to all three cleats with finish nails. Then repeat this process to complete the middle shelf.

Finishing Touches

At this point, you'll want to attach the casters to the bottom of the cart. Lay the cart on its side and mount the casters using lag screws. For each caster, run two screws into the cleat and two screws into the side rail. Tip the cart back upright and you're ready to add the top.

First, cut a piece of 1/2-inch-thick exterior plywood to fit inside the frame. Attach the plywood with glue and screws. Set the tile using a non-modified thinset mortar. Arrange the tile with 3/8-inch grout lines. Allow the mortar to set, and then grout the tile with sanded grout.

All that's left now are the finishing touches. That means a good sealer on the grout and tile and a stain or penetrating oil on the cedar. You'll also want to clean up and protect the copper. I used an abrasive pad to buff the copper to a nice shine and then coated it with spray lacquer to protect it. Be sure to mask the cart to keep the lacquer off the cedar.

Now you can fold your X-Bench down, stow it out of the way and get ready to grill a nice meal to reward your hard work and enjoy your brand new grill cart.

