

Ox-Cart

Rolling cart for OpenBuilds Ox CNC Machine

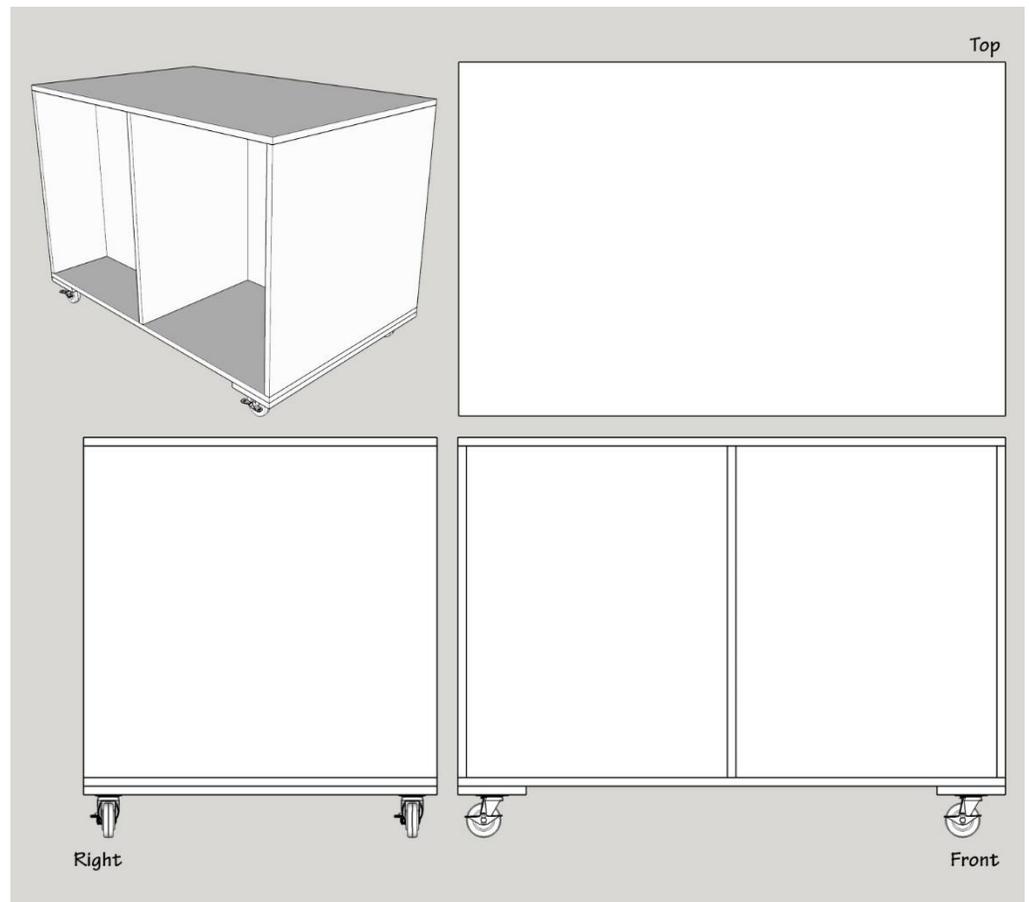
Overview

This project provides a rolling work-platform for the OpenBuilds Ox CNC machine – in a large-format (750mm x 1000mm) configuration. The worktop on this rolling station is 31"x48" and will provide room to mount both the CNC machine and electronics enclosure directly to the worktop. Alternatively, the storage beneath could be configured to hide the CNC electronics directly within the cart.

The storage compartments specified in the plan were designed with an offset to provide a deep and shallow area on both sides of the cart. I plan to add shelves and drawers to parts the cart, while adding a built-in dust collection unit to one of the larger spaces. The offsets and further storage arrangements can be modified in many ways to suit individual needs.

Lastly, this cart is great as-is, but if you want a more “finished” appearance, I recommend:

1. Adding a ½" hard wood face-frame
2. Adding a second layer of ¾" MDF to the top (this makes a sacrificial surface that is cheap and easily replaced)

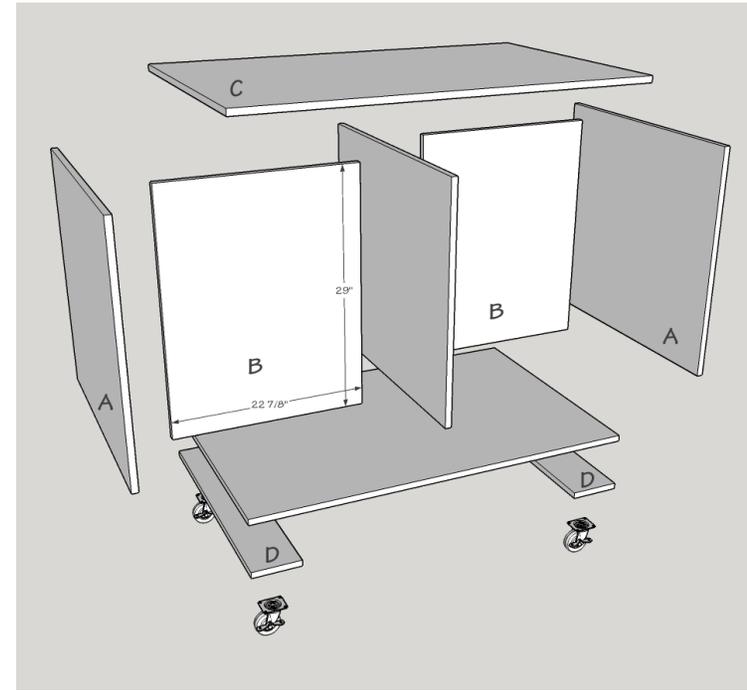


Bill of Materials

Description	Quantity
4' x 8' x 3/4" Plywood	2
3.5" Locking Casters (5" overall height)	4
Bolts for casters (M8-1.25 x 30mm)	16
Nuts for caster bolts (M-8-1.25)	16
Washers for caster bolts (M8 or 5/16")	16
1 1/4" Pocket-Hole Screws	30
1" wood screws	8

Instructions

1. Referencing the provided **Cut List**, cut all panels to size.
2. Drill six (6) pocket holes into each panel, as follows:
 - Panel(s) A: 3 holes (spaced equidistant) top and bottom
 - Panel(s) B: 3 holes (spaced equidistant) in each side
3. Using glue and pocket-hole screws, assemble panels (A) and (B)
 - Use corner clamps to ensure 90-degree connections
 - Reference Figure 2 for the offsets I used for the (B) panels
4. Using glue and pocket-hole screws, assemble the top surface (panel C) to the (A) panels from the prior step.
5. Flip the surface over onto its newly installed top and repeat this process to assemble the bottom surface.
6. Using glue and 1" wood screws, fasten panels (D) to the bottom surface – ensure the screws will not interfere with the intended caster mount points.
7. Mark and drill holes for each caster mounting bolt. My casters could take bolts up to 3/8" in shaft-diameter, so that is the diameter hole I drilled.
8. On the inside of the bottom surface, use a drill-bit matched to your washer size to drill a recessed hole so that the wheel-mounting hardware will not protrude into the bottom of the storage cavity.
9. Install each caster using the bolts, washers, and nuts (sized appropriately for your caster mounting holes). My local hardware store only had enough bolts in size M8-1.25 x 30mm – so that is what I used.
10. Add storage options (drill for shelf mounts, install sliding drawer hardware, etc.) as desired.



Fig

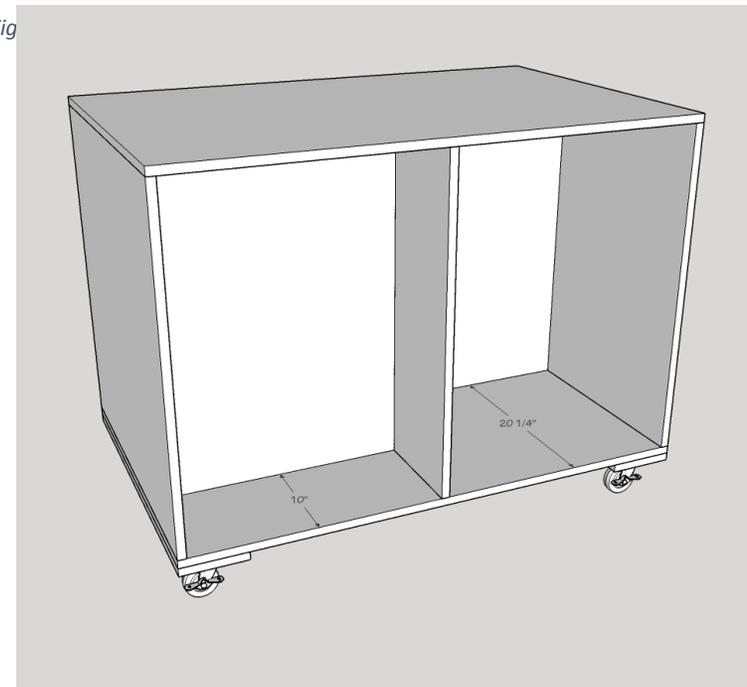


Figure 2: Storage Offsets

Cut List

Part Number	Material	Length	Width	Quantity
A	3/4" Plywood	29"	31"	3
B	3/4" Plywood	22 7/8"	29"	2
C	3/4" Plywood	48"	31"	2
D	3/4" Plywood	31"	6"	2

Cut Diagrams

