The Ultimate Storage Cart Tutorial



TOOLS

Table saw (or circular saw and straight edge) (alternatively, a good hardware store could make these cuts for you) Router with 1/2" bit Straight edge Clamps Screwdriver Hammer (we have a pneumatic nail gun, but it's not necessary...but it is faster!)

MATERIALS

(2) 4' x 8' sheets 1/2" plywood (we used A-C)
(4) wheels and screws for installation Glue
Wood Filler
Finish nails
Sandpaper (we have an orbital sander – not necessary, just faster)
Finish (I used a wipe on polyurethane)

I began the design by measuring three of my containers lined up side by side adding a little wiggle room – this gave me a space of 36" wide by 7 1/2" tall by 17" deep to plan for. I wanted the finished cart to be 37" tall (to match the height of my already present cutting table). The wheels we bought were just under 4" tall, leaving 33" for the height of the cabinet itself. There's room for 4 rows of my containers, 16 qt Sterilite.



I also wanted some smaller boxes to hold very small bits of fabric, and found some more containers that fit in the same foot print, Sterilite large clip box. So with all these decisions in place, we sketched out a plan on how to construct the cabinet, which you can find further into this PDF. The basic construction is a box that is 1/2" deeper and 1" wider than the intended spaces, with 1/2" grooves routed into the sides for the shelves to fit and 1/4" grooves routed in the back for a panel to drop in and stabilize the entire cabinet.

Step 1: Cut your plywood

The hubby and I also drew up plans on how we cut the plywood, which are also included later in this PDF.

You should end up with the following pieces:

- (2) Sides: 33" x 171/2"
- (2) Top/Bottom: 361/2" x 171/2"
- (3) Shelves: 361/2" x 17"

(1) Back: $36" \times 32"$ (you may need to adjust these for final fitting) Optional Dividers: (6) $71/2" \times 17"$ and (2) $8" \times 17"$ (customize these for your final shelf spacing and storage needs)

We used a table saw with rollers – that first cut is very awkward – I had to help stabilize the plywood without pulling it the wrong way. If you don't have a table saw, you can use a circular saw and straight edge to guide it, or a good hardware store could make these cuts for you.



Step 2: Rout grooves for shelf placement

Both sides are going to have 1/2" grooves routed to hold the shelves in place, these grooves should be identical and (if you used A-C plywood) on the rougher side of the plywood. There is a groove at the very top and bottom of the sides – this is to hold the top and bottom. Then mark the placement of your shelves – we placed both the sides next to each and marked them at the same time. You could evenly subdivide this space, or choose to make the shelves different heights, depending upon your needs. I marked three lines 8" apart, leaving the bottom space a bit taller.

Note: If you don't have a router you could get small strips of pine or poplar and make supports for your shelves.

Step 3: Glue and assemble

"Glue and assemble" – Hah! Easy to type, harder to do! Place a moderate amount of glue in the side grooves for the horizontal shelves and then insert the top, bottom and shelves (good side of the plywood facing up); you've now got a very wobbly set of shelves. The inner shelves should be flush with the front of the cabinet, leaving a gap along the back, this is where the back will drop in. Nail through the sides into the shelves to steady it, and then make sure the whole thing is square.

While this is drying, measure the space for the back and cut it to fit. Glue the backs of the shelves and the grooves in the top and bottom and slide your back into place. More nails through the back into the shelves will keep everything steady.

Let this dry and to ast your wonderfulness with a lovely beverage – you've earned it!

Step 4: Wheels and dividers

The wheels were screwed into place 1/2" in from each corner. I then brought out some of my containers and played around with the placement of the dividers until I was happy with the arrangement. They were then "toenailed" into place (see the picture, but it's basically nailing at an angle through different layers of wood, in this case a shelf and divider).

Note: These dividers were wedged in there pretty tightly – if you didn't want to commit to subdividing your shelves permanently, they'll stay in there pretty well without the nails.

Step 5: Finish and enjoy!

The final steps are to fill the nail holes with wood filler, sand the whole piece, and then finish it.

COST

This really was an inexpensive project – of course it helps that we had things like glue, wood putty and sandpaper on hand. If you didn't need wheels this project would be extremely cheap!

Plywood = \$62 4 wheels = \$22 Total Cabinet Materials = \$84 Plastic boxes 4\$/each = \$48 Entire Project = \$132



External Width 37"



Constructed with ¹/₂" plywood

Constructed with ¹/₂" plywood

4' x 8' Sheet of ½" Plywood #1

| 17 ½″ | 17″ |
|-------|----------------------|
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| | |
| Top | ۶helf [*] ۶ |
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4' x 8' Sheet of ½" Plywood #2

