

No. 202. A (FREE!) Computer Cart or Mobile Workbench

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Need a computer stand for your desktop or laptop? Or a mobile workbench/work surface you can roll into place in your office or workshop? Here is one that is small, easily moved, and has both an adequate workspace and a shelf. Cost? Nada. Nil. Nichts. Nothing. Best of all, you are contributing to the recycling program by salvaging parts that probably would have gone into a landfill, and giving them a second chance to be useful for many additional years.

Find a dealer that sells Weber grills. Very likely, they will have a "bone yard" in the back where old grills await recycling. Find one that has both of the two wheels intact and the frame (1 inch square steel tubing) appears not to be broken. Ask if you can take the steel frame (leave the grill burner and cover for aluminum recyclers – these parts are solid, cast aluminum). Use a 7/16-inch wrench to disassemble the frame into either 5 or 6 pieces (depending on the particular model). If the plastic or wood bracket trays are in good condition, save those too, with their metal brackets. Save the bolts and black plastic washers under the bolt heads. The frame and wheels easily fit in a small car's trunk when disassembled. Cart it all home.

At home, break off and discard the plastic "hubcaps" and the metal retaining ring under the hubcap. Pliers do this easily. Slide off the wheels and remove the axel from the frame. Drill a hole for a cotter pin about 1/4 inch in from each end of the axel (or, you can give the store some business by purchasing a new retaining rings and hubcaps). Clean and brighten the axel shaft with steel wool and give it a quick spray with clear plastic coating. Remove the black plastic washers from the frame bolts and buff the bolts on a wire wheel to remove any rust and dirt. Put the washers back on the bolts, reversing their position so that any cupping will face the frame. Wash the wheels and dig out any pebbles stuck in the tread.

Remove the black plastic tubing ends from all the square frame components (pry one corner with a knife and then use a screwdriver along each side). Don't forget the two on the vertical elements that contact the floor. Wash the tubing ends and remaining square frame components with soap and water to remove any grease, and let them drain and dry. Sand the tubing lightly with fine sandpaper or steel wool to dull the sheen. Then give each component a light spray with gloss black paint, to make them look brand new.

Reassemble the frame when the paint is dry, starting with the axel and wheels (the other vertical frame member is longer than the one that holds the wheels, and it has no axel holes). When done, replace the black plastic tubing ends on the bottom of the vertical frame element that has no wheels, and on the four ends of the horizontal elements. You need 6, so go back to the store and get any missing ones from other junked frames, or buy new ones. Hardware stores carry them new, too, but if you go that route bring an old one to match the correct size.

You now have a lightweight but strong cart frame that is quite stable until you lift the handles to roll it on its wheels. Cut whatever plywood, composition board or other material you like for the top work surface and bottom shelf. Keep the bottom shelf the size of the bottom frame, and cut notches in the shelf to match the vertical members. No fastening hardware is needed if you do the notching carefully – just tip the shelf in place. Make the top work surface as large as you like within reason. Don't forget to leave about 6 inches of horizontal tubing free at the end opposite the wheels, so you can grasp them as handles when you want to move the cart. One approach to fastening the top work surface is to drill and tap four 8 or 10/32 holes in the frame top, for

screws that go through the board. Use taper-head screws and countersink the holes in the board so that they do not protrude above the board.

You should observe one caution when using the cart. Use care to keep any heavy equipment you put on the top work surface centered between the two vertical frame elements. For example, I used a cart to hold two bench grinders, one with a coarse and fine wire wheel and the other with two wheels with different grinding grits. I used care to mount these between the two vertical frame elements so the whole cart does not unexpectedly tip during use.

They make wonderful mobile workbenches, and even great storage carts that can be easily moved and repositioned in your shop or office. Be prepared, though! If you make one, you will likely make more than one. My first computer carts never got to see a computer! My first two wound up as garage workbenches, and four more appeared in my computer workshop in the basement. Finally, one wound up next to my HF rig desk, holding a computer on its bottom shelf, and a printer on the top shelf. The screen, keyboard and mouse, however, are on my HF rig desk.

Finally, here is another recycling tip, especially useful if you used rough material for the top work surface and bottom shelf of your cart. Go to your hardware or other store where they sell pull-down window shades. Ask if you can snag a couple of discarded shades from the trash. Use them to cover the shelves in your project (and your workbench, too!). The plastic in these shades is white or nearly white and it makes a wonderful surface to work on because of its texture and light-reflective nature. It is easily cut with a razor knife to conform to whatever surface you are covering. Use masking tape to hold it in place along the edges. When it gets dirty or torn or full of solder burns, simply pull it off and put on a new piece. I promise that, if you try this once on your workbench, you will love it. And it is one more item that gets a second use before hitting the landfill.

This article is a rewrite of No. 112, published about 11 years ago, and it is still relevant! Happy computing!