

## BOX STYLE CART PLANS

### Materials List

\* Blueprints are shown at the bottom of the page.

- 1 - Sheet of 1/2" ABX Plywood
- 2 - 20" Wheels
- 1 - 3/4" Axle
- 2 - 4' lengths of 1" aluminum tubing
- 2 - 1' lengths of 3/4" aluminum tubing
- 2 - 5/16" eye bolts
- 2 - 3/16" eye bolts
- 2 - 1" Rubber tips for front of shafts
- 14' of 1&1/2" aluminum angle
- 10' of 1/2" aluminum "U" channel
- 2 - 1/4" X 2" bolts
- 2 - 1/4" hex nuts
- 40 - 3/16" X 1/2" bolts
- 40 - T-nuts
- 14 self tapping screws



\*This cart is designed using wheels and axle manufactured by Garden Way Research.

\*dated

Parts for Garden Way Carts are available at Grower's Solution, 2212 Isaac's Pass, Cookeville, TN 38506.

<http://www.growerssolution.com/page/GS/PROD/26part>

Phone: 1.931.528.3390

Please follow these instructions step by step referring to the blueprint to assemble your cart.

(1) First cut out the five plywood panels exactly as shown in figure 1 below. (Or have your local lumberyard cut them for you.) The best plywood to use is 1/2" thick ABX. It is not necessary to use AB (good both sides) but make sure exterior grade glue is used.

Now stain or paint all five pieces.

(2) Cut 2 pieces of angle 36" long and 2 pieces 23 7/8" long. Miter ends on all 4 pieces to 45 degrees. Drill 3/16" holes in the 2 short pieces and 4 holes in the long pieces as shown in Figure #2.

(3) Lay these pieces on bottom piece of plywood and mark holes to be drilled. All 14 holes in the plywood bottom will be drilled 1/4". When drilling, hold a block of wood against the opposite side to prevent splintering. After holes have been drilled, insert eyebolts into the plywood into all holes except for the axle clamps. All T-nuts will be on the inside of the cart. When starting screws into the T-nuts, hold the T-nut to keep it from being pushed out of the wood.

(4) Next drill three 3/16" holes in the other leg of the short angles and four 3/16" holes in the other leg of the long angles. The end holes should be drilled 1" from the ends and 1/2" down from the edge. The remaining holes should be evenly spaced. Position the two side pieces of plywood and mark and drill holes. These holes will also be 1/4" holes. Install T-nuts and bolts.

(5) Cut four pieces of angle 9 1/2" long. These will be the corner angles. Drill two 3/16" holes in one leg of each angle 5/8" from the outer edge and 1 1/2" from each end. The legs with the holes 5/8" from the edge will be attached to the sides of the cart. Position the angles this way and mark and drill holes in the plywood sides using a 1/4" drill. Insert T-nuts into these holes and install bolts.

(6) Position front and back panels of plywood and mark and drill holes 1/4". NOTE: Make sure the front end is against the front angles and make sure you pull the sideboards against the edges of the front end before making the holes to be drilled. Do the same for the back. Install T-nuts and bolts.

(7) Cut the 1/2" aluminum U-channel. Two pieces 23 7/8" long and two pieces 36" long. Miter these pieces 45 degrees. Position and mount these with self-tapping screws. Put 3 screws in each piece.

(8) position cart so the front end is up. Drill two 5/16" holes in the bottom piece of angle 4 1/2" from the side of cart 1" from bottom edge. Drill two holes in line with these approximately 3 1/2" up from the center of holes. These holes will be determined by the way in which the shafts were bent. They should be just below the bottom of the bend.

(9) The shafts will be made from th 1" aluminum tubing. Prior to bending, insert a piece of 3/4" tubing into the end to be bent. This may have to be a 7/8" tubing depending on the thickness on the wall of the 1" tubing. It should be a snug fit. This will facillitate bending and add support when tightening mounting bolts and eye bolts.

(10) Start the bend about 5 1/2" from the end of the tubing. Make the bend 90 degrees. This should make the length of the short leg about 7" long.

(11) Position shafts with the long end straight up and drill a 5/16" hole in the center of the short end 1" from the end. Drill a 1/4" hole 3 1/2" from the center of the 5/16" hole. Mount the shafts to the cart using the 5/16" eyebolt and the 1/4" x2" bolt. When mounting the shafts to the cart, a large diameter washer and lock washer should be used under each nut.

(12) Cut off ends of shafts at 36 1/2" from the cart. Drill a 3/16" hole through the shafts 1 1/2" from the end. This hole will be drilled down through the shaft so that the 3/16" eye bolt will be sticking straight up. Install 3/16" eyebolt. place rubber tip on end of shafts.

NOTE: The length of the shaft (33") and the height (18") will be determined by the harness you will be using, but should vary only slightly.

(13) With the cart standing on end, push 1/4" x 1" bolts through each of the four axle clamp holes from inside the cart so that they project from the bottom of the cart. Place an axle clamp over the bolts on each side, and thread a nut on each bolt. Then slip the axle through the axle clamps, slide a wheel on each end, secure with a cotter pin and tighten all four bolts. Place a few drops of oil between the inner and outer races of the ball bearings (not in the holes in the hub marked "oil" and covered with a plastic cap. These holes are in the hubs for another application for these wheels.) Periodically tighten all nuts and bolts and re-stain the plywood panels every season or so.

You are now ready to hitch your dog to your cart.

Happy carting!

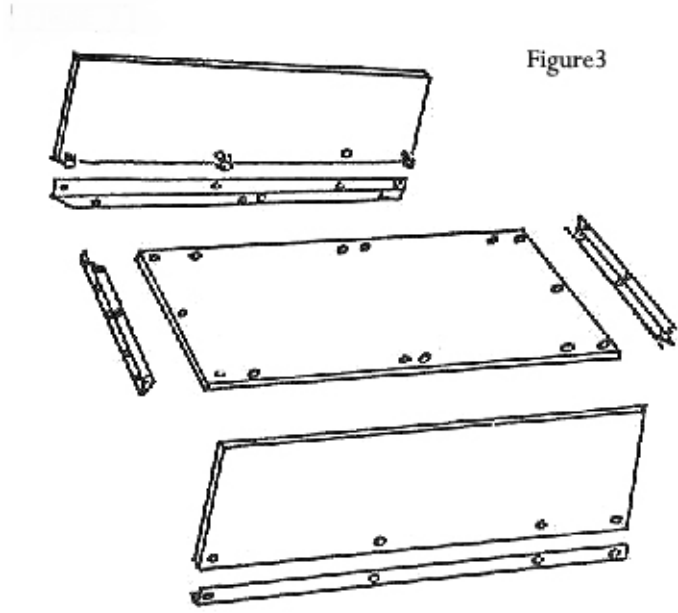
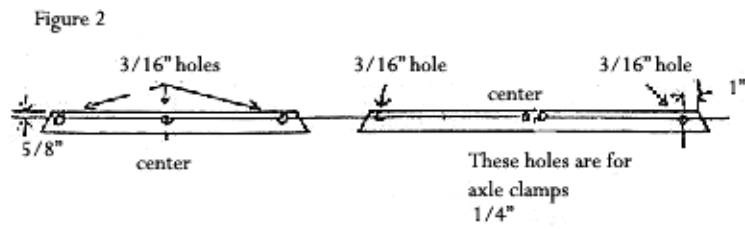
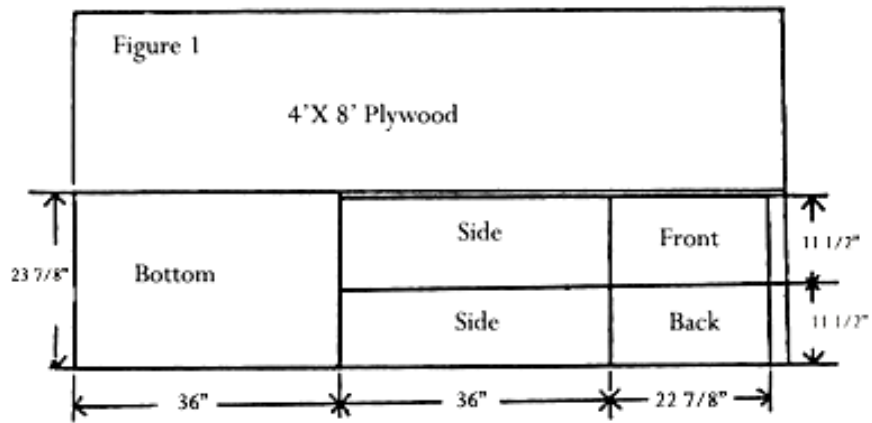


Figure 4

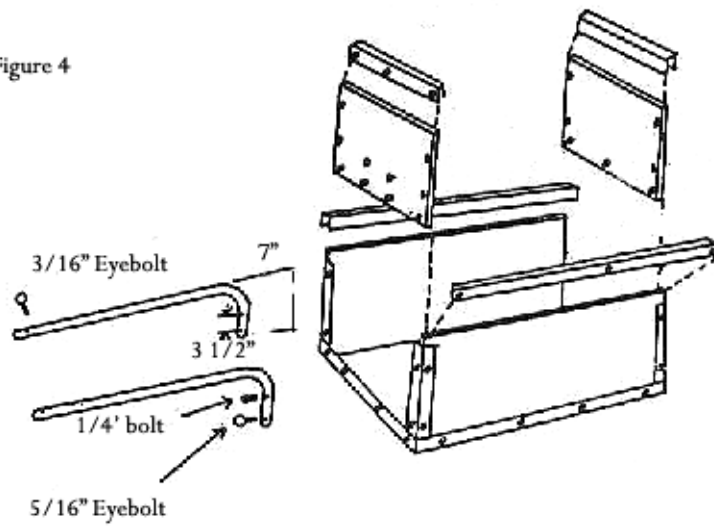


Figure 5

