Build a Trade-Show Booth for Under $200!

Designed by Jim Vanides © 2002

This corner booth, with a seven foot front and sweeping 4x8’ backdrop, assembles in less than 20 minutes and can be built in one weekend.
Materials

- 4’x8’x3/4” particleboard laminated w/white melamine
- 4’x8’ black satin Formica sheet
- (3) 8’ std grade 2x4’s
- (2) 3 ½ x 6” rectangular nail plates (galvanized steel)
- (6) 45deg angled nail plates (galvanized steel)
- (2) 2”x1/4-20 hex head bolts
- (12) 1 ½” x ¼” carriage bolts
- (12) 1 ½” x ¼” lag bolts
- (6) #8 x ¾” RH wood screws
- (2) #6 x ¾” RH metal screws, preferable black with washer
- 3 yards of 45” wide black cotton fabric
- thumb tacks
- one sheet of poster board or scrap strips of cardboard
- Black paint
- Track lighting fixture (optional)

for mounting artwork:
- Scotch double-stick adhesive tape
- Spray mount adhesive
- UHU “TAC” gum

Tools

- 7/16” Socket and ratchet
- ¼” drill bit for cutting steel
- countersink bit
- drill bit for lag bolt pilot holes
- electric drill
- saber saw
- paint brush
- hammer
- pliers
- tape measure
- phillips head screwdriver
- saber saw
STEP ONE: Before you leave the lumber-yard...

Save yourself some trouble and time by asking the staff at the lumber-yard to use their panel saw to make four cuts in the 4x8 sheet of melamine-laminated particle board. The 6” wide pieces that are cut will serve as structural supports for the display:

While you’re at it, have them use their radial arm saw to cut the three 8’ 2x4’s down to 7’ in length.
**STEP 2: Building the Support Structure**

The display’s table top is supported by a structure creates a “three legged table”. The legs are the 7’ tall 2x4’s. The table top rests on top of a triangular frame made of 6” wide ¾” thick particleboard laminated with melamine:

From the top, the frame looks something like this:
To make the triangular frame, reduce the length of the two 48”x6” particle board pieces (which you had cut at the lumber yard) down to 42” in length. Take one of the 85”x6” pieces and cut it to 81” in length. On all three pieces, drill two ¼” diameter holes at each end to accommodate the carriage bolts:

These support-triangle pieces are fastened to the 2x4 legs using galvanized steel “nail plates” that are pre-bent to 45 degrees. These nail plates are normally used for reinforcing 2x4’s that are used for framing walls.
You will need to open up four of the holes to $\frac{1}{4}$” to accommodate the carriage bolts.

- **SAFETY TIP:** to hold the brackets while drilling, nail two 4d nails into some scrap 2x4 to act as pins to hold the bracket from spinning.
- **SAFETY TIP:** because the holes in the brackets start as elongated slits, start with a countersink bit to widen the holes. Then, use the final $\frac{1}{4}$” bit to drill the hole to its final size.
Next, pre-bend them to the proper (approximately) angles.
Now prepare the LEFT and RIGHT 2x4 “legs” by drilling pilot holes for the ¼” lag bolts that will hold the brackets:
The rear leg has only two holes, both \( \frac{1}{4}'' \) in diameter, that are drilled through the 3 \( \frac{1}{2}'' \) wide face of the 2x4. These holes accommodate two \( \frac{1}{4}'' \) Hex Head bolts that hold two brackets:
Attach the brackets to the LEFT and RIGHT legs with \( \frac{1}{4} \)" lag bolts:

Attach the rear brackets to the REAR leg using the 2"\( \times \frac{1}{4} \)" hex head bolts:
Then, while someone holds a pair of legs, assemble the triangular base by attaching the 6" wide boards to the brackets, using 1 ½" x ¼" carriage bolts:
Now it’s time to cut out the table top. It will be approximately the size and shape shown below... but check the dimension with the (*), as it is the only critical dimension and may vary from project to project. It is the inside dimension between the LEFT and RIGHT legs.

Mark the shape on the UNDERSIDE (the “hidden” side) of the melamine sheet using a pencil. Use a saber saw to cut the overall width (about 82”), and then cut the critical width (*, about 78”) as shown below:
Lay the table surface on top of the triangular frame, and draw where your additional cuts will go. These are entirely cosmetic, but may look something like this:

With the table top sitting on top of its triangular support, you can now fit the Formica backdrop on TOP of the table, and bend it in an arc so the right and left edges of the Formica are flush to the RIGHT and LEFT upright legs. Secure with #6 RH screws:
The Name Banner at the top will add some additional rigidity to the structure, constrains the Formica sheet at the top, and provides a handy place to mount a sign. It attaches to the LEFT and RIGHT upright 2x4’s using a pair of pre-bent, pre-drilled nail plates, as described below:
ATTACHING THE SKIRT: The skirt is a piece of black cotton fabric of your choosing, from a typical 45” wide bolt of fabric. Before attaching the skirt to the front edge of the table, iron the fabric and then iron in a crease that leaves a folded width of about 34”. This will make it easier to attach the fabric and helps to give a crisp edge.

A crisp edge is also accomplished by sandwiching a ¾” wide strip of cardboard between the thumbtack and the material. Lay the 34” wide portion of the skirt on top of the table, letting the extra material hang down in front of the front-edge of the table-top. Place a strip of cardboard against the fabric, flush with the top of the table-top, and secure with a thumb-tack. Then, flip the skirt back over, hiding the thumbtacks and dangling neatly in front of your exhibit:
OTHER DETAILS:

You may want to paint the LEFT and RIGHT 2x4’s with black paint, so they blend in with the black Formica backdrop. You may also want to paint any other visible edges with black paint. If the exhibit is not located in the corner to hide the rear, you may also want to paint the other visible surfaces.

A very nice touch is to add lighting to your display. You can buy an inexpensive “track light” with 2 or 3 bullet fixtures, and mount it to the back side of the top “Banner Bar”.

ATTACHING EXHIBIT MATERIALS:

Scotch double-stick tape does an excellent job in holding lightweight paper artifacts on the Formica. It seems to be “permanent” on the paper, but is re-positionable on the Formica.

For heavier objects, such as poster board material or foam-core objects, consider using UHU “TAC” adhesive “gum”. It looks like white chewing gum, and creates a re-positionable but very tacking “glob” that can be pressed onto the back of the artifact’s corners.

SUGGESTION: attach the objects to the Formica while the Formica is flat on the ground. Then, carefully lift the Formica onto the table and then reposition objects as needed to accommodate the curvature of the backdrop.

USING THIS DESIGN:

Permission is granted to reproduce this design for non-commercial purposes. Please send an email note to jvanides@stanfordalumni.org and let him know how it went and what you used it for!

This exhibit booth design was first used at the 2002 Learning Design and Technology Exposition, Stanford University School of Education.