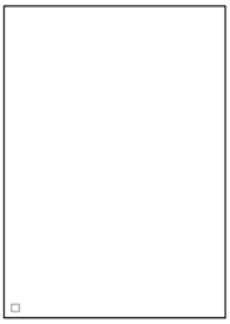
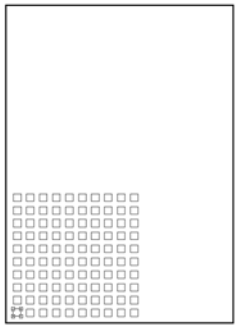
# Creating a Lattice in DesignMaster[1]

By Sandy McCauley
January 8, 2008

(1) Draw a square and make it 7mm on both sides. Place it in the lower left corner of the Sign Blank.

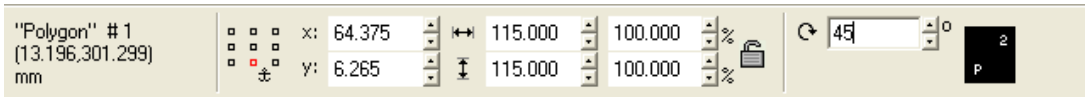


(2) Select the square and go to Layout>Array. Duplicate all of the settings shown here. Then click on the Close button. The result should be a grid of boxes as shown.



(3) Use Ctrl-A to select ALL of the boxes and go to Arrange>Make Path.

(4) Go to the Smart Bar at the top, and type in 45 next to the rotate arrow:




(5) Click on the Tab key to accept the 45 degree rotation. Move the grid of boxes to the middle of the Sign Blank:

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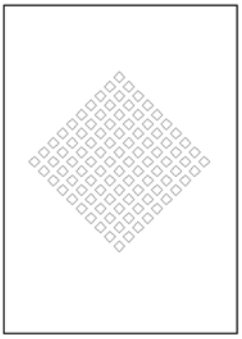
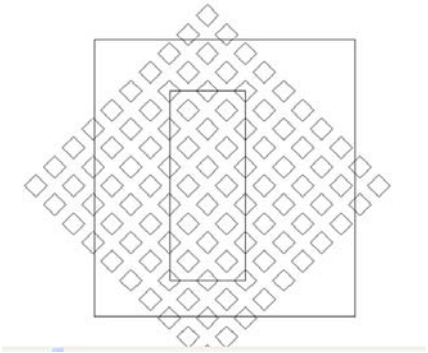


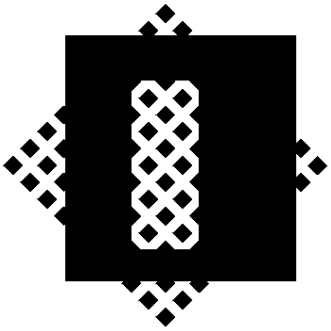
(6) The boxes make look a little warped but when you zoom in close, you'll see they are still perfect squares. ☺

(7) Draw the shape you want to fill with the lattice and arrange exactly how you want the lattice to look. Notice how I have the edges of the rectangle going through the centers of the diagonal boxes. This will make it look more uniform:

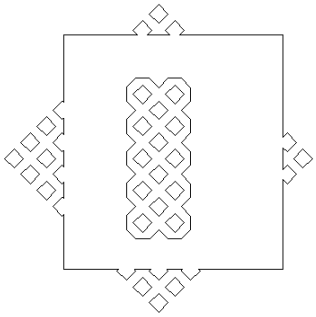
(8) Draw a second rectangle around the first. It doesn't have to be centered or any particular size because you'll delete it later:



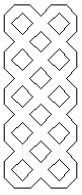
(9) VERY carefully, select the inner rectangle, making sure you aren't selecting the grid of boxes. Then hold down the Shift key and select the outer bigger rectangle. Go to Arrange>Make Path. When you turn on Fill (Alt-S), you should see this:



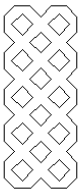
(10)Turn off Fill and use Ctrl-A to select everything. Go to you Basic Weld tool and click on the first weld icon:



(11)Select and go to Arrange>Break Path. Click away so nothing is selected. Then you should be able to select the outer portions and delete, leaving just the interior lattice:

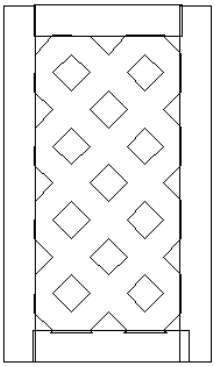


(12)Use Ctrl-A again to select everything and go to Arrange>Make Path. Now you can't inadvertently move one part of the lattice away from the rest.

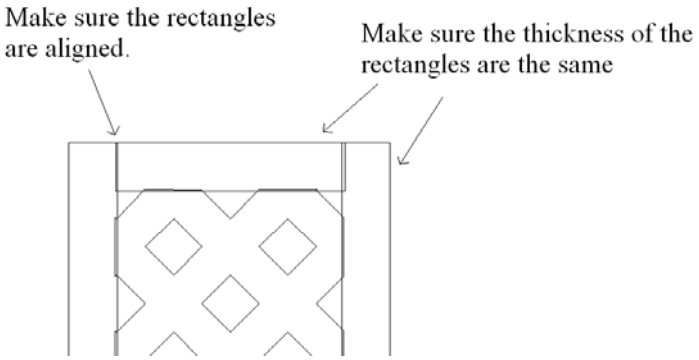


(13)Use Ctrl-A again to select everything and go to Arrange>Make Path. Now you can't inadvertently move one part of the lattice away from the rest.

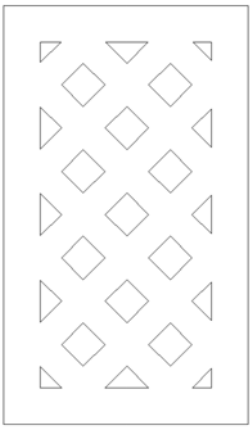
(14) Draw four rectangles around the perimeter and overlap the edges as shown:



(15) Adjust the widths of the rectangles so that they are identical. Then modify the lengths so that the overlap evenly around the outside.




(16) Use Ctrl-A to select all objects and then use the Basic Weld tool to weld:



(17) Lattice is complete!