

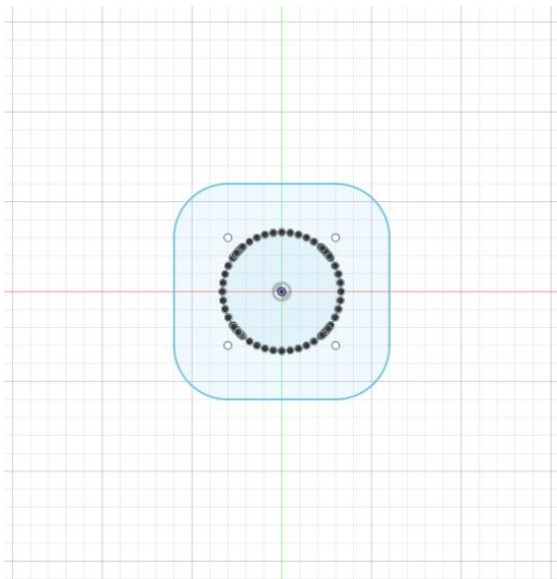
Another Way to Make Printable waveguide without using Thicken

This is another way to make a solid waveguide for printing or other fabrication without having to use the thicken command. This avoids any change in waveguide geometry that thickening can sometimes cause.

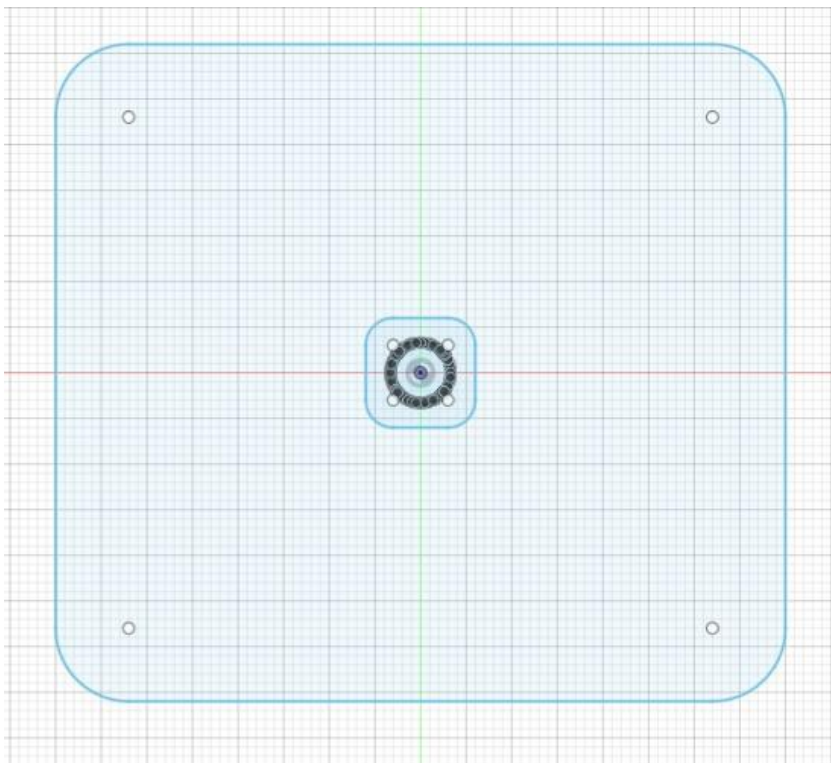
Use the waveguide surface loft in the test file or your own when mabat releases the updated tool.

Then make a lofted surface to go on the outside of the waveguide. I chose to use a rectangle with filleted corners.

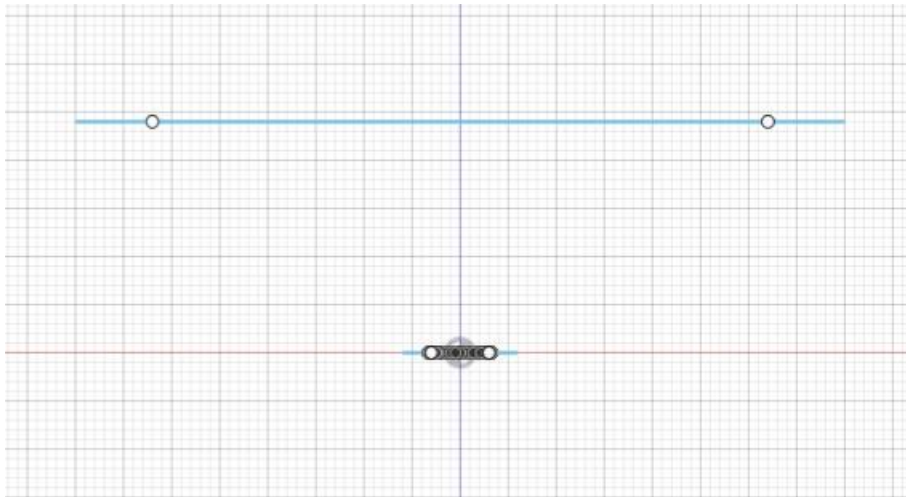
This is the sketch on the bottom plane where the entrance to the horn is.



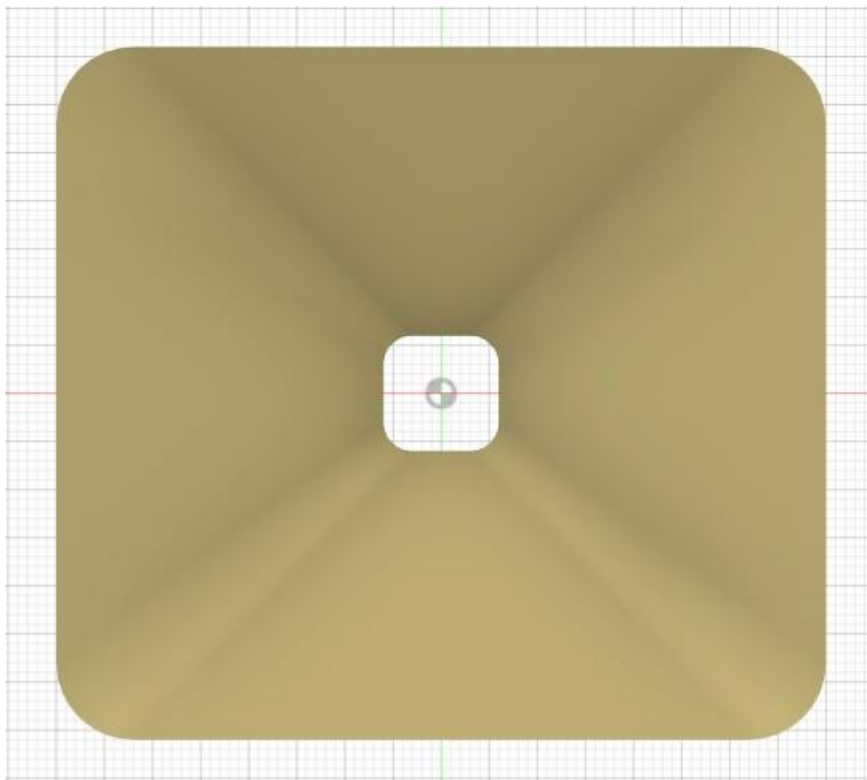
Then draw one for the top of the new surface



This is what they look like in the vertical plane.

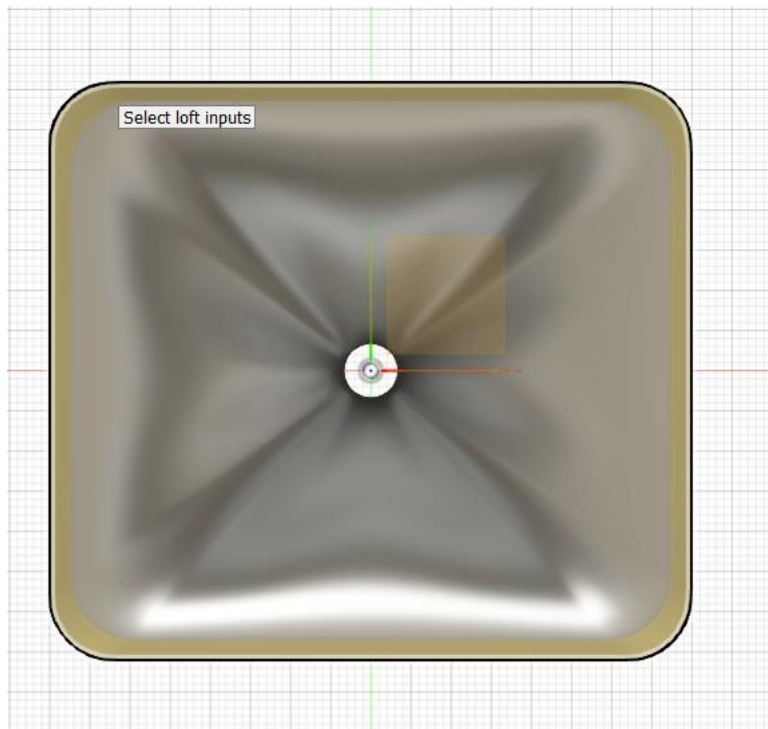


Create a surface loft between them and you get this

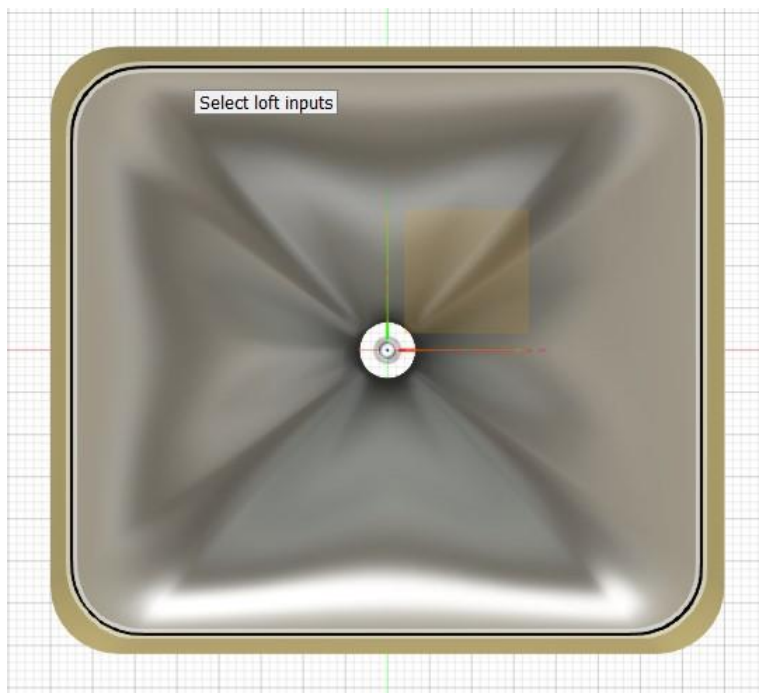


Next step is to loft surfaces between the outside and waveguide profiles to fill the gaps.

Select the outside edge of the top outside profile, move the pointer still the edge highlights.

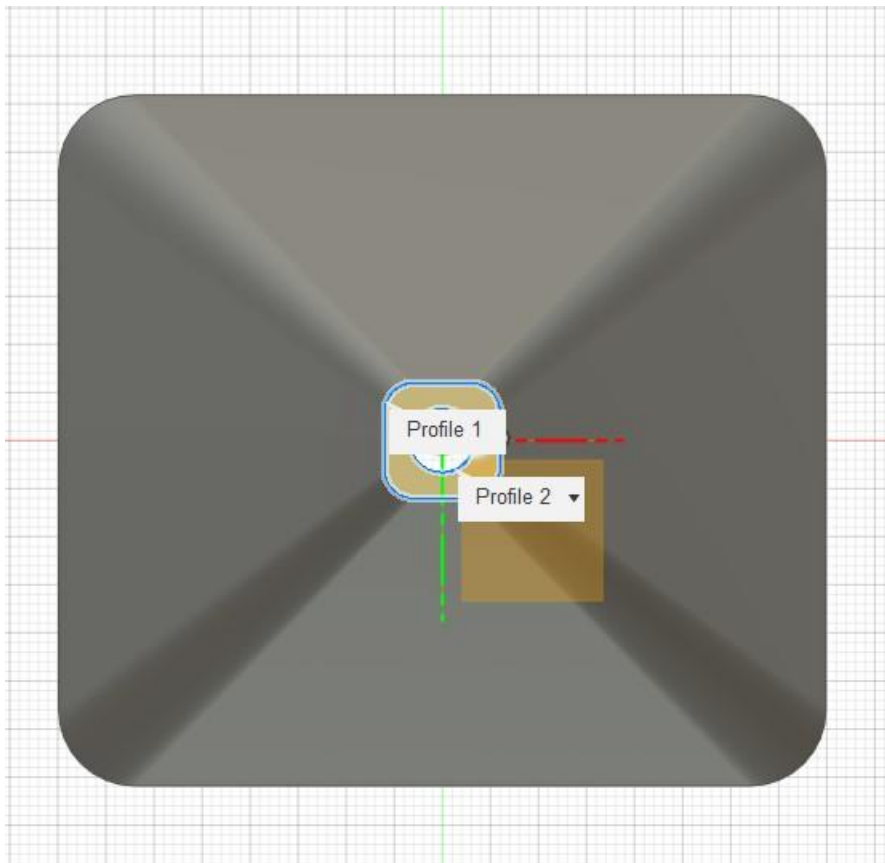


Then the inside profile



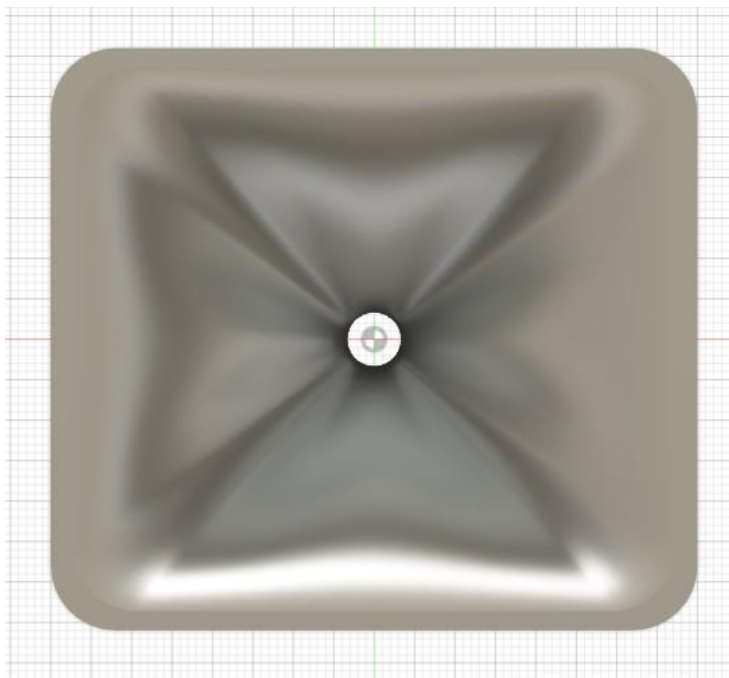
Execute the command and the surface will be created, then flip the model over to do the same on the bottom

Loft these two profiles together

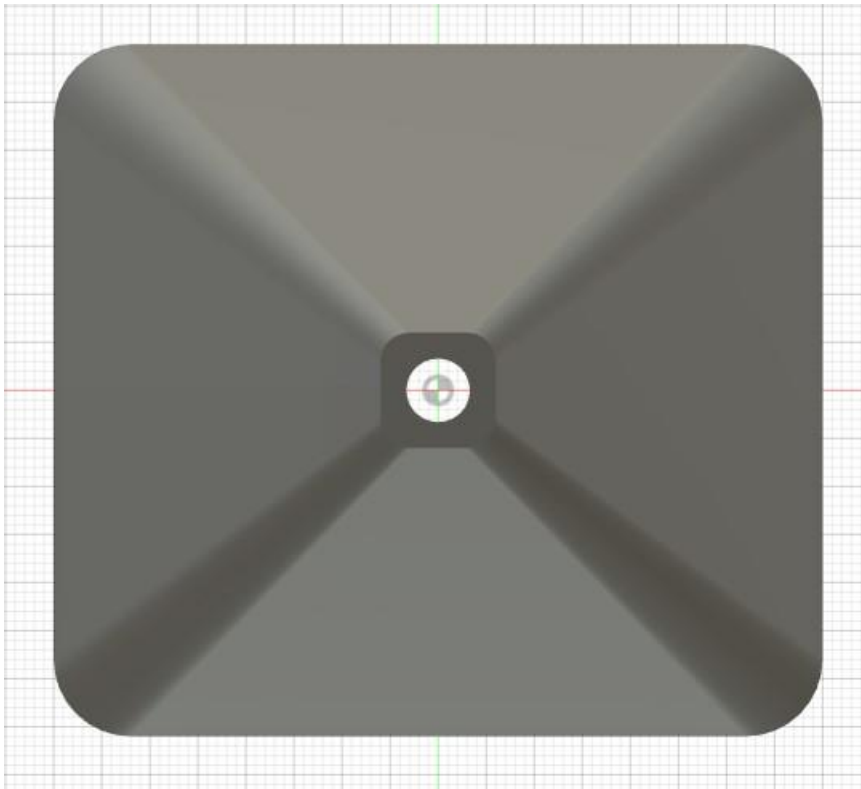


Use the stitch command to join four surfaces together, flip the model around so you can select the bottom and top lofts, the inside and outside waveguide surfaces then run the command.

That will give a combined solid with the inside of waveguide and the outside of the lofted shape combined. Extra baffle, mounting edge, driver mounts etc. can then be added.



Finished bottom



This shows the difference between the original mesh and the new solid, pretty good match

