FE3BS Assembly Guide

Open Source Instruments, Inc.

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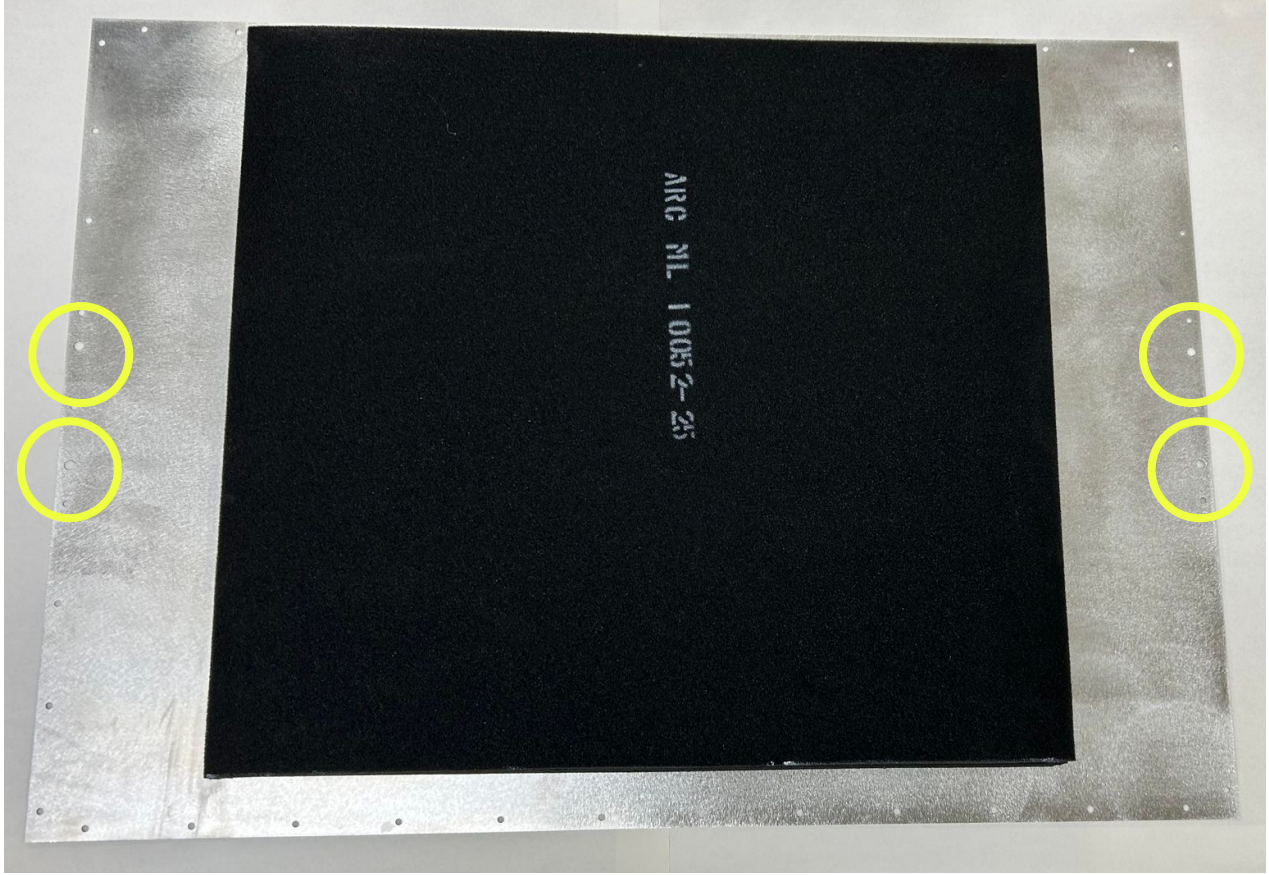
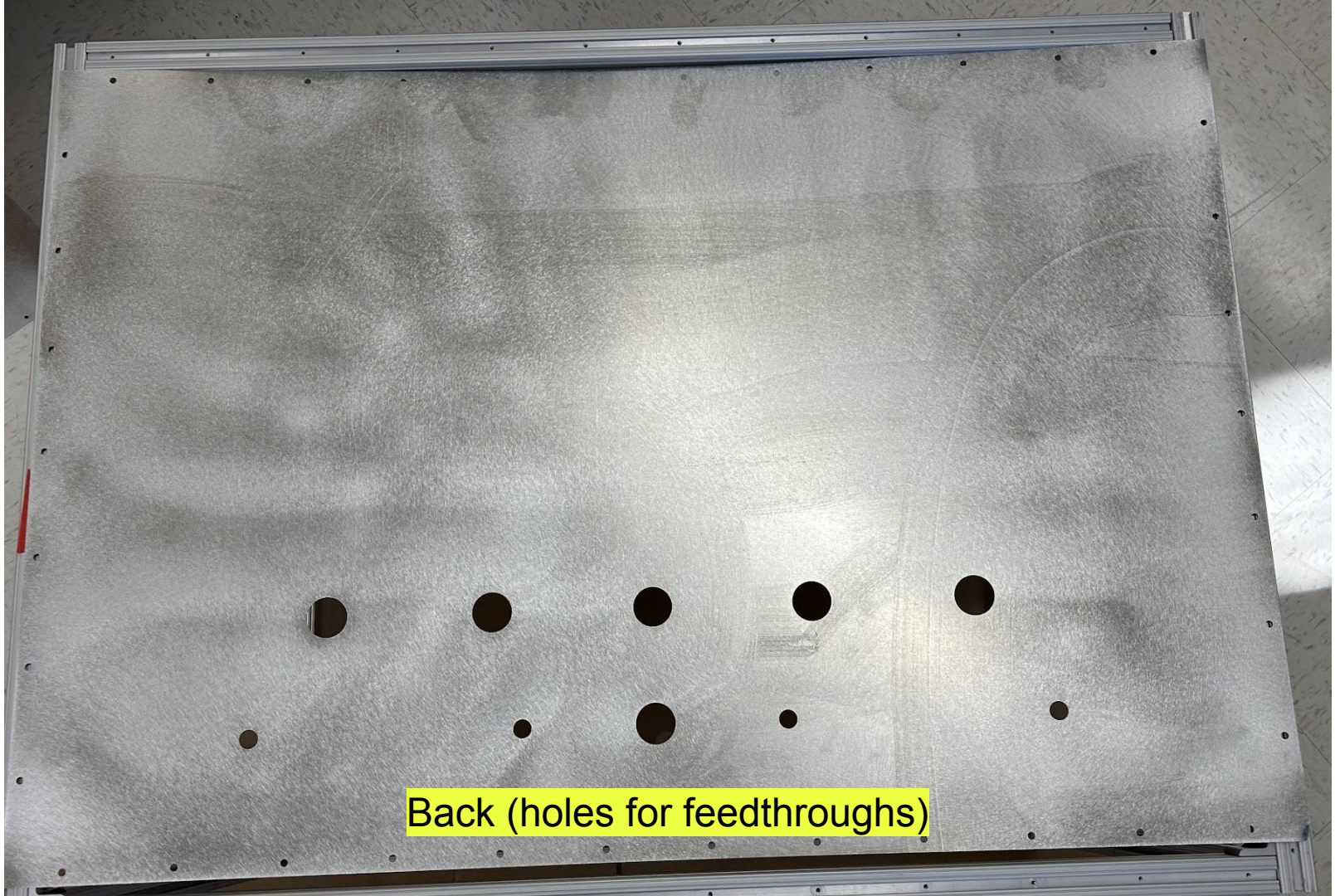
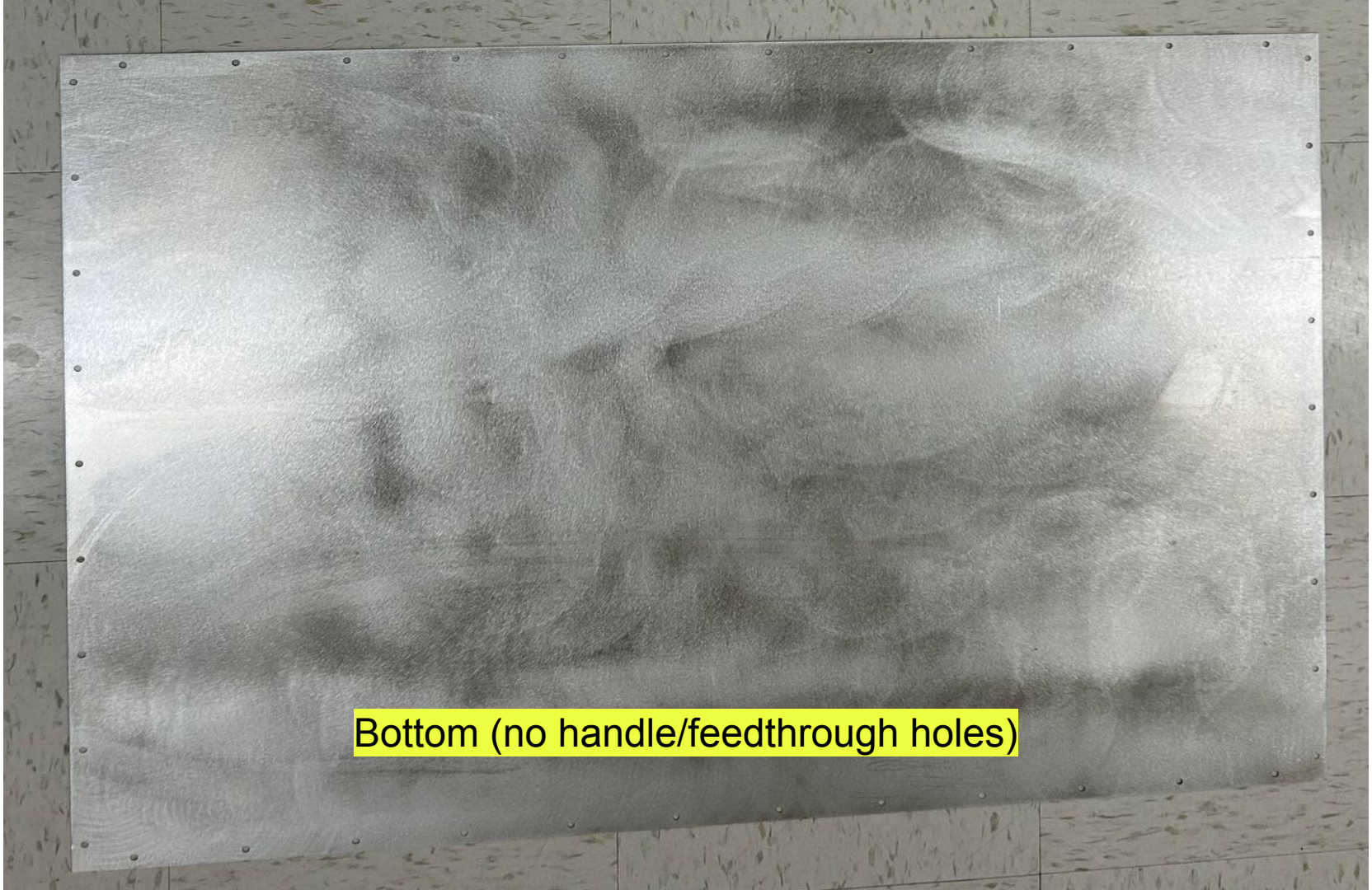
With shelf

No shelf



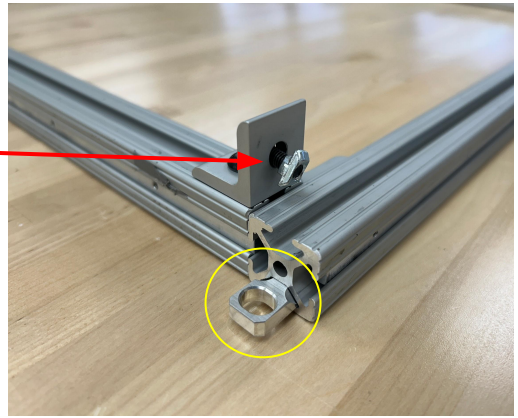
Top (mounting holes for handles on either side, absorber foam attached)


Back (holes for feedthroughs)

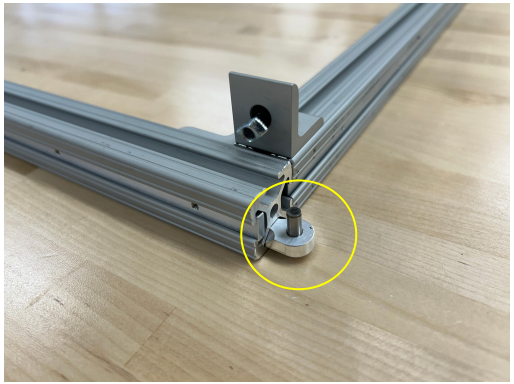

Bottom (no handle/feedthrough holes)

The two side walls are mirror images of each other, the side with the brackets faces inward. Mesh and the tubes that secure it will come pre installed.

One hammer nut is left exposed on each corner (attaches to frame strut)



Top corner plate attached to door latch with set screw



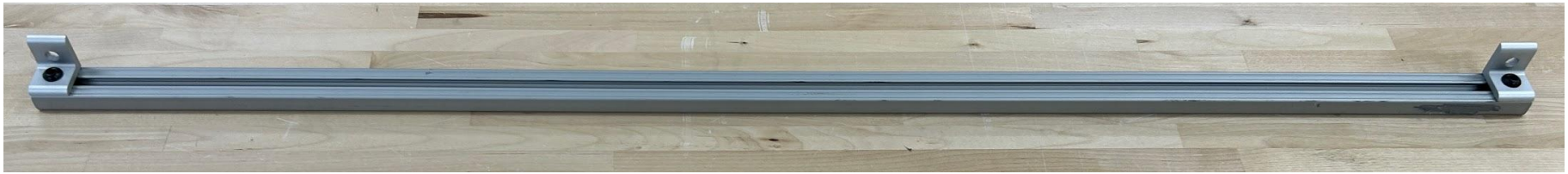
Bottom corner attached to door hinge with set screw

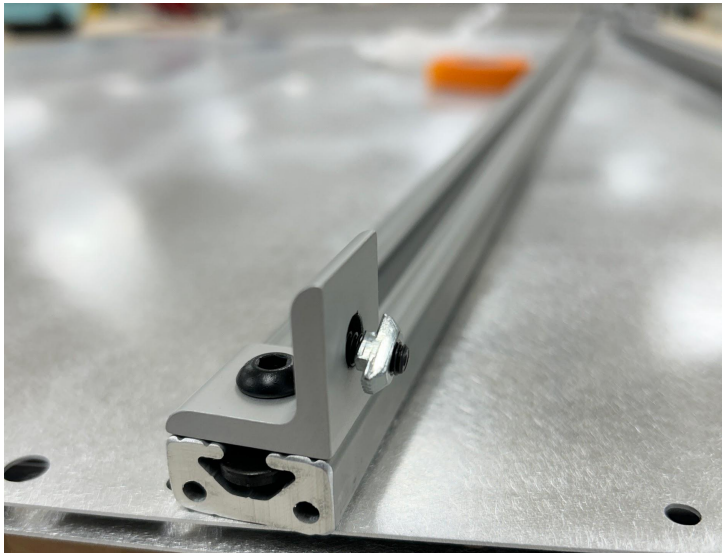
Side walls

Inside: mesh secured in place by metal plates that screw in from the front

Outside: hinges, latches, mounting screws for mesh plates

door



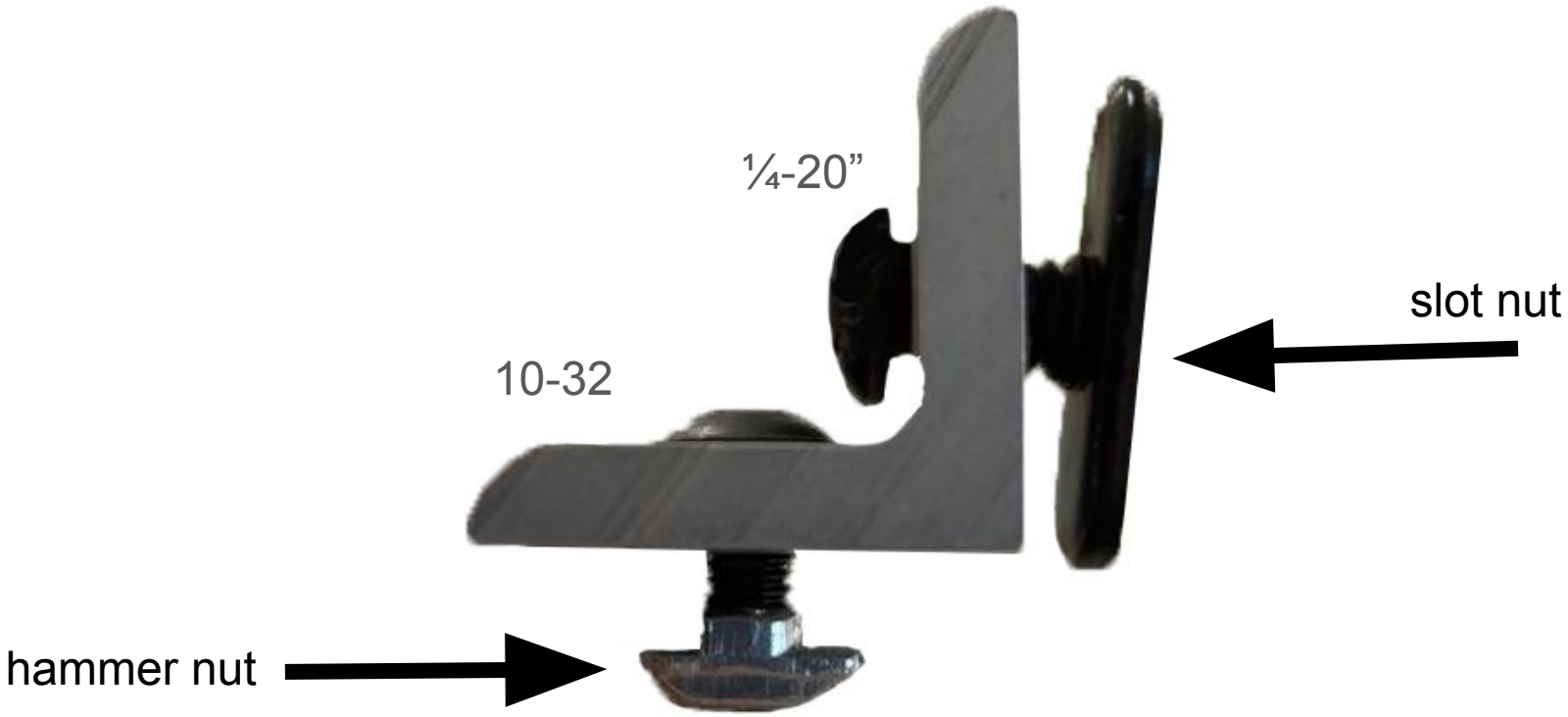


shelf supports

*Make sure to remove protective film from both sides prior to installation

shelf

frame struts



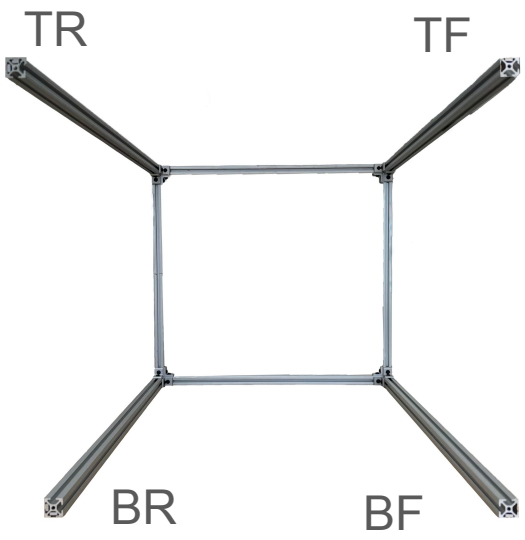
brackets/nuts/screws

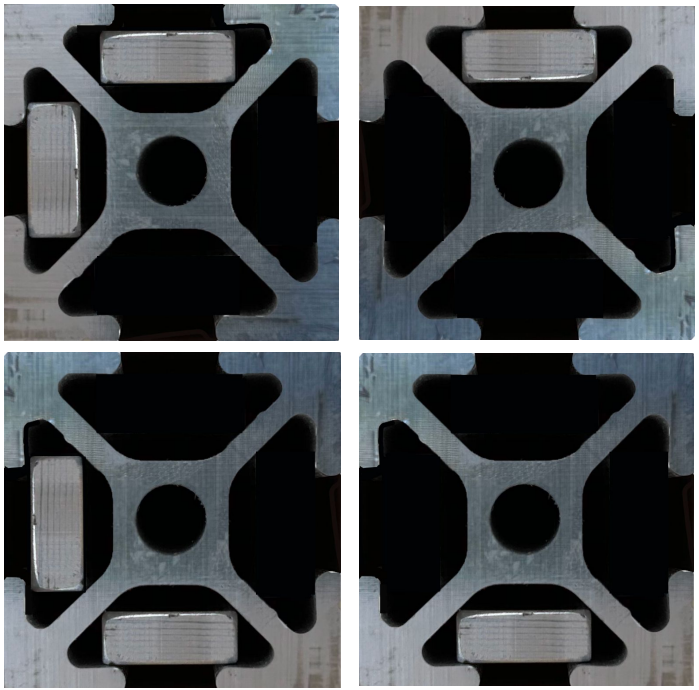
Nut/slot mechanics

Every joint on the FE3B uses a system consisting of a screw, bracket, and a slot or drop-in hammer nut. The slot nuts are inserted into the slots on the sides of the frame struts, then they can be screwed into place with an allen key. The hammer nuts drop in from the top, then fastened with an allen key. Each nut will come pre installed on every bracket.

Frame strut assembly

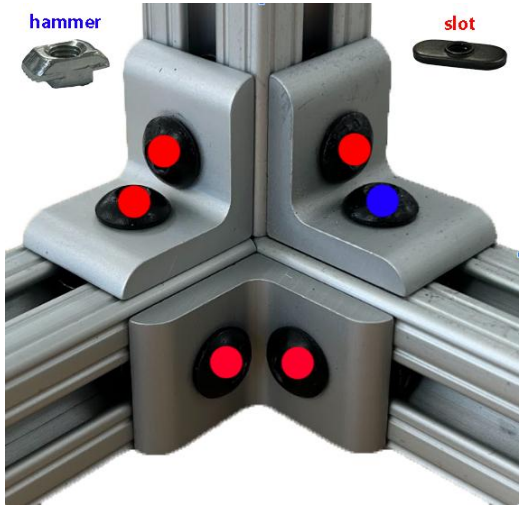
Before attaching the frame struts to the first side wall assembly, ensure that the panel attachment rods are properly oriented in their slots as shown in this image. These slots will be inaccessible once the side walls are attached. In this image, the door mounts on the faraday enclosure on the right side and the struts must be placed accordingly to allow the panels to be screwed on later.

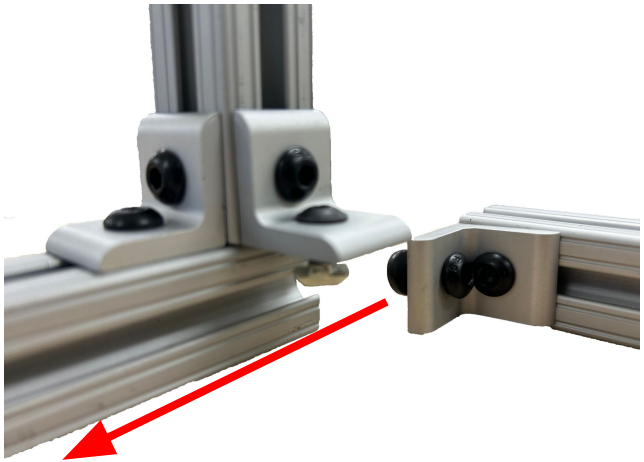




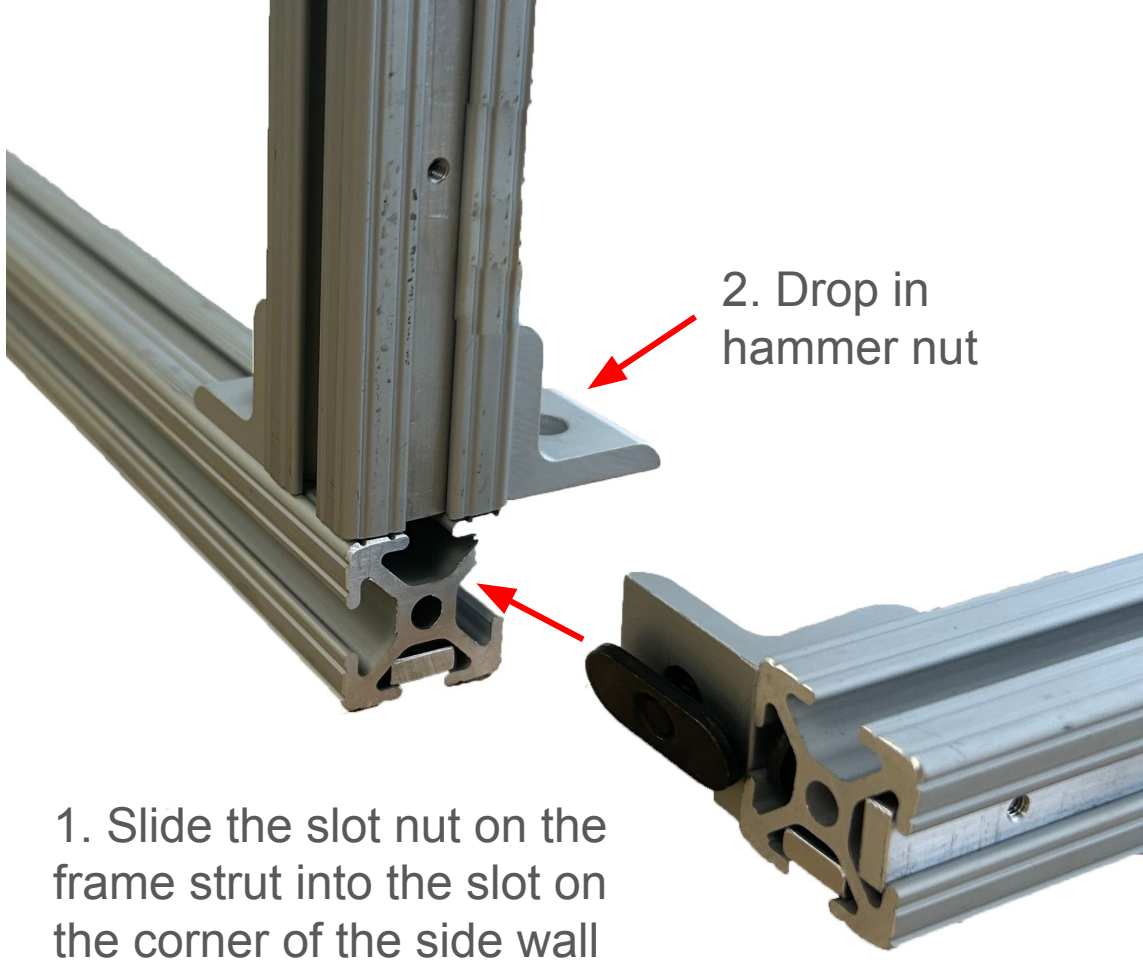
1 - Attaching frame struts to side walls

Upon completion of frame assembly, there will be 8 corner joints. Each corner is held together by 3 brackets that attach like so. In total you will need to assemble two brackets on each corner, the others come pre installed. Holding the side wall in place, slide the slot nut onto the frame bracket the frame and tighten them. Then drop in the hammer nut from the top.





The frame bar on the right will slide into the side wall on the left.



A cross section of the frame with one side wall installed. Here the struts are labeled according to the order you will install them.

*Install the frame struts in the order shown. You want to attach the other side wall to struts 1 and 2 **before installing struts 3 and 4**, this is to avoid straining the upper two struts.

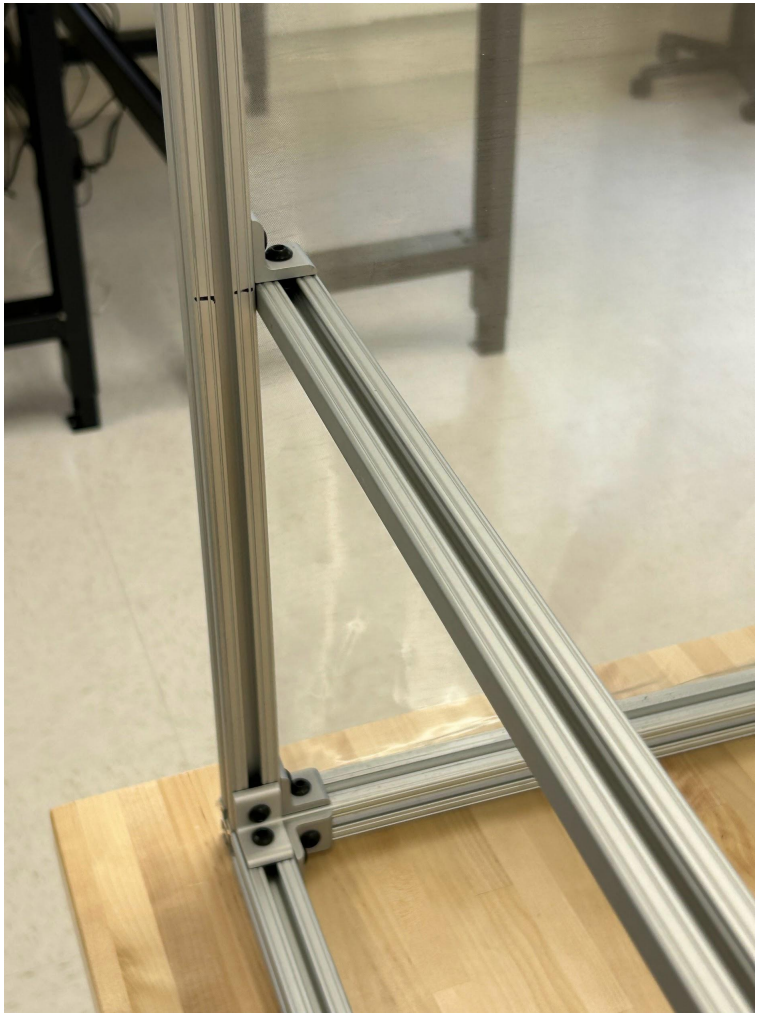
1A - Attach lower frame struts to the first side wall

1B - Attach second side wall to the lower frame struts

1C - Slide the upper frame struts into place

2 - Install shelf support struts

Two struts run along the length of the frame, supporting the shelf that will rest on top of them. These struts are secured on either side of the frame with a bracket, screw, and hammer nut. We recommend installing these brackets about 9.5” from the floor of the enclosure. Slide the nut into the slot on either side and secure the strut to these brackets.



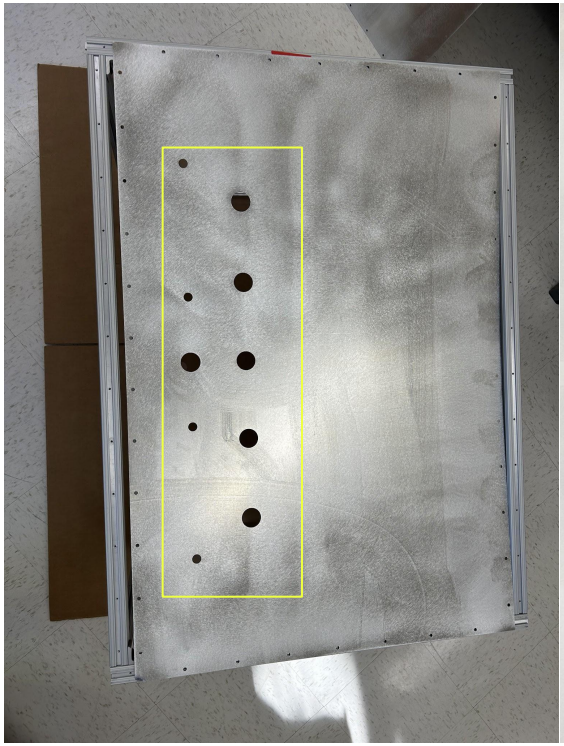
3 - Secure shelf to shelf struts

Add pictures once film taken off

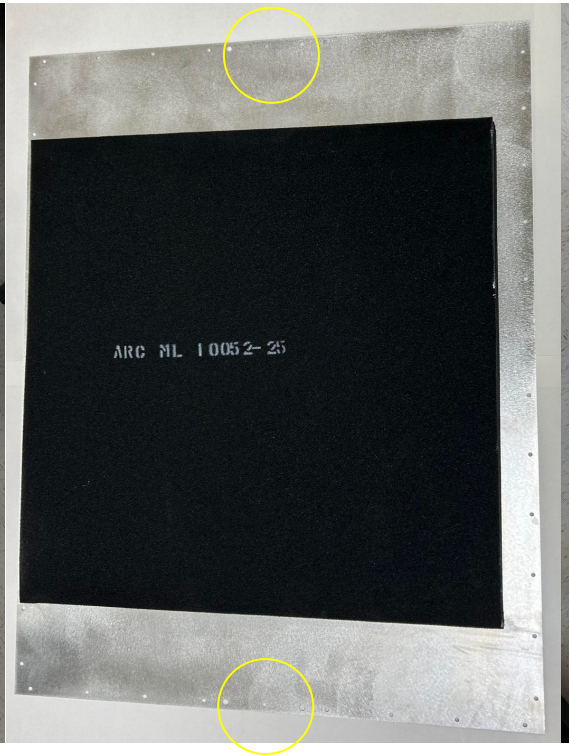
Place the shelf on the struts and drop the included hammer nut into the slot on the strut, right below the shelf's mounting holes. Then you can attach the shelf with 10-32 mounting screws. Use a ruler and level to fine tune the height of the shelf.

4 - Install RJ45/BNC feedthroughs in back wall prior to assembly

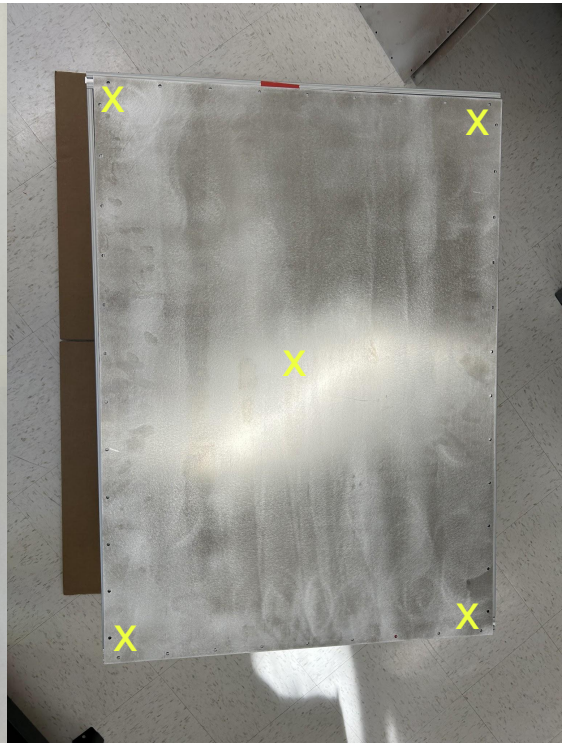
5 - Attach top, back, bottom panels using M3x8mm screws



Back: has holes for feedthrough (install feedthroughs to the wall prior to assembly)



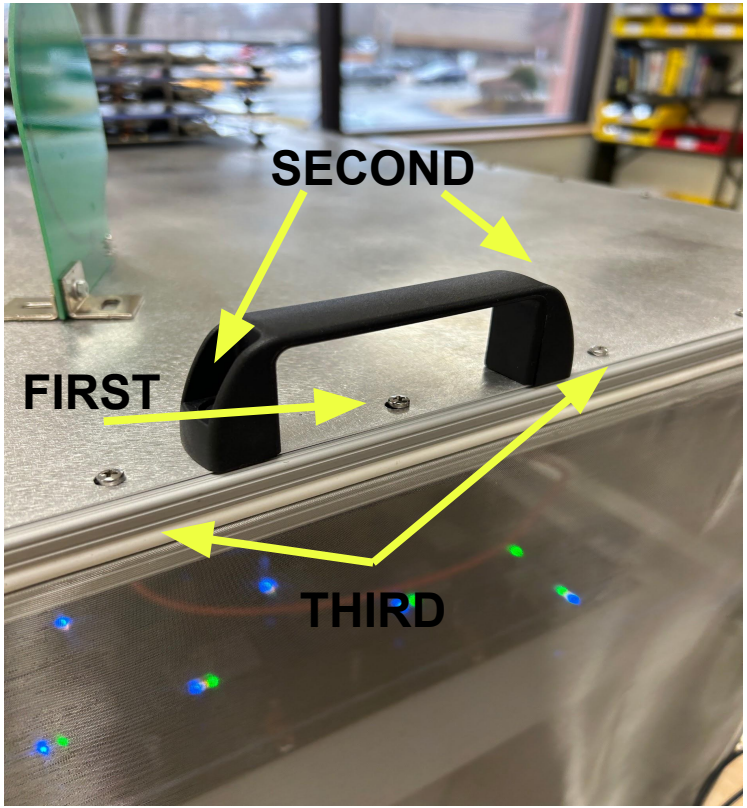
Top: has holes for handles, absorber faces inwards



Bottom: attach rubber feet

INSTALL HANDLES AND SCREWS IN THIS ORDER

4x ¼”-20 socket head screws included for handles



6 - Attaching door

There are two hinge plates (with two set screws) that are slid into either side of the bottom of the frame where the door attaches. Hang the door’s hinges from them, tighten the set screws. On the top of the frame, a latch plate (with one set screw) will be slid into the frame for the door to mate to on either side of the door. Align both, sliding the door into place. When the door is fully flush with the frame, close both latches and tighten a total of 6 set screws to secure the door/hinges in place.





Appendix 1: Replace side walls

The mesh is held in place by a silicone tube on each of the 4 sides. A sheet of mesh is layed on top of the side wall, and secured on each side by first tucking them into the slots that the tubes sit in.

Here you can see the pinch/push technique, first pinching the tube and then pushing it into the slot on top of the mesh. Align the mesh with the outer edge of the frame before you begin so there is no excess sticking out.

After laying a piece of mesh over the side wall frame, begin on one corner.

We recommend cutting a 26” x 25” of mesh, this will give you a few inches to spare that you can cut off later.

One hand: Pinch/push tube
Other hand: Holding mesh and pulling it taut as you go

Once one tube is installed, begin to fit the tube on an adjacent side, continuing this until all four sides are secured. It is important to continue to pull the mesh taut on all sides. When finished, touch up any loose areas by pulling more mesh into the slot and resetting the tubes, especially at the corners.

Cut off extra length of tubing, extra mesh

Appendix 2: Replace door mesh

Replacing the door mesh is slightly simpler than replacing the wall mesh. There are four pieces of metal securing the mesh. Loosen their screws, this will provide enough relief to remove the mesh without taking out the screw.

Two methods:

Left: loosen the screws securing the plates without fully taking the plates off, this allows you to slide the mesh in one side after another. This way you don’t have to worry about the mesh blocking the screw holes. You may need to cut off excess mesh so it fits perfectly under the plates.

Right: remove the screws completely and lay your mesh in place. It may be slightly difficult to keep in place, and you must be careful not to lay the mesh over the screw holes