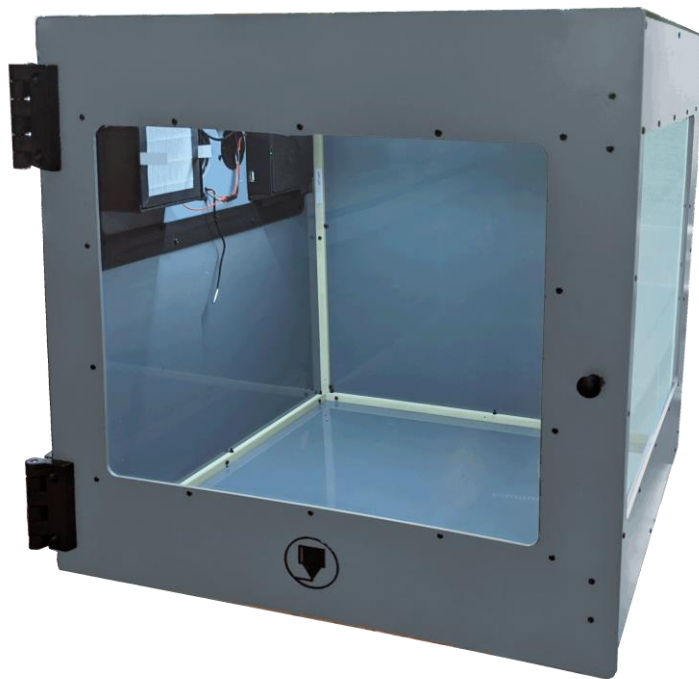
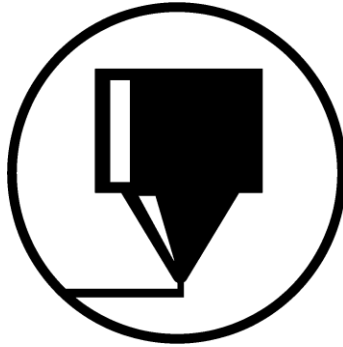


makergadgets



Innovator Enclosure Manual

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Innovator Parts List	4
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WARNING AND SAFETY INSTRUCTIONS

To reduce the risk of fire or electric shock, do not expose this equipment to rain or moisture. Do not place objects filled with water such as a vase or the like, on top of or inside the apparatus.

The 3D-printer enclosure is not intended to be used as a stepping object or table; objects may be placed on top of the enclosure that amount to no more than a total of 10 lbs.

The preinstalled filtration system consists of a high-speed fan that is not intended to be obstructed by any objects other than the HEPA/Carbon filter attached and provided by Makergadgets. Any other type of filter or obstruction not provided by Makergadgets may reduce the life of the fan or destroy it altogether.

The fan is not blocked in any way other than the filter, so careful handling must be taken when changing filters. Enclosure must be unpowered and unplugged before removing filter.

As with any high-speed rotational object, fingers should be kept out of the fan when under operation or when enclosure is plugged in.

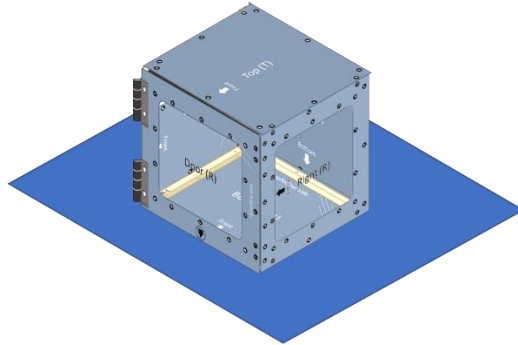
Interior parts are made from PLA and thus should not be exposed to temperature above 50°C (122F). Testing was completed with 6-hour prints using ABS and PETG extruded at 240°C (464F) and the enclosure maintained temperatures below 40°C (104F).

Do not transport or move enclosure with Printer inside. First remove printer, then replace printer after enclosure in new work area.

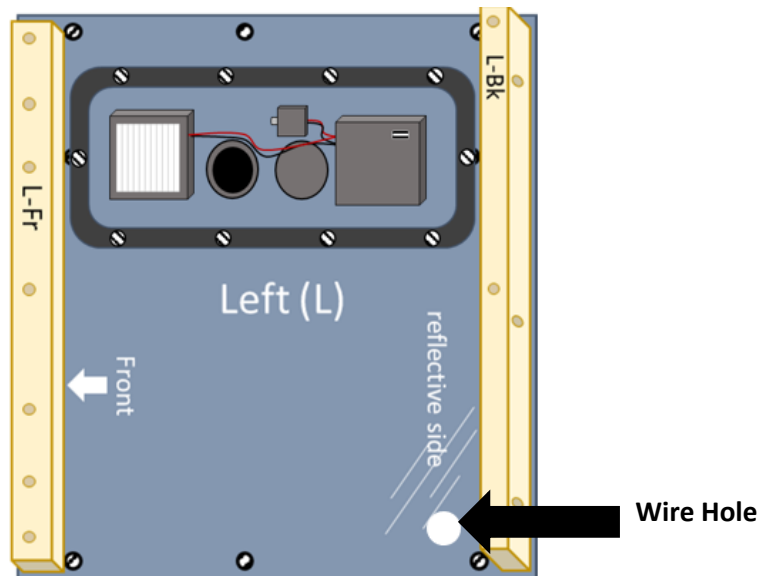


Operational Notes

1. For stability, the Enclosure should be placed on a flat surface that covers the **WHOLE** foot print of the bottom panel

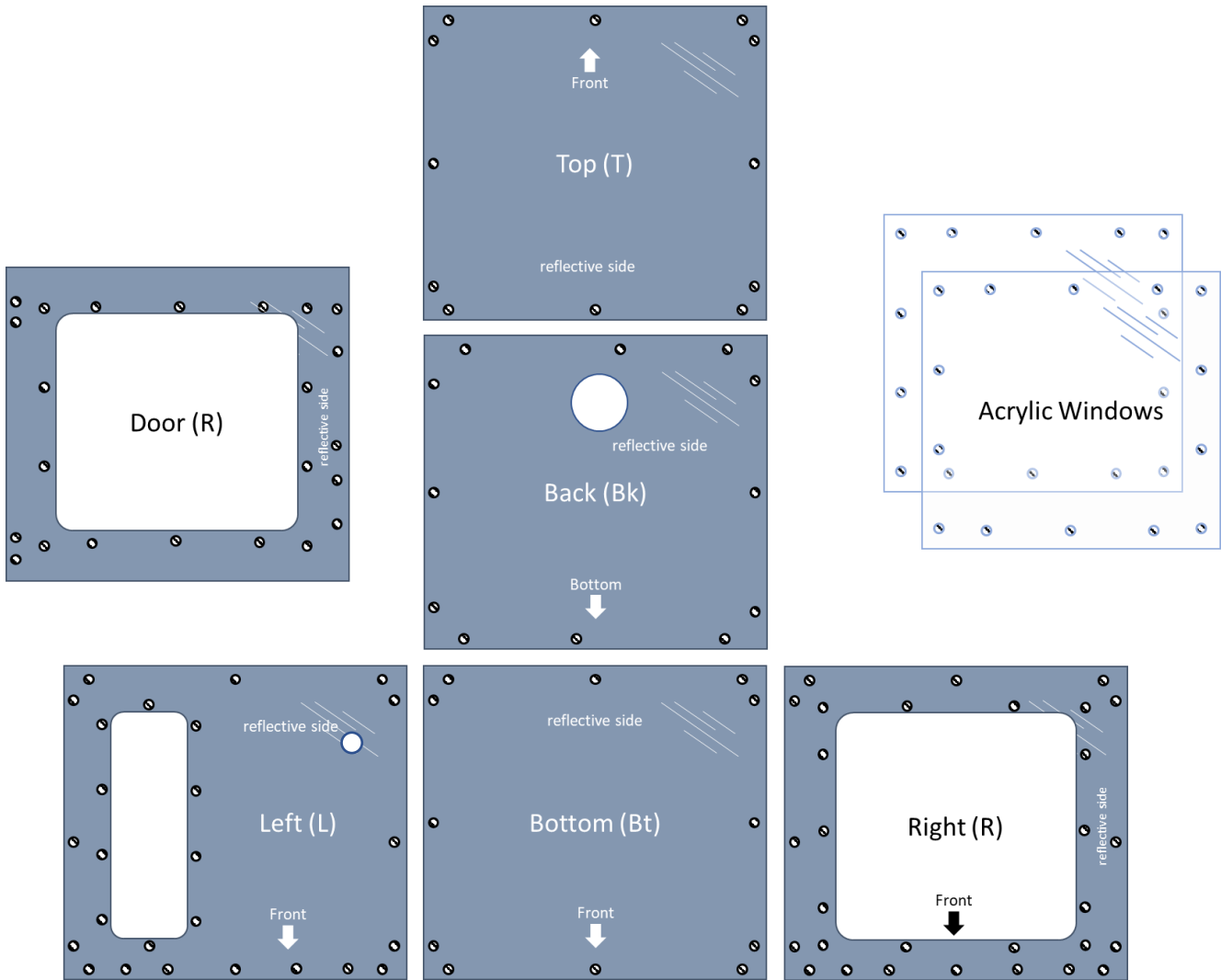


2. The LEFT Panel has a hole for the wires to be passed through. If you would like to have this hole closed when using the Innovator Control, then you can print a valve closure. You can use free source designs such as this one on thingiverse: <https://www.thingiverse.com/thing:4914786>



Innovator Parts List

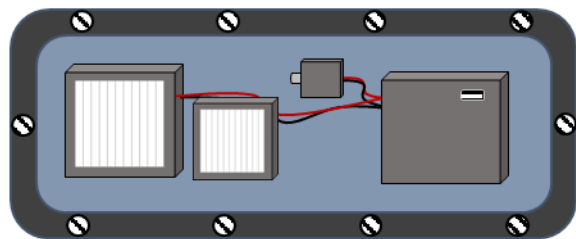
1. Panels



Basic Panel



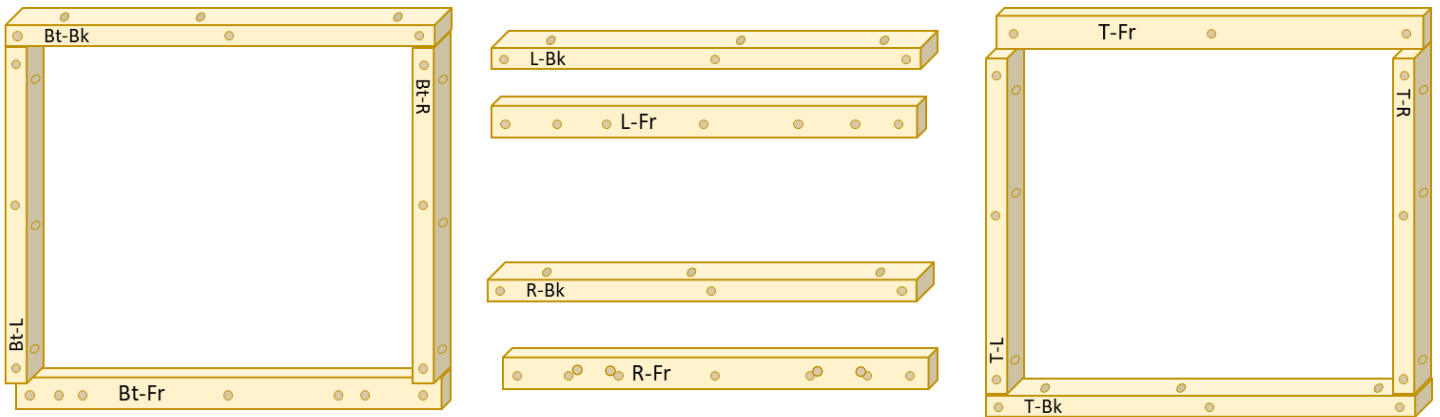
Control Panel



2. Framing Brackets

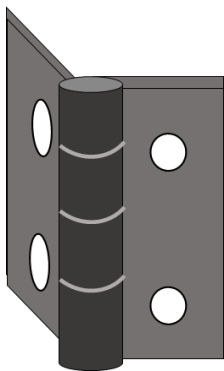
Each bracket is labeled for assembly:

- The Bottom Panel has 4 frames, named Bottom-Left (Bt-L), Bottom-Right (Bt-R), Bottom-Front (Bt-Fr), and Bottom-Back (Bt-Bk)
- Left Panel and Right Panels have two frames each Left-Front (L-Fr), Left-Back (L-Bk), Right-Front (R-Fr), and Right-Back (R-Bk)
- The Top Panel has 4 frames, named Top-Left (T-L), Top-Right (T-R), Top-Front (T-Fr), and Top-Back (T-Bk)



3. Hardware

Hinges
2 x



Hinge Bolts
8 x



Door Knob



Nuts
110 x



10mm Bolts
48 x



15 mm Bolts
30 x

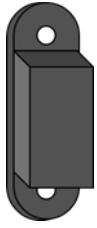


25 mm Bolts
30 x



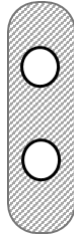
SUPER Magnets

2 x



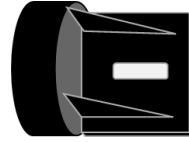
Metal Brackets

2 x



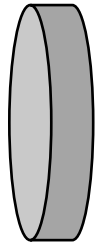
LIGHT Magnets

2x



Loose Magnets

2x



Washers

4 x



Double Sided

Tape 2 x



4. Electrical Parts

LED Light



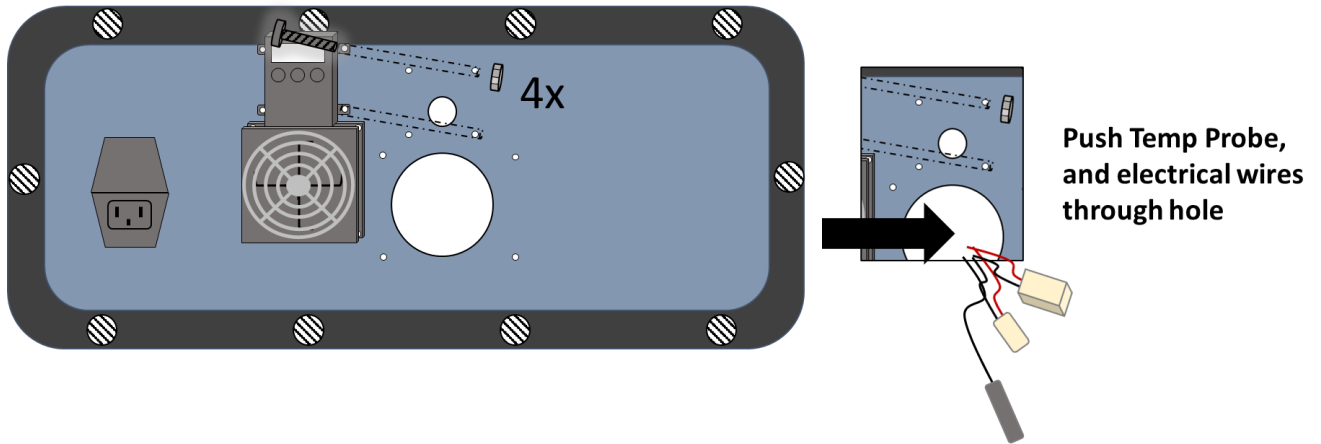
Control Panel Power OR LED Light Power (Basic)



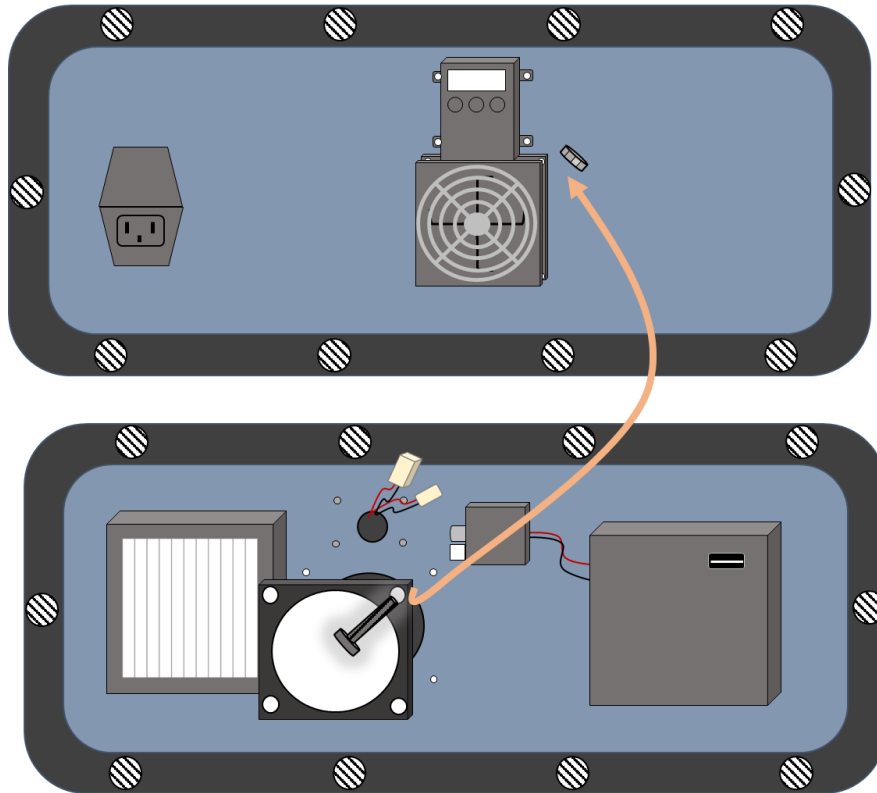
Innovator Assembly Instructions

1. Attach Smart Exhaust

Attach smart
exhaust control
using 10mm Bolts



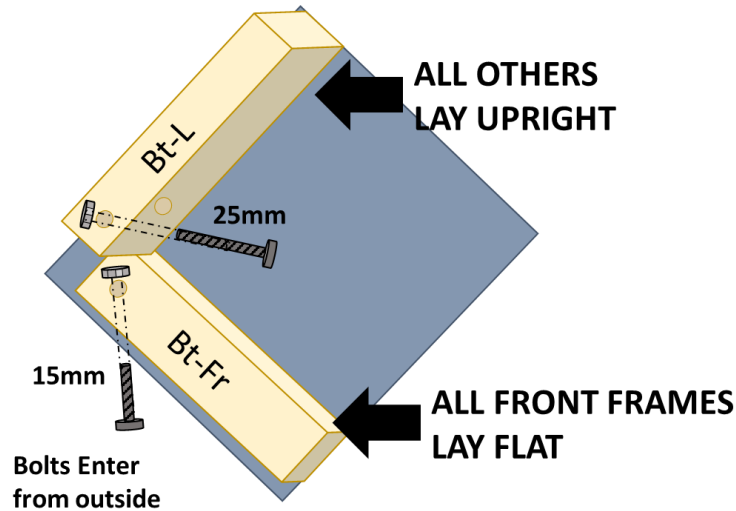
Attach Exhaust Filter Bracket from the
Inside and attach nut on the outside fan



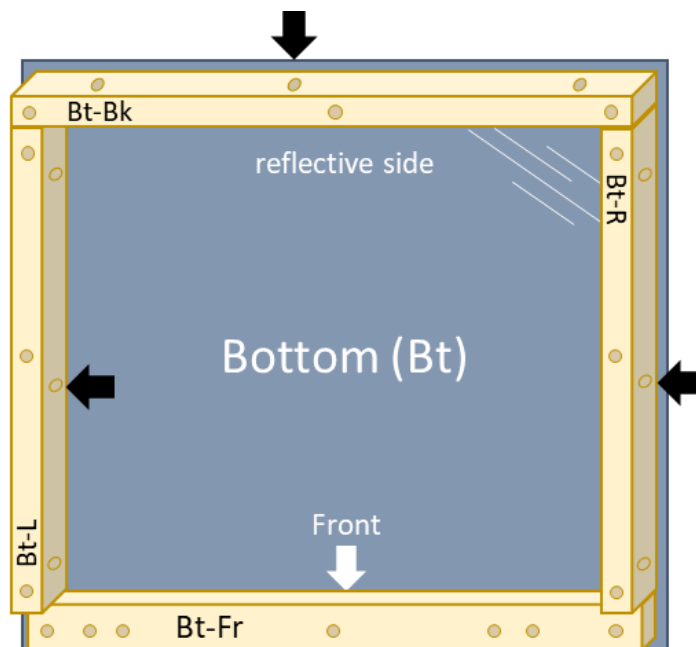
2. Frame the Bottom Panel

Begin with attaching the 4 bottom frames.

NOTE: The FRONT frame brackets lay flat on the ALL of the panels, while all others stand upright. Bolts come in from the outside and attach to the nuts. Ignore the perpendicular holes, as they are used later.

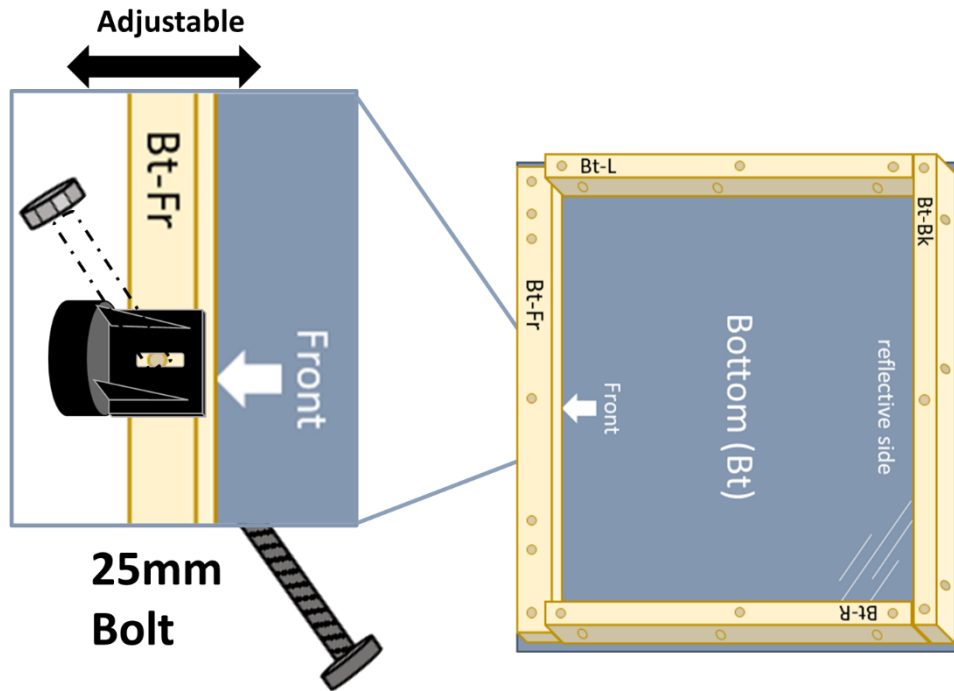


Attach the 4 frames to the bottom panel and note the orientation of each frame



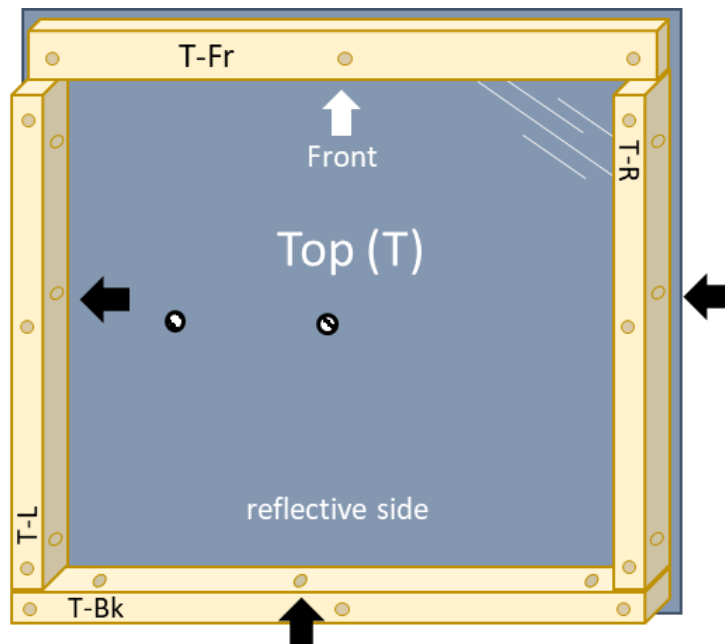
Attach the LIGHT magnet frame to the center of the bottom using a 25mm Bolt



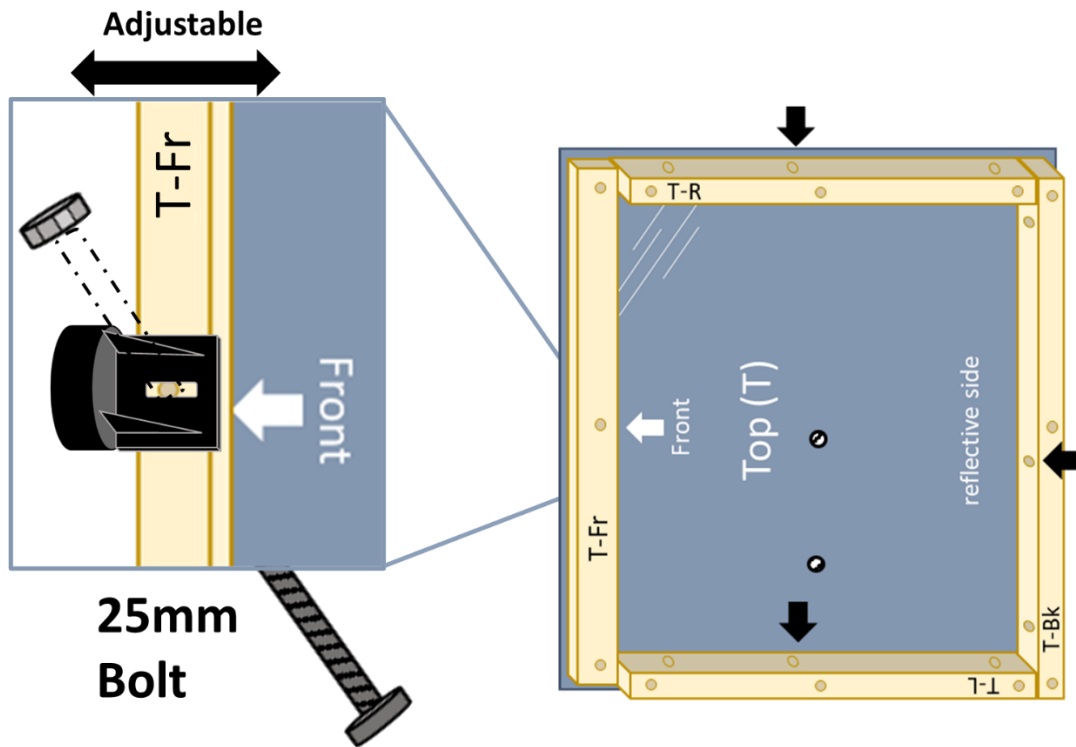


3. Frame the Top Panel

Frame the Top Panel similarly

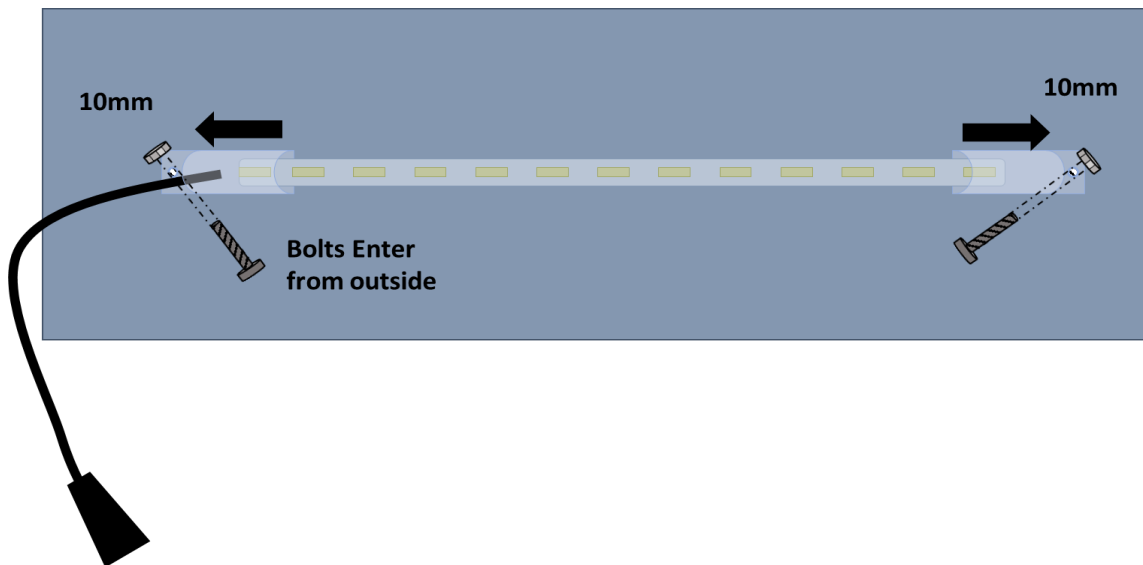


Attach the LIGHT magnet frame to the center of the bottom using a 25mm Bolt

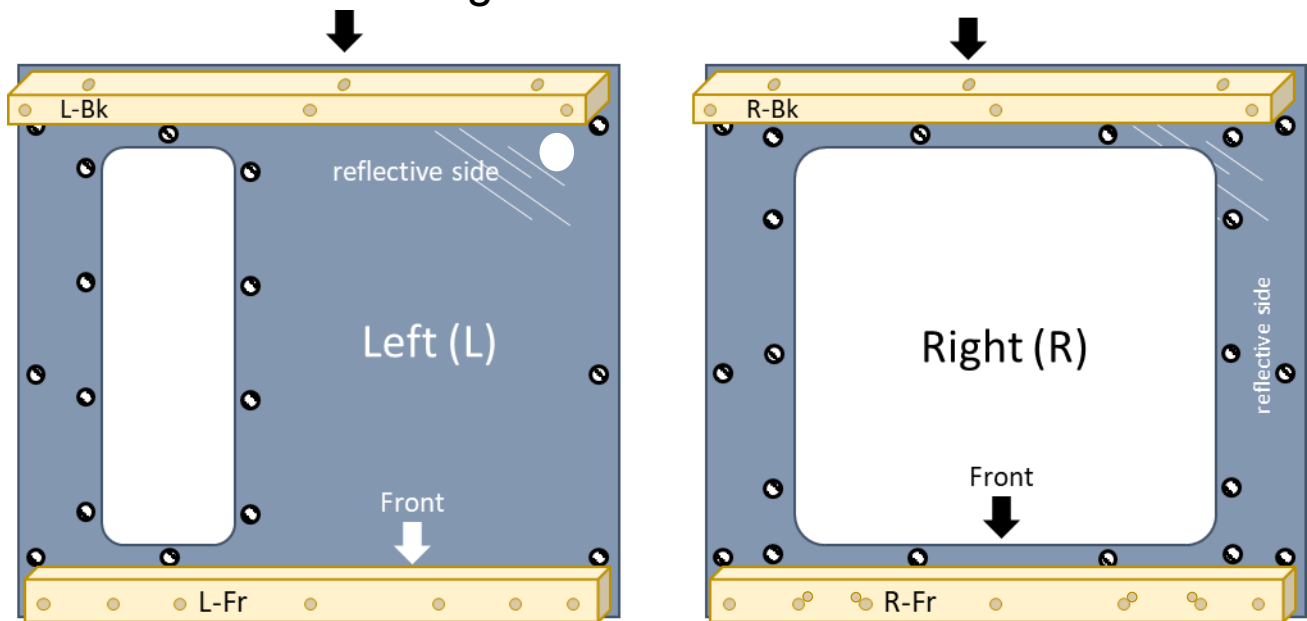


4. Attach the LED Light

Slide out the ends of the LED light so the holes align with the panel holes

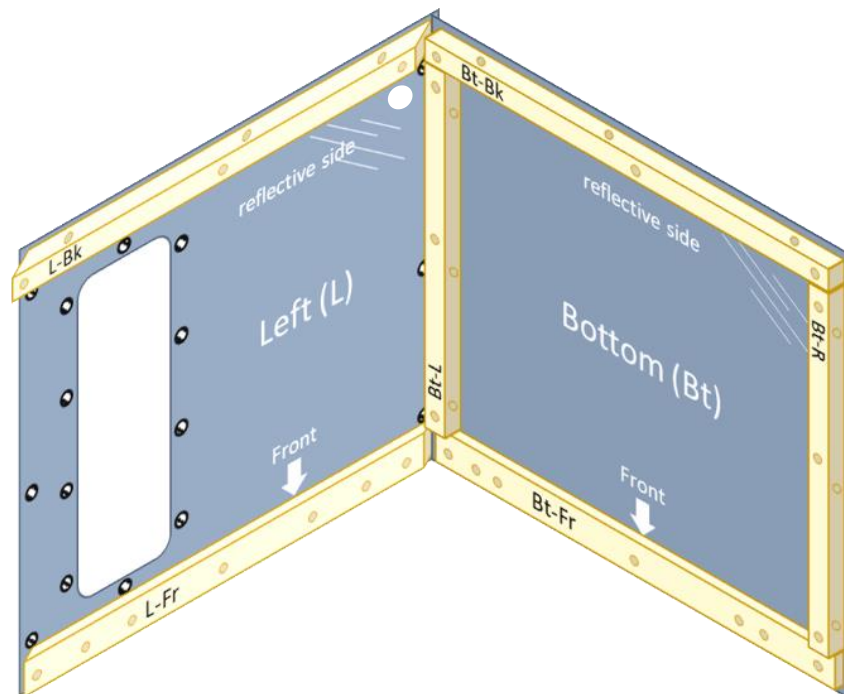


5. Assemble Left and Right Panels

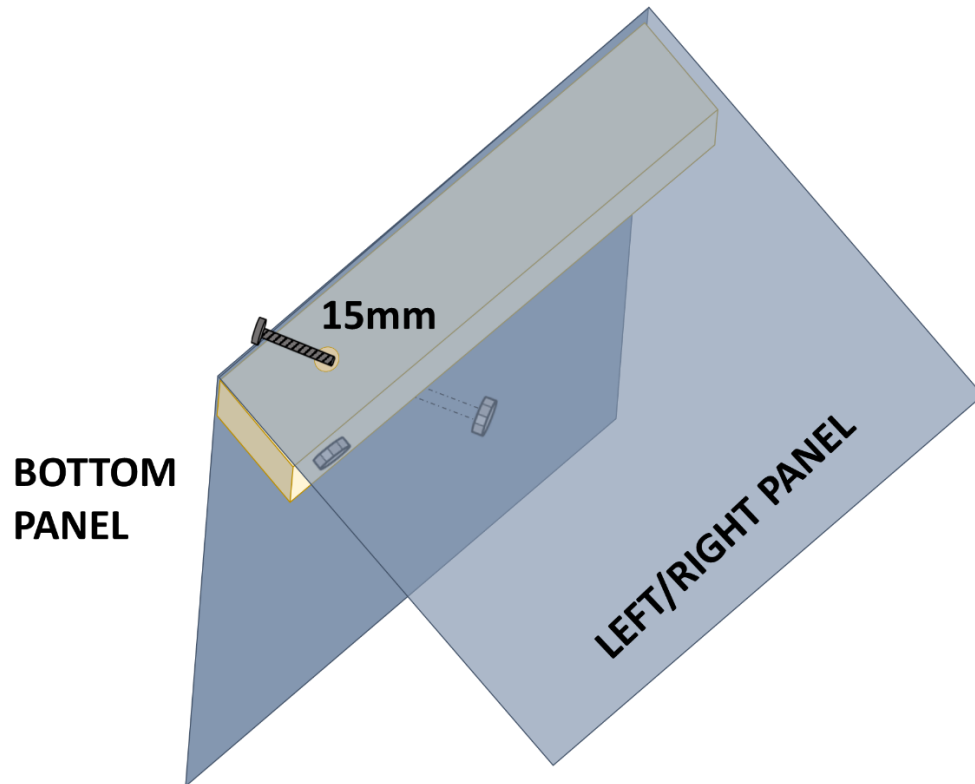


6. Attach Left and Right Panels to Bottom Panel

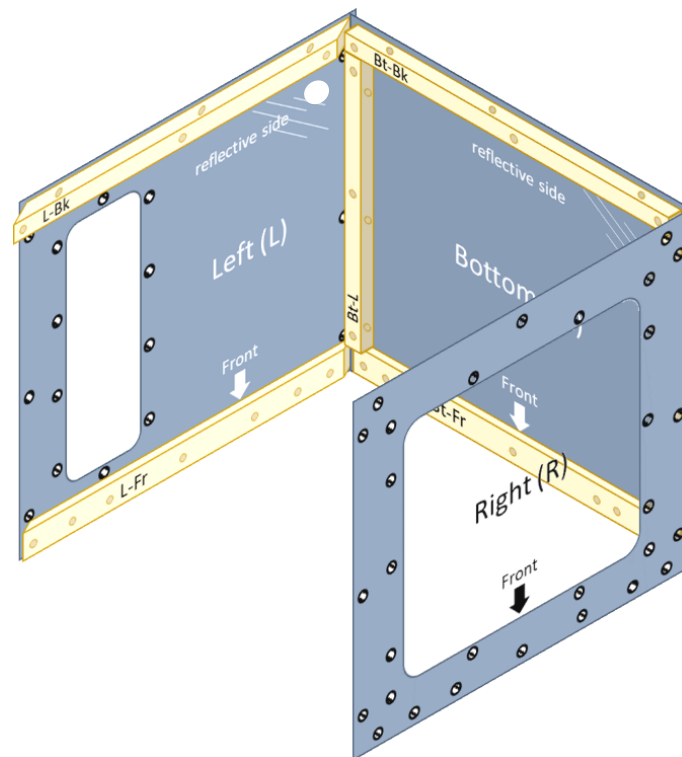
Align the Bottom panel to the Left Panel by placing the panels upright.



Then place the 15mm bolts through the aligned holes

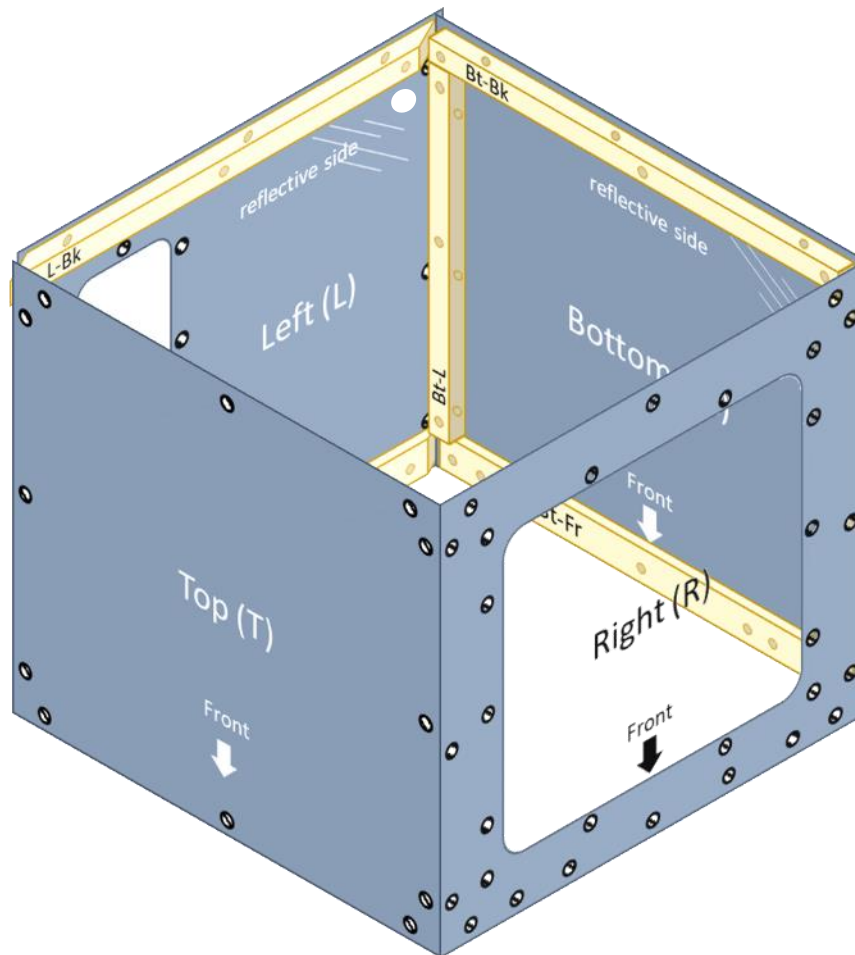


Then attach the Right Panel



7. Attach the Top Panel

Attaching the top panel will then create a square inner frame on the back side of the enclosure

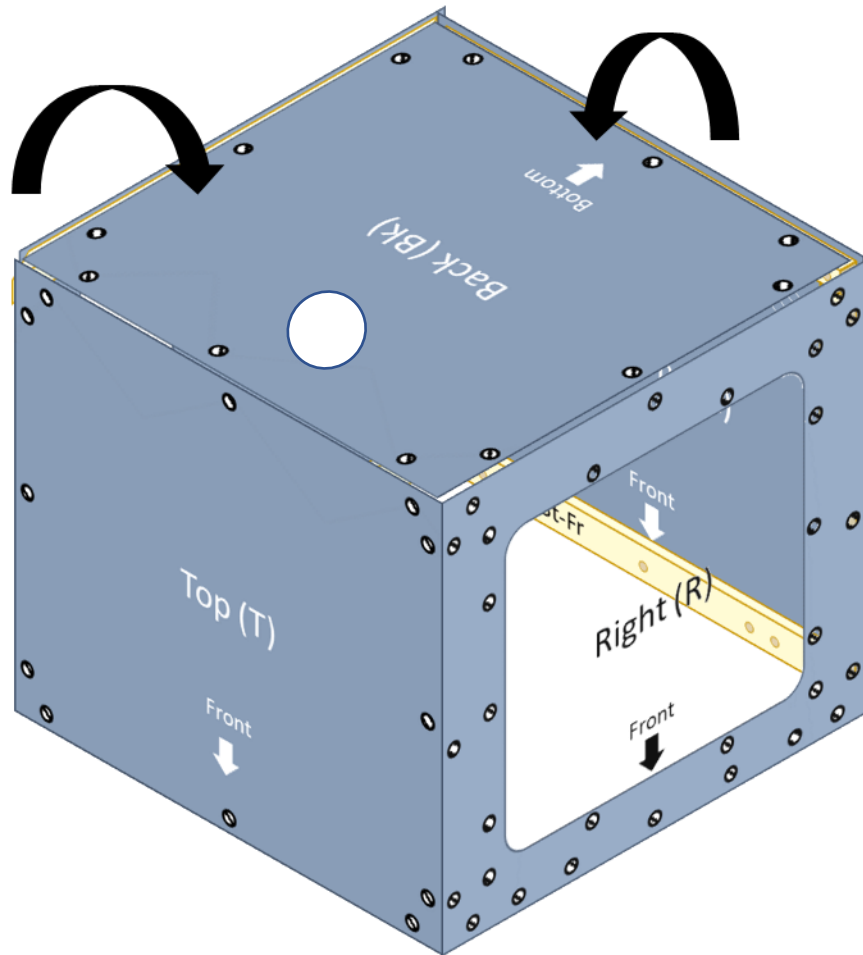


8. Attach the Back Panel

The Back Panel should fit snugly **INSIDE** the box created by the four attached panels and rest on the inside framing brackets.

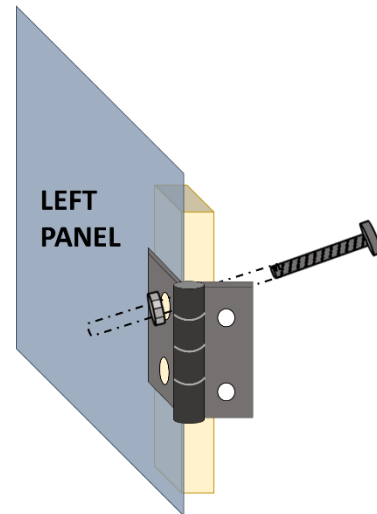
NOTE: The middle hole for the Bottom-Back Frame attachment does not align. The enclosure is still very tightly sealed together, and so it is not necessary.

Fits inside Framed Panels



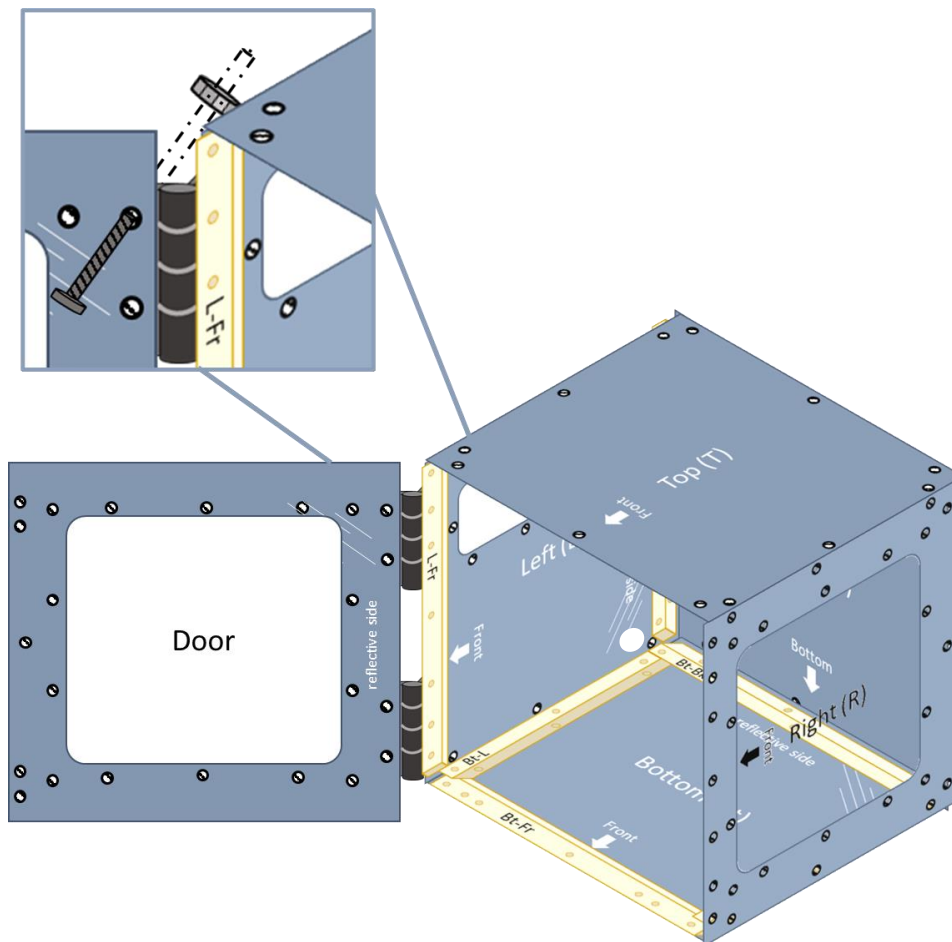
9. Attach Hinges to Left Frame

Now attach hinges to the frame with the extra-large bolts and nuts, with the bolts entering from the inside of the enclosure through the framing bracket, outwards to the bolt

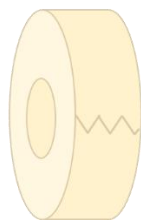
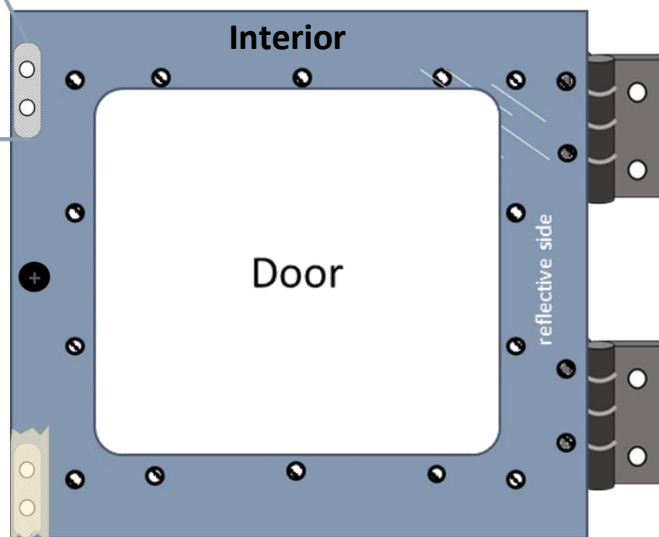
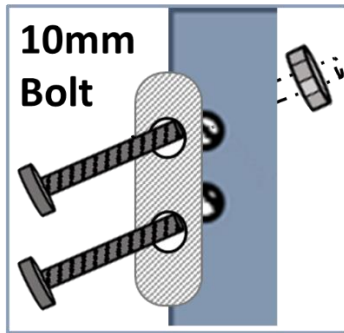
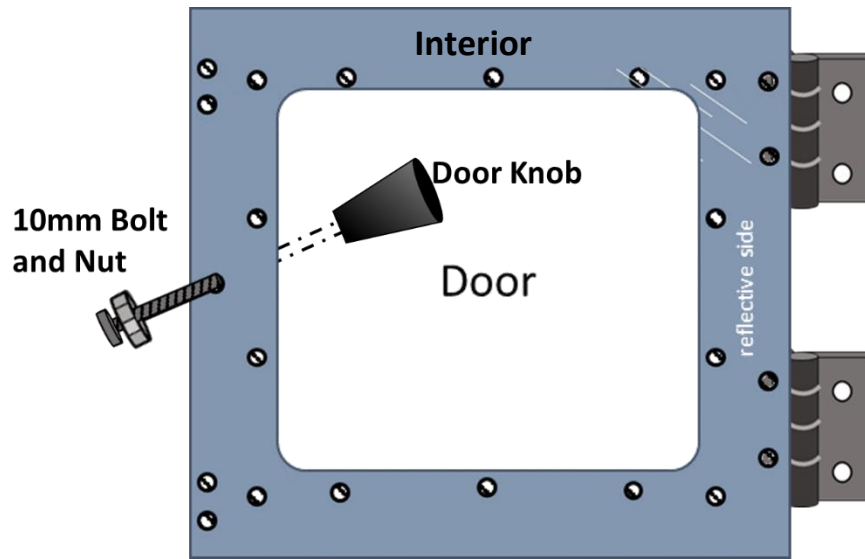


10. Attach Door

Similarly attach the door to the hinges with the bolts going through the inside of the door, outside to the nuts.



11. Attach the Door Knob and Metal Plates

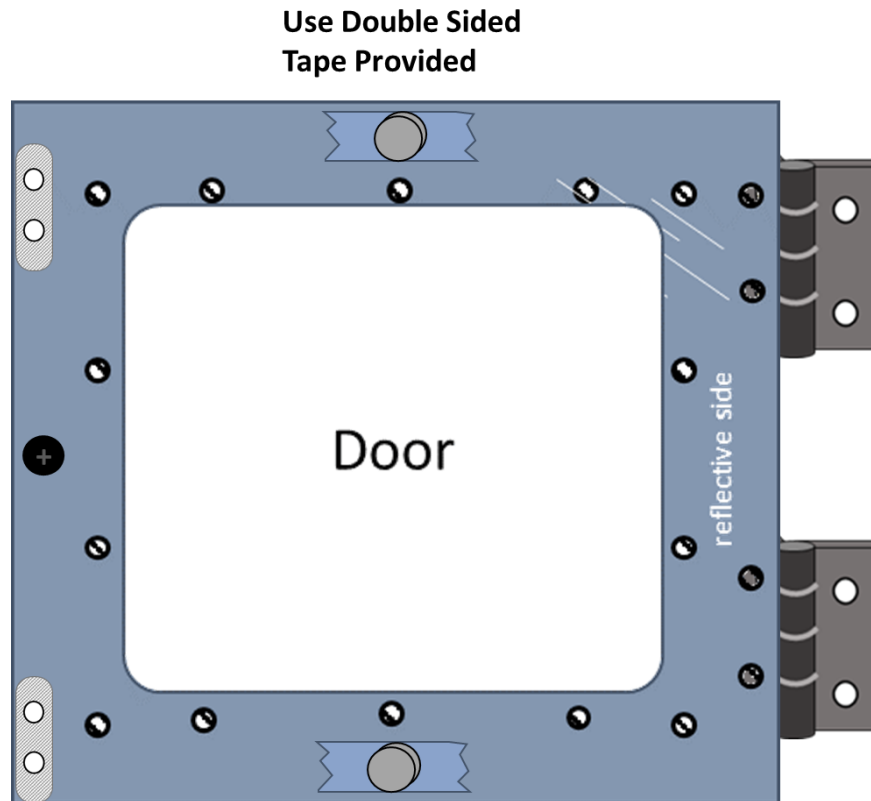


Add Masking Tape to reduce Strength of Close



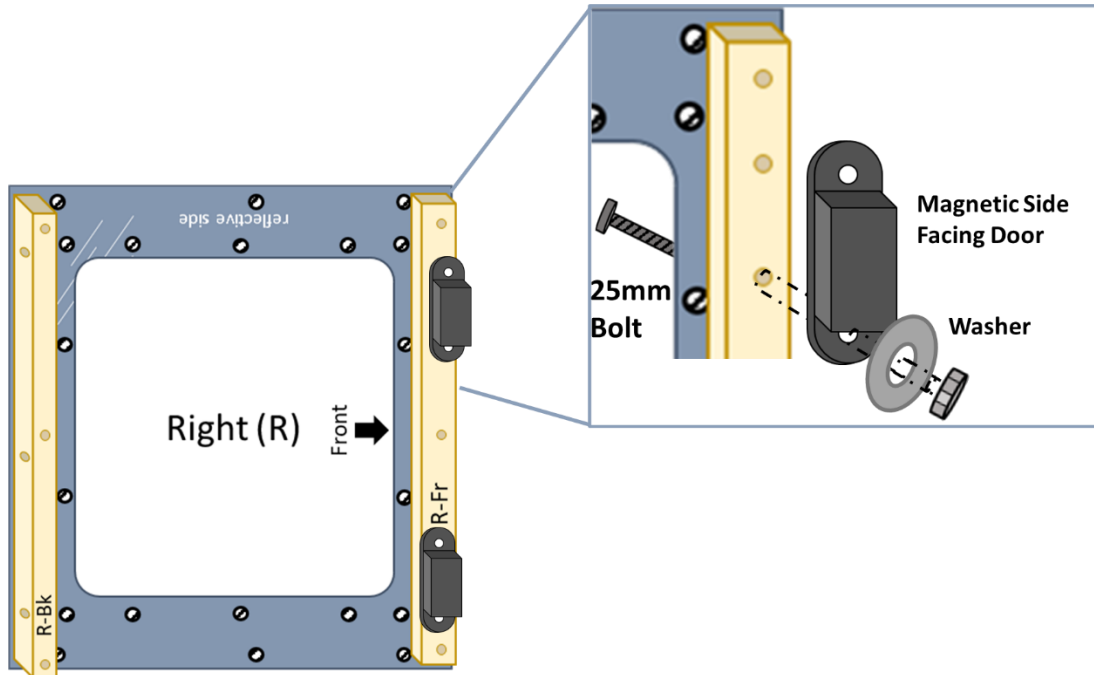
12. Attach Loose Light Magnets to Door Interior

Use provided double sided tape and attach loose magnets. Ensure they align with the LIGHT Magnets on the top and bottom front frames



13. Attach Door Magnets

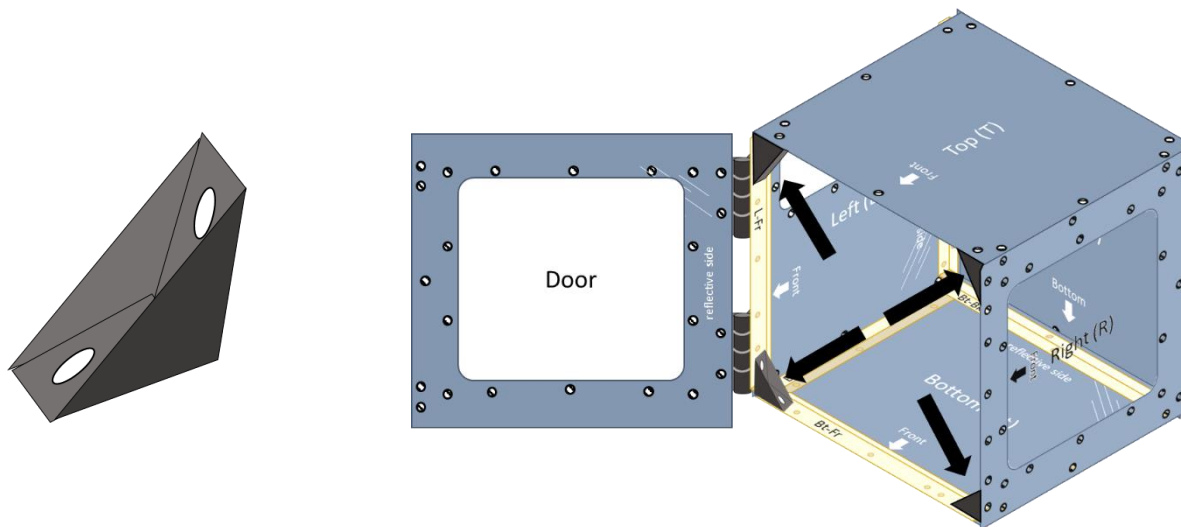
NOTE: The Right-Front framing bracket may have double drilled holes. This is not a problem.



14. Optional: Add Framing Brackets for Additional Support

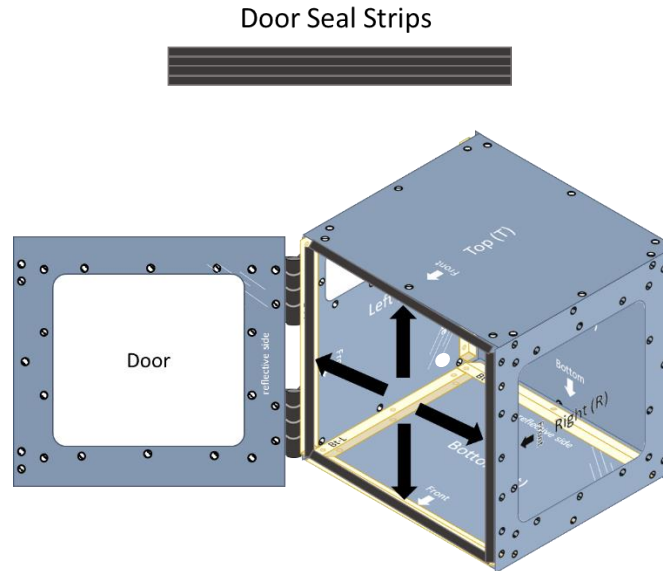
You can print out framing brackets from our STL site:

<https://www.makergadgets.org/how/stl-files> and add them for additional support on each corner of inside of the door frame



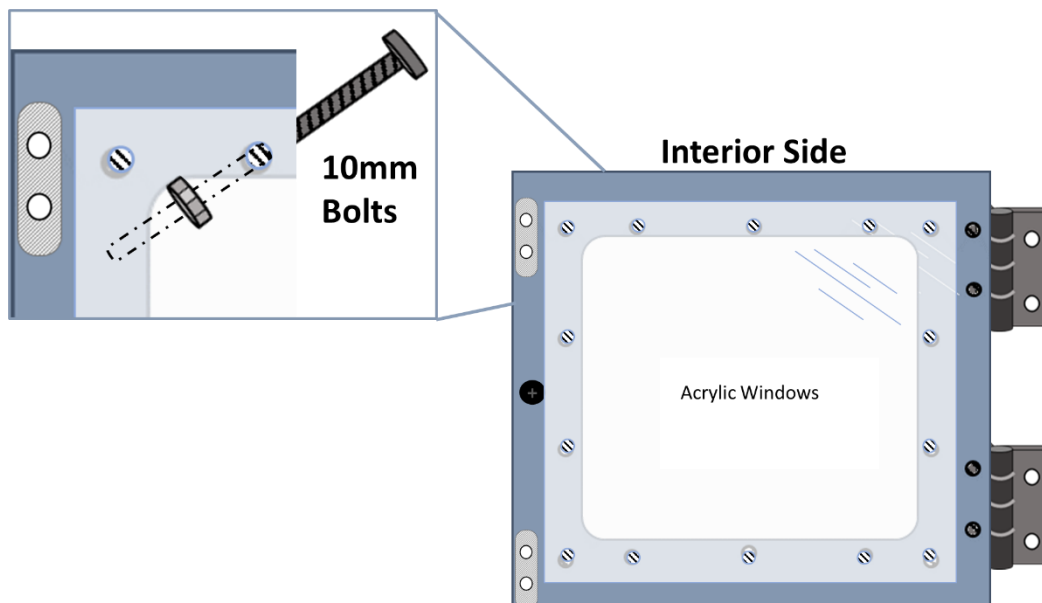
15. Add Weather Stripping

There should be a pack of 4 seal strips. These should be placed on the outward facing portion of the inner frame, such that when the door is attached, it will be pressed against the seal strips.



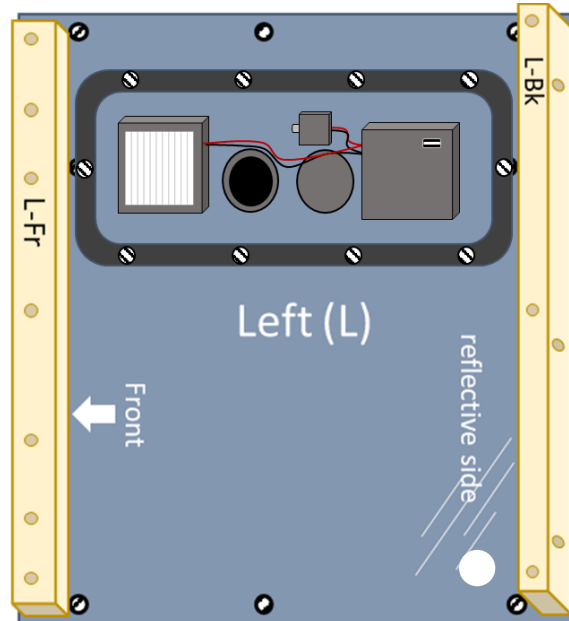
16. Install Windows and Left Window (Basic) or Control Panel

Install the Acrylic Windows to the Door and Right Panel. Use the 10mm Bolts.



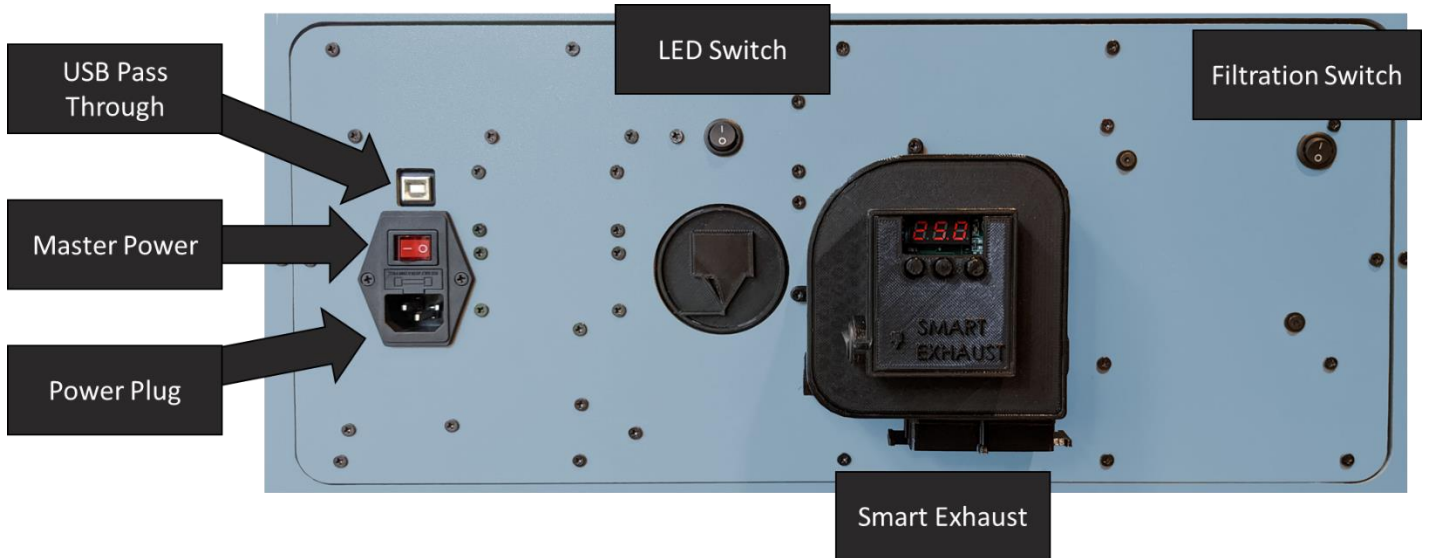
For the Left Panel, if you have purchased the Basic Model, then you will have an additional acrylic window to close the Left Panel.

If you have chosen the Innovator Control, you will be installing the Control Panel using 10mm Bolts with the bolts entering from the exterior side.

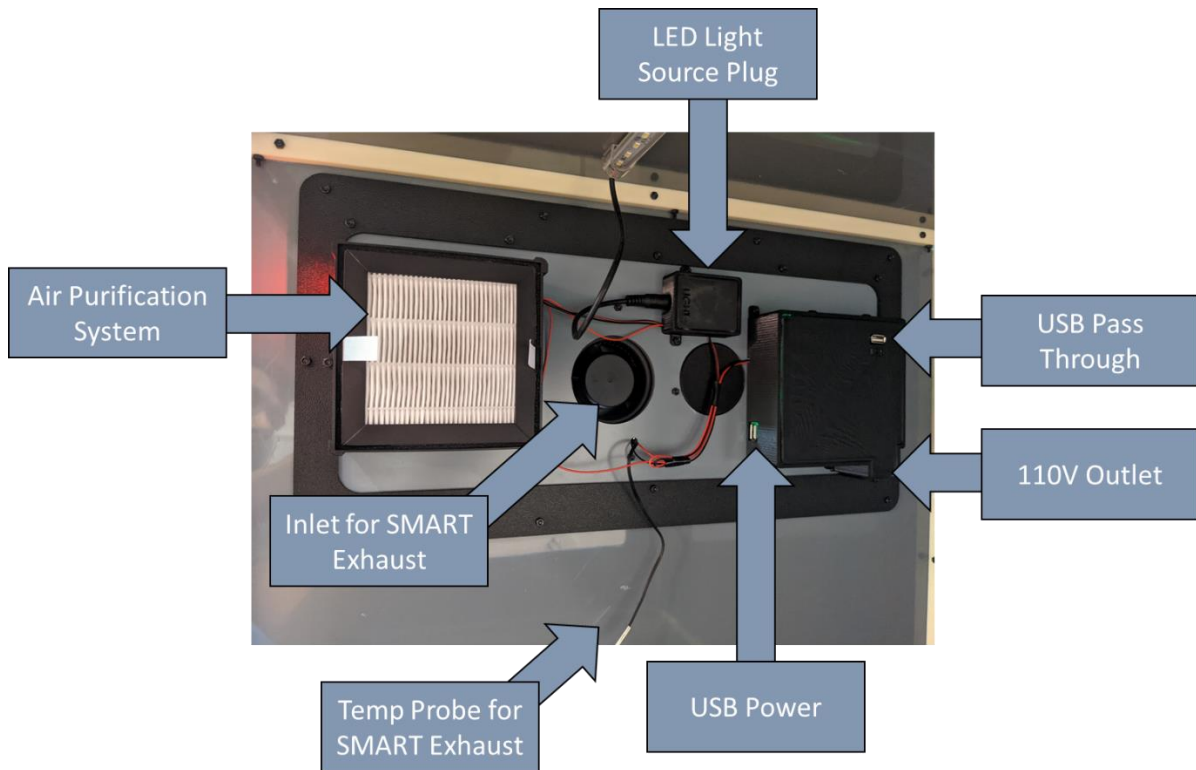


17. Connect Power Cords

Outside Panel:



Inside Panel:



Smart Exhaust User Guide - Setting Temperature Control

Smart Exhaust Control



Temp Screen	By default, the screen shows the <i>current</i> temperature from the probe in Celsius
Button 1	Press this button and the TEMP SCREEN will blink. This will allow you to set the temperature that will trigger the exhaust. Set the desired trigger temperature by using BUTTON 2 and BUTTON 3 , and press BUTTON 1 again to save the setting and return to the current temperature
Button 2	Once the TEMP SCREEN is blinking after pressing BUTTON 1 , use this button to <i>increase the trigger temperature</i>
Button 3	Once the TEMP SCREEN is blinking after pressing BUTTON 1 , use this button to <i>decrease the trigger temperature</i>
EXHAUST FAN	The exhaust fan will turn on once the temperature reaches 2°C above the trigger temperature and will turn off once the trigger temperature is reached

