EXTENSIBLE, MODULAR, STACKABLE ENCLOSURES
THE EASIEST WAY TO FUNCTIONAL & ATTRACTIVE PRODUCTS

QUICK START GUIDE

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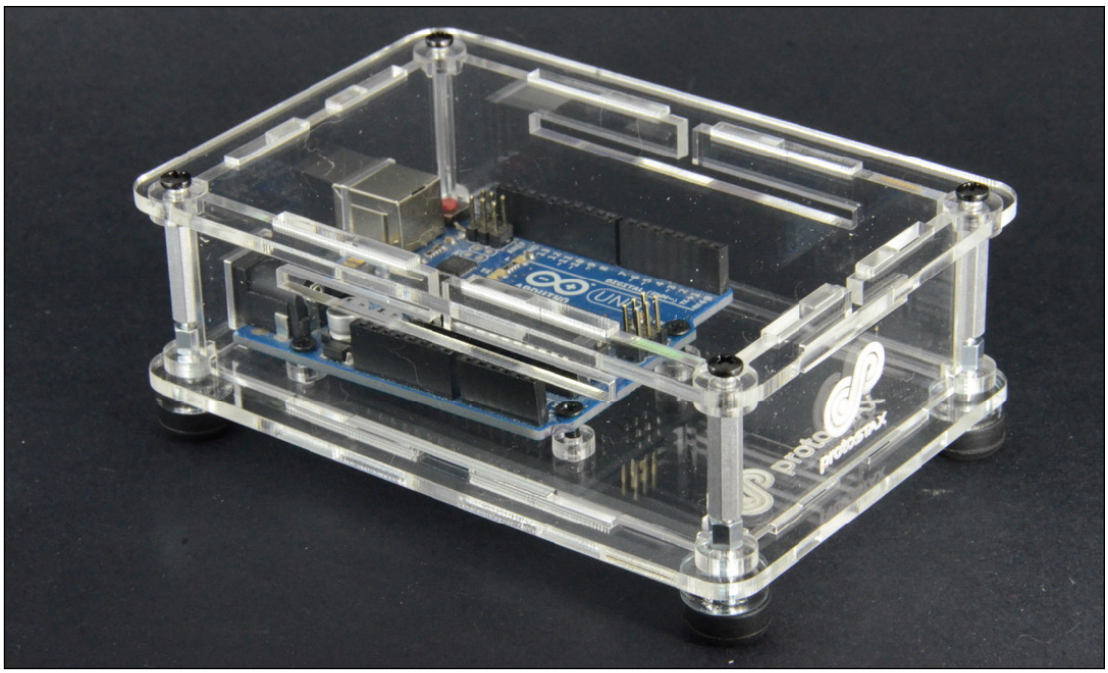
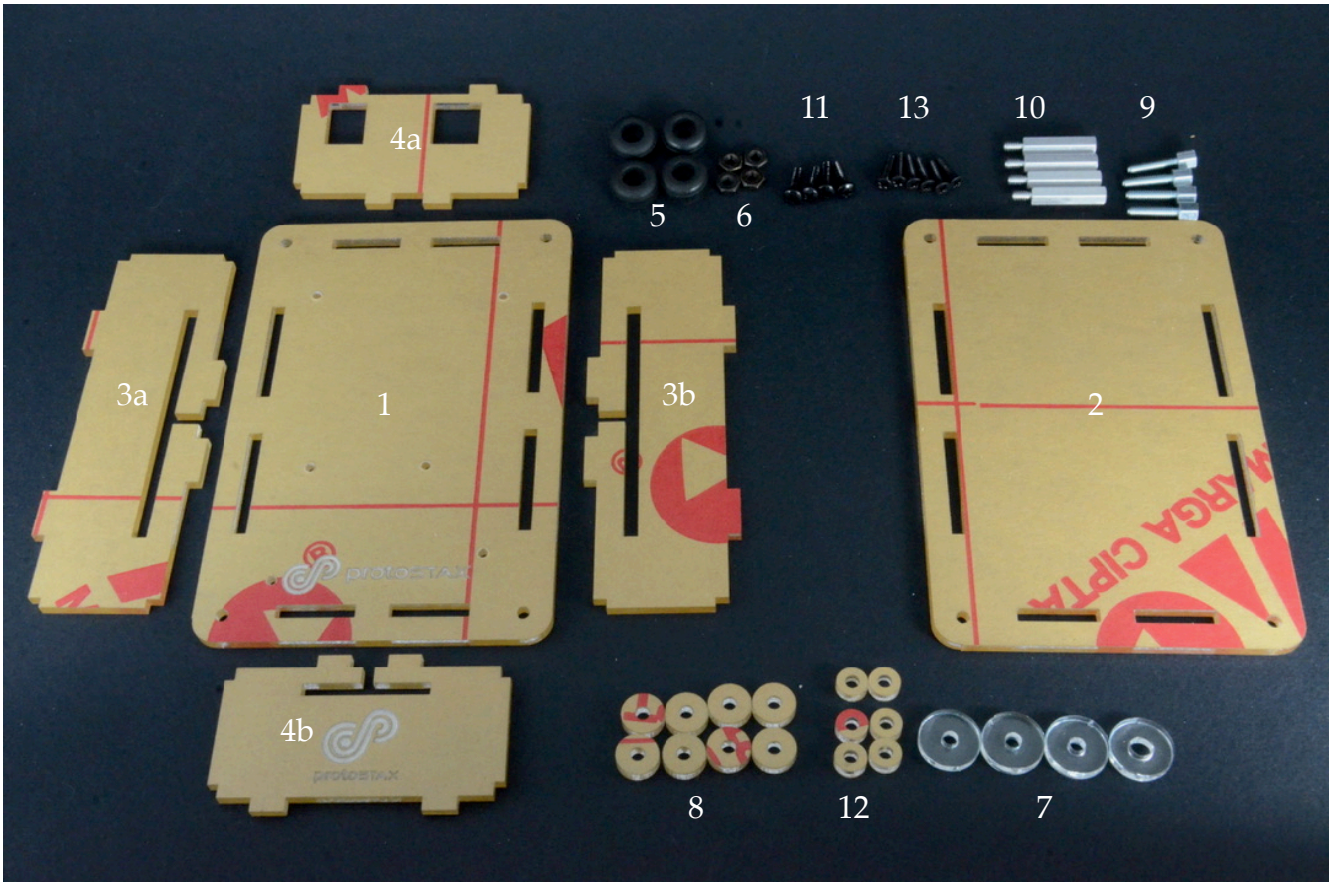


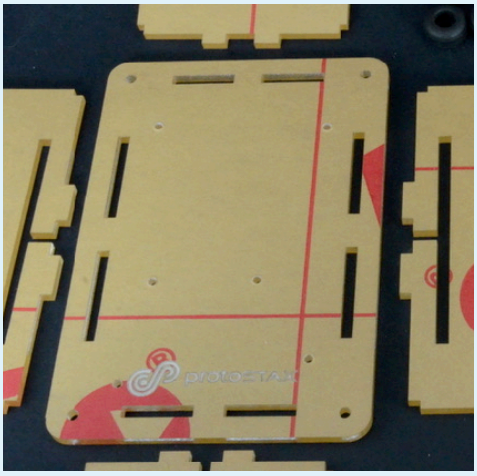
Parts List (May vary!)



1) Base Plate - 1x
1) Top Plate - 1x
3a) Long Side Wall 1
3b) Long Side Wall 2
3c) Long Side Wall 3 (on some models)
4a) Short Side Wall 1
4b) Short Side Wall 2
5) Rubber Feet - 4x
6) Hex Nuts - 4x
7) Washers for Rubber Feet - 4x
8) Vertical Bracing Spacers - 8x
9) Vertical Bracing Lower Element - 4x
10) Vertical Bracing Upper Element - 4x
11) Top Screws - 4x (#4-40 screws - these are a litte bigger than the PCB mounting screws)
12) PCB spacers (where applicable; number varies)
13) PCB mounting screws (where applicable; number varies) (M2.5 screws - these are a little more slender than the top screws. They can either be black or silver.)

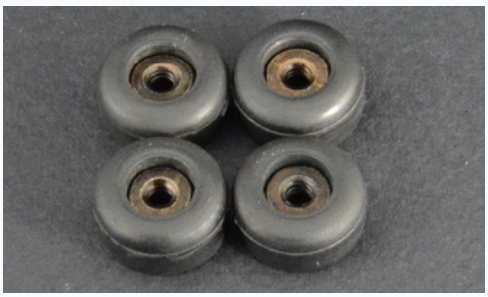
Assembly

1. Remove the protective backing from your enclosure pieces.

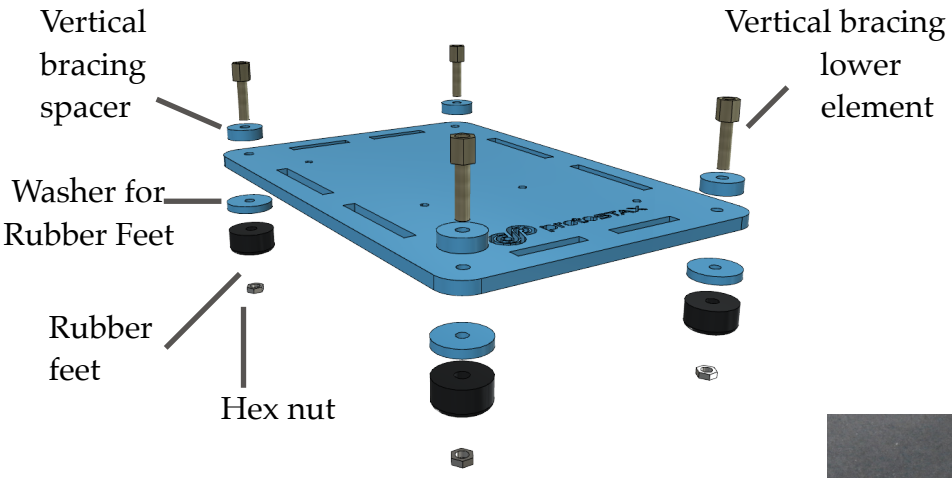


2. Prepare Feet

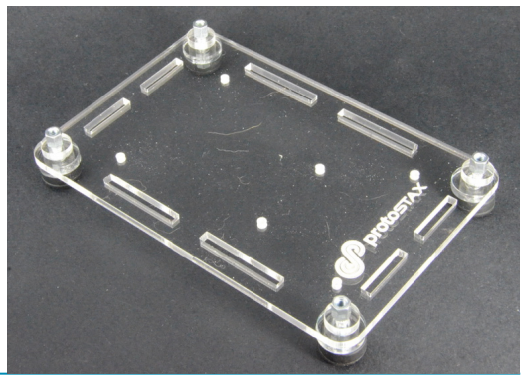
Start off by inserting the hex nuts into the bottoms of the rubber feet - you can press them down with a Phillips screw-driver gently so they fit in snugly.



3. Base Assembly



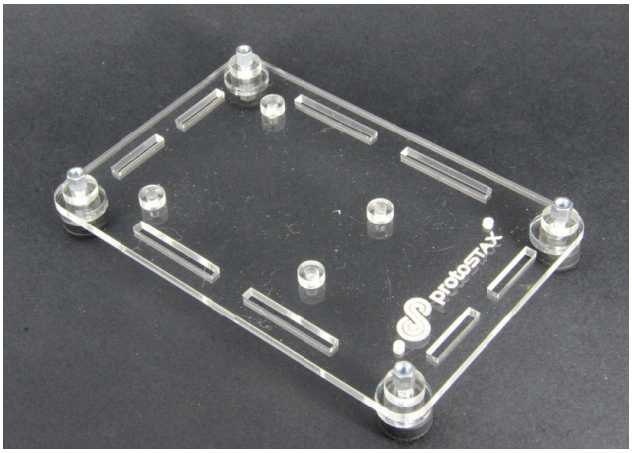
This is what it looks like when done!

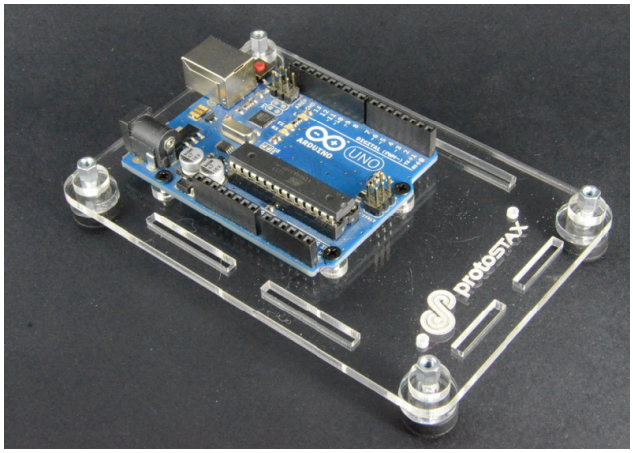


Platform Configuration - Base Only!

4. Place PCB spacers over the mounting holes, and place your board to line up with the mounting holes. Use the provided machine screws to mount the board to the bottom plate. The mounting holes are threaded, so you don't need any extra nut below.

Please note that the PCB mounting screws (#13 in parts list) are a different size (M2.5) than the top screws (#11 in parts list) (which are #4-40). Please make sure you use the correct ones. The screws can all be hand screwed, so if is it too tight, it is not the right screw.



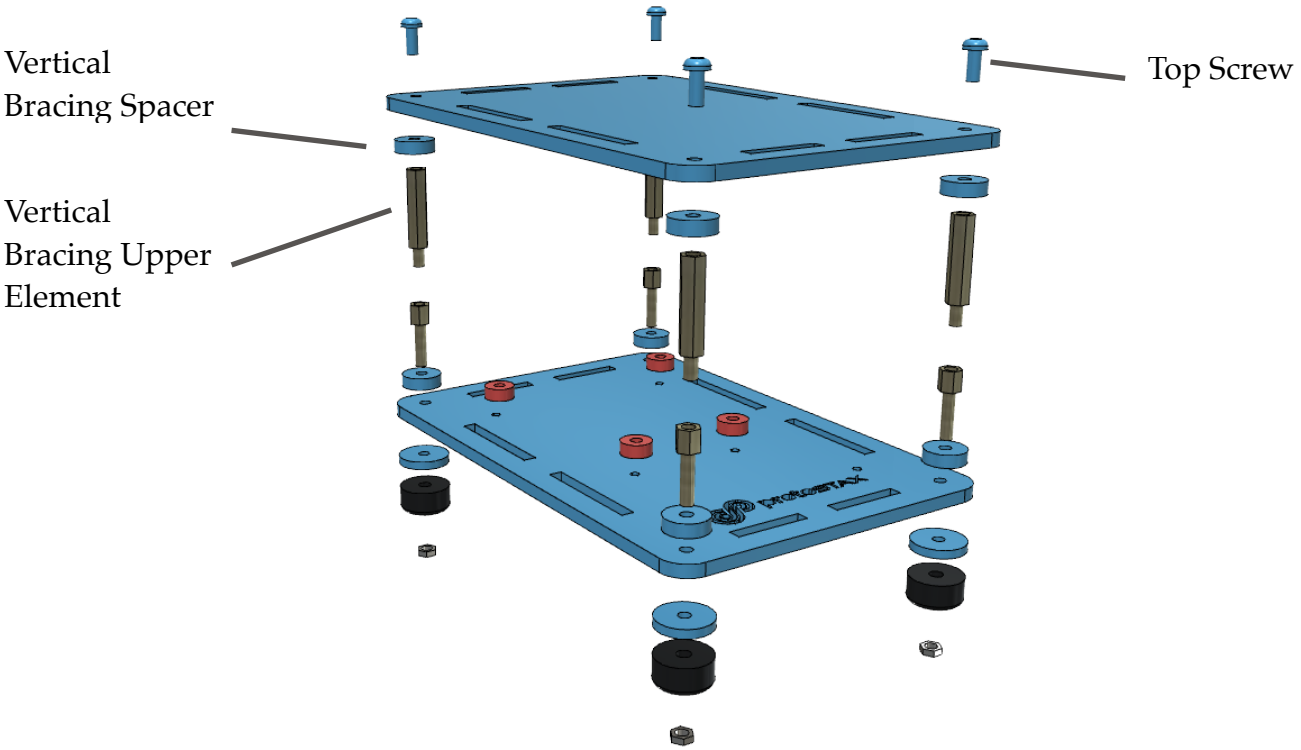


This is what it looks like with your board mounted to the base plate using the PCB spacers and PCB mounting screws!

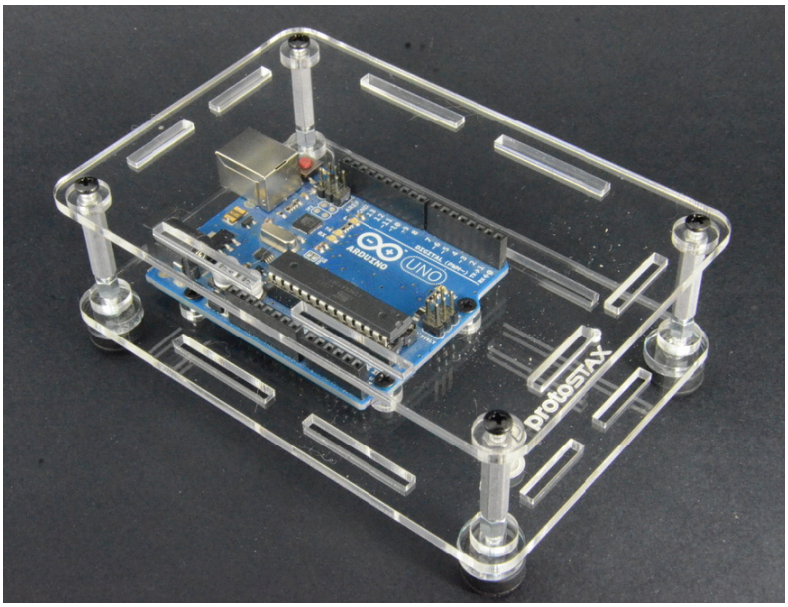
This is what we call *Platform Configuration*! You have your board mounted firmly on the base plate, and have it protected and elevated by rubber feet (and protect the surfaces of your tables from scratches from the bottom of your board too! :-)) . This configuration gives you full and open access to your board as you start prototyping!

Open Configuration - Omit Side Walls

5. Attach top bracing elements, top spacers, and top plate and secure with screws as shown below to form an Open Enclosure



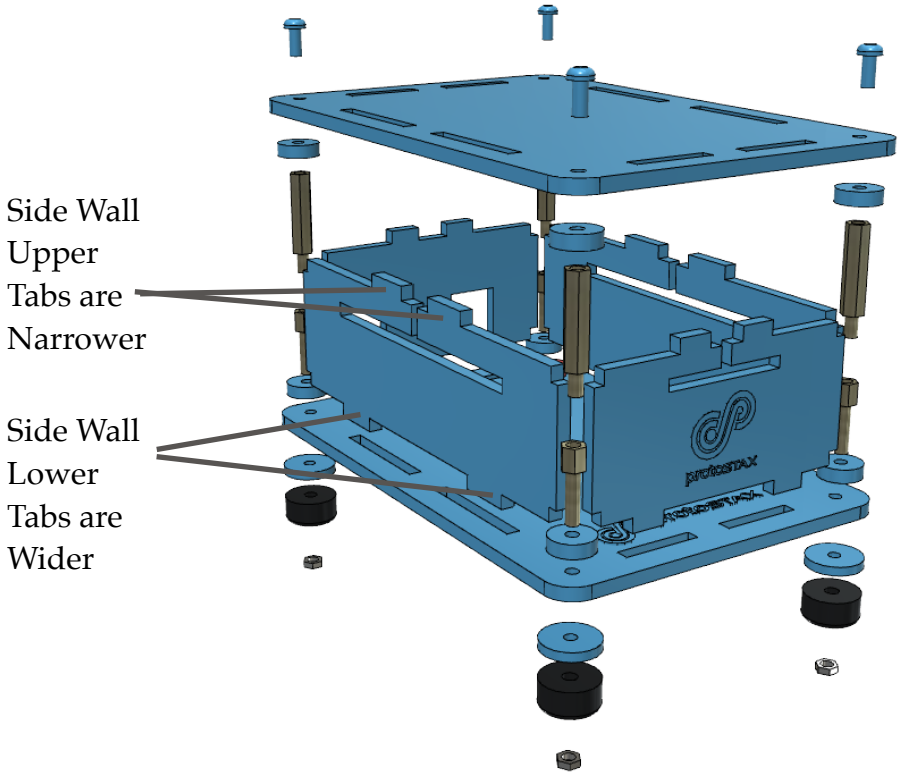
This is what is looks like when done!



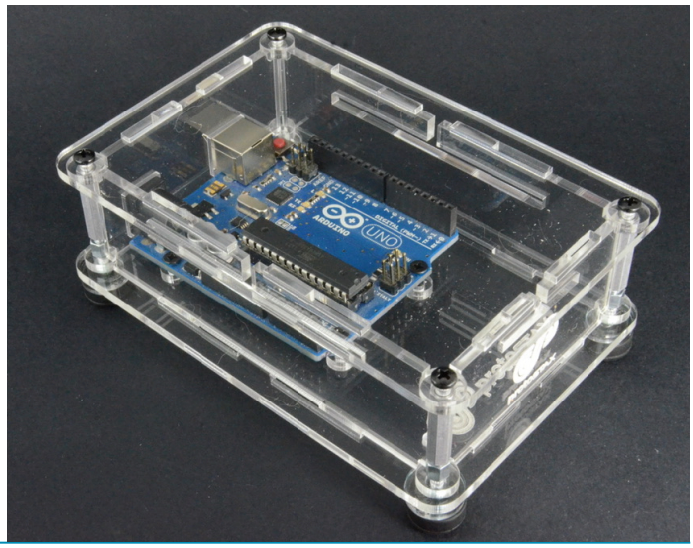
This is what we call the *Open Configuration*. In this configuration, you've added the upper vertical bracing elements and top of the enclosure, but have omitted the side walls. This configuration gives your prototype more protection than the Platform Configuration, while still giving you open access (from the sides) to your prototype, in case you need tweak or adjust some things, or for example, if your prototype is running a bit hot and can do with some extra airflow!

Closed Configuration - Fully Enclosed

6. Add the side walls to form a fully Closed Enclosure. The side walls fit into the wall slots on the bottom and top plates. Note the proper orientation of the side walls for the cutouts to fit any plug and input points of the board. Also ensure that the side walls are oriented such that the lower tabs are the wider tabs, with the narrow tabs going towards the top of the enclosure (sometimes, especially when a side wall doesn't have any specific cutouts for a particular board, it is possible to insert the side wall in an upside-down way) - when you are vertically stacking enclosures, this orientation of the side walls will ensure that the side wall from the top will in the wall slots without any problems.

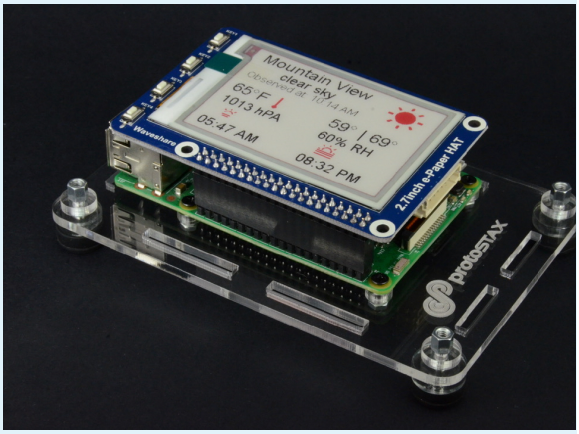


This is what it looks like when done!

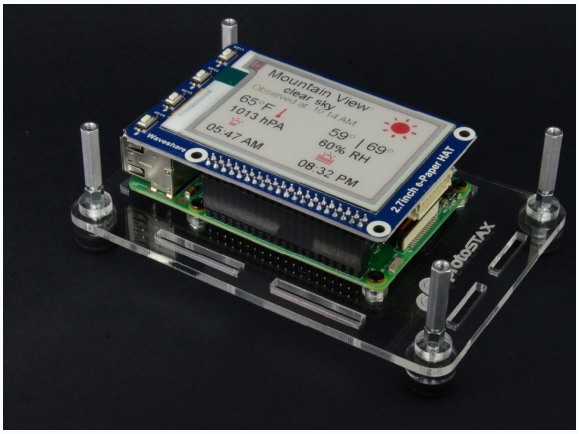


Assembly Tip!

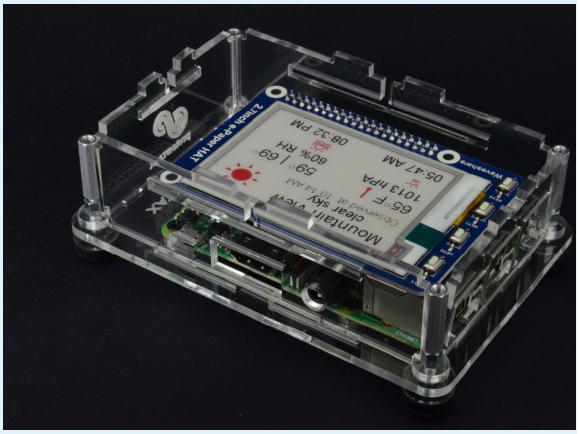
Start with Platform Config



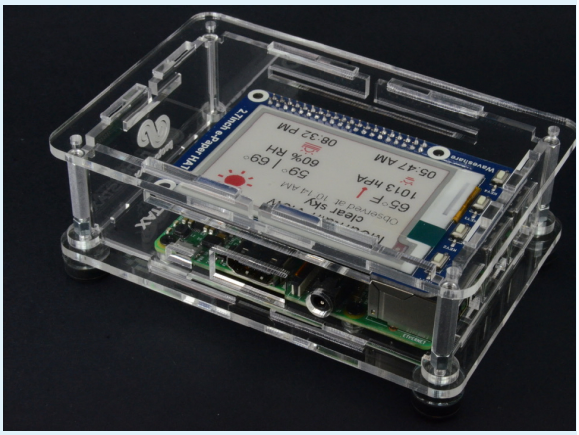
Add Vertical Upper Bracing Elements



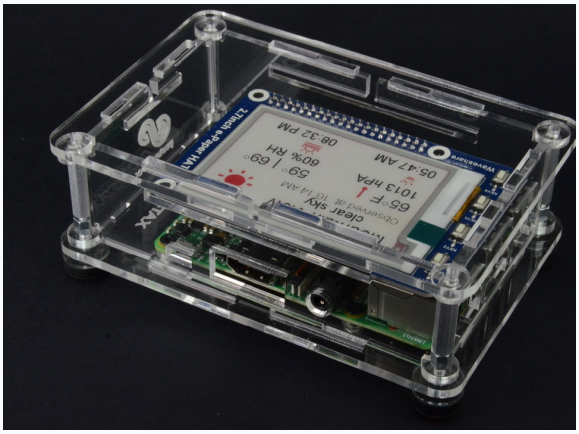
Add Side Walls (remember the orientation of the tabs - wider tabs fit into the lower base plate, and the upper tabs are narrower)



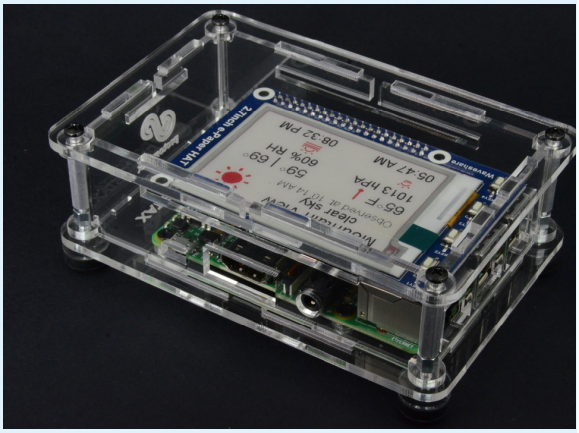
Add the Top Plate next. Make sure the upper tabs of the side walls fit into the wall slots of the Top Plate. The upper tabs of the side walls are cantilevered to allow for cables to be inserted into the cable management slots (in most cases, the walls have cable management slots at the top. It is only in some cases that they don't have the slots). Twisting the upper tab's cantilever excessively can cause it to snap off. Once the side wall's upper tabs are firmly seated in the wall slot, this twisting is no longer a concern as the side wall provides rigidity to the top plate and the top plate in turn protects the tabs of the side walls. However, be careful during installation when you are trying to line up the side walls' tabs and the wall slots, to prevent damage!



Insert the upper vertical bracing spacers into the gaps between the Vertical Bracing Upper Elements and the Top Plate. It is easier to do this once the Top Plate is in place, even though the vertical bracing spacers fit below the Top Plate!



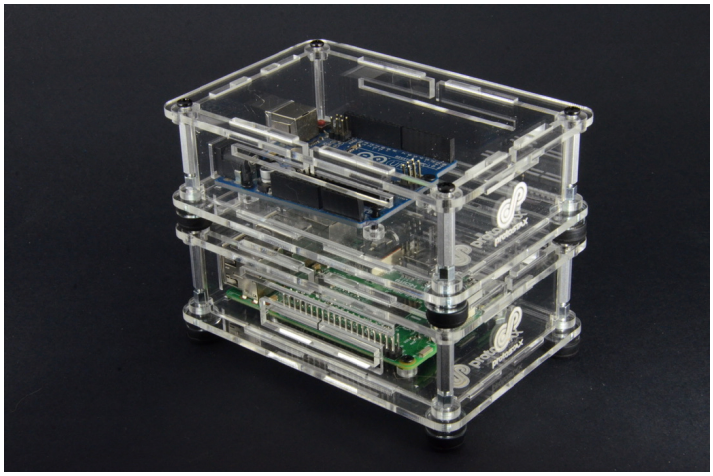
Lastly, insert the top screws and screw them into the Vertical Bracing Upper Elements to finish your enclosure!



This is what we called the Fully *Closed Configuration,* which provides maximum protection for your board. Our beautiful, elegant enclosures are not just functional but great-looking, light-weight, and offer considerable protection for your electronic devices!

The enclosure has about 1.2 inches of vertical clearance internally, which means you'll have ample room for an Arduino Shield or a Raspberry Pi HAT/pHAT/Bonnet. You might even be able to squeeze in two Shields if the lower Shield is lower profile and the upper Shield is flush and does not use female headers.

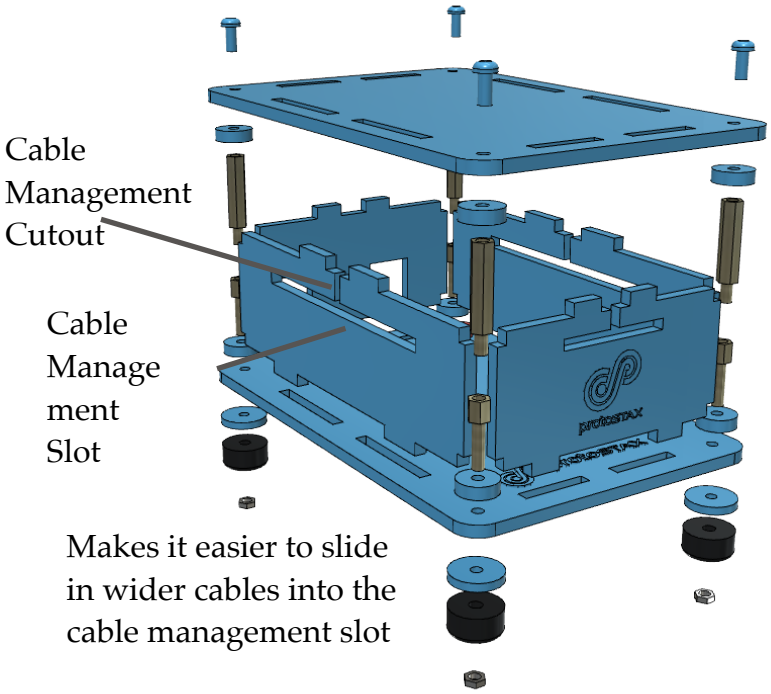
Lastly, finished ProtoStax enclosures are themselves stackable one on top of the other for storage! The holes on the rubber feet of the upper enclosure fit into the top screws of the lower enclosure. Yes, we love paying attention to little details! 😊

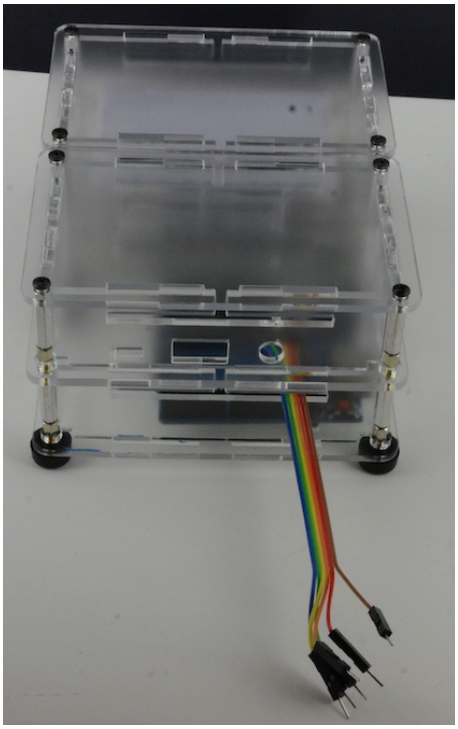


Cable Management

It is essential in prototyping to be able to interface/connect with external systems. Even with an infinitely stackable and modular system like ProtoStax, you might still have external boards, etc that you would like to connect to. You will also want to be able to manage cables going between different ProtoStax sub-enclosures that form part of a bigger whole enclosure.

ProtoStax enclosures include cable management features that help you in these cases. Most side walls include cable management slots with cable management cutouts that make it easier for you to insert the cable into the slot. The Wall Slots on the Base Plate and Top Plate can also be used to organize and manage your cables when you are using your enclosure in the Open Configuration.





Happy Making!

We hope that this User Manual has been useful to you in getting started with ProtoStax Enclosure Systems. We look forward to hearing about your own projects and usage of ProtoStax Enclosures in them!

If you are using ProtoStax in your social media, please use the hashtags and @mensions mentioned below to tag us on your posts! If you have any questions, comments or suggestions, please do get in touch with us! If there is anything we can do to improve ProtoStax or the guides/user manuals, please let us know!

Please feel free to write us with any comments, questions, suggestions or concerns you may have! We love hearing from you!

If you can take a moment to go to our website and rate/review the enclosures, that would be awesome!

We hope ProtoStax can be a useful tool to help you with your maker journey! 😊

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