

Vortex 3 Real-Time Voice Changing Module

BOARD MOUNTING AND PROTECTION

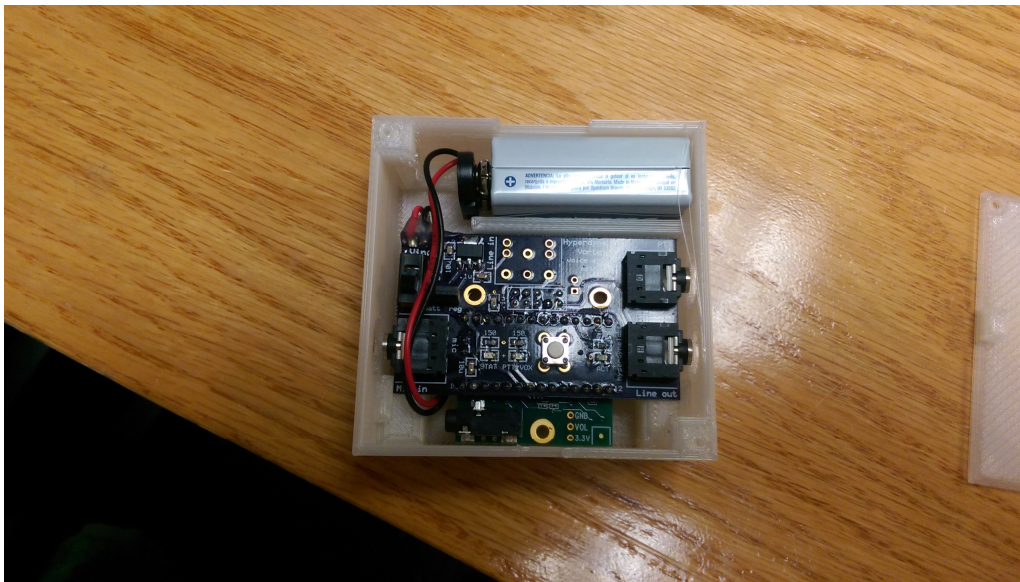
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If you are mounting the unit inside your helmet, **you want to make sure you do not get it wet.** *That includes condensation, sweat, etc.* These things can short out the board and render it inoperable. A good way to protect the board is to use epoxy, hot glue, or even heat shrink wrap. If your boards get wet or stop operating, turn it off and let it air dry completely before turning it back on. You can also mount the boards inside a plastic project box to protect them.

3D printed project box

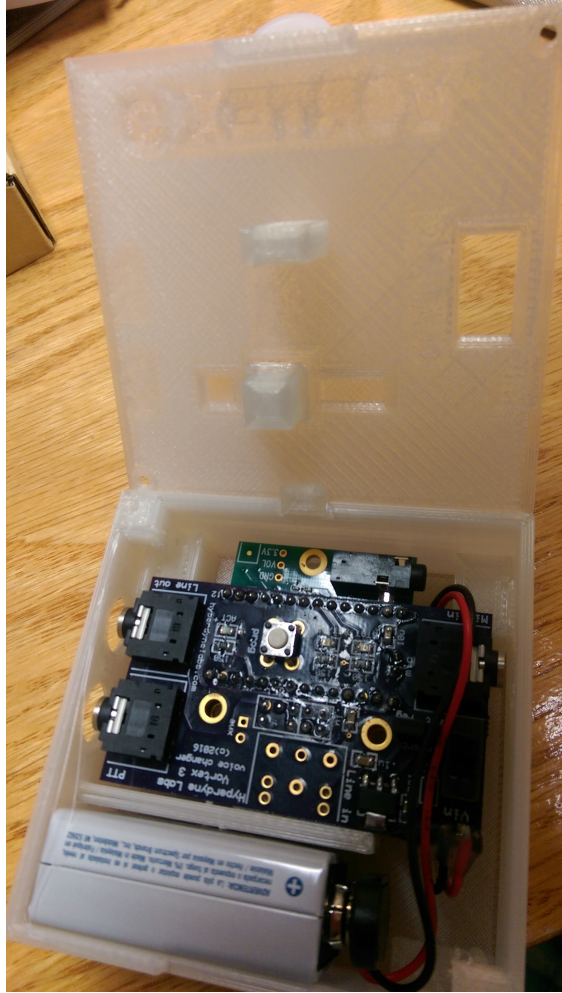
If you got the 3D printed Vortex project box, the board will fit inside and be secured with the lid. The unit is a friction fit and only goes in one way. Holes for 3.5mm cables are on the side of the box. There is also space for a 9V battery to mount on the side of the unit.



The lid is keyed with 2 rectangular catch blocks. If you also want to use the button plunger, you can install that under the lid and close the box up so the plunger sits atop the programming button. There are areas to see the LEDs and a cutout for the power on/off switch.

If you want to further seal the box from outside wetness, you can use a rubber block to place in the on/off lid cutout so condensation does not get inside the box. You can also place a small bag of desiccant inside the box to soak up any water condensation.

There are also 2 screw holes in the lid that allow you to further secure the lid to the box body.



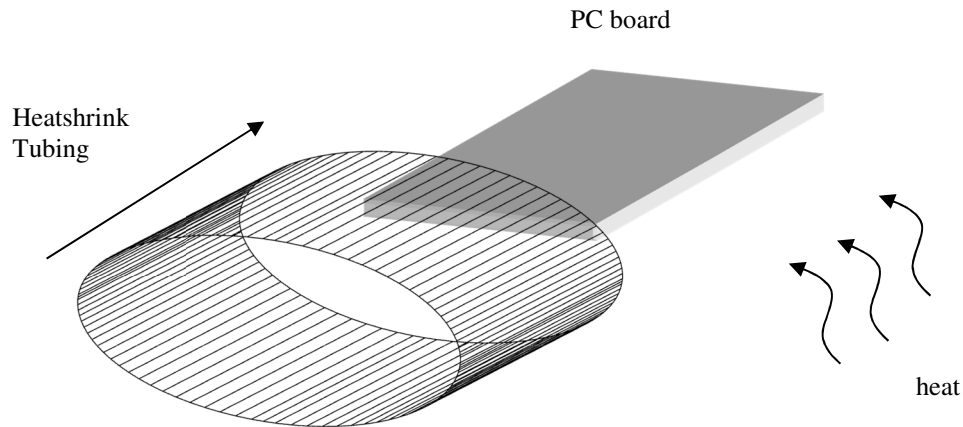
There is also a column printed on the backside of the lid that will press down on the mounted Vortex unit to secure it when the lid is secured.

Here is a pic of the button plunger installed:



Heat shrink installation

If the project box is too large for your mounting area, you can use heatshrink to protect the board as well. To protect your board using heatshrink, simply slide the heatshrink tubing over your board. The heatshrink will slide over the long side so the jacks are not covered. Cut the heatshrink so it is 0.5" longer than the board. Take a heat gun (or hairdryer on "high") and evenly heat the tubing. It will constrict around the board making a seal. Heat both sides until the tubing is tight. Do not heat it for more than 30 sec. Once the tubing has shrunk to its new size heating it further will not shrink it more.



You can then take an exacto knife and cut out any needed slots or holes for power switch, PROG button, etc.

Here is an example circuit board that has been properly heat wrapped:

