

Instructions/parts for Pi Zero Case

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The Mark 2 (or PI Zero design) includes a Marketplace USB hub:

- <https://www.amazon.com/gp/product/B01IT1TLFQ/>

does not fit within any of the typical PI Zero cases.

Chad Baldi kindly designed a plastic case for the ensemble and Dave Kostin kindly 3D printed it for me. The STL files are:

- Mark2Box_v1.STL
- Mark2Lid_v1.STL

To assemble the box you will need:

- Pkg of 316 Stainless Steel Phillips Flat Head Screws, M2.5 x 0.45 mm Thread, 8 mm Long
- 4 of Male-Female Threaded Hex Standoff, 18-8 Stainless Steel, 4.500 mm Hex, 8 mm Long, M2.5 x 0.45 mm Thread
- 4 of Female Threaded Hex Standoff, 18-8 Stainless Steel, 4.5mm Hex, 10mm Long, M2.5 x 0.45 mm Thread

which I ordered from McMaster and Carr:

- <https://www.mcmaster.com>

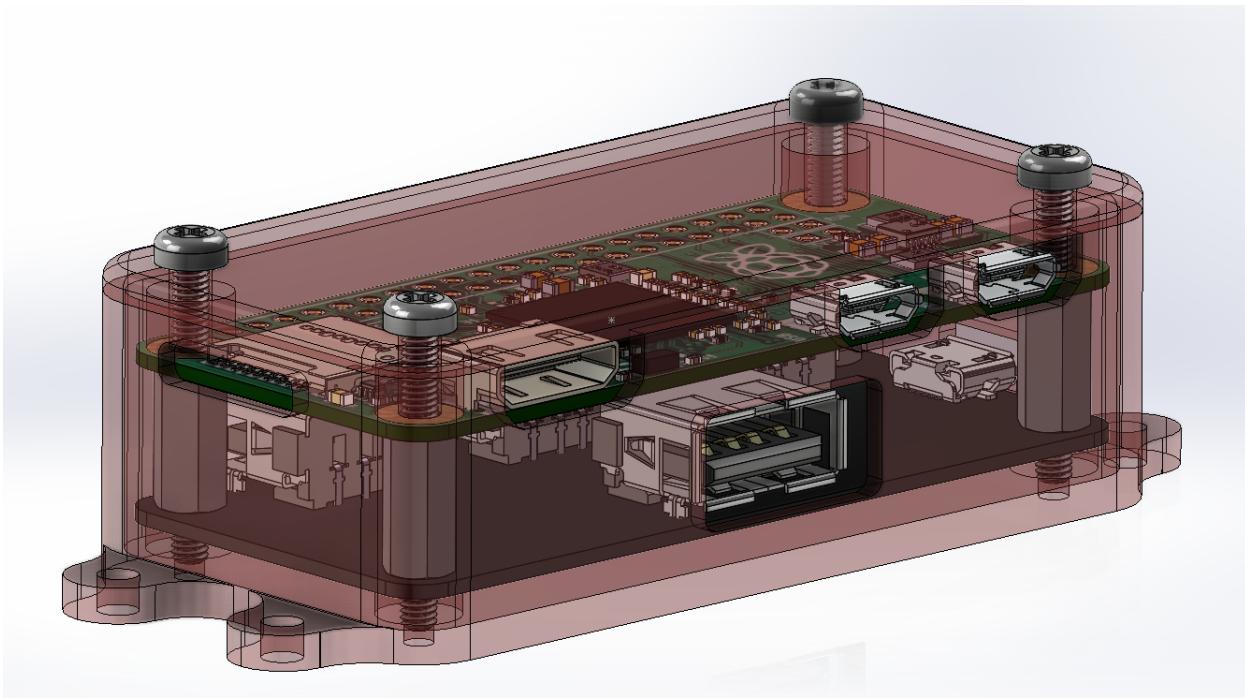
To assemble, starting from the bottom:

- insert M2.5 X0.45 mm thread 8 mm long screws into bottom of case
- Place Marketplace USB hubs over M2.5 screws
- Insert 10 mm Female threaded (female both sides) over M2.5 screws securing Marketplace USB hub
- Place Pi Zero on top of 10 mm female-female standoff ensuring that the pogo plugs are located on the appropriate solder pads of the PI Zero board (critical that these be aligned)
- Insert 8 mm male-female standoffs through the Pi Zero board and screw into the 10 mm female female standoffs

The structure is now a solid structure. Now:

- place the top over the male-female standoffs and secure with M2.5X0.45 8 mm screws

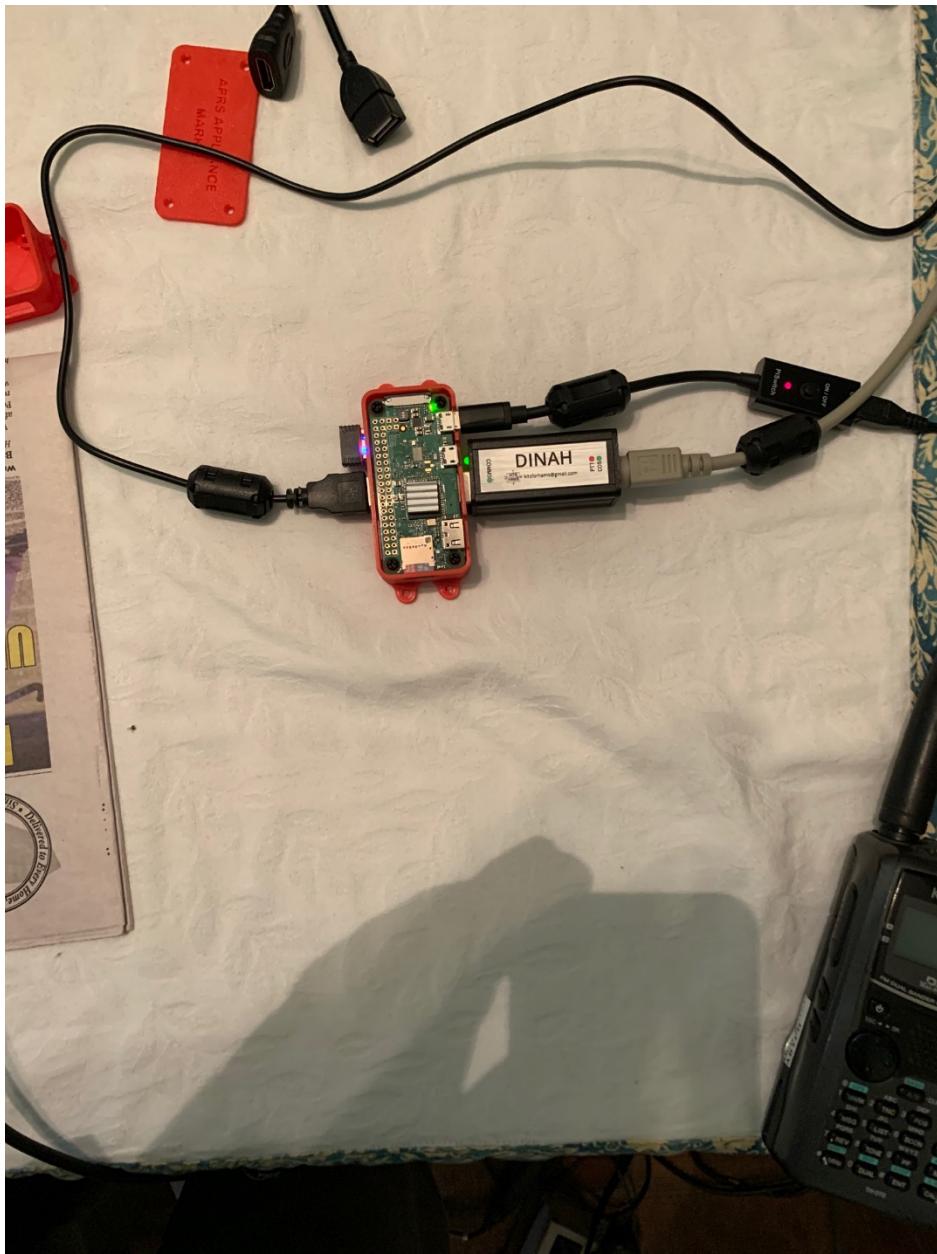
Diagrams of the case are shown below:



In the final design there is about a 4 mm gap between the top and the case: this allows free air flow to keep the Pi Zero cool.



This is a prototype case. In particular the lip over the SD card slot is problematic, but for testing purposes this should work fine. The assembled PI Zero device is shown below.



Where the GPS puck is not shown but is plugged into the USB ports on the left.