As makers we deal with the common problem of powering our creations while we’re prototyping them. For me, it’s not an uncommon occurrence to have a couple Raspberry Pi’s, an Arduino, and maybe a 7” touchscreen or two sitting on the workbench at any given point in time. When I originally came up with the concept for the Maker Station I was searching for a solution to that power problem and, ideally, I wanted a project that would force me to learn CAD, wiring with JST connectors, to develop a better understanding of the Raspberry’s GPIO and the I2C protocol, and whatever other geekery I could pile into the project. After a solid four weeks of development I can safely say Maker Station met all those desires and then some.

Specifications:

Power: 10 amps @5v via 8 USB

Switching capability: 15

Compute: Raspberry Pi Model 3b (although the 2 through 3b+ would work fine) – make sure you have Wi-Fi ability

PCA9685 I2C Controller (used for the switch LEDs not servos)

A spare Pi-Zero is installed on the power box faceplate but not currently used

Source code, part list, and general documentation:

<https://github.com/BryceAshey/maker-station>