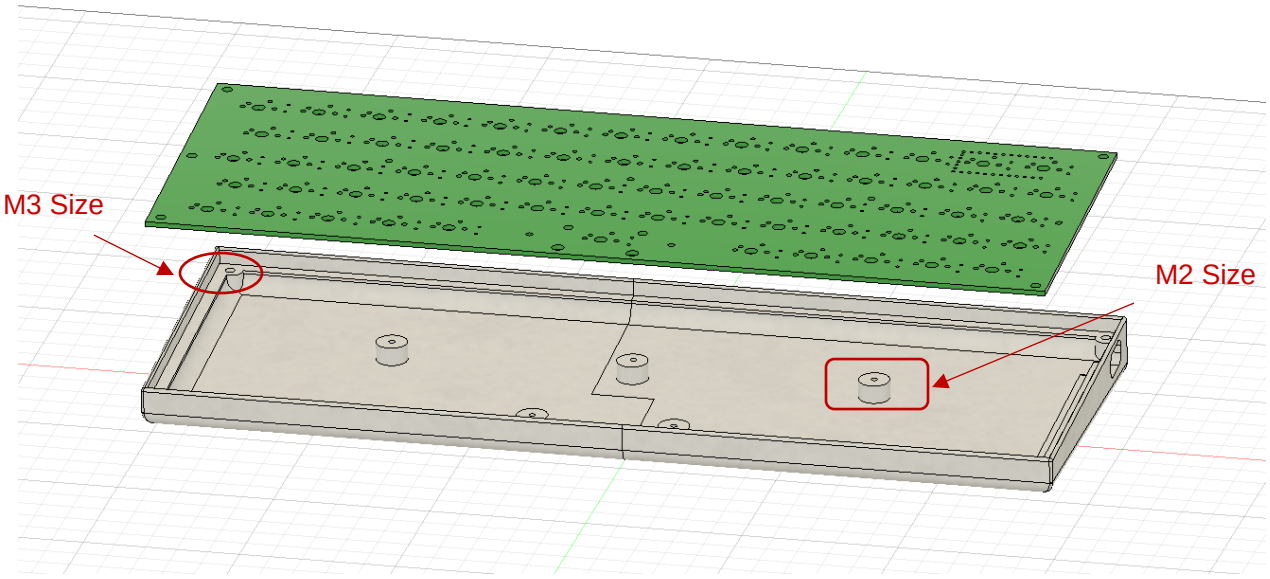
BO75 Instructions/Build Guide

See BOM for list of the specific components needed for the build. The instructions for the 3D printed case will be at the end of this writeup.

The BO75 is an approximately a 75 percent keyboard that I made in an evening while challenging myself to see how fast I could design a standard keyboard that I plan on using and showing off in the office I work in.

There are a few specific nuances to the build that I will highlight here in this guide; they are not overly complex, just a little specific to the manner and sequence that certain components are placed. Notably, the Elite-C Microcontroller and the two switches and diodes that are positioned right parallel to the footprint for the Elite-C.

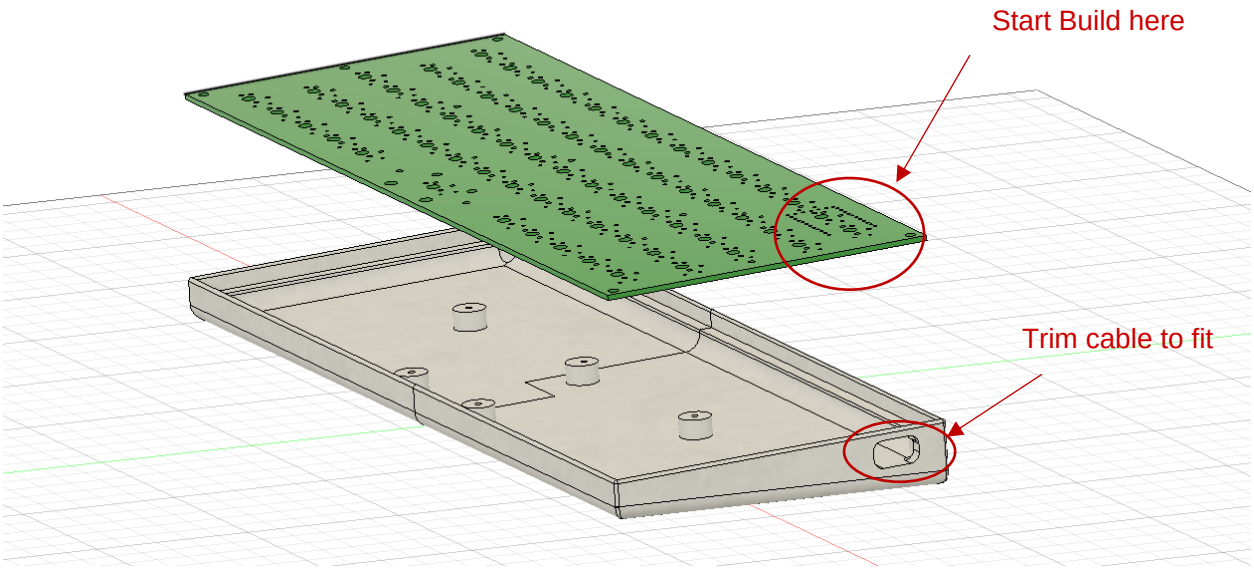
In the illustrations you will find labels outlining where the screws that mount the PCB to the 3D printed shell, as well as labels for the sequence and positioning of the Elite-C and corresponding switches and diodes.



(Figure1. Mounting screw placement and size)

The screw sizes for the corner placement are size M3 and are 8mm long.

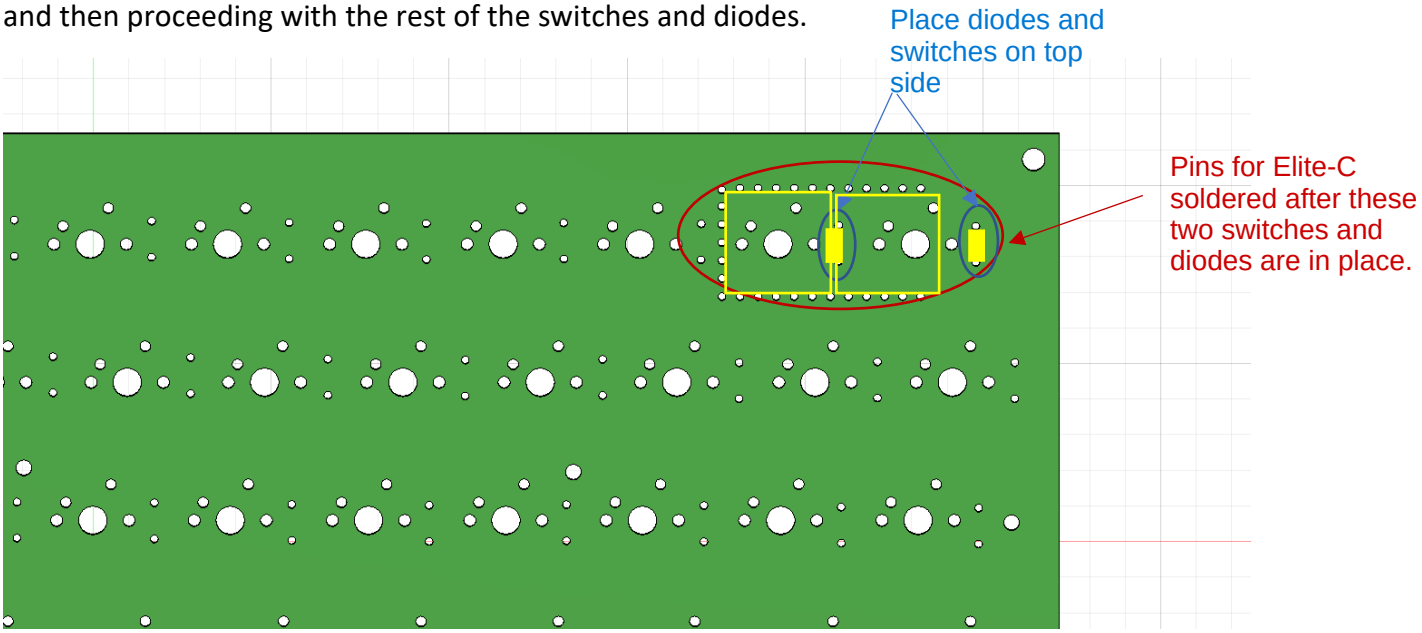
The screw sizes for the center standoffs are M2 and 8mm long.



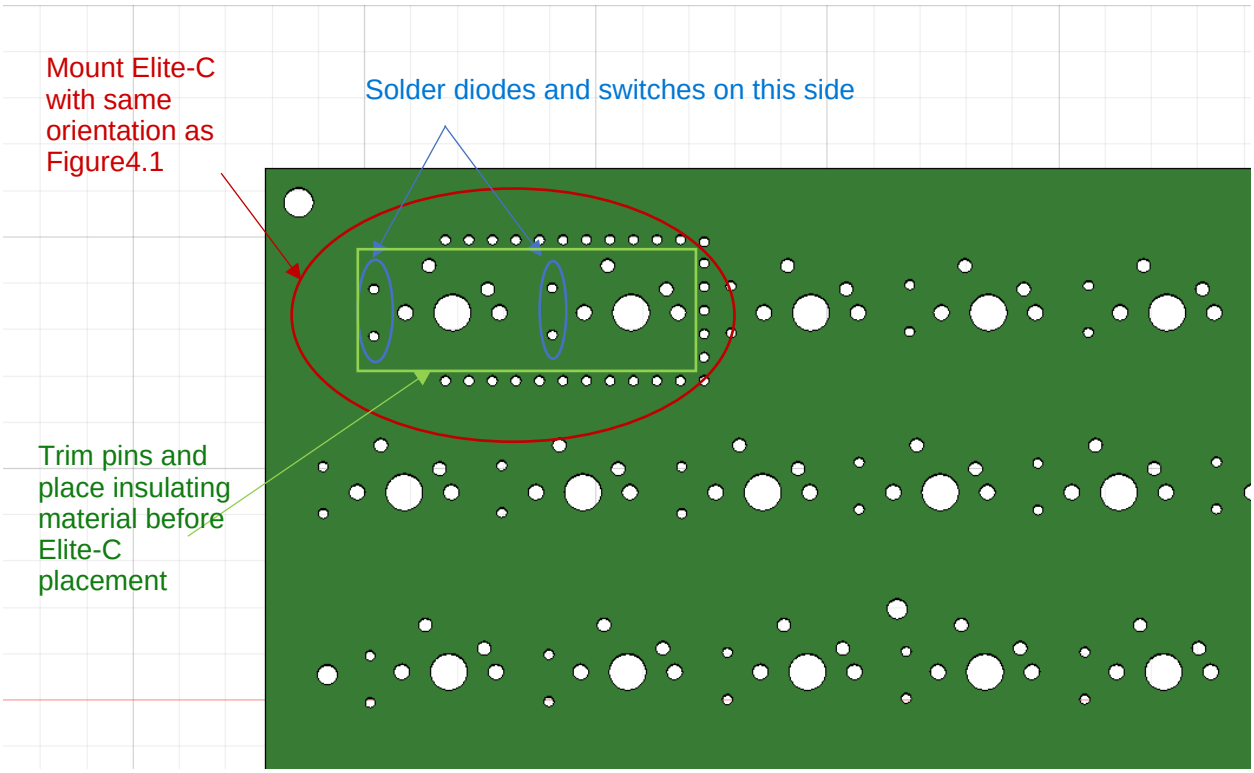
(Figure2. Elite-C Placement and cable modification initial instructions)

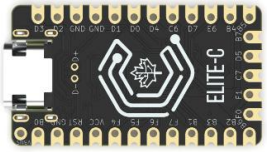
The size of the hole for the cable to go in was modeled a little slim for most standard USB-C cables and most may need to be trimmed down to the proper diameter to fit properly. I personally used a utility knife with a sharp blade (very carefully) to do so.

The Elite-C will be placed on the bottom side of the PCB as will most of the Diodes for the build; except for the two diodes that are nearest to the Elite-C. This is the part of the build where you want to make sure you solder on the two diodes and two switches before soldering the Elite-C and then proceeding with the rest of the switches and diodes.



(Figure3. Top PCB view, diode and switch placement instructions)





(Figure4.1 Elite-C orientation to be soldered on backside of PCB)

(Figure4.2 Back view PCB Elite-C, switch, and diode placement instructions with insulated material)

Solder the switches and the diodes and then trim down pins before moving to the next step.

After trimming down the pins of the soldered diodes and switches take some electrical tape or other insulating material that can be adhered and place over the newly trimmed pins so they don't short against the micro controller that will be placed atop. See Figure 4.1 for orientation that the Elite-C needs to be soldered in.

After soldering in the microcontroller then proceed to the normal build steps of soldering the diodes in with the components on the backside.