3D Printed Switch Manual

## Materials and Tools

- 2 wires cable. 20-22AWG. https://www.digikey.com/en/products/detail/tensility-international-corp/30-00398/5023197

- Mono jack plug male 3.5mm.
  https://www.digikey.com/en/products/detail/cui-devices/MP3-3501/992141

- 4 pin Switch.
  https://www.digikey.com/en/products/detail/adafruit-industries-llc/1010/7244937

- Pliers
- Solder iron and solder wire.

Instructions

1. Download the STL files and print them in the following orientation. The support overhang angle should be at least 65 degrees, so the threads aren't covered with support material.
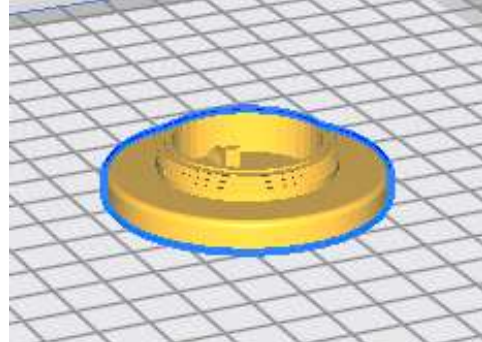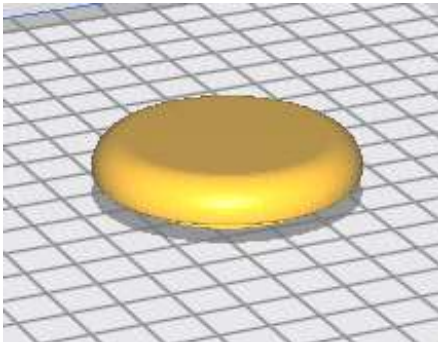

When printed, the button can still have small imperfections that may need to be cleaned with an exacto knife.

The button is designed with a 'break away' ring that allows the top cap to achieve smooth vertical motion when pressing the button. The next couple of frames outlines how this works and how to clean the button so you can improve its performance in case issues arise with the manufacture
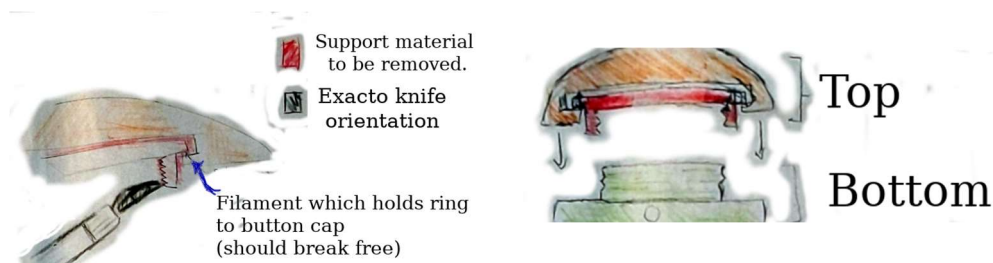
2. Strip the two ends of the cable.
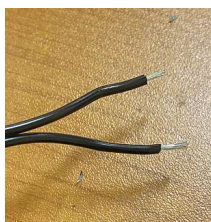
3. Solder one end to the cable to the male mono jack connector, one wire to the pin marked in red and the other wire to the hole marked in green and screw the cover to protect the exposed wire.
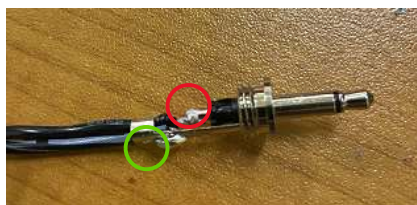
4. Cut the two pins on the side of the switch.

5. Pass the other end of the cable through the outside of the hole of the 3D printed base and solder the cable to the switch as seen in the pictures. Place the switch in the middle of the base. If needed you can use superglue to hold it. Once the button is closed the switch will be held in place.
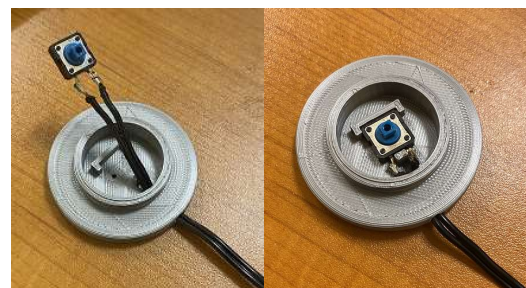
6. Screw the upper printer part to the base rotating the inner ring clockwise. The ring is designed to break free from the top to allow the button to move smoothly up and down. Occasionally this happens before the ring is fully tightened to the base.

    See the illustration below and/or the videos to see alternate ways to tighten the ring.

YouTube Videos

Threading the button onto the base
Unthreading the button onto the base

Top

Bottom

Top View

Face blade away
from you

Mushroom
Cap

Threads

Bottom

Inside with switch

Side View