**Overview**

The Simple Switch Tester is a device that enables the user to test the switch they have built, in order to determine if they assembled it successfully and that all the components are working. When a switch is plugged into the 3.5 mm jack and activated, an LED will light up indicating a successfully operating switch. The device can be used at build events to test a series of switches, or at home during a digital build event. The switch tester is a simple device made up of six main components: the 3.5 mm jack, a AAA battery holder, two AAA batteries, an LED, a 68 Ω resistor, and a tactile switch working in parallel that can test the batteries as well as the switch. The total cost of the device is well below other equivalent devices on the market by sourcing inexpensive components and utilizing FDM 3D printing. The Simple Switch Tester is scheduled to launch at the end of August.

**Assembly**

The device requires the following tools and equipment for assembly: *a soldering iron, pliers, flush cutters, and a 3D printer (or temporary access to one)*. After the enclosure is 3D printed, the device can be assembled in a few short steps. The 3D printed enclosure is snap-fit and requires no additional parts to assemble it. The total build time should be under thirty minutes after the enclosure is finished printing.

**Components**

The components for the device can be found on Digikey.ca. The battery will be easily accessible if it needs to be changed. The 3D printed enclosure can be printed in any material, but PLA is ideal for sustainability purposes. All the components involved with the switch tester are recyclable at a local depot or biodegradable.

**Testing**

The Simple Switch Tester will be tested internally during a live build session to determine potential improvements and feedback on the building/using experience.