

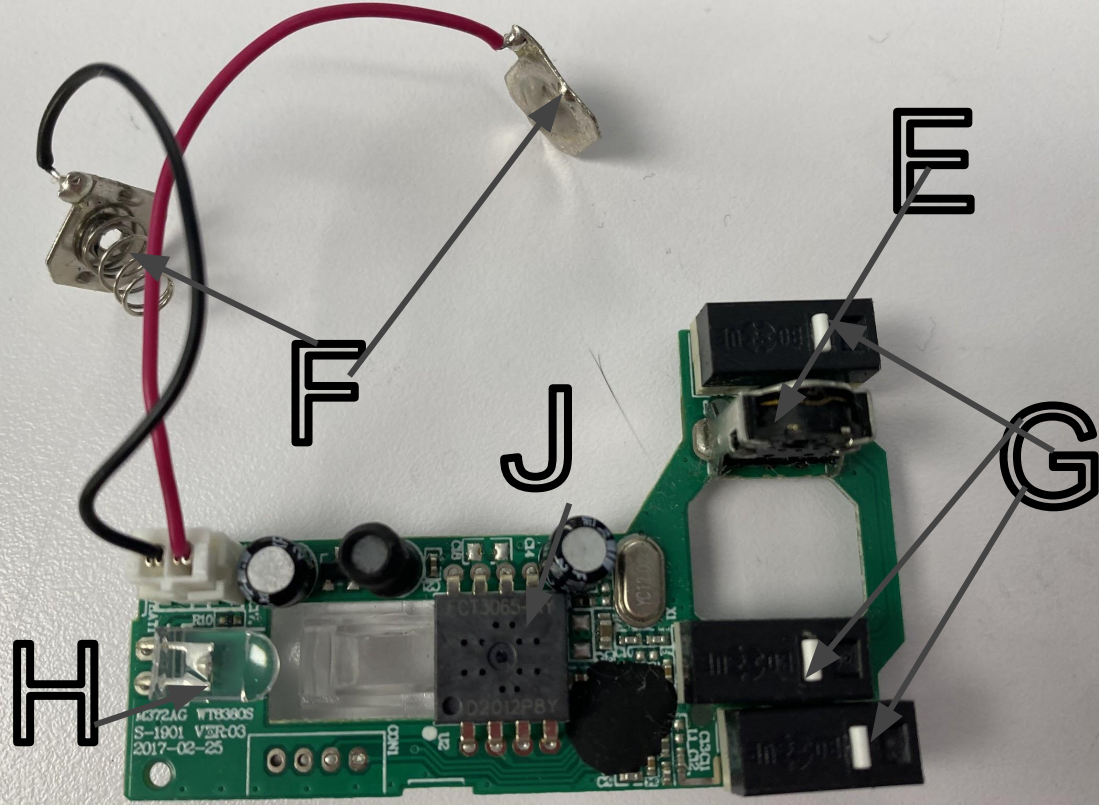
# Vex iq reverse engineering online challenge

By team 56529C

Members: Owen Willing, Milo Sierra, Ben Long, Heston Frame, Jayce Rothe

Franklin Central Junior High, Indianapolis Indiana





# Catalog

**A: Outer Casing; Provides housing for electrical components**

**B: Battery: Provides Power to the electrical components**

**C: Circuit Board; Its is the brains of the mouse, It receives and gives information to the computer**

**D: Scroll Wheel: Provides scrolling function using potentiometer**

**E: Potentiometer that detects scrolling**

**F: Wires connected to the batters**

**G: Buttons detecting clicks**

**H: Infrared Led that senses the mouse being moved**

**I: angled lens focusing the led light**

**J: microcontroller that sends and receives information**

# REPORT

For the 46529C reverse engineering project we choose to do a mouse because we had some prior knowledge about engineering due to a class we had taken. So we sort of knew what we were doing. It also seemed not to overly complicated and something we knew that we would be able to do. During the process of cataloging and taking apart our team could recognize 10 import parts of the computer mouse. There are a total of 5 sensors. 3 buttons, a potentiometer, and a light sensor to detect the infrared led. There are also a few other important non-electrical parts such as the casing to house all of the electronics or the scroll wheel. The battery is also an important component as it powers the device. Letter J was one thing our team was uncertain about. We believe that it is a microcontroller similar to one in an arduino that computes, sends, and receives information. We also think that the microcontroller makes it wireless. The main thing that we learned from reverse engineering this mouse is there are many parts that each serve their own purpose. When all of these parts work together they make the mouse function.