

Word Count: 300

Onn Wireless Mouse

The many iterative processes led us to choose the computer mouse. This simple device has been continuously evolving ever since the 1960's, and it will continue to advance.

Once we removed the upper panel, a AAA battery slot appeared with the chip located underneath. Upon removal, we found the logic board. Here there was an Image Acquisition System (IAS), rotary sensor, left and right mouse buttons, optical sensor, LED sensor, lens, antenna, and the main processor. Although Texas Instruments products achieve the same function as the parts found in our mouse (USB dongles, optical sensors, etc.) none of the parts were manufactured by TI.

The function of a mouse is to communicate, through the actions of pointing and clicking, in a graphical user interface (GUI). Numerous individual parts allow for the aforementioned process to be achieved. The battery powers the mouse. All sensors are located on the logic board. The rotary sensor measures rotation by reading each ridge of the scroll wheel. The IAS is used to calculate movement. The LED sensor aids in calculating speed. The Radio Frequency (RF) receiver accepts the signal from the RF transmitter located in the USB dongle. The main processor interprets the information from all the sensors into the movement displayed on the GUI.

After this experience, we were able to comprehend the basic functions of the computer mouse and attribute specific functions to individual parts. This brought to light the amount of work and collaboration needed to produce an elementary computer mouse. As students, we are always taught that collaboration is imperative in our learning. However, after this challenge, we were able to see that collaboration is also imperative, especially the innovative workplace. This entire process led us to think about the improvements able to be made in the world of VEX robotics.



