Heart Rate Video Game Controller

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Disclaimer

This adapter for a heart rate sensor is intended for educational and entertainment purposes only.

It is not part of or a medical device.

Licencing

What is this ?

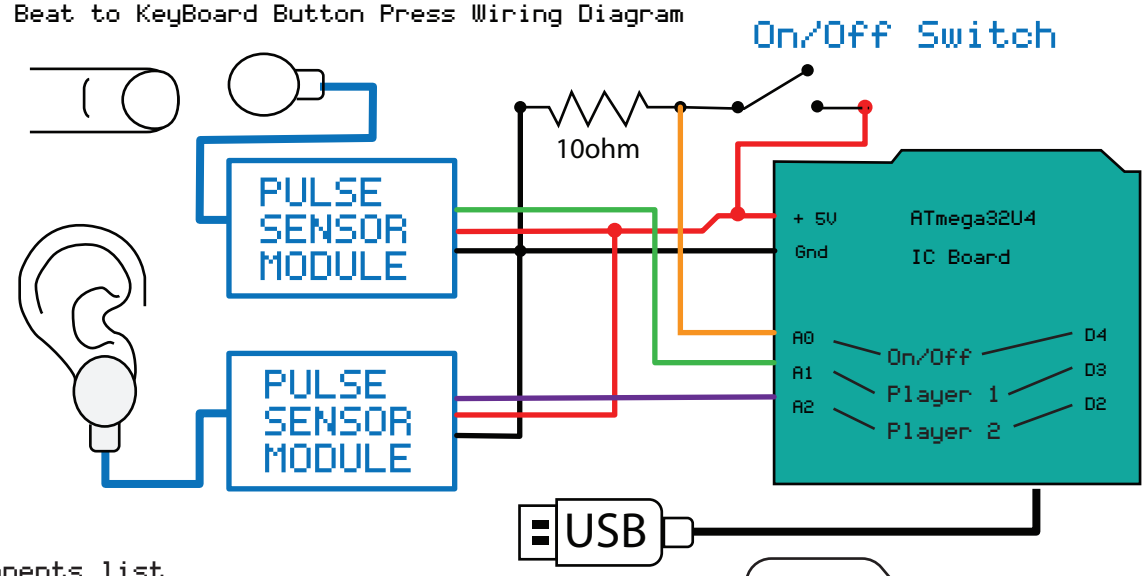
This project uses a pulse sensor to detect a heartbeat and translates into a keyboard button press for use in video games. The sensor used sends a harmless infrared signal through your finger or earlobe and detects variation in blood flow. The Arduino Leonardo takes the signal and sends out a USB keyboard signal. Which will show up as a left or right arrow key being pressed on your computer. This will cause your text cursor back or forward like pressing a keyboard arrow. (player 1 left arrow key and player 2 right arrow key)

Games

The Chill Challenge - this game takes the presses are then calculated heart rate and check for variablity.

https://maxtaylermedia.itch.io/chill-challenge

Heart Beat to KeyBoard Button Press Wiring Diagram



Components list

X 1 Arduino Leonardo (ATmega32U4 chip) IC Board
X 1 or 2 Pulse Sensor Module - Grove-Ear-clip-Heart-Rate-Sensor
  Other pulse sensor maybe used but the code may need to be made.
X 1 Switch or Potentiometer.
X 1 10K ohm resistor
X 3 LED and Resistors(Optional)

Load the Code

Warning this code cause your cursor to move every time a signal is sensed.

(github link player one)

(github link two player)

Newbies

* A converter cable form 2mm male to 2.54mm male pins for the pulse sensor if you are using a breadboard.

*The Arduino IDE is usede to add the code to the board it is sudjected the load some test code and a few projects before trying this one

User Tips

Strain releff. clip or holding

Advanced

Change Keyboard presses in code

Keyboard for your own projects

The arrows are and input so

letters and makes for easier debugging

Adding a transistor to the sensor in the circuit. Can help signal with signal dection with some sensors. the resistors values may need to be changed depending on sensor or voltage. The signal treshold in the code may need changes as well.