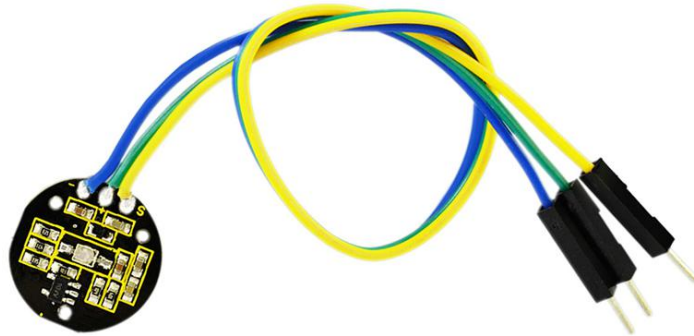


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keystudio XD-58C Pulse Sensor Module



Introduction

keystudio XD-58C pulse sensor module is used to measure heart rates. It's widely applied for students, artists, athletes, inventors, games or mobile terminal developers to develop heart rate related interactive works.

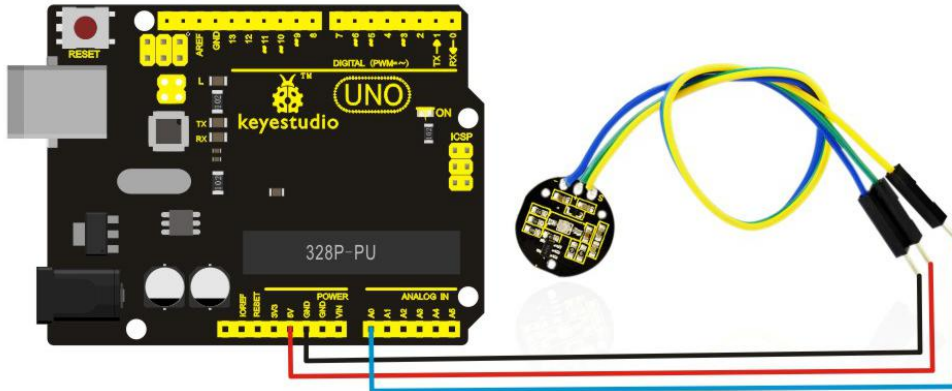
You can wear the sensor on your finger or earlobe and connect it to Arduino. It also has an open source APP program that can display your heart rate real-time in graph. It's in short, a heart rate sensor integrated with optical amplifier and noise elimination circuit.

Specification

1. LED peak wavelength: 515nm
2. Power supply: 3.3V/5V
3. Output type: analog
4. Output signal: 0~3.3 (at 3.3V power supply) / 0~5V (at 5V power supply)

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Circuit Connection



Program Upload

Download the program and the software [here](#).

```
PulseSensorAmped_Arduino_1dot2 | Arduino 1.5.6-r2
File Edit Sketch Tools Help
PulseSensorAmped_Arduino_1dot2 interrupt
*/
// VARIABLES
int pulsePin = 0;           // Pulse Sensor purple wire connected to an
int blinkPin = 13;         // pin to blink led at each beat
int fadePin = 5;           // pin to do fancy classy fading blink at e
int fadeRate = 0;         // used to fade LED on with PWM on fadePin

// these variables are volatile because they are used during the interrupt se
volatile int BPM;          // used to hold the pulse rate
volatile int Signal;      // holds the incoming raw data
volatile int IBI = 600;   // holds the time between beats, must be
volatile boolean Pulse = false; // true when pulse wave is high, false wh
volatile boolean QS = false; // becomes true when Arduino finds a bee

Done uploading.
bytes.
Global variables use 237 bytes (11%) of dynamic memory, leaving 1,811 bytes
for local variables. Maximum is 2,048 bytes.
1 Arduino Uno on COM6
```

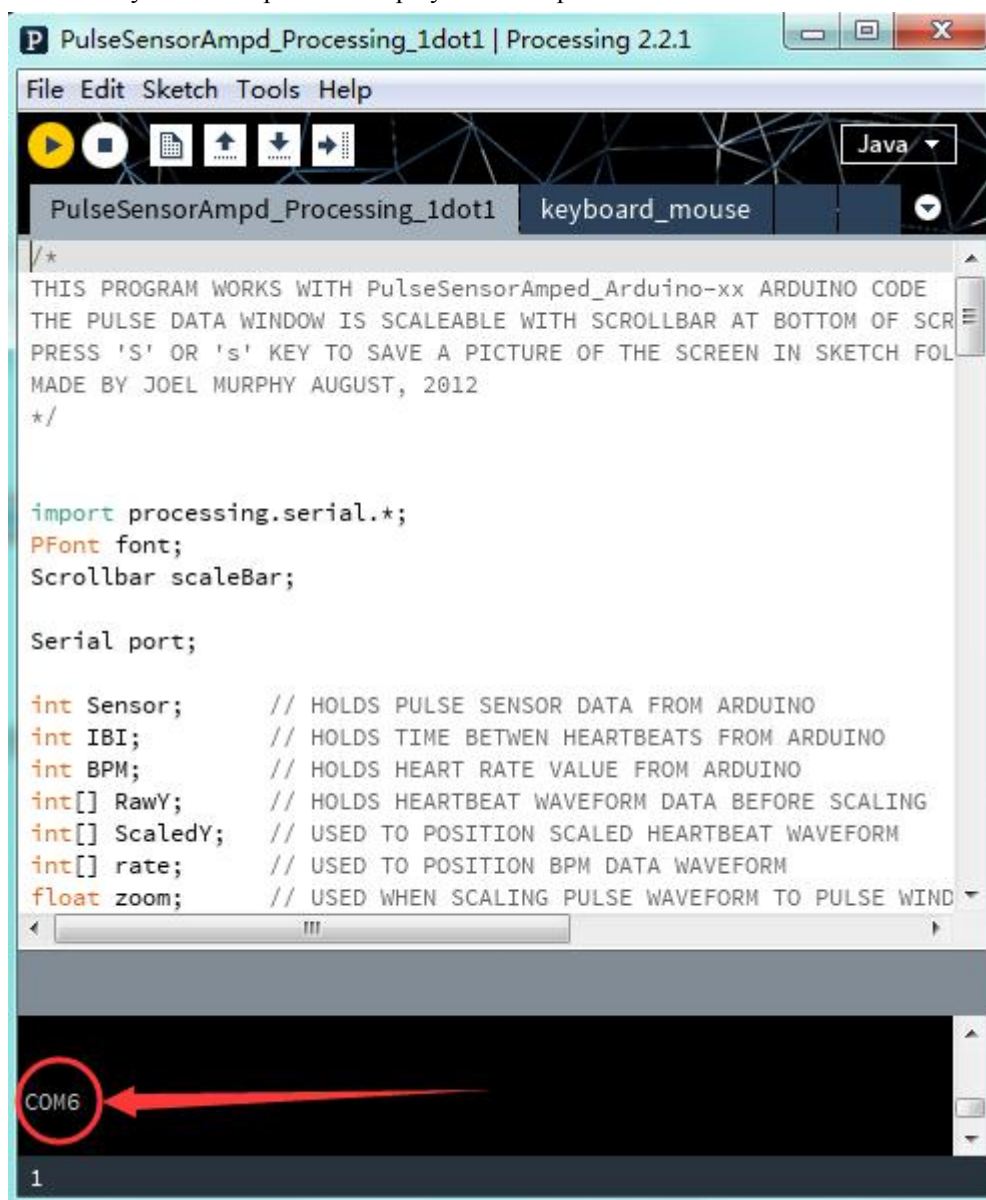
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User Instruction

1. install “processing software” from the downloaded file..
2. Open “processing”, click menu “file”- “open”, find the folder named “PulseSensorAmpd_Processing_1dot1”, select the file.

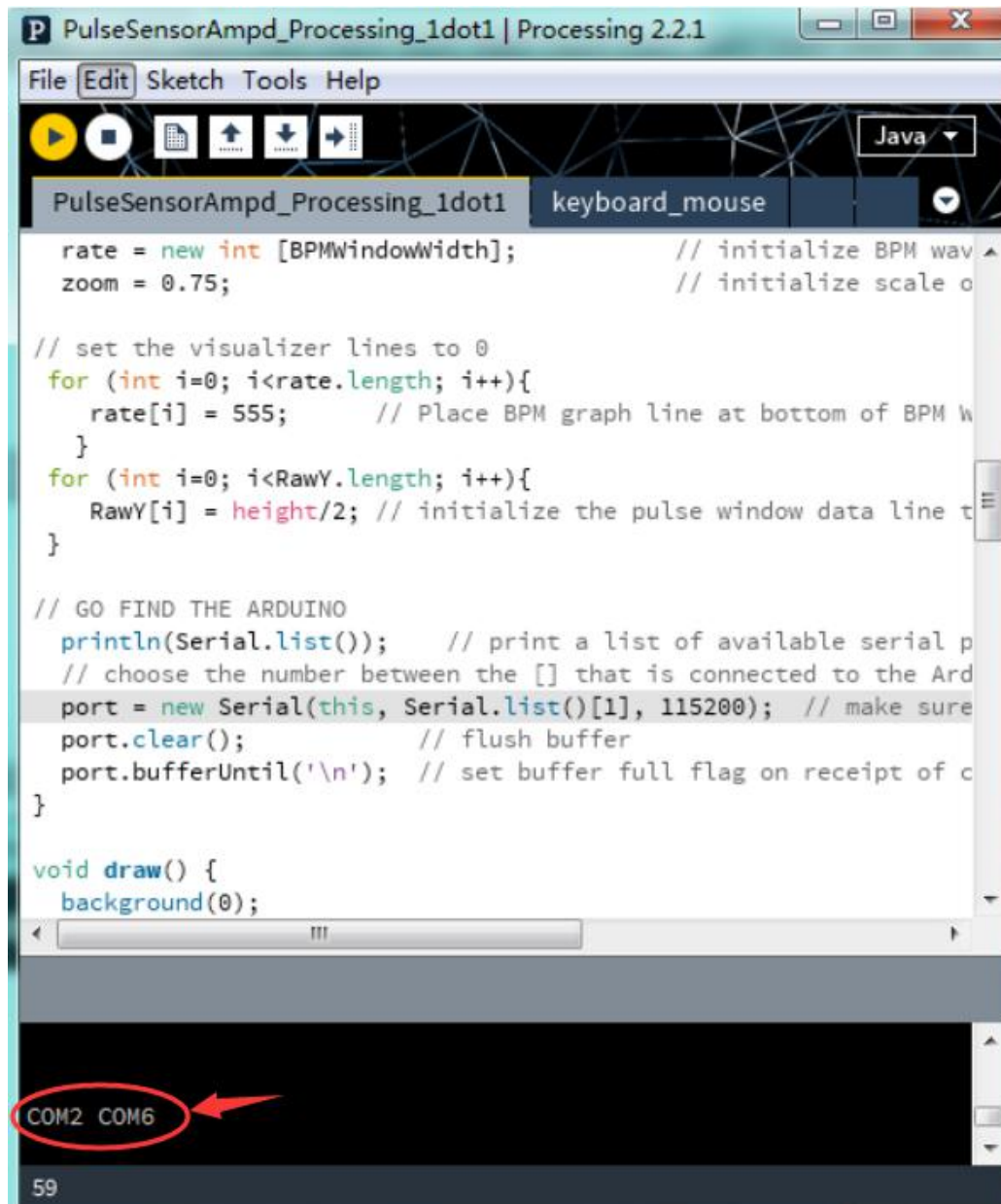


3. When only 1 COM port of the computer is connected, click “run”. The software will self-identify the COM port and display as below picture shown.



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4. If multiple COM port is connected to the computer, click “run”. The software will self-identify the COM port and display as below picture shown.



We change the serial port No. In the code correspondingly.

```
println(Serial.list()); // print a list of available serial p
// choose the number between the [] that is connected to the Ard
port = new Serial(this, Serial.list()[1], 115200); // make sure
port.clear(); // flush buffer
port.bufferUntil('\n'); // set buffer full flag on receipt of c
}
```

Here, 0 in “Serial.list()[0]” stands for the first one COM2, 1 in Serial.list()[1] stands for the second one COM6.

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5. Place the sensor on your finger or your earlobe, you can measure your pulse rate as below picture shown.

