# Heart Rate Monitor (Wearable and Wireless Using ECG)

A rather convenient device to monitor heart rate while running.

## Things used in this project

### Hardware components

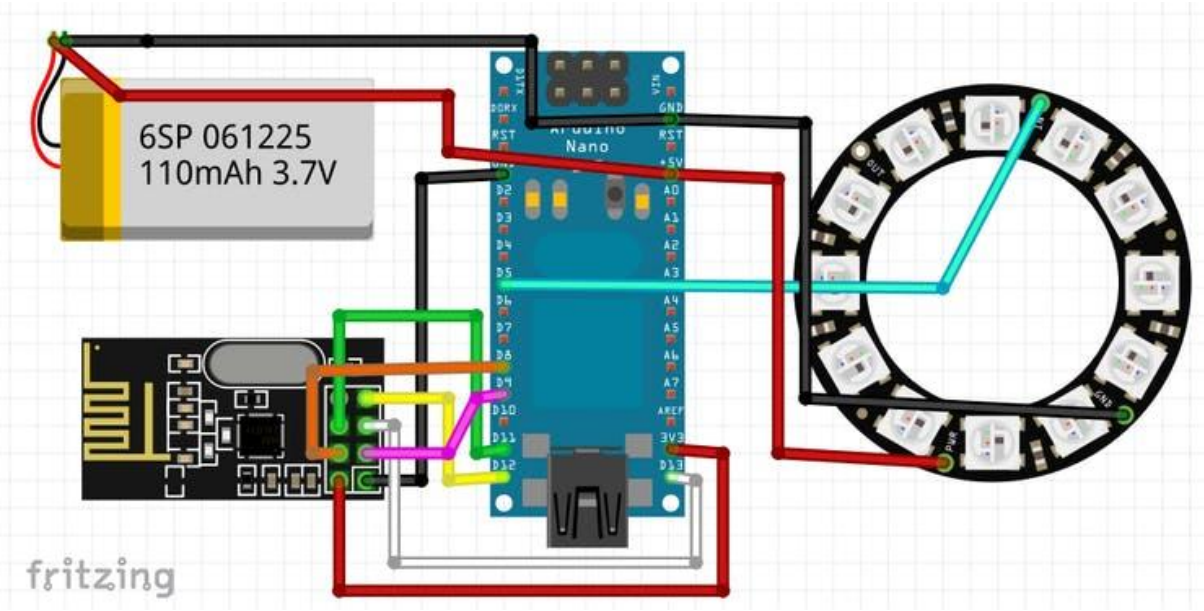
| | | |
|---|---|---|
| | uECG device<br>For actually measuring BPM. It can send data via nRF24-compatible protocol | × 1 |
|  | Arduino Nano R3 | × 1 |
| | nRF24 Module (Generic)<br>Any module would work here. Required to receive BPM data from uECG | × 1 |
|  | Adafruit NeoPixel Ring: WS2812 5050 RGB LED | × 1 |
| | LiPo battery<br>Any battery with 200+ mAh capacity | × 1 |

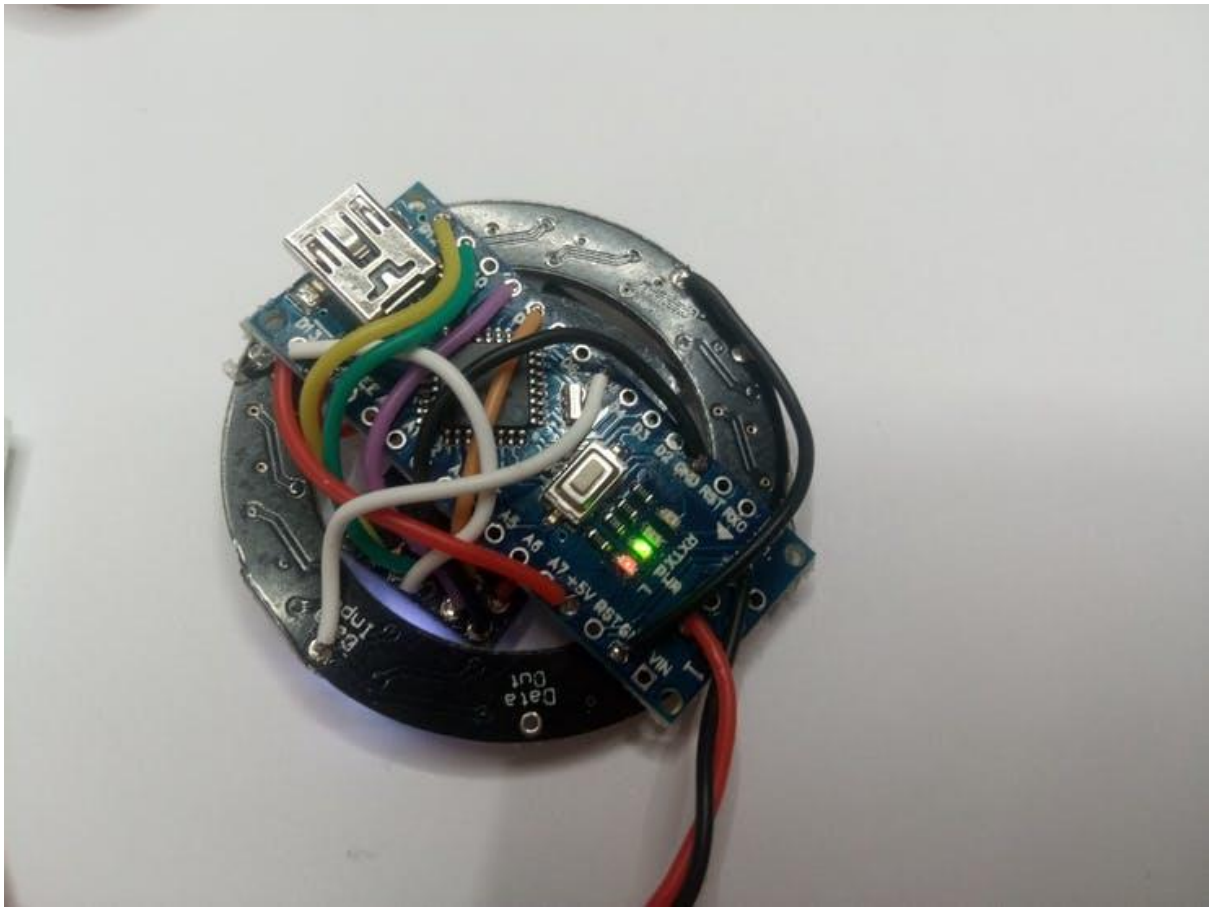
### Hand tools and fabrication machines

| | |
|---|---|
|  | Soldering iron (generic) |

Connection list is as follows:
nRF24 pin 1 (GND) - Arduino's GND
nRF24 pin 2 (Vcc) - Arduino's 3.3v

nRF24 pin 3 (Chip Enable) - Arduino's D9
nRF24 pin 4 (SPI:CS) - Arduino's D8
nRF24 pin 5 (SPI:SCK) - Arduino's D13
nRF24 pin 6 (SPI:MOSI) - Arduino's D11
nRF24 pin 7 (SPI:MISO) - Arduino's D12
LED ring Power - Arduino's 5V
LED ring GND - Arduino's GND
LED ring DI - Arduino's D5
Battery positive (red) - Arduino's 5V
Battery negative (black) - Arduino's GND
(note that battery requires connector, so it could be disconnected and charged)




Data Out
VIN