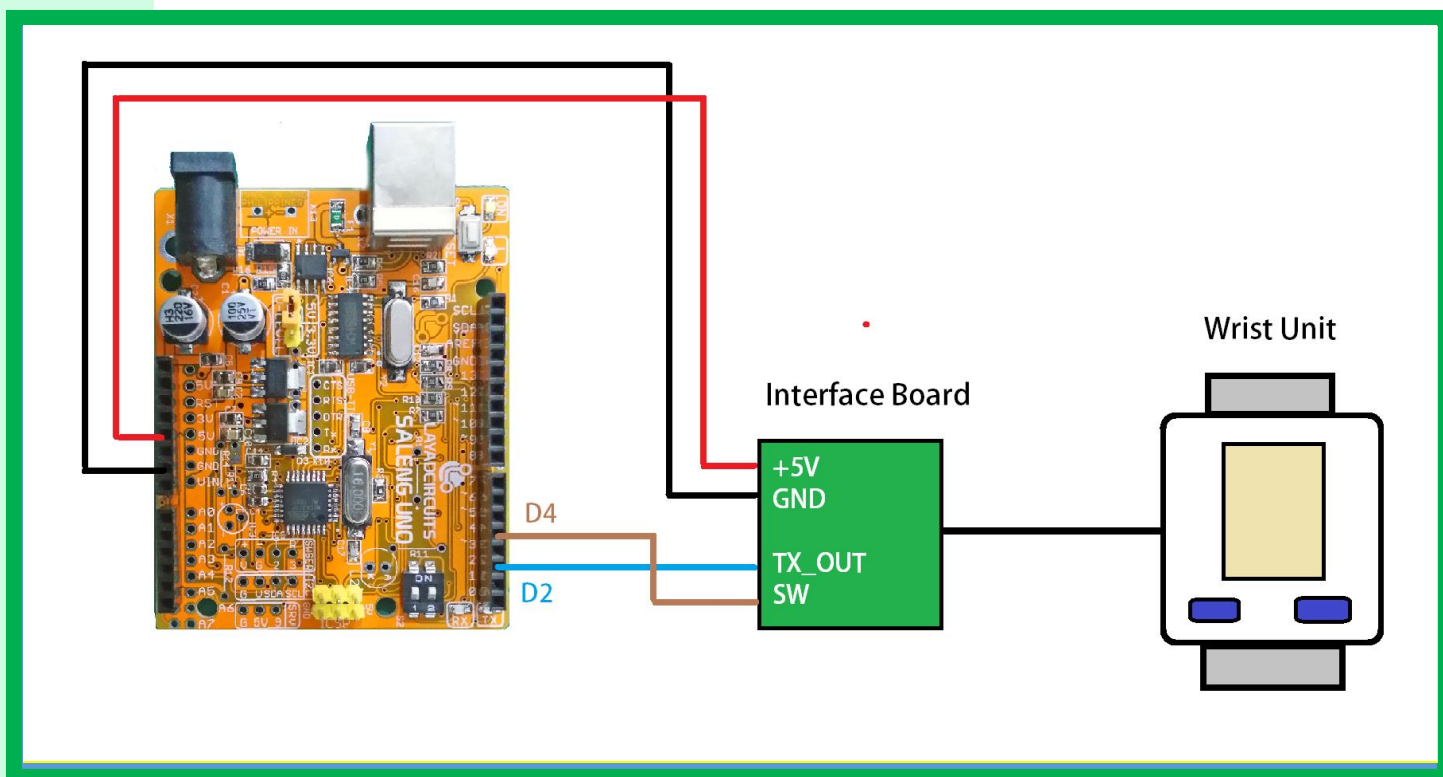


Thank you for purchasing the blood pressure sensor kit. The kit is a fully integrated solution for microcontroller/microprocessor based systems that requires reading of blood pressure and/or pulse rate without having to build the internal electronics from scratch. The kit has the following basic specs:

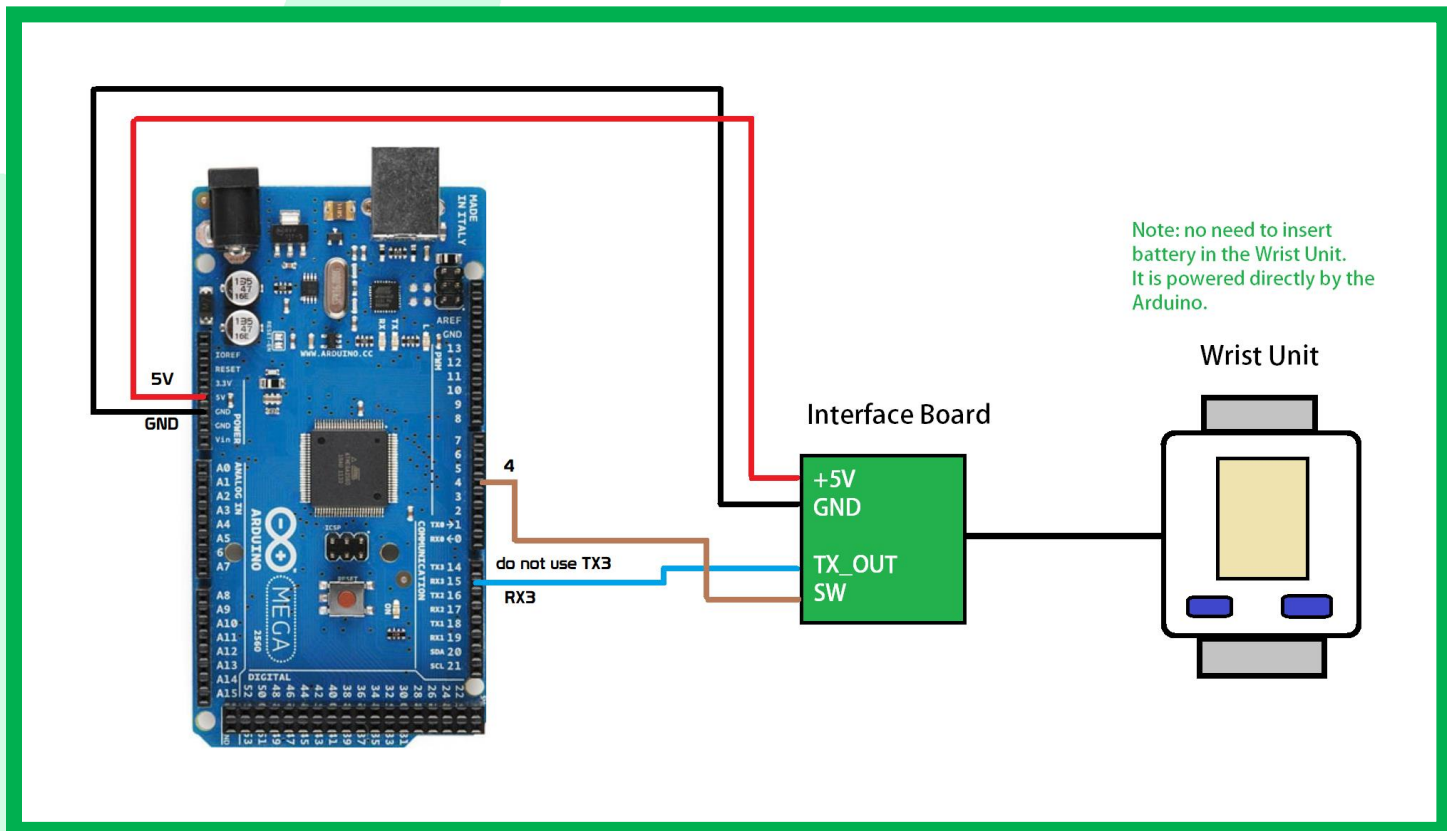
- Input Voltage: 5Vdc
- Current = 150mA ~ 250mA
- Data output: UART / Serial Port
- Baud rate and Serial port settings: 9600, 8 data bits, no Parity, 1 Stop bit
- "Start Read" Input

STEP 1

Wire up the hardware following the diagram below. You may use Saleng Uno or an Arduino as host microcontroller.



If you are using Arduino Mega 2560, follow this diagram:



Note: It is recommended to have a separate regulated power source for the BP sensor unit. You need a 5V source that can supply at least 500mA. If you are powering the unit from the Arduino's 5V pin, make sure you have a power supply of at least 500mA rating, connected to the DC jack of the Arduino.

STEP 2

Download and Install the Arduino library we have written for this sensor. The [library is available from our Github page](#).

STEP 3

Close and relaunch the Arduino IDE.

STEP 4

In the Arduino IDE, go to , File>Examples>LayadCircuits_BloodPressure_Demo. The sample code will open. In the code, you should find the line

```
#define BOARD ARDUINO_UNO
```

Change the ARDUINO_UNO to ARDUINO_NANO or ARDUINO_MEGA based on the board you are using. Save the changes.

STEP 5

Wear the wrist unit on your wrist.

STEP 6

Tools>Boards and select your Arduino. Saleng Uno users should simply select Arduino Uno. Tools>Ports and select your COM port. Upload the example code as it is.

STEP 7

After uploading open the serial monitor and set it to 9600 baud rate. Wait around 5 seconds and the wrist unit will start inflating the cuff.

STEP 8

At some point the cuff will deflate slowly until it complete deflates after detecting your blood pressure. At this point the BP reading and pulse rate shall display in the serial monitor.

NOTES

- Every single unit has been tested by Layad Circuits before it is released to the customer. Hence, when used properly, it should work as it should.
- In the example code, it uses 3 variables names systole, diastole and pulserate. These variables store the last reading from the device. Of course, initially, there are all zeroes.
- It is advised that you separate the power supply of the BP sensor kit from the Arduino regulator. The ground should be common for Arduino and BP.
- To restart another reading using the example code, simply press the reset button on the Arduino. It should start inflating after 5 seconds.
- When you encounter an Error in the wrist display (e.g. "Err" or similar), then reposition your wrist as the sensor may not be aligned with the pulse.