



instructables

Controlling LED Brightness With a Potentiometer and OLED Display



by RonFrtek

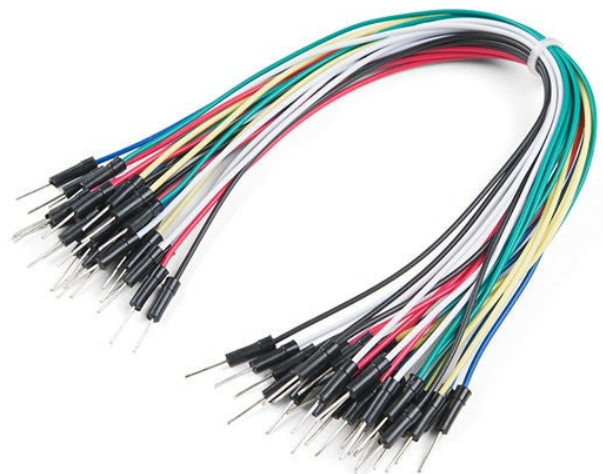
In this tutorial we will learn how to control the LED brightness with a potentiometer and Display the value on the OLED Display.

Watch a demonstration video.

<https://www.youtube.com/watch?v=6RetrIdAnzg>

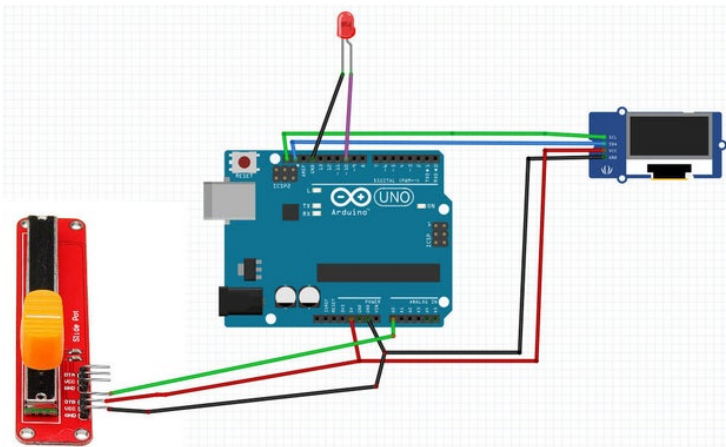
Step 1: What You Will Need

- Arduino UNO (or any other Arduino)
- LED
- Potentiometer
- Jumper wires
- OLED Display
- Visuino program: [Download Visuino](#)



Step 2: The Circuit

- Connect potentiometer pin [DTB] to arduino analog pin [A0]
- Connect potentiometer pin [VCC] to arduino pin [5V]
- Connect potentiometer pin [GND] to arduino pin [GND]
- Connect LED positive pin to Arduino digital pin [10]
- Connect LED positive pin to Arduino pin [GND]
- Connect OLED display pin [VCC] to arduino pin [5V]
- Connect OLED display pin [GND] to arduino pin [GND]
- Connect OLED display pin [SDA] to arduino pin [SDA]
- Connect OLED display pin [SCL] to arduino pin [SCL]

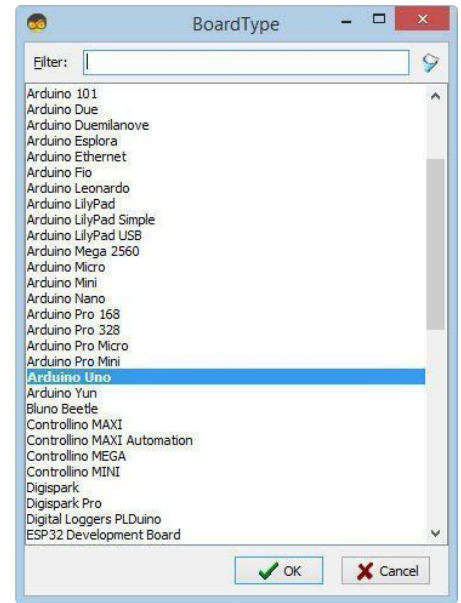
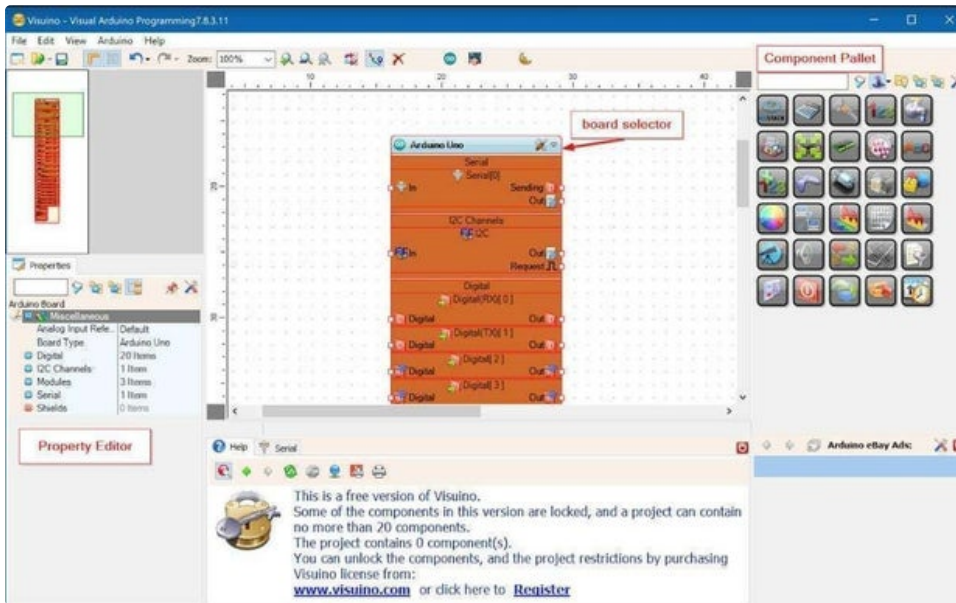


Step 3: Start Visuino, and Select the Arduino UNO Board Type

To start programming the Arduino, you will need to have the Arduino IDE installed from here: <https://www.arduino.cc/>.

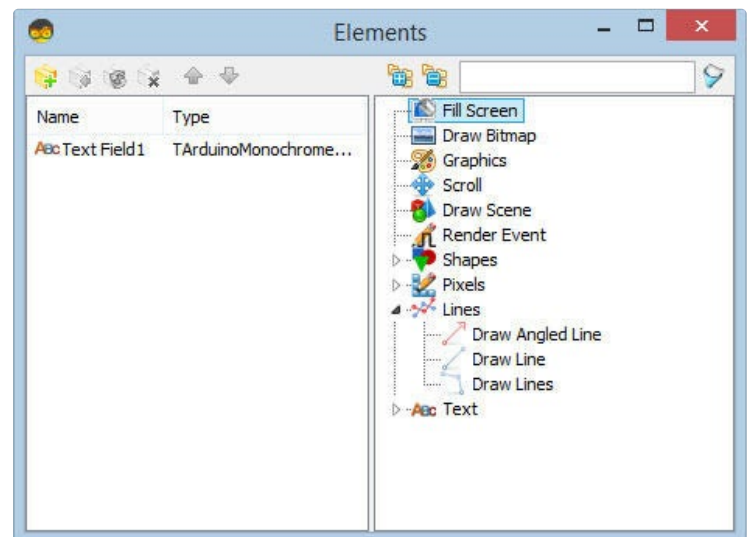
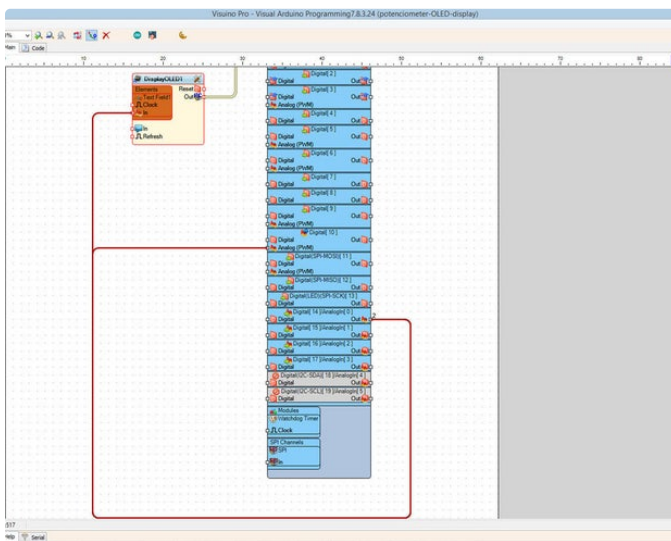
Please be aware that there are some critical bugs in Arduino IDE 1.6.6. Make sure that you install 1.6.7 or higher, otherwise this Instructable will not work! If you have not done follow the steps in this

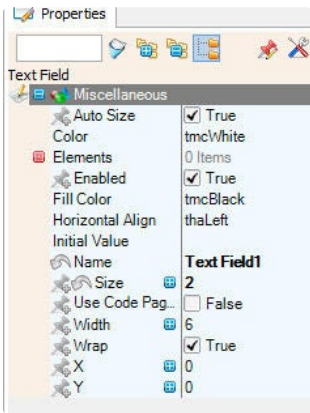
Instructable to setup the Arduino IDE to program Arduino UNO! The Visuino: <https://www.visuino.eu> also needs to be installed. Start Visuino as shown in the first picture Click on the "Tools" button on the Arduino component (Picture 1) in Visuino When the dialog appears, select "Arduino UNO" as shown on Picture 2



Step 4: In Visuino ADD & Connect Components

- Connect Arduino AnalogIn pin[Out] to Arduino Digital [10] pin - Analog (PWM)
- Add OLED display I2C
- Double click on the DisplayOLED1 component
- In the element window expand "Text" and drag "Text Field" to the left side
- Select "Text Field1" on the left side and in the properties window set size to: 2
- Close the elements window
- Connect Arduino AnalogIn [0] to DisplayOLED1>Text Field1>pin In
- Connect DisplayOLED1 pin I2C Out to Arduino I2C In

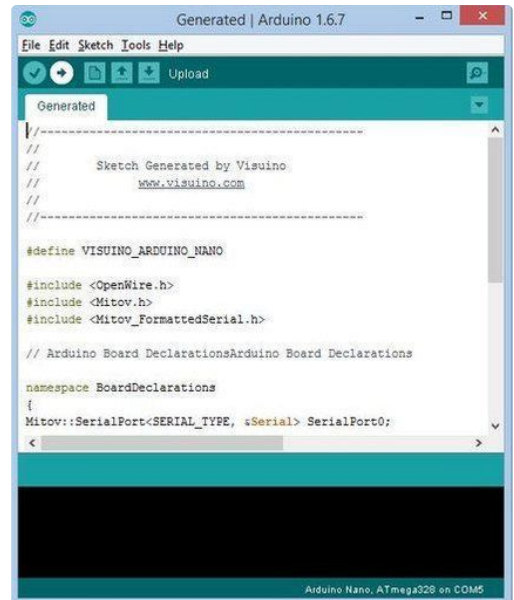




Step 5: Generate, Compile, and Upload the Arduino Code

In Visuino, Press F9 or click on the button shown on Picture 1 to generate the Arduino code, and open the Arduino IDE

In the Arduino IDE, click on the Upload button, to compile and upload the code (Picture 2)



Step 6: Play

If you power the Arduino UNO module, and change the potentiometer position the LED will change its brightness and the potentiometer value will be displayed on the OLED display.

Congratulations! You have completed your project with Visuino. Also attached is the Visuino project, that I created for this Instructable, you can download it [here](https://www.visuino.eu) and open it in Visuino: <https://www.visuino.eu>