

Sumobot Arduino Sensor Tutorial

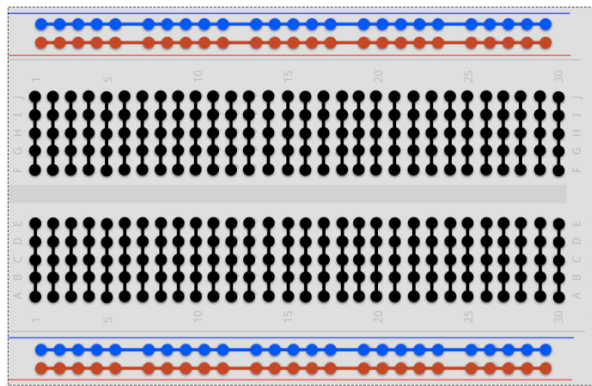
Quick Reference

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All code is provided!

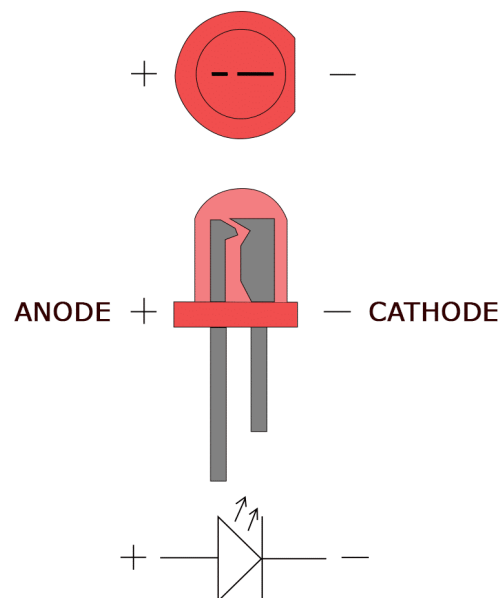
Cheat Sheet For Breadboards and LEDs



fritzing

How a breadboard connects everything

(Image: Fritzing)

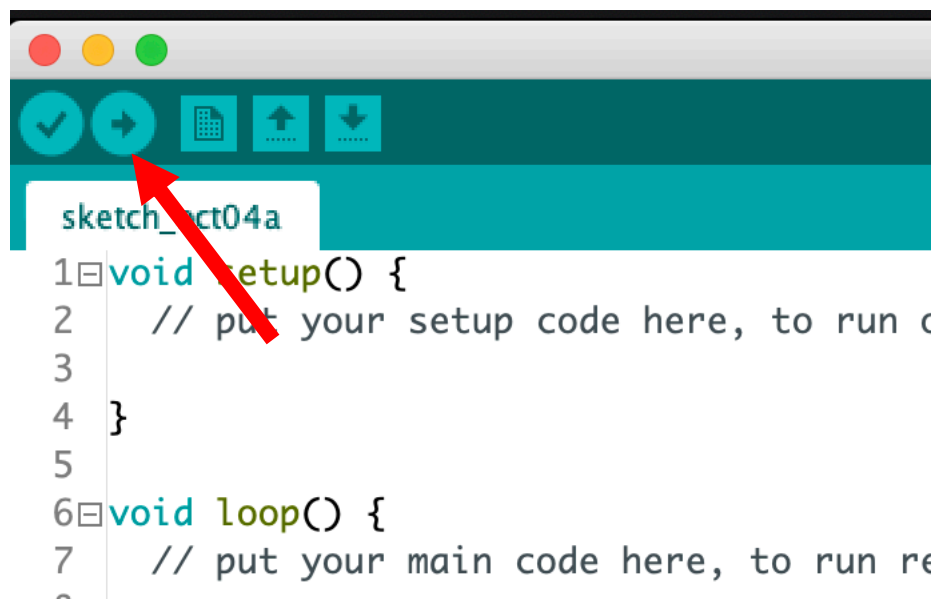


How to tell which LED pin is positive or negative

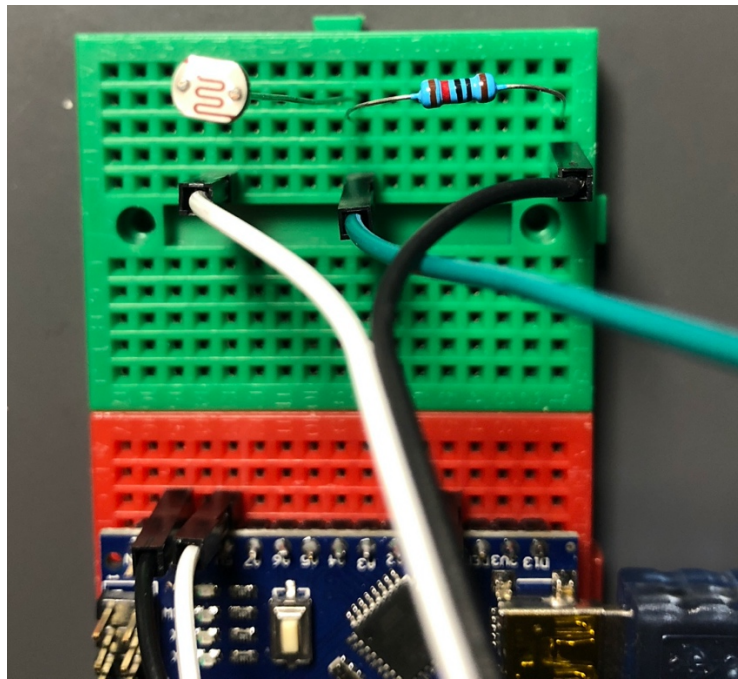
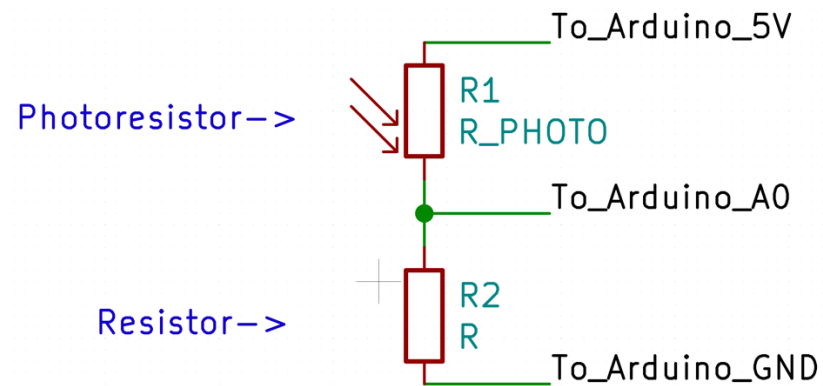
(Image: circuitbasics.com)

Programming the Arduino

1. Make your code!
2. Choose your Board
 - a. If you have an Arduino Uno
 - i. Tools Menu>Board>'Arduino Uno'
 - b. If you have an Arduino Nano
 - i. Tools Menu>Board>'Arduino Nano'
3. Select the Port
 - a. Tools Menu>Port>Select Port (See Next Step)
 - b. For Windows
 - i. Named 'COMX'
 - ii. Where X is a number (i.e. COM3, COM4)
 - c. For Linux & Mac
 - i. Named '/dev/cu.usbserial- XXXXXX'
 - ii. Where XXXXXX is a random number
4. Press the Program Button!



Light Sensor Circuit



Use this photo if you cannot understand the symbols!

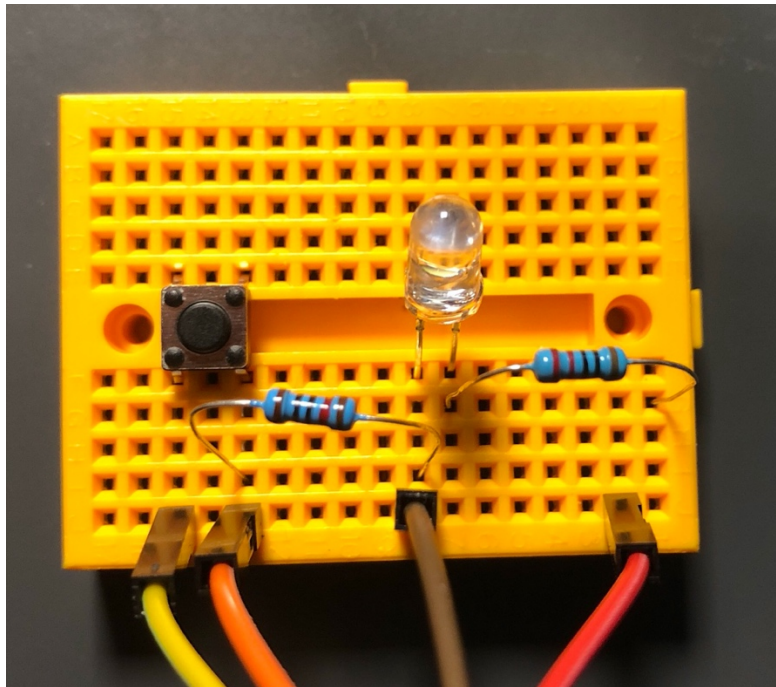
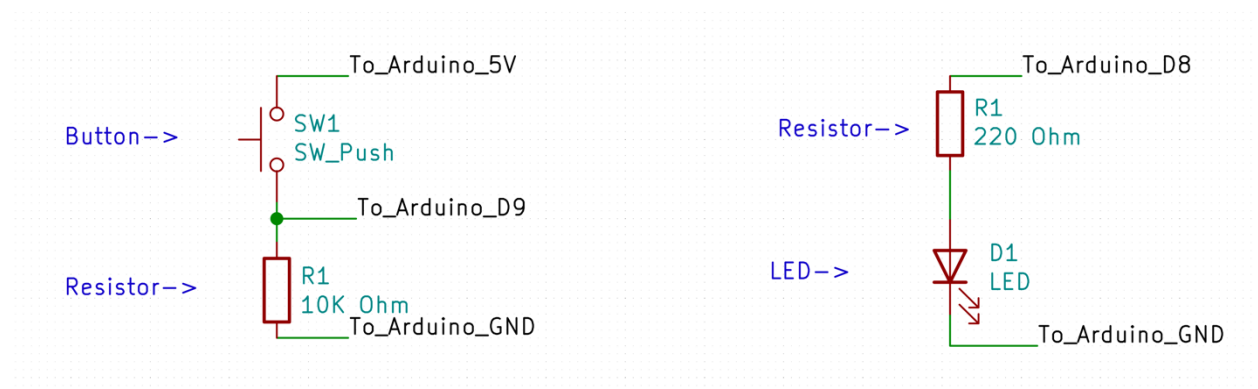
White – 5V

Black – GND

Green – A0

Code is found under the folder "Sumobot_Light_Sensor"

Button and LED Circuit



Use this photo if you cannot understand the symbols!

Yellow – 5V

Orange – D9

Brown – GND (Used by both LED and Button)

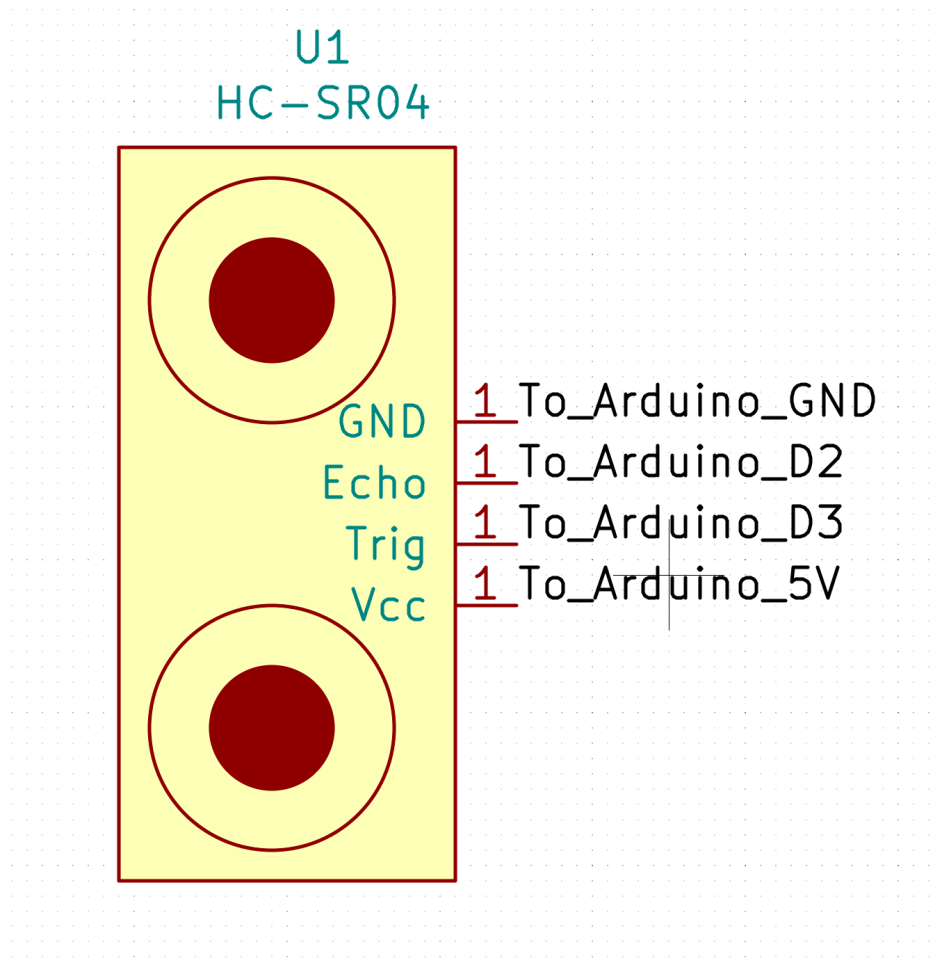
Red – D8

Left Resistor – 10KΩ

Right Resistor – 220Ω (330Ω also works well)

Code is found under the folder “Sumobot_Button_Led”

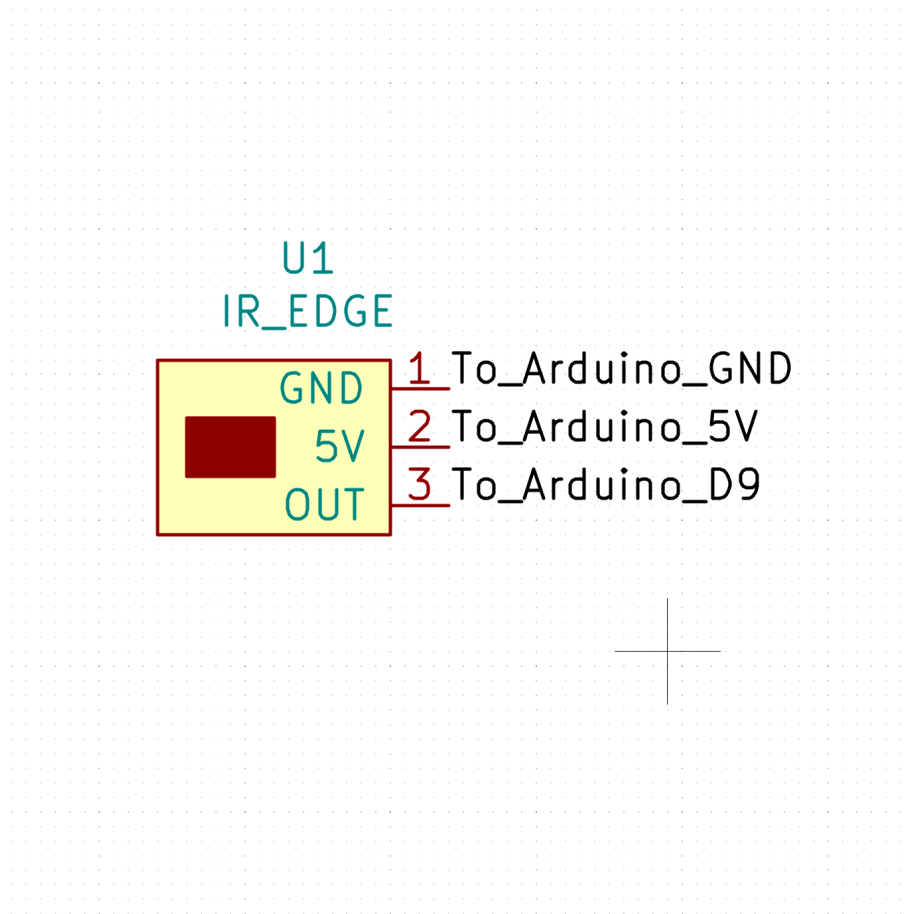
Ultrasonic Sensor



This one is quite self-explanatory and should not need a real-life image!

Code is found under the folder "Sumobot_Ultrasonic"

Bonus (For those who bought the fancy edge sensor)



Adapt the button code to work with this!

It can replace the 10K Ω resistor and button and acts like a button itself!