SENSOR LABS

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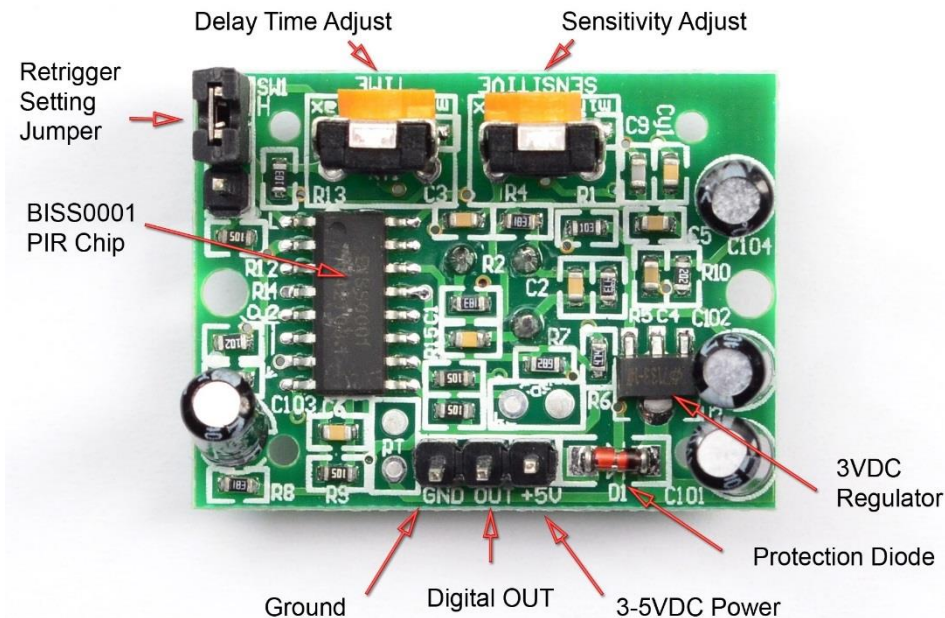https://creativecommons.org/faq/#what-does-some-rights-reserved-mean

PIR Sensor

PIR sensors allow you to sense motion, almost always used to detect whether a human has moved in or out of the sensors range. They are small, inexpensive, low-power, easy to use and don't wear out. For that reason they are commonly found in appliances and gadgets used in homes or businesses. They are often referred to as PIR, "Passive Infrared", "Pyroelectric", or "IR motion" sensors.

When the detector sees PIR signal, it will pull the output low,

Delay Time Adjust

Sensitivity Adjust

Retrigger Setting Jumper

BISS0001 PIR Chip

3VDC Regulator

Protection Diode

Ground

Digital OUT

3-5VDC Power

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HOW IT WORKS

- Power PIR with 3-5 volts
  - 5 volts seems to work best
  - Connect +5V to VCC
  - Connect GND to Ground
- Digital OUT is a signal that will be LOW if there is no motion, and HIGH if there is motion
- Typically you should let the PIR "warmup" for 30-60 sec after you power on the circuit.
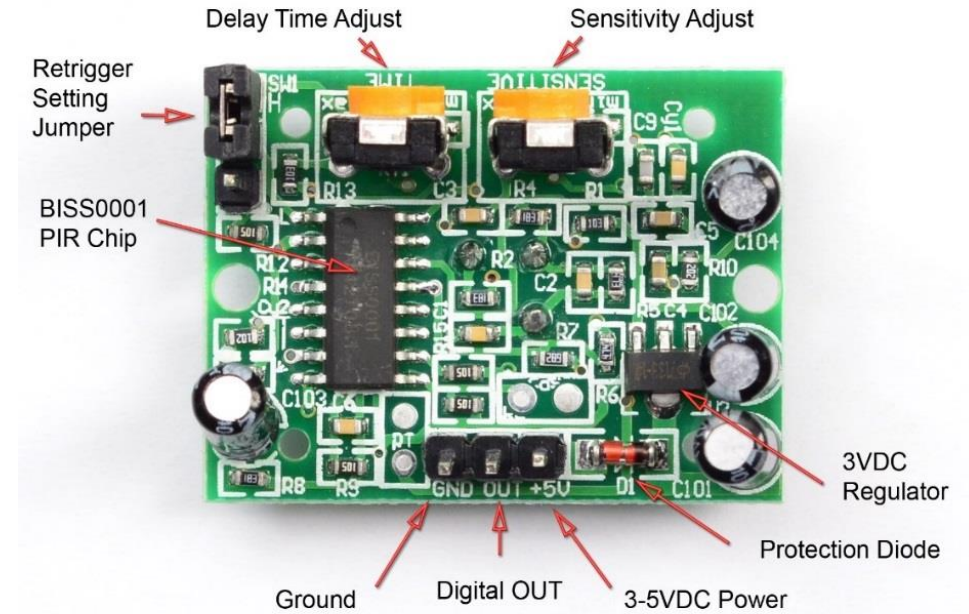
- Delay Time Adjust will change the time the PIR is HIGH after it sees motion
- Sensitivity Adjust tunes how sensitive to motion the PIR is
- The Retrigger Jumper controls if...

ARDUINO CODE & CONNECTIONS

```
const int arduinoBoardLED = 13;        // LED on pin 13
const int pirSensor = 6;        // input pin for sensor
int buttonVal = 0;     // variable to store the read value

void setup()
{
pinMode(arduinoBoardLED, OUTPUT);  // set pin 13 as output
pinMode(pirSensor, INPUT);      // set pin 6 as input
}

void loop()
{
buttonVal = digitalRead(pirSensor);  // read the input pin
digitalWrite(arduinoBoardLED, buttonVal);  // sets the LED to button's
value
}
```
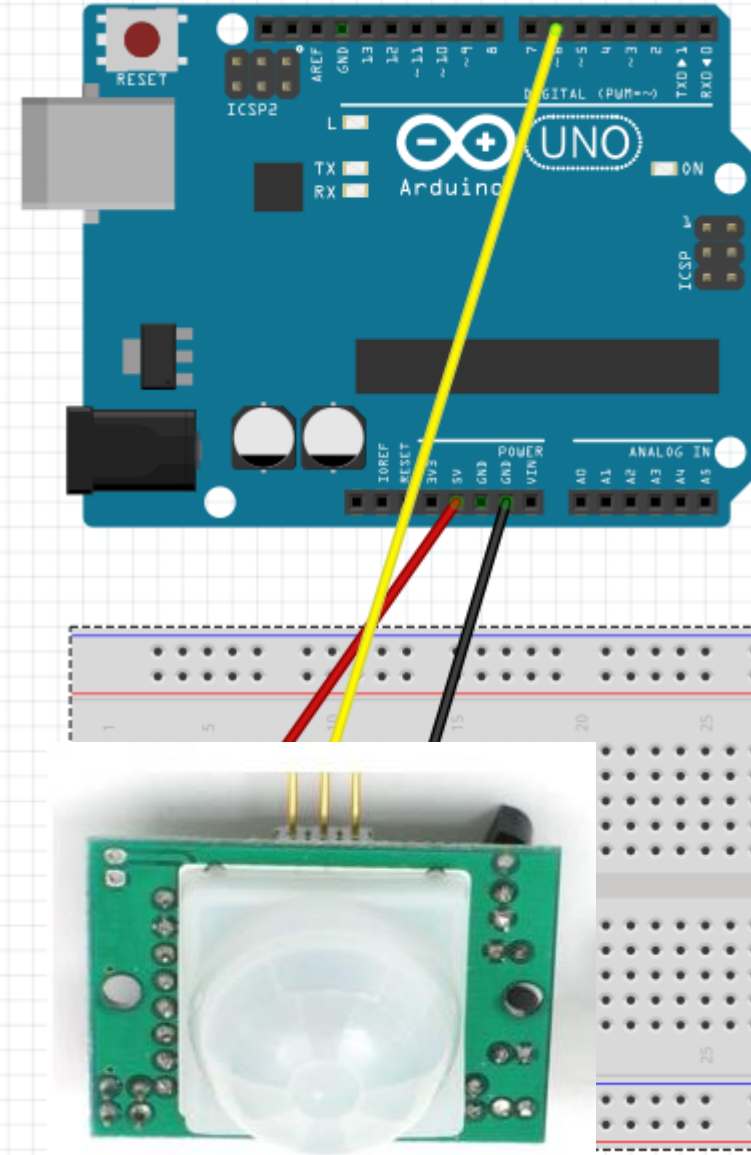
RESOURCES

- Adafruit - PIR Motion Sensor

- Instructables – PIR MOTION SENSOR TUTORIAL

- YouTube

  - PIR Motion Sensor Tutorial

  - PIR Sensor Tutorial - Part 1/3 : Home Automation

WHAT IS THE SENSOR?

- Overview
- Short paragraph on what it does and how it's used

SENSOR PINOUT AND FUNCTIONS

- List the pins and what they do

SENSOR LAB

- Add instructions for building a circuit to test and use this sensor

- You can build examples in Tinker and cut and past the image here…

- If you want, you can send me your code, and after we verify it works, I can post it on my GitHub site… or you can create and post to your own GitHub site.

SENSOR LAB STEPS

- Step by Step how to setup
- Step by Step on connecting to the Arduino
  - \<Link to your code\>
- Step by Step on how to verify it is working
- Any trouble shooting tips for issues that could go wrong or get in the way

APPENDIX

APPENDIX A: LICENSE & ATTRIBUTION

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