

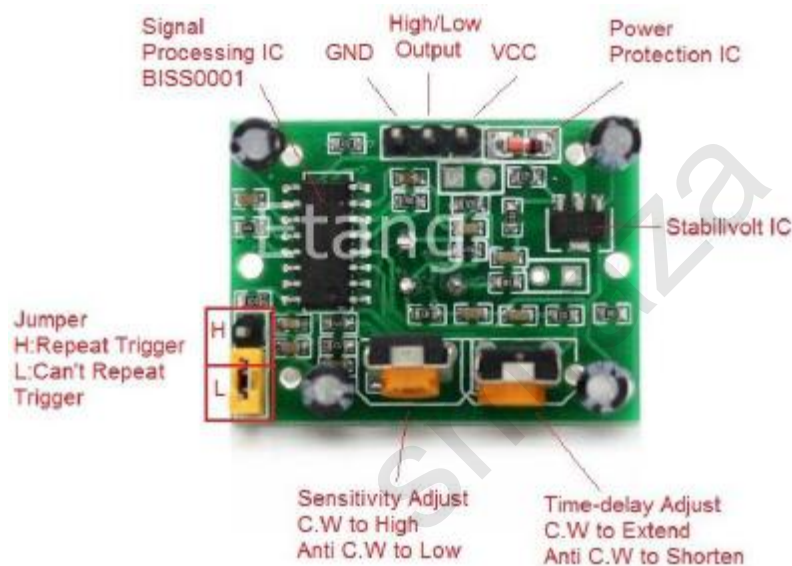
Detecting Motion with PIR

Overview



PIR or Passive Infrared is a common method of motion detection that measure changes in heat to signal the change. The basic model is that they take IR (heat) images on 2 sensors at different times, when they differ, they know something has changed. This particular sensor from Spark Fun brings the signal pin low when it senses a change.

Specification








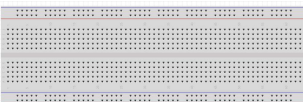

Please view "PIR-datasheet.pdf"

Path: \Public_materials\Datasheet\ PIR-datasheet.pdf

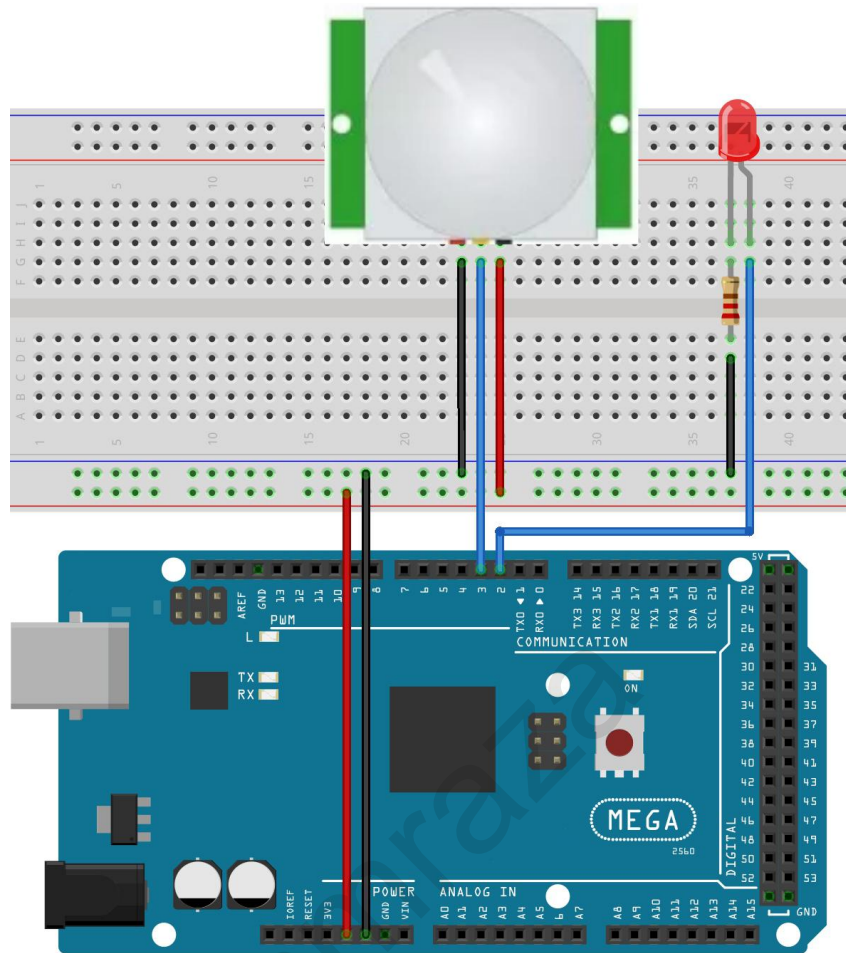
Pin definition

PIR	Arduino
GND	-> GND
OUT	-> D3
VCC	-> 5V

Hardware required

Material diagram	Material name	Number
	PIR Movement sensor	1
	LED	1
	220/330Ω	1
	USB Cable	1
	MEGA 2560	1
	Breadboard	1
	Jumper wires	Several

Connection diagram

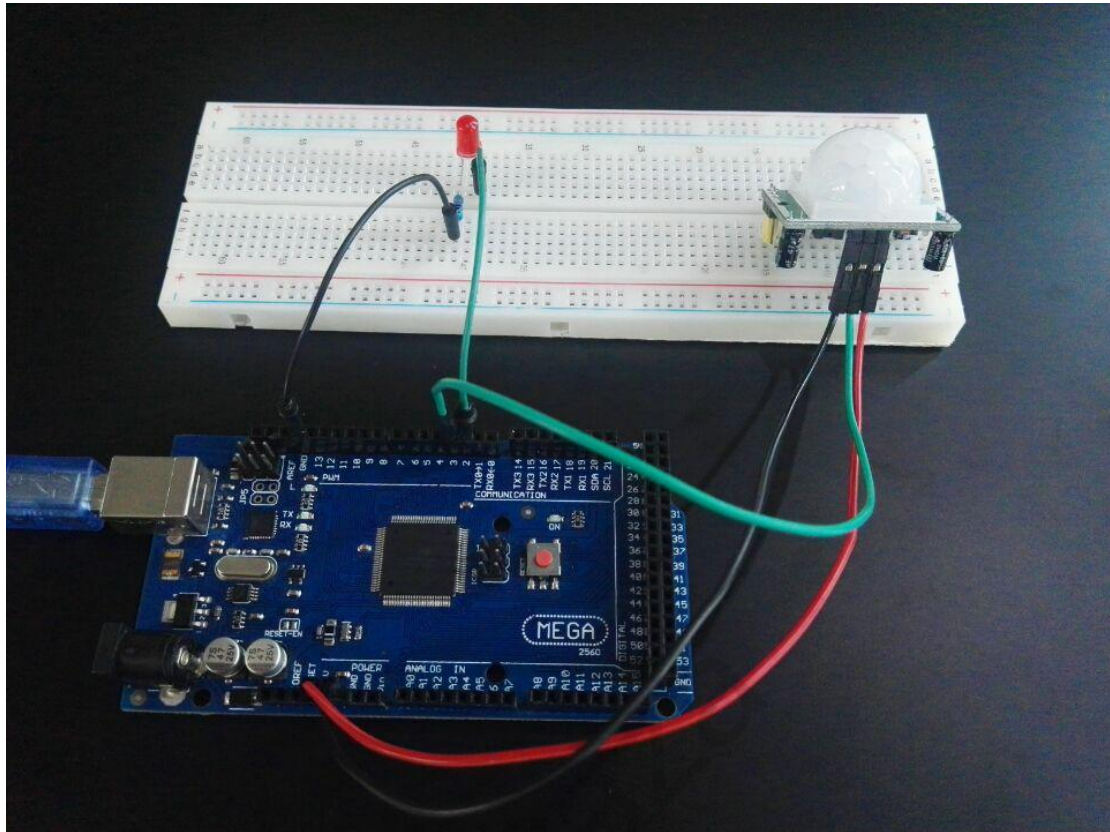


Sample code

Note: sample code under the **Sample code** folder

```
const int pirPin = 3
const int LED =2
void setup()
{
    Serial.begin(9600);
    pinMode(pirPin, INPUT);
    pinMode(LED,OUTPUT);
}
void loop()
{
    int pirVal = digitalRead(pirPin);
    if(pirVal == LOW)
    {
        //was motion detected
        Serial.println("Motion Detected");
        digitalWrite(LED,HIGH);
    } else
    {
        digitalWrite(LED,LOW);
    }
    delay(1000);
}
```

Example picture



Language reference

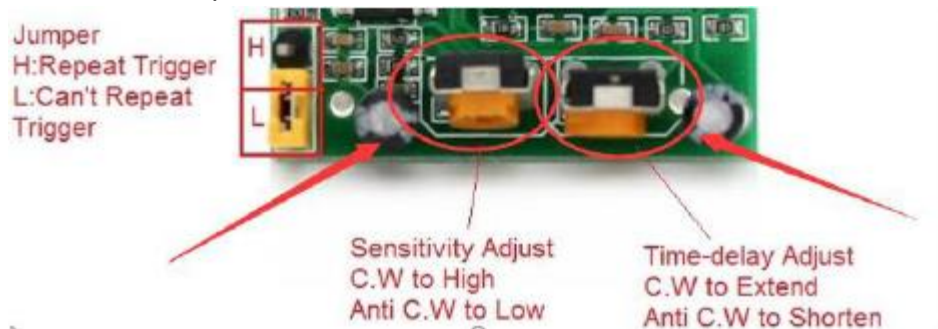
Null

Application effect

LED lights will light up when someone passes by PIR.

Tips:

If the experiment can not be achieved, please follow the following chart to debug, or refer to PIR-datasheet.pdf



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