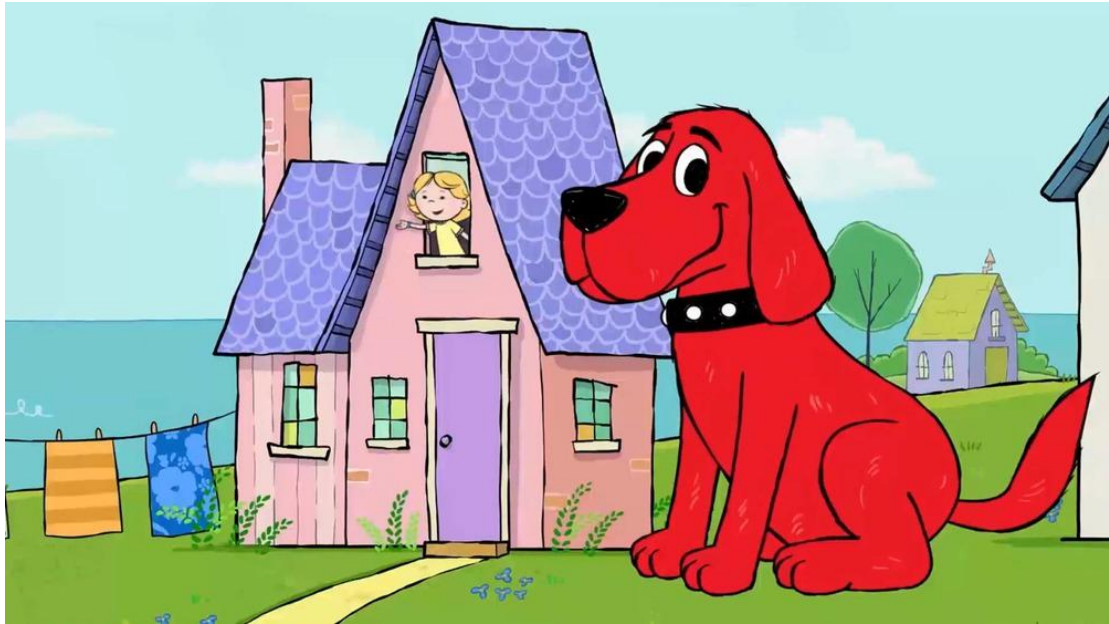


Project 12: A Guard Dog

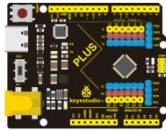


1. Project Introduction

PIR sensors measure infrared (IR) light radiating from moving objects that emit heat. The sensor allows you to detect motion of people, animals and cars to trigger security alarms and lighting. They are used to detect movement and are ideal for security and safety such as burglar alarms and security lighting systems.

In this project, we will use a PIR motion sensor, a buzzer, and a cartoon dog card to make a guard dog that sounds when someone or an animal moves nearby.

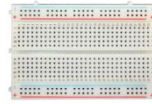
2. Project Hardware



Plus
Development
Board*1



Plus Board
Holder



400-Hole
Breadboard



USB
Cable*1



PIR Motion
Sensor*1



Passive
Buzzer*1



Jumper Wire*5



Guard dog
Paper
Card*1

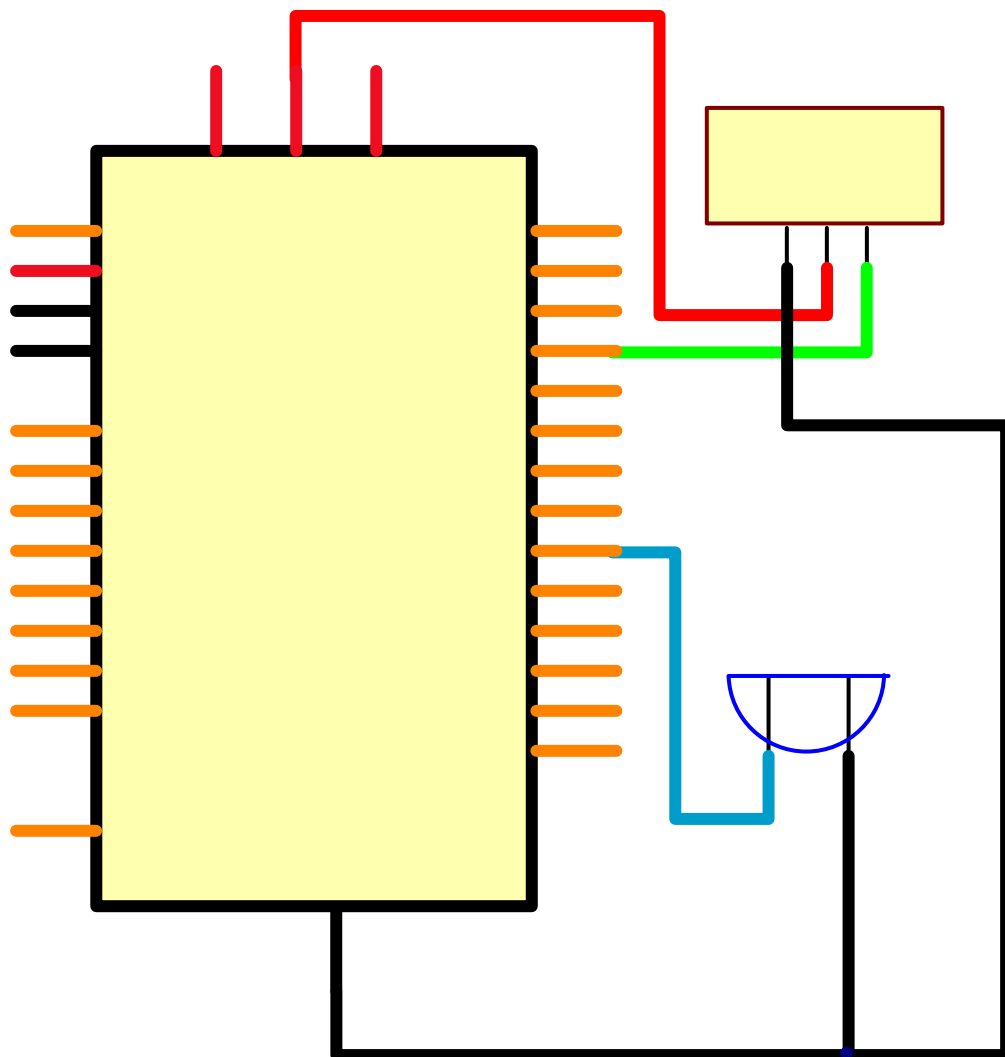
3.PIR Motion Sensor Specification

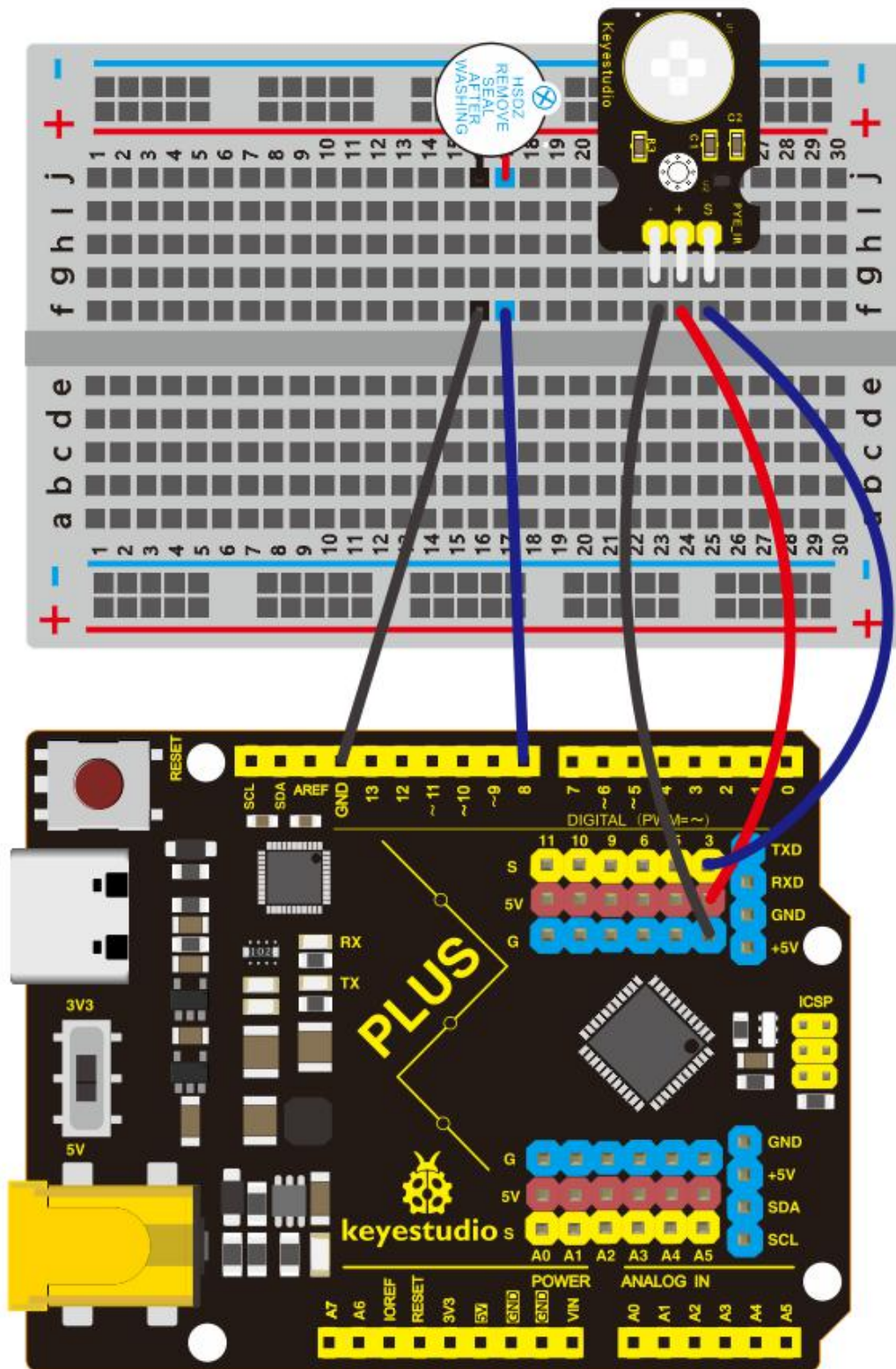


- Input Voltage 3.3 ~ 5V (6V Maximum)
- Working Current 15uA
- Working Temperature -20 ~ 85 °C

- Output Voltage High 3V, Low 0V
- Output Delay Time (High Level) About 2.3 to 3 Seconds
- Detection Angle 100 °
- Detection Distance 7 meters
- Output Indicator LED (When output HIGH, it will be ON)
- Pin limit Current 100mA

4.Circuit Connection





5. Project Code

```
/*
```

```
keyestudio STEM Starter Kit
```

```
Project 12
```

```
Guard dog
```

```
http://www.keyestudio.com
```

```
*/
```

```
int buzzerpin = 8; // buzzer pin
```

```
int pirPin = 3;    // PIR Out pin
```

```
int pirStat = 0;   // PIR status
```

```
void setup() {
```

```
    pinMode(buzzerpin, OUTPUT);
```

```
    pinMode(pirPin, INPUT);
```

```
    Serial.begin(9600);
```

```
}
```

```
void loop()
```

```
{
```

```
    pirStat = digitalRead(pirPin);
```

```
    if (pirStat == HIGH)
```

```
    {           // if motion detected
```

```
        digitalWrite(buzzerpin, HIGH); // turn buzzer ON
```

```
        Serial.println("Hey I got you!!!");
```

```

}
else {
    digitalWrite(buzzerpin, LOW); // turn buzzer OFF if we
have no motion
}
}////////////////////////////////////

```

- 1.Open up the Arduino IDE and copy the above code into a new sketch.
- 2.Select the correct Board type and COM port for the Arduino IDE.
- 3.Click Upload button to upload the code.

6.Project Result

If the PIR motion sensor detects someone moving nearby, the buzzer will sound an alarm, and click to open the serial monitor on the Arduino IDE, you will see "Hey I got you!!!".

