



InfraRed IR Obstacle Detector

This Infrared Obstacle Sensor has a pair of infrared transmitting and receiving sensors. The infrared LED emits Infrared light and when an obstacle appears on the line of infrared light, it is reflected back by the obstacle which is sensed by the receiver LED.

When the sensor detects an obstacle, the LED indicator lights up, giving a low-level output signal in the OUT pin. The sensor detects distance of 2~30cm. The sensor has a potentiometer which can be adjusted to change the detection distance.

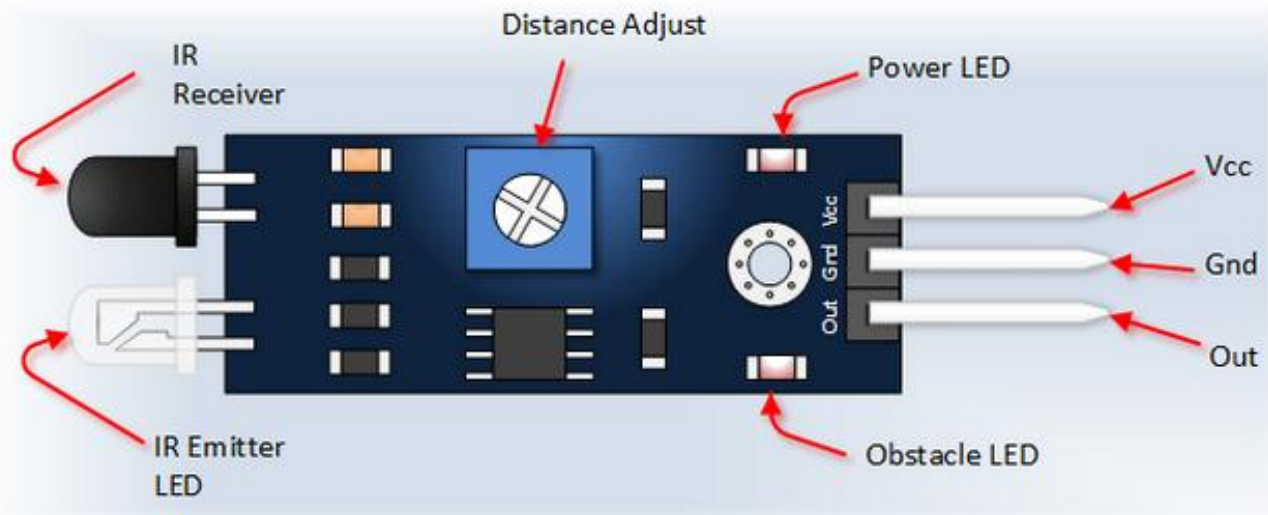


SKU: [SSR1017](#)

Brief Data:

- Operating Voltage: 3~5VDC.
- Output type: Digital (0 and 1).
- Detection Distance: 2~30cm. Potentiometer adjustment.
- Mounting Hole: Ø3mm.
- Board size: 3.2 x 1.4cm

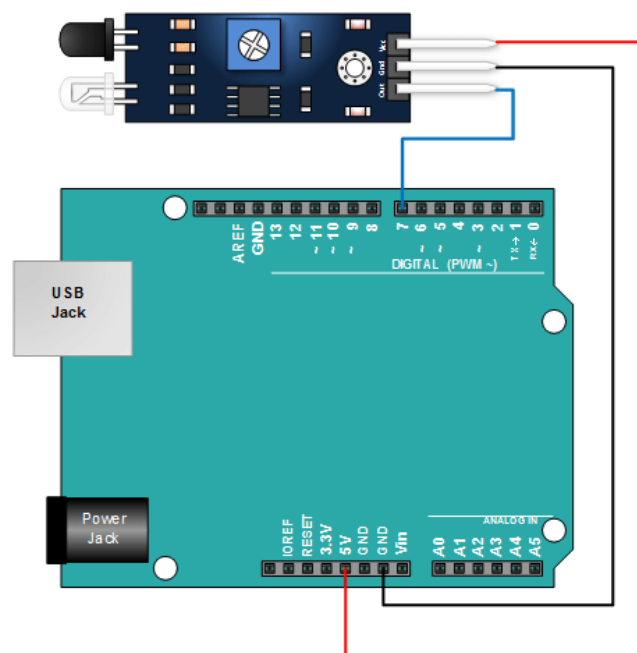
Functional Diagram:



Pin Function	Description
Vcc	3.3 ~ 5Vdc Supply Input.
Gnd	Ground.
Out	Output low when obstacle is in range.
Power LED	Light on when power is applied.
Obstacle LED	Light on when obstacle detected.
Distance Adjust	Adjust detection distance. CCW decreases distance. CW increases distance.
IR Emitter	Infrared emitter LED.
IR Receiver	Infrared receiver that receives signal transmitted by Infrared emitter.

Application with Arduino:

Connect the IR Sensor as below schematic:



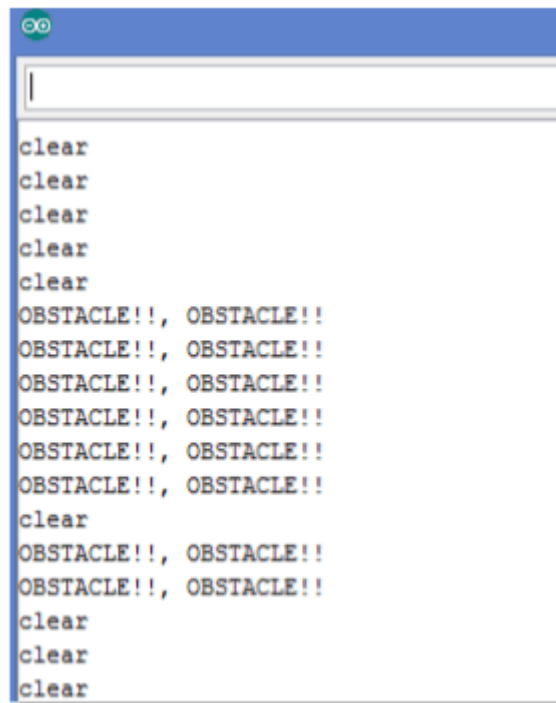
Upload the below sketch to Arduino board:

```
// IR Obstacle Collision Detection Module
// =====
int LED = 13; // Use the onboard Uno LED
int isObstaclePin = 7; // This is our input pin
int isObstacle = HIGH; // HIGH MEANS NO OBSTACLE

void setup() {
  pinMode(LED, OUTPUT);
  pinMode(isObstaclePin, INPUT);
  Serial.begin(9600);
}

void loop() {
  isObstacle = digitalRead(isObstaclePin);
  if (isObstacle == LOW)
  {
    Serial.println("OBSTACLE!!, OBSTACLE!!");
    digitalWrite(LED, HIGH);
  }
  else
  {
    Serial.println("clear");
    digitalWrite(LED, LOW);
  }
  delay(200);
}
```

Move your hand towards the IR LEDs. As your hands near them, the Output LED on the module and the LED for pin 13 on your Arduino board will light up. Open your serial monitor and vary the distance of your hand while viewing the serial monitor. The output should look like the picture below:





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