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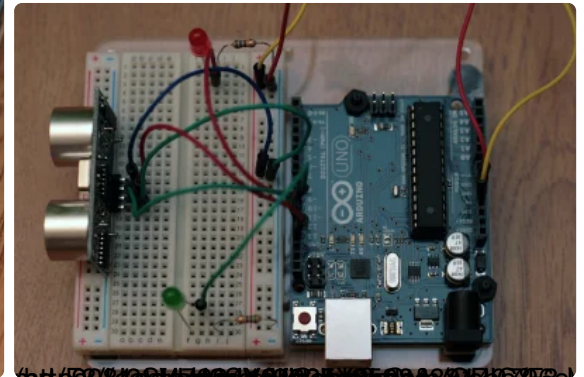
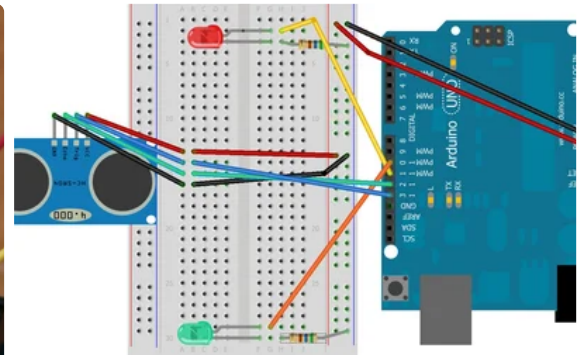
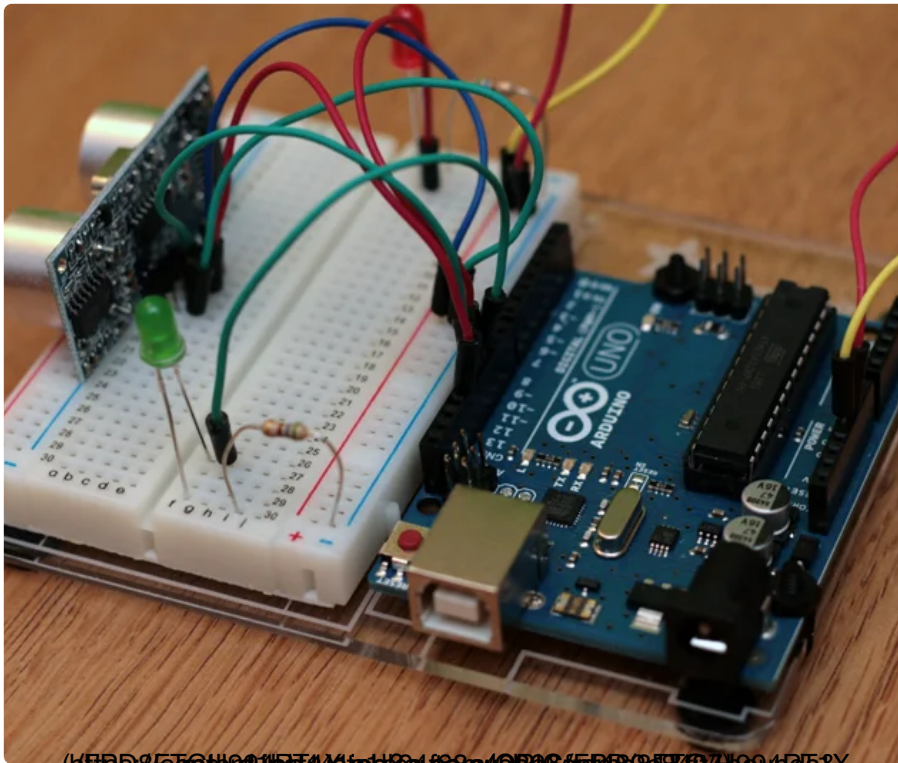
## Simple Arduino and HC-SR04 Example

By [jsvester \(/member/jsvester/\)](#) in [Circuits \(/circuits/\)](#) > [Arduino \(/circuits/arduino/projects/\)](#)

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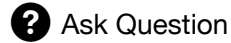
420

254

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After buying a HC-SR04 from Amazon, I could not get it to work out of the box. Not wanting to concede I had a DOA sensor on my hands, I searched for a simple example setup. After spending far too long on this than I felt I needed to, I decided to make this instructable to help other emerging tinkerers get their project off the ground.

I admit this example is more than bare-bones in that it has LEDs, but this lets me test it without needing a PC to show distance and check the accuracy of the sensor.



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## Step 1: Parts List

## Arduino UNO R3 (I use the Adafruit mount)

## One (1) HC-SR04 Ultrasonic Sensor

One (1) Red LED

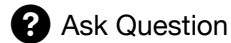
One (1) Green LED

Two (2) 560 ohm (Green, Blue, Brown, Gold) Resistors

## Half Breadboard

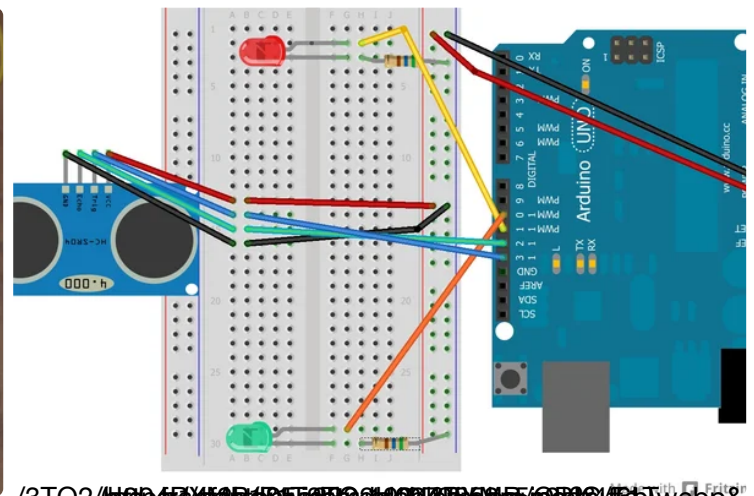
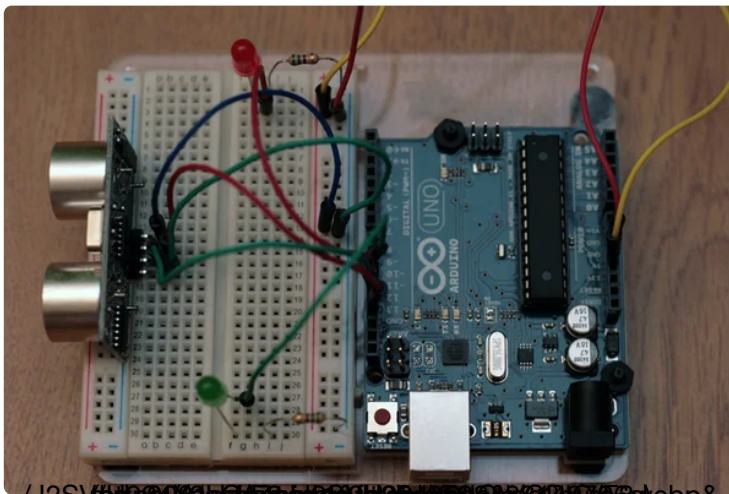
## Eight (8) Male/Male hookup wires

A ruler that measures centimeters (or use the serial monitor)



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## Step 2: Connect the Components



Connect the components and wires as shown in the two pictures.



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## Step 3: Upload the Sketch

Copy the sketch to your Arduino and watch the blinky lights.

Simple Arduino and HC-SR04 Example



/\*

HC-SR04 Ping distance sensor]

VCC to arduino 5v GND to arduino GND

Echo to Arduino pin 13 Trig to Arduino pin 12

Red POS to Arduino pin 11

Green POS to Arduino pin 10

560 ohm resistor to both LED NEG and GRD power rail

More info at: <http://goo.gl/kJ8GI>

Original code improvements to the Ping sketch sourced from Trollmaker.com

Some code and wiring inspired by <http://en.wikiversity.org/wiki/User:Dstaub/robotcar>

\*/

```
#define trigPin 13
```

```
#define echoPin 12
```

```
#define led 11
```

```
#define led2 10
```

```
void setup() {
```

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

```
  pinMode(trigPin, OUTPUT);
```

```
  pinMode(echoPin, INPUT);
```

```
  pinMode(led, OUTPUT);
```

```
  pinMode(led2, OUTPUT);
```

```
}
```

```
void loop() {
```

```
  long duration, distance;
```

```
  digitalWrite(trigPin, LOW); // Added this line
```

```
  delayMicroseconds(2); // Added this line
```

```
  digitalWrite(trigPin, HIGH);
```

```
// delayMicroseconds(1000); - Removed this line
```

```
  delayMicroseconds(10); // Added this line
```

```
  digitalWrite(trigPin, LOW);
```

```
  duration = pulseIn(echoPin, HIGH);
```

```
  distance = (duration/2) / 29.1;
```

```
  if (distance < 4) { // This is where the LED On/Off happens
```

```
    digitalWrite(led,HIGH); // When the Red condition is met, the Green LED should turn off
```

```
    digitalWrite(led2,LOW);
```

```
}
```

```
  else {
```

```
    digitalWrite(led,LOW);
```

```
    digitalWrite(led2,HIGH);
```

```
}
```

```
if (distance >= 200 || distance <= 0){
    Serial.println("Out of range");
}
else {
    Serial.print(distance);
    Serial.println(" cm");
}
delay(500);
}
```



**Code.Dat**(<https://constructables.com/COD/CPN/CFRW/F94FV94FW6/F94FV94FW6.txt>)



 Add Tip



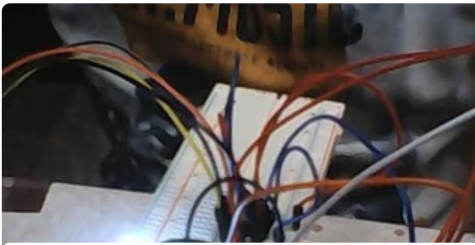
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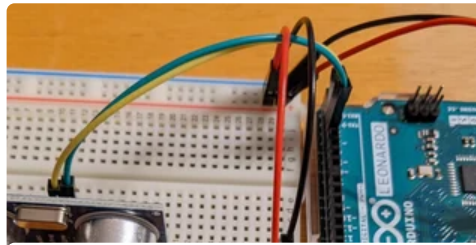
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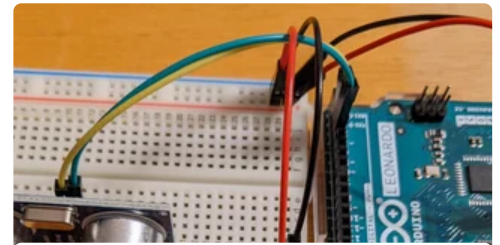
## 55 People Made This Project!



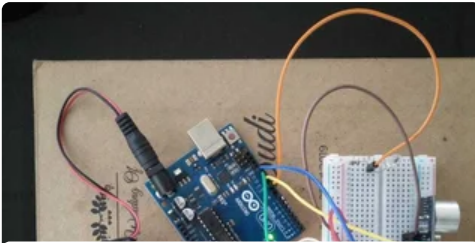
alfio1.inc (/member/alfio1.inc/)  
made it!



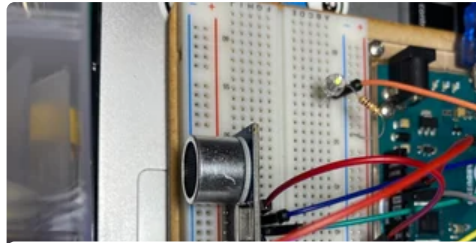
nigini (/member/nigini/) made it!



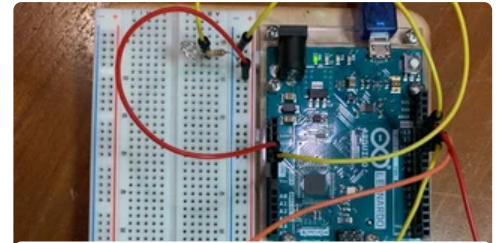
nigini (/member/nigini/) made it!



wthing08 (/member/wthing08/)  
made it!



claire833.sung (/member  
/claire833.sung/) made it!



jasminechuang2005 (/member /jasminechuang2005/) made it!