← **TechnoReview85**   🔍

Useful technical support for buyer & user,science project,engineering projects, lets DO IT YOUR SELF

Object detector using Arduino uno & ultrasonic sensor HC-sr04

March 05, 2017

It is simple object detector project using arduino ultrasonic module
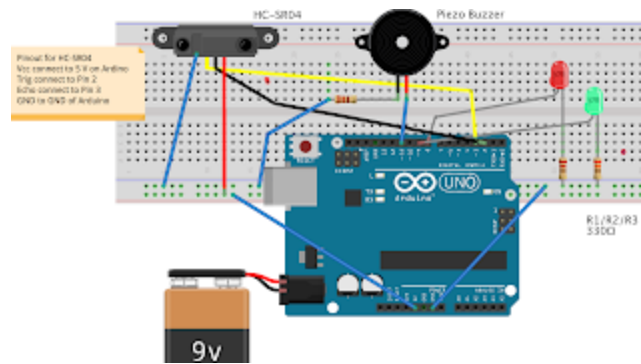
Parts list--

Bread board

LED (RED & GREEN)

Resistor -220 ohms

Male to male jumper wire

arduino uno

arduino ultrasonic module (HC-SR04)

HC-SR04 connection

VCC--5V
GND--GND
TRIG-- D2
ECHO-D3

LED RED -- D8
GND via resistor

LED GREEN-- D9
GND via resistor

PIEZO BUZZER --D11

GND--GND

Supply 9V Battery

ARDUINO CODE :-

```
//Ultasonic Sensor

//Pins connected to the ultrasonic sensor
#define trigPin  2
#define echoPin 3
//LED pins
#define ledGreen 9
#define ledRed 8
//Pin connected to the piezo buzzer
#define alarm 11

int range = 5;//range in inches

void setup() {
  // initialize serial communication:
  Serial.begin(9600);
  //initialize the sensor pins
  pinMode(trigPin, OUTPUT);
  pinMode(echoPin, INPUT);
  //initialize LED pins
  pinMode(ledGreen, OUTPUT);
  pinMode(ledRed, OUTPUT);
  //set LEDs
  digitalWrite(ledGreen, HIGH);
```

```
      digitalWrite(ledRed, LOW);

  }
  void loop()
  {
   // establish variables for duration of the ping,
   // and the distance result in inches and centimeters:
   long duration, inches, cm;

   // The PING))) is triggered by a HIGH pulse of 2 or more microseconds.
   // Give a short LOW pulse beforehand to ensure a clean HIGH pulse:
   digitalWrite(trigPin, LOW);
   delayMicroseconds(2);
   digitalWrite(trigPin, HIGH);
   delayMicroseconds(5);
   digitalWrite(trigPin, LOW);

   // Take reading on echo pin
   duration = pulseIn(echoPin, HIGH);

   // convert the time into a distance
   inches = microsecondsToInches(duration);
   cm = microsecondsToCentimeters(duration);

   Serial.print(inches);
   Serial.print("in, ");
   Serial.print(cm);
   Serial.print("cm");
   Serial.println();

   if(inches < 5) {
     Serial.println("DANGER");
     digitalWrite(ledGreen, LOW);
     digitalWrite(ledRed, HIGH);
     tone(alarm, 2000);
     delay(100);
   } else {
     Serial.println("GOOD");
     digitalWrite(ledGreen, HIGH);
     digitalWrite(ledRed, LOW);
```

```
      noTone(alarm);
      delay(100);
    }


  delay(200);
}


long microsecondsToInches(long microseconds)
{
  // According to Parallax's datasheet for the PING))), there are
  // 73.746 microseconds per inch (i.e. sound travels at 1130 feet per
  // second).  This gives the distance travelled by the ping, outbound
  // and return, so we divide by 2 to get the distance of the obstacle.
  // See: http://www.parallax.com/dl/docs/prod/acc/28015-PING-v1.3.pdf
  return microseconds / 74 / 2;
}


long microsecondsToCentimeters(long microseconds)
{
  // The speed of sound is 340 m/s or 29 microseconds per centimeter.
  // The ping travels out and back, so to find the distance of the
  // object we take half of the distance travelled.
  return microseconds / 29 / 2;
}
```

arduino   electronic

 Enter Comment

Popular posts from this blog

how to make 4x4x4 led cube using arduino

November 18, 2017

To make 4x4x4 led cube using arduino you need arduino uno or arduino nano 3.0 parts list - Arduino uno or nano Resistor 100 ohom x4 wire vero board (doted or line) header male   L shaped cardboard &   …

READ MORE

Connection & wiring of 24 v electric bi -cycle By Techno review 85

March 25, 2018

In this post I want to describe How to connect all parts like brushed motor, throttle brake light, ignition switch via controller It is very easy to wiring e bike parts About Parts you need to make & all details about el   …

READ MORE

Raspberry pi 3.5 inch LCD screen setup & install driver

July 09, 2018

This tutorial for beginner raspberry pi user .It is very easy way to install driver for 3.5 inch touchscreen LCD. Before install driver You need A Raspberry pi 3B with raspbian OS because this Lcd screen works with only r   ...

READ MORE

Interesting topics   ⌄

[Powered by Blogger](#)

Technoreview85

•

[Privacy policy](#)