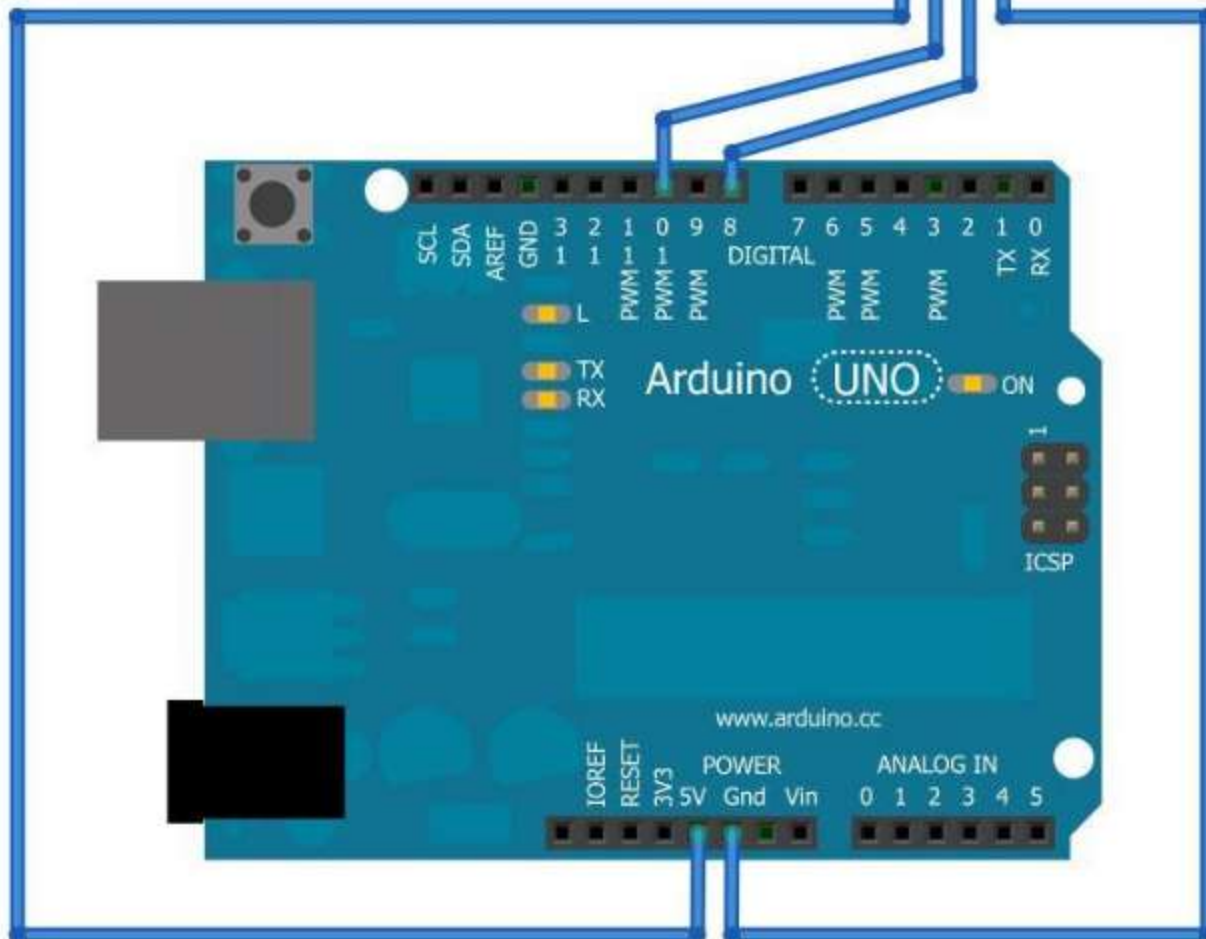


Ultrasonic Distance Measurement Module

- use a breadboard for connecting it to your Arduino (not shown in schematic below)
- do not use higher than 5V as a supply voltage (“VCC” on sonar = pin for supply voltage)
- verify module function with the Arduino Serial Monitor before implementing with your application

HC-SR04 Sonar

VCC=5 V max
Trig=sends outgoing pulse
Echo=incoming pulse
GND=ground



Sample Code:

```
// Very few comments in this code :( Can you figure it out anyways?  
// Does it work? If not, always compare your schematics with your  
// code: Can it work? Does it make sense?
```

```
/*  
  HC-SR04 Ping distance sensor]  
  VCC to arduino 5v GND to arduino GND  
  Echo to Arduino pin 13 Trig to Arduino pin 12  
  More info at: http://goo.gl/kJ8G1  
*/
```

```
#define trigPin 12  
#define echoPin 13
```

```
void setup() {  
  Serial.begin (9600);  
  pinMode(trigPin, OUTPUT);  
  pinMode(echoPin, INPUT);  
}
```

```
void loop() {  
  int duration, distance;  
  digitalWrite(trigPin, HIGH);  
  delayMicroseconds(1000);  
  digitalWrite(trigPin, LOW);  
  duration = pulseIn(echoPin, HIGH);  
  distance = (duration/2) / 29.1;  
  if (distance >= 200 || distance <= 0){  
    Serial.println("Out of range");  
  }  
  else {  
    Serial.print(distance);  
    Serial.println(" cm");  
  }  
  delay(500);  
}
```

to match with the schematic on the previous page, use:

```
#define trigPin 10  
#define echoPin 8
```

You are free to change either the electronics to match the code, or vice-versa.

Source:

<http://winkleink.blogspot.ca/2012/05/arduino-hc-sr04-ultrasonic-distance.html>