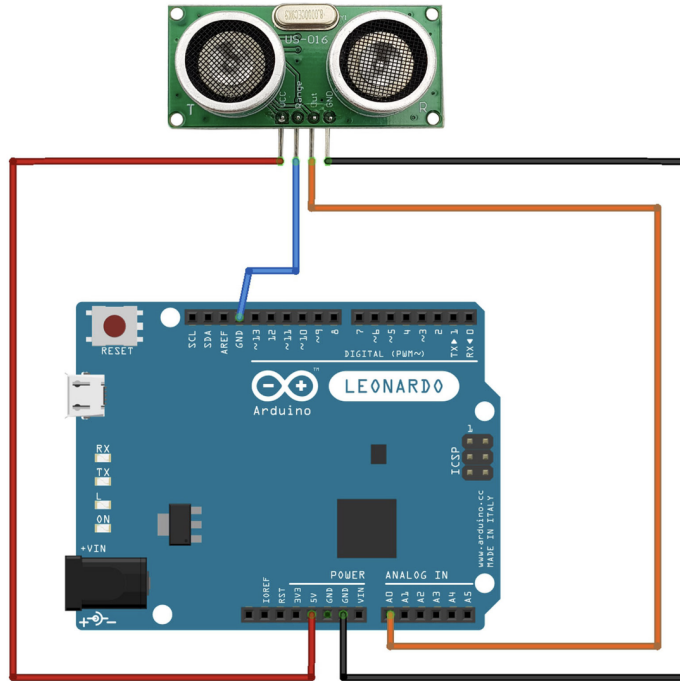# US-016 Ultrasonic Distance Sensor (Analog)

How it works:

The US-016 ultrasonic sensor uses echolocation to return a voltage to your device proportional to distance. The sensor has two selectable ranges (100 cm / 300 cm).

Specs:

Voltage (VCC)	3.3-5 VDC
Max Current	3.8mA
Analog output (OUT)	cm = $max\ range\ *\ \frac{V_{Out}}{VCC}$
Max Range with range pin connected to GND	100cm
Max Range with range pin powered (3.3-5v) or unconnected	300cm
Min Range	2cm
Precision	0.3 cm + 1%
Effectual Angle	+/- 15º
Resolution	1 mm
Unit Dimensions	45x20x1.2 mm

Calibration Equation: 1V = x cm, where x is the range max / voltage
Example: When range max is 100 cm and Vcc voltage is 5V, 1V will be equal to 20cm

Useful links:

- Tutorial:
  https://www.instructables.com/Tutorial-How-to-Use-Analoge-Ultrasonic-US-016/
- Youtube: https://www.youtube.com/watch?v=THWFt87tkKc

Code:

```c
 unsigned int ADCValue;
void setup(){
   Serial.begin(9600);
}

void loop(){

   ADCValue = analogRead(0);
 // ADCValue *=3;
   Serial.print("Present Length is: ");
   Serial.print(ADCValue, DEC);
   Serial.println("mm");
   delay(1000); //delay 1S
}
```