# IoT Based Sound Pollution Monitoring System

Project Objectives :

We surely can't imagine a world without sound. Sound is one of an integral part of our day to day life, everything just becomes monotonous without the presence of audio. But too much of anything is dangerous, with the advent of automobiles, loudspeakers, etc. sound pollution has become a threat in recent days. So, in this project, we will build an **IoT decibel meter** to measure sound in a particular place and record the value in a graph using IoT. A device like this will be useful in places like hospitals and schools to track and monitor the sound levels and take action accordingly. Previously we have also built an [Air pollution meter](#) to monitor air quality using IoT.

Sound level meters are commonly utilized in sound pollution studies for the quantification of various sorts of noise, especially for industrial, environmental, mining, and aircraft noise. The reading from a sound level meter doesn't correlate well to human-perceived loudness, which is best measured by a loudness meter. Specific loudness may be a compressive nonlinearity and varies at certain levels and certain frequencies. These metrics also can be calculated in several other ways
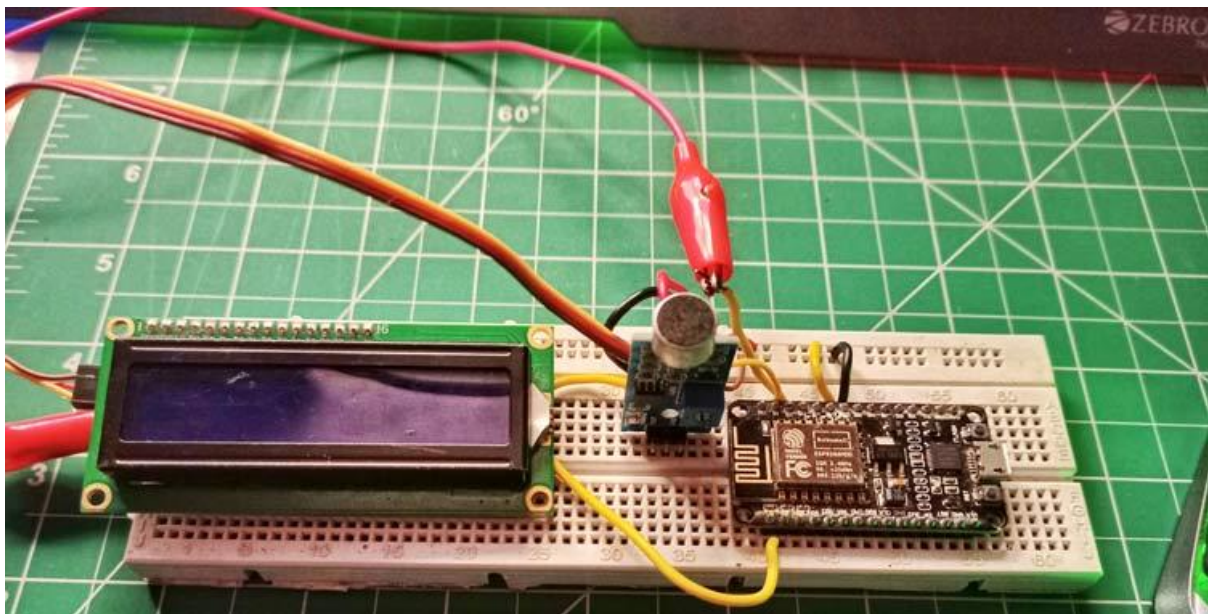
Here we are going to make an **IoT based decibel meter** that will **measure the sound in decibels(dB)** using a sound sensor and display it to the LCD display along with that, it will also

be pushing the readings to the **Blynk IoT platform** making it accessible from across the world.
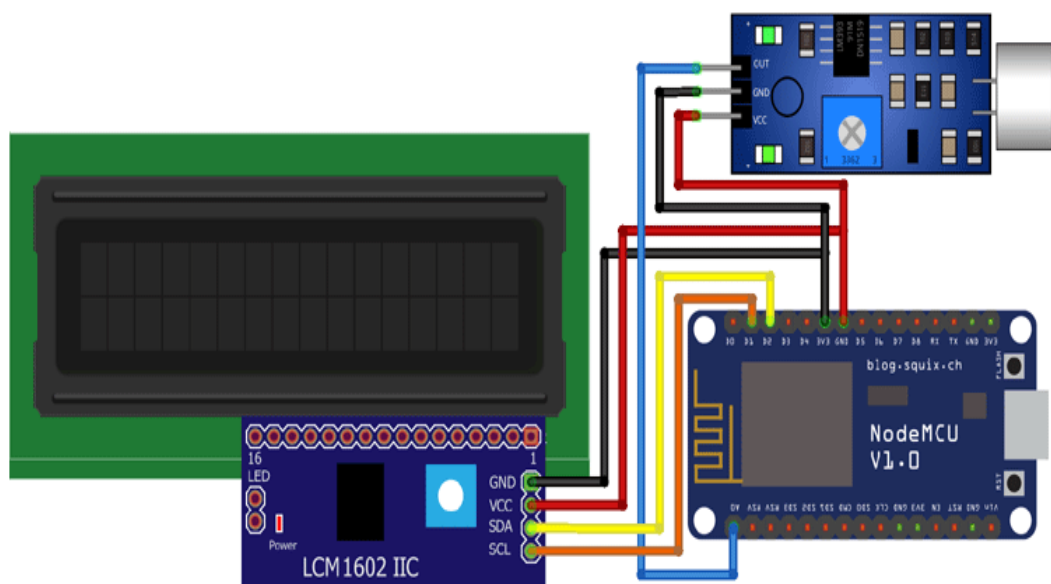
Components Required

- ESP8266 NodeMCU Board
- Microphone sensor
- 16*2 LCD Module

Circuit Diagram for IoT Sound Meter

The connections are pretty simple, we just have to connect the sound sensor to one of the Analog pin and the LCD to the I2C pins.

- Breadboard
- Connecting wires

In the above diagram, we have connected the power pins of the sound sensor and LCD display to 3v3 and GND pin of NodeMCU. Along with that, we have also connected the SCL and SDA pins of the module to D1 and D2 respectively, and the OUT pin of the sound sensor to A0 pin.