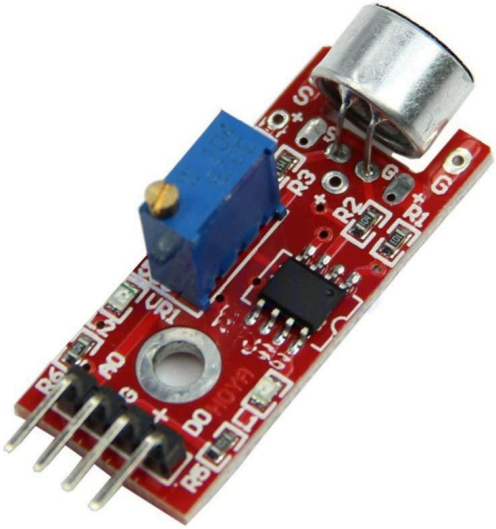
ABLEDUCATION™
ACTIVITY BASED LEARNING

Interfacing of Sound sensor module with Arduino Mega

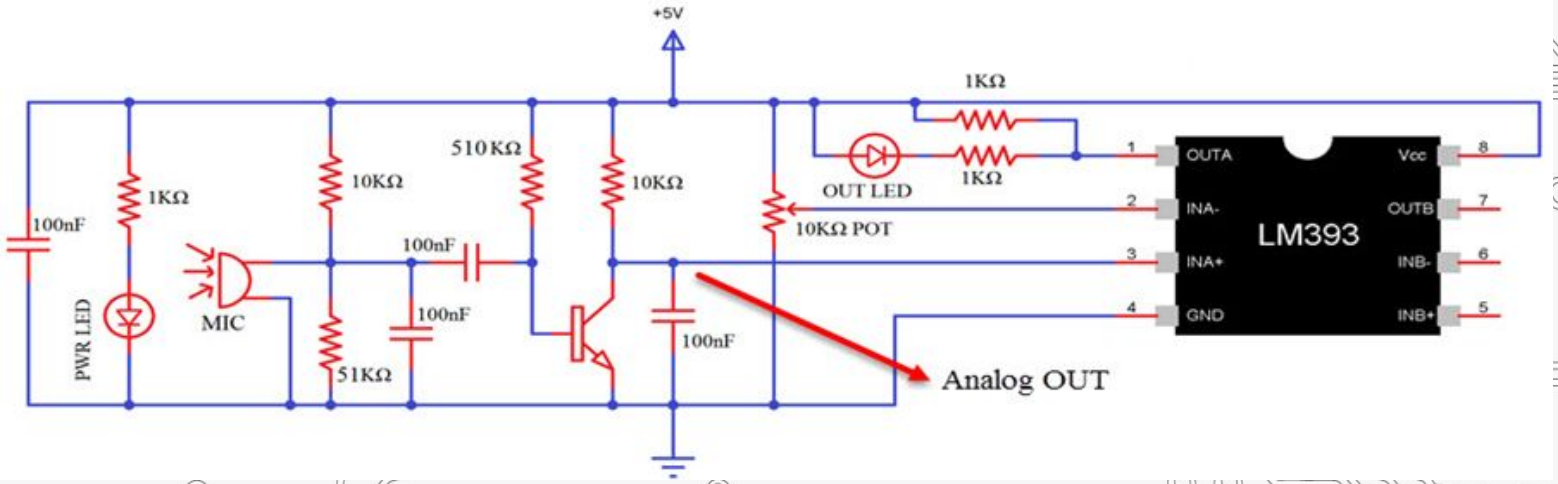


Sound sensor

- The **Sound sensor module** provides an easy way to detect **sound** and is generally used for detecting **sound intensity**.
- When the **sensor** detects a **sound**, it processes an output signal voltage which is sent to a microcontroller then performs necessary processing.
- The Sound Detector is a small board that combines a microphone and some processing circuitry. It provides not only an audio output, but also a binary indication of the presence of sound, and an analog representation of it's amplitude.

Schematic of Sound Sensor

- There are several Sound Sensor Modules available in the market that are implemented using different ICs like LM324, LM393, LM344, LM386 etc. So, check your sound sensor for the main IC and determine its schematic.
- To understand more about the sound sensor module, know the schematic. Below is LM393 Voltage Comparator IC.



How does it works?

- The **Sound sensor** has a thin piece of material called a diaphragm that vibrates when hit by **sound** waves (similar to how your eardrum vibrates when hearing **sound**).

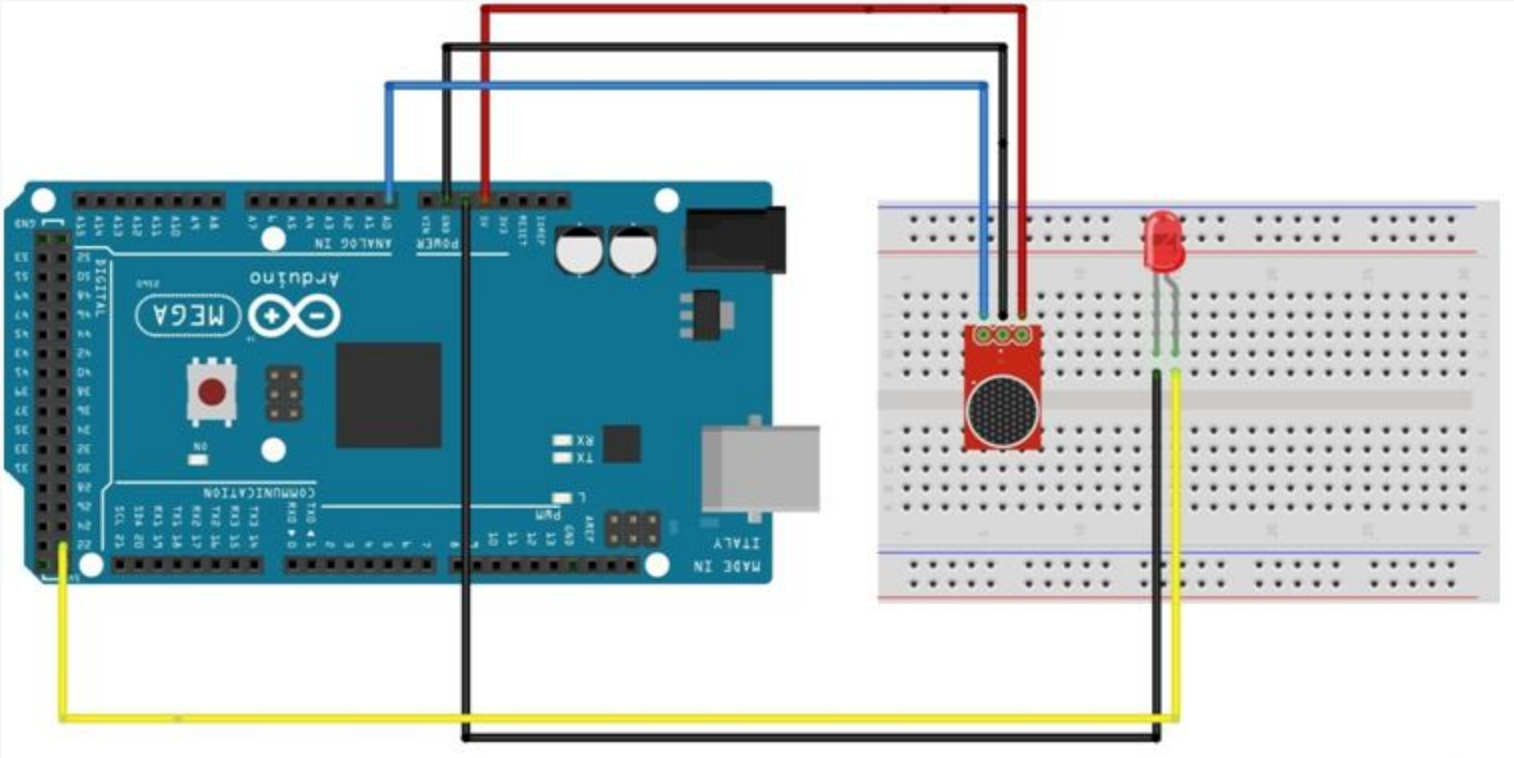
- The vibration of the diaphragm is converted by the **sensor** into an electrical signal.

Components required

- Arduino Mega
- Sound sensor module
- LED
- USB cable
- Breadboard
- Jumper wires(male to male)

ABLEDUCATION™
ACTIVITY BASED LEARNING

Connection Diagram



Connections

1. Connect Ao pin of sound sensor with Ao pin of Arduino Mega.
2. Connect Vcc and GND(ground) pin of sound sensor with Arduino 5V and GND respectively.
3. Connect LED Positive pin to 22 (digital pin) of Arduino.
4. Connect LED's ground pin with Arduino GND pin.

ABLEDUCATION™
ACTIVITY BASED LEARNING

Code

Sound_sensor | Arduino 1.8.19

File Edit Sketch Tools Help

Sound_sensor

```
void setup() {
  // put your setup code here, to run once:
  Serial.begin(9600);
//pinMode(A0,INPUT);
pinMode(22,OUTPUT);
}

void loop() {
  // put your main code here, to run repeatedly:
//
int data=analogRead(A0);
Serial.println(data);
if(data<600){
  digitalWrite(22,1);
  delay(200);
}
  else{
  digitalWrite(22,0);
  delay(200);
}}
```

Project Link : https://youtu.be/VCNgzr_5y_g