Using the MAX9814 mic amplifier

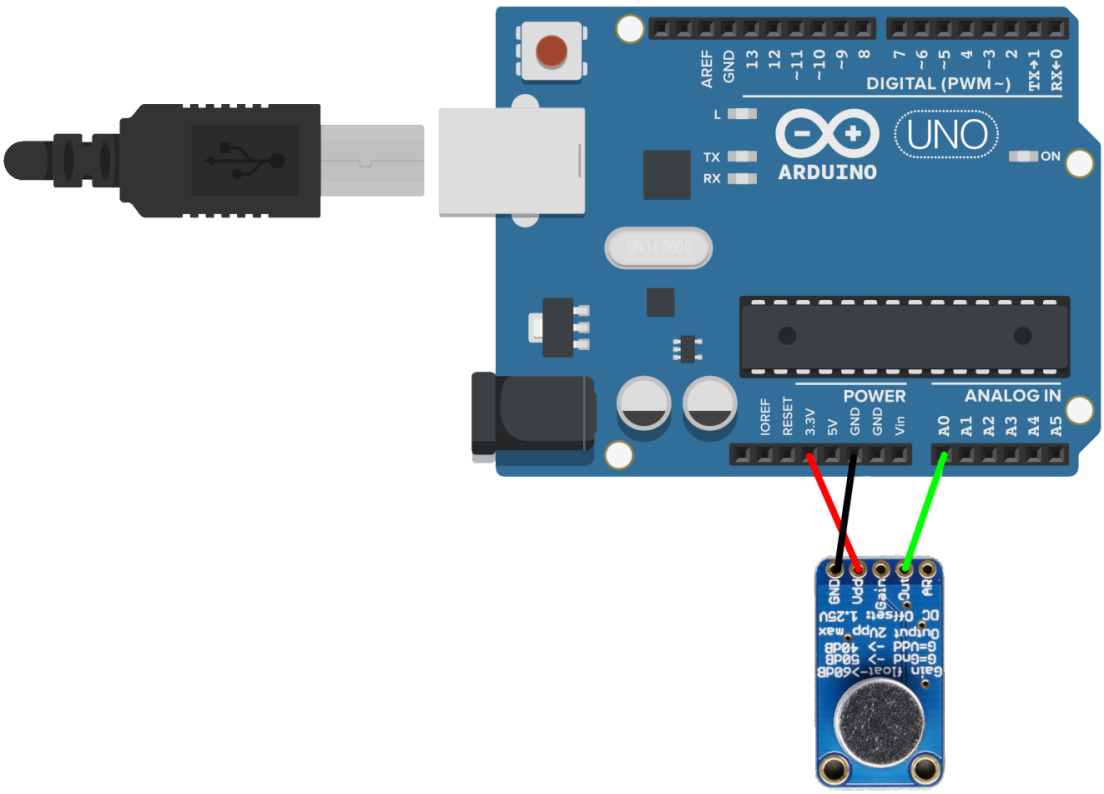
This Adafruit MAX9814 microphone amplifier allows you to easily detect sound.

There are a total of five connections on this mic, however we will only be using VCC, GND and OUT in our wiring. You can read more about this component **here**.

Wiring

1. Power (VCC to 3.3V)
2. Ground (GND to GND)
3. Output to analog pin on the Arduino (OUT to A0)

There are three wires:



Retrieving Data

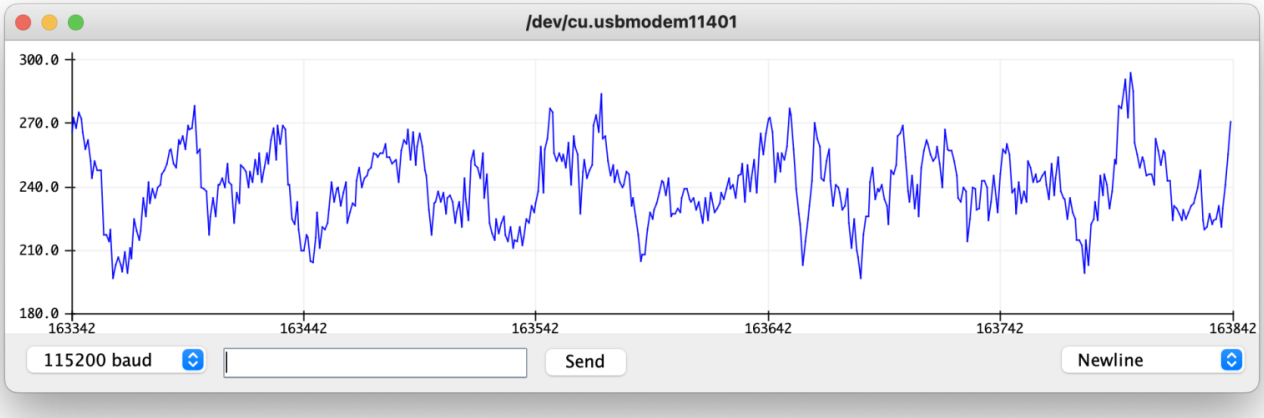
This code allows instructs the mic to detect and prints out values corresponding to the sound's varying volume.

```
int MicPin = A0;
int MicVolume = 0; // Define a variable MicVolume and initialize it to 0

void setup() {
  Serial.begin(115200); // Initialize serial communication
}

void loop() {
  MicVolume = analogRead(MicPin);
  Serial.println(MicVolume);
}
```

You can check that your circuit is working by looking at the Serial Plotter; In the menu bar go to Tools > Serial Plotter or press Command + Shift + L on your keyboard. Make sure this is set to 115200 baud.



To utilise this data, you can temporarily slow down the data coming in from the mic and look to the **Serial Monitor** this time, to set up your own threshold, e.g. :

```
void loop() {
  MicVolume = analogRead(MicPin);

  if (MicVolume > 400) { // If the volume is above this threshold a warning comes up in the Serial Monitor
    Serial.println("Loud noise");
    delay(500);
  } else {
  Serial.println(MicVolume);
  }
}
```

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