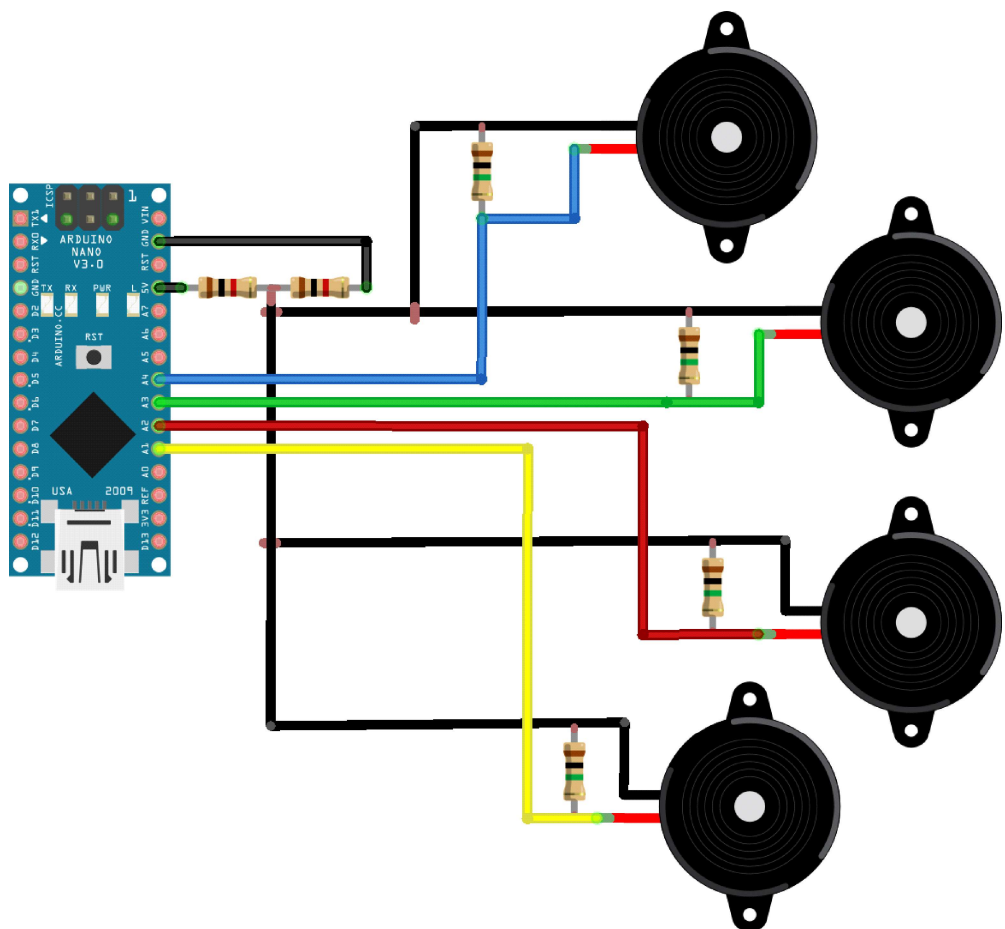


## Piezo sensor

### Plan de câblage / Wiring diagram



fritzing

### Liste du matériel requis / List of required equipment:

- x1 carte arduino nano v3.0
- x4 resistance (resistor) 1MΩ
- x2 resistance (resistor) 1kΩ
- x1 cable USB

### Informations complémentaires / Further informations :

Les fils rouges et noirs servent à l'alimentation de la sonde (rouge sur + et noir pour la masse). L'alimentation est en 5V. Les fils bleu, vert, rouge et jaune sont sur les entrée analogiques A4, A3, A2 et A1

*The red and black wires are used to supply the probe (red on + and black for ground). The power supply is 5V. The blue, green, red and yellow wires are on the analog inputs A4, A3, A2 and A1.*

```
int bleu = 4;
int b;
int listebleu[270];
int rouge = 2;
int r;
int listerouge[270];
int vert = 3;
int v;
int listevert[270];
int val;
int t0 = 1;
int val0;

int ind;
int r0;
int v0;
int b0;

unsigned long t;
unsigned long t2;

const unsigned char PS_4 = (1 << ADPS1); //precision degradee
const unsigned char PS_8 = (1 << ADPS1) | (1 << ADPS0); //precision degradee
const unsigned char PS_16 = (1 << ADPS2);
const unsigned char PS_32 = (1 << ADPS2) | (1 << ADPS0);
const unsigned char PS_64 = (1 << ADPS2) | (1 << ADPS1);
const unsigned char PS_128 = (1 << ADPS2) | (1 << ADPS1) | (1 << ADPS0);

int incomingByte = 0;
boolean value=false;
boolean value2=false;

void setup() {
  Serial.begin(115200);
  ADCSRA &= ~PS_128;
  ADCSRA |= PS_8;
}

void loop() {
  while (value==false){
    Serial.println(6);
    delay(50);
    while (Serial.available()>=1){
      incomingByte = Serial.read();
      if (incomingByte!=-1){
        value = true;
      }
    }
  }
  while (value2==false){

    delay(50);
    while (Serial.available()>=1){
      incomingByte = Serial.read();
      if (incomingByte!=-1){
        value2 = true;
      }
    }
  }
}
```

```

// t=micros();
  val= analogRead(t0);
  r=analogRead(rouge);
  v= analogRead(vert);
  b = analogRead(bleu);
  r0=r;
  v0=v;
  b0=b;
  val0=val;
  ind=-1;
  while ((val-val0<20) && (val0-val<20)){

    val = analogRead(t0);
    //Serial.println(val-val0);
    //if (r-r0<500){

  }
  t=micros();

  for (int i=0;i<270;i++){

    r=analogRead(rouge);
    v=analogRead(vert);
    b=analogRead(bleu);

    listerouge[i]=r-r0;
    listevert[i]=v-v0;
    listebleu[i]=b-b0;

  }
  t2=micros()-t;

  for (int i =0; i<100;i++){
    Serial.print(0); Serial.print(",");
    Serial.print(listerouge[i]); Serial.print(",");
    Serial.print(listevert[i]);Serial.print(",");
    Serial.println(listebleu[i]);
  }
  for (int i =100; i<270;i++){
    Serial.print(t2); Serial.print(",");
    Serial.print(listerouge[i]); Serial.print(",");
    Serial.print(listevert[i]);Serial.print(",");
    Serial.println(listebleu[i]);
  }

value2=false;

  }

```