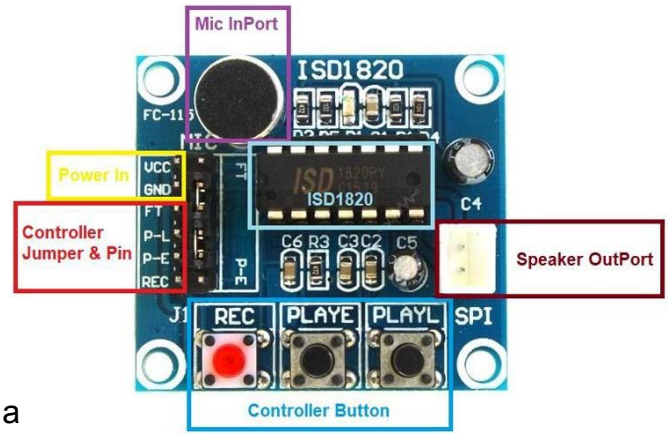
Sound Recorder
(Technical Note)

Introduction

Sound recorder is a device that captures audio in various situations like meetings, lectures, interviews, conferences, and broadcasts so that you can easily edit or play them back.



Scientific Fact and Applications

A ISD1820 Voice Recorder Module is a multiple-message record/playback device. A major feature of the module is that is can store the messages in its non-volatile memory and can be configured to store messages of length between 8 to 20 seconds. Another main feature of this module is that it has internal audio amplifier that can drive a 0.5W 8Ω speaker directly without the need for any external amplifier circuit.

Applications

Security Systems
Most security cameras only record videos and adding a sound recording feature, in places of interest, could enhance security measures.

Accident Voice Recordings
The sound recorder can be activated within a control system during and to capture an accident situation.

Toys
A sound recording feature can increase user-interaction capabilities in toys.

Reference

https://www.electronicshub.org/interfacing-isd1820-voice-recorder-module-with-arduino/

Z2M Part Number:
EMA-00009-A

Sound Recorder
(Application Note)

Project

To record and play sound by using a ISD1820 Sound Recorder.

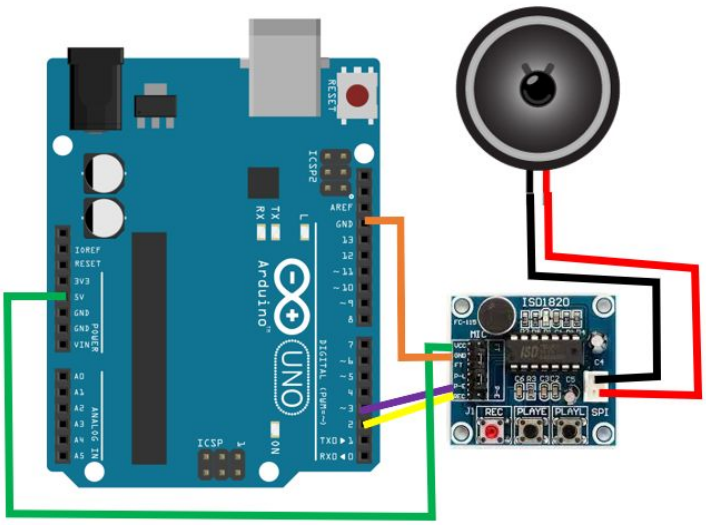
Procedure

1. Connect the **VCC** pin to **5V** of Arduino.
2. Connect the **GND** pin to **GND** of Arduino.
3. Connect the **REC** pin to **pin 2** of Arduino.
4. Connect the **P-E** pin to **pin 3** of Arduino.
5. Speak to the microphone when red light is on.

Components Required

Component	Part No.	Qty
Arduino UNO	EMX-00001-A	1
ISD1820 Sound Recorder	EMS-00009-A	1

Schematic



Code

```
/* Set rec as pin 2 and play as pin 3*/
int rec=2;
int play=3;;

void setup()
{
  /* Set Record and playback as output*/
  pinMode(rec,OUTPUT);
  pinMode(play,OUTPUT);

  /*Deactivate Record and Playback at the start*/
  digitalWrite(rec,LOW);
  digitalWrite(play,LOW);

/*Record voice for 5 seconds. Red light of the module will be on while recording. */
  digitalWrite(rec,HIGH);
  delay(5000);
  digitalWrite(rec,LOW);
  delay(1000);
}

void loop()
{
  /*Play back recording repeatedly. Red light blinks when the each playback is done.*/
  digitalWrite(play,HIGH);
  digitalWrite(play,LOW);
  delay(5000);
}
```

Challenge Yourself

1. Create an automated greeting sound like the one you hear when you enter any door of a Seven Eleven store.