Title:

Piezo Buzzer

Sensor/Indicator/Actuator:

Indicator Actuator

Features:

Play a Simple Tone using a LOW/HIGH Signal Play Notes from x to y

Connection:

Digital

Summary:

Add some sound to your project with the Piezo Buzzer Module. If you need a simple on off buzzer then you just need a HIGH signal to activate it. If you want to play different tones, utilize the playTone function in the second example.

Example Code

Buzzer

```
#define BUZZER_SOCKET 6

void setup() {
    pinMode(BUZZER_SOCKET, OUTPUT);
}

void loop(){
    // Turn on the Buzzer
    digitalWrite(BUZZER_SOCKET, HIGH);

    // Wait one second (delay takes millisecond arguments)
    delay(1000);

    // Turn off the Buzzer
    digitalWrite(BUZZER_SOCKET, LOW);

    // Wait 30 seconds
```

```
    delay(30000);

}
```

Play Tones

```
#define BUZZER_SOCKET 6

void setup() {
    pinMode(BUZZER_SOCKET, OUTPUT);
}

void loop(){
    // play a scale
    playTone(1915, 300);
    playTone(1700, 300);
    playTone(1519, 300);

    // play the same scale using playNote()
    playNote('c', 300);
    playNote('d', 300);
    playNote('e', 300);

    // wait 10 seconds
    delay(10000);

}

void playTone(int tone, int duration) {
  for (long i = 0; i < duration * 1000L; i += tone * 2) {
    digitalWrite(BUZZER_SOCKET, HIGH);
    delayMicroseconds(tone);
    digitalWrite(BUZZER_SOCKET, LOW);
    delayMicroseconds(tone);
  }
}

void playNote(char note, int duration) {
  char names[] = { 'c', 'd', 'e', 'f', 'g', 'a', 'b', 'C' };
  int tones[] = { 1915, 1700, 1519, 1432, 1275, 1136, 1014, 956 };

  // play the tone corresponding to the note name
  for (int i = 0; i < 8; i++) {
    if (names[i] == note) {
      playTone(tones[i], duration);
```

```
    }
  }
}
```

Play Meoldies

```
#define BUZZER_SOCKET 6

// All the code to make a song is in this block
// This plays Ode To Joy
int length = 15; // the number of notes
char notes[] = "eefggfedccdeedd"; // a space represents a rest
int beats[] = { 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 1, 1 };
int tempo = 300;

void setup() {
  pinMode(BUZZER_SOCKET, OUTPUT);

  for (int i = 0; i < length; i++) {
    if (notes[i] == ' ') {
      delay(beats[i] * tempo); // rest
    } else {
      playNote(notes[i], beats[i] * tempo);
    }

    // pause between notes
    delay(tempo / 2);
  }
}

void loop() {

}

void playTone(int tone, int duration) {
  for (long i = 0; i < duration * 1000L; i += tone * 2) {
    digitalWrite(BUZZER_SOCKET, HIGH);
    delayMicroseconds(tone);
    digitalWrite(BUZZER_SOCKET, LOW);
    delayMicroseconds(tone);
  }
}

void playNote(char note, int duration) {
  char names[] = { 'c', 'd', 'e', 'f', 'g', 'a', 'b', 'C' };
```

```
  int tones[] = { 1915, 1700, 1519, 1432, 1275, 1136, 1014, 956 };

  // play the tone corresponding to the note name
  for (int i = 0; i < 8; i++) {
    if (names[i] == note) {
      playTone(tones[i], duration);
    }
  }
}
```