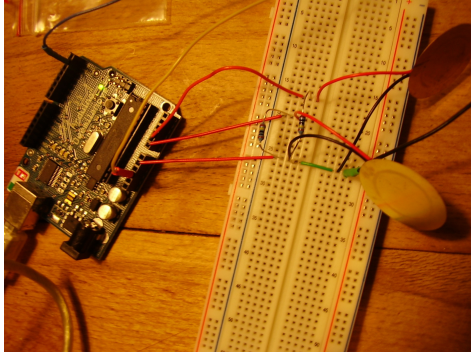**My very basic experience by using piezo speaker and Arduino.**
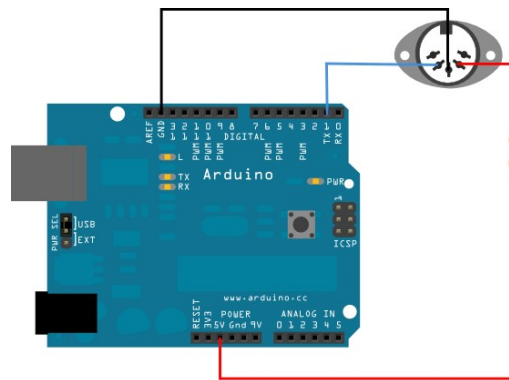
What I did?
*First step:
I connected piezo speaker(s) to the the Arduino board.

*Next step:
I connected simple Midi - USB adapter to the Arduino board.
http://arduino.cc/en/Tutorial/Midi

*Next step:
I found Arduino code, which translates sensor signals into MIDI sounds.

```
 const int middleC = 60;    // Middle C (MIDI note value 60) is the lowest note we'll
play
 const int LEDpin = 13;     //  Indicator LED

 // Variables:
 byte note = 0;             // The MIDI note value to be played
 int AnalogValue = 0;       // value from the analog input
 int lastNotePlayed = 0;    // note turned on when you press the switch

 void setup() {
   //  set the states of the I/O pins:
   pinMode(LEDpin, OUTPUT);
   //  Set MIDI baud rate:
   Serial.begin(31250);
 }

 void loop() {
   //  My potentiometer gave a range from 0 to 1023:
   AnalogValue = analogRead(0);
```

```
    //  convert to a range from 0 to 127:
    note = AnalogValue/8;
        noteOn(0x90, note, 0x40);
        digitalWrite(LEDpin, HIGH);
        delay(100);
}

 //  plays a MIDI note.  Doesn't check to see that
 //  cmd is greater than 127, or that data values are  less than 127:
 void noteOn(byte cmd, byte data1, byte  data2) {
    Serial.print(cmd, BYTE);
    Serial.print(data1, BYTE);
    Serial.println(); //send the eom
}
```
----

*Next step:
I used Midi Monitor to get info about sounds.
http://www.snoize.com/MIDIMonitor/

*Next step:
I used Plogue Bidule 0.9705 to get sound output.
http://www.macmusic.org/software/view.php/lang/en/id/693/Bidule
It is software which crashes a lot, but helped me in this case :) Till I don t have a real
MIDI player...

BTW:
Also I tried to manipulate video with piezos by using Modul8 Midi Mapping, but it didn
t work as well as I thought. Should work on it a bit more :)
I don t think that I understood Arduino coding very well, but at least I understood how
I can physically connect sensors and get some real output. And I am happy that I got
real sounds out of it! Small steps, but still something :)
Also I hope that this experience might be useful of our group work in some point :)
I will work on it on these days, my next goals are to make code for using many piezo
sensors together and make them each to play different tones. Does it make sense?
I hope that MIDI Library will help me in this case
http://www.arduino.cc/playground/Main/MIDILibrary