Baa Baa Black Sheep

Turn your arduino into a musical nursery rhyme machine.

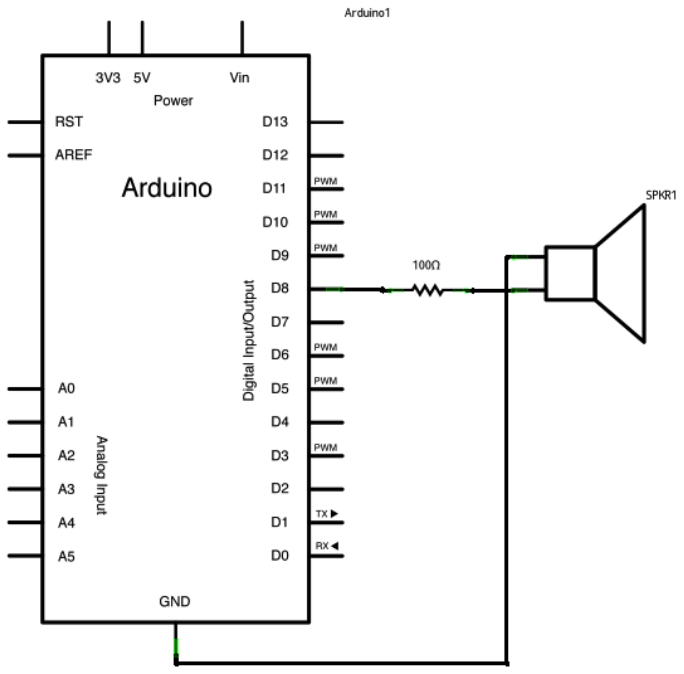
Hardware Required

- Arduino Board
- Resistor
- Piezo

Circuit

To build the circuit, attach a 100-ohm resistor to pins 8. Connect the other end of the resistor to the positive (red) wire of the piezo. Connect the negative (black) wire of the piezo to ground. Then plug your Arduino board your computer, start the Arduino program, and enter your code..

Schematic



Code

Convert the following sheet music to the correct notes (lines = EGBDF, spaces = FACE). Play the notes by adjusting the frequency and duration output to the speaker.

Use the following frequency guide to aid your musical masterpiece. You may have to fine tune it depending on your speaker.

```
// Start by defining the relationship between
//       note, period, &  frequency.
#define  c     3830    // 261 Hz
#define  d     3400    // 294 Hz
#define  e     3038    // 329 Hz
#define  f     2864    // 349 Hz
#define  g     2550    // 392 Hz
#define  a     2272    // 440 Hz
#define  b     2028    // 493 Hz
#define  C     1912    // 523 Hz
// Define a special note, 'R', to represent a rest
#define  R     0
```