



Für Elise Melody Clip



Intended Use

The purpose of the **Für Elise Melody Clip** is to produce a two-voice melody, to be used in a greeting card. The song is played through the use of two PS1420P02CT piezo buzzers, after the press of a push-button. The prototype is programmed to play 20 seconds of Beethoven's *Fur Elise* at a moderato tempo, with the two buzzers playing two different octaves.

Operating Conditions

Operating voltage range of the device: 1.8V to 5.5V
Operating temperature: -55°C to +125°C
Storage temperature: -65°C to +150°C
Maximum DC Current per I/O pin: 40.0mA

Setup Instructions

To operate the device, connect VCC (Pin 20) to a voltage source that is within the operating voltage range (1.8V to 5.5V), and GND (Pin 10) to ground. Press button to play the song interval. Refer to Figure 1 for the device's schematic.

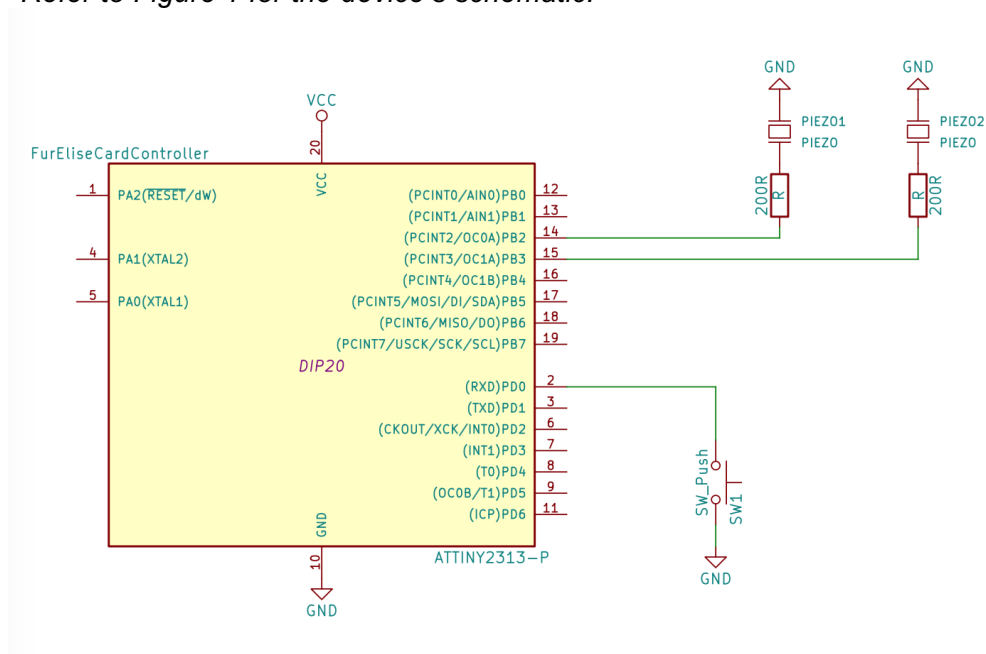


Figure 1: Schematic of Greeting Card Melody Generator Prototype

Testing

The **Für Elise Melody Clip** will play the following sheet music at the illustrated octave and at an octave above, simultaneously.

Für Elise

Moderato Ludwig van Beethoven (1770-1827)

Sheet music for the first system of 'Für Elise' by Ludwig van Beethoven. The music is in 8/8 time and E minor. The first system (measures 1-5) features a treble clef with a melody starting on G4, marked 'p' (piano). The bass clef has a simple accompaniment. Fingering numbers are provided for the right hand: 5, 2, 4, 3, 1, 2, 4, 5.

Sheet music for the second system of 'Für Elise' by Ludwig van Beethoven. The second system (measures 6-10) continues the melody and accompaniment. The treble clef melody includes a slur over measures 6-7 and 8-9. The bass clef accompaniment continues with eighth notes.

Sheet music for the third system of 'Für Elise' by Ludwig van Beethoven. The third system (measures 11-15) continues the melody and accompaniment. The treble clef melody includes a slur over measures 11-12 and 13-14. The bass clef accompaniment continues with eighth notes.

Sheet music for the fourth system of 'Für Elise' by Ludwig van Beethoven. The fourth system (measures 16-20) continues the melody and accompaniment. The treble clef melody includes a slur over measures 16-17 and 18-19. The bass clef accompaniment continues with eighth notes. The system ends with a 'mf' (mezzo-forte) marking.