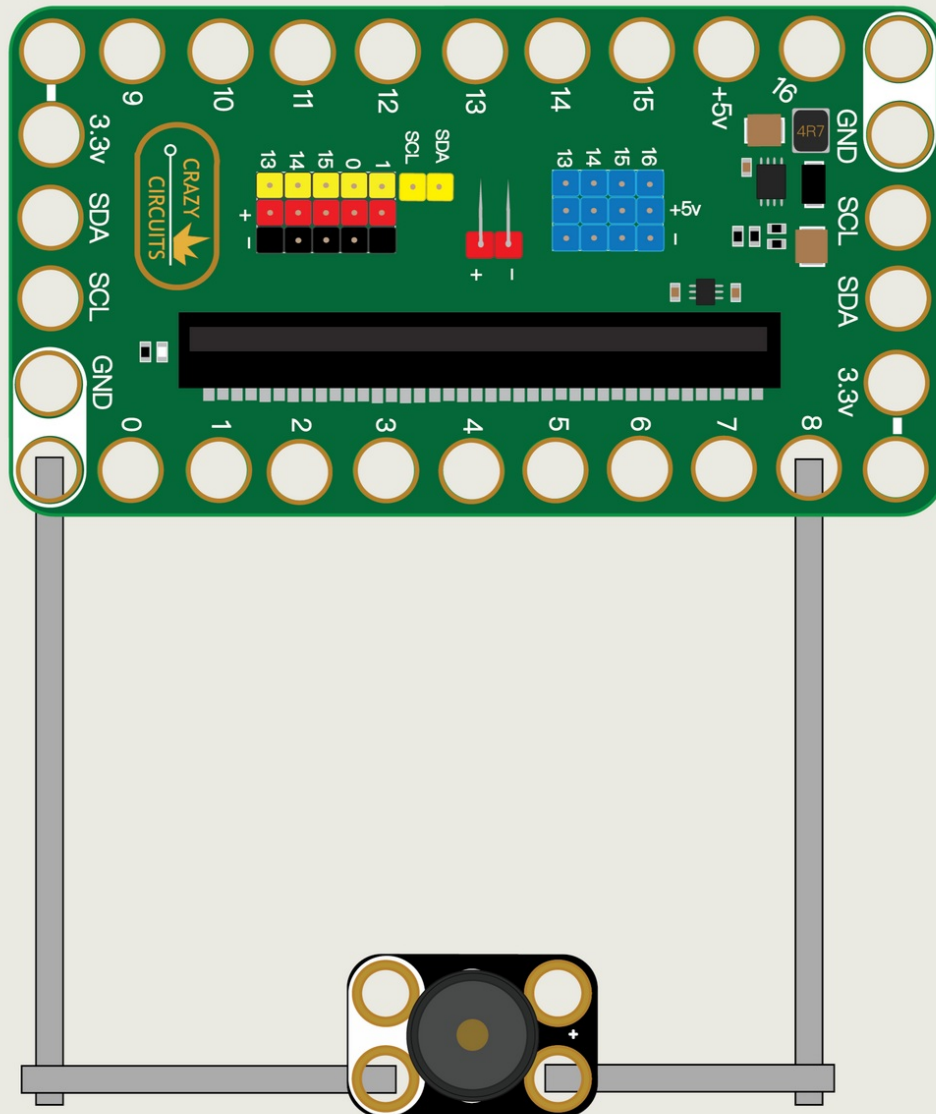




CH13-C - Piezo Tones

Connect a piezo speaker to a Bit Board and control it with code.

Written By: Pete Prodoehl



INTRODUCTION

Connect a piezo speaker to a Bit Board and control it with code.

We'll explore how we can make sounds using a piezo speaker.



TOOLS:

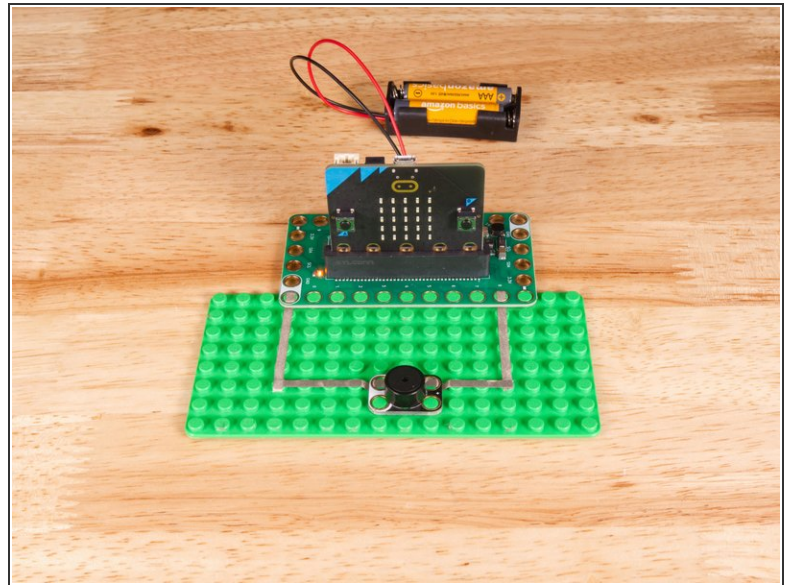
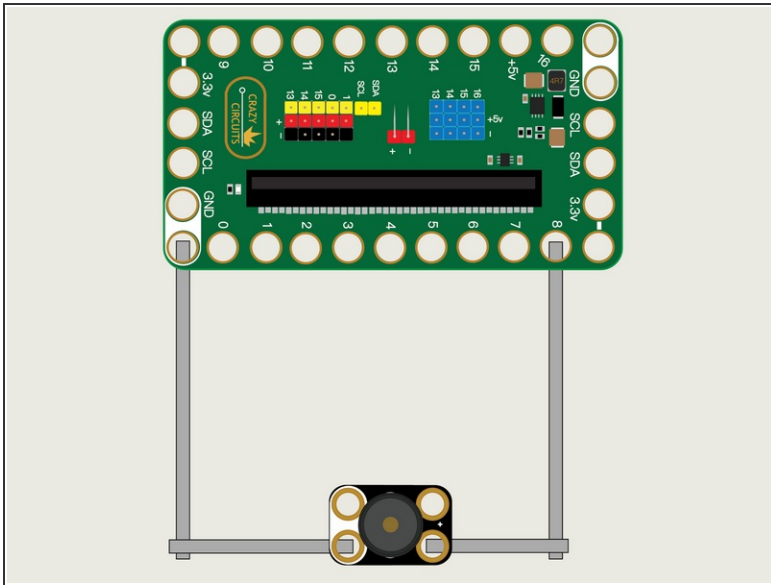
- [Computer](#) (1)



PARTS:

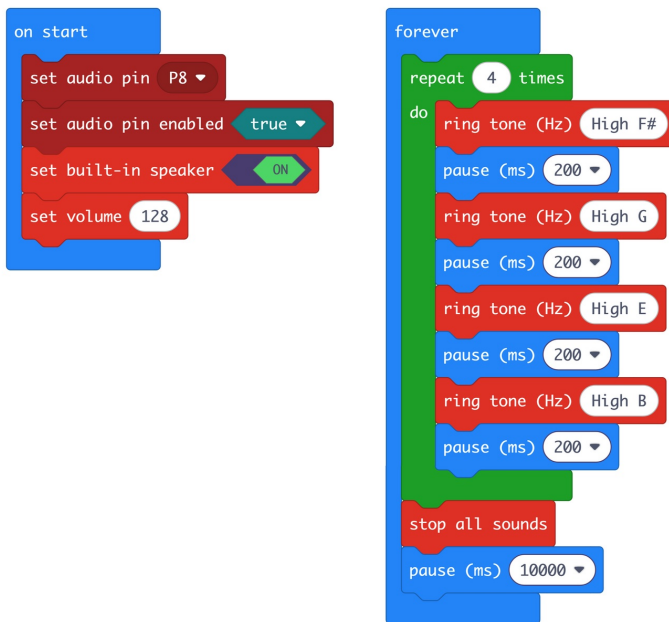
- [Crazy Circuits Bit Board](#) (1)
- [micro:bit](#) (1)
- [Maker Tape](#) (1)
1/8" Wide
- [Crazy Circuits Piezo Speaker Chip](#) (1)

Step 1 — Connect the Piezo



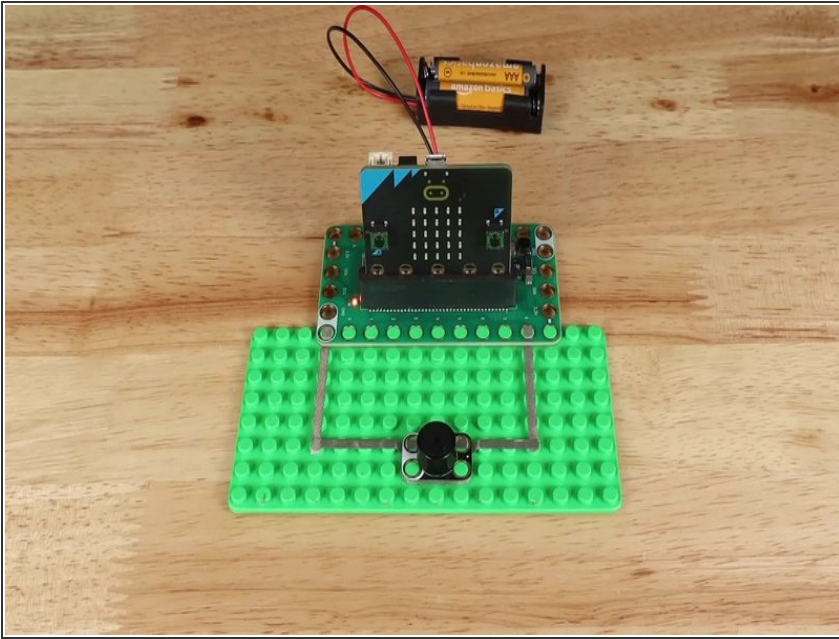
- We'll use **Maker Tape** to connect the Piezo to the Bit Board on a LEGO baseplate.
- The Piezo will connect to **Pin 8** and to **Ground** (GND).
- ☑ You'll notice the **Ground** on the Bit Board (as well as the Piezo and other Crazy Circuits components we'll use) is color coded **White**.

Step 2 — Load the Code



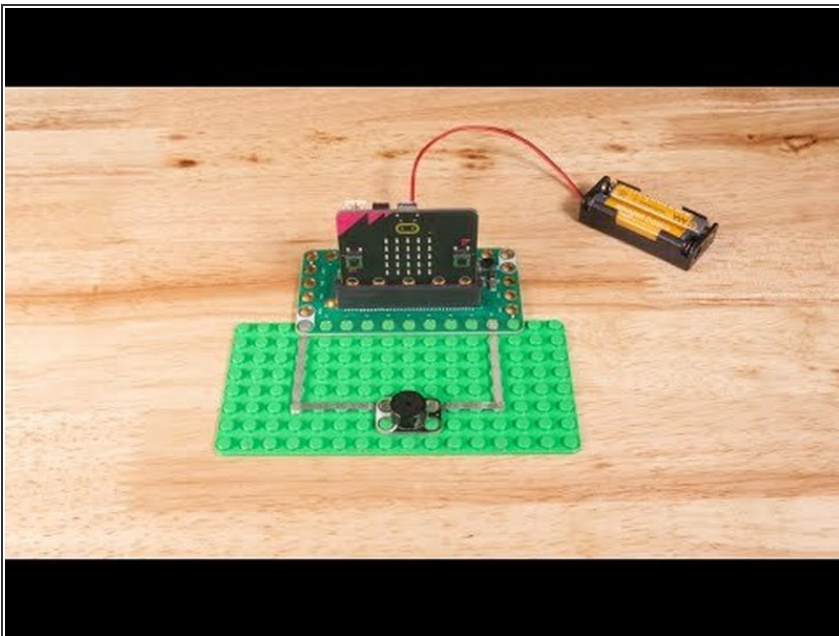
- If you've never used a micro:bit before you'll want to check out this guide: [Bit Board V2 Setup and Use](#)
 - We're going to load the following code for our **Piezo Tones** program: https://makecode.microbit.org/_XoAM1xXYE...
 - We'll play some various **tones**, with a pause between each one, and finally use the stop all sounds block to make sure the last one doesn't keep playing!
- i* Note that we've set our audio pin to **P8**, and also have the set built-in speaker block to **on**. This means the sound will play on the Crazy Circuits Piezo *as well as* the micro:bit's built-in piezo.

Step 3 — Test it Out!



- Once the code is loaded it should start running immediately.
- ① You can power the micro:bit via the USB cable you used to load the code or you can use a battery pack plugged into the Bit Board.
- The micro:bit will use the repeat block to play four tones four times, then stop all the sounds for 10 seconds, and repeat.

Step 4 — Follow Along



- Follow along with our recorded Live Stream!
- ① You can watch the full video of us walking through this project, along with explaining and exploring the code:
<https://www.youtube.com/live/3olw8CrFukM...>