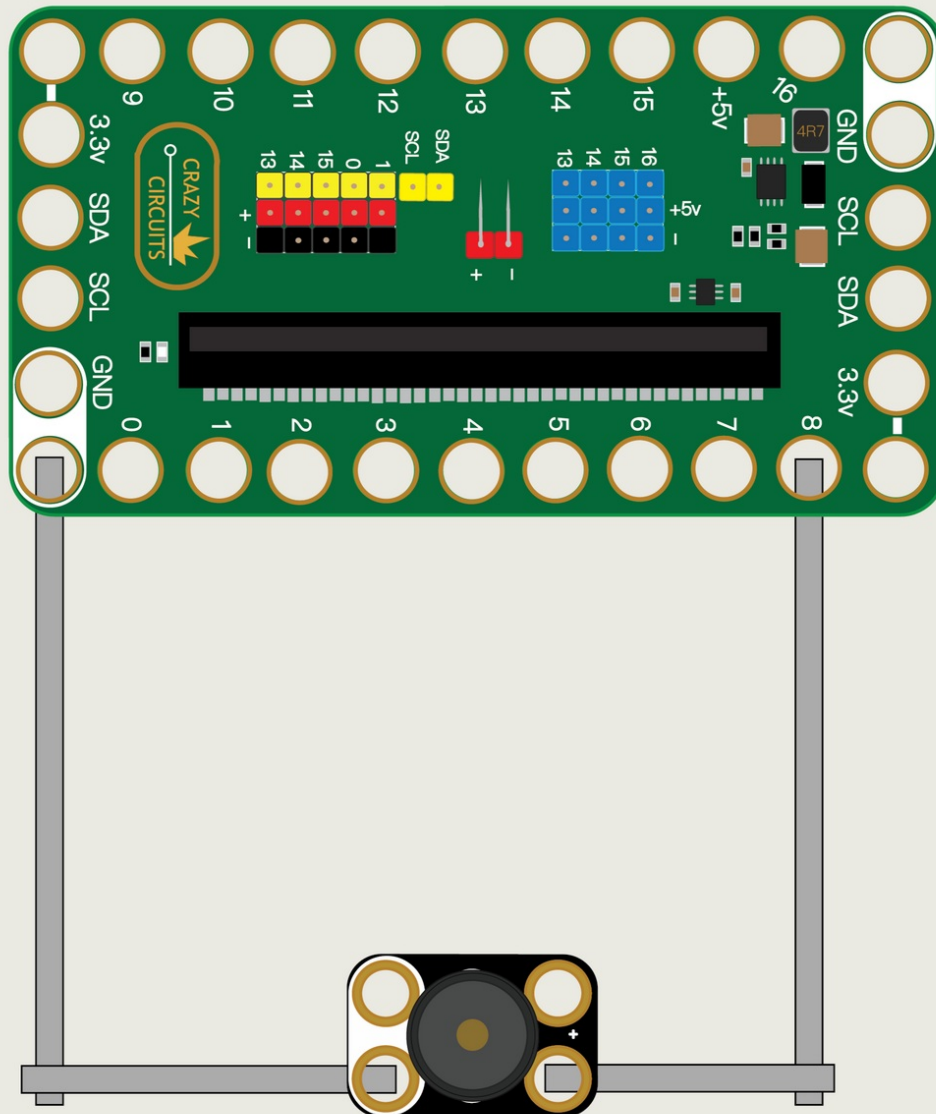




CH13-B - Piezo CC vs Built-in

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:

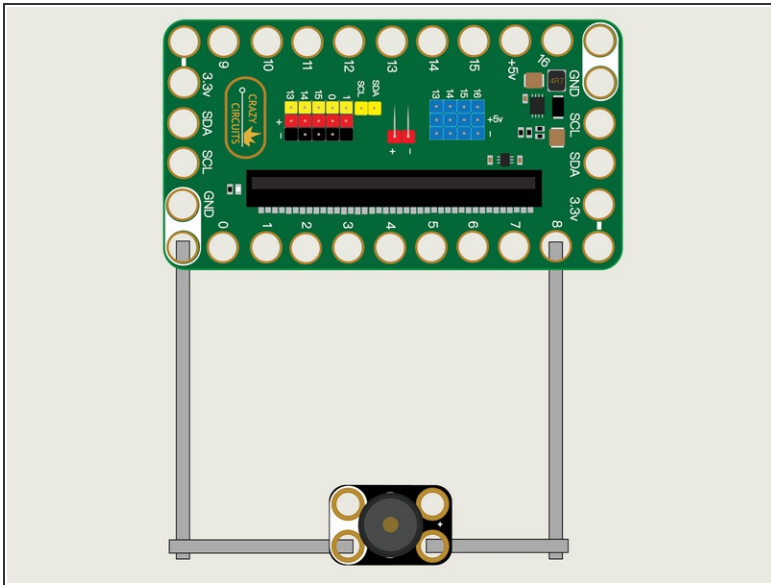
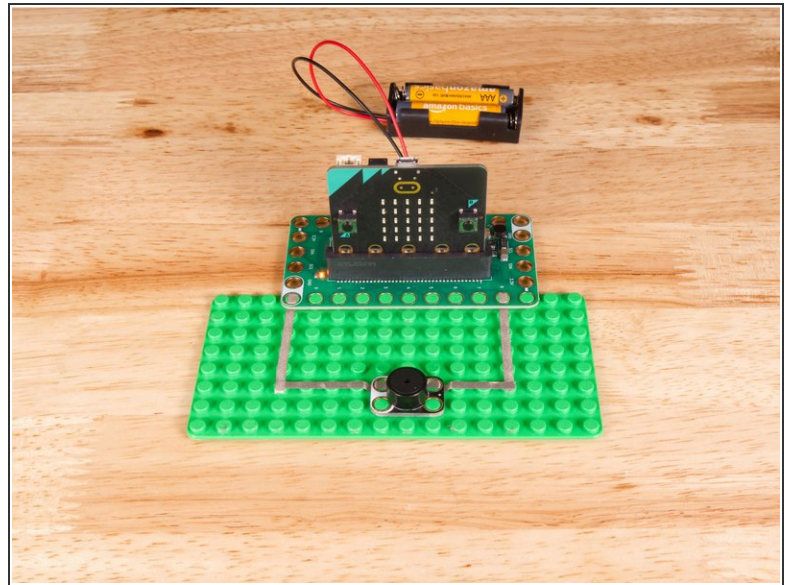
- [Computer](#) (1)



PARTS:

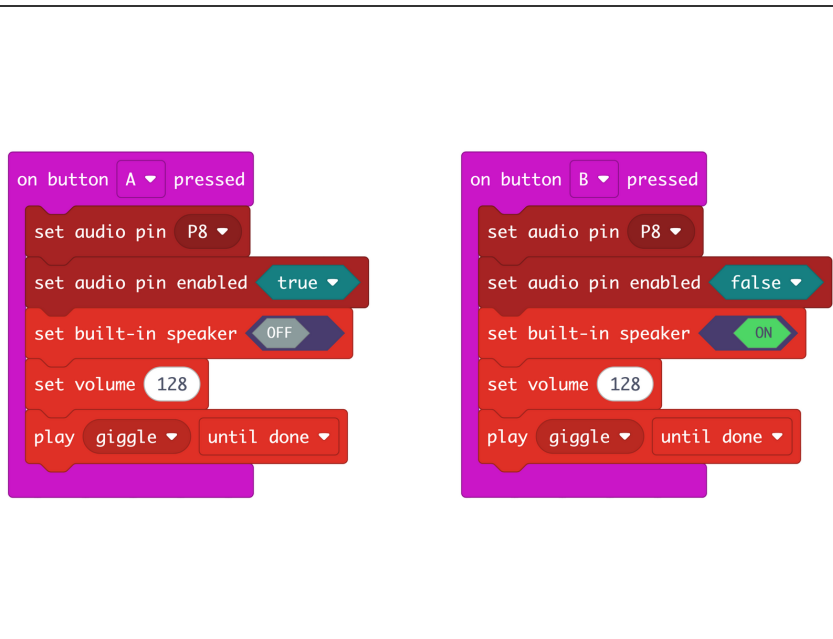
- [Crazy Circuits Bit Board](#) (1)
 - [micro:bit](#) (1)
 - [Maker Tape](#) (1)
- 1/8" Wide
- [Crazy Circuits Piezo Speaker Chip](#) (1)

Step 1 — Connect the Piezo



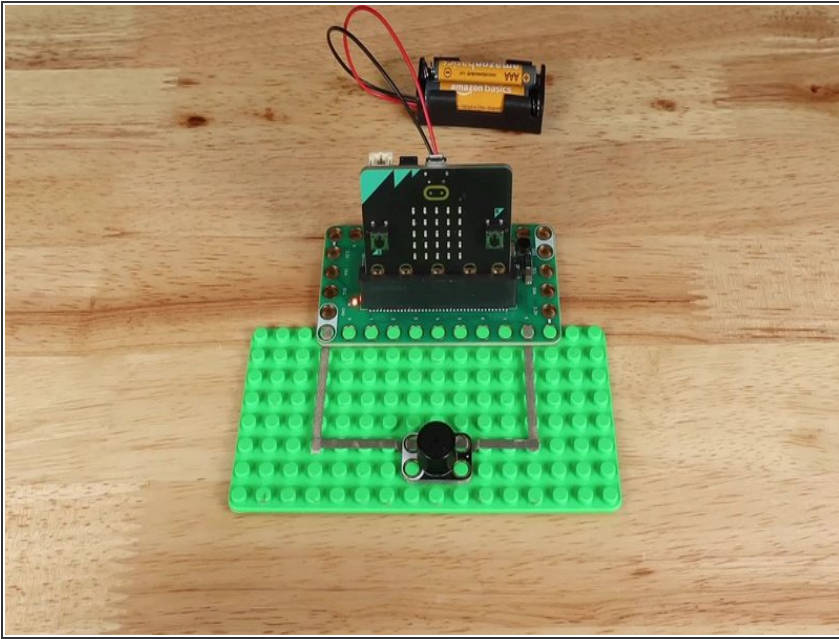
- We'll use **Maker Tape** to connect the Piezo to the Bit Board on a LEGO baseplate.
- The Piezo will connect to **Pin 8** and to **Ground** (GND).
- ☑ You'll notice the **Ground** on the Bit Board (as well as the Piezo and other Crazy Circuits components we'll use) is color coded **White**.

Step 2 — Load the Code



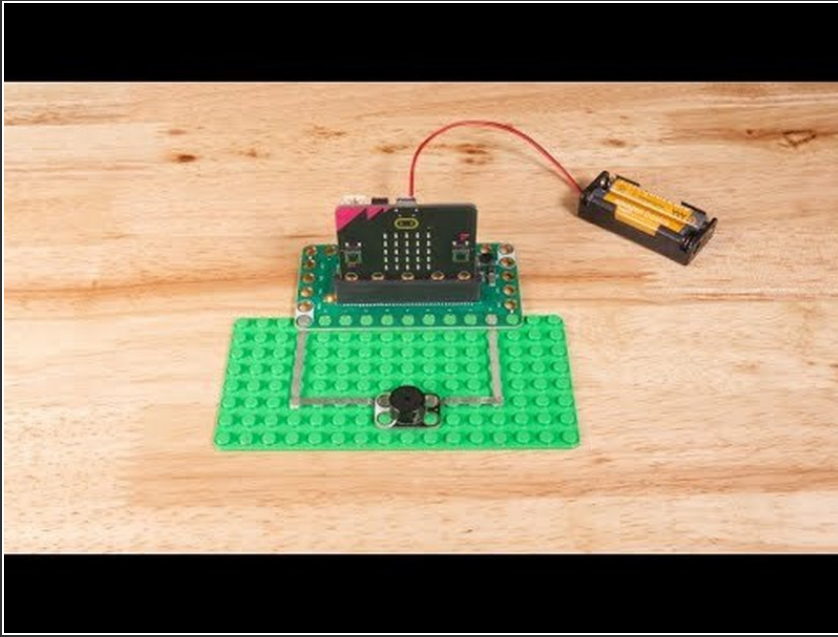
- If you've never used a micro:bit before you'll want to check out this guide: [Bit Board V2 Setup and Use](#)
- We're going to load the following code for our **Piezo CC vs Built-in** program:
https://makecode.microbit.org/_WF90o32Dd...
- ⚠ The micro:bit (since the release of version V2) has included a built-in piezo speaker on the back. This guide will show you how to use both the Crazy Circuits Piezo we've connected as well as the built-in piezo on the micro:Bit and how to choose between the two.
- ✦ It may be worth taking a quick look at the [set Audio Pin](#) page for more in-depth information.

Step 3 — Test it Out!



- Once the code is loaded it should start running immediately.
- ⓘ 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.
- Press the **A Button** on the micro:bit and a sound will play on the Crazy Circuits Piezo Speaker we connected with Maker Tape.
- Press the **B Button** on the micro:bit and a sound will play on the piezo speaker on the back of the micro:bit
- ✎ The built-in piezo may be a bit louder. You can adjust the volume in the code to try making the volumes equal to each other if desired.

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...>