

**Purpose:** The purpose of the Atari Punk Synthesizer project was to learn how to work with breadboards in order to create a circuit that is controlled by a battery, a switch, and volume nozzles that will make a sound.

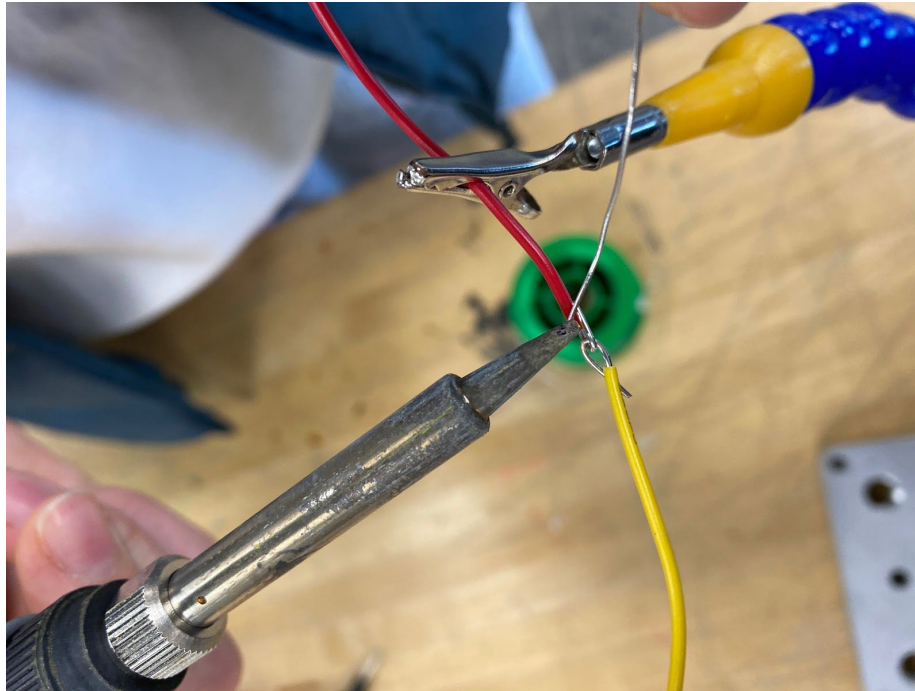
1. We first started by knowing out our different parts, labeling each of them with the proper name. This is important because it helps keep our parts organized, understand what each of them does in the project as a whole, and make sure that we do not have any missing parts. For example, when I knowled out my project I realized that I did not have the chip that goes into the breadboard.
2. We then went home and watched two videos and took notes. First on soldering, and second on Multimeters. This helped us understand how to work each of these gadgets and to ensure that we know the safety protocol prior to starting.
3. Next, we watched videos in class about testing potentiometers, stripping wires, and another video on soldering.
4. After this, we looked at the one final video on schematics to ensure that we knew how to read a breadboard and place the wires, resistors, and capacitors in the correct places.
5. Finally, we began the process of putting together our breadboard.

One setback I had was that when my breadboard was complete, it still was not working. I went through the process of making sure my battery worked (it did) and my chip worked (it did). I finally decided that I needed to look at a schematic to figure out if any of my wires were in place. I realized that in fact I had a whole wire missing and another one in the wrong place! I fixed these two and my breadboard started working.

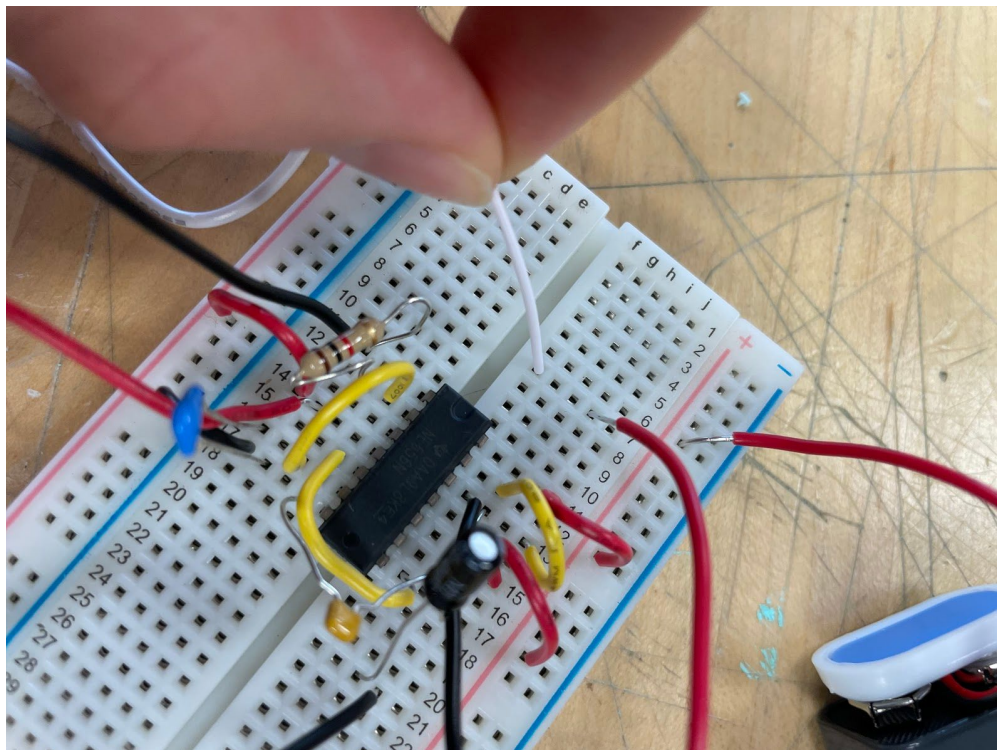
A collection of electronic components is displayed on a white background, each with a handwritten label below it:

- 5K  $\Omega$  potentiometer**: A single potentiometer with a silver shaft.
- 1M  $\Omega$  potentiometer**: Two potentiometers side-by-side.
- Bread Board**: A standard white breadboard.
- 8  $\Omega$  speaker**: A small circular speaker in its original packaging.
- Four metal washers/nuts**: Four small metal fasteners arranged in a square.
- Battery GND**: A blue and black cable connected to a battery.
- 9V battery**: A rectangular 9-volt battery.
- Switch**: A small black push-button switch.
- Two DIP switches**: Two small black integrated circuits with pins.
- 100 nF ceramic capacitor**: A small yellow component with two leads.
- 100 pF electrolytic capacitor**: A larger yellow component with two leads.
- 1k  $\Omega$  resistor**: A long, thin resistor with color bands.
- Perf Board**: A perforated circuit board.

## Knowled Parts

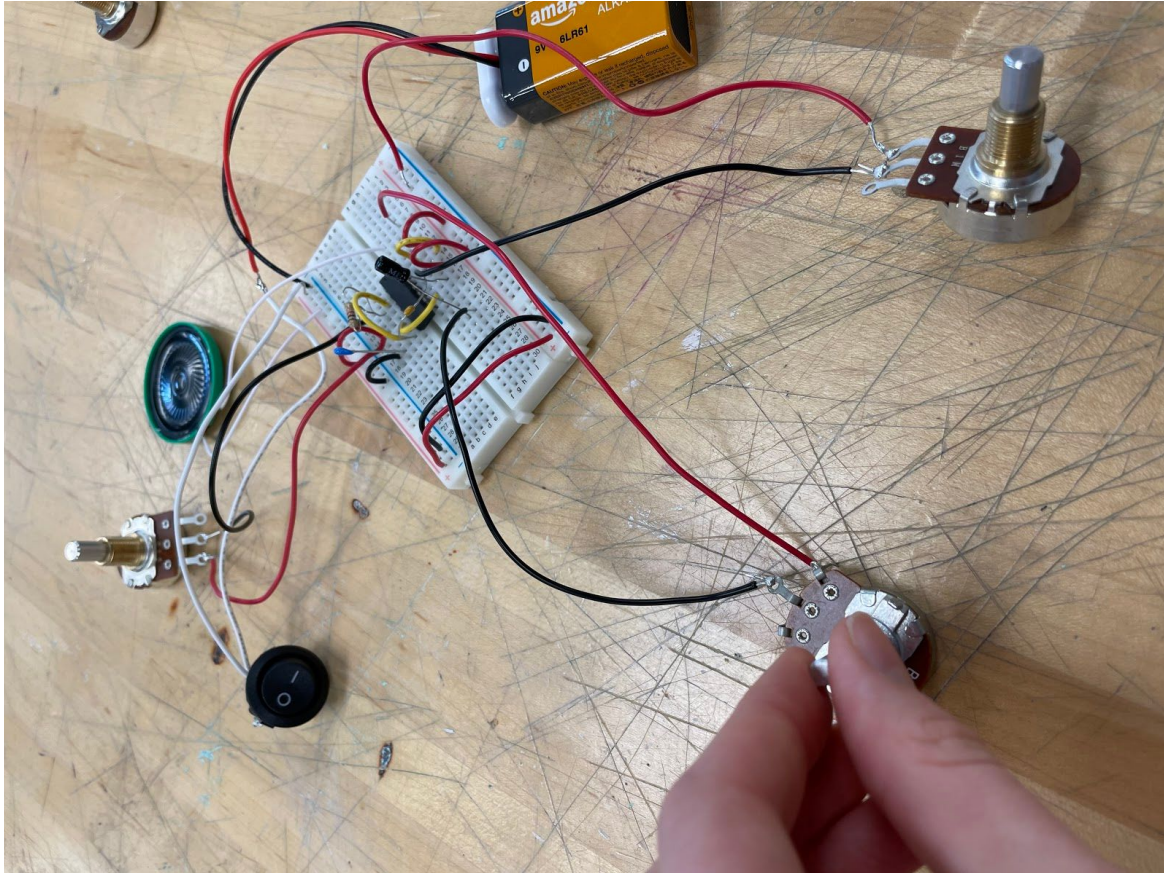


**Soldering Wires Together**



**Inserting Wires**





**Playing Around With The Volume**

**Here is the link for my working breadboard with sound:**

[https://drive.google.com/file/d/1xMWiv\\_uM\\_02\\_YaKdgkPH\\_CS68Vne3K2V/view?usp=sharing](https://drive.google.com/file/d/1xMWiv_uM_02_YaKdgkPH_CS68Vne3K2V/view?usp=sharing)