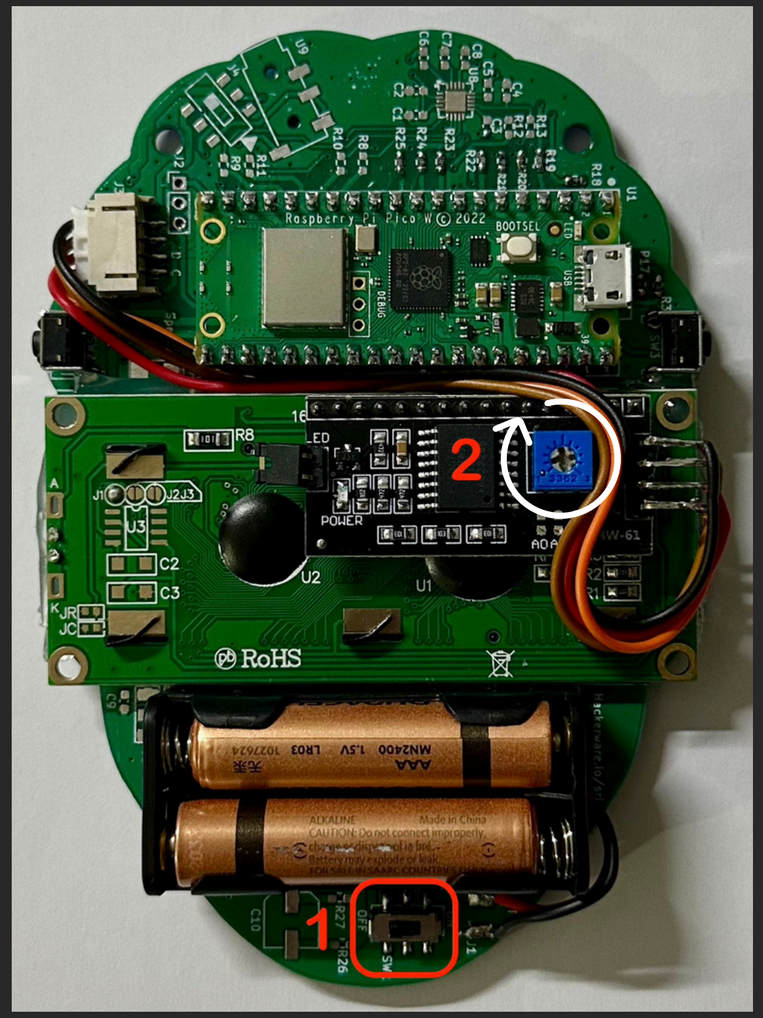
THE BADGE

BOOT-UP

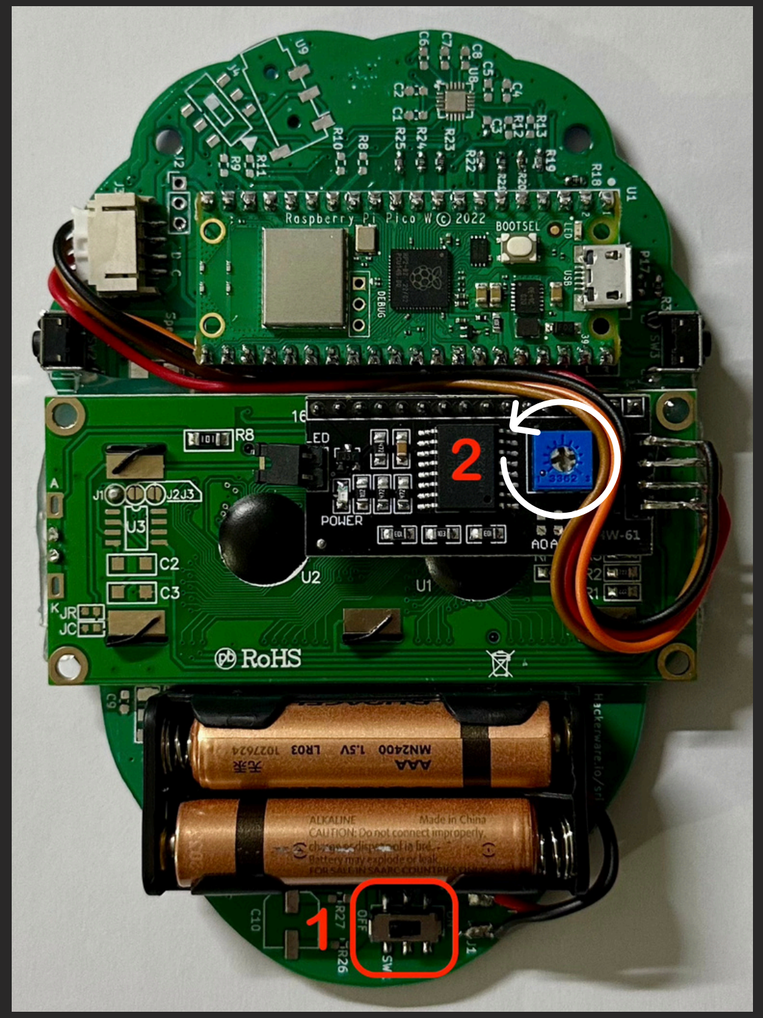


1. Turn on the badge using slide switch.
2. If the display lights up but does not show any text, please rotate the potentiometer dial clockwise all the way using screwdriver or any basic tool until the text is visible. It could be possible that the text is dimly visible due to insufficient battery output.

ON STATE

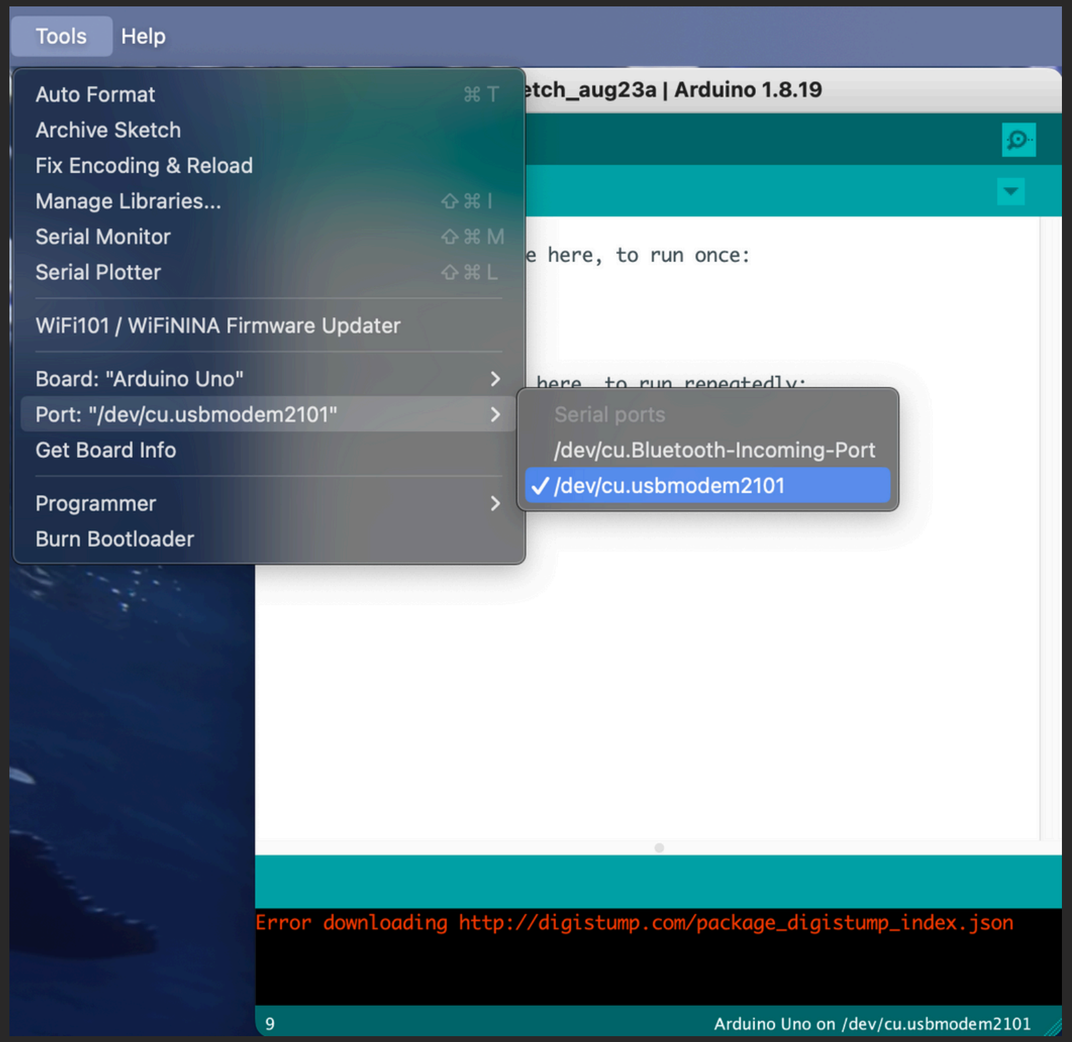
1. Default badge screen with SAIKO characters on the first line.
2. Reaction game and LED animation signs on the second line.
3. Press left side switch for the game and right side switch for the LED show.

CTF INTERFACE



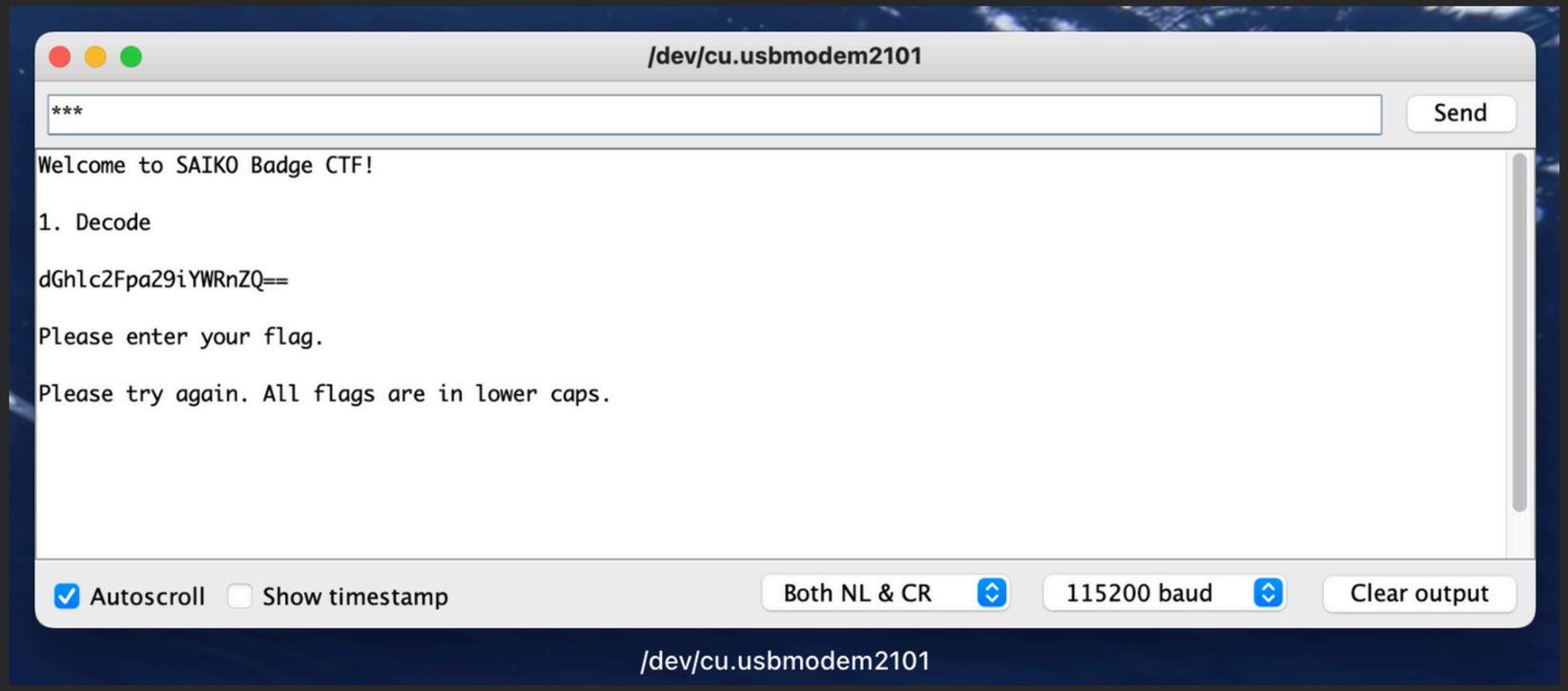
1. Turn OFF the badge using slide switch. Then connect the micro USB cable to RPi.
2. If the display lights up and shows solid white blocks, please rotate the potentiometer dial anti-clockwise half the way using screwdriver or any basic tool until the text is visible.

CTF INTERFACE



1. Download/Open Arduino IDE.
2. Select the correct port from Tools menu.
3. Then open Serial Monitor from Tools menu.

CTF INTERFACE



1. On the bottom side adjust the settings - “Both NL&CR” and “115200 baud”.
2. Type and send *** (three star signs) in the serial monitor to initiate the CTF.
3. The CTF Challenge is then printed on the screen.
4. Three challenges will appear in sequence one after another.
5. The flags are to be typed as is in small caps only.

REACTION GAME

1. In default boot-up screen, press the left side switch to begin the reaction game.
2. Reaction game glows 6 LEDs in sequence with random delay of which one LED is red.
3. The goal is to press the right side switch to catch the red LED glowing at precise moment.
4. The game presents a challenge as it restarts after every attempt with unpredictable time delay.

LED MODE

1. In default boot-up screen, press the right side switch to begin the LED mode.
2. LED mode glows LEDs in a sequence with a variety of colours in loop.
3. Meant to use like a screensaver feature when the badge is not in use.

NOTES ON FIRMWARE 1.0

Upgrades

- Blue layer topped with varnish coating to refine the quality and finish.
- Reaction game made much more fun with random delay blinking.
- Integrating LCD with the serial monitor CTF.

Known Limitations

- Use of 2 AAA cells might be insufficient to show the text brightly on LCD. 3 AAA cells were avoided due to them not fitting on the board. More research in this area ongoing to figure out a solution.
- Required to rotate potentiometer between CTF and battery power use. This might be same solution as above.