# PortalGun

# \*\*\*\*\*All resources used were originally found at:

# <https://www.thingiverse.com/thing:1100601> and from there -

# <https://github.com/pomeroyb/PortalGun>

# I have altered the pin-outs as necessary to allow for more sounds and for better organization of the wiring\*\*\*\*\*

Code to control a Portal Gun (From Rick and Morty)

##Libraries Download and install the following libraries:

* [ClickEncoder](https://github.com/0xPIT/encoder)
* [Adafruit\_GFX](https://github.com/adafruit/Adafruit-GFX-Library)
* [Adafruit\_LEDBackpack](https://github.com/adafruit/Adafruit-LED-Backpack-Library)

## Pin Definitions

If you deviate from the following definitions, you will have to change the firmware to account for that.

| **LED Display** | **Trinket Pro Pin** |
| --- | --- |
| SCL | A5 |
| SDA | A4 |
| GND | GND |
| Vcc | 5V |
| Vi2c | 5V |

| **Rotary Encoder** | **Trinket Pro Pin** |
| --- | --- |
| A | A1 |
| B | A0 |
| GND | GND |
| Button | A2 |

| **LED** | **Trinket Pro Pin** |
| --- | --- |
| Top Bulb | 13 |
| Front Right | 12 |
| Front Center | 11 |
| Front Left | 10 |

## Installing Firmware

First, [set up the Arduino IDE according to Adafruit](https://learn.adafruit.com/introducing-pro-trinket/setting-up-arduino-ide). Connect your Trinket Pro and make sure the bootloader is running, then click upload.

## Button Behavior

The rotary encoder has a click button, and we can detect a single click, a double click, and a hold.

* Single Click : Wakes the Trinket Pro from low power mode
* Double Click : Reset to dimension C137
* Hold : Turn off LEDs and put the Trinket Pro into a low power mode.

##Installing SFX The main branch doesn't have SFX support. Use the SFX branch to test this out (I found that the speaker inside the case was too quiet to hear.)

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| **FX SoundBoard** | **Trinket Pro Pin** | | **Sound Effect Dimension Location**  For these locations you can use any sound file you want, I used VLC media files (.OGG) per the specifications by Adafruit |
| --- | --- | --- | --- |
| 0 | | 0 | C136 – this is the value entered on the LED display |
| 1 | | 1 | C135 |
| 2 | | 2 | C134 |
| 3 | | 3 | C133 |
| 4 | | 4 | C132 |
| 5 | | 5 | C131 |
| 6 | | 6 | C130 |
| 7 | | 7 | C129 |
| 8 | | 8 | C128 |
| 9 | | 9 | C127 |

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##Installing SFX You should be able to just connect the FX board to the computer, and drop the files in the "sfx" folder onto it. The files do follow a naming convention ([see here](https://learn.adafruit.com/adafruit-audio-fx-sound-board/triggering-audio)), so don't change the file names unless you know what you're doing.