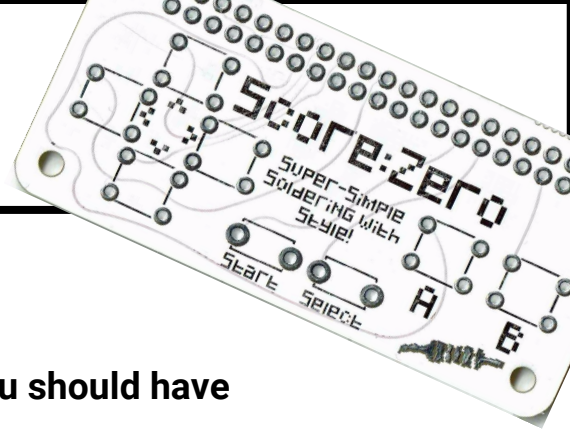


# Getting Started with Score:Zero



## Part 1: Assembly

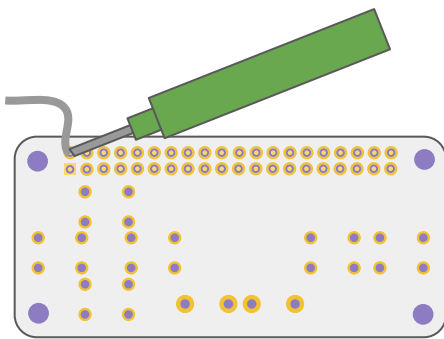
Before you begin, check you have everything you need. You should have

- 1 white PCB (circuit board)
- 4 square black buttons
- 2 square red buttons
- 2 small rectangular black buttons
- 1 2x20 female header (black with gold pins sticking out)

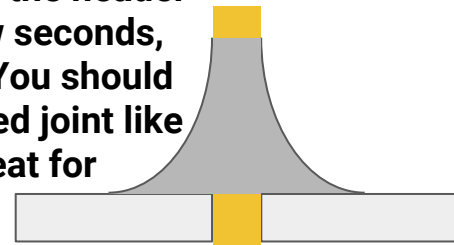
You'll also need a few tools:

- A soldering iron with a fine tip for electronics
- A reel of electronics solder
- A damp sponge or some wire wool to clean the iron on before you use it
- Some flush cutters (optional) to cut off any sticky-out bits of solder
- Blue-tack (to support the PCB whilst you're soldering)

1

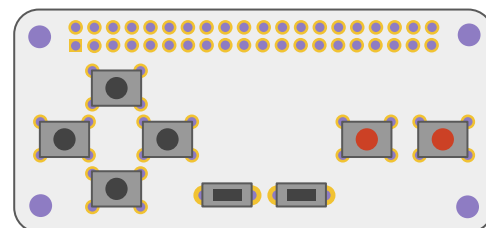


The first step is to solder on the header pins to the PCB. Use some blue-tack to support the PCB so that it sits level on the header. Use the soldering iron to heat up the header pin and the pad for a few seconds, then feed the solder in. You should get a nice volcano-shaped joint like shown on the right. Repeat for the other pins.

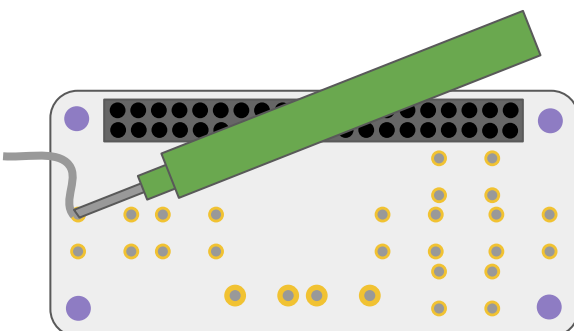


2

Next, clip the buttons into the PCB. The legs should fit through the holes, but you might need to bend them out or in a bit with your finger. They should clip in nicely, and stay in the board without falling out. If they don't stay, use a bit of sticky tape to secure them while you solder.



3

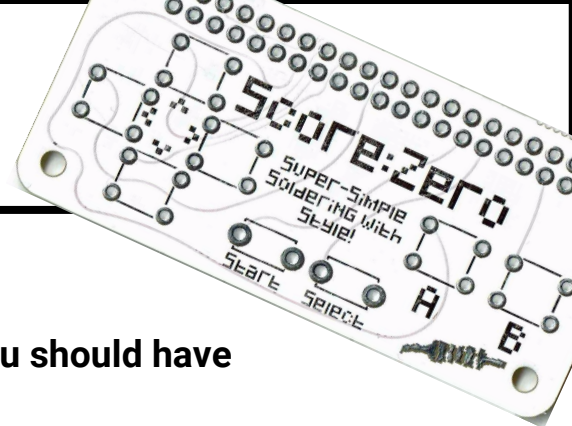


Use the soldering iron and solder to attach the buttons to the PCB. Do one pin first, and make sure the button's laying flat before doing the other ones.

Trim the button leads with the flush cutters if you need to.

Well done, your assembly is complete! See the next page for software...

# Getting Started with Score:Zero



## Part 2: Software

Before you begin, check you have everything you need. You should have

- A soldered Score:Zero PCB
- A Raspberry Pi with header pins attached - Score:Zero works best with the Pi Zero and Zero W but you can use it with any of the following: A+, B+, 2, 3, Zero or Zero W)
- An SD card with Raspbian OS loaded on it (you can find instructions for this on raspberrypi.org)
- A power supply, mouse, keyboard and screen set up with your Raspberry Pi

1

Turn off and unplug your Raspberry Pi, and plug the Score:Zero board in on top. Make sure it sits properly on all of the the pins, and there aren't any sticking out either side.

2



Turn on the Raspberry Pi and wait for it to boot. Make sure it's connected to the internet. Then, click the button at the top of the screen, that looks like the one on the left. Type the code below, all on one line. This will download all the software examples for Score:Zero. You only need to type the white code - the blue and green is just already there.

```
pi@raspberrypi: ~$ git clone https://github.com/wonkyresistor/scorezero
```

3

Now you've got a shiny new 'scorezero' folder on your Raspberry Pi! To navigate to it, and test your Score:Zero out run the following commands:

```
pi@raspberrypi: ~$ cd scorezero/  
pi@raspberrypi: ~$/scorezero/ sudo python3 test.py
```

Press the buttons to see if it works! Use ctrl-C to exit.

4

To let you use Score:Zero as a keyboard or mouse, you need to install the uinput Python library. This lets the code act like a keyboard. Just run:

```
pi@raspberrypi: ~$ sudo apt-get install libudev-dev  
pi@raspberrypi: ~$ sudo pip3 install python-uinput
```

To run the keyboard code just run the code from step 3, but replace test.py with HID\_keyboard.py or HID\_mouse.py. To make it run automatically on startup, run:

```
pi@raspberrypi: ~$ sudo nano /etc/rc.local
```

and add the code: `sudo python3 /home/pi/scorezero/HID_keyboard.py &` above the `exit 0` line. Press control+X, then Y, then enter to save the changes. Reboot your Raspberry Pi and the code will appear like a keyboard!

Well done! You're all sorted for retro gaming on your Raspberry Pi. If you're stuck, let us know on Twitter [@wonkyresistor](https://twitter.com/wonkyresistor), or email [help@wonkyresistor.com](mailto:help@wonkyresistor.com). Happy making!