Seal Enthusiast presents:

The FOSS DOT User guide

Original design and user guide by:

Blue Printz Tactical

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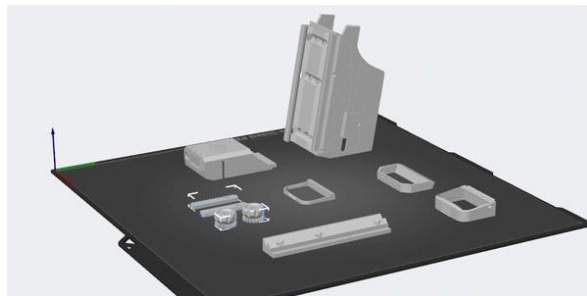
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Printing

1.

Use normal temps and settings as you filament provider suggests (I recommend PLA+ for your filament)

2.

Below is the proper orientation of the prints, make sure they match!

3.

Start printing!

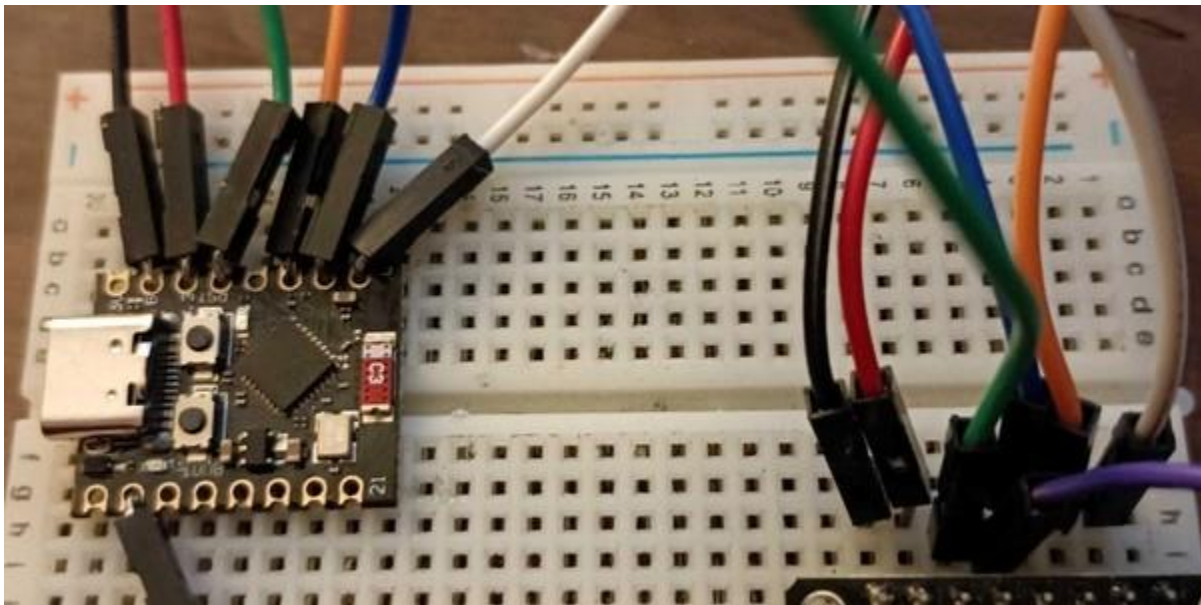*THE BOLTS USED FOR THE COGS AND RAIL ATTACHMENT:

6-32 1/2 for the cogs

10-32 1 and 1/2 for rails

Wiring

ST7735 Wiring

Wiring is simple, follow the esp32 super mini pinout sheet provided for sclk(scl) and mosi(sda). In the code set which pins you want to use for CS,DC, and Reset. Then of course vin goes t0 3.3, and ground to gnd.

More Wiring

From the 5V pin on the esp32, connect a wire to the left or right outside pin of the switch.

Connect a wire between the middle pin of the switch and the Out+ side of the TP4056.

From the Gnd pin on the TP4056 connect a wire to the ground wire on the esp32.connect the battery positive wire(red) to the B+ on the TP4056.

Connect the battery negative wire(black) to the B- on the TP4056.

For the button connect a wire to the 3.3v line. Attach this wire to one pin on the button.

Connect a wire from pin 21 on the ESP32 to the pin diagonally opposite, or the one next to the power pin, on the button.

Connect your pin on the button that is connected to pin 21, with a 10k ohm resistor.Attach the other side of the resistor to the ground wire off of the esp32.

Optionally if you would only like to use 1 single port for charging and data, connect a wire from the 5v pin on the esp32 and wire it to the +in next to the usb port on the tp4056. then using the esp32 port will charge the battery with the tp4056.

Time to Code!

Keep in mind you may need to initialize a different tft if your colors are inverted!
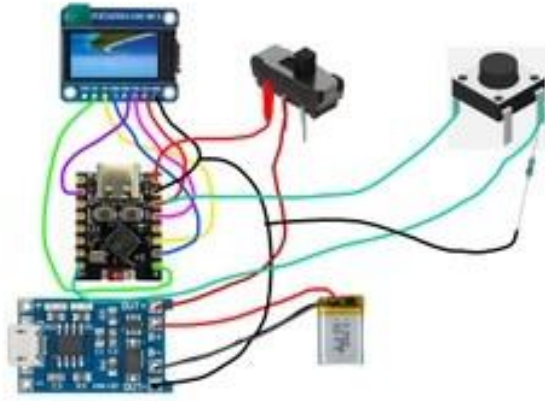
FOSS DOT Optics Operation

Charging

Remove the slip on the ring on the back. Once removed, you can now lift out the main carriage, make sure to line the battery back up with its slot when reinserting! On the exposed bottom of the carriage are 2 usb ports, one on the blue board and one on the black esp32. Connect to the blue tp4056 to charge, if you so desire to reprogram, plug in to the esp32 and insert the usb cable to your computer.

Reprograming

I used Arduino IDE so it should be easy enough for you as well.

https://github.com/urBoyBlu88/BluPrntzTtcl
Here is the code, I would recommend swapping the images that are green. Blue and white images work best in all light conditions. I'm still testing other color configurations. You can download my image .h files from this same git
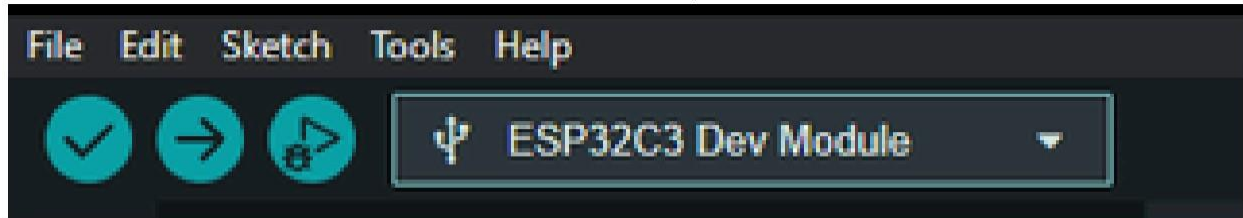
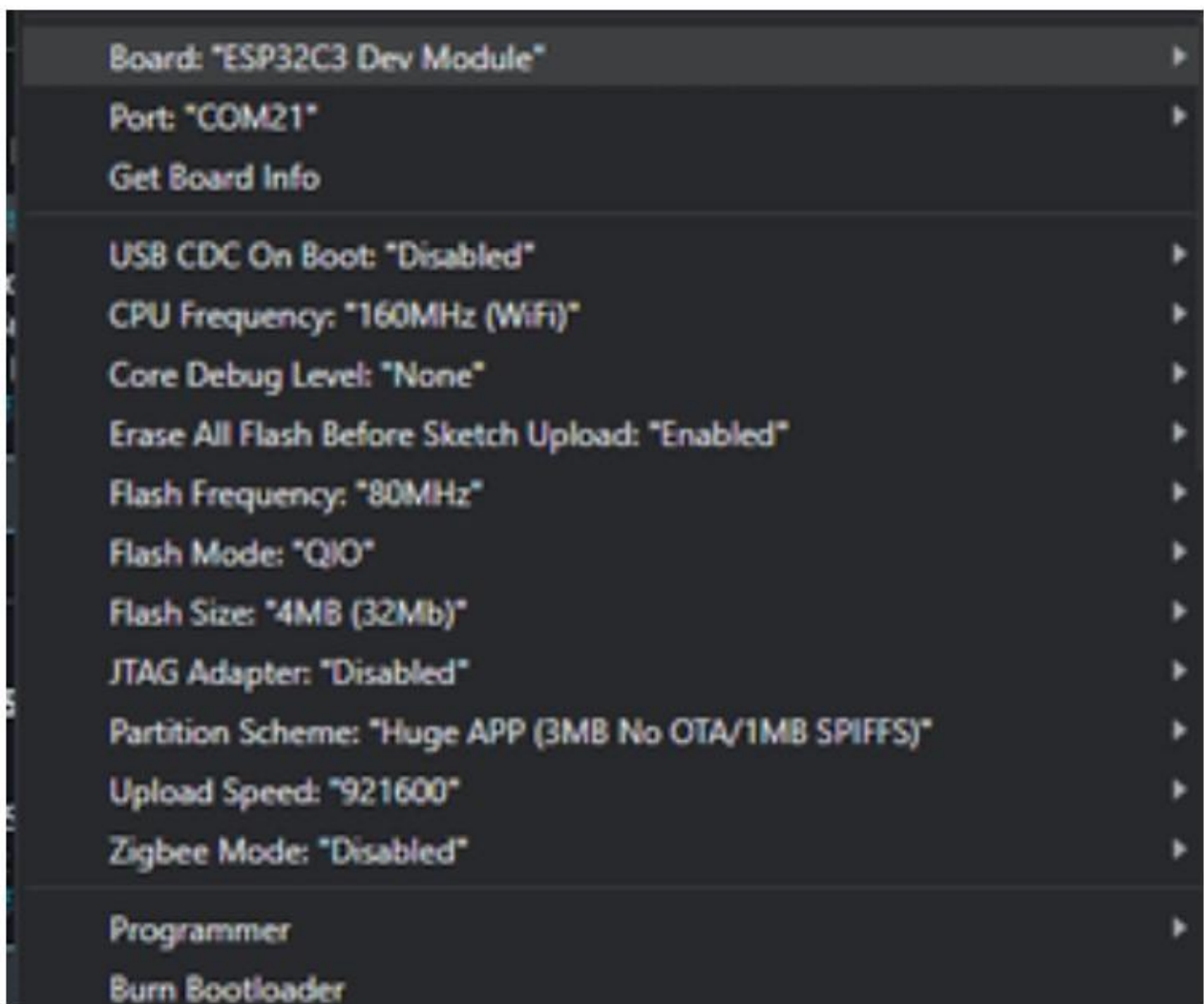repo. download this board manager, the same version is probably best.
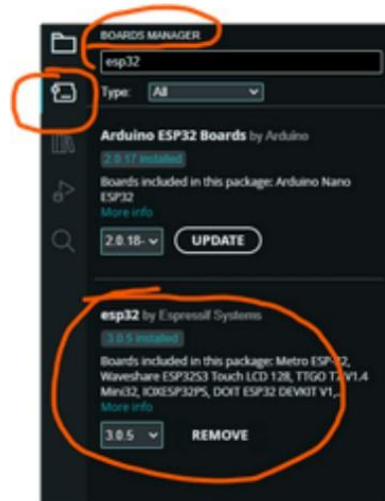
Next add the adafruit st7735 and st7789 lib

The correct board to select is the esp32 c3 dev board

Below is a example upload config

Board: "ESP32C3 Dev Module"	▸
Port: "COM21"	▸
Get Board Info	
USB CDC On Boot: "Disabled"	▸
CPU Frequency: "160MHz (WiFi)"	▸
Core Debug Level: "None"	▸
Erase All Flash Before Sketch Upload: "Enabled"	▸
Flash Frequency: "80MHz"	▸
Flash Mode: "QIO"	▸
Flash Size: "4MB (32Mb)"	▸
JTAG Adapter: "Disabled"	▸
Partition Scheme: "Huge APP (3MB No OTA/1MB SPIFFS)"	▸
Upload Speed: "921600"	▸
Zigbee Mode: "Disabled"	▸
Programmer	▸
Burn Bootloader	

Bluetooth Windage and Elevation

On your phone, Download this app,

https://play.google.com/store/apps/details?id=com.zhctwh.ble_tester

With your Foss Dot powered ON. Bluetooth on your phone turned ON, and location on your phone turned ON; open the app and hit the scan button at the bottom.

Search for "UglyOptic" and select it. Then click the last option on the list that says "service" and has a bunch of letters and numbers.

Next tap in the write area to enter text. Set the check box from hex -> ASCII. You want it to be ASCII.

Here are your codes to enter for W&E on the

(I hope they are as simple as I think they are!)

!* all entered letter should be lowercase *!

l – enter lowercase 'L', your reticle should shift left

r – enter lowercase 'R', your reticle should shift right

u – enter lowercase 'U', your reticle should shift up

d – enter lowercase 'D', your reticle should move down

m – enter lowercase 'M' your reticle should center on screen.

Lens info

The Lens Used is Length 34mm Width 24mm Thickness 2.74mm Special-shaped beam splitting mirror lens.

Lenses are removable if you wish to change the view of the reticle on the lens.

OR simply if you need to replace the lens.

[(The lens used)](#)
(From [alibaba](#) with love)

If you have any questions or concerns at all, please do not hesitate to reach out!

We are always happy to help however we can here at Blue Printz Tactical!