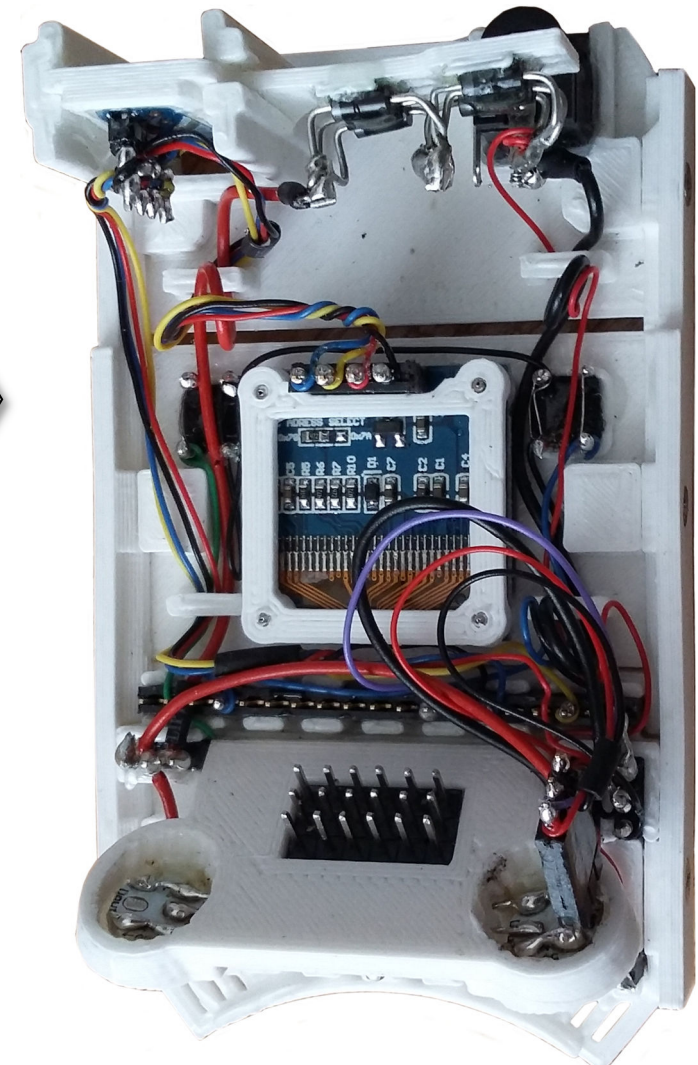
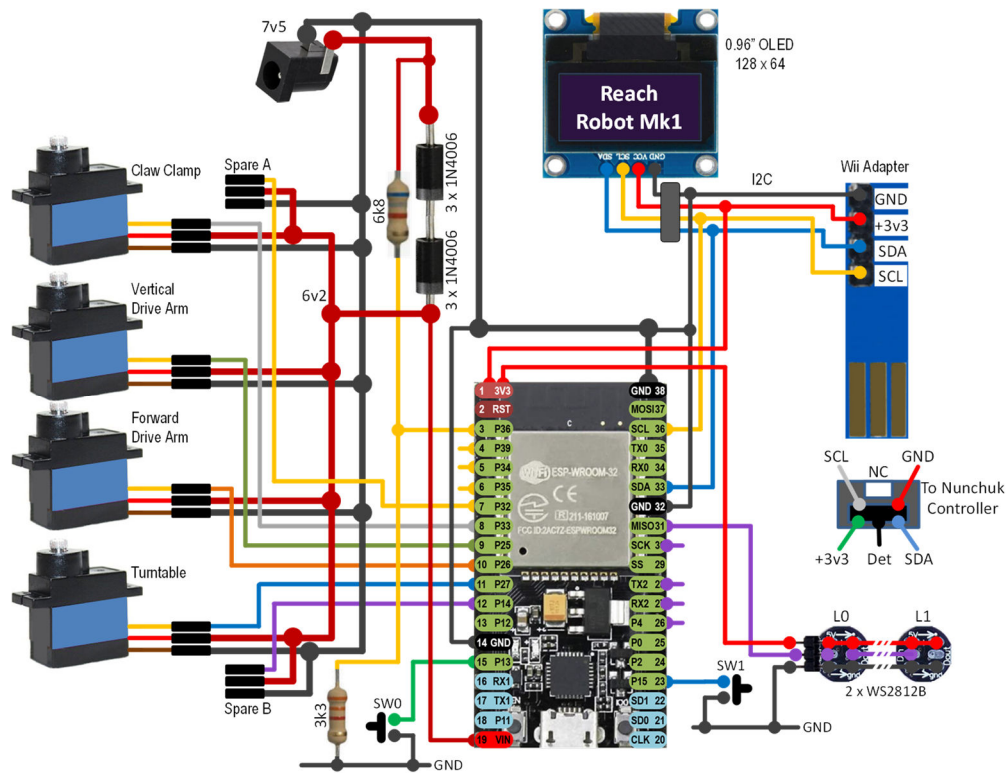
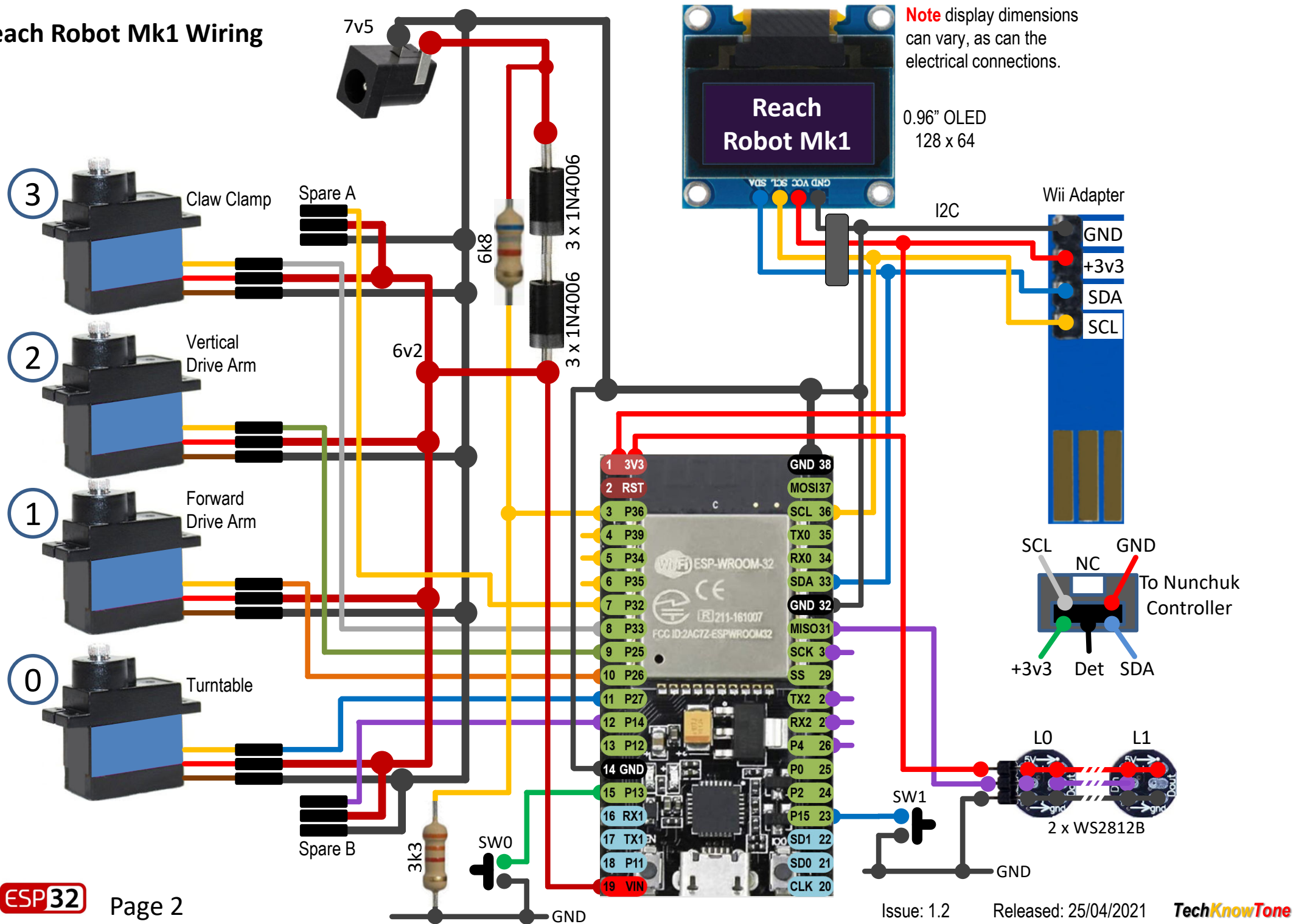


Reach Robot Mk1

Circuits & Wiring

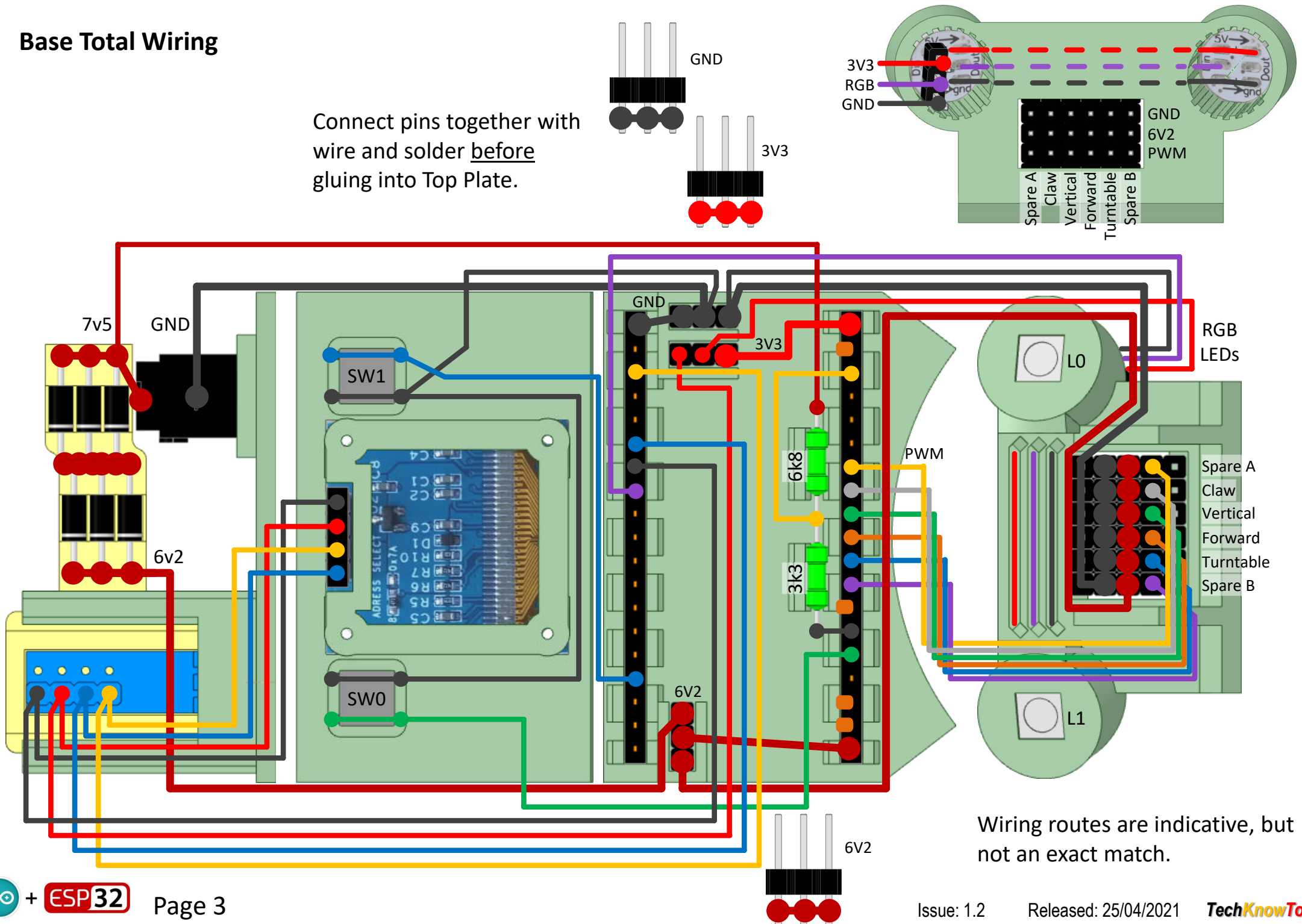


Reach Robot Mk1 Wiring



Base Total Wiring

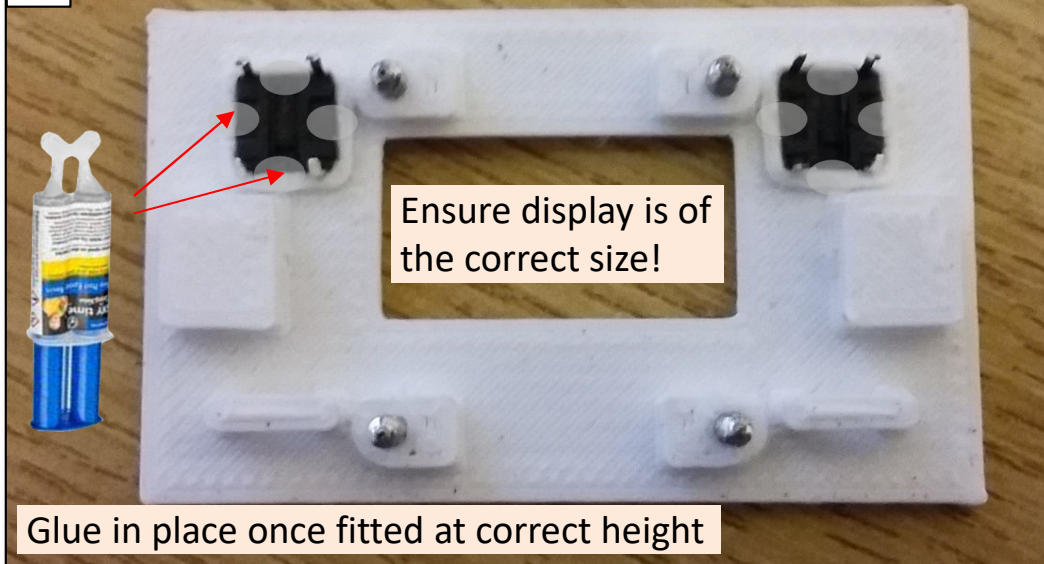
Connect pins together with wire and solder before gluing into Top Plate.



Wiring Sequence

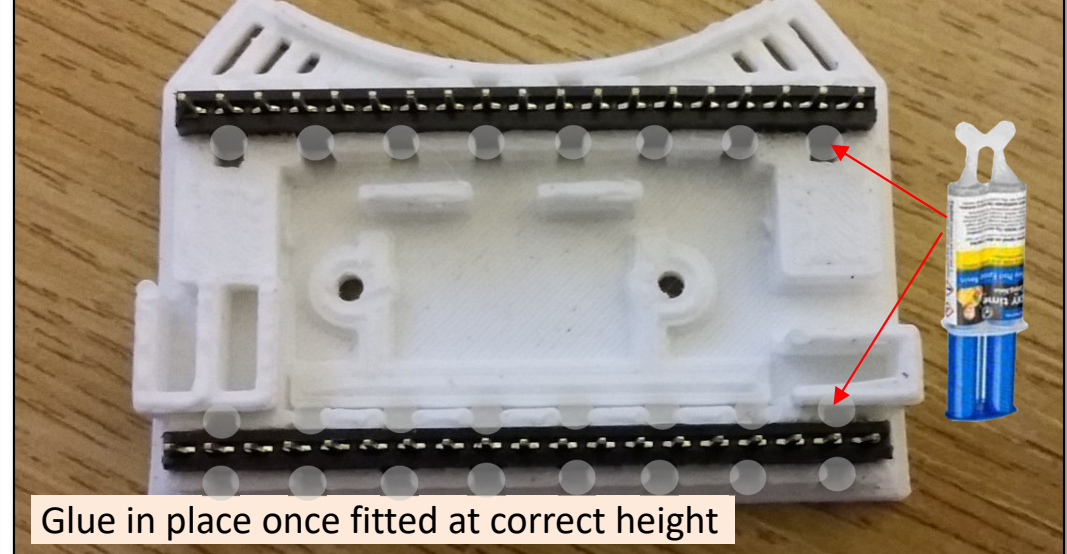
01

Mount the button switches in the fascia plate



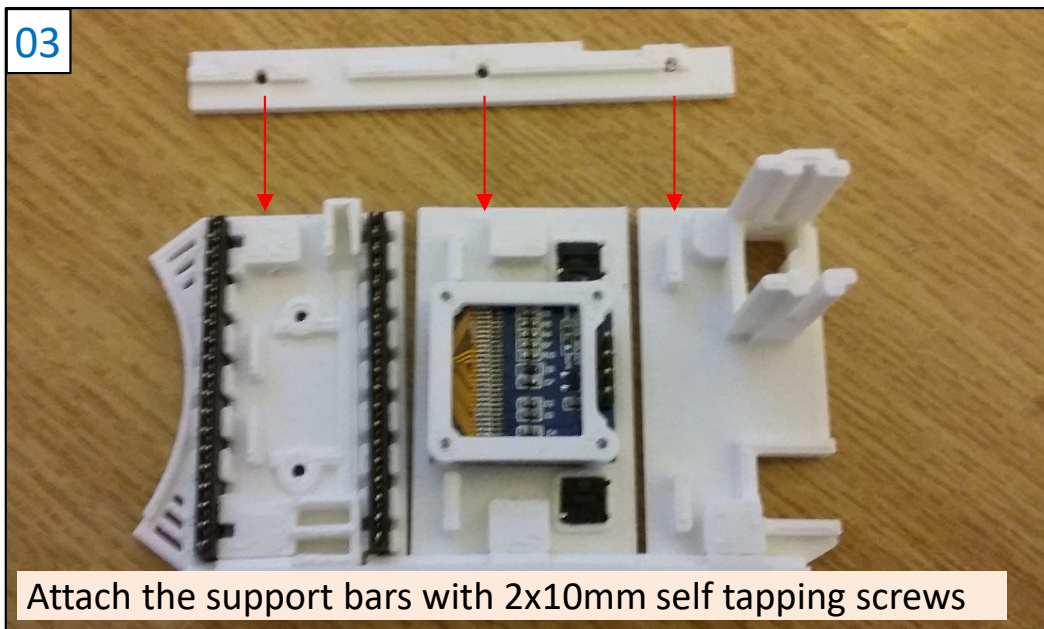
02

Mount socket strips for the micro in the top plate



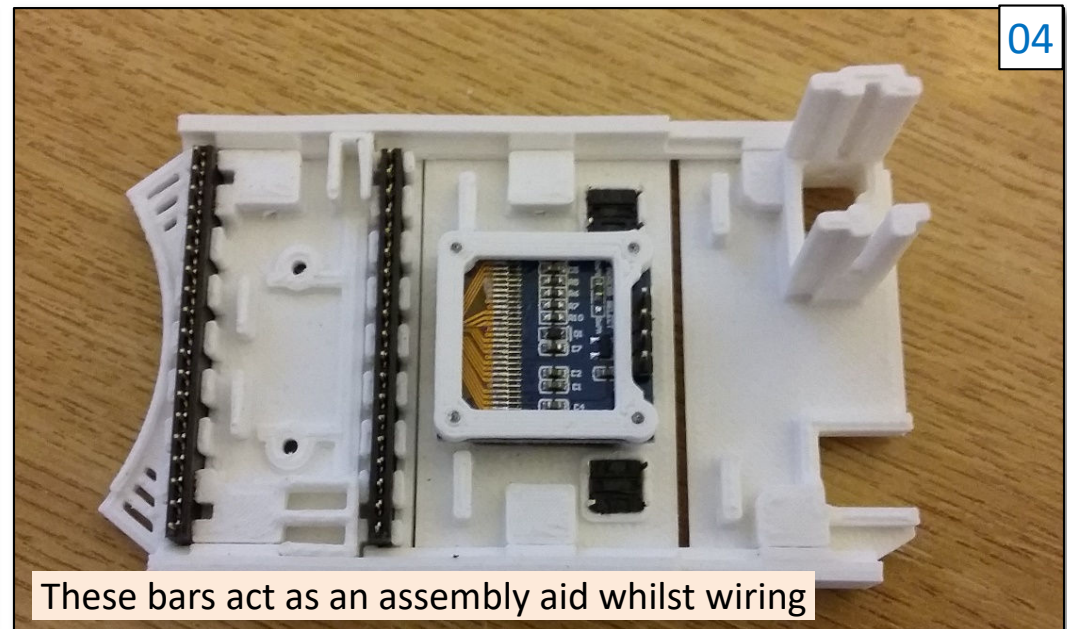
03

Attach the support bars with 2x10mm self tapping screws



04

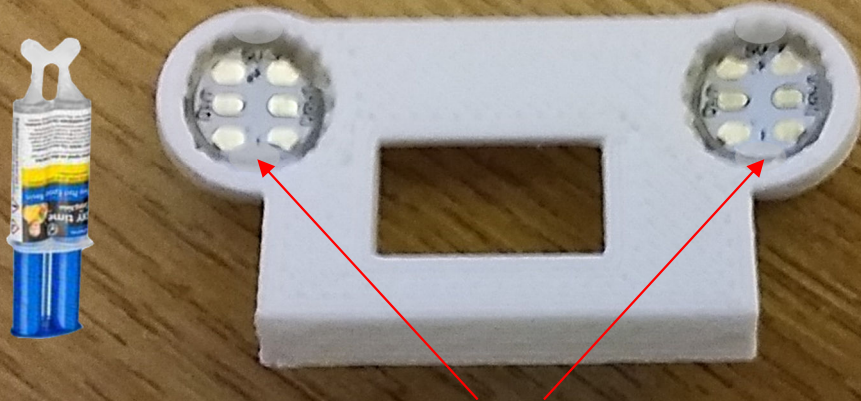
These bars act as an assembly aid whilst wiring



Wiring Sequence

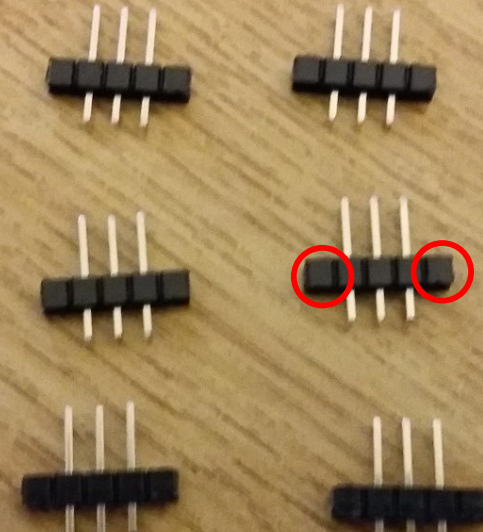
05

Avoid getting glue on contacts



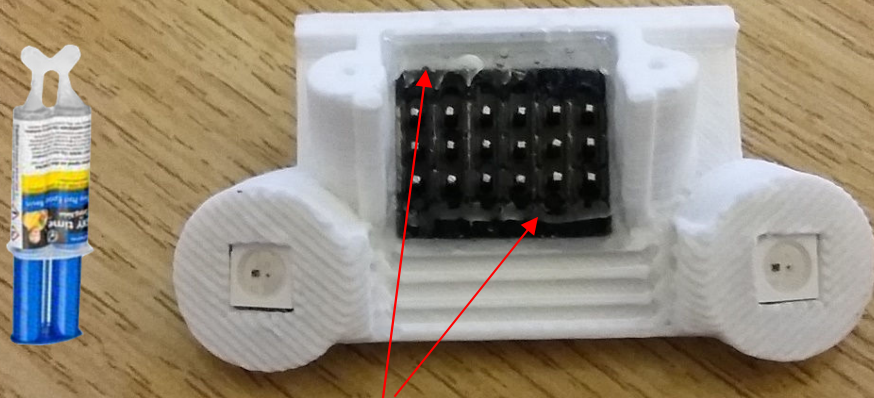
Glue the WS2812 RGB LEDs into their respective sockets

06



Remove the two end pins from the 5-pin strips

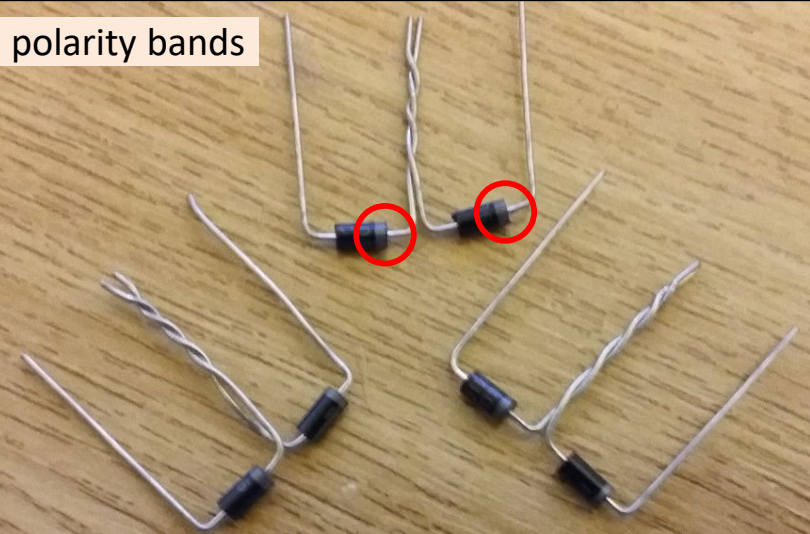
07



Glue the six pin strips into the angled plate

08

Observe polarity bands

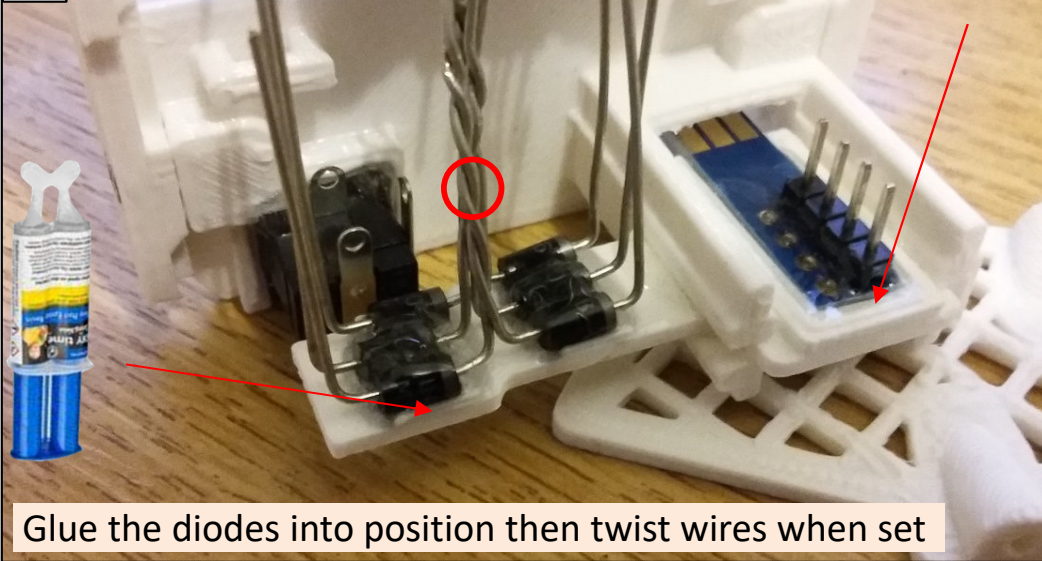


Create 3 pairs of diodes by twisting the wires together

Wiring Sequence

09

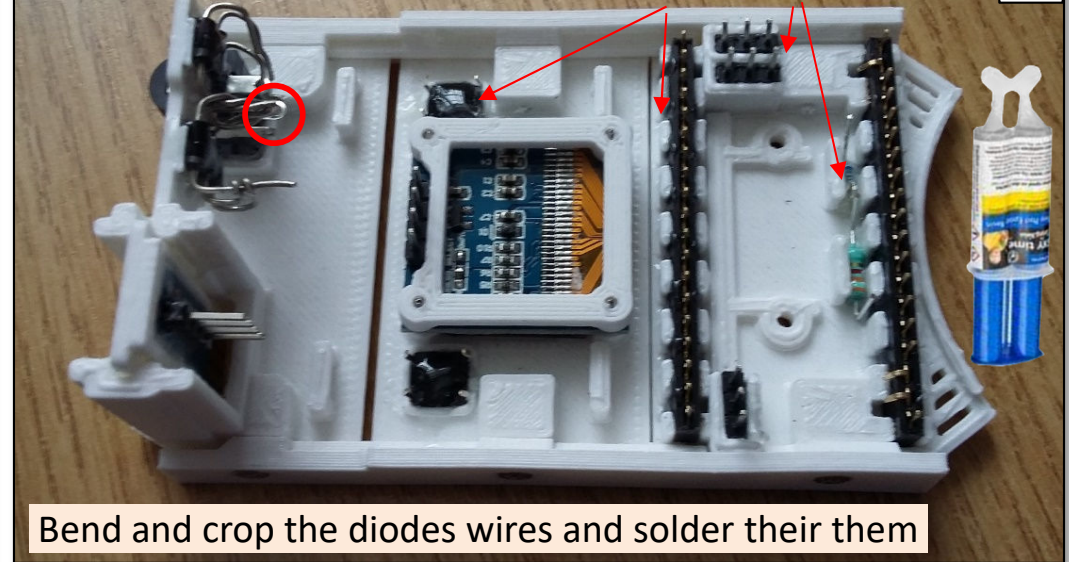
Connect Wii controller to adapter whilst gluing



Glue the diodes into position then twist wires when set

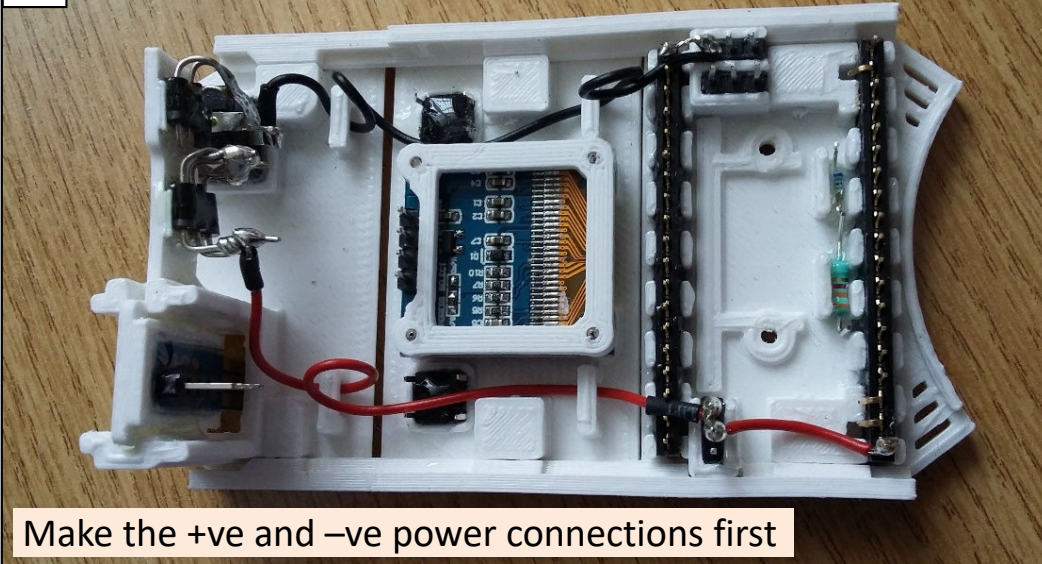
10

Parts glued into position



Bend and crop the diodes wires and solder their them

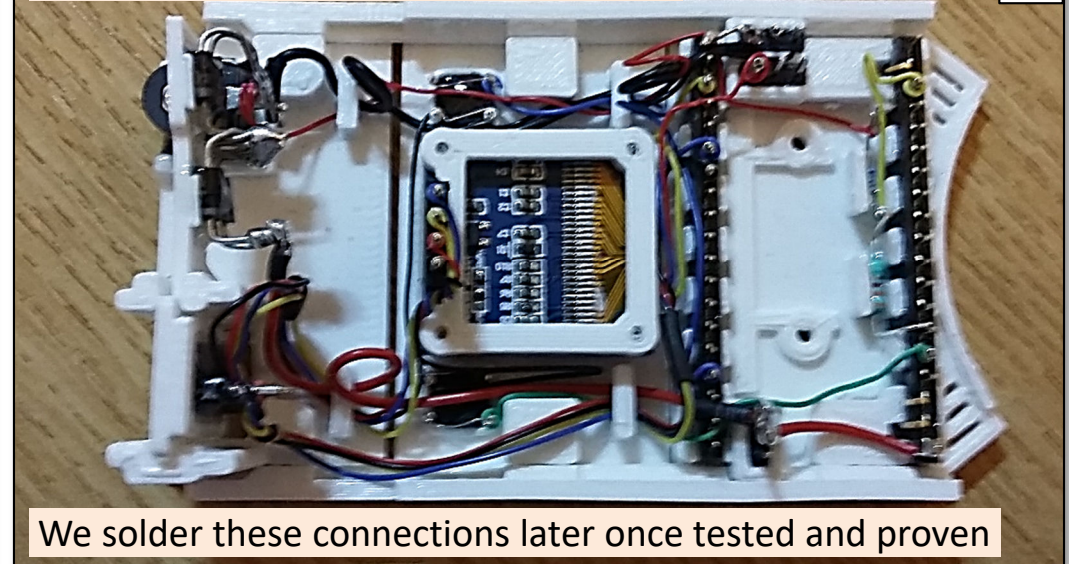
11



Make the +ve and -ve power connections first

12

Now wire wrap the digital connections

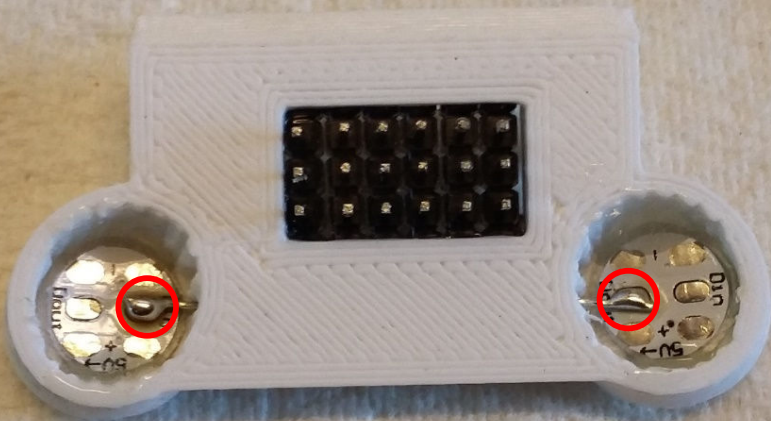


We solder these connections later once tested and proven

Wiring Sequence

13

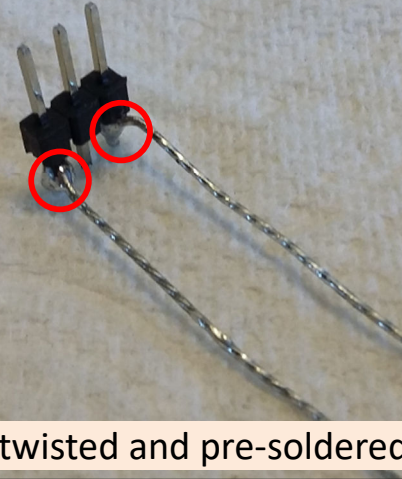
Insert and solder the WS2812 central signal wire



The wires run through holes and behind the panel

14

Attach 2 wires to a 3 pin strips outer pins



Stranded wire can be twisted and pre-soldered

15

Note, no contact to D_{out} pin

Break in connection

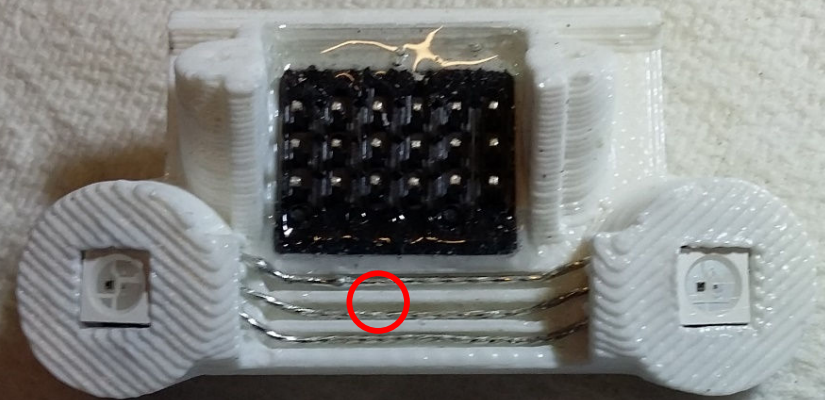
3-pin strip



Place these wires into the angled plate and solder in

16

Turning the part over...

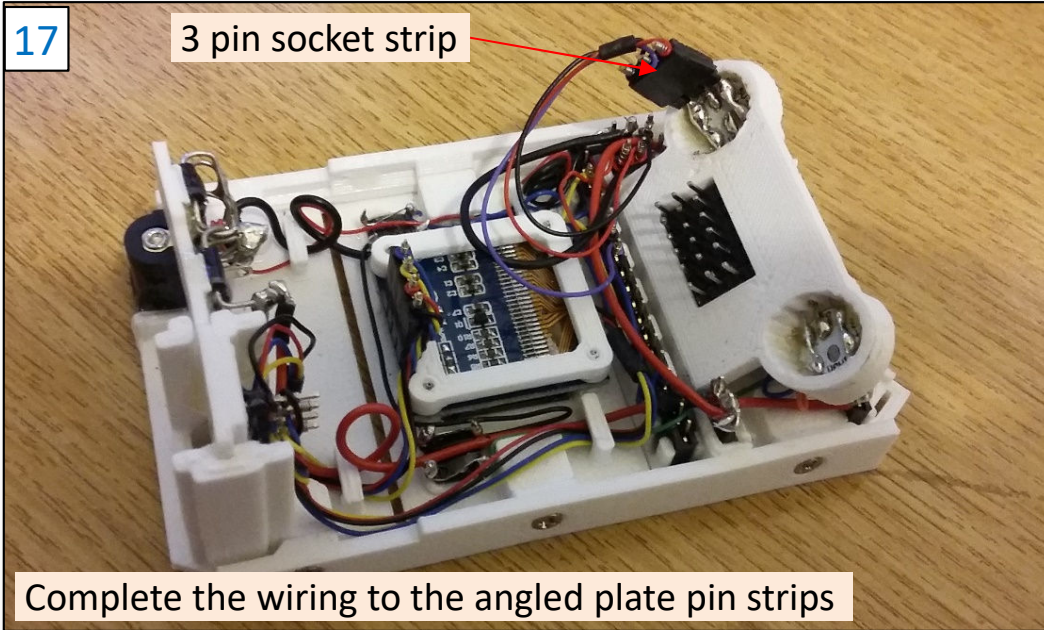


RGB LED wires viewed from the reverse side

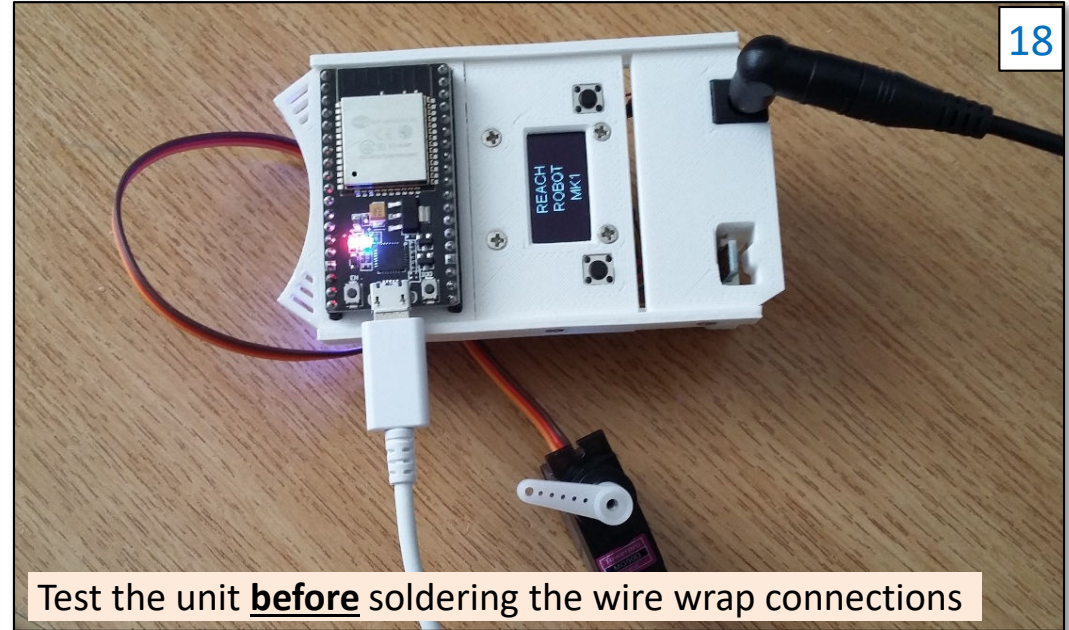
Wiring Sequence

17

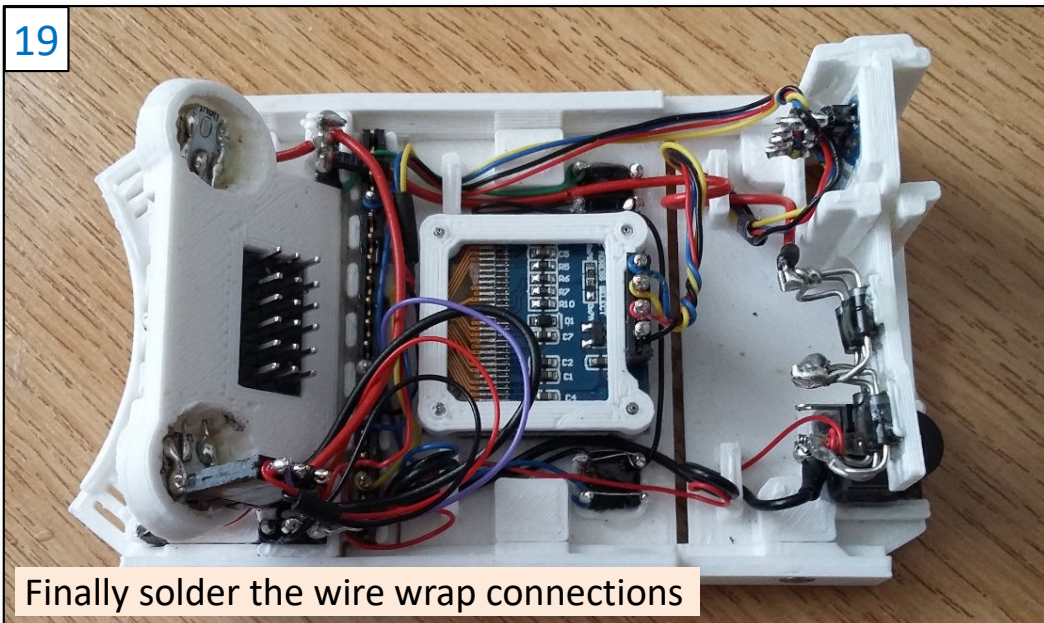
3 pin socket strip



18

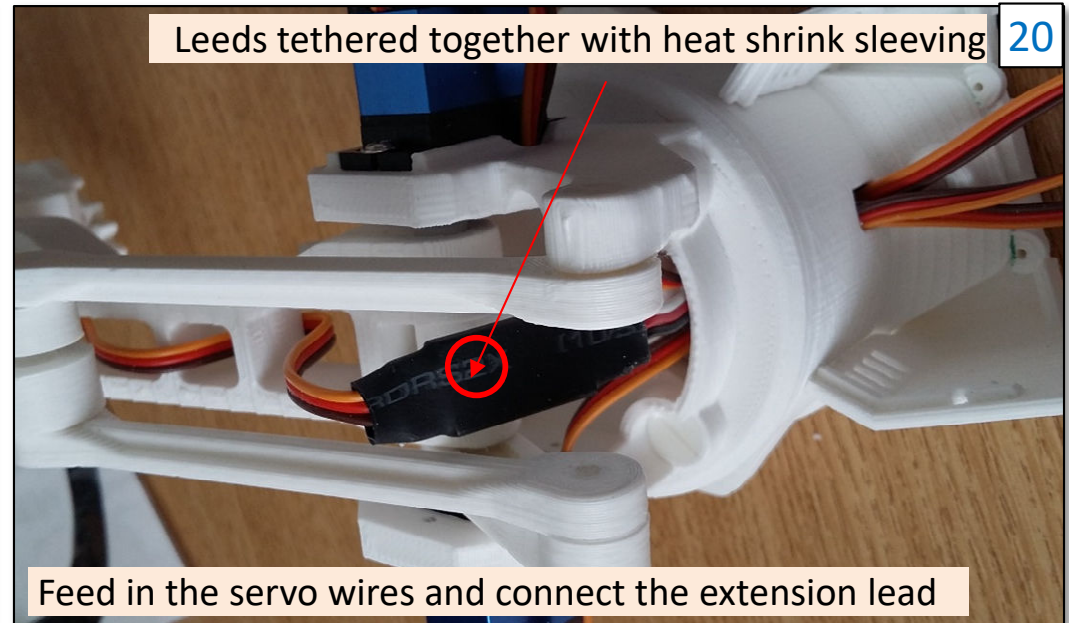


19

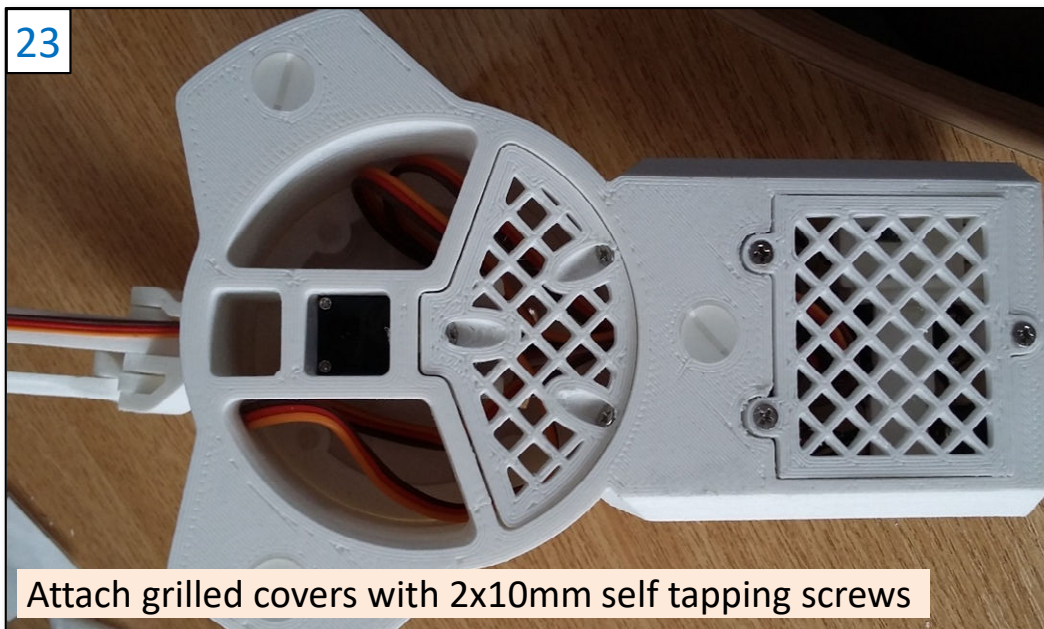
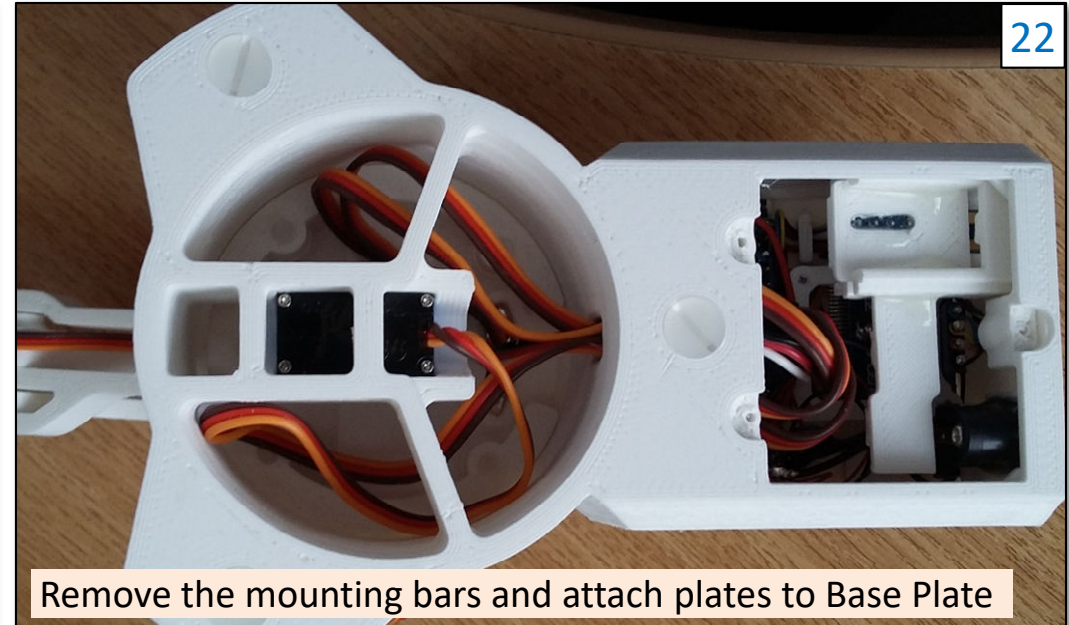
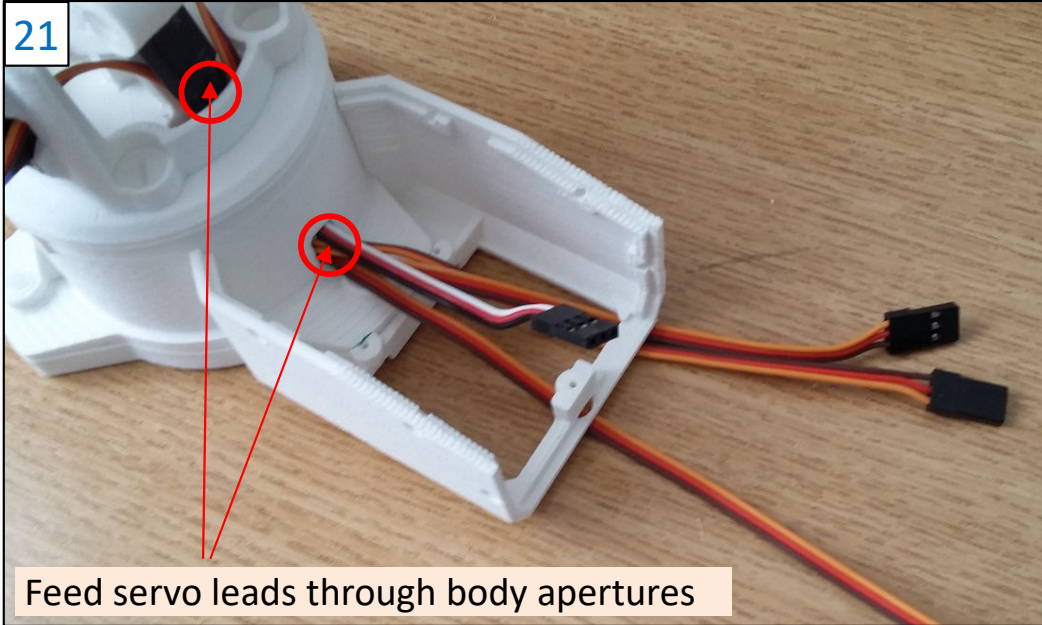


20

Leads tethered together with heat shrink sleeving

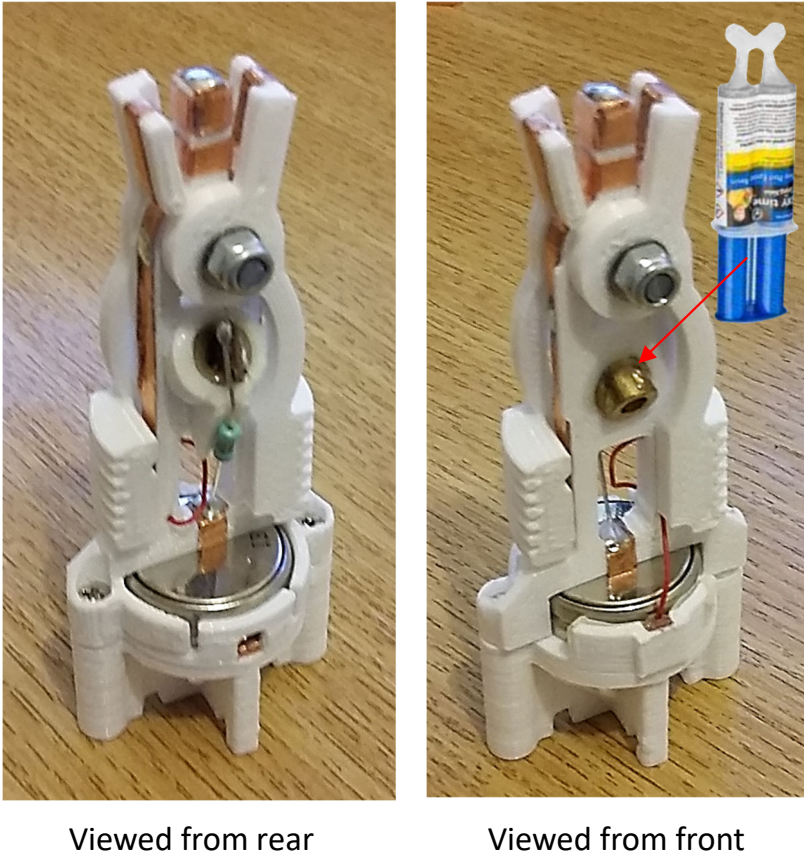
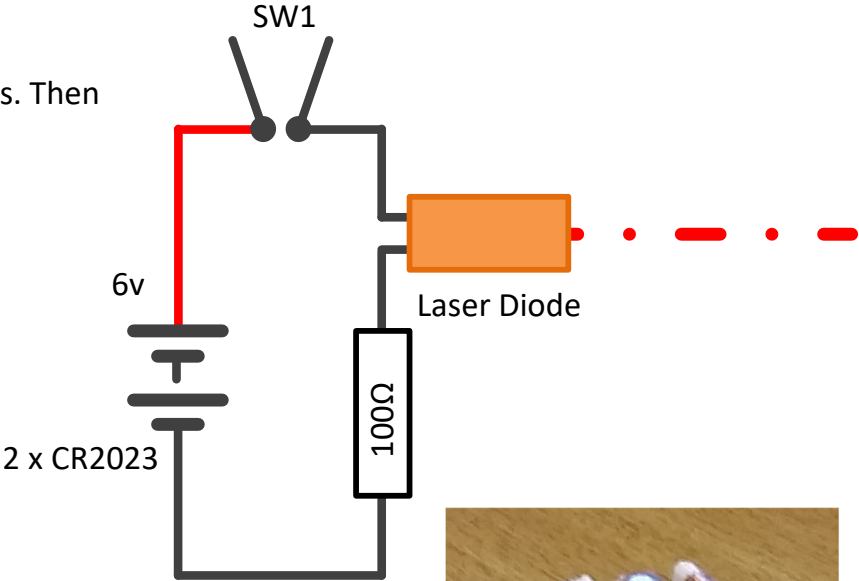
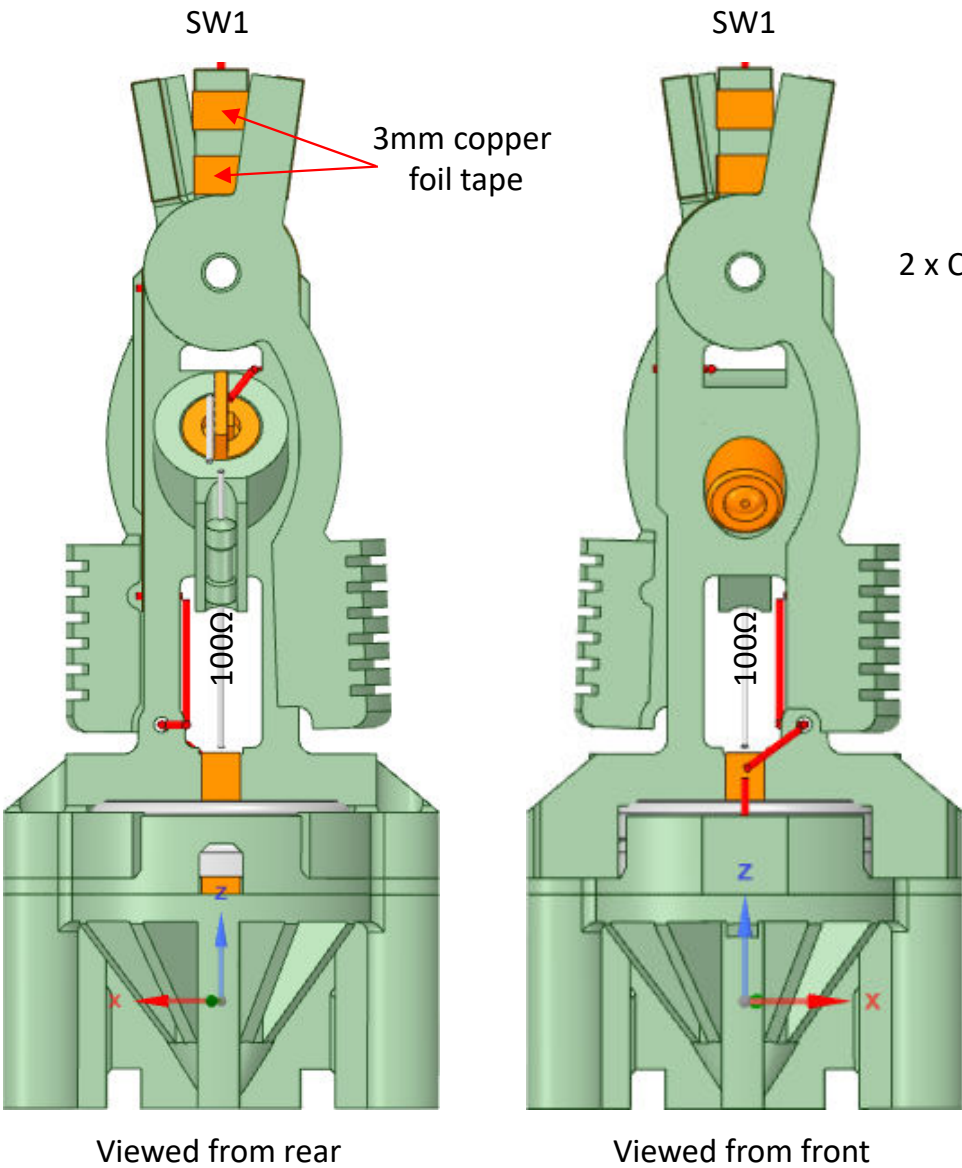


Wiring Sequence



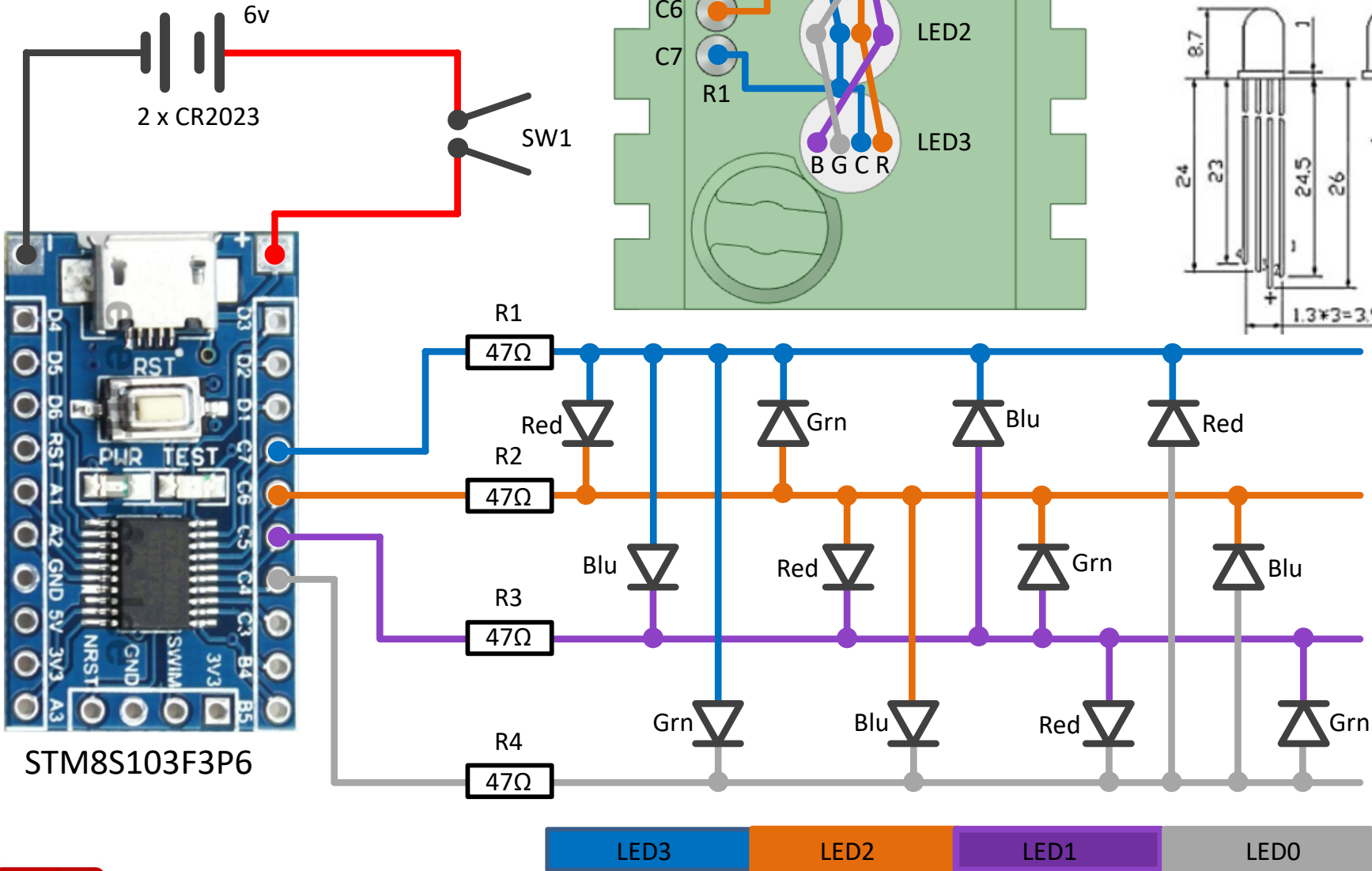
Laser Stand Wiring

Glue laser diode into aperture. Apply copper tape to components. Then use wire wrap wire to complete the connections and solder.



Paint Booth Stand Wiring

Use wire wrap wire to make the connections to the RGB LEDs. Solder the 4 resistors into the micro board before gluing it into the body plate. Then complete the 4 wire wrap connections from the LEDs to the resistors. Apply flux to copper tape connections before dabbing with pre-loaded soldering iron.



	Wavelength	Luminous Intensity	Voltage
R	630-640nm	1000-1200MCD	1.8-2.0
G	515-525nm	3000-5000MCD	3.2-3.4
B	465-475nm	2000-3000MCD	3.2-3.4

