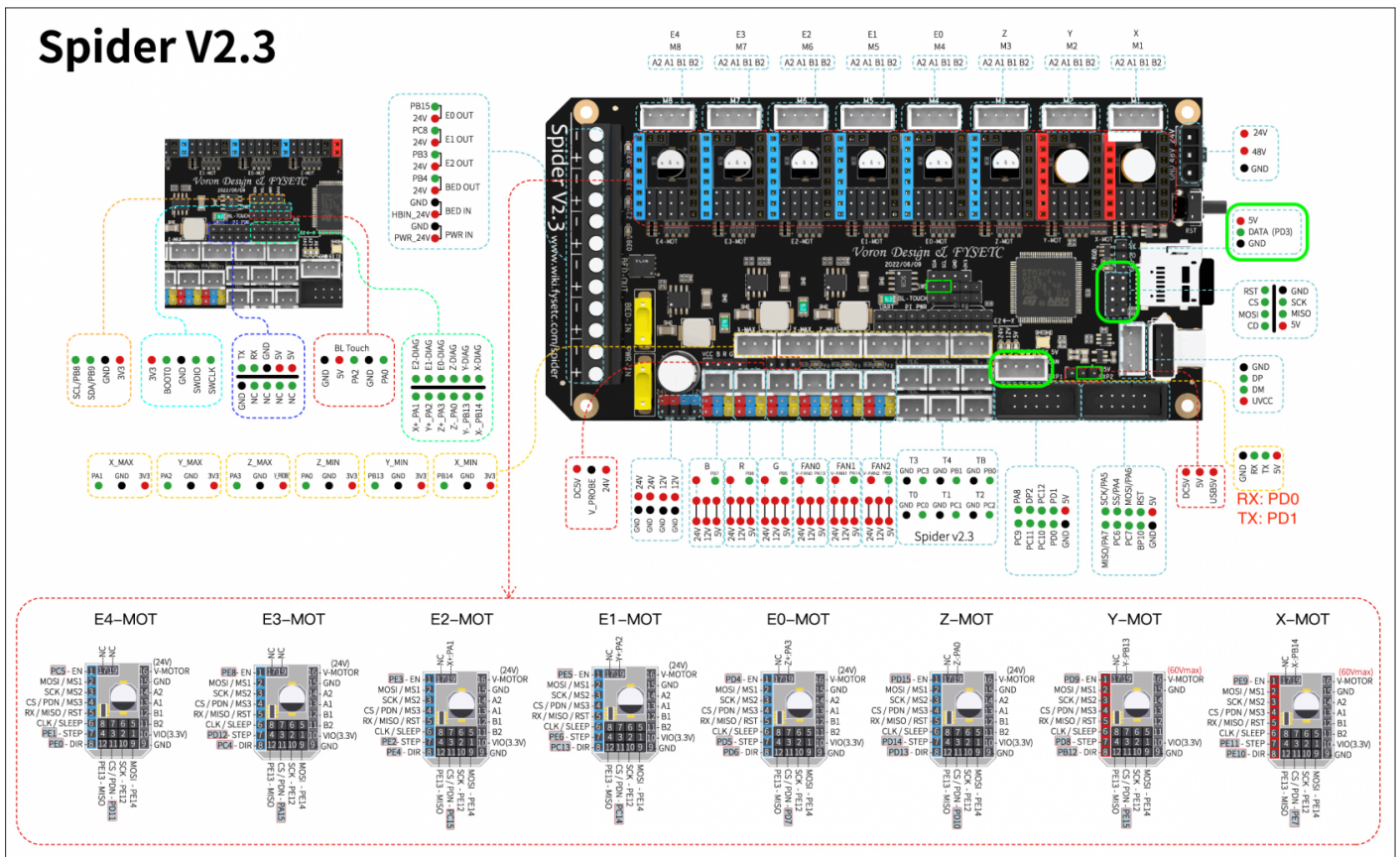


Neopixel LED Stripes

Neopixel LEDs sind LED Streifen, die 3polig angeschlossen werden. 5V, Ground und Data.

Über die Datenleitung wird jede einzelne LED in Farbe und Helligkeit gesteuert.

Das Fysetc Spider 2.3 bietet einen RGB Port an. PD3

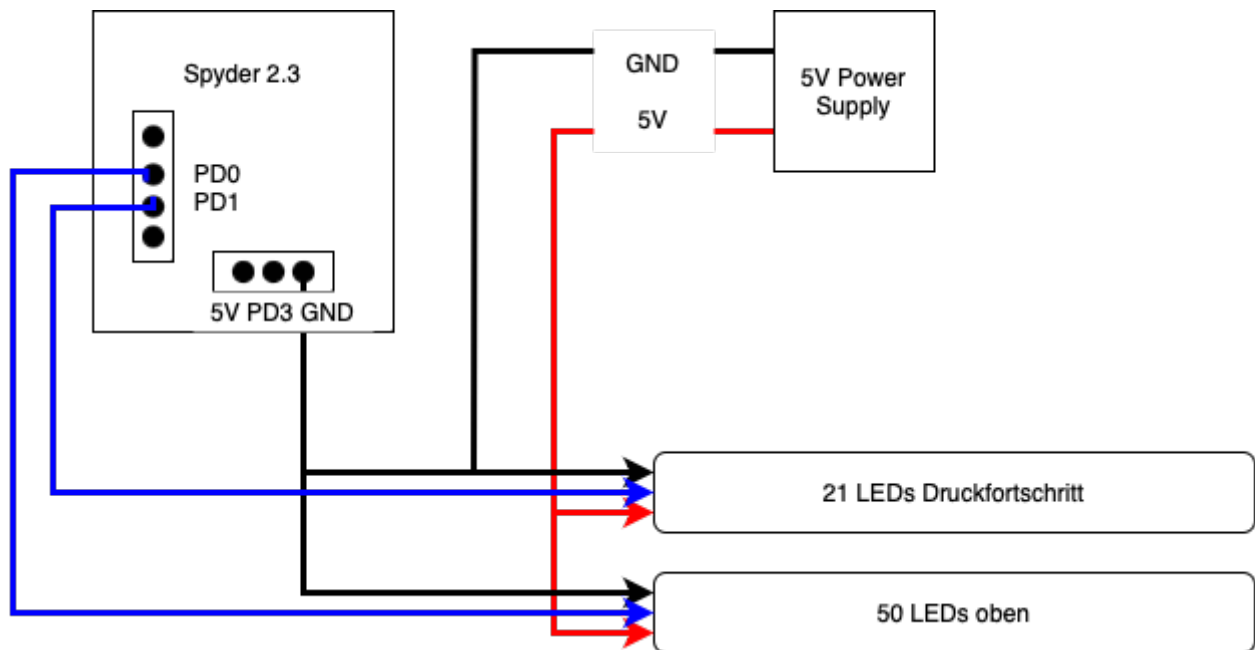


Ich muss mir irgendwie den PD3 zerstört haben. Im siboor Discord haben wir dann 2 weitere digitale Ausgänge gefunden, die für RGB Ansteuerung herangenommen werden können.

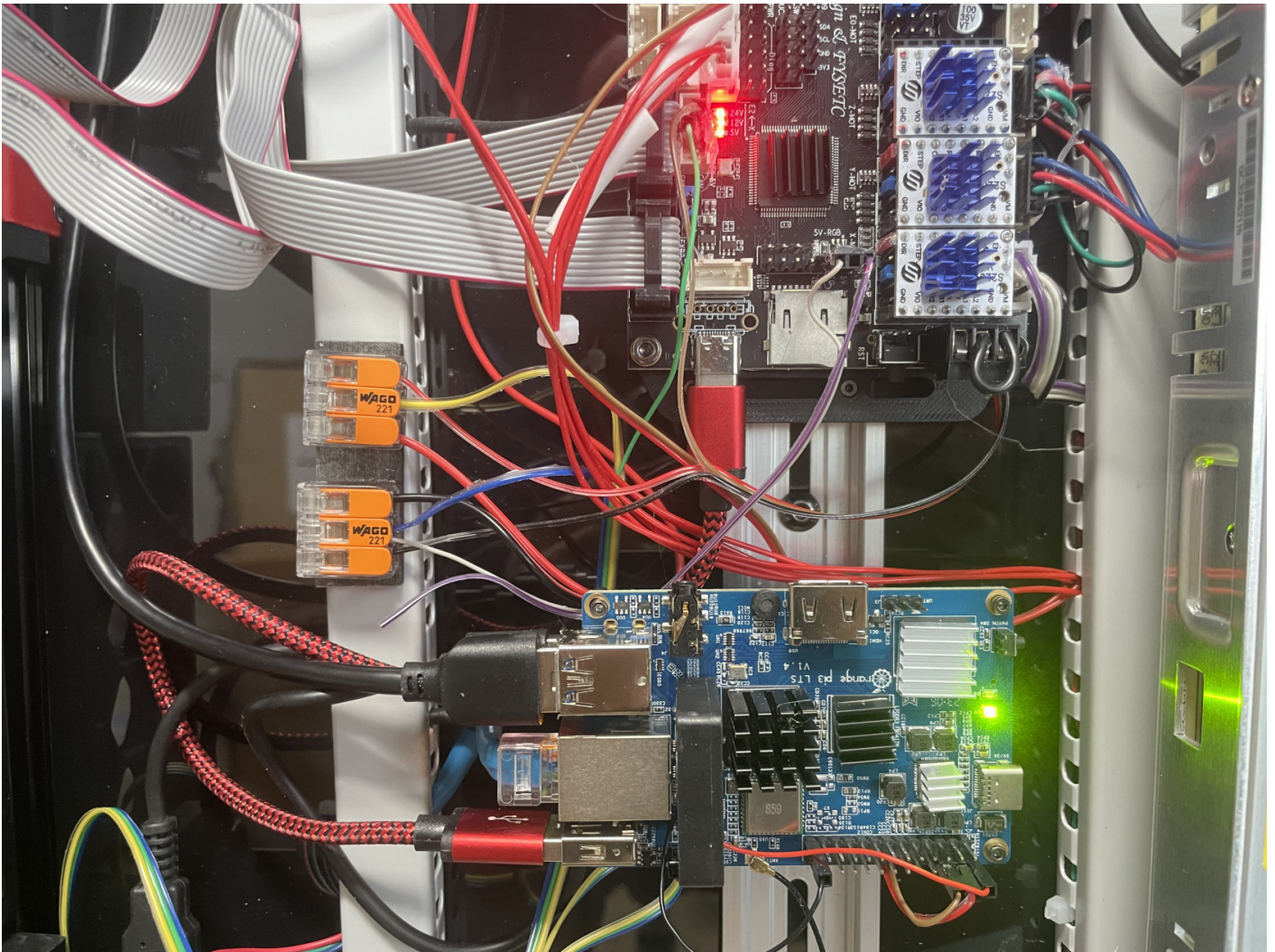
Der RX (PD0) und der TX (PD1) Port vom CANbus Anschluss.

Der interne 5V Anschluss reicht nicht für 50 LEDs aus. Darum habe ich ein zusätzliches 5V Netzteil eingebaut.

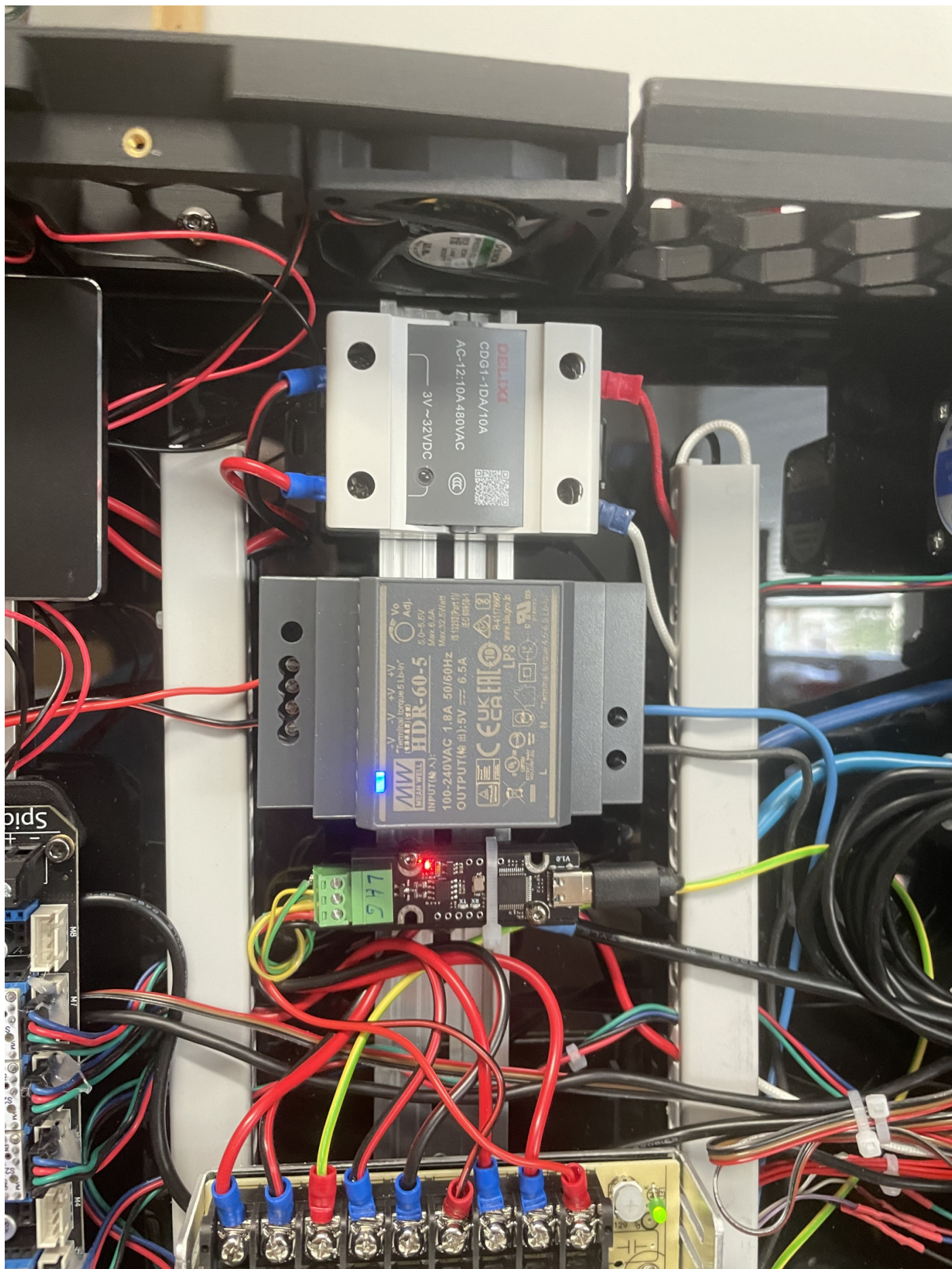
Bei der Verwendung eines externen Netzteils muss unbedingt GND gleichgeschaltet werden.



Verdrahtung



5V Netzteil



neopixel.cfg

```
[neopixel chamber_leds]
pin: PD0
chain_count: 50
color_order: GRBW
initial_RED: 0.2
initial_GREEN: 0.2
initial_BLUE: 0.2
initial_WHITE: 0.2
```

```
[neopixel progress_leds]
pin: PD1
chain_count: 21
color_order: GRBW
initial_RED: 0.2
initial_GREEN: 0.2
initial_BLUE: 0.2
initial_WHITE: 0.2
```

LED Effects

Für die Ansteuerung der LEDs nutze ich die LED Effects von Julian Schill

https://github.com/julianschill/klipper-led_effect

Damit werden sowohl die Neopixels im Stealthburner und dann meine chambers_leds und die progress_leds gesteuert.

```
#####
# LED Effects Animations #
#####

#####
## logo effects ##
#####

[led_effect sb_logo_busy]
autostart:      false
frame_rate:     24
leds:
  neopixel:sb_leds (1)
```

layers:

breathing 3 1 top (1,0,0)

[led_effect sb_logo_cleaning]

autostart: false

frame_rate: 24

leds:

neopixel:sb_leds (1)

layers:

breathing 3 1 top (0.0, 0.02, 0.5)

[led_effect sb_logo_calibrating_z]

autostart: false

frame_rate: 24

leds:

neopixel:sb_leds (1)

layers:

breathing 3 1 top (0.0, 0.0, 0.35)

[led_effect sb_logo_heating]

leds:

neopixel:sb_leds (1)

autostart: false

frame_rate: 24

layers:

breathing 3 1 top (1, 0.18, 0)

[led_effect sb_logo_cooling]

leds:

neopixel:sb_leds (1)

autostart: false

frame_rate: 24

layers:

breathing 3 1 top (0, 0, 1)

[led_effect sb_logo_homing]

autostart: false

frame_rate: 24

leds:

neopixel:sb_leds (1)

layers:

breathing 3 1 top (0.0, 0.6, 0.2)

[led_effect sb_logo_leveling]

autostart: false

frame_rate: 24

leds:

neopixel:sb_leds (1)

layers:

breathing 3 1 top (0.5, 0.1, 0.4)

[led_effect sb_logo_meshing]

autostart: false

frame_rate: 24

leds:

neopixel:sb_leds (1)

layers:

breathing 3 1 top (0.2, 1.0, 0.0)

[led_effect sb_logo_printing]

autostart: false

frame_rate: 24

leds:

neopixel:sb_leds (1)

layers:

gradient 0.3 1 add (0.3, 0.0, 0.0),(0.3, 0.3, 0.0),(0.3, 0.1, 0.0)

[led_effect sb_logo_standby]

autostart: false

frame_rate: 24

leds:

neopixel:sb_leds (1)

layers:

breathing 3 1 top (0.01, 0.01, 0.01)

[led_effect sb_logo_part_ready]

autostart: false

frame_rate: 24

leds:

neopixel:sb_leds (1)

layers:

breathing 3 1 top (0.0, 1.0, 0.0)

```
#####  
## nozzle effects ##  
#####
```

```
[led_effect sb_nozzle_heating]  
autostart:      false  
frame_rate:     24  
leds:  
    neopixel:sb_leds (2,3)  
layers:  
    breathing 3 1 top (1.0, 0.18, 0.0, 0.0)
```

```
[led_effect sb_nozzle_cooling]  
autostart:      false  
frame_rate:     24  
leds:  
    neopixel:sb_leds (2,3)  
layers:  
    breathing 3 1 top (0.0, 0.0, 1.0, 0.1)
```

```
[led_effect sb_nozzle_standby]  
autostart:      false  
frame_rate:     24  
leds:  
    neopixel:sb_leds (2,3)  
layers:  
    breathing 3 1 top (0.6, 0.0, 0.0, 0.0)
```

```
[led_effect sb_nozzle_part_ready]  
autostart:      false  
frame_rate:     24  
leds:  
    neopixel:sb_leds (2,3)  
layers:  
    breathing 3 1 top (0.6, 1.0, 0.0, 0.1)
```

```
#####  
## all led effects ##  
#####
```

[led_effect sb_critical_error]

leds:

neopixel:sb_leds

neopixel:chamber_leds

layers:

strobe 1 1.5 add (1.0, 1.0, 1.0)

breathing 2 0 difference (0.95, 0.0, 0.0)

static 1 0 top (1.0, 0.0, 0.0)

autostart: false

frame_rate: 24

run_on_error: true

[led_effect rainbow]

leds:

neopixel:sb_leds

neopixel:chamber_leds

autostart: false

frame_rate: 24

layers:

gradient 1 1 top (1,0,0,0),(0,1,0,0),(0,0,1,0)

#####

LED Effects Statics

#####

[led_effect set_nozzle_leds]

leds:

neopixel:sb_leds (2,3)

#neopixel:caselight

autostart: false

frame_rate: 24

layers:

static 0 0 top (0.0, 0.0, 0.0, 1.0)

[led_effect set_logo_leds]

leds:

neopixel:sb_leds (1)

autostart: false

frame_rate: 24

layers:


```
static      0 0 top    (1.0, 1.0, 1.0)
```

```
[led_effect set_chamber_white]
```

```
leds:
```

```
    neopixel:chamber_leds
```

```
autostart:      false
```

```
frame_rate:     24
```

```
layers:
```

```
    static      0 0 top    (0.0, 0.0, 0.0, 1.0)
```

```
[led_effect set_chamber_white_left]
```

```
leds:
```

```
    neopixel:chamber_leds (1-20)
```

```
autostart:      false
```

```
frame_rate:     24
```

```
layers:
```

```
    static      0 0 top    (0.0, 0.0, 0.0, 1.0)
```

```
[led_effect set_chamber_white_right]
```

```
leds:
```

```
    neopixel:chamber_leds (31-50)
```

```
autostart:      false
```

```
frame_rate:     24
```

```
layers:
```

```
    static      0 0 top    (0.0, 0.0, 0.0, 1.0)
```

```
[led_effect set_chamber_white_front]
```

```
leds:
```

```
    neopixel:chamber_leds (21-30)
```

```
autostart:      false
```

```
frame_rate:     24
```

```
layers:
```

```
    static      0 0 top    (0.0, 0.0, 0.0, 1.0)
```

```
[led_effect set_progress]
```

```
leds:
```

```
    neopixel:progress_leds
```

```
autostart:      false
```

```
frame_rate:     24
```

layers:

```
progress -1 0 add      ( 0, 0, 1),( 0, 0.1, 0.6)
```

```
static    0 0 top      ( 0, 0, 0.1)
```

#####

The Macros

#####

[gcode_macro set_progress]

gcode:

```
SET_LED_EFFECT EFFECT=set_progress REPLACE=1
```

[gcode_macro stop_chamber_effects]

gcode:

```
STOP_LED_EFFECTS LEDS="neopixel:chamber_leds"
```

[gcode_macro set_chamber_white]

gcode:

```
STOP_CHAMBER_EFFECTS
```

```
SET_LED_EFFECT EFFECT=set_chamber_white REPLACE=1
```

[gcode_macro set_chamber_white_left]

gcode:

```
STOP_CHAMBER_EFFECTS
```

```
SET_LED_EFFECT EFFECT=set_chamber_white_left REPLACE=1
```

[gcode_macro set_chamber_white_right]

gcode:

```
STOP_CHAMBER_EFFECTS
```

```
SET_LED_EFFECT EFFECT=set_chamber_white_right REPLACE=1
```

[gcode_macro set_chamber_white_front]

gcode:

```
STOP_CHAMBER_EFFECTS
```

```
SET_LED_EFFECT EFFECT=set_chamber_white_front REPLACE=1
```

[gcode_macro set_logo_leds_off]

gcode:

```
SET_LED_EFFECT EFFECT=set_logo_leds STOP=1
```

[gcode_macro set_logo_leds_on]

gcode:

SET_LED_EFFECT EFFECT=set_logo_leds

[gcode_macro set_nozzle_leds_on]

gcode:

SET_LED_EFFECT EFFECT=set_nozzle_leds

[gcode_macro set_nozzle_leds_off]

gcode:

SET_LED_EFFECT EFFECT=set_nozzle_leds STOP=1

[gcode_macro status_off]

gcode:

STOP_LED_EFFECTS

SET_CHAMBER_WHITE_FRONT

[gcode_macro status_ready]

gcode:

STOP_LED_EFFECTS

SET_LED_EFFECT EFFECT=rainbow

SET_CHAMBER_WHITE_FRONT

[gcode_macro status_part_ready]

gcode:

STOP_LED_EFFECTS

SET_LED_EFFECT EFFECT=sb_nozzle_part_ready

SET_LED_EFFECT EFFECT=sb_logo_part_ready

SET_CHAMBER_WHITE_FRONT

[gcode_macro status_busy]

gcode:

STOP_LED_EFFECTS

SET_LED_EFFECT EFFECT=sb_logo_busy

SET_CHAMBER_WHITE_FRONT

set_nozzle_leds_on

[gcode_macro status_heating]

gcode:

STOP_LED_EFFECTS

SET_LED_EFFECT EFFECT=sb_logo_heating

SET_LED_EFFECT EFFECT=sb_nozzle_heating

SET_CHAMBER_WHITE_FRONT

[gcode_macro status_cooling]

gcode:

```
STOP_LED_EFFECTS
SET_LED_EFFECT EFFECT=sb_logo_cooling
SET_LED_EFFECT EFFECT=sb_nozzle_cooling
SET_CHAMBER_WHITE_FRONT
```

[gcode_macro status_leveling]

gcode:

```
STOP_LED_EFFECTS
SET_LED_EFFECT EFFECT=sb_logo_leveling
SET_CHAMBER_WHITE_FRONT
set_nozzle_leds_on
```

[gcode_macro status_homing]

gcode:

```
STOP_LED_EFFECTS
SET_LED_EFFECT EFFECT=sb_logo_homing
SET_CHAMBER_WHITE_FRONT
set_nozzle_leds_on
```

[gcode_macro status_cleaning]

gcode:

```
STOP_LED_EFFECTS
SET_LED_EFFECT EFFECT=sb_logo_cleaning
SET_CHAMBER_WHITE_FRONT
set_nozzle_leds_on
```

[gcode_macro status_meshing]

gcode:

```
STOP_LED_EFFECTS
SET_LED_EFFECT EFFECT=sb_logo_meshing
SET_CHAMBER_WHITE_FRONT
set_nozzle_leds_on
```

[gcode_macro status_calibrating_z]

gcode:

```
STOP_LED_EFFECTS
```



```
SET_LED_EFFECT EFFECT=sb_logo_calibrating_z  
SET_CHAMBER_WHITE  
set_nozzle_leds_on
```

```
[gcode_macro status_printing]
```

```
gcode:
```

```
STOP_LED_EFFECTS  
SET_CHAMBER_WHITE  
SET_LED_EFFECT EFFECT=sb_logo_printing  
set_nozzle_leds_on  
set_progress
```

Revision #7

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