Whammy 4 – NEO – Version 1.10
By melatroid

Working Pre-Final Version

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HARMONY
↑OCT ↑OCT
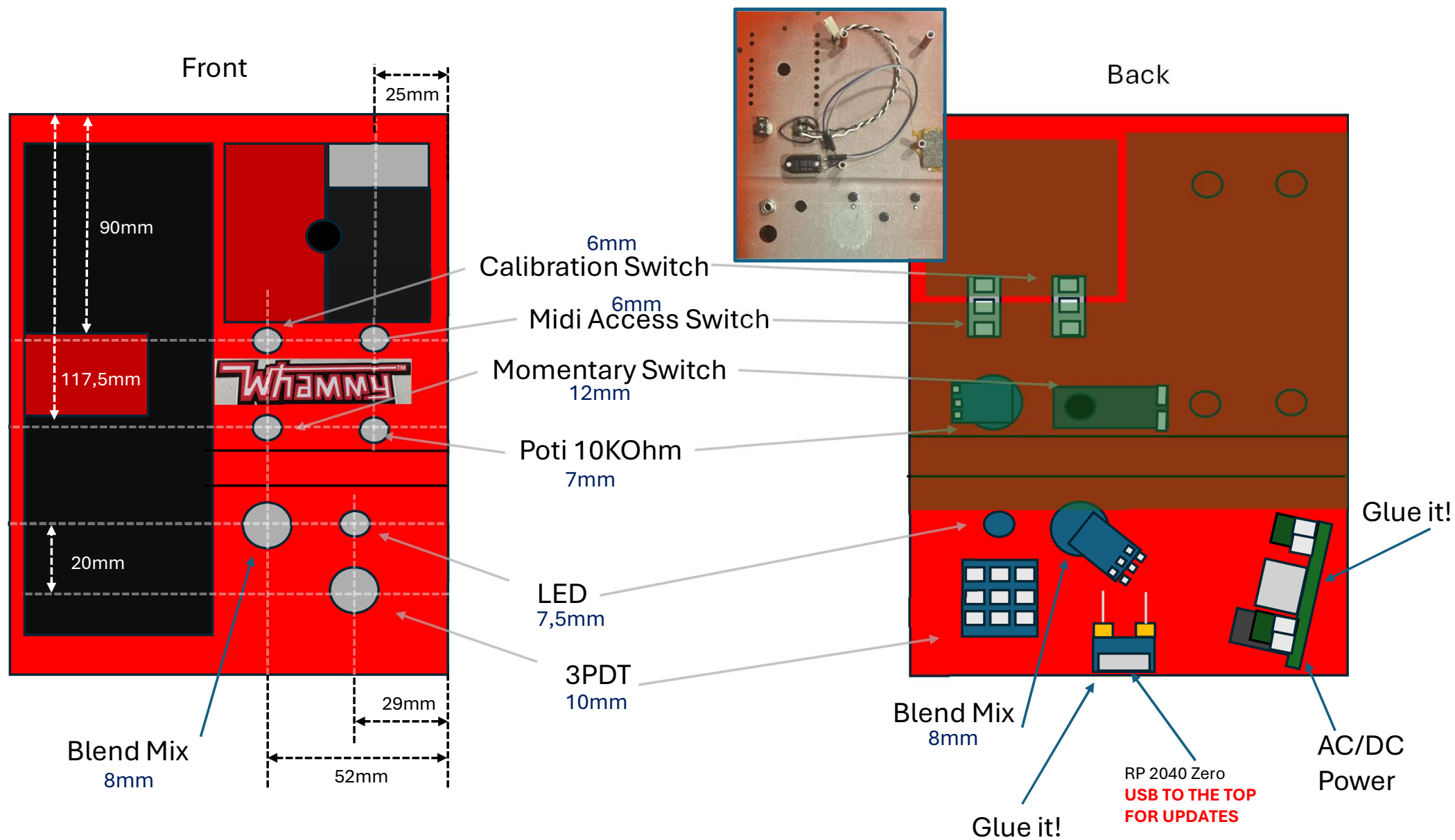↑5TH ↓4TH
↑4TH ↓3RD
↑5TH ↑7TH
↑5TH ↑6TH
↑4TH ↑5TH
↑3RD ↑4TH
↓3RD ↓3RD
↑2ND ↓3RD

EFFECT

DETUNE
SHALLOW
DEEP

WHAMMY
↓2 OCT
↓ OCT
↑ OCT
↑2 OCT
DIVE BOMB
DROP TUNE

Calibration

Midi Access

Time

Momantary / Change Effects

Blend Mix

LED On/OFF

Effect On/OFF

Front

25mm

90mm

117,5mm

Whammy™

20mm

Blend Mix
8mm

29mm

52mm

Calibration Switch
6mm

Midi Access Switch
6mm

Momentary Switch
12mm

Poti 10KOhm
7mm

LED
7,5mm

3PDT
10mm

Back

Glue it!

Blend Mix
8mm

Glue it!

RP 2040 Zero
**USB TO THE TOP
FOR UPDATES**

AC/DC
Power

Parts

1kΩ   3x

1MΩ

220Ω   2x
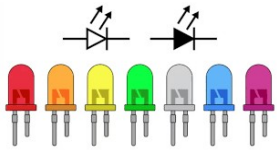
ELKO/Ceramic Condenser

22-47 uF

100 nF
47 nF

Toogle Switch 2x
Midi Access /
Calibration

Momantary
(Original Part)

250kΩ
Blend

3PDT

B0505S-1W

AC/DC
LM2596HV

10KΩ

Raspberry Pi
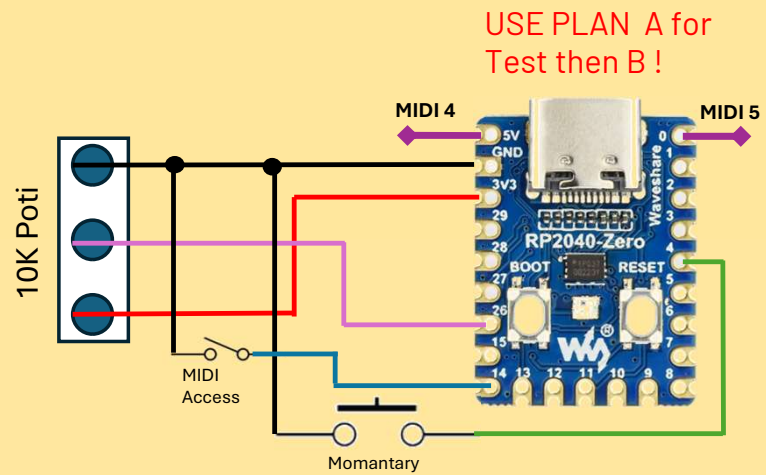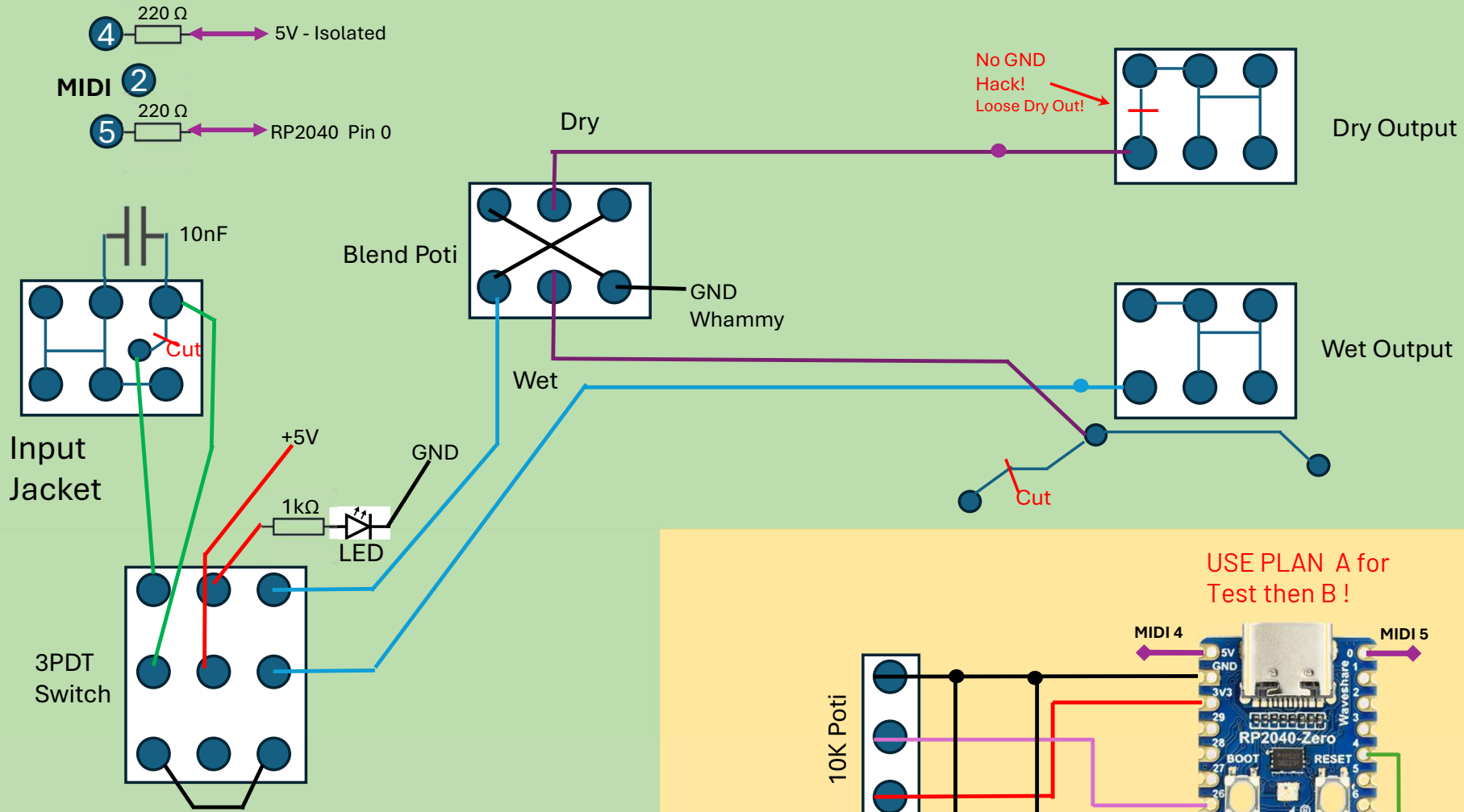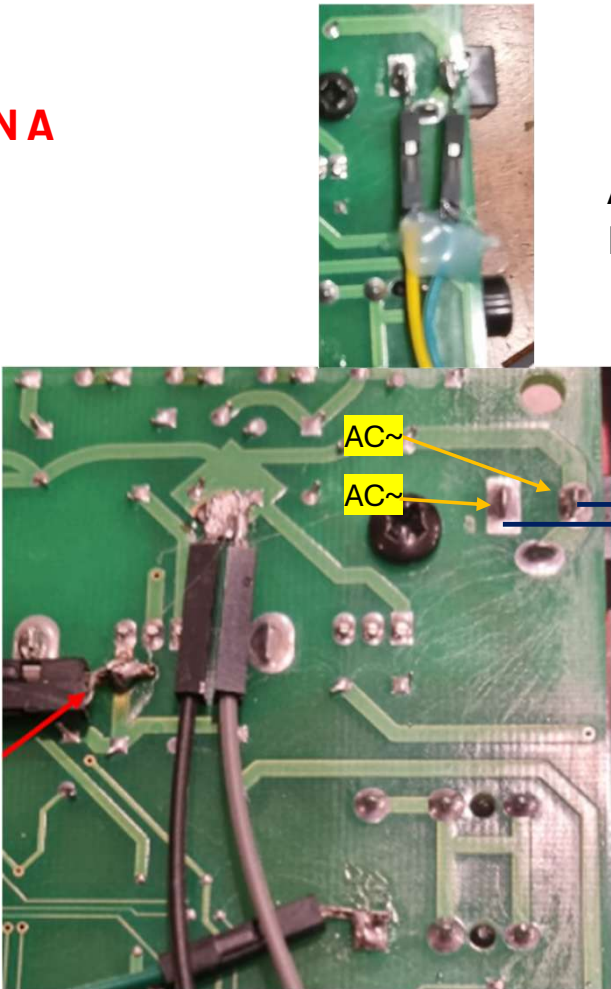2040 Zero

220 Ω → 5V - Isolated

MIDI ④ ②

220 Ω → RP2040 Pin 0

No GND Hack! Loose Dry Out!

Dry

Dry Output

10nF

Blend Poti

GND Whammy

Wet Output

Input Jacket

+5V

GND

Wet

Cut

1kΩ

LED

3PDT Switch

Cut

USE PLAN A for Test then B !

MIDI 4

MIDI 5

10K Poti

5V GND 3V3 29 28 27 BOOT 26 15 14 12 11 10 8 RESET

RP2040-Zero

Waveshare

MIDI Access

Momantary
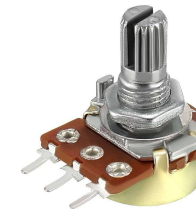
Power Supply PLAN A
TEST ONLY!

AC/DC Converter
LM2596HV

Get a new fix!!!
Look Plan B/C

AC~
AC~

~9V

5V +/- !!!

USB Type-C

220 Ω MIDI 4

4

MIDI 5 220 Ω

5
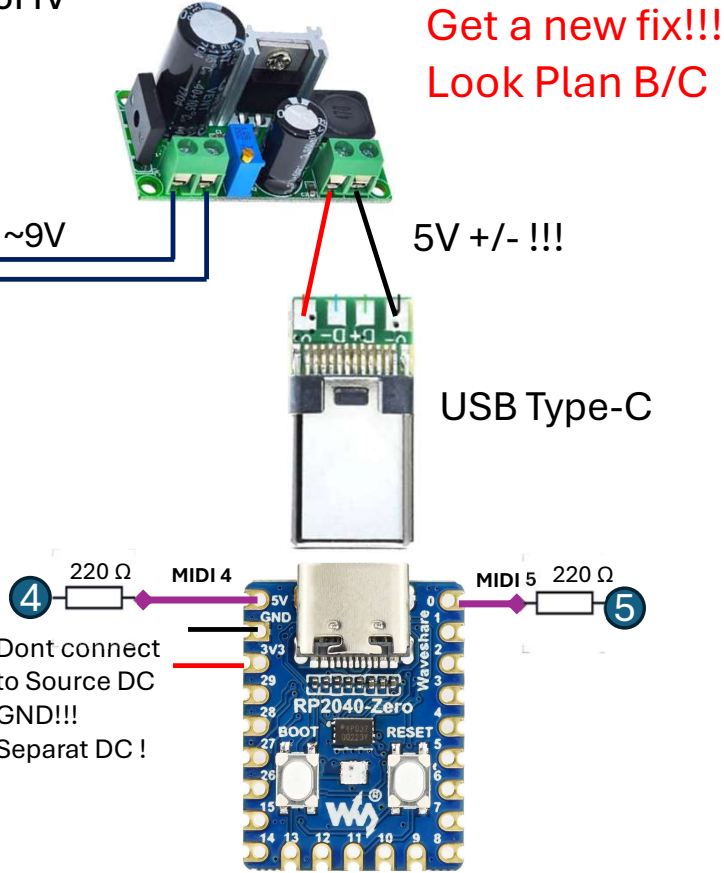
Dont connect
to Source DC
GND!!!
Separat DC !
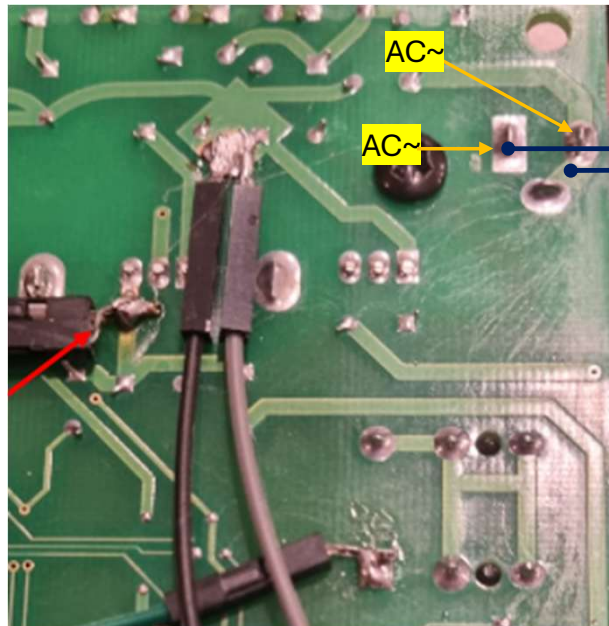
Power Supply PLAN B

AC/DC Converter
LM2596HV

B0505S-1W

1W series power module
● RoHS   YYWW

1 2 3 4
-Vin +Vin -Vout +Vout

Voltage here!

AC~

AC~

~9V

5V

47
uF

+ -

100
nF

47
nF

BLM21PG121SN1D
(Optional)

-
22-47 uF
+

100 nF

Dont connect to
Source DC GND!!!
Separat DC !

RP2040-Zero
Waveshare

Check if 5V?

220 Ω

4

MIDI

2

Not really needet
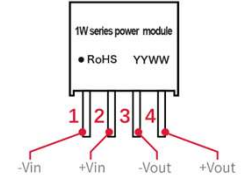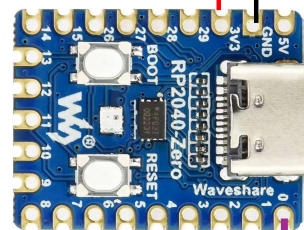
MIDI 5

*Dont connect 2040 Zero
bevor Voltage is correct!*

220 Ω

5

Power Supply PLAN C
MT3605 **OR** TPS61023

TP4056 – USB-C

1000mA ~ 5-6h Playtime

R5.
R2   R1
OUT+
B+
B−
C1 C2
R6
C3   R3   HW-107   OUT−

3,7-4V

Var1

Var2

− CL   103450
+ 3.7V 2000mAh

BEST OPTION!!!

TPS61023

TPS
61023

1R0

Vin GND 5V En

GND

Check if stable 3,3V?

VIN+ HW-045 VIN−

MT3608

220

VOUT+   VOUT−

*Dont connect 2040 Zero
bevor Voltage is correct!*

3V3 GND 5V

2040 Zero

RP2040-Zero

BOOT

RESET

Waveshare

MIDI 5

④   220 Ω

MIDI   ②

4,5-5V !!!

⑤   220 Ω

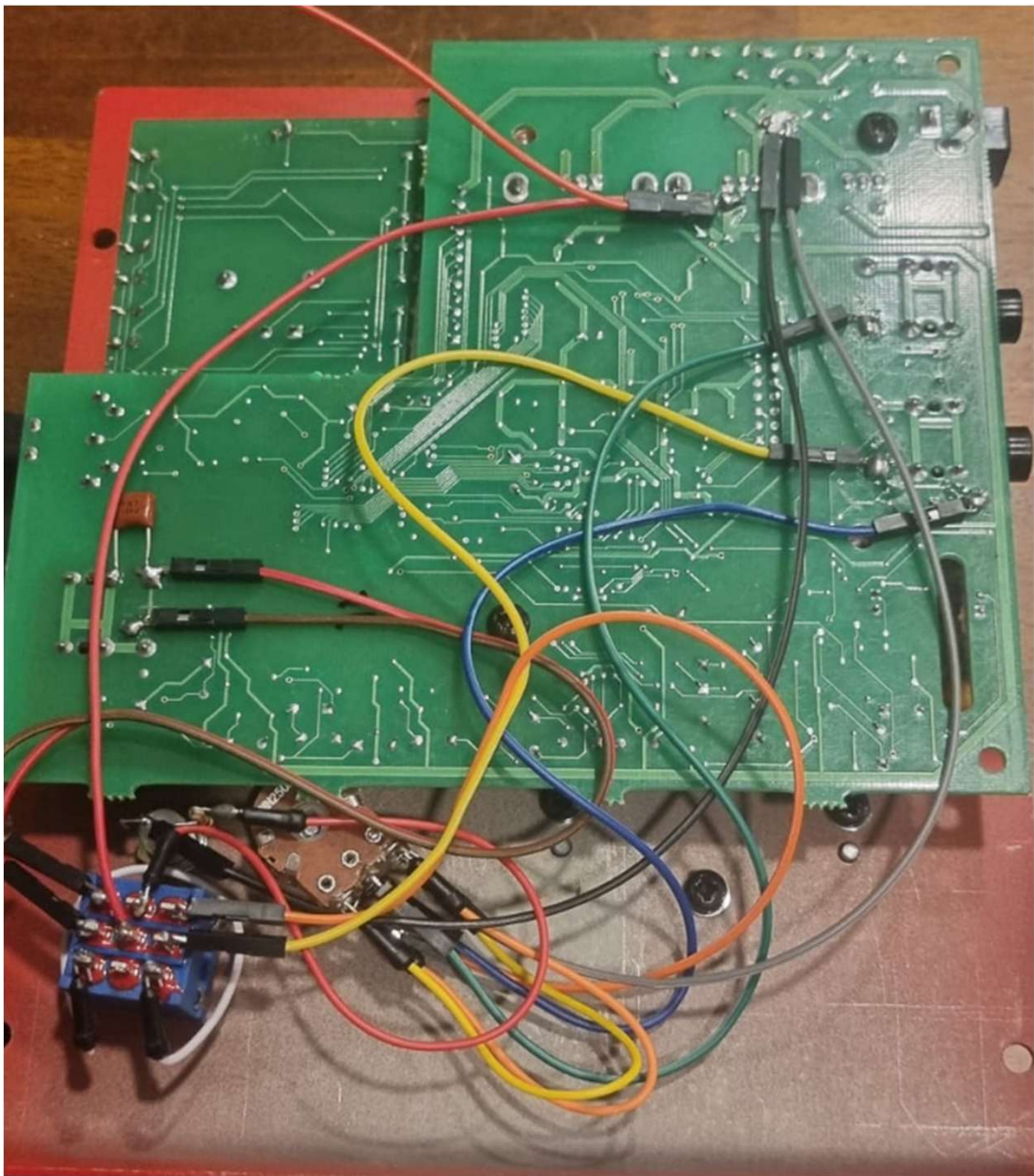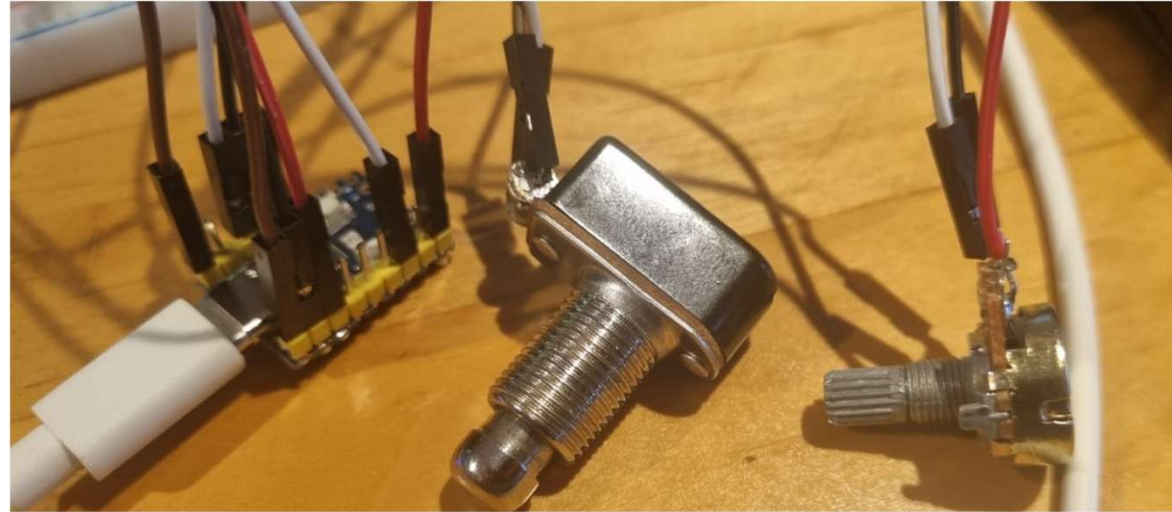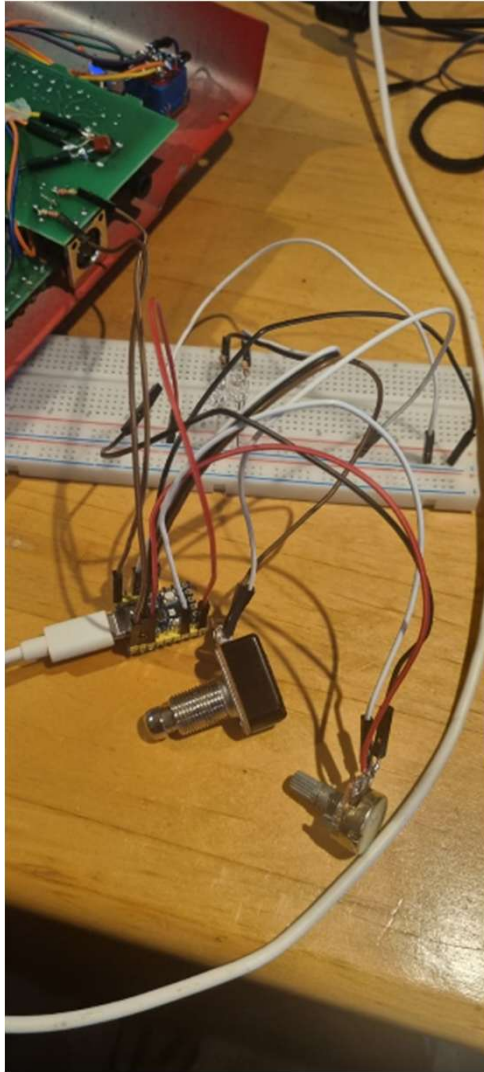StandBy
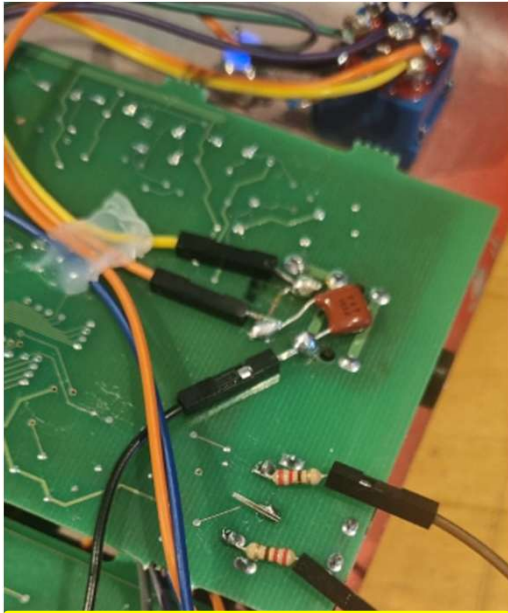ON/OFF

100 kΩ

Toggle Switch

Power Supply Test

Midi 4
VBUS

MIDI 2
GND

Midi 5
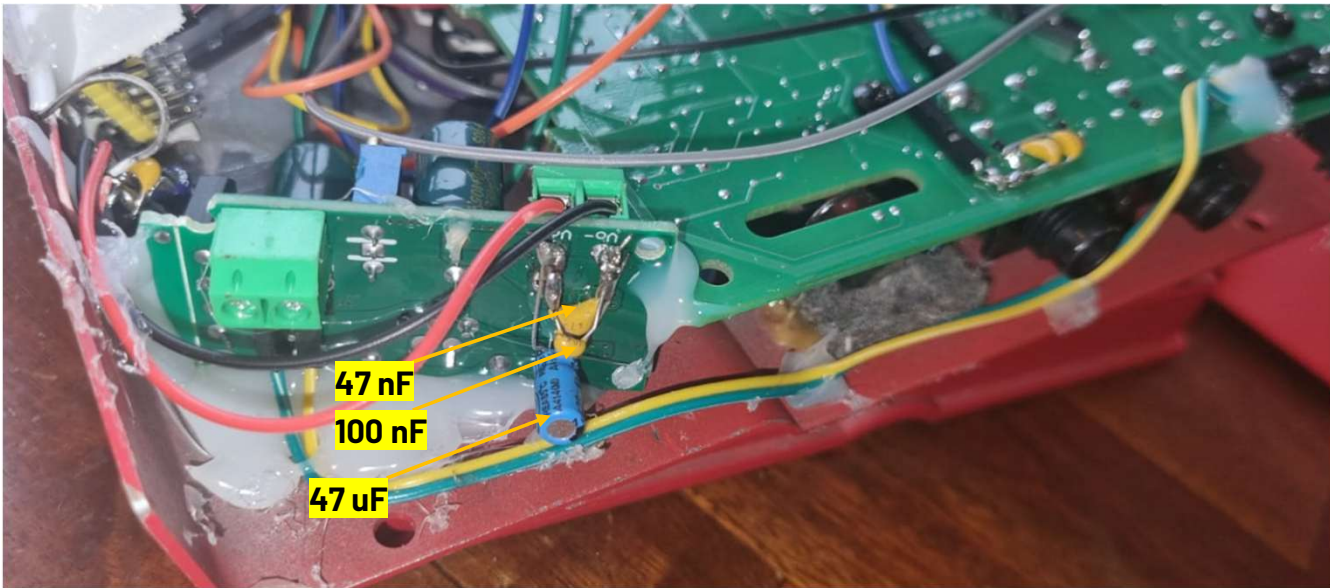TX

CUT
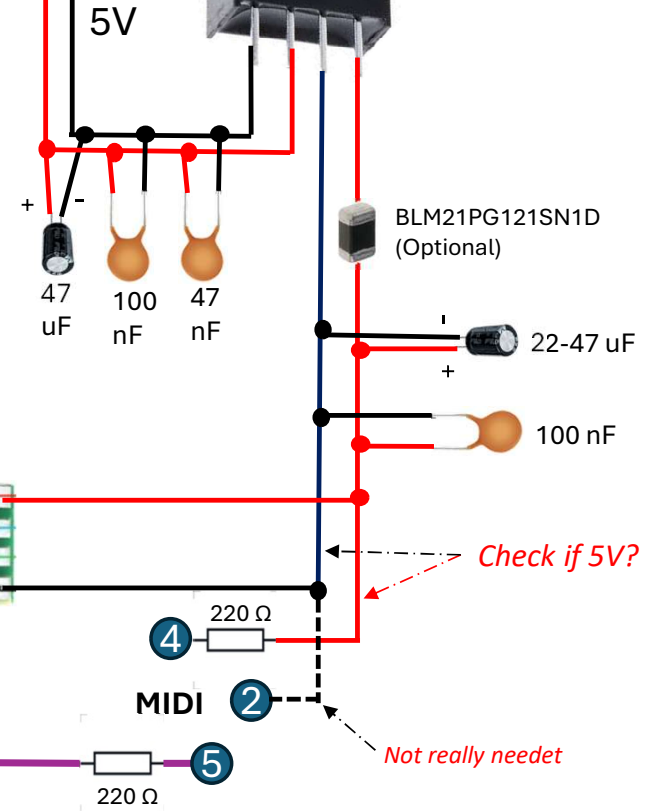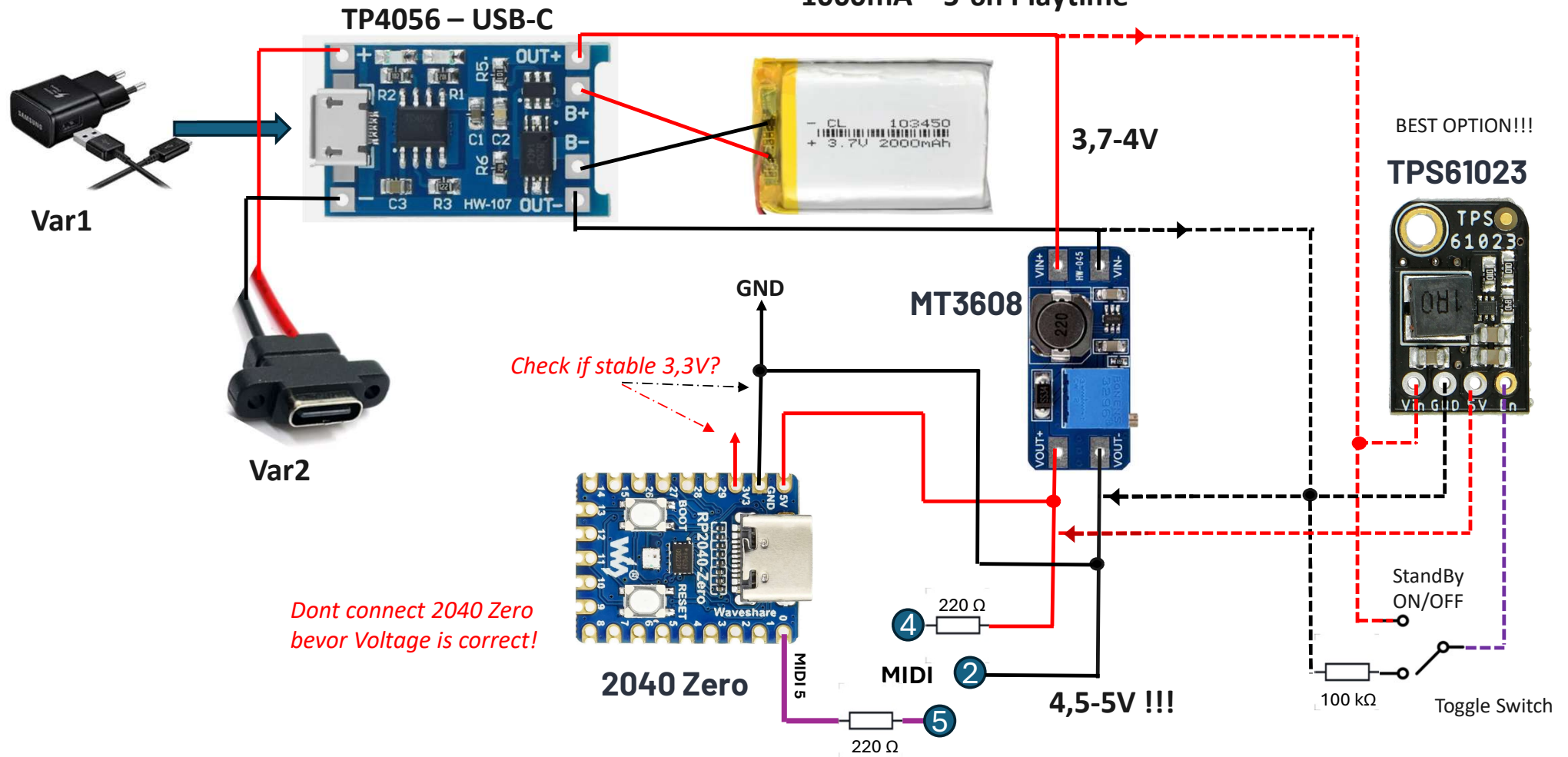
CUT
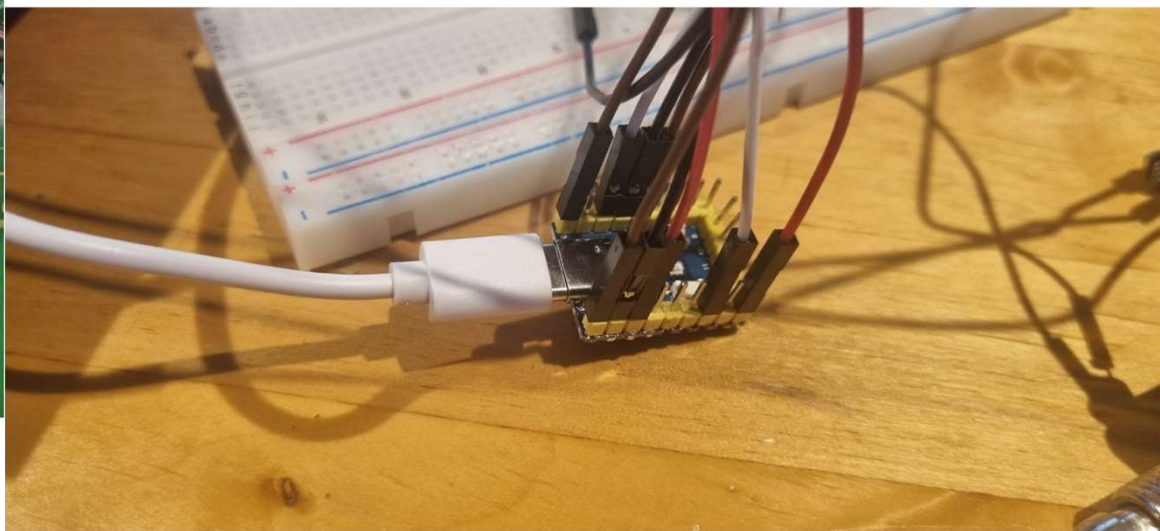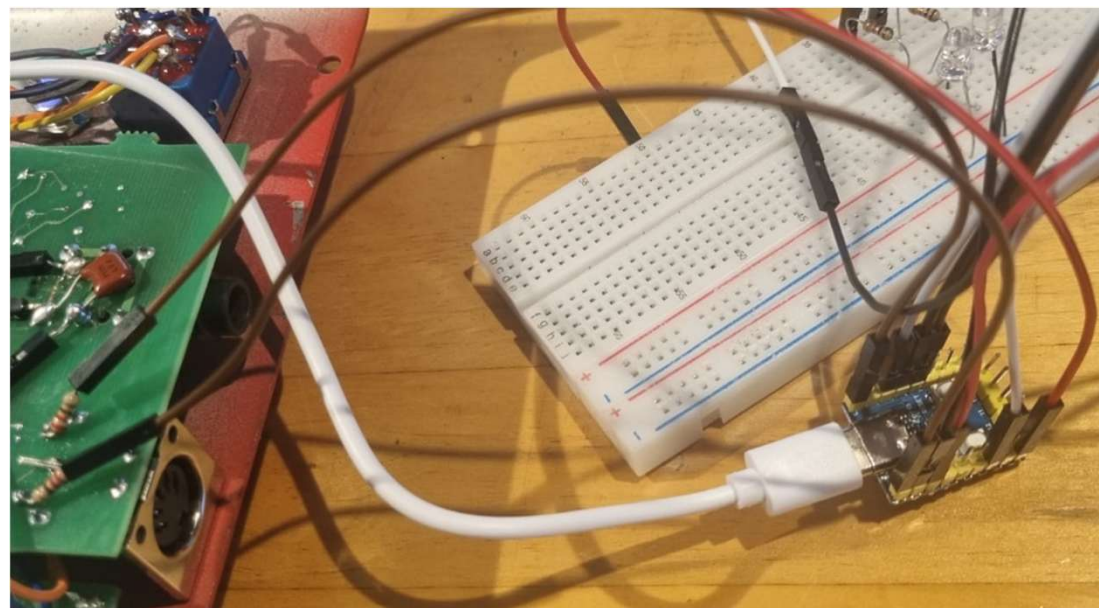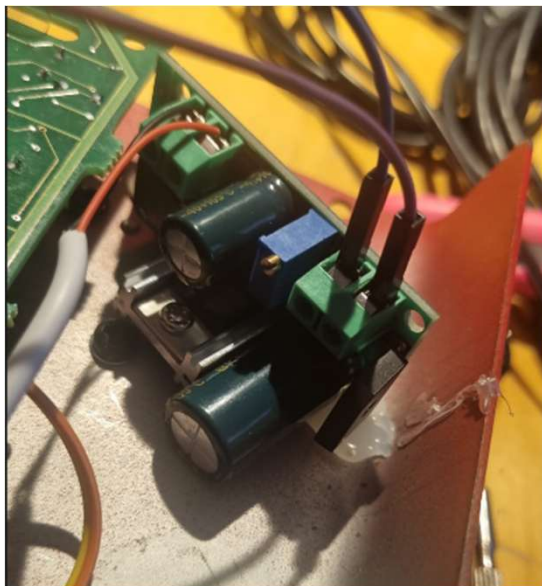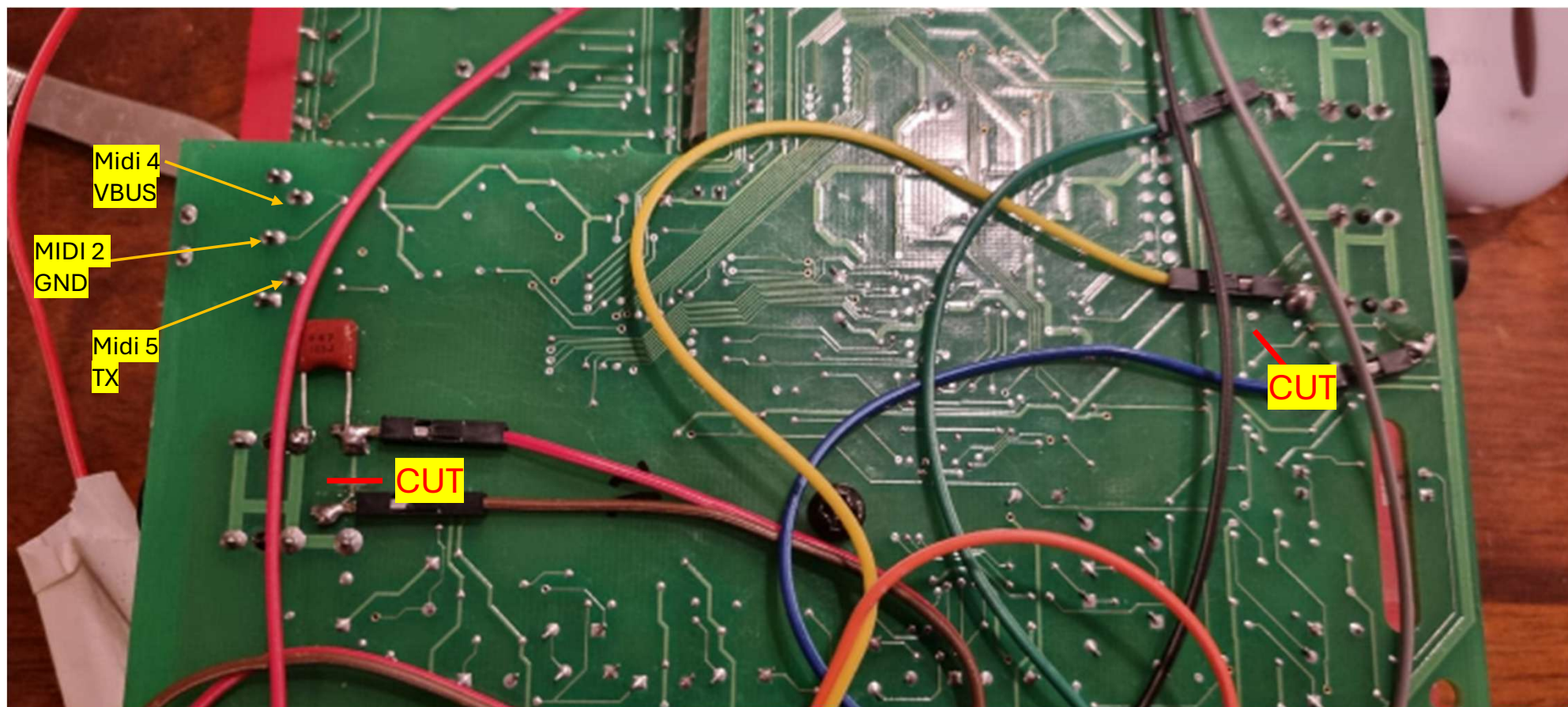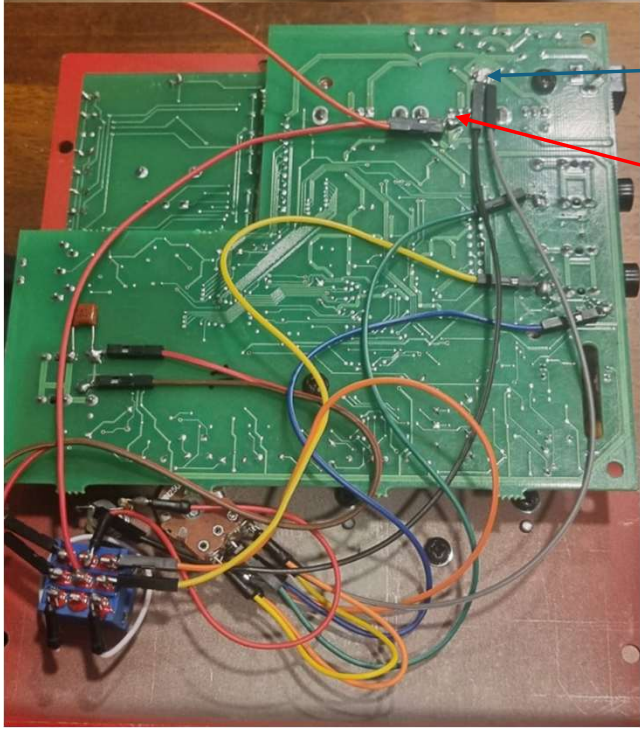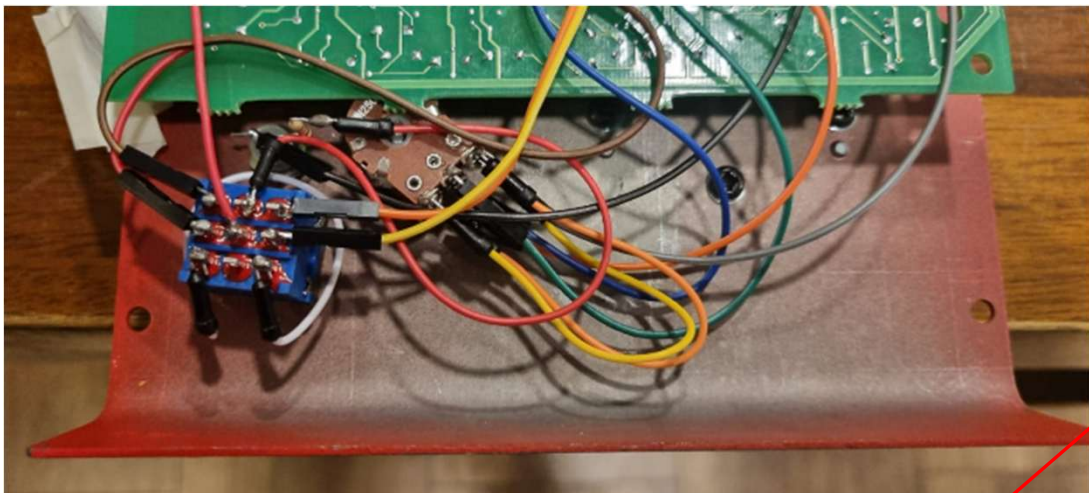
GND LED
HERE!!!

+5V LED
HERE!!!

Pull up
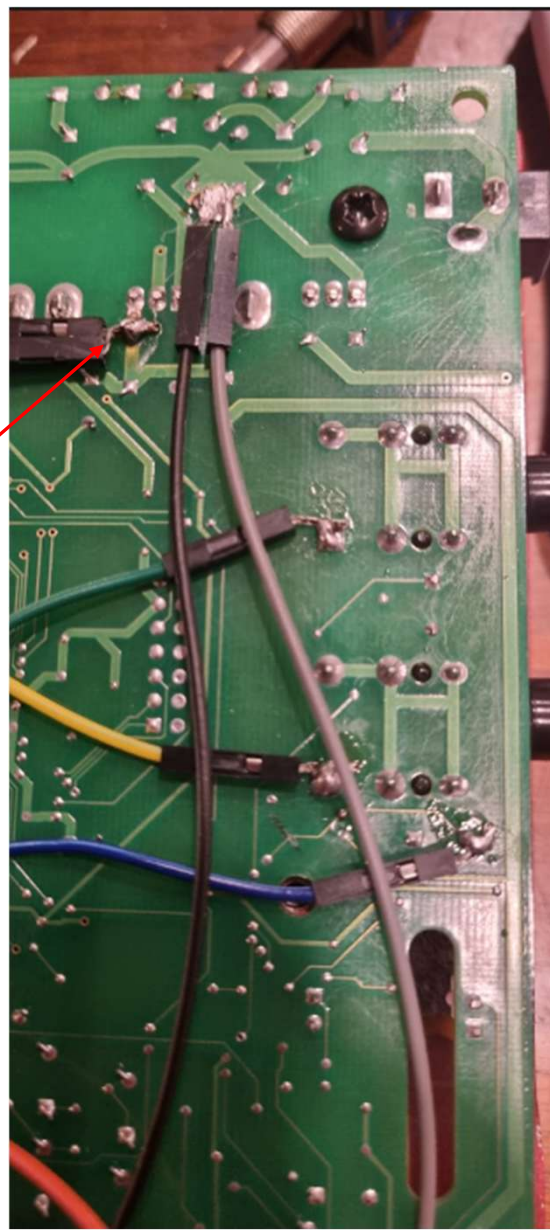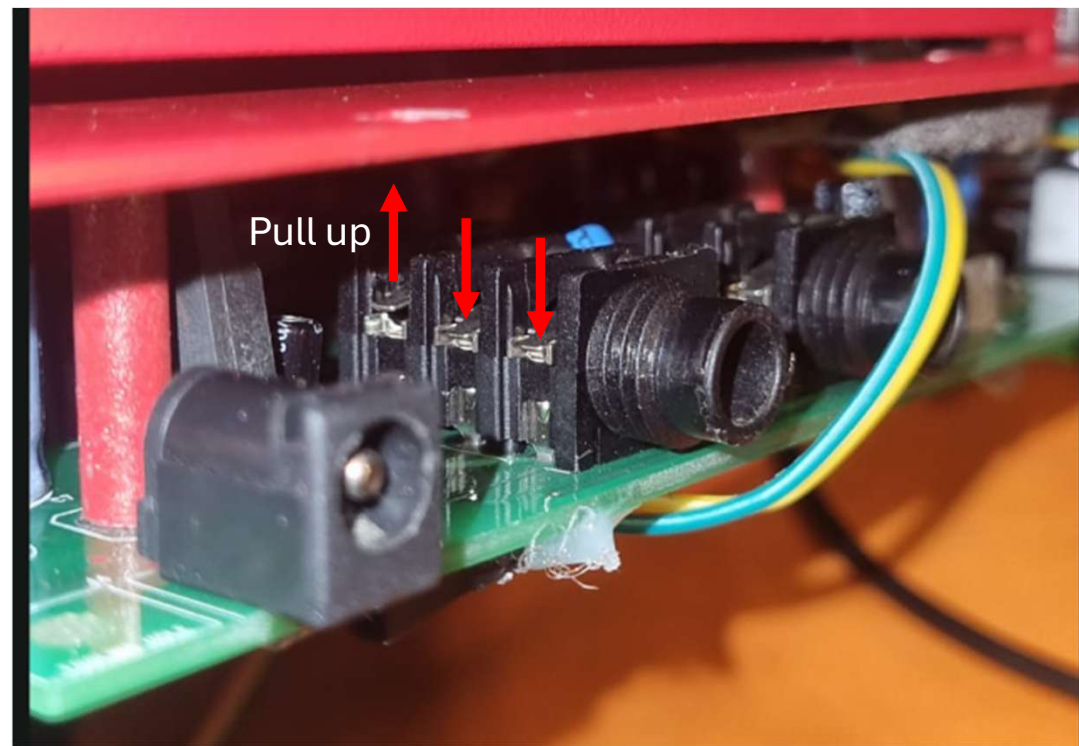
Midi Test

- 2 combinable effect presets

Anti- Noise-Filter

Insulate the cooling shield behind the housing with a PVC film.

B0505S-1W

47 uF

100 nF

47 nF

100 nF

47 nF

100 nF

47 uF
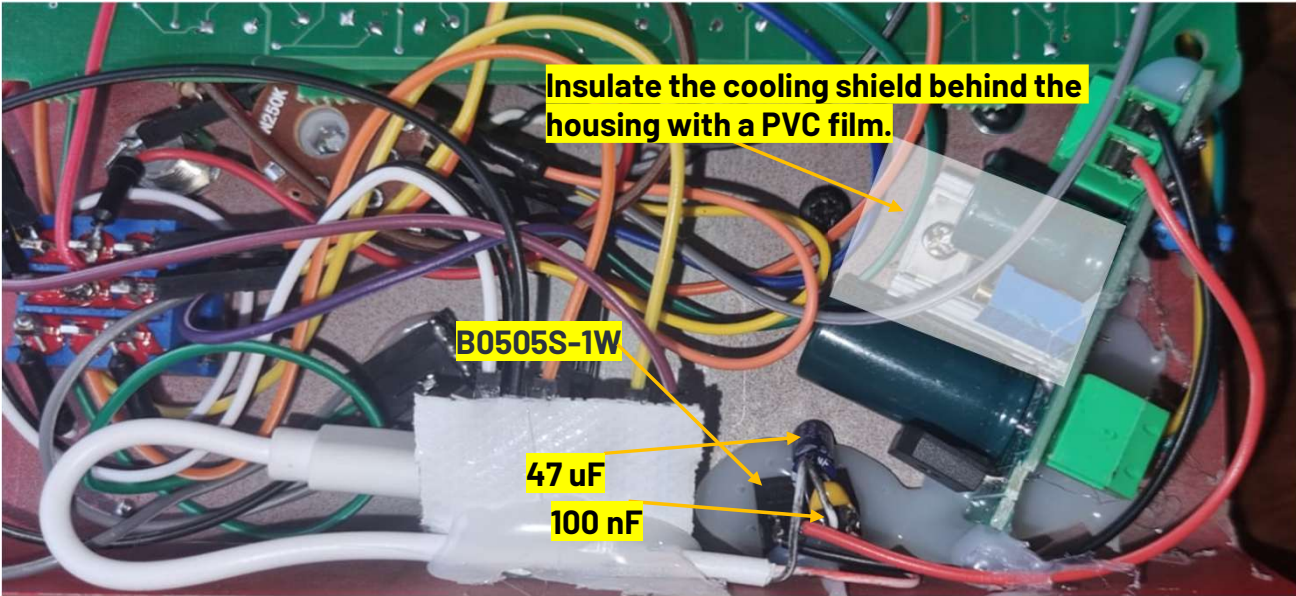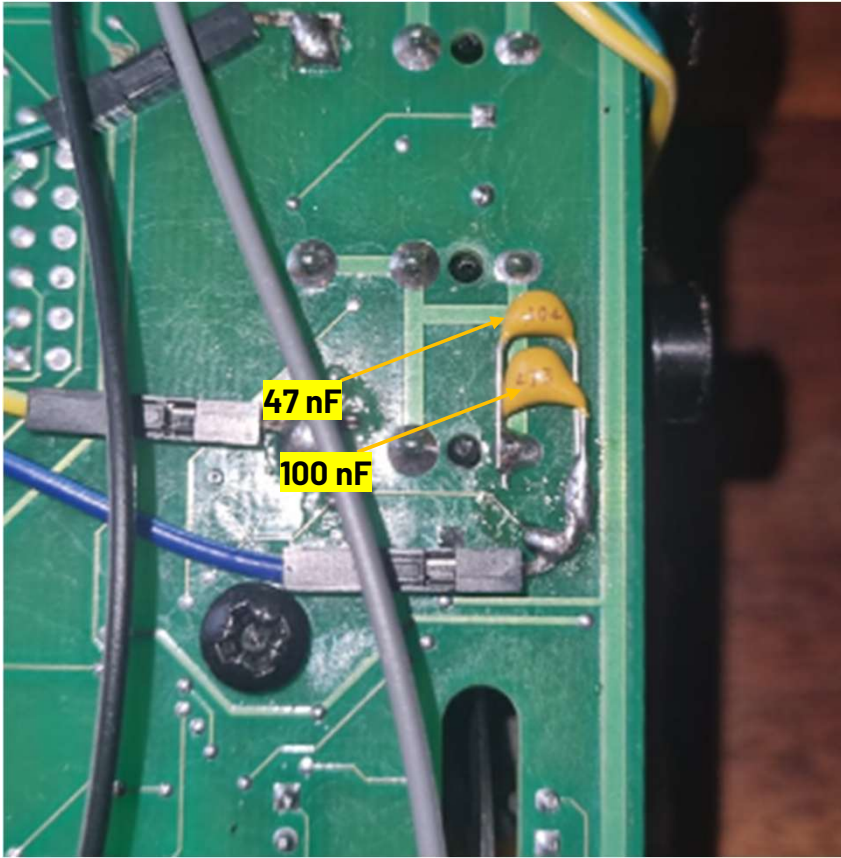
Final Front/Back

Flash NEO Software