



Plainsong Metronome

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NOTES

- Rev A -> Rev B changes:
- Button added and R1 removed for BOOT0 operation
 - Input PS change to +12VDC, 1A
 - VCAP_1 (pin 22) connection to +3V3 cut
 - MCU pin changes (Rev A -> Rev B):
 - PA0 -> PB5
 - PA1 -> PB3
 - PA3 -> PB13
 - PB5 -> PA0
 - PB13 -> PA3
 - PC13 -> N/C
 - U3 Pin 26 connected to +1V8
 - Digi-pots and associated resistors removed - MAX9867 can adjust volume
 - FFC pin connection changes (Rev A -> Rev B):
 - Pin 15 -> GND
 - Pin 17 -> GND
 - Pin 30 -> +12V (not +9V)
- Rev A -> Rev B PCB changes:
- USB con board cut-out increased vertically

ADDITIONAL DOCUMENTATION


PCB: 2025001 B Soutra Plainsong Metronome_PCB.PcbDoc

BoM: 2025001 B Soutra Plainsong Metronome_BoM.pdf

Draft: 2025001 B Soutra Plainsong Metronome_DRAFT1.PCBDwf
2025001 B Soutra Plainsong Metronome_DRAFT2.PCBDwf

OutJob: 2025001 B Soutra Plainsong Metronome_OJ.OutJob

SOUTRA



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| | |
|---|------------------------------|
| Title: Plainsong Metronome | Engineer: S.Thomas |
| Project: 2025001 B Soutra Plainsong Metronome | Approval: S.Thomas |
| Sch Rev: B Date: 28/10/2025 | Date: 28/10/2025 |
| File Name: Title-Page.SchDoc Sheet 1 of 9 | Libraries: ST_Library.LibPkg |
| Size: A4 | Scale: 1:1 |

Power Tree

DC JACK
12V 1A

5V DCDC

3V3 DCDC

1V8 DCDC

MCU

CODEC

Amplifiers

IOb

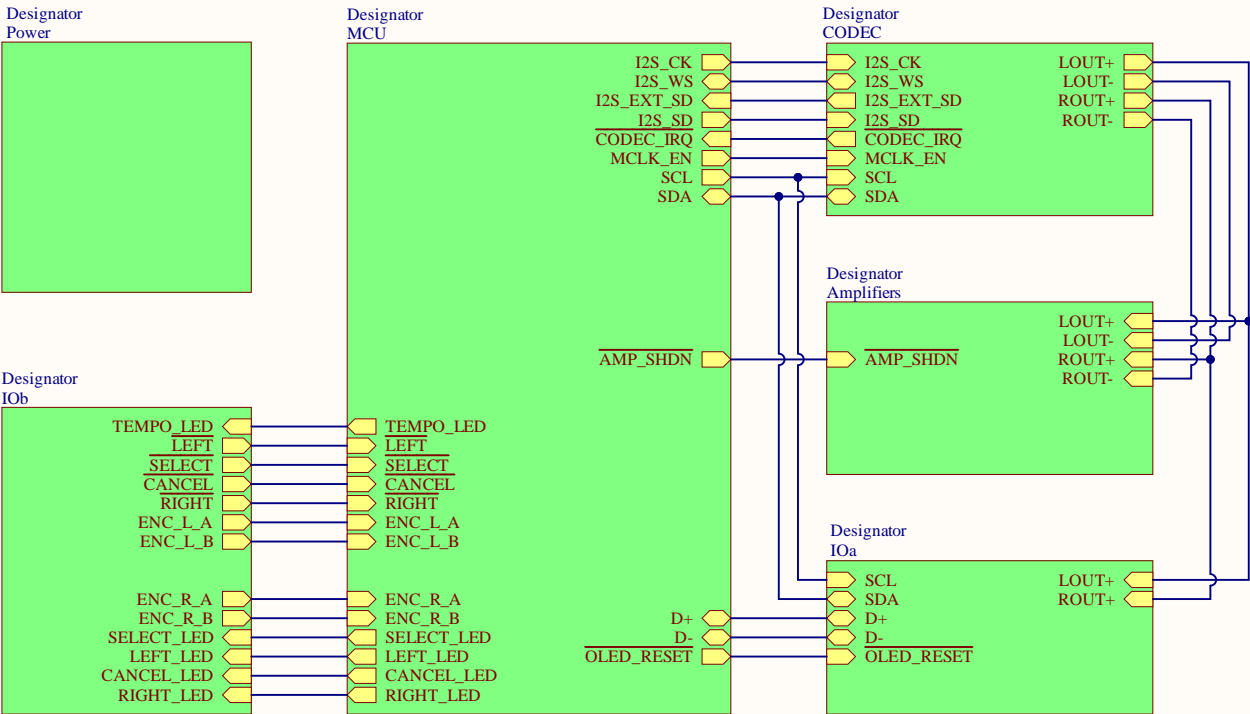
IOa


LEGEND

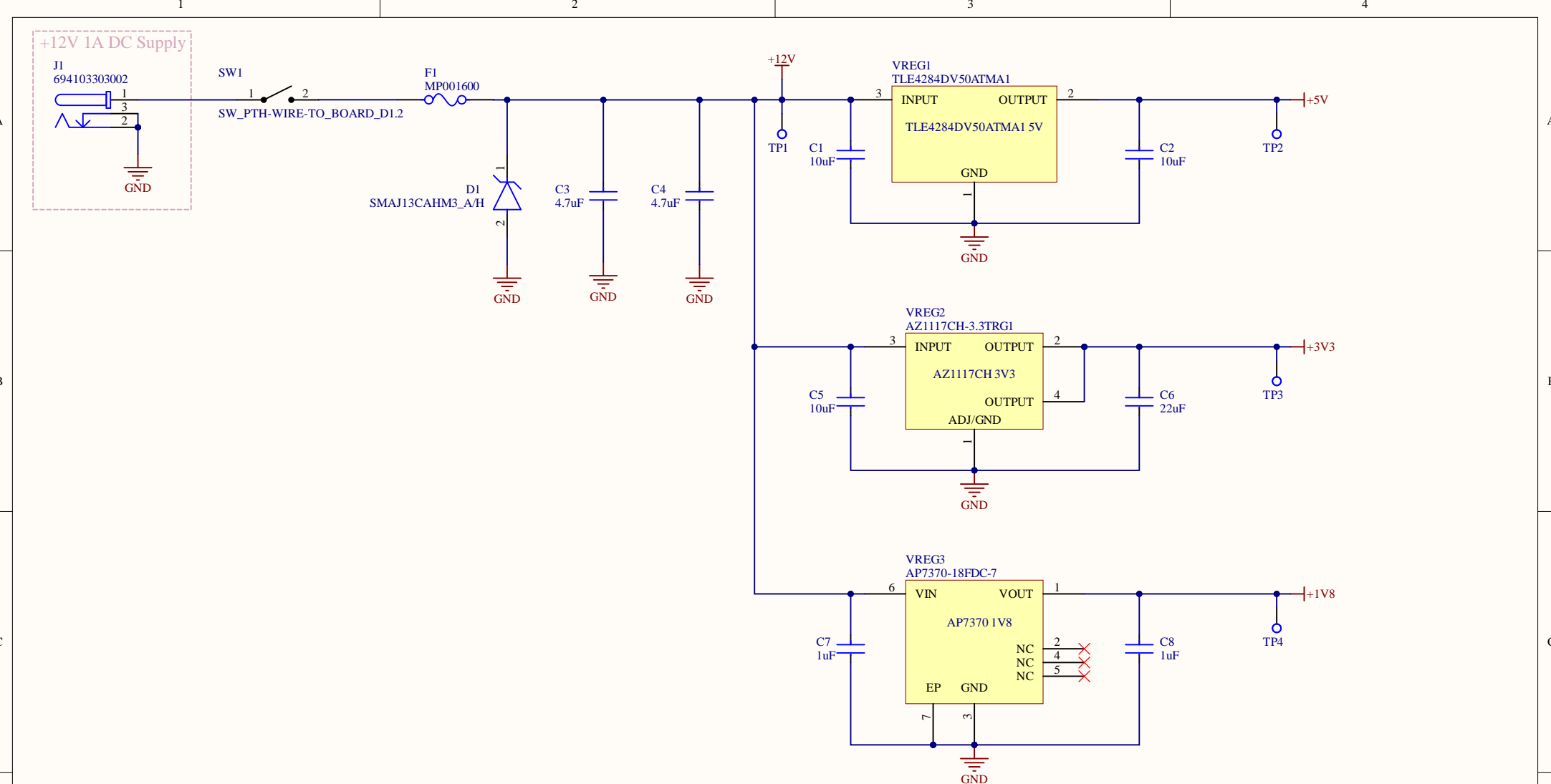
- Input Connector
- Power Conversion
- Powered Device/Sub-Circuit
- Output Connector


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| Sch Rev: B Date: 28/10/2025 | | Date: 28/10/2025 | |
| REFERENCE DOCUMENTS | | LIBRARY | |
| BoM: 2025001 B Soutra PIRev: ngMetronome_SchDocLibPkg | | Size: A4 | |
| PCB: 2025001 B Soutra PIRev: ngMetronome_PCB.PcbDoc | | Scale: 1:1 | |
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| | | Sheet 2 of 9 | |

Block Diagram

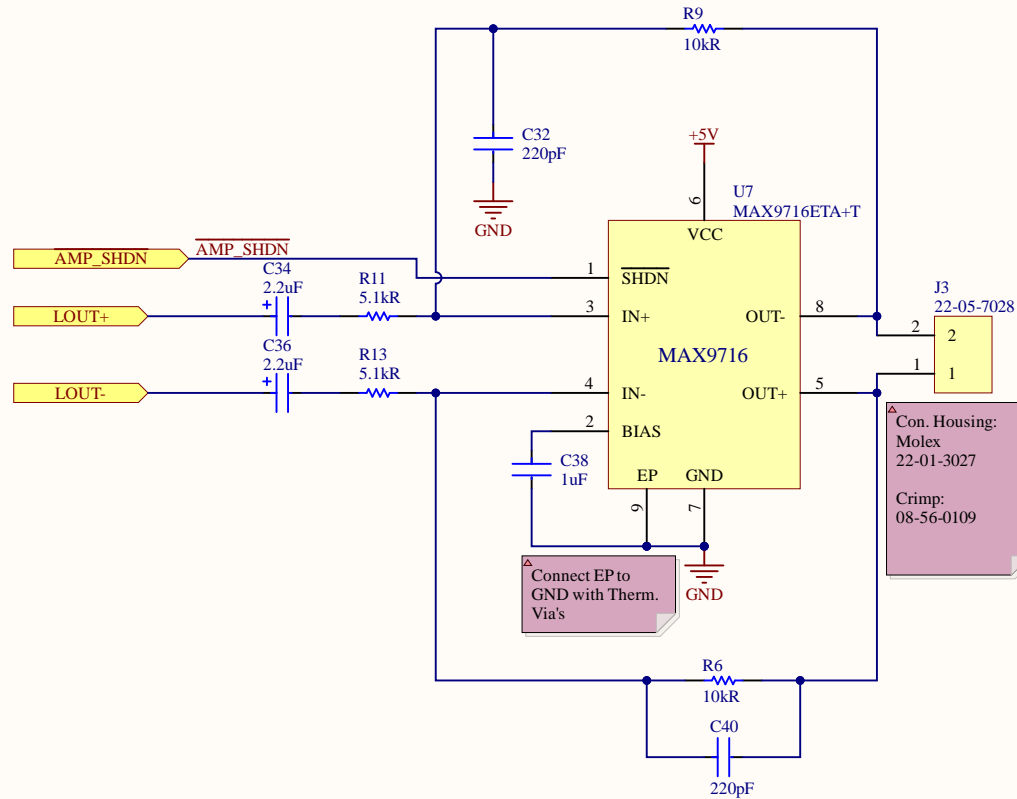


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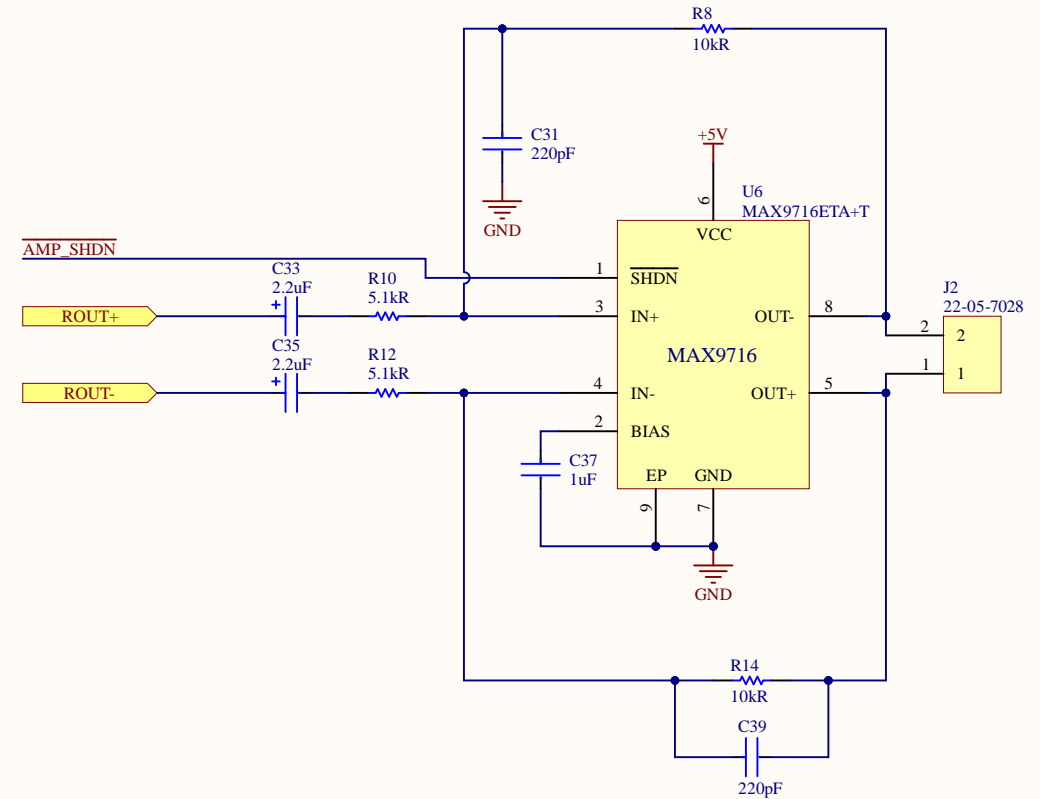


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| | | Sheet 4 of 9 | |

LEFT Channel




RIGHT Channel

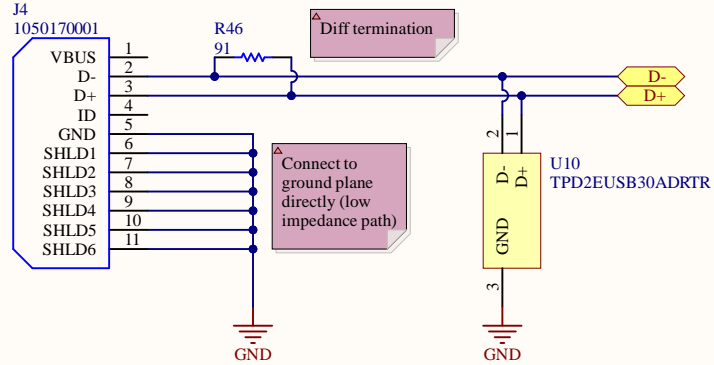


Amp Test Points

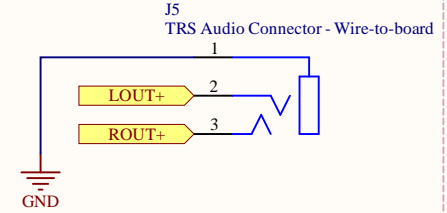
AMP_SHDN TP31

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| PCB: 2025001 B Soutra P1Rev: 1 B Metronome_PCB.PcbDoc | | Scale: 1:1 | |
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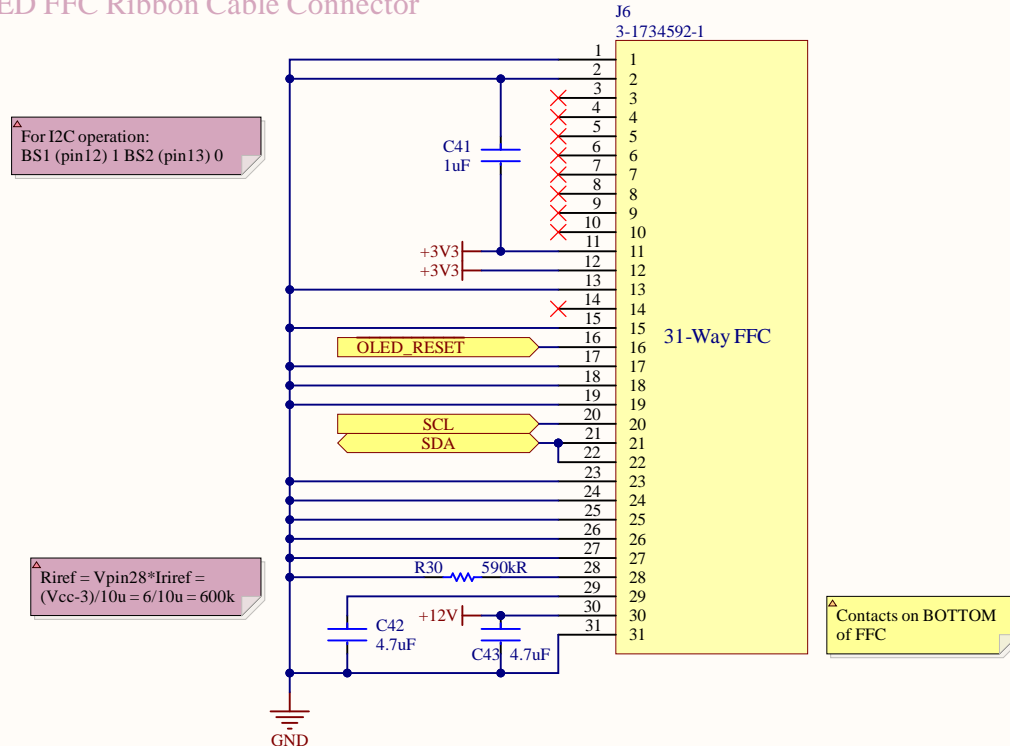
USB Input




3.5mm Headphone Output - Wire-to-Board

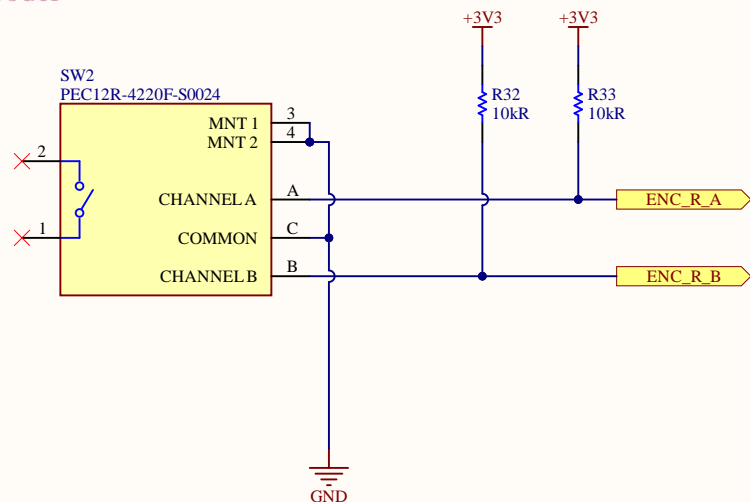


OLED FFC Ribbon Cable Connector

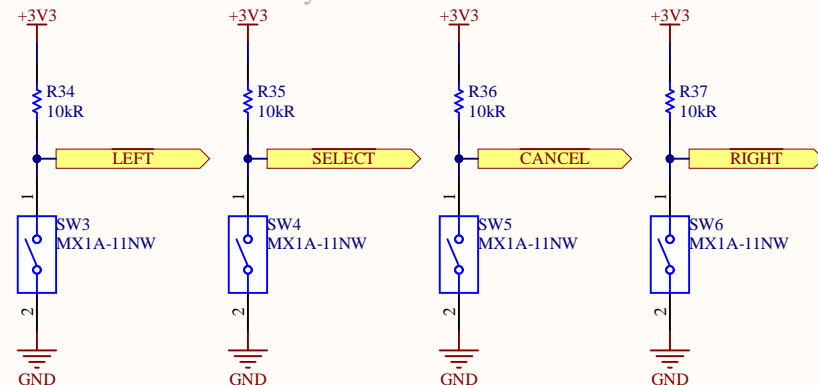


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| BoM: 2025001 B Soutra PI Rev: ng8Metronome_SchDocLibPkg | PCB: 2025001 B Soutra PI Rev: ng8Metronome_PCB.PcbDoc | Date: 28/10/2025 | Approval: S.Thomas |
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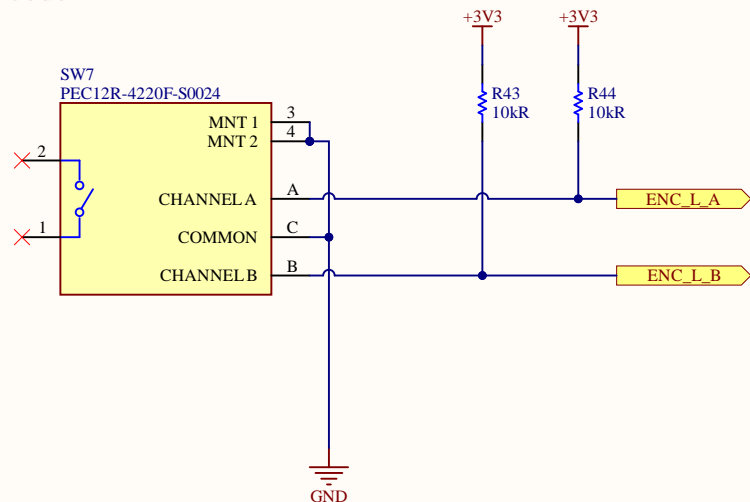
Left Encoder



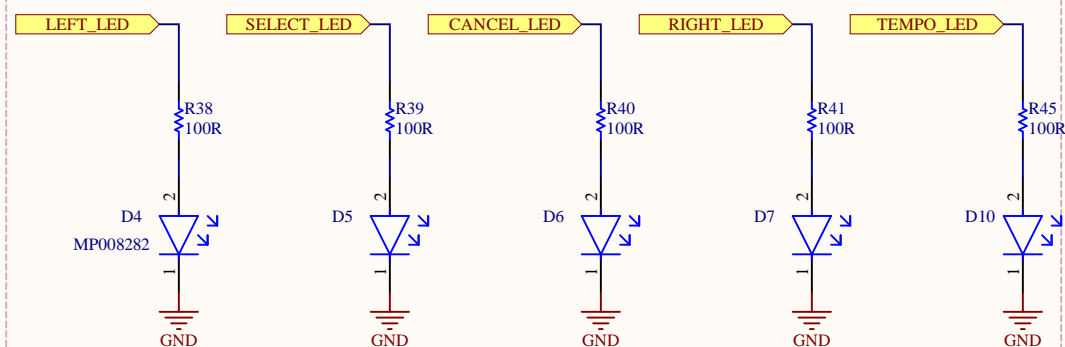
Selection Switches - Cherry MX




Right Encoder



Indicator LEDs



MENTOR 1275.1001 Light Pipes for all LED - see DS for mounting specs.

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| BoM: 2025001 B Soutra PI Rev: 1 | | Soutra Metronome Lib Pkg | |
| PCB: 2025001 B Soutra PI Rev: 1 | | Soutra Metronome PCB PcbDoc | |
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| Size: A4 | | Scale: 1:1 | |
| File Name: IOB.SchDoc | | Sheet 9 of 9 | |