

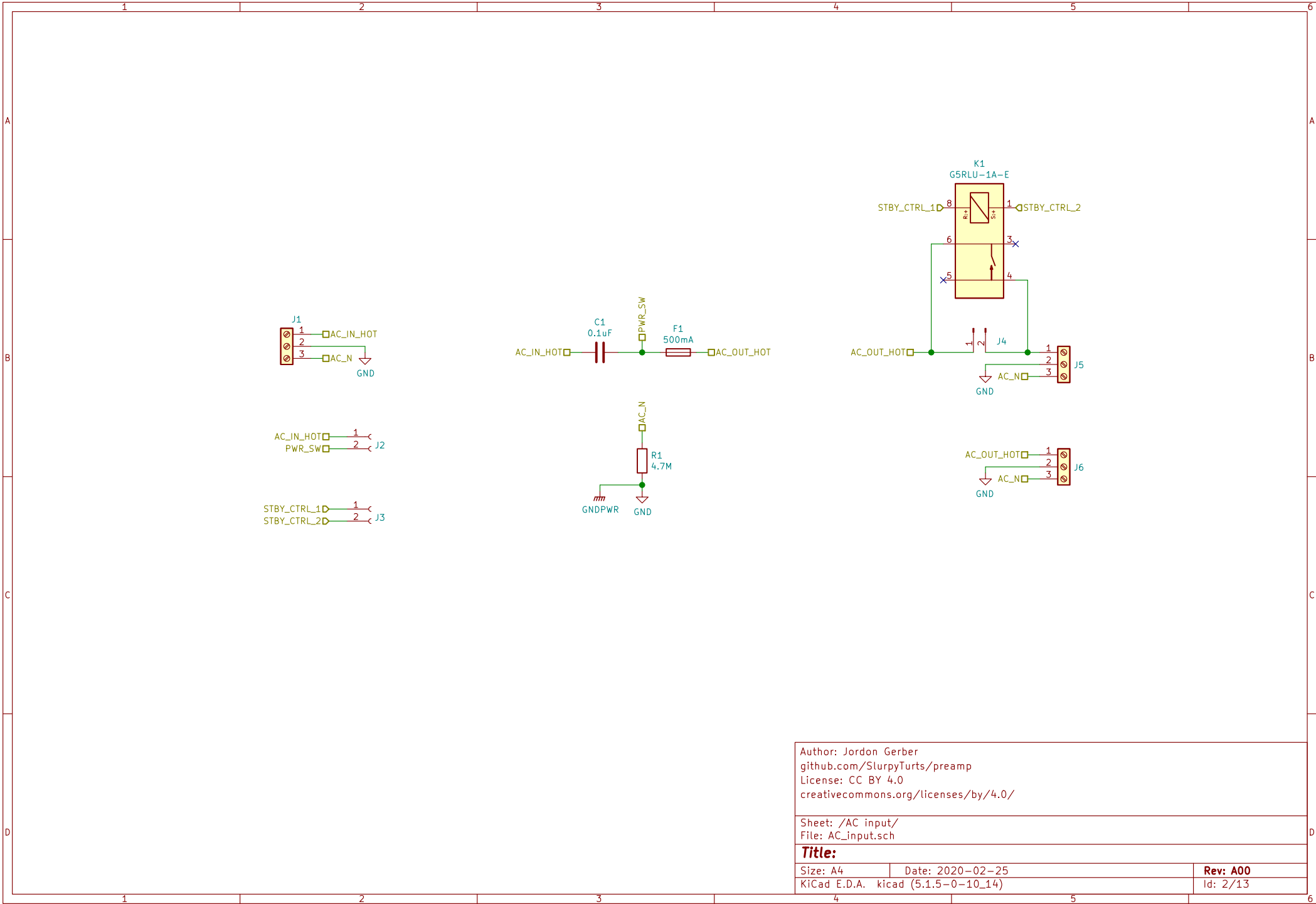
Author: Jordan Gerber
github.com/SlurpyTurts/preamp
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Sheet: /
 File: preamp.sch

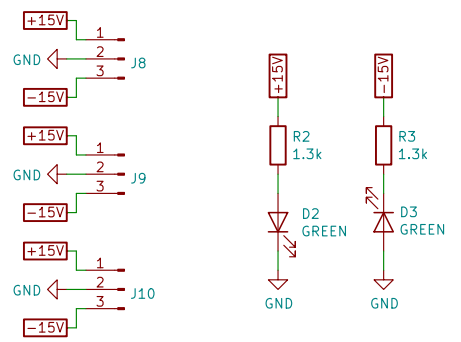
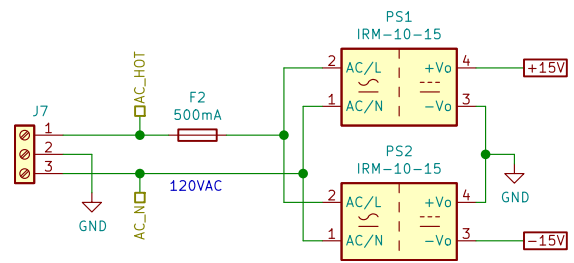
Title: Preamp

Size: A4 Date: 2020-02-25
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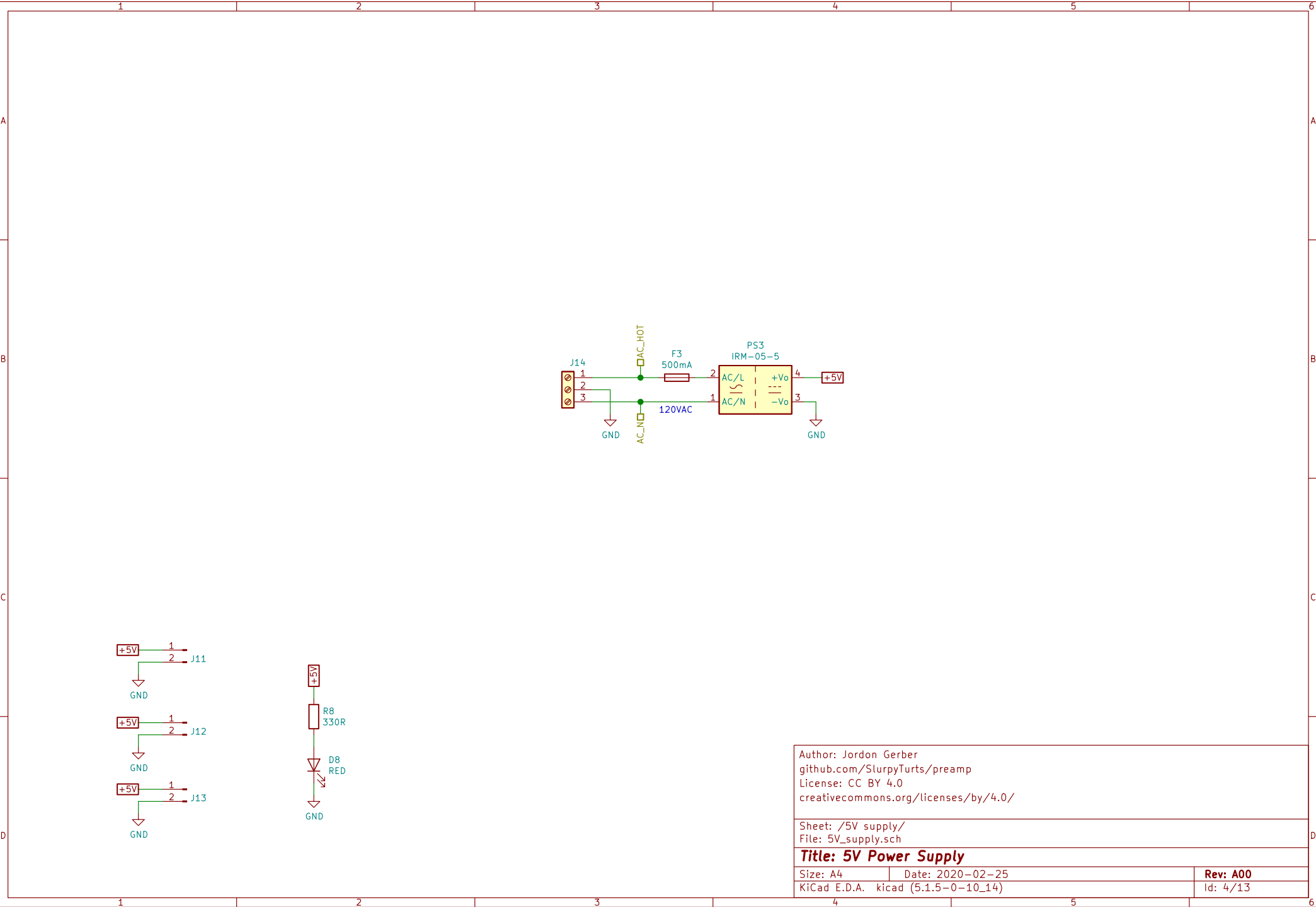
Rev: A00
 Id: 1/13



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Sheet: /AC input/ File: AC_input.sch		
Title:		
Size: A4	Date: 2020-02-25	Rev: A00
KiCad E.D.A. kicad (5.1.5-0-10_14)		Id: 2/13



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Sheet: /+ -15V PWR SUPPLY/ File: +-15V_PWR_SUPPLY.sch		
Title: 15V Power Supply		
Size: A4	Date: 2020-02-25	Rev: A00
KiCad E.D.A. kicad (5.1.5-0-10_14)		Id: 3/13

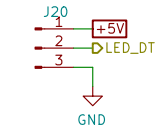
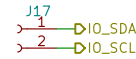
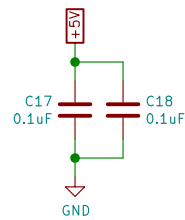
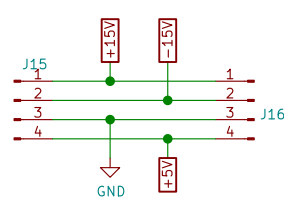
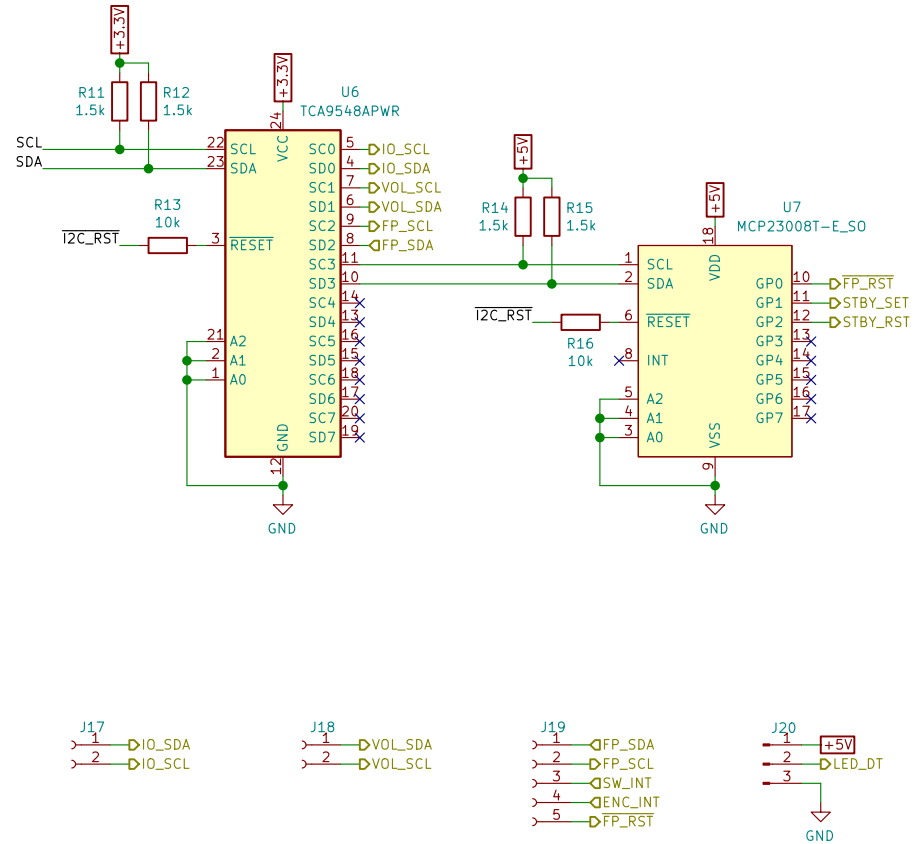
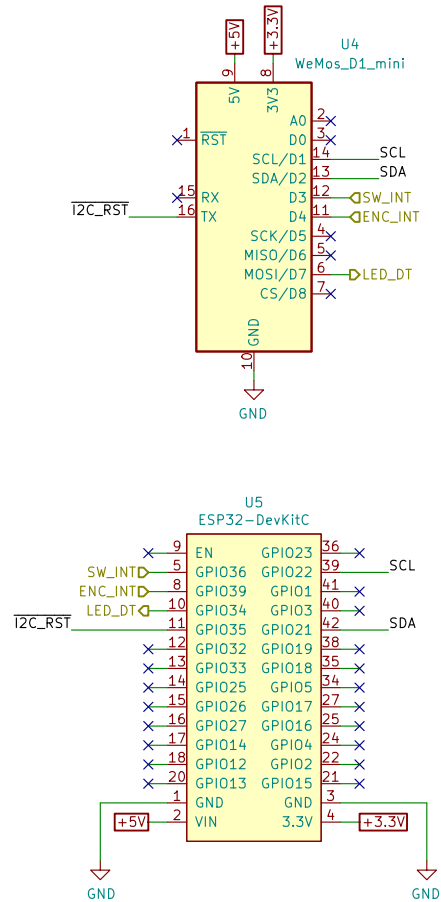


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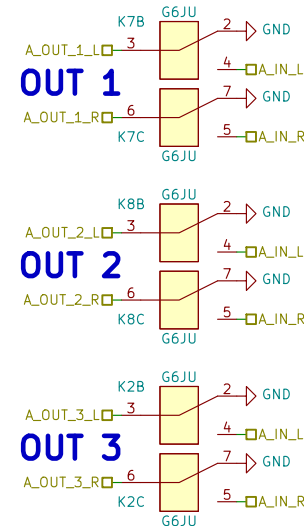
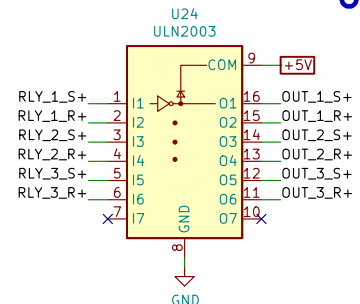
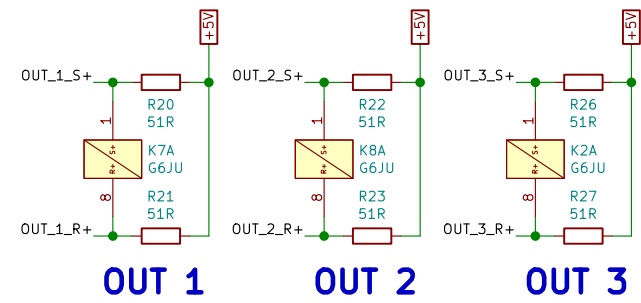
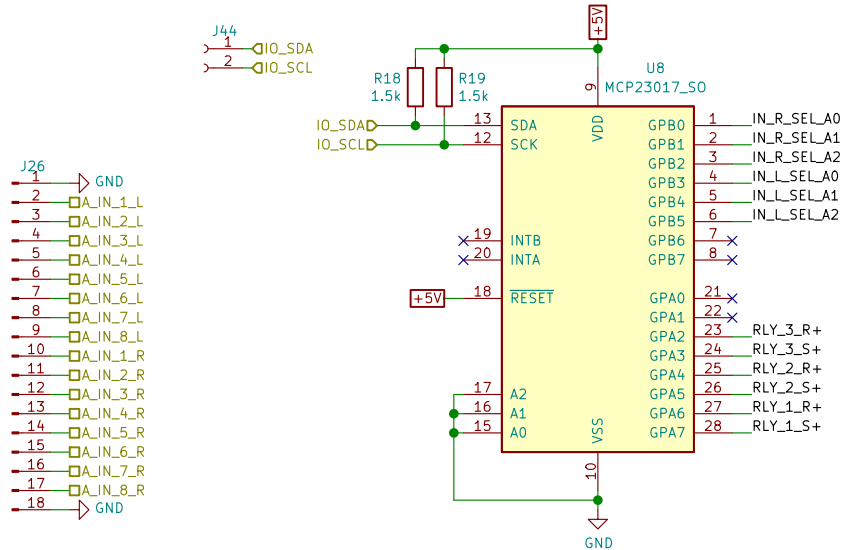
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File: 5V_supply.sch

Title: 5V Power Supply

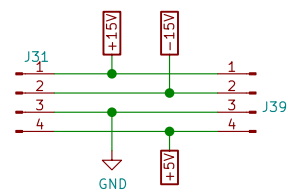
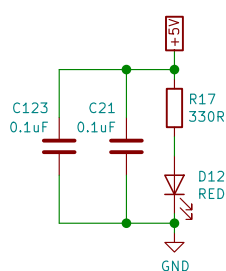
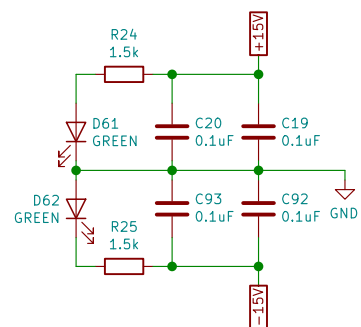
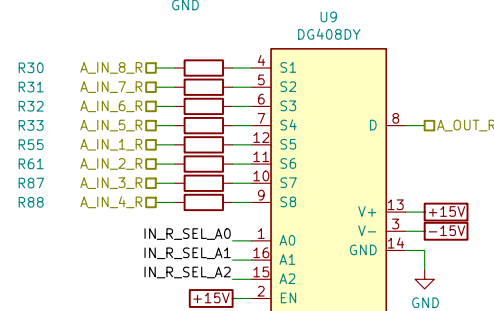
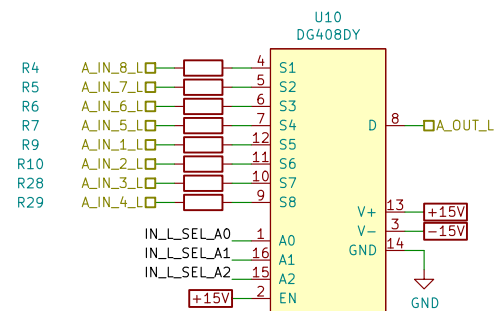
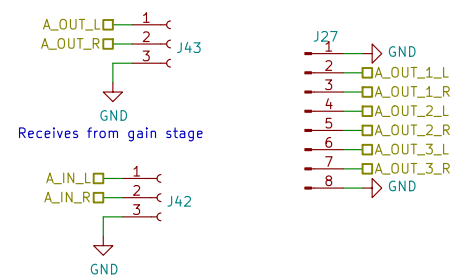
Size: A4	Date: 2020-02-25	Rev: A00
KiCad E.D.A. kicad (5.1.5-0-10_14)	Id: 4/13	



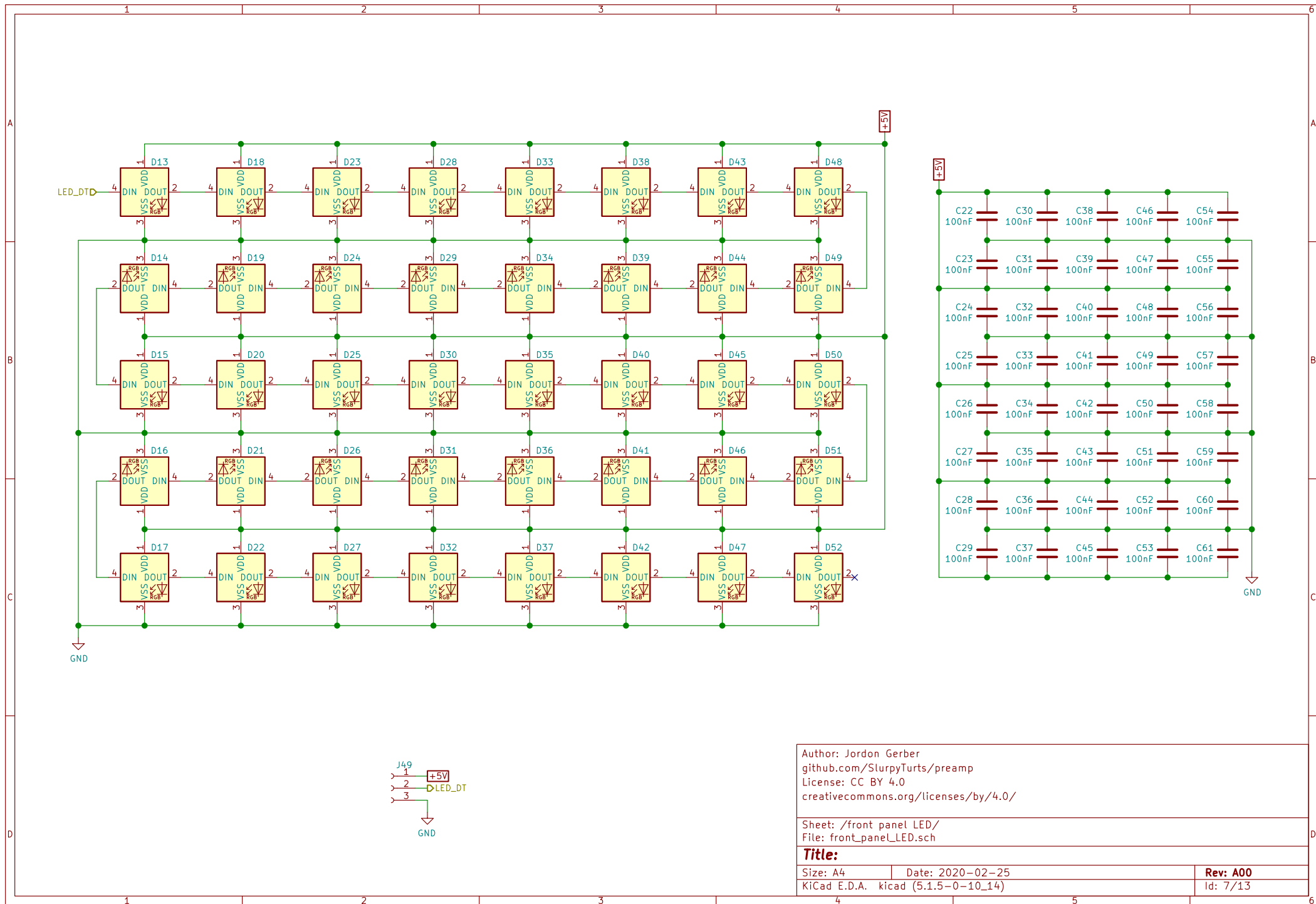
Author: Jordon Gerber github.com/SlurpyTurts/preamp License: CC BY 4.0 creativecommons.org/licenses/by/4.0/	
Sheet: /MCU/ File: MCU.sch	
Title: Preamp MCU Board	
Size: A4	Date: 2020-02-25
KiCad E.D.A. kicad (5.1.5-0-10_14)	Rev: A00 Id: 5/13



Sends to amp / tone / etc



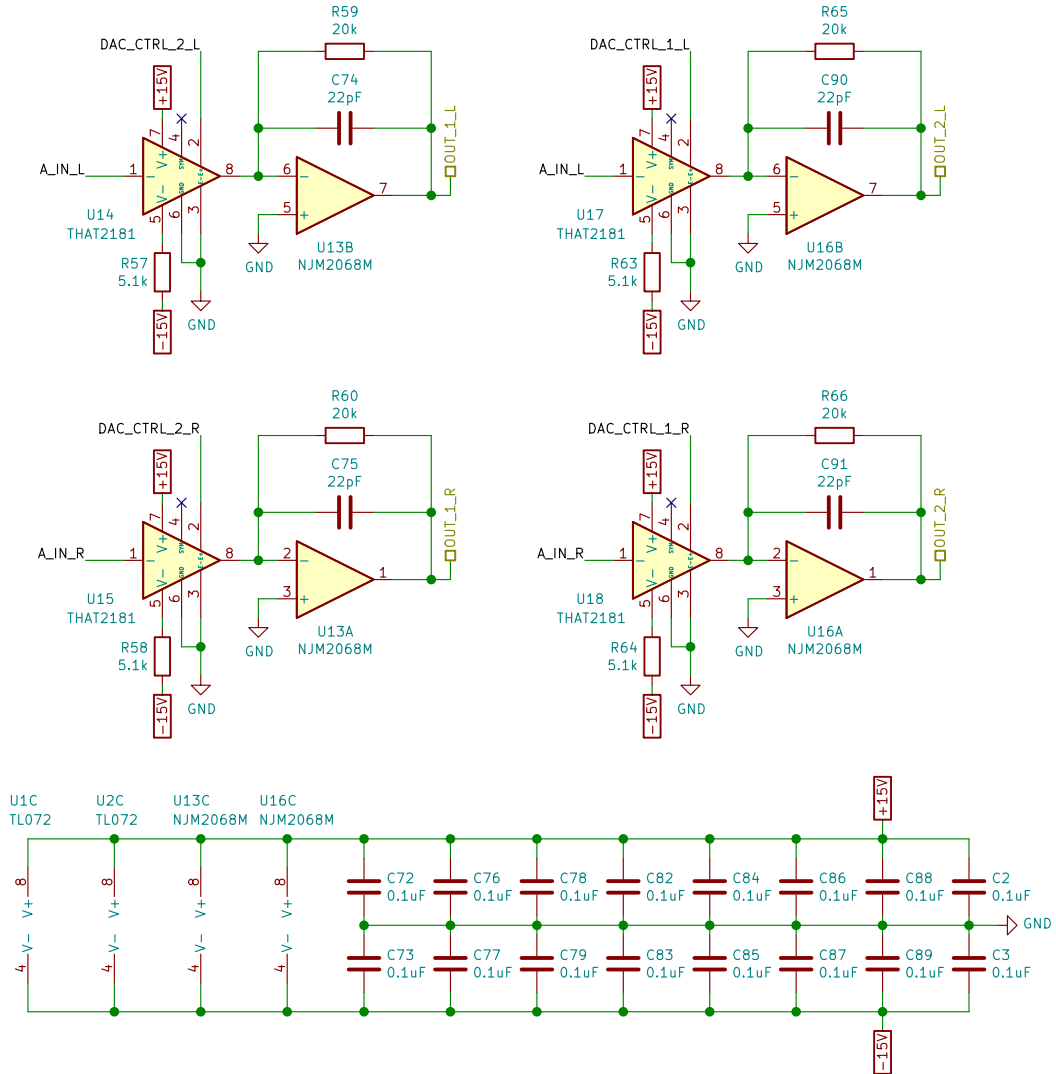
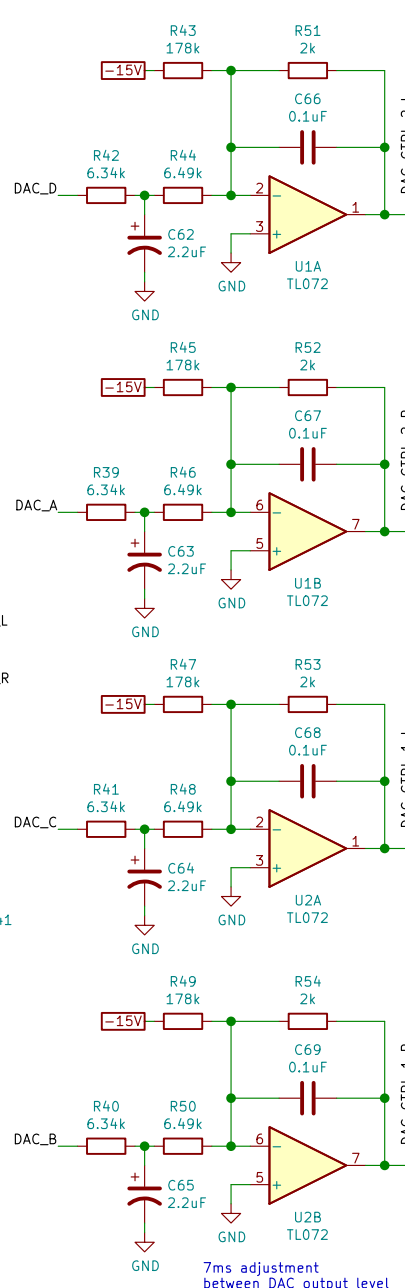
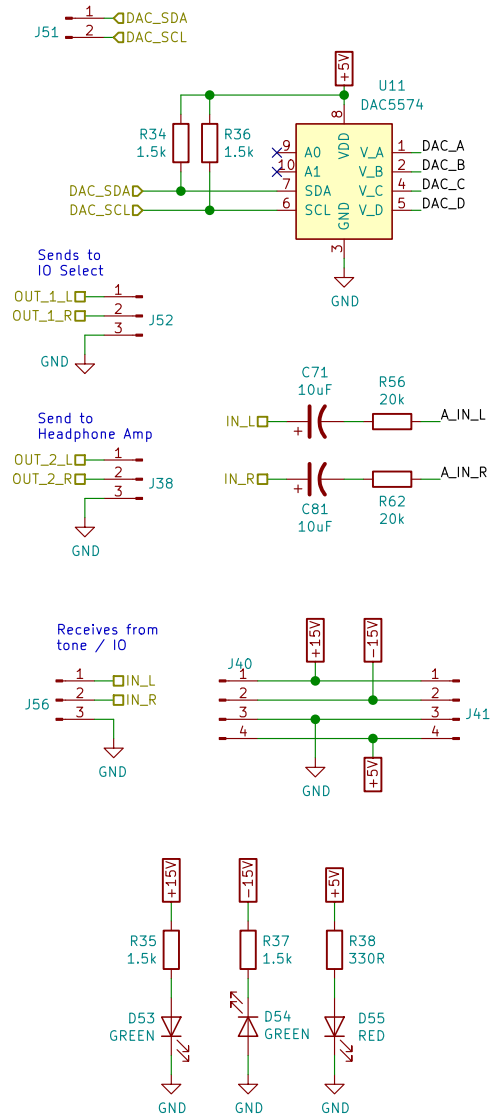
Author: Jordan Gerber github.com/SlurpyTurts/preamp License: CC BY 4.0 creativecommons.org/licenses/by/4.0/	
Sheet: /input selector/ File: input_selector.sch	
Title: IO Relay Select Board	
Size: A4	Date: 2020-02-25
KiCad E.D.A. kicad (5.1.5-0-10_14)	Rev: A00
	Id: 6/13



Buffered DAC output max approx. 0.78V
 $5V * (2k / (6.34k + 6.49k))$

Per VCA Manufacturer's spec, 6mV per dB attenuation
 for max 0.78V, $0.78 / 0.006 = 130dB$ range
 $130dB / 256 \text{ steps} = 0.51dB / \text{step}$

178k offset resistor shifts output up by approx. 30dB
 control range becomes -100dB to +30dB



<http://www.thatcorp.com/datashts/dn02.pdf>

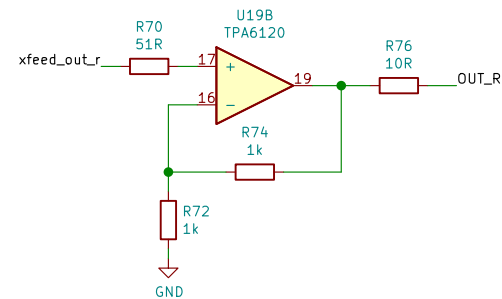
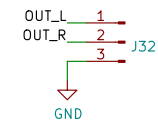
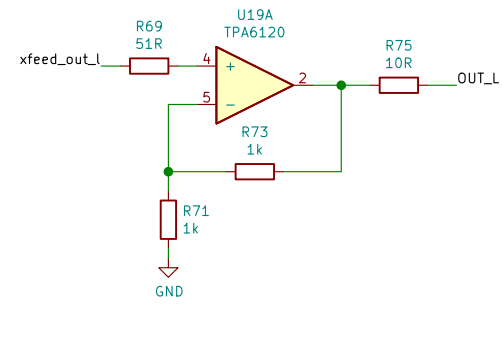
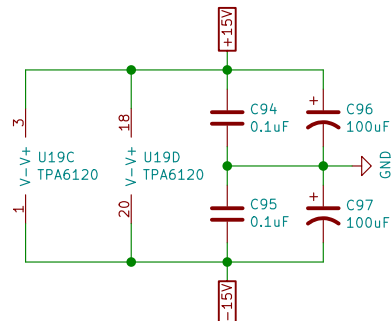
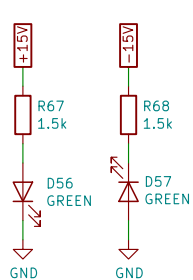
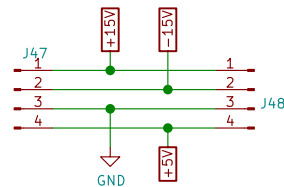
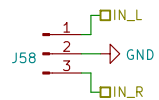
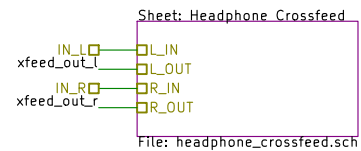
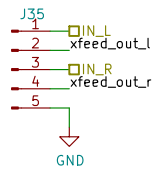
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Sheet: /Volume Control/
 File: volume_ctrl.sch

Title:

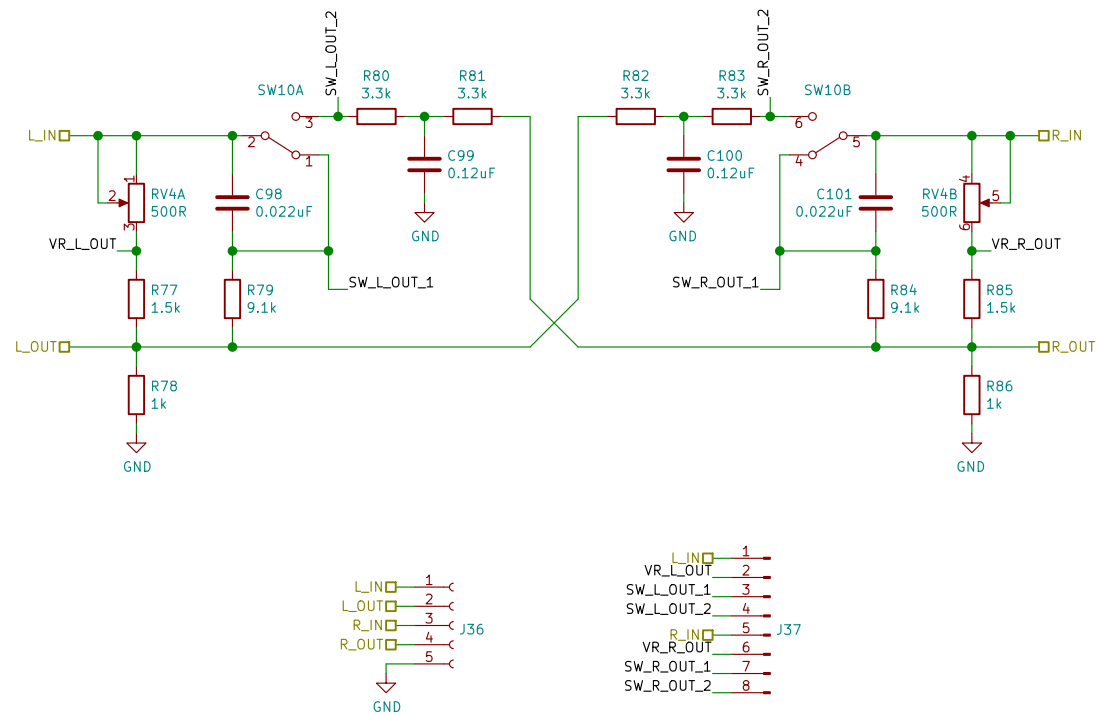
Size: A4 Date: 2020-02-25
 KiCad E.D.A. kicad (5.1.5-0-10_14)

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 Id: 8/13



crosstalk: <https://headwizememorial.wordpress.com/2018/03/09/an-acoustic-simulator-for-headphone-amplifiers/>
amp: http://www.pavouk.org/hw/tpa6120headamp/en_index.html

Author: Jordon Gerber github.com/SlurpyTurts/preamp License: CC BY 4.0 creativecommons.org/licenses/by/4.0/		
Sheet: /headphone amp/ File: headphone_amp.sch		
Title: Headphone Amplifier Board		
Size: A4	Date: 2020-02-25	Rev: A00
KiCad E.D.A. kicad (5.1.5-0-10_14)		Id: 9/13



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Sheet: /headphone amp/Headphone Crossfeed/
 File: headphone_crossfeed.sch

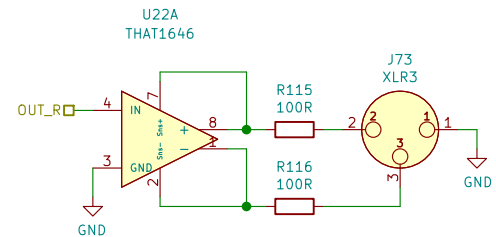
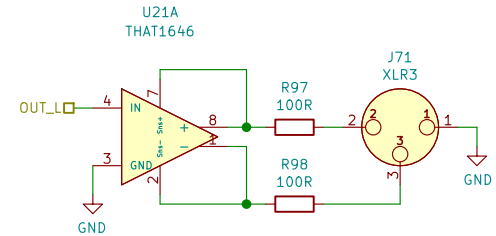
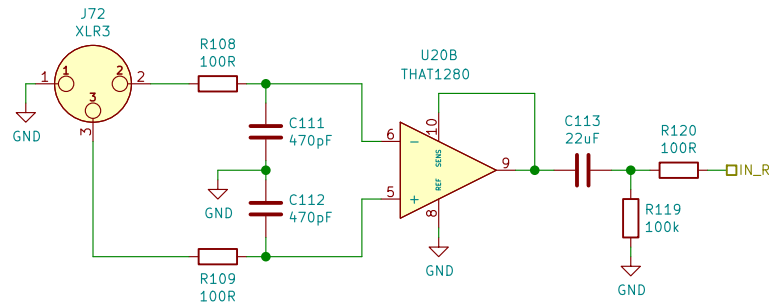
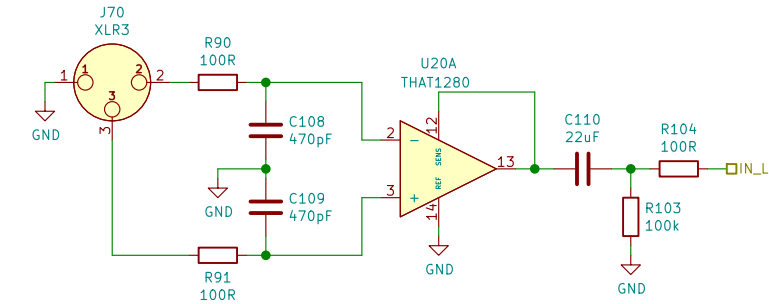
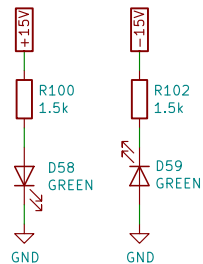
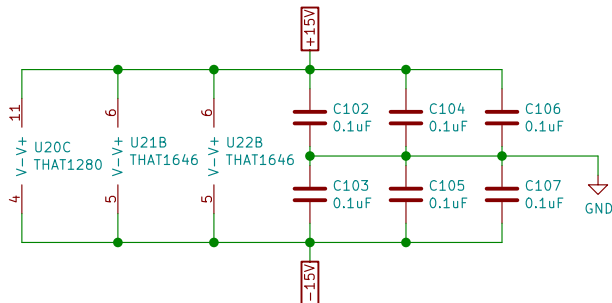
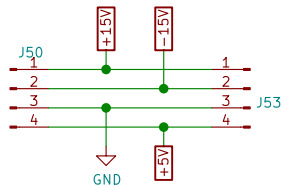
Title: Headphone Crosstalk

Size: A4 Date: 2020-02-25

KiCad E.D.A. kicad (5.1.5-0-10_14)

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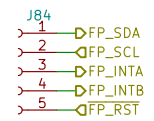
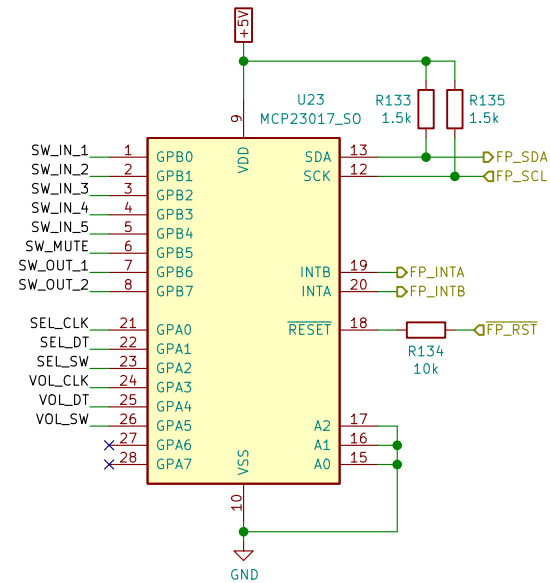
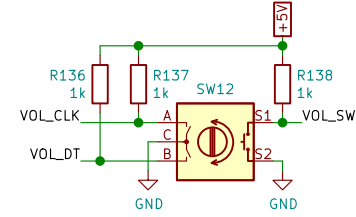
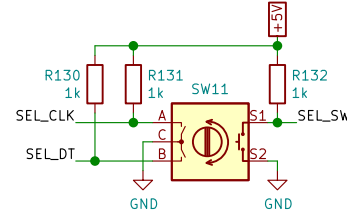
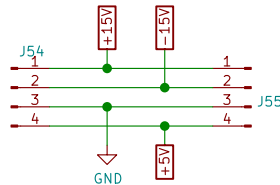
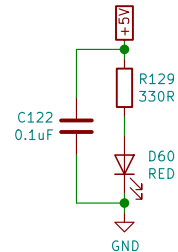
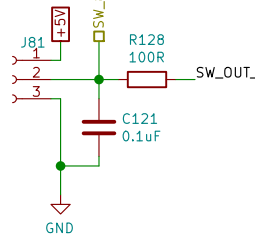
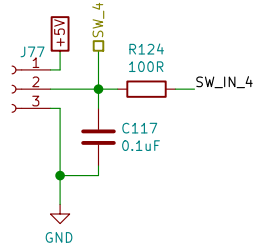
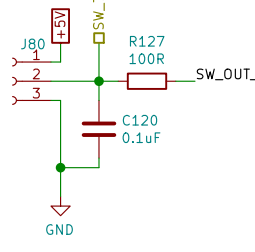
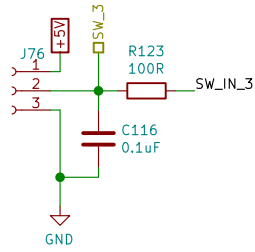
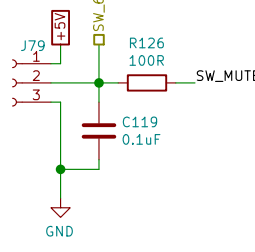
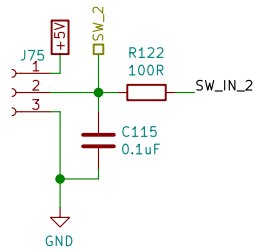
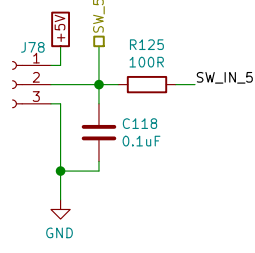
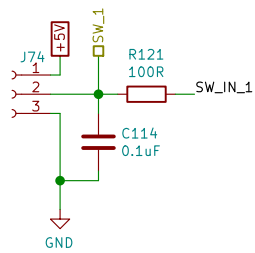
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Sheet: /Balanced daughter IO pcb/
 File: IO_BALANCED_DAUGHTER.sch

Title: Balanced IO Daughter Board

Size: A4
 Date: 2020-02-25
 KiCad E.D.A. kicad (5.1.5-0-10_14)

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 Id: 11/13



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Sheet: /front panel/
 File: front_panel.sch

Title: Front Panel

Size: A4 Date: 2020-02-25
 KiCad E.D.A. kicad (5.1.5-0-10_14)

Rev: A00
 Id: 12/13

