

ESP32 SYNTH

PAGE 1

COVER

PAGE 2



BLOCK DIAGRAM

PAGE 3



POWER

PAGE 4



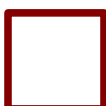
MCU – USB

PAGE 5



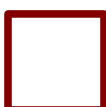
AUDIO

PAGE 6



MIDI

PAGE 7



MUX – POTS

MOUNTING HOLES

H101

H102

H103

H104

Joël Ucedo

Sheet: /
File: ESP32 synth.kicad_sch

Title: ESP32 SYNTH

Size: A3 Date: 2023-06-02
KiCad E.D.A. kicad (6.0.7)

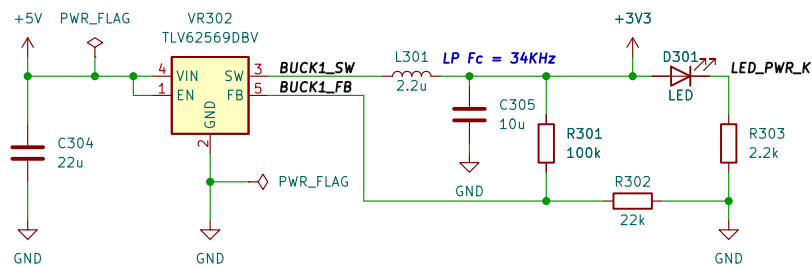
Rev: 0
Id: 1/7

BLOCK DIAGRAM

Joël Ucedo		
Sheet: /BLOCK DIAGRAM/ File: block_diagram.kicad_sch		
Title: ESP32 SYNTH		
Size: A3	Date: 2023-06-02	Rev: 0
KiCad E.D.A. kicad (6.0.7)	Id: 2/7	

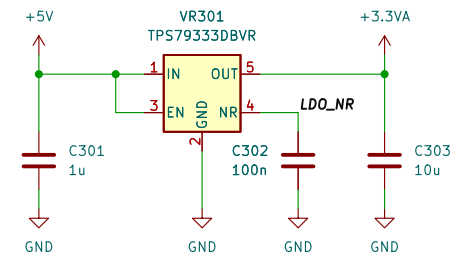
POWER

+5V > +3V3 DIGITAL



$$V(\text{out}) = 0.6 * (1 + 100k / 22k) = 3.327V$$

+5V > +3V3 ANALOG



Only for analog audio circuit

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Sheet: /POWER/
File: power.kicad_sch

Title: ESP32 SYNTH

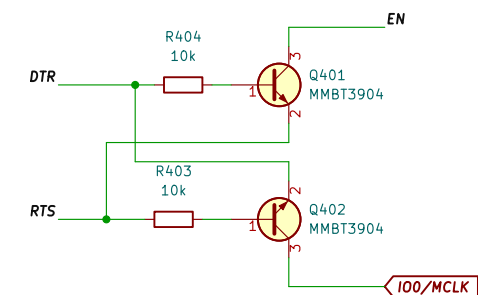
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KiCad E.D.A. kicad (6.0.7)

Rev: 0

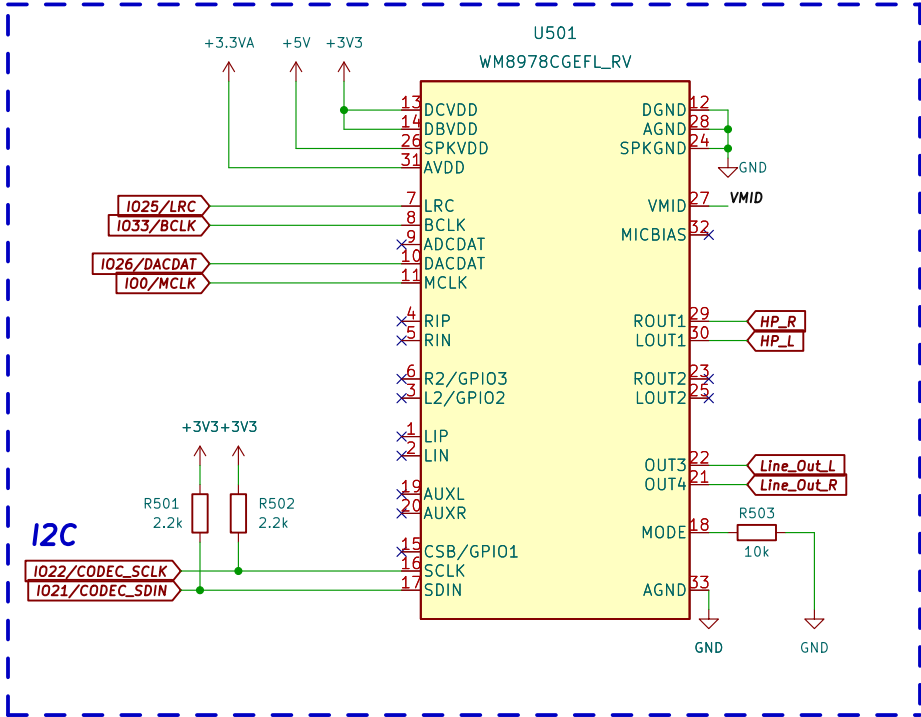
Id: 3/7

USB TO UART CONVERTER

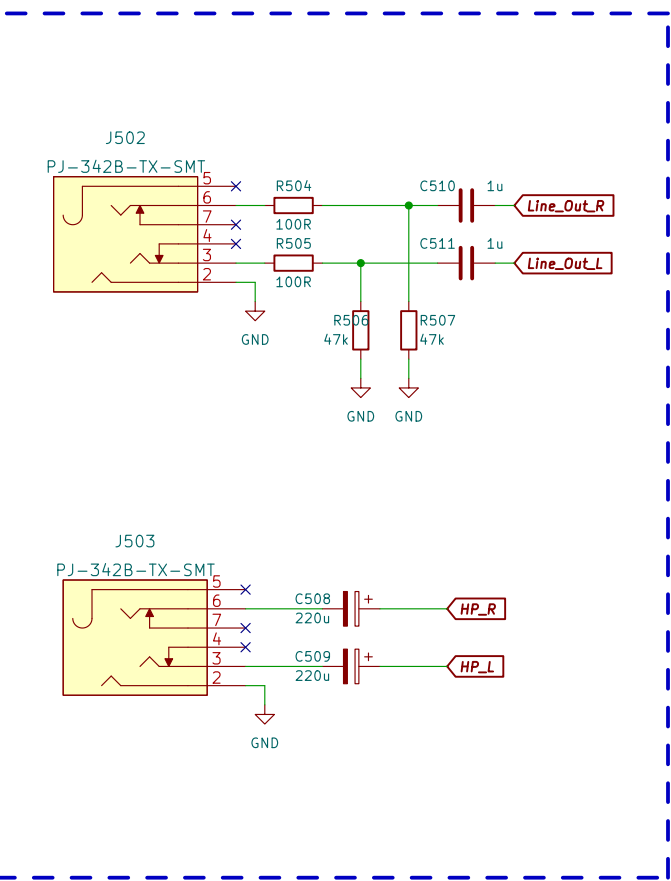


AUDIO

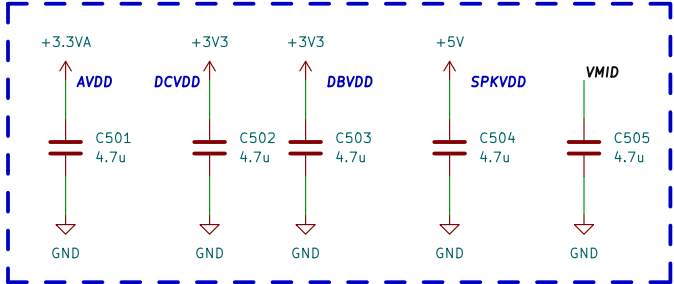
AUDIO CODEC



LINE OUT & HEADPHONE



DECOUPLING



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Sheet: /AUDIO/
File: audio.kicad_sch

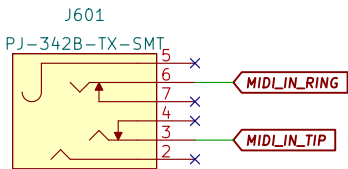
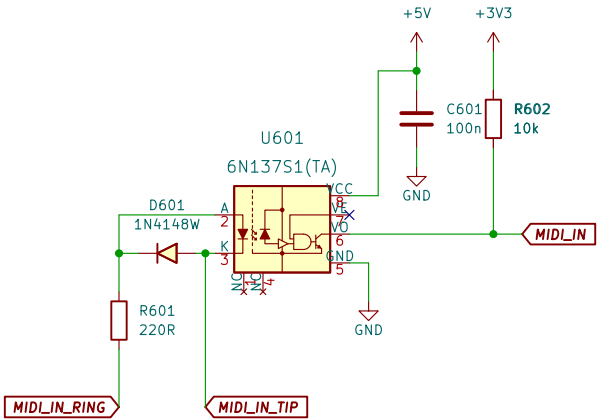
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Size: A3 Date: 2023-06-02
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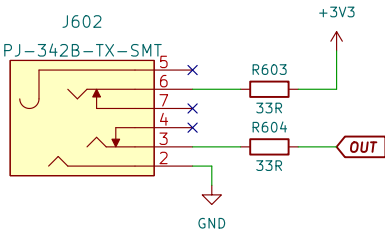
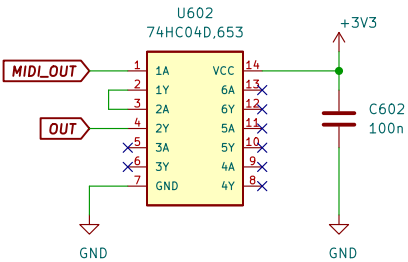
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Id: 5/7

MIDI

MIDI IN



MIDI OUT & THRU



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Sheet: /MIDI/
File: midi.kicad_sch

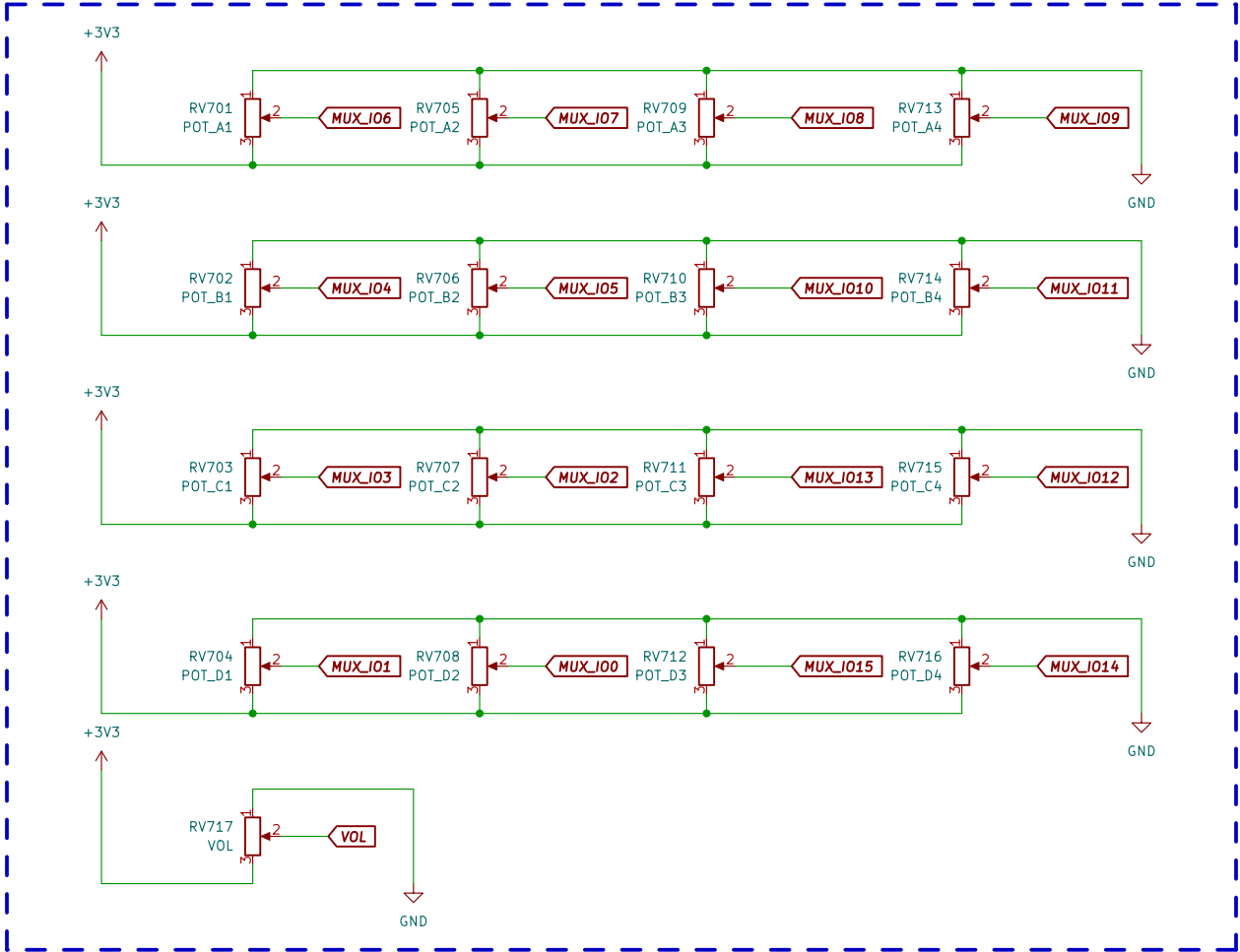
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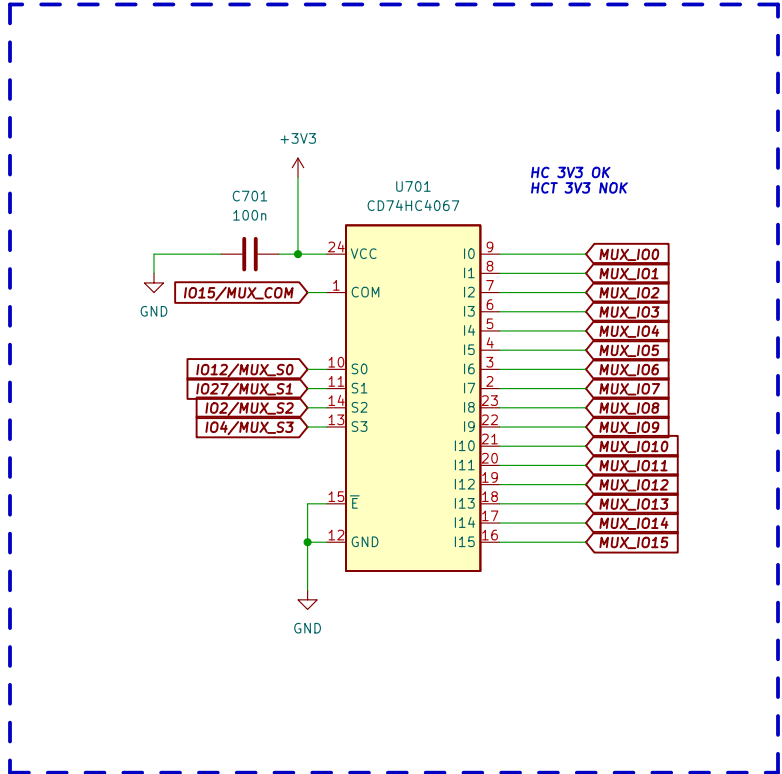
Rev: 0
Id: 6/7

MUX – POTS

POTENTIOMETERS



MULTIPLEXER



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Sheet: /MUX – POTS/
File: mux_pots.kicad_sch

Title: ESP32 SYNTH

Size: A3 Date: 2023-06-02
KiCad E.D.A. kicad (6.0.7)

Rev: 0

Id: 7/7