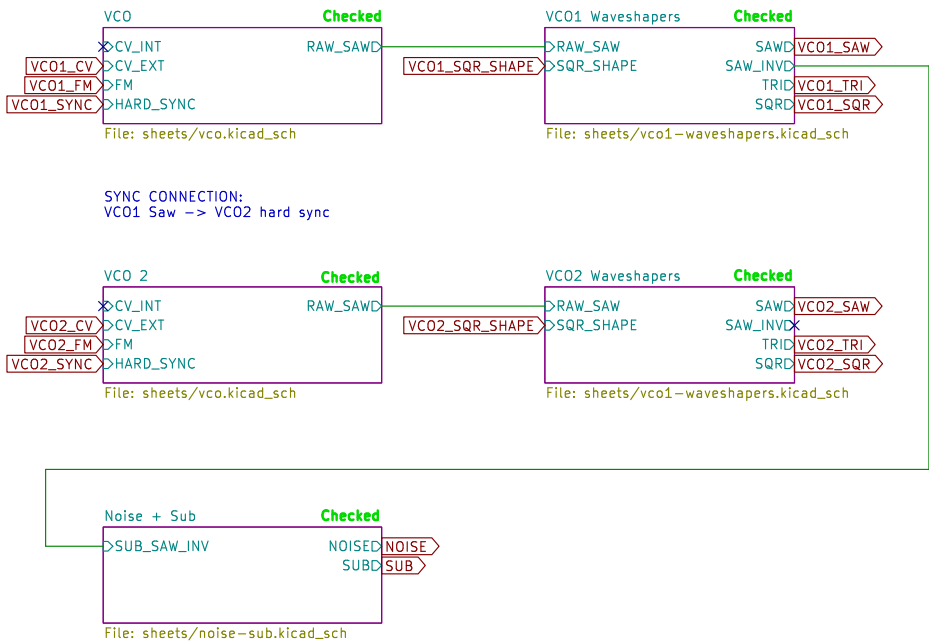


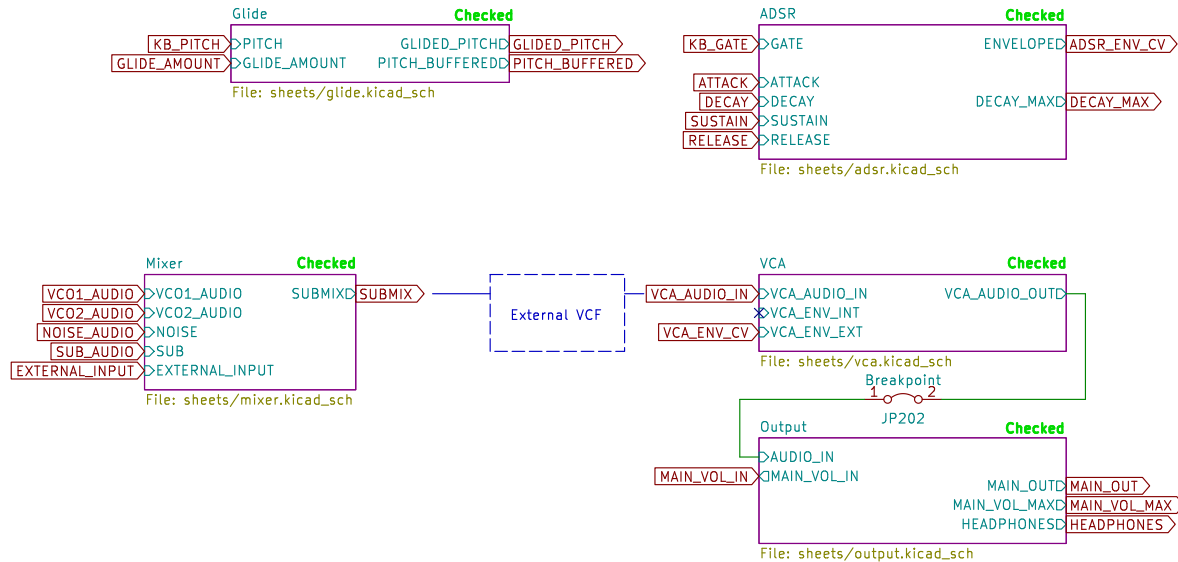
Power



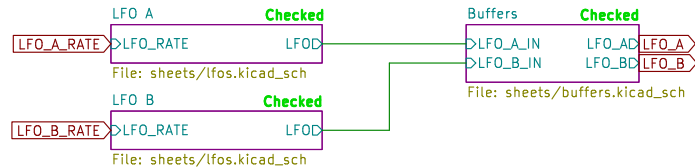
Sound sources



Control



Mod

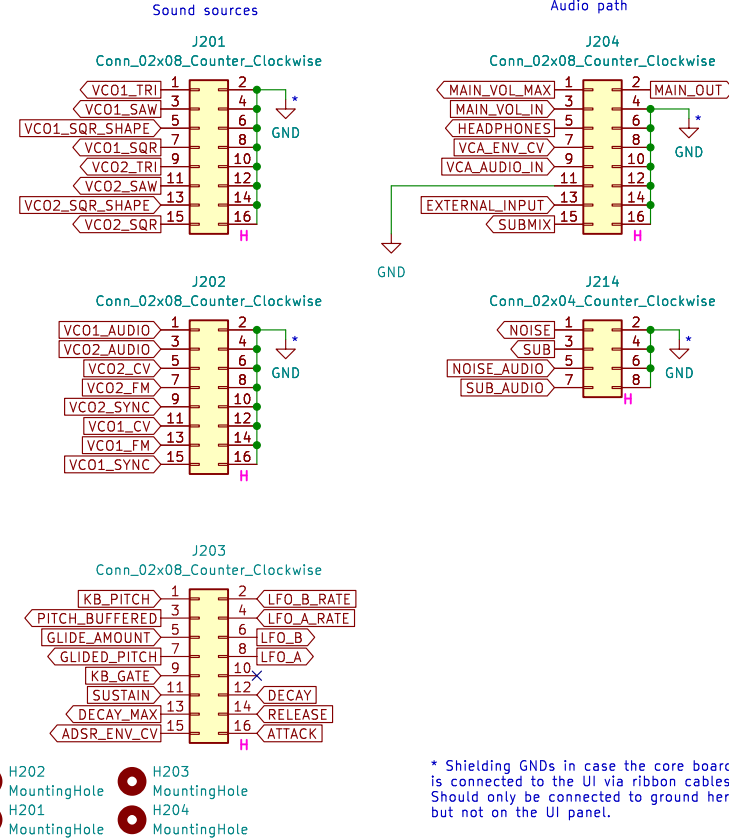


Playground

1. VCO1 Saw → VCO2 Hard sync + on of the LFOs to pitch or FM in of VCO2. Makes hard sync even better.
2. VCO2 Audio → VCO1 FM
3. VCO2 Audio → Filter cutoff

All done by connections on the UI board.

Interface



Inputs and outputs are from the perspective of this circuit.

H: hand soldered

Shmørgerh

Sheet: /

File: core.kicad_sch

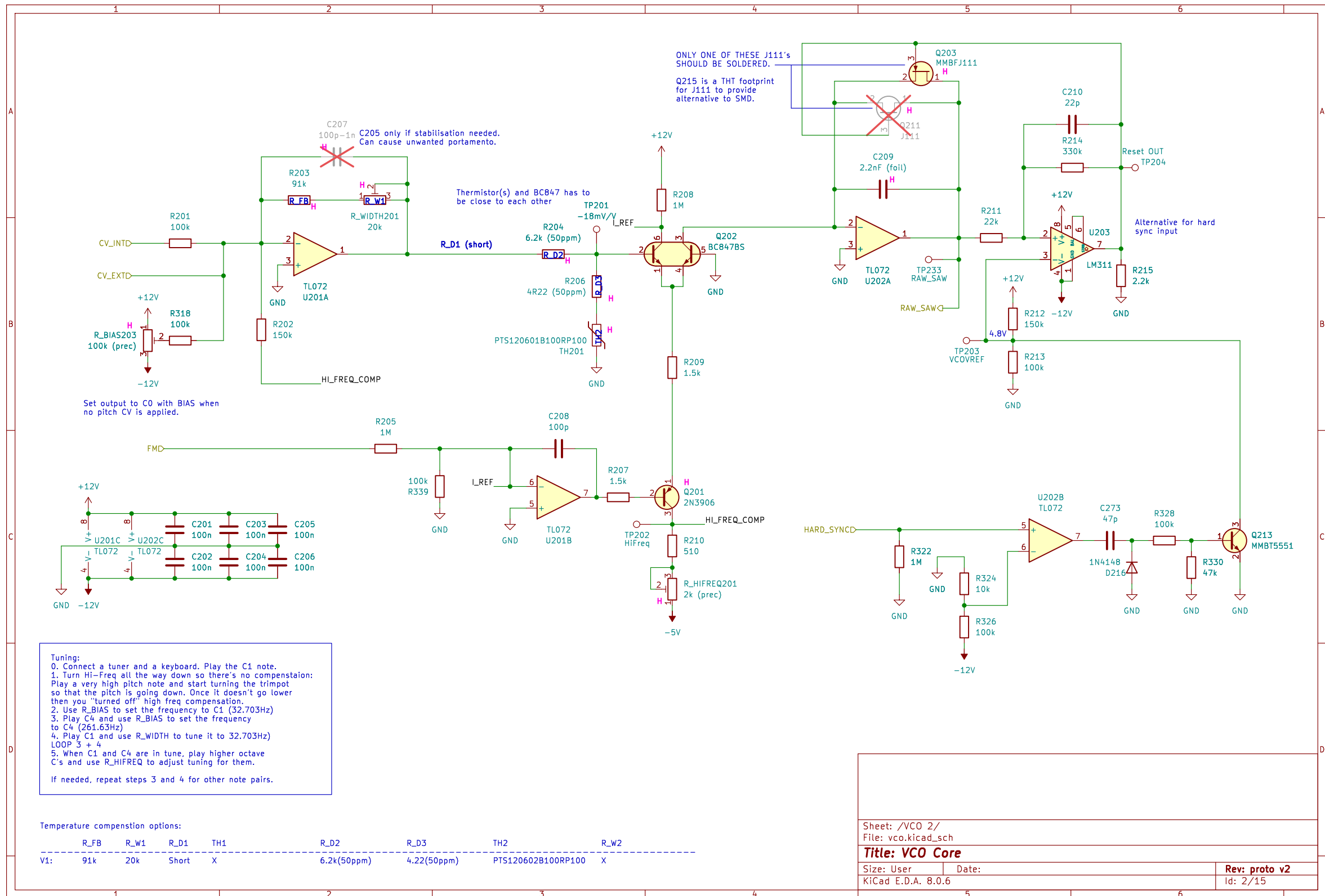
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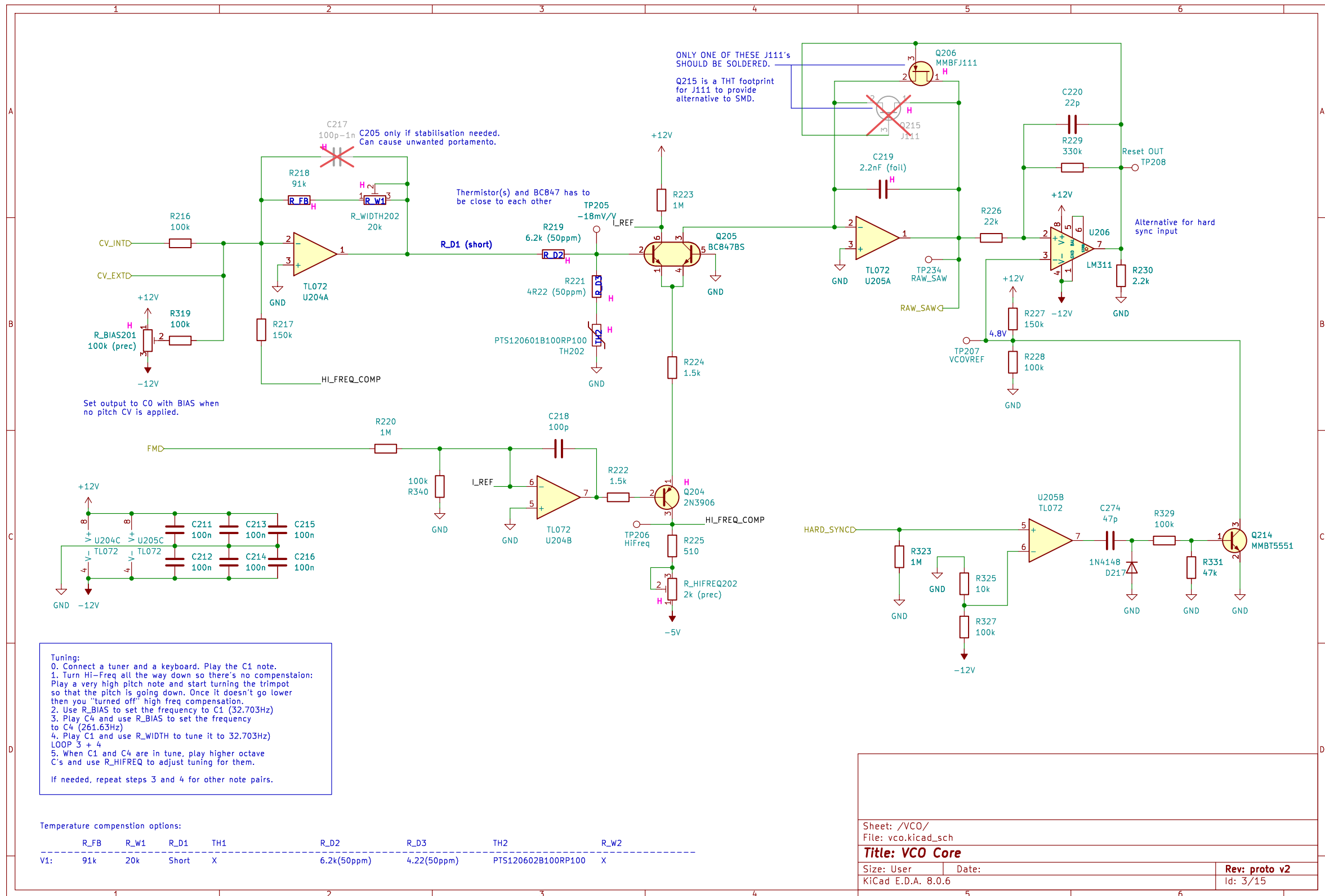
Size: User Date: 2023-10-28

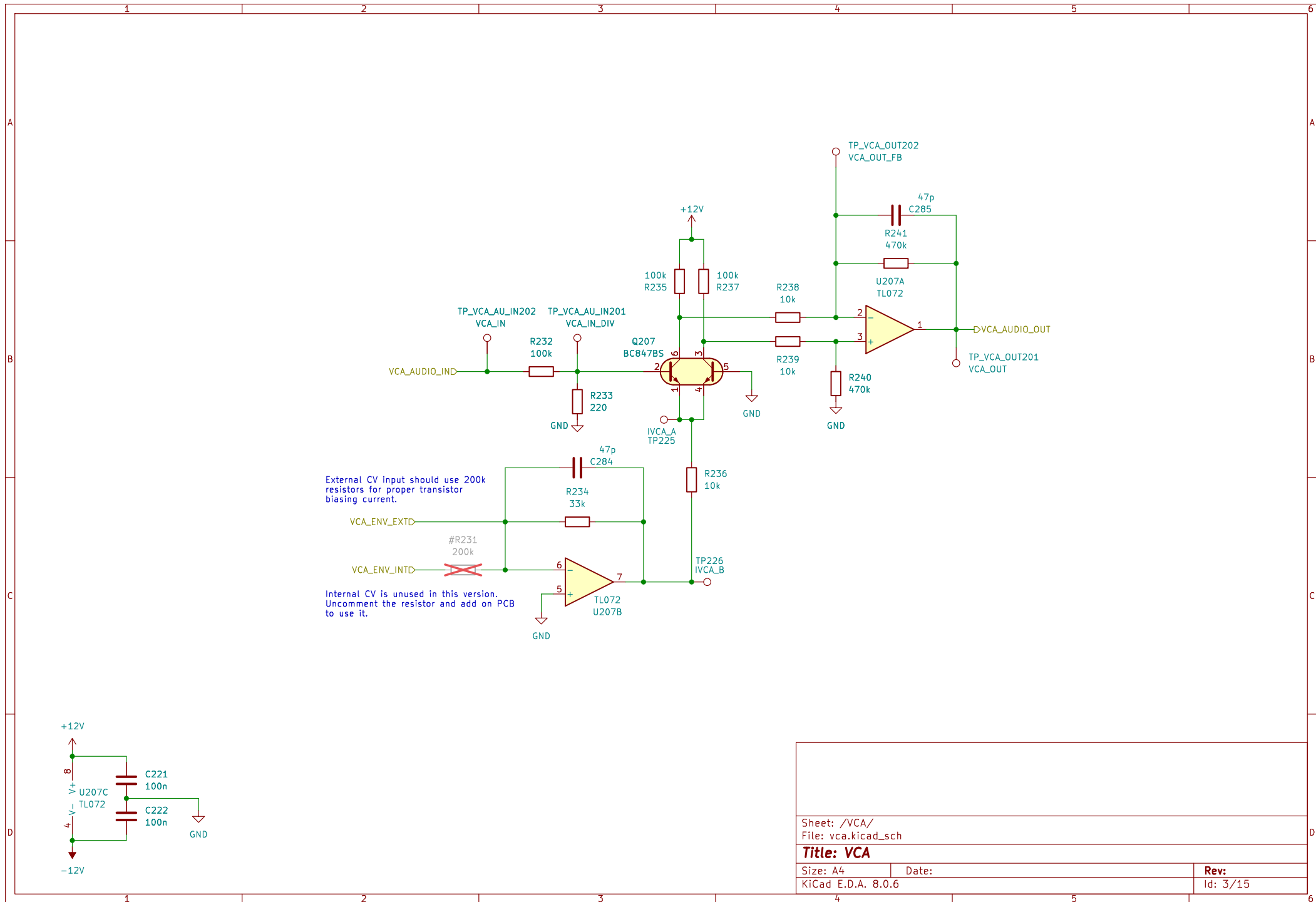
KiCad E.D.A. 8.0.6

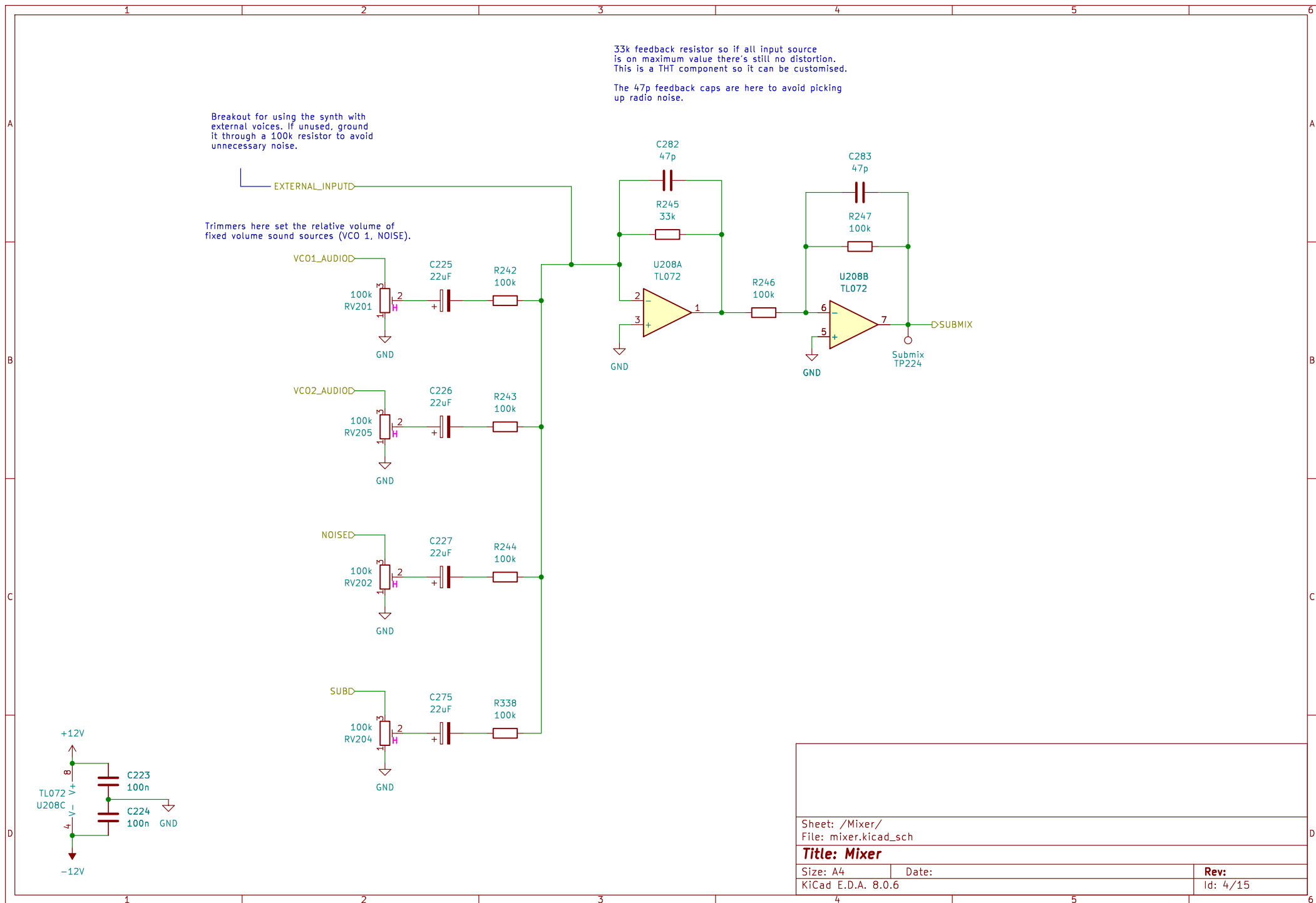
Rev: 1.0

Id: 1/15

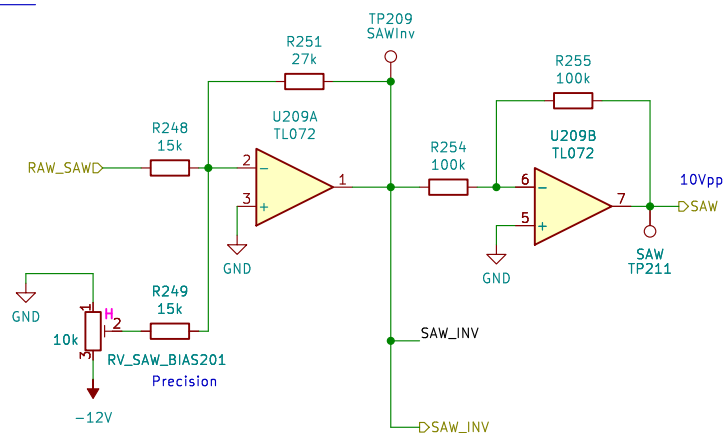






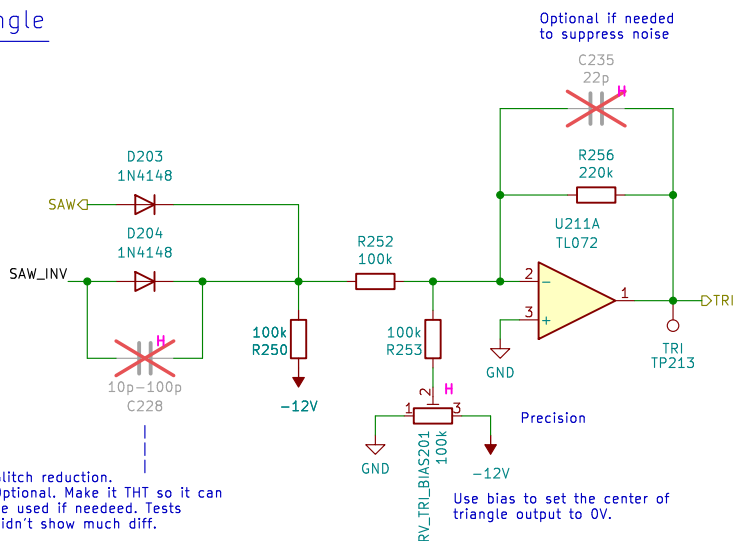


Sawtooth



Use BIAS to set the sawtooth output exactly to oscillate around 0V. This is critical for a nice triangle wave.

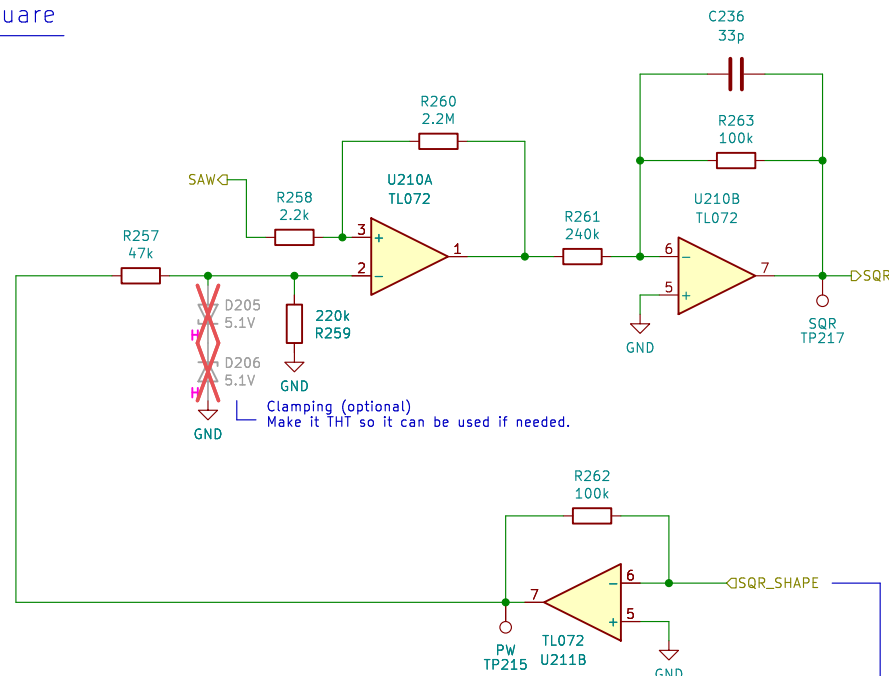
Triangle



Glitch reduction. Optional. Make it THT so it can be used if needed. Tests didn't show much diff.

Use bias to set the center of triangle output to 0V.

Square



Clamping (optional)
Make it THT so it can be used if needed.

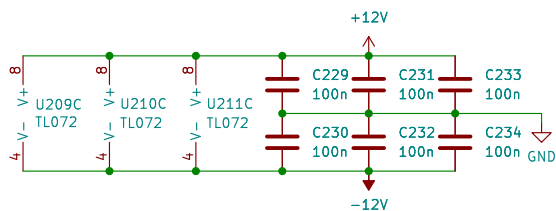
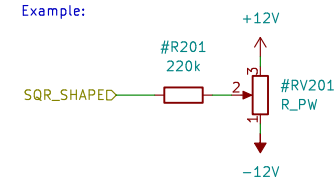
Square pulse width

Connect any number of CV inputs through input resistors to set the pulse width with a CV on SQR_SHAPE. Use the following CV values:

0V/GND: 50%
-5.5V: 5%
+5.5V: 95%

Set the input resistors so that the CV mixer's output value is between -/+5.5.

Example:



Sheet: /VC02 Waveshapers/
File: vco1-waveshapers.kicad_sch

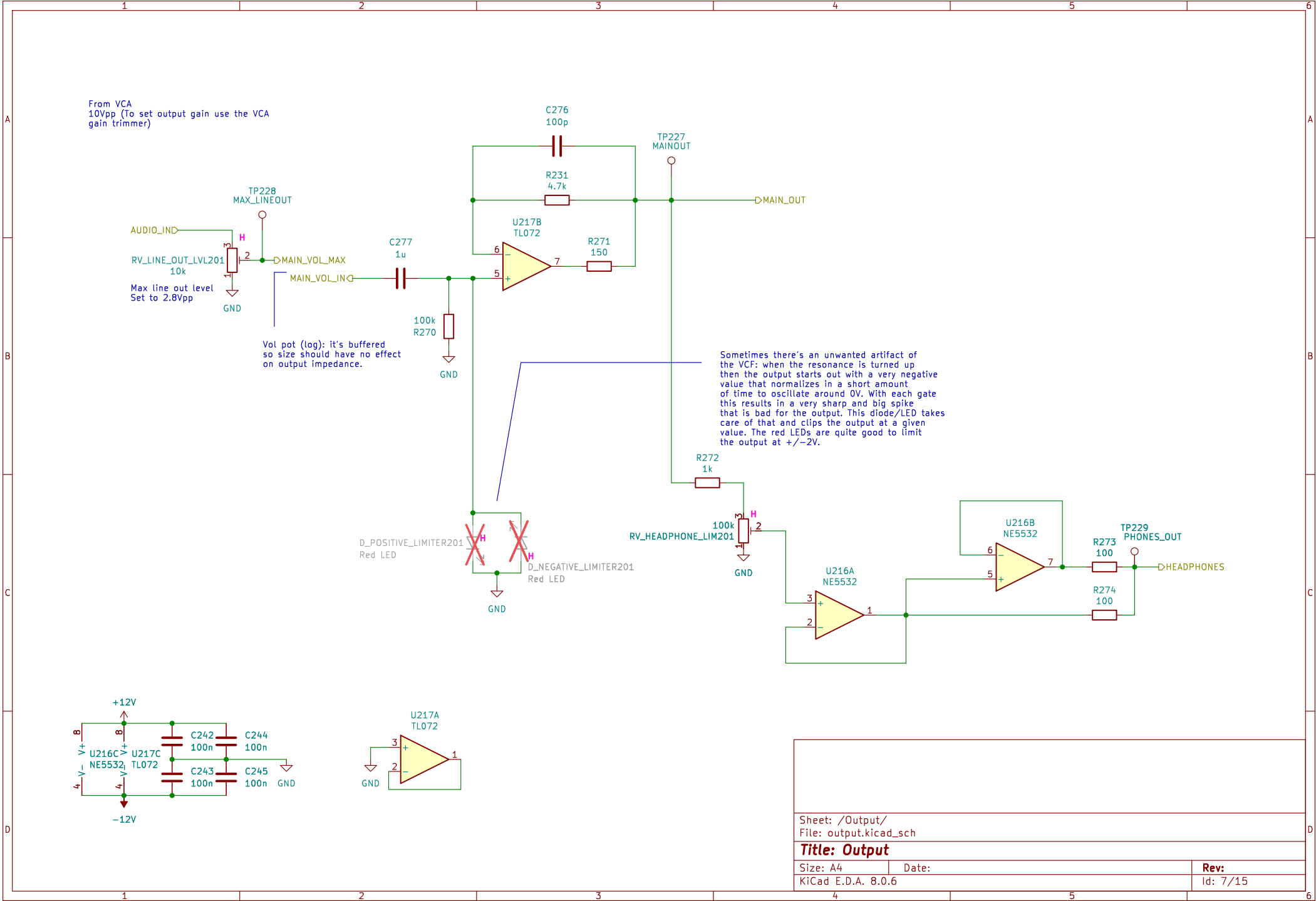
Title: Waveshapers

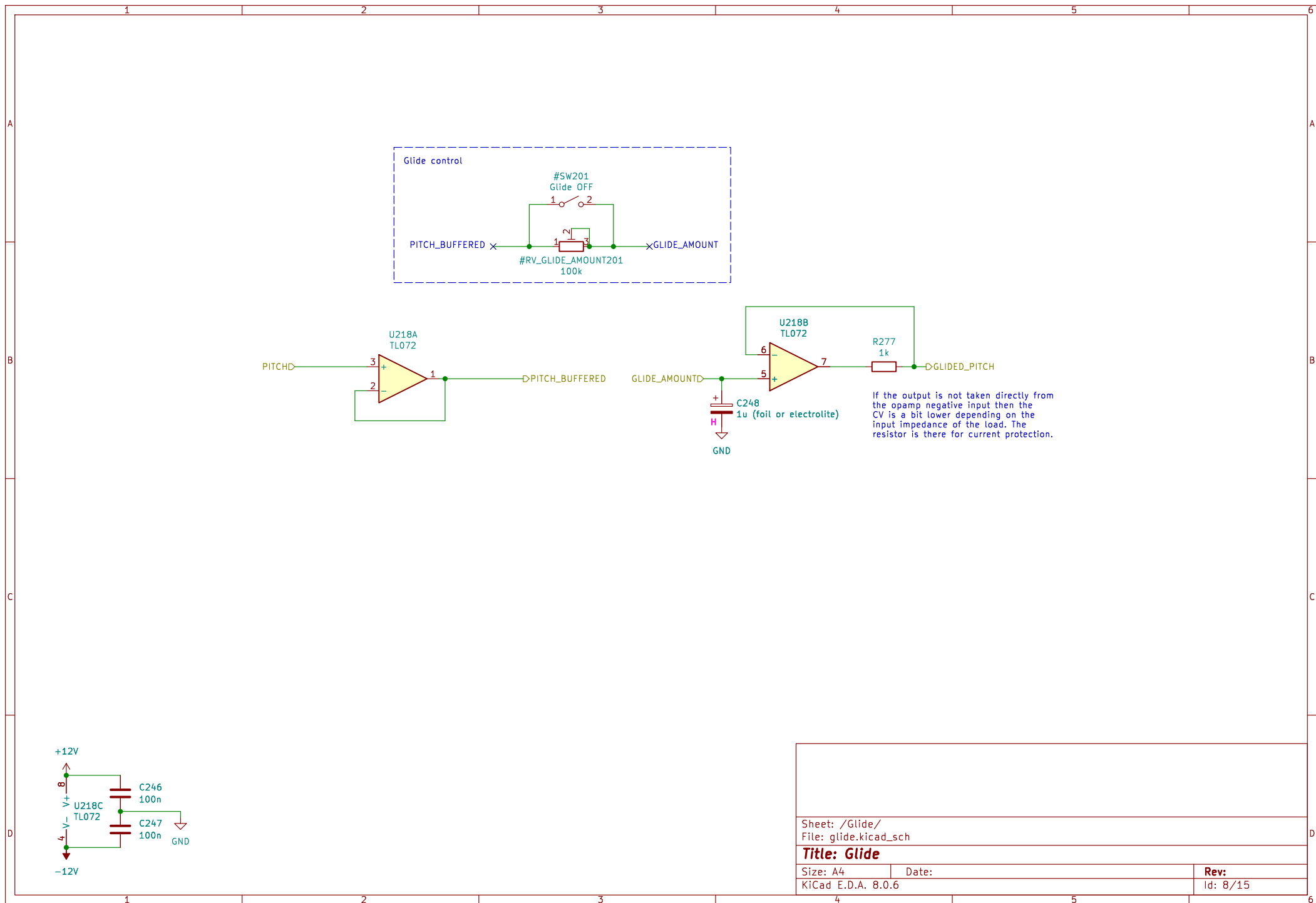
Size: User Date:

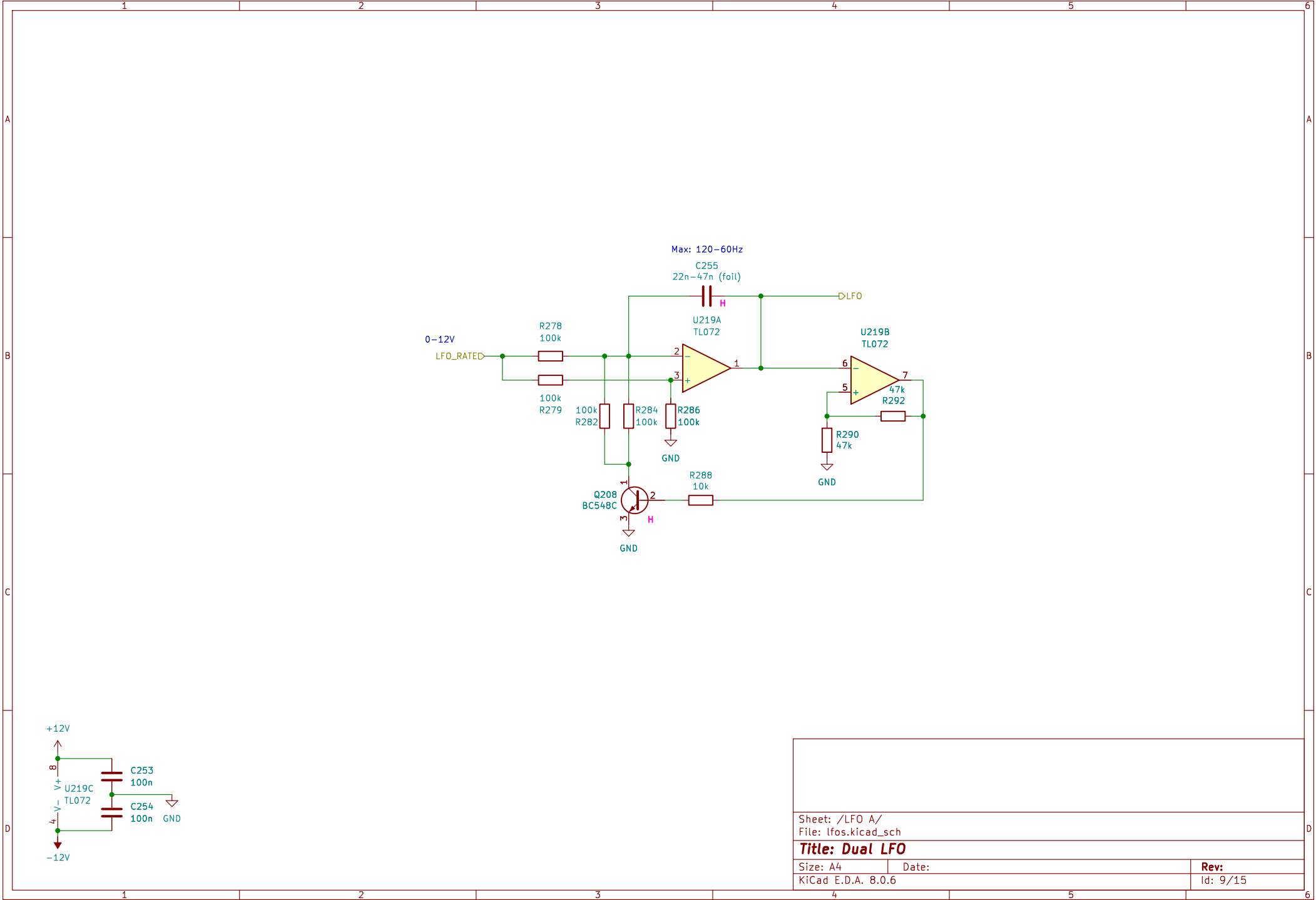
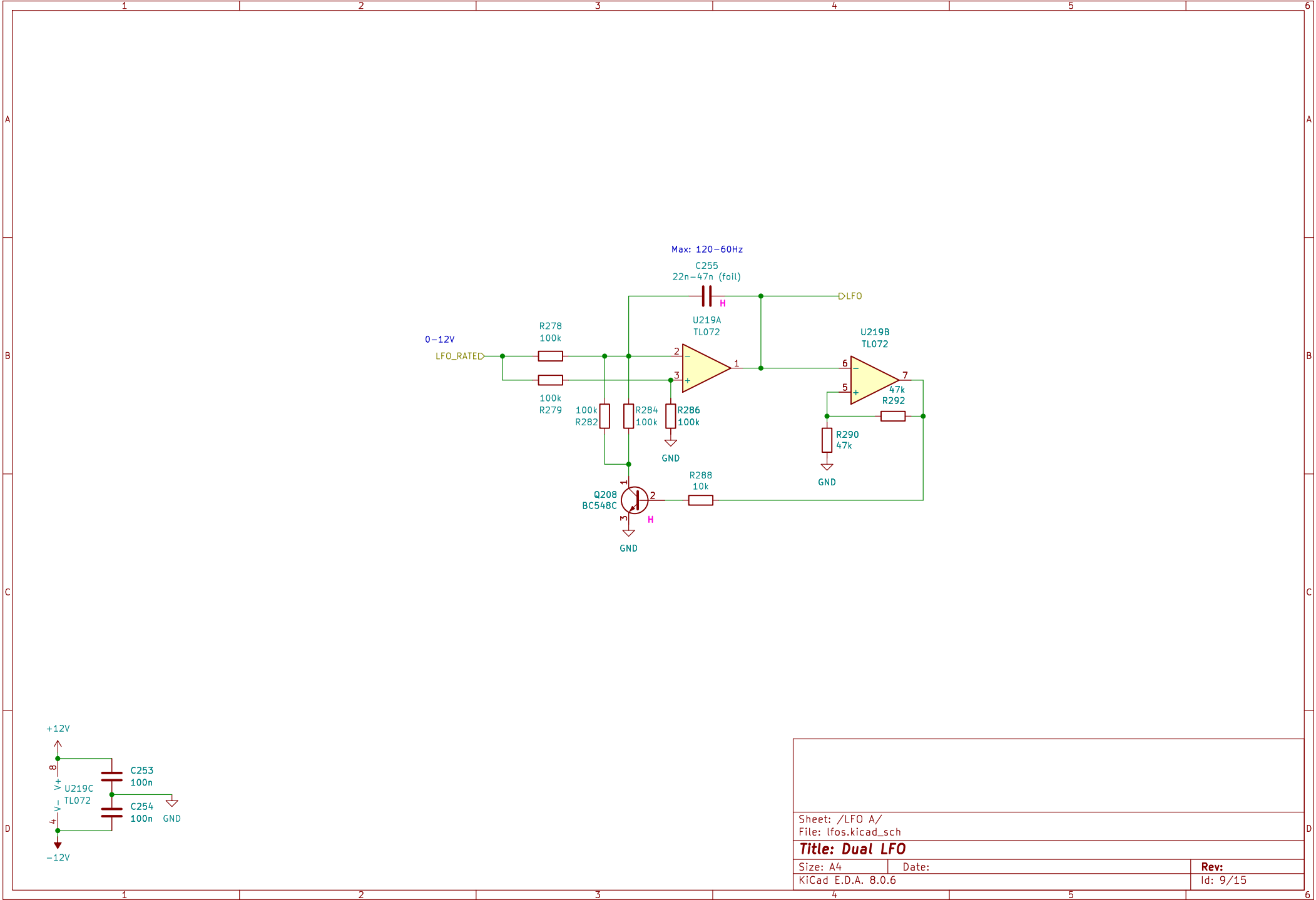
KiCad E.D.A. 8.0.6

Rev:

Id: 5/15







Title: Dual LFO

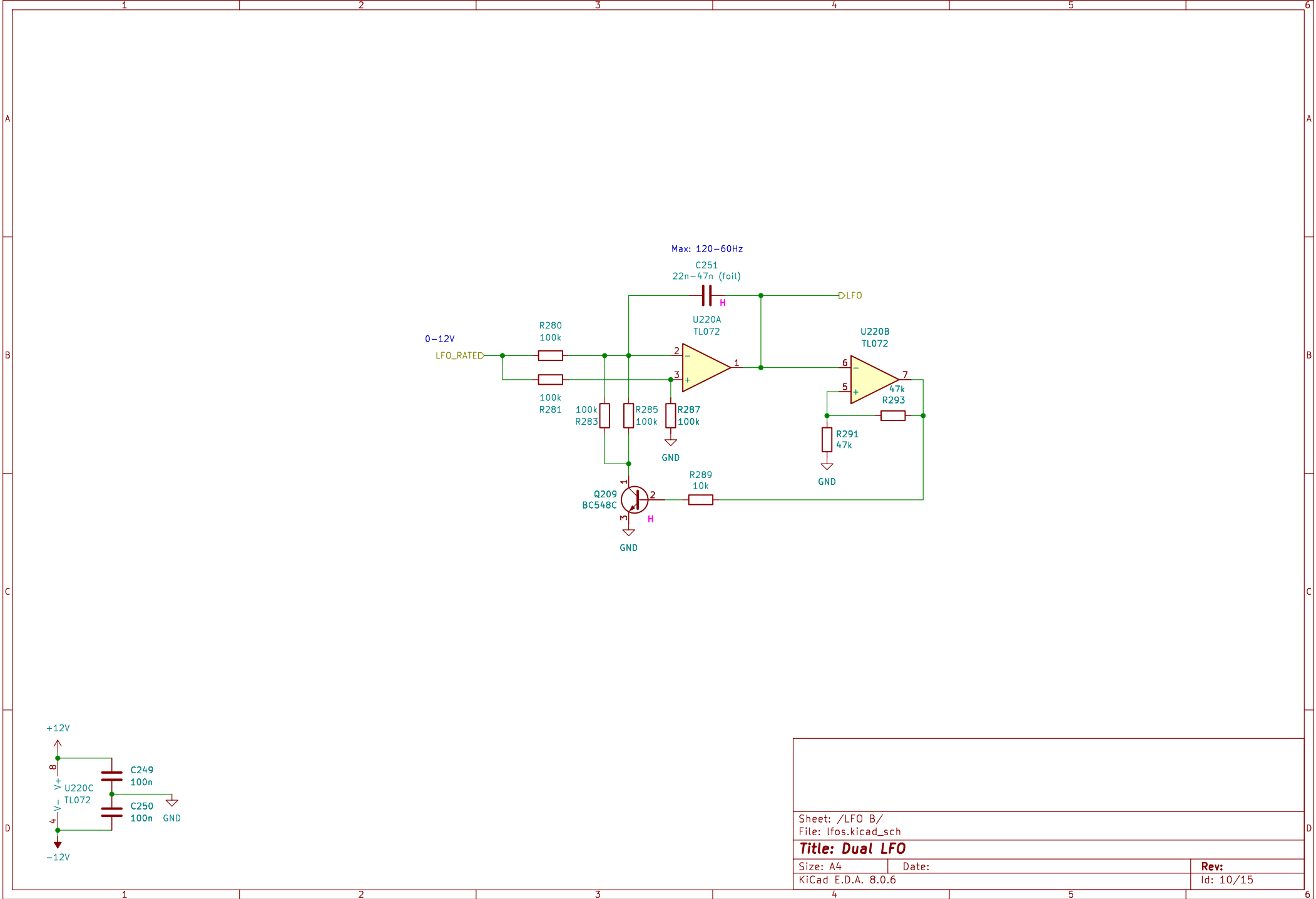
Title: Dual LFO

KiCad E.D.A. 8.0.6

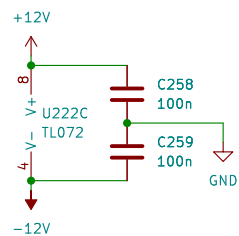
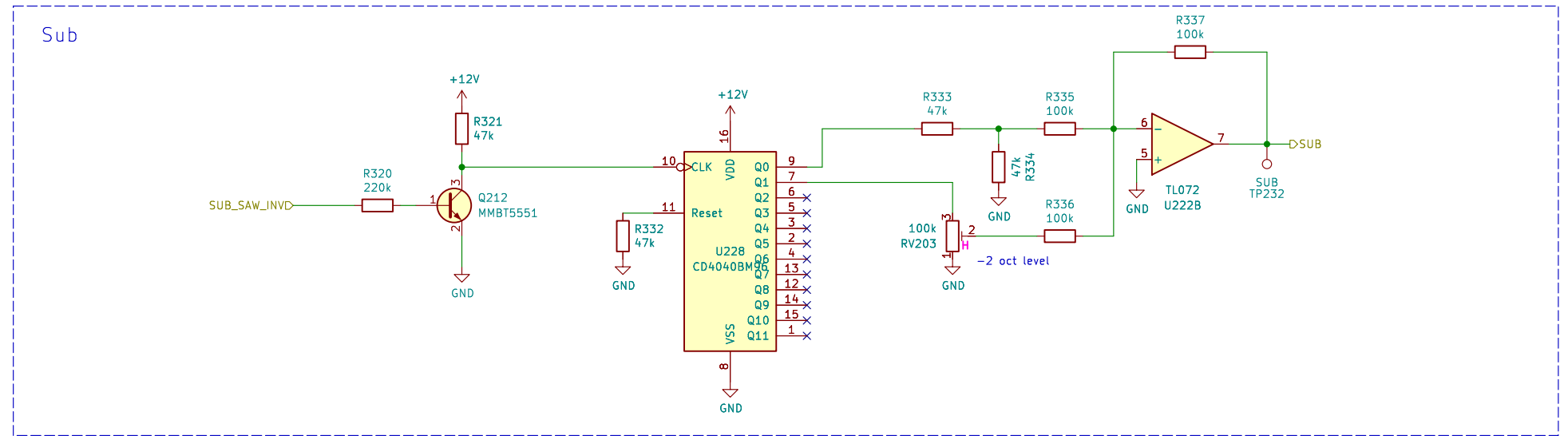
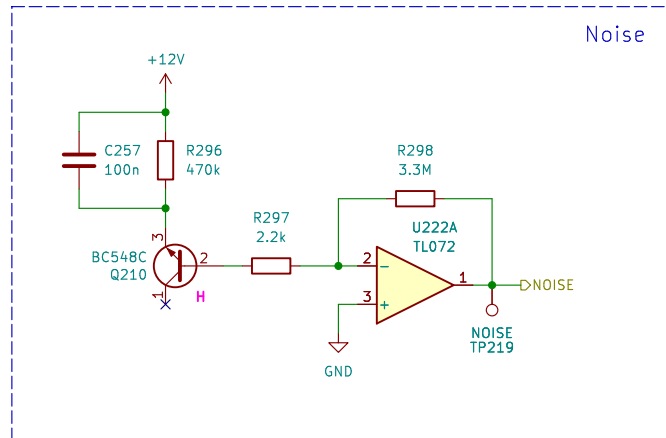
6

Id: 9/

Id: 9/15



Sheet: /LFO B/	
File: lfos.kicad_sch	
Title: Dual LFO	
Size: A4	Date:
KiCad E.D.A. 8.0.6	Rev: Id: 10/15



Sheet: /Noise + Sub/
File: noise-sub.kicad_sch

Title:

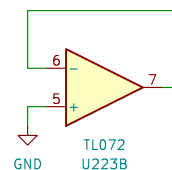
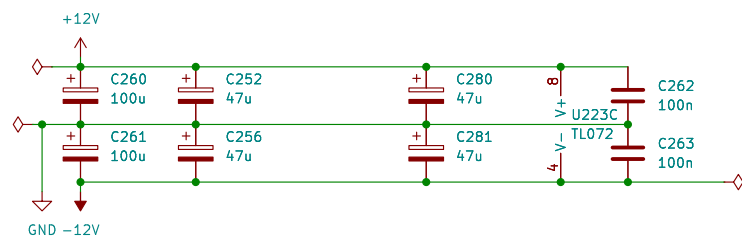
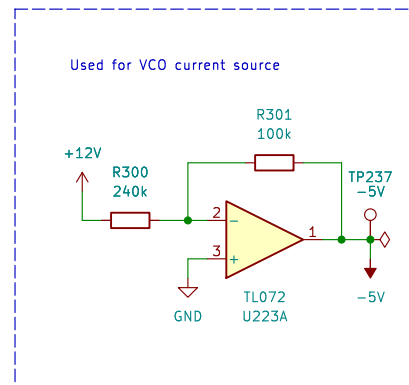
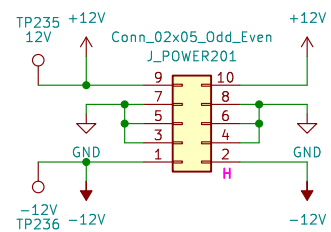
Size: A4

Date:

KiCad E.D.A. 8.0.6

Rev:

Id: 11/15



Sheet: /Power/
File: power.kicad_sch

Title: Power

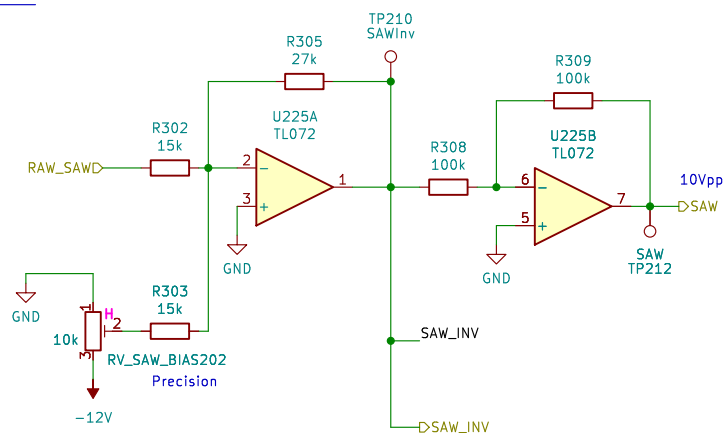
Size: A4 Date:

KiCad E.D.A. 8.0.6

Rev:

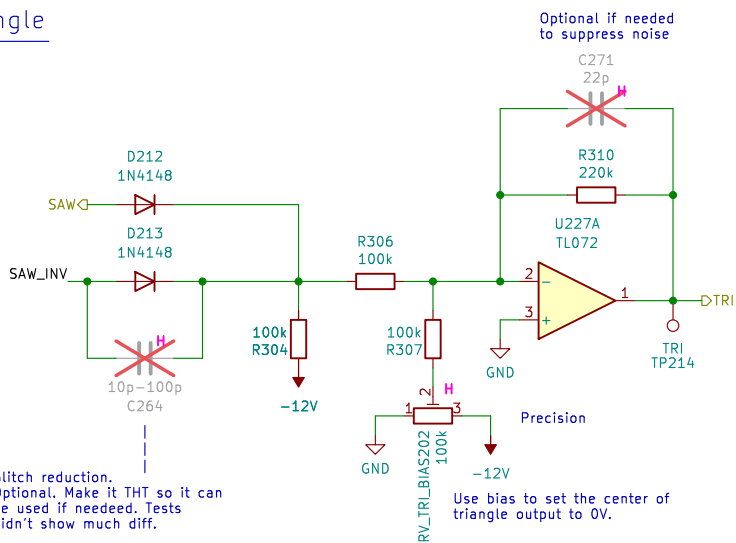
Id: 12/15

Sawtooth



Use BIAS to set the sawtooth output exactly to oscillate around 0V. This is critical for a nice triangle wave.

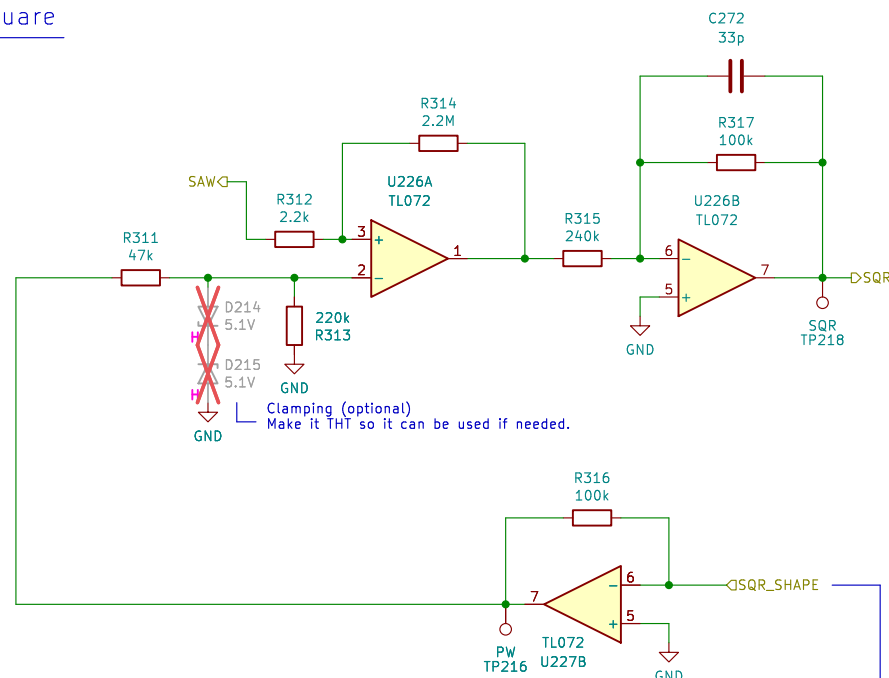
Triangle



Glitch reduction. Optional. Make it THT so it can be used if needed. Tests didn't show much diff.

Use bias to set the center of triangle output to 0V.

Square



Clamping (optional)
Make it THT so it can be used if needed.

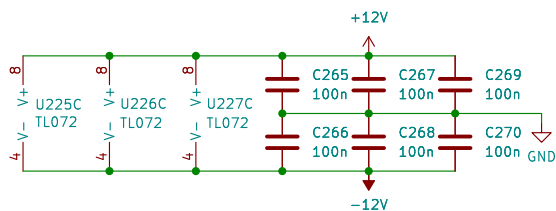
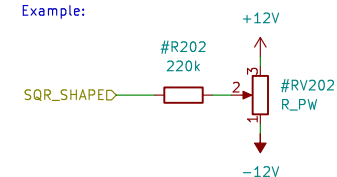
Square pulse width

Connect any number of CV inputs through input resistors to set the pulse width with a CV on SQR_SHAPE. Use the following CV values:

0V/GND: 50%
-5.5V: 5%
+5.5V: 95%

Set the input resistors so that the CV mixer's output value is between -/+5.5.

Example:

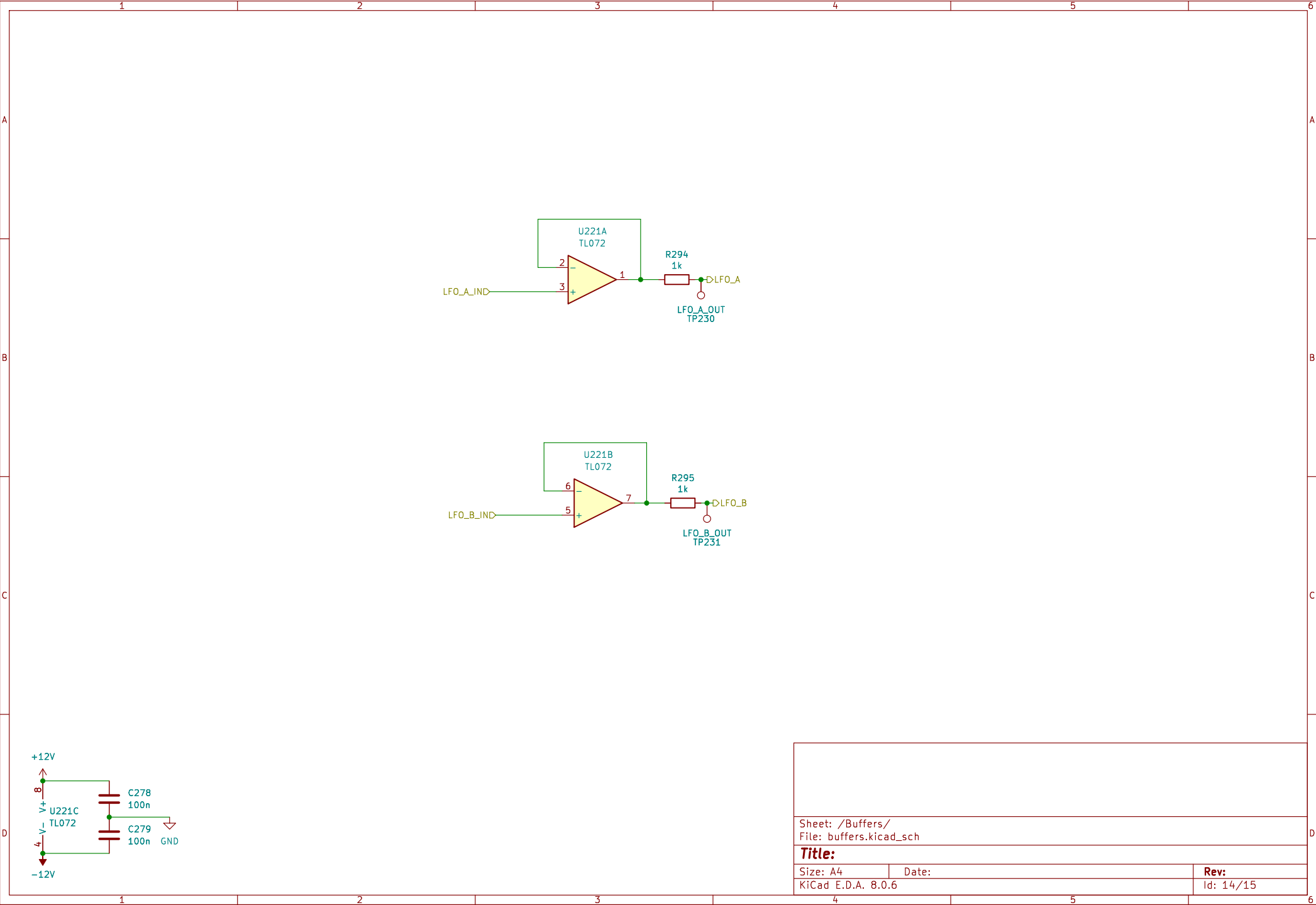


Sheet: /VC01 Waveshapers/
File: vco1-waveshapers.kicad_sch

Title: Waveshapers

Size: User Date:
KiCad E.D.A. 8.0.6

Rev:
Id: 13/15



Sheet: /Buffers/ File: buffers.kicad_sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. 8.0.6	Id: 14/15	