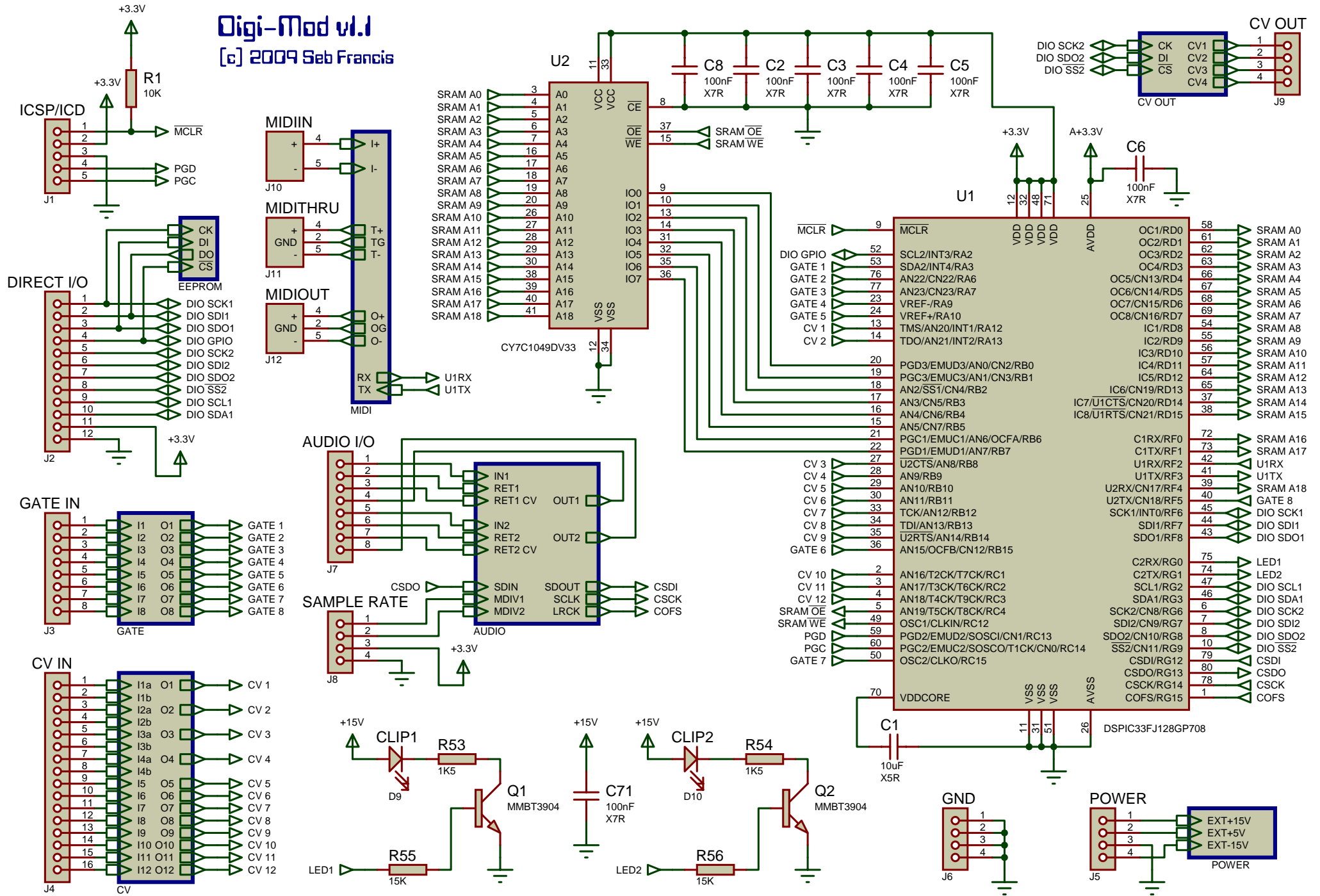
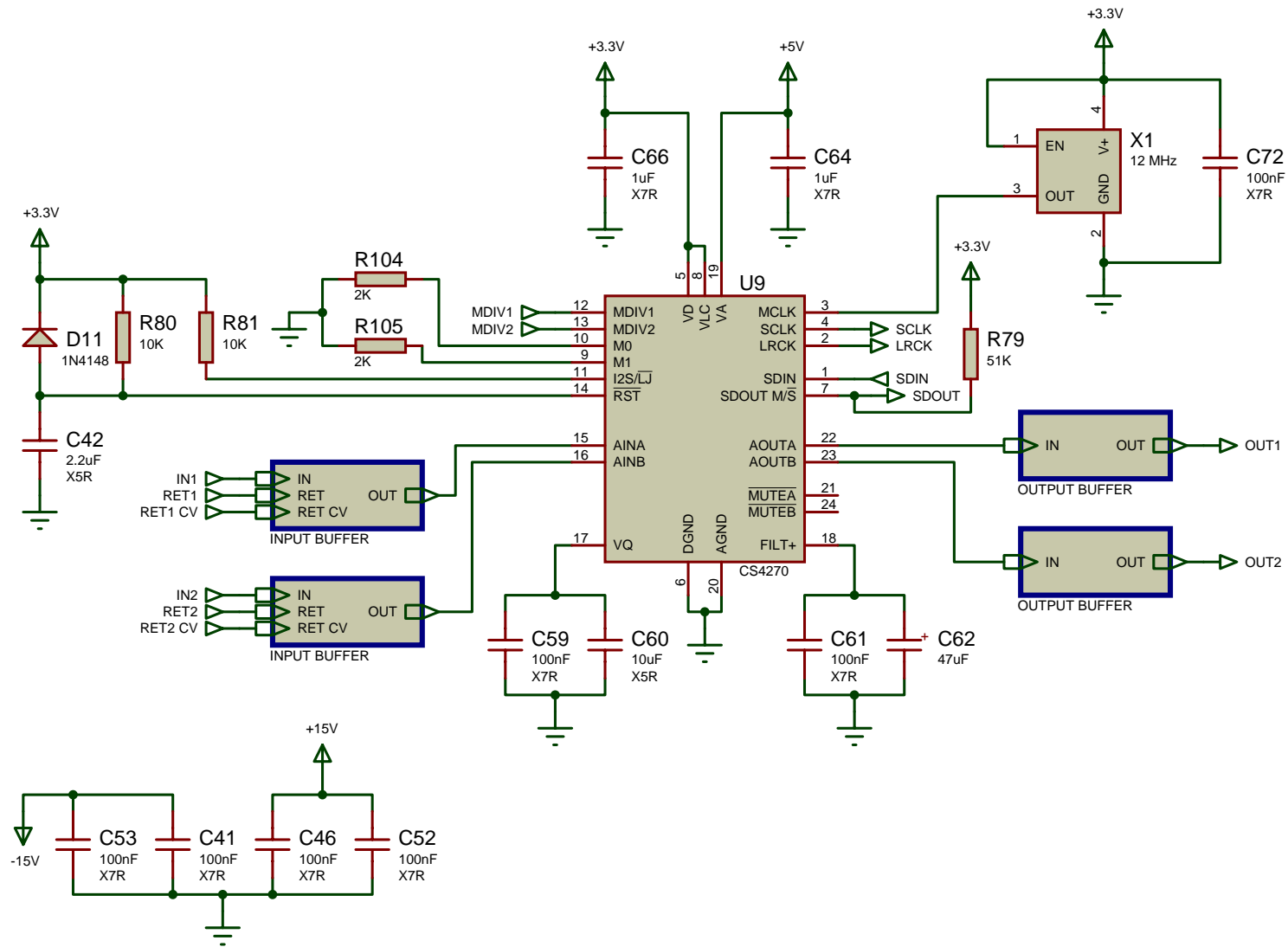


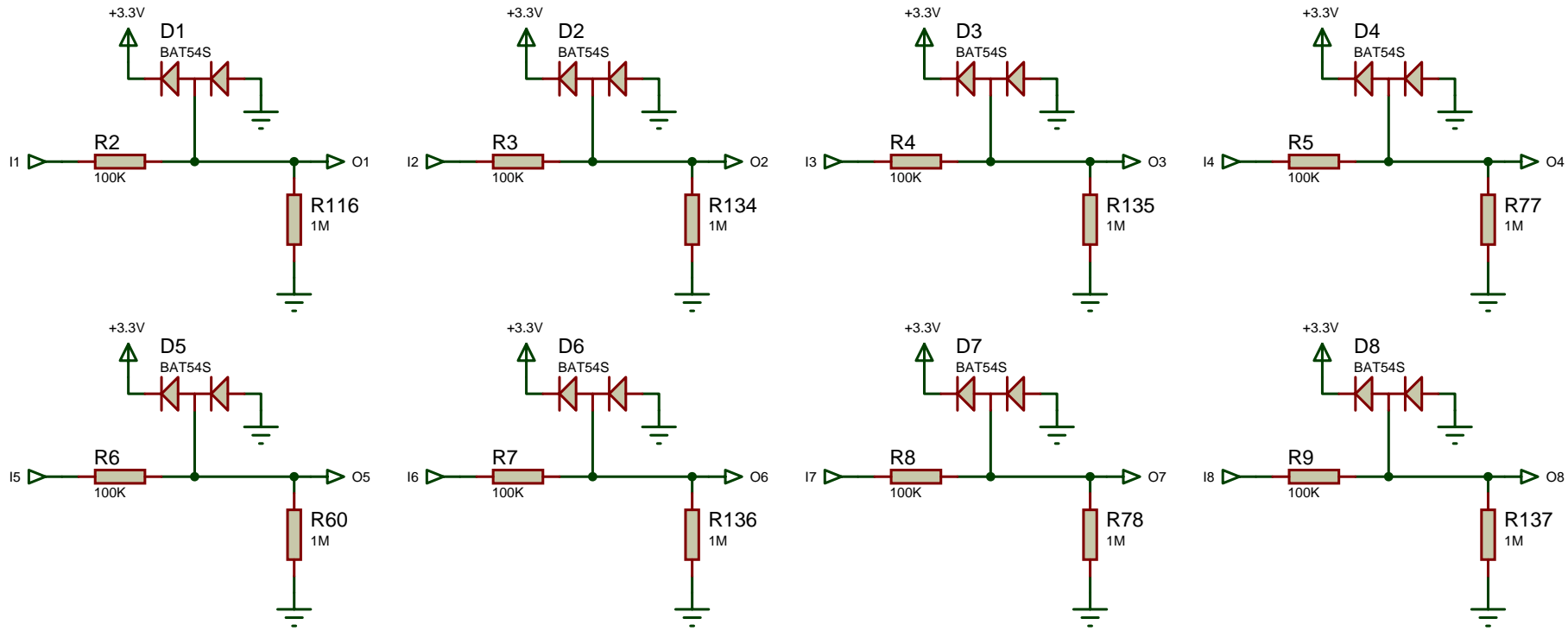
Digi-Mod v1.1

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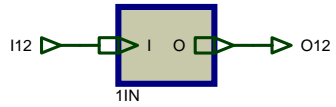
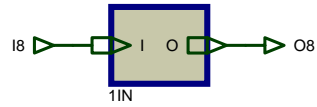
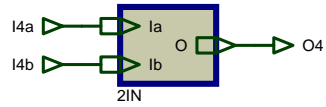
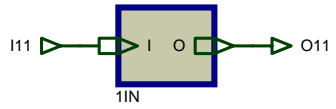
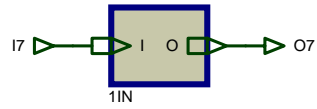
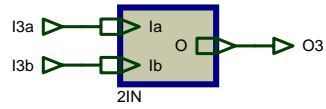
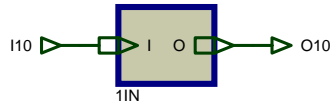
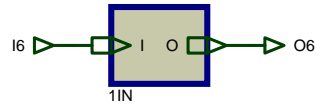
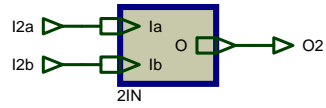
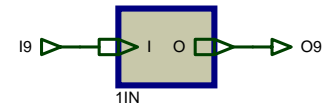
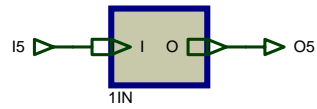
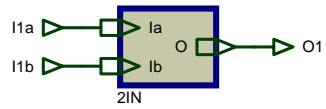
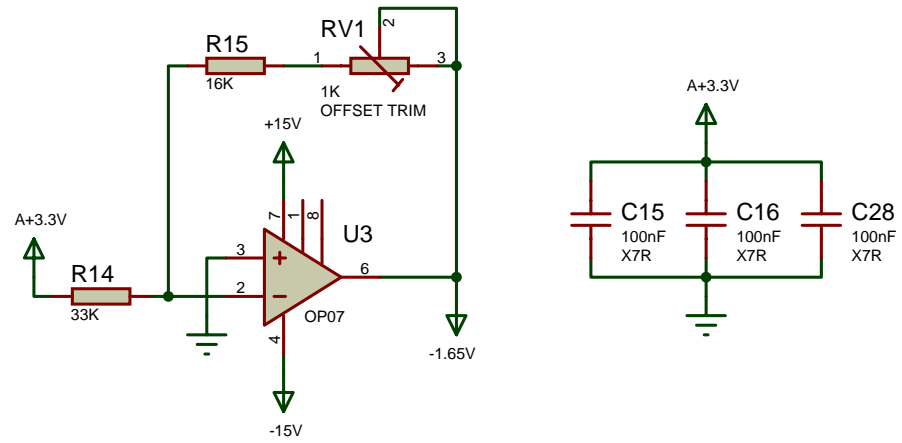




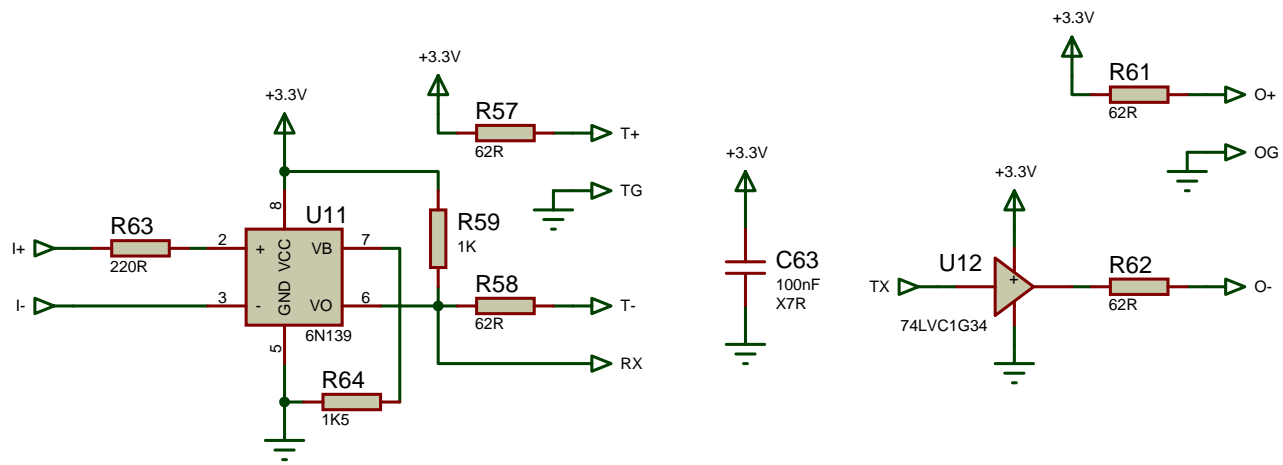
AUDIO INTERFACE



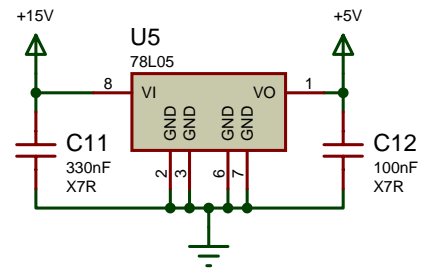
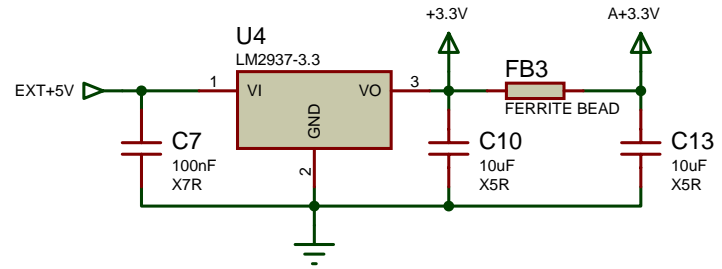
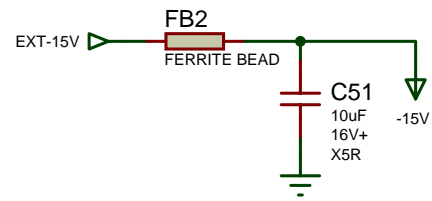
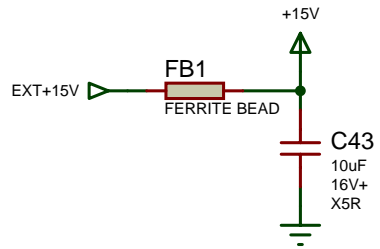
GATE INPUTS



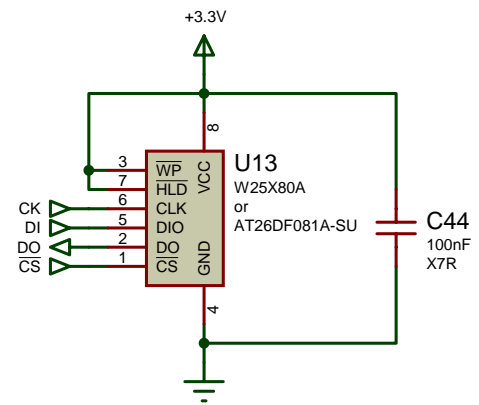
CV INPUTS



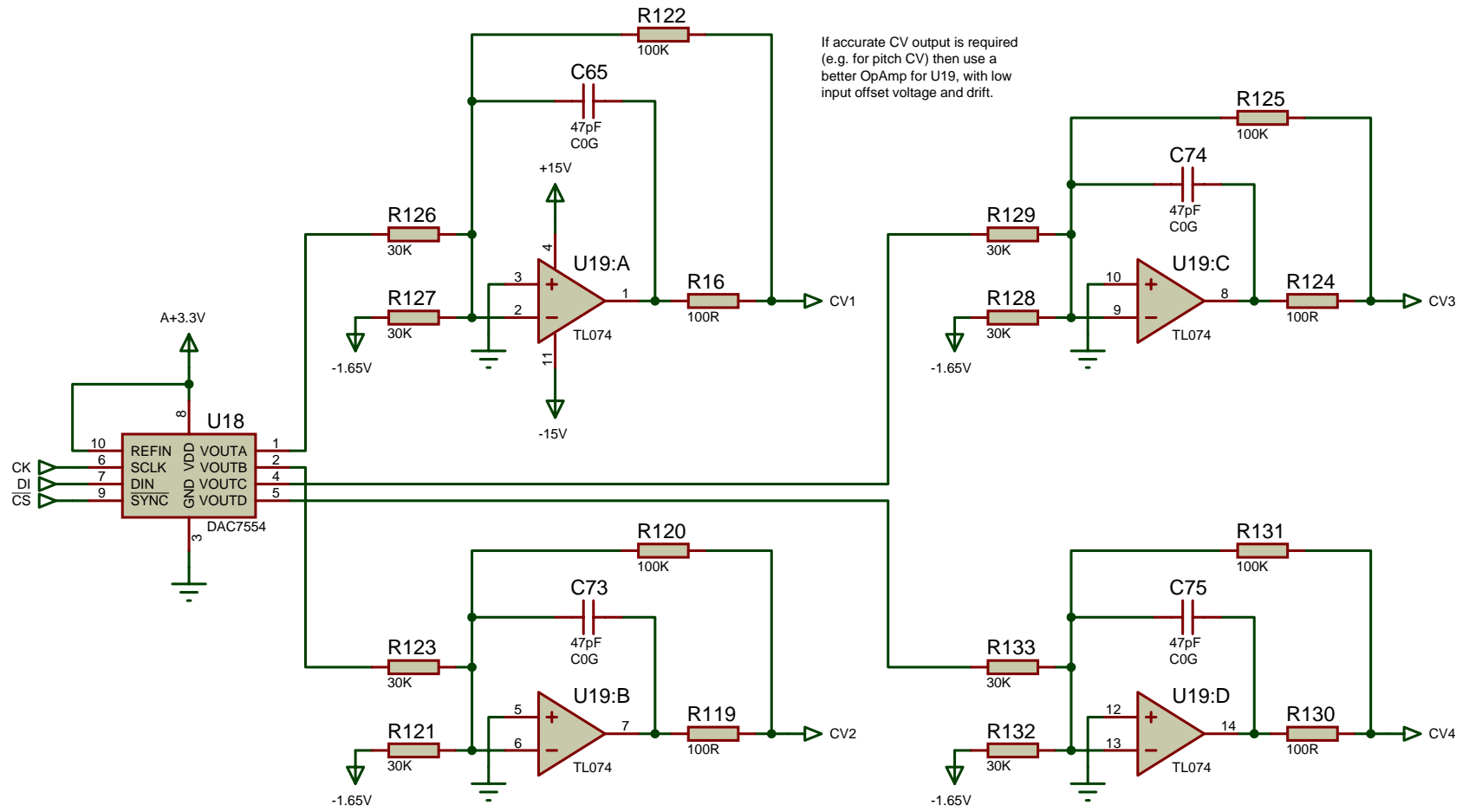
MIDI INTERFACE



POWER

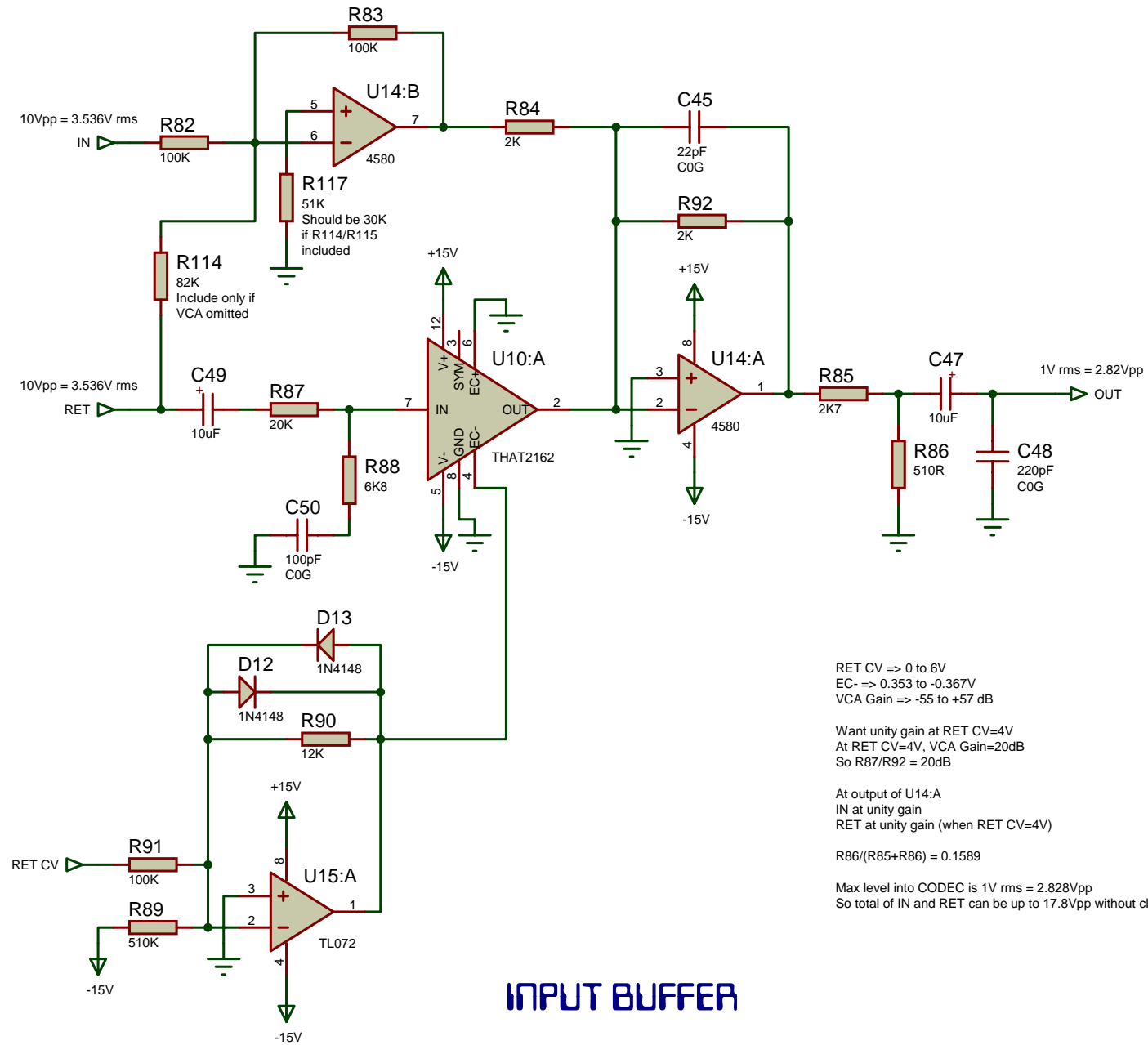


EEPROM



If accurate CV output is required (e.g. for pitch CV) then use a better OpAmp for U19, with low input offset voltage and drift.

CV OUTPUTS



RET CV => 0 to 6V
 EC- => 0.353 to -0.367V
 VCA Gain => -55 to +57 dB

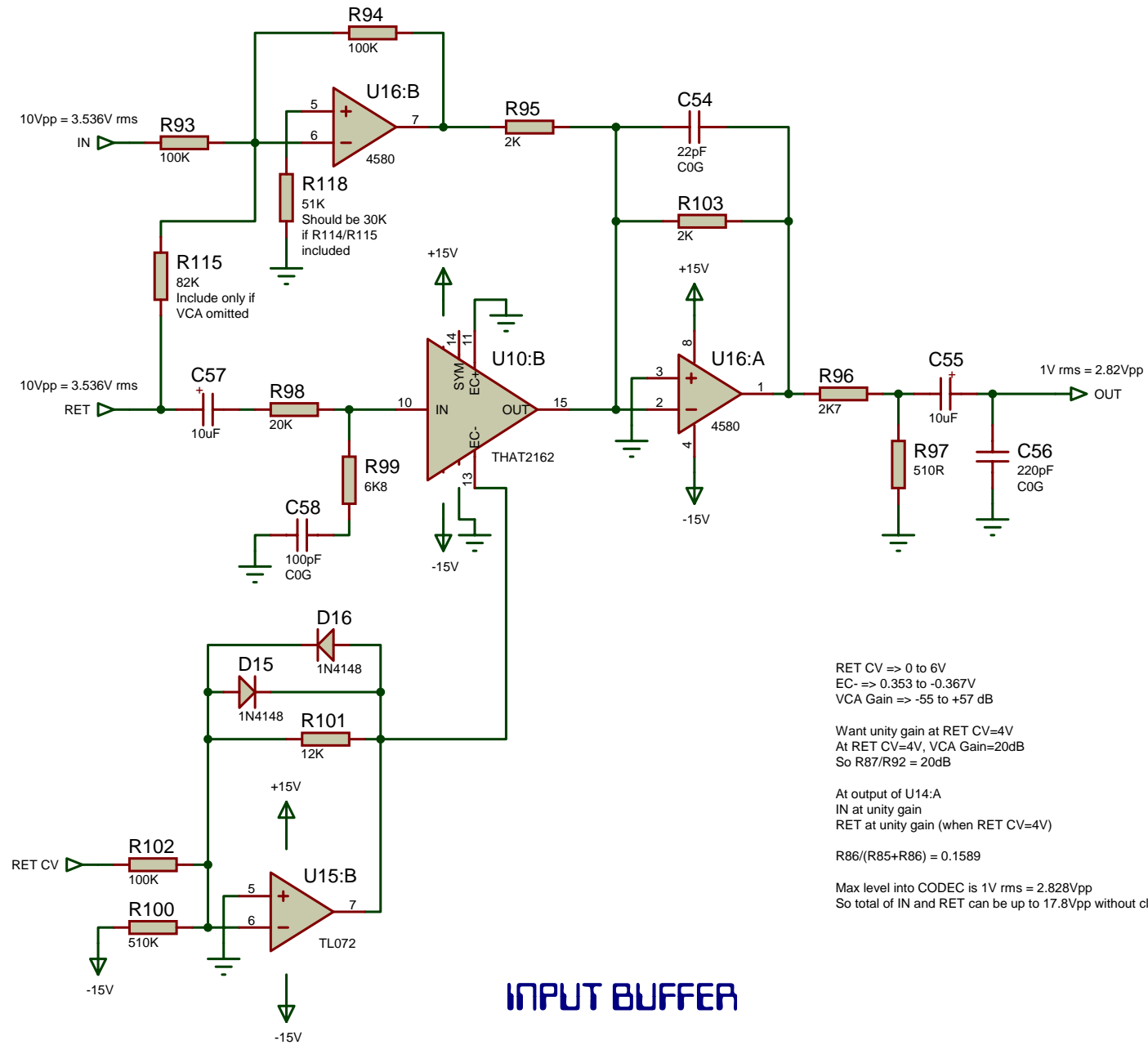
Want unity gain at RET CV=4V
 At RET CV=4V, VCA Gain=20dB
 So R87/R92 = 20dB

At output of U14:A
 IN at unity gain
 RET at unity gain (when RET CV=4V)

$$R86/(R85+R86) = 0.1589$$

Max level into CODEC is 1V rms = 2.828Vpp
 So total of IN and RET can be up to 17.8Vpp without clipping

INPUT BUFFER



RET CV => 0 to 6V
 EC- => 0.353 to -0.367V
 VCA Gain => -55 to +57 dB

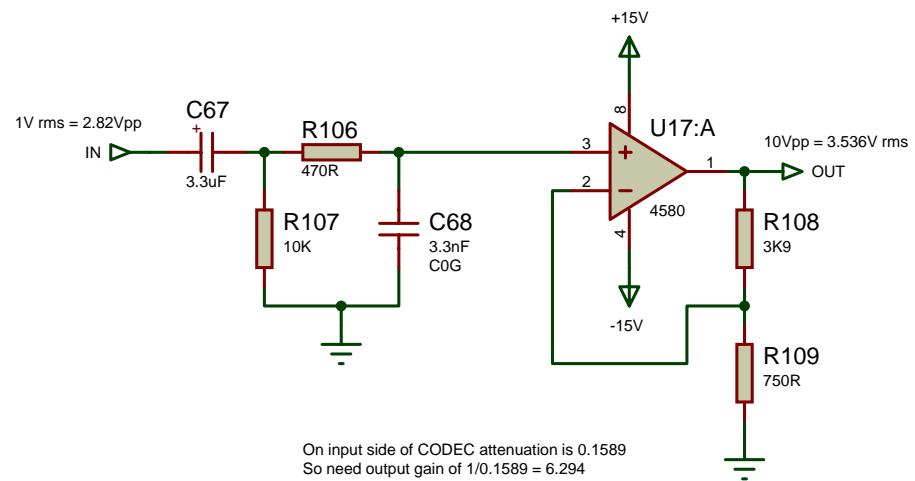
Want unity gain at RET CV=4V
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At output of U14:A
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INPUT BUFFER

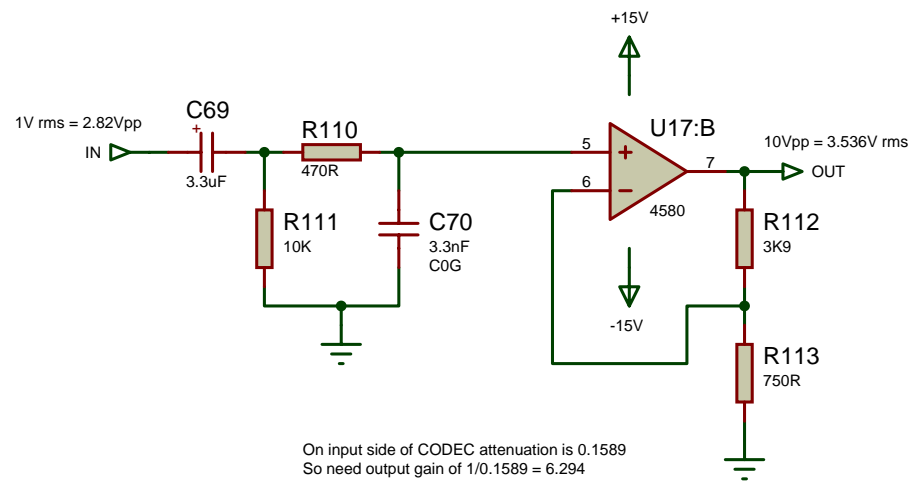


On input side of CODEC attenuation is 0.1589
 So need output gain of $1/0.1589 = 6.294$

$$R108/R109 + 1 = 6.2$$

Impedance at +ve IP U17:A = 570R
 Impedance at -ve IP U17:A = 629R

OUTPUT BUFFER

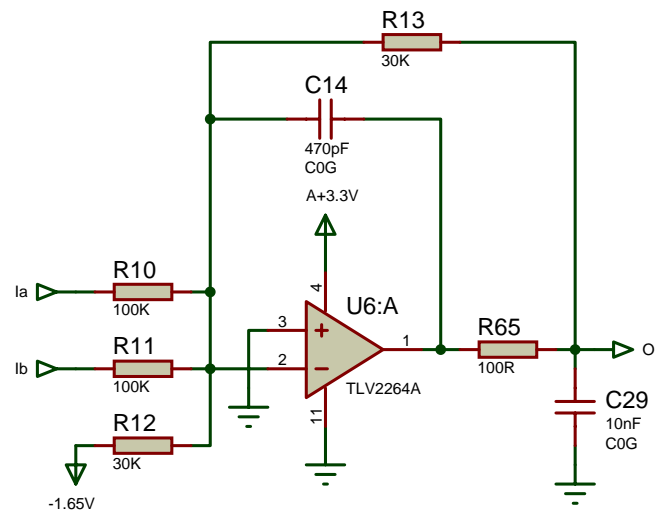


On input side of CODEC attenuation is 0.1589
So need output gain of $1/0.1589 = 6.294$

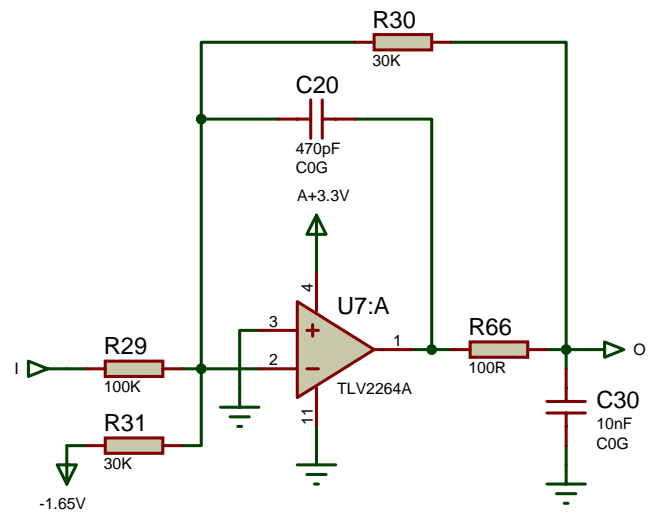
$$R108/109 + 1 = 6.2$$

Impedance at +ve IP U17:A = 570R
Impedance at -ve IP U17:A = 629R

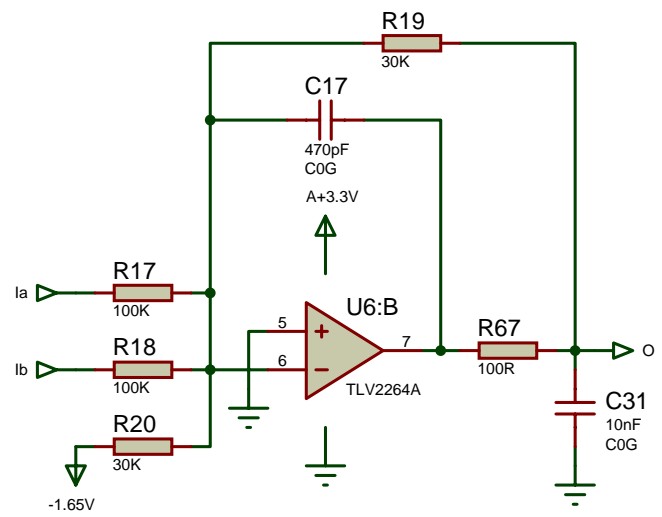
OUTPUT BUFFER



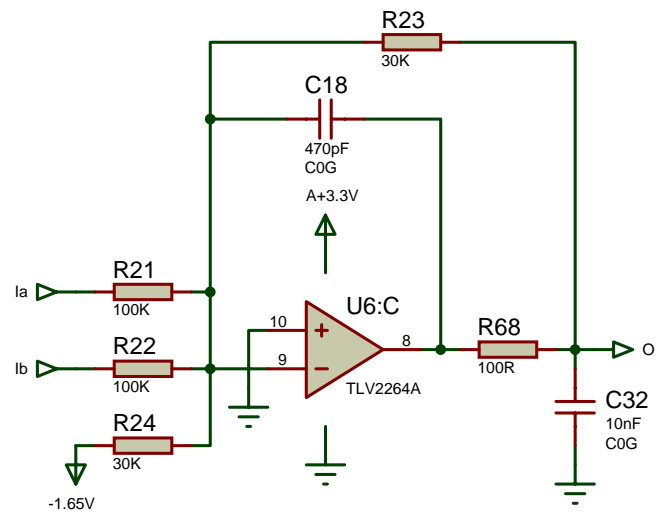
DUAL INPUT CV



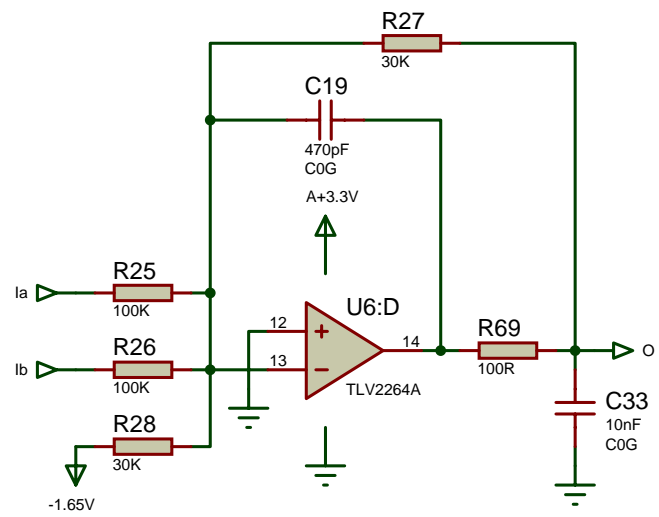
SINGLE INPUT CV



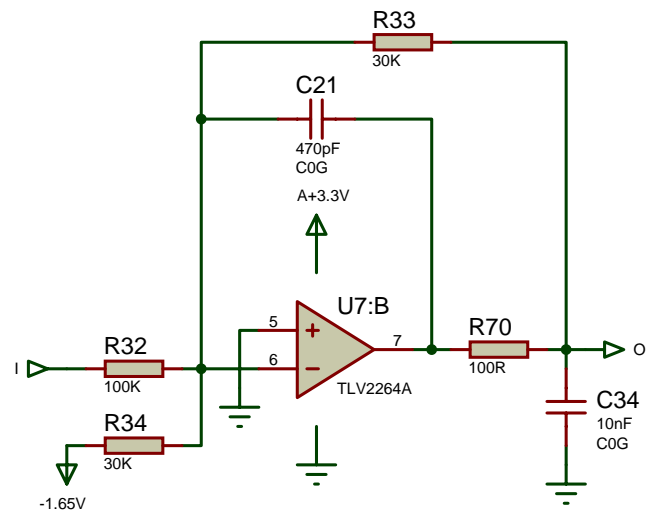
DUAL INPUT CV



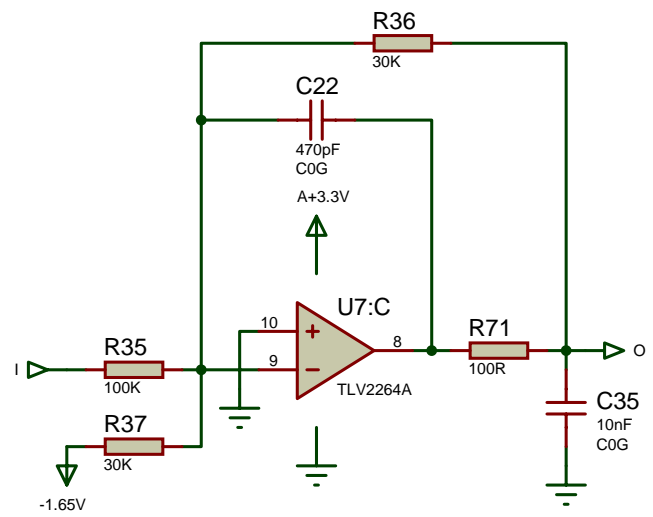
DUAL INPUT CV



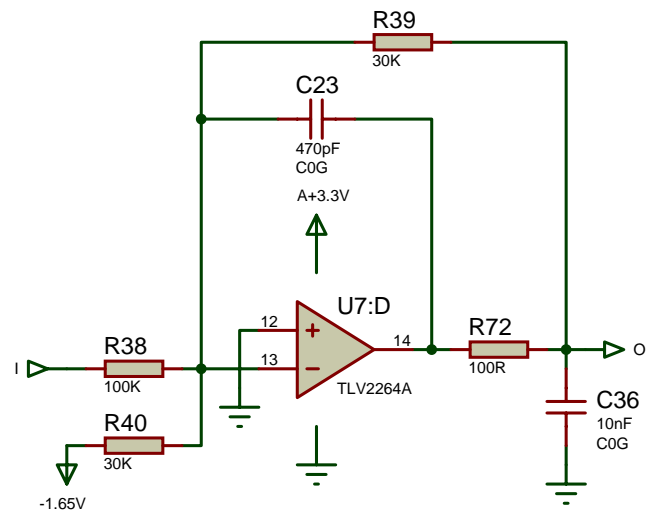
DUAL INPUT CV



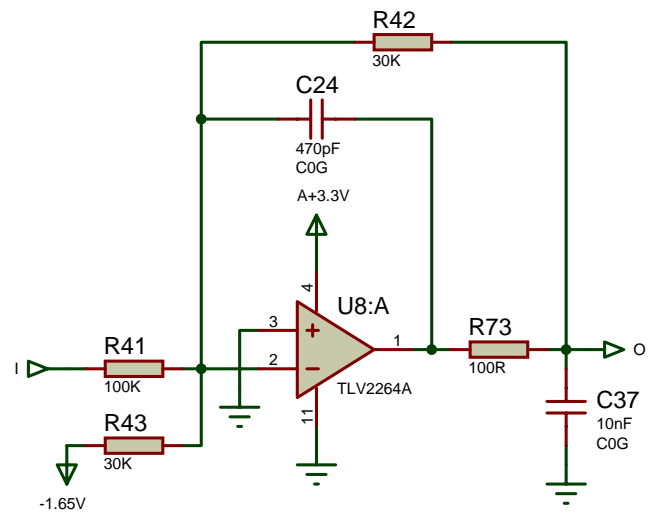
SINGLE INPUT CV



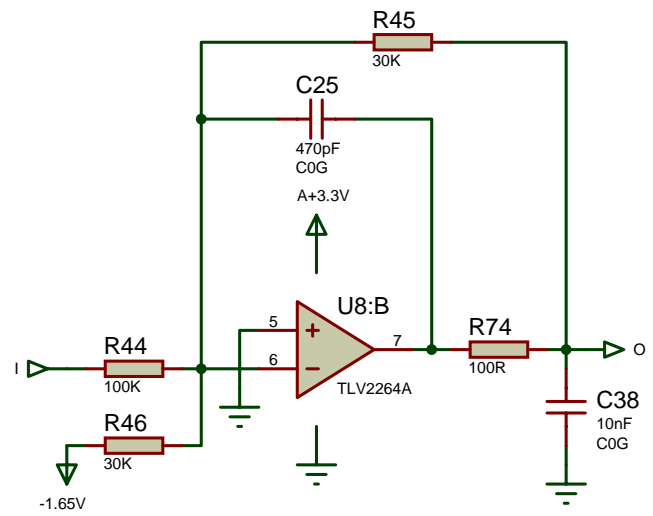
SINGLE INPUT CV



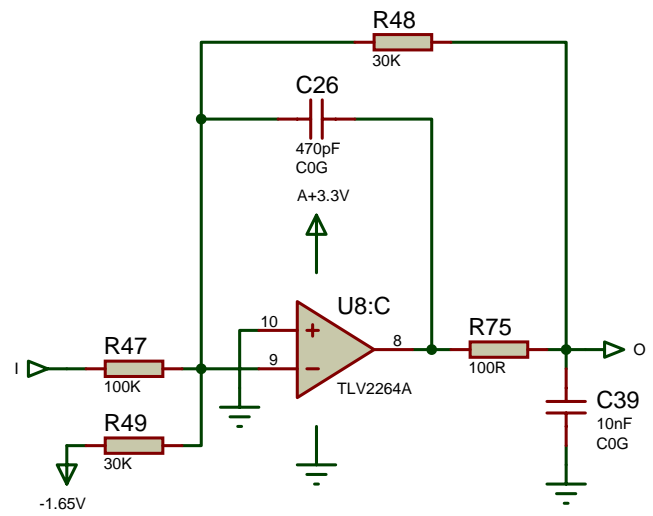
SINGLE INPUT CV



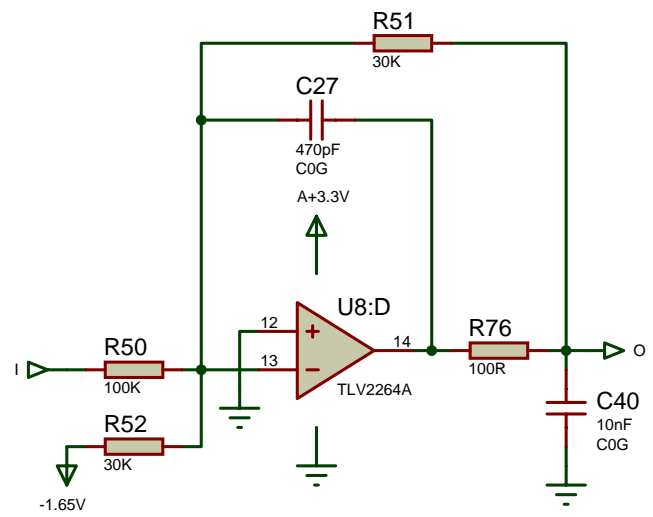
SINGLE INPUT CV



SINGLE INPUT CV



SINGLE INPUT CV



SINGLE INPUT CV