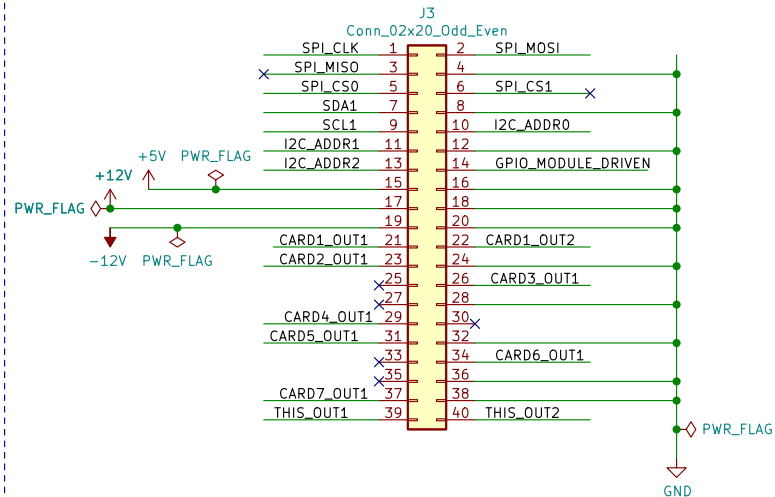
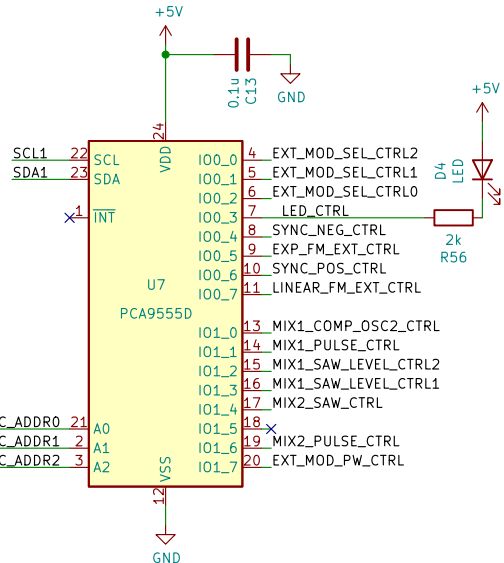


2x20 connection interface

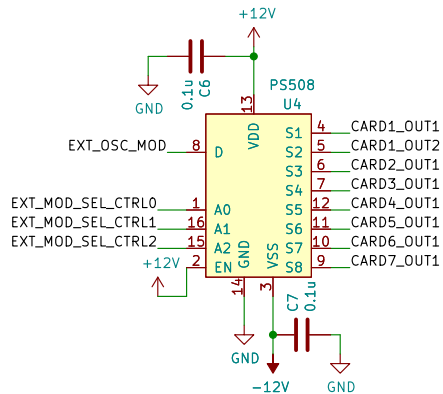


Interface: As Osc1, this module will drive:
OSC1_MIX1, OSC1_MIX2, and OSC1_CV.
The GPIO_PLDRIVER is used as a chip select.
The GPIO_MODULE_DRIVEN output is ours as well,
intended to be used for VCO tuning, if I get to it.
A module can tap into other lines for pulling signals in, but should not drive any other lines.

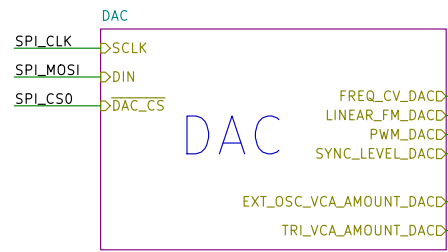
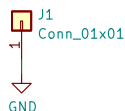
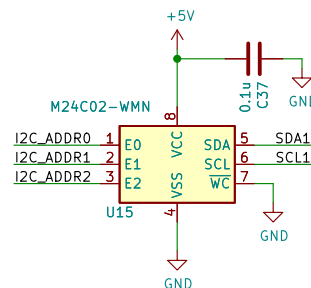
GPIO for switch control
I2C address 0100[addr2,addr1,addr0]



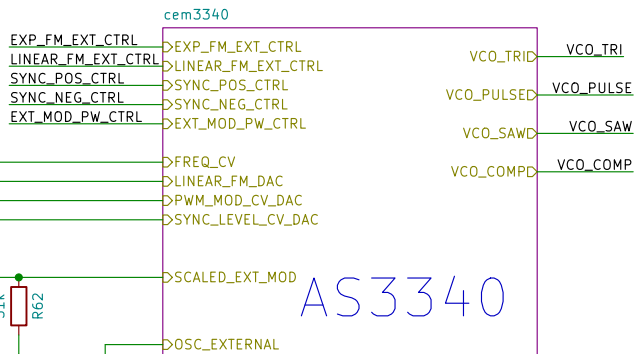
External Input Mod Select



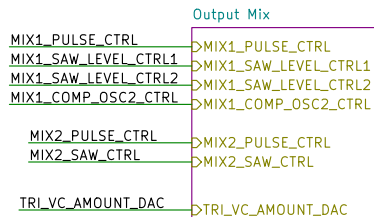
Board ID in EEPROM
I2C address 1010[addr2,addr1,addr0]



File: dac.kicad_sch



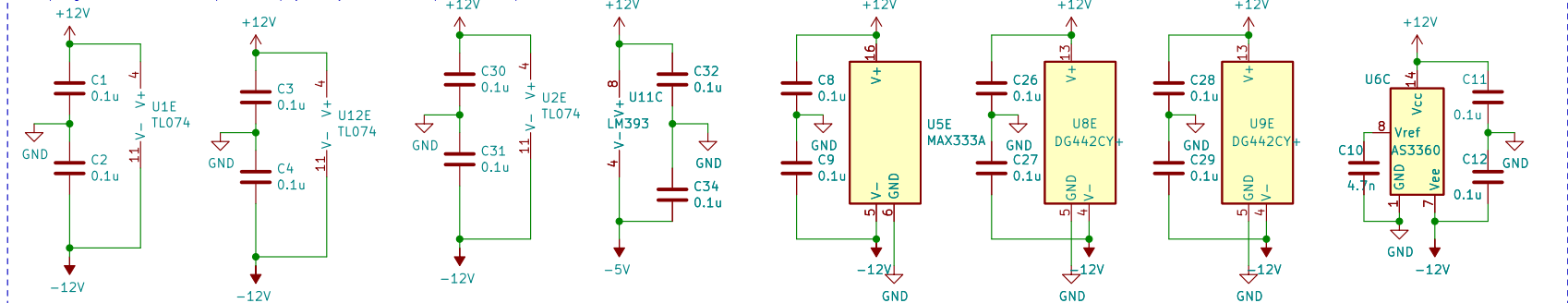
File: cem3340.kicad_sch



Output Levels
and Mixing

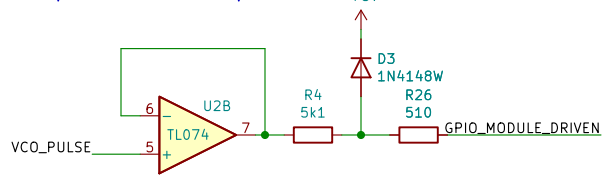
File: output_mix.kicad_sch

Decoupling with associated caps to be physically close to respective chips

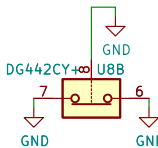


DG442: Ensure model is spec'd for +/- 12V. LE is not
MAX333A: MAX333AEWP+ or MAX333ACWP+

Tune Control: send pulse back to PI for freq count



Not Used



Mounting Holes



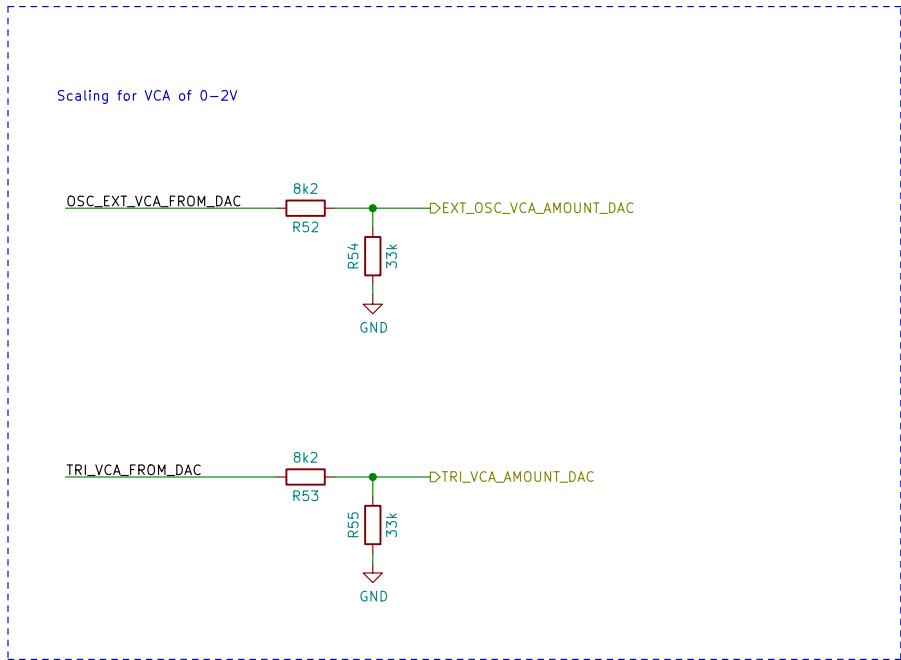
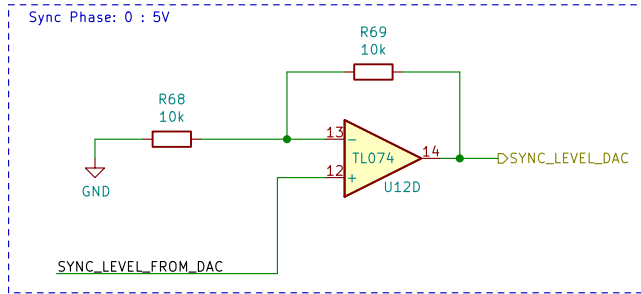
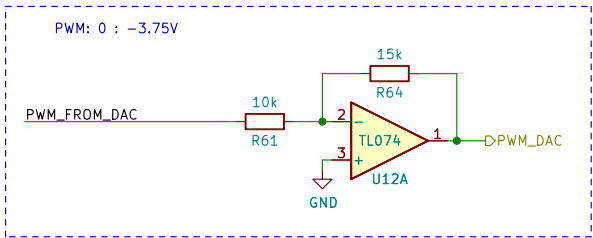
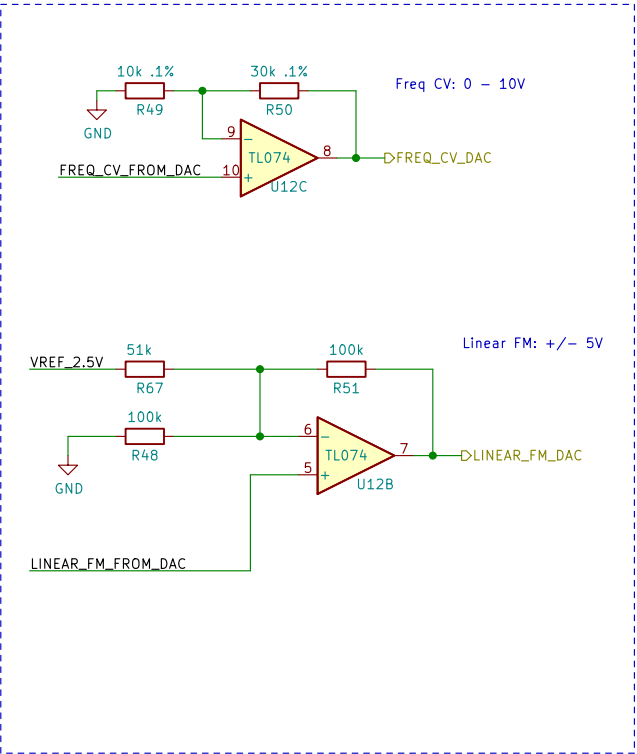
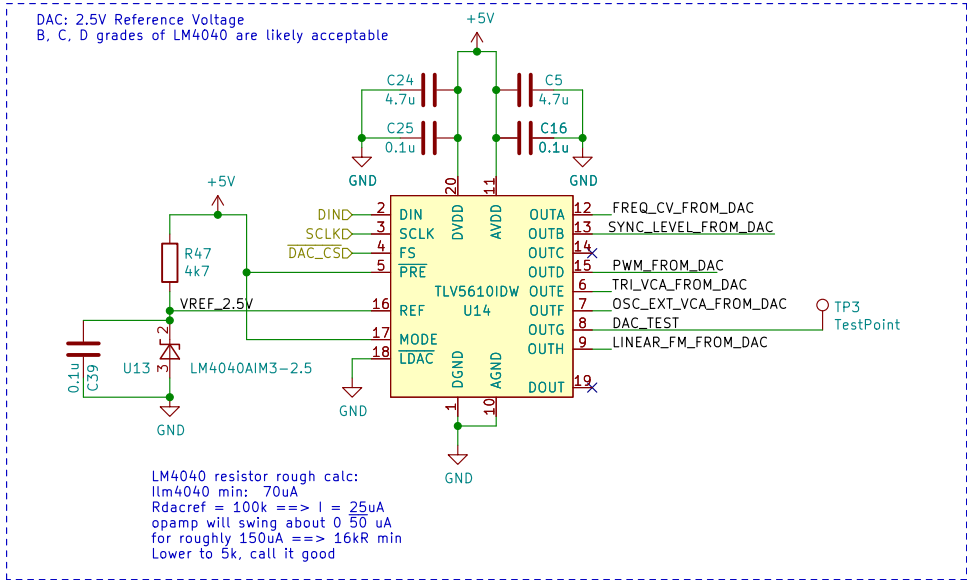
Zoxnoxious Engineering

Sheet: /
File: as3340.kicad_sch

Title: Zoxnoxious 3340 Oscillator

Size: B Date: 2022-09-07
KiCad E.D.A. kicad (6.0.7-1)-1

Rev: 0.4
Id: 1/4



DAC Output Levels:
FREQ_CV_DAC: 0 : 10V
LINEAR_FM_DAC: +/- 5V
EXT_OSC_VCA_AMOUNT: 0 : 2V
PULSE_VCA_AMOUNT_DAC: 0 : 2V
PWM_DAC: 0 : -3.75V (inverted to positive downstream)
SYNC_LEVEL_DAC: 0 : 10V (sync phase)

Zoxnoxious Engineering

Sheet: /DAC/
File: dac.kicad_sch

Title: Zoxnoxious 3340 Oscillator

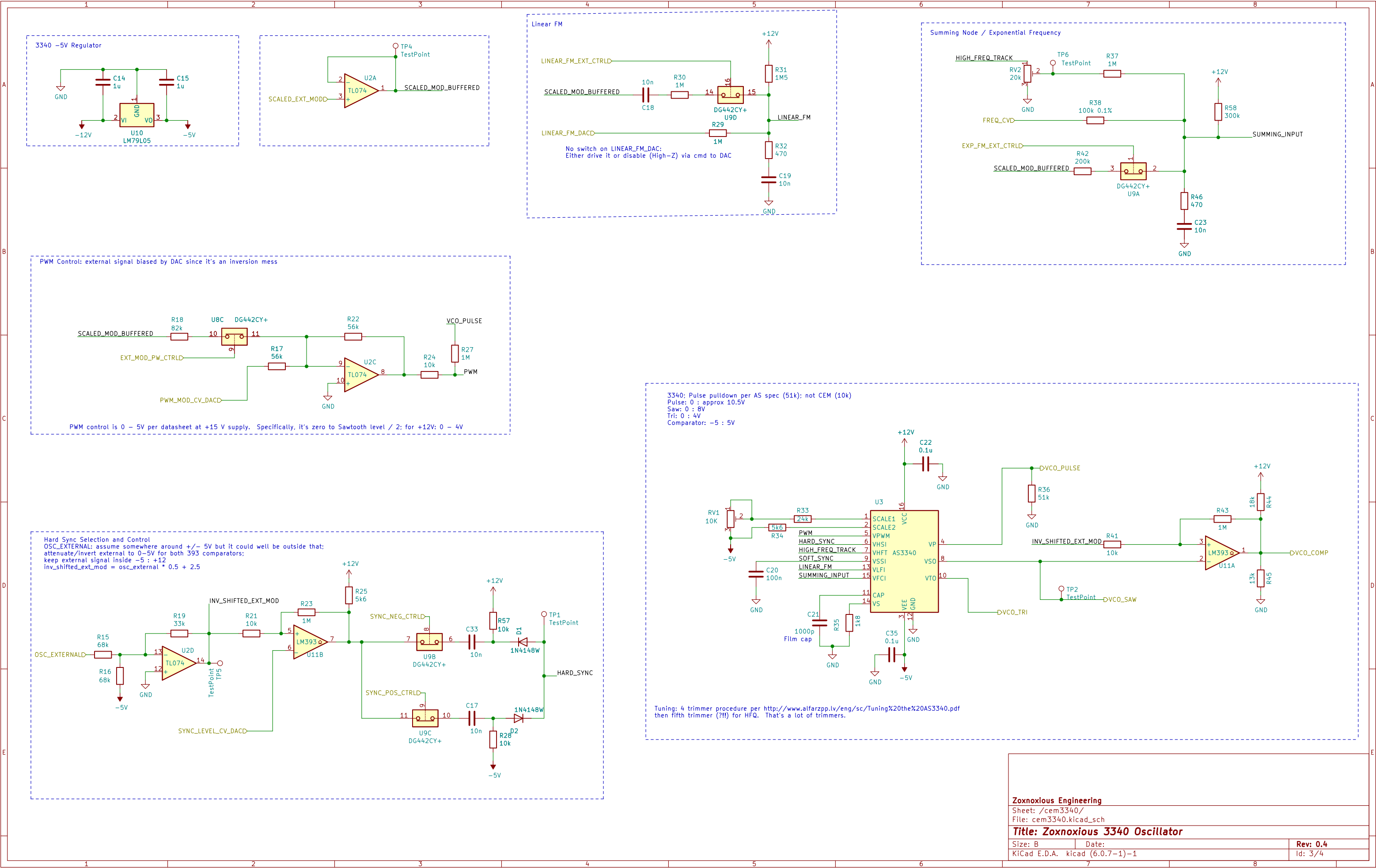
Size: B

Date:

Rev: 0.4

KiCad E.D.A. kicad (6.0.7–1)–1

Id: 2/4



Zoxxnoious Engineering

Sheet: /cem3340/

File: cem3340.kicad_sch

Title: Zoxxnoious 3340 Oscillator

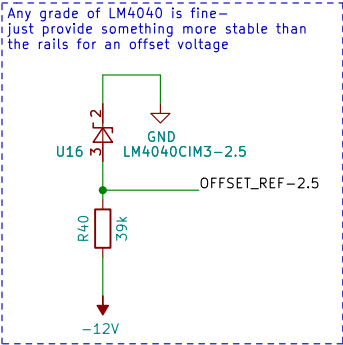
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Date:

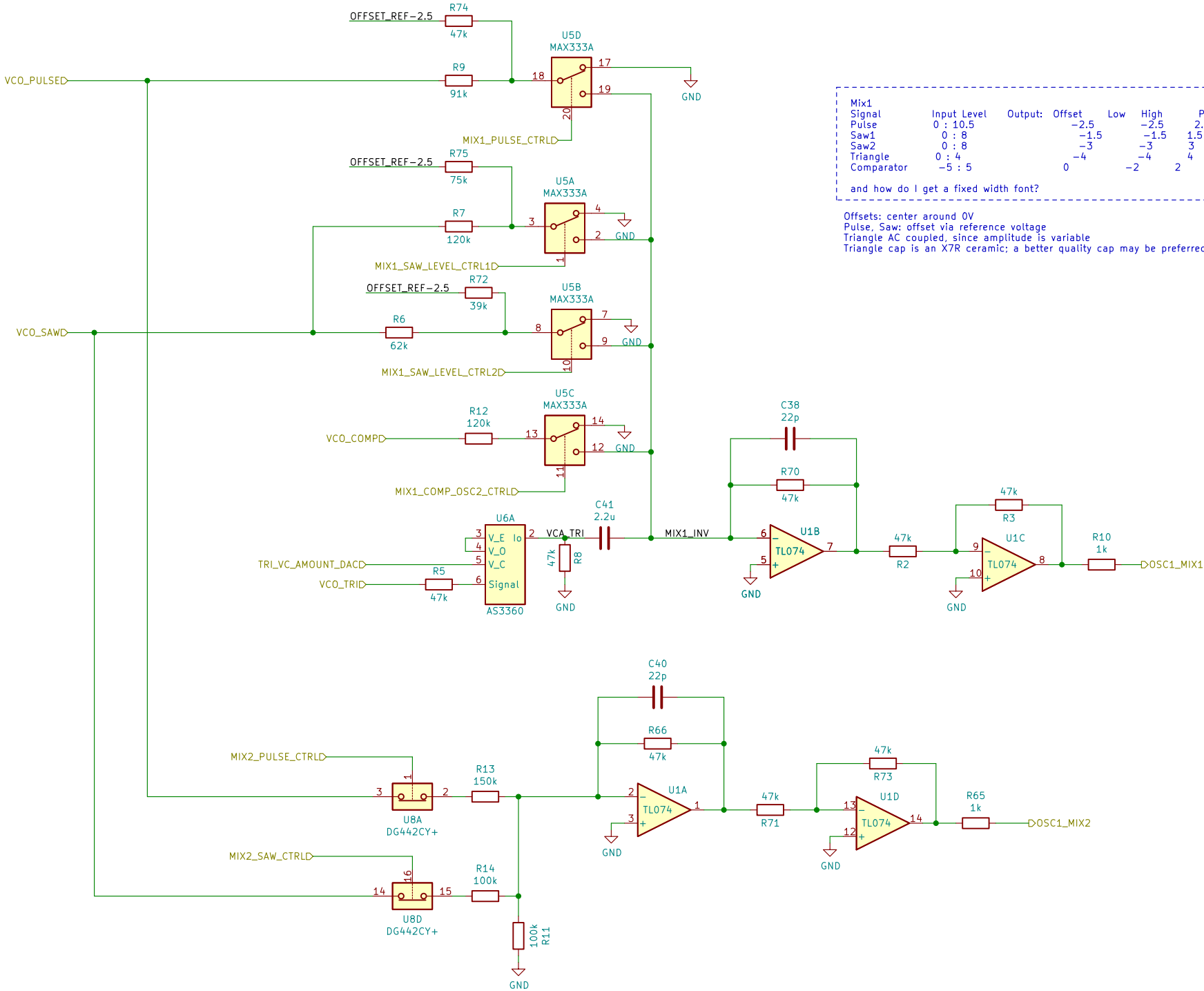
KiCad E.D.A. kicad (6.0.7-1)-1

Rev: 0.4

Id: 3/4



-16k in load to OFFSET_REF-2.5 ==> 150 uA
LM4040 requires 65 uA
total 215 uA
44k calculated ==> 39k resistor, allowing for power supply wierdness
Changing offsets to waveforms will change this value



Mix1	Input Level	Output:	Offset	Low	High	Peak-to-Peak
Signal	0 : 10.5		-2.5	-2.5	2.5	5
Pulse	0 : 8		-1.5	-1.5	1.5	3
Saw1	0 : 8		-3	-3	3	6
Saw2	0 : 4		-4	-4	4	8
Triangle						
Comparator	-5 : 5		0	-2	2	4

and how do I get a fixed width font?

Offsets: center around 0V
Pulse, Saw: offset via reference voltage
Triangle AC coupled, since amplitude is variable
Triangle cap is an X7R ceramic; a better quality cap may be preferred

Zoxxious Engineering

Sheet: /Output Mix/

File: output_mix.kicad_sch

Title: Zoxxious 3340 Oscillator

Size: B

Date:

Rev: 0.4

KiCad E.D.A. kicad (6.0.7-1)-1

Id: 4/4