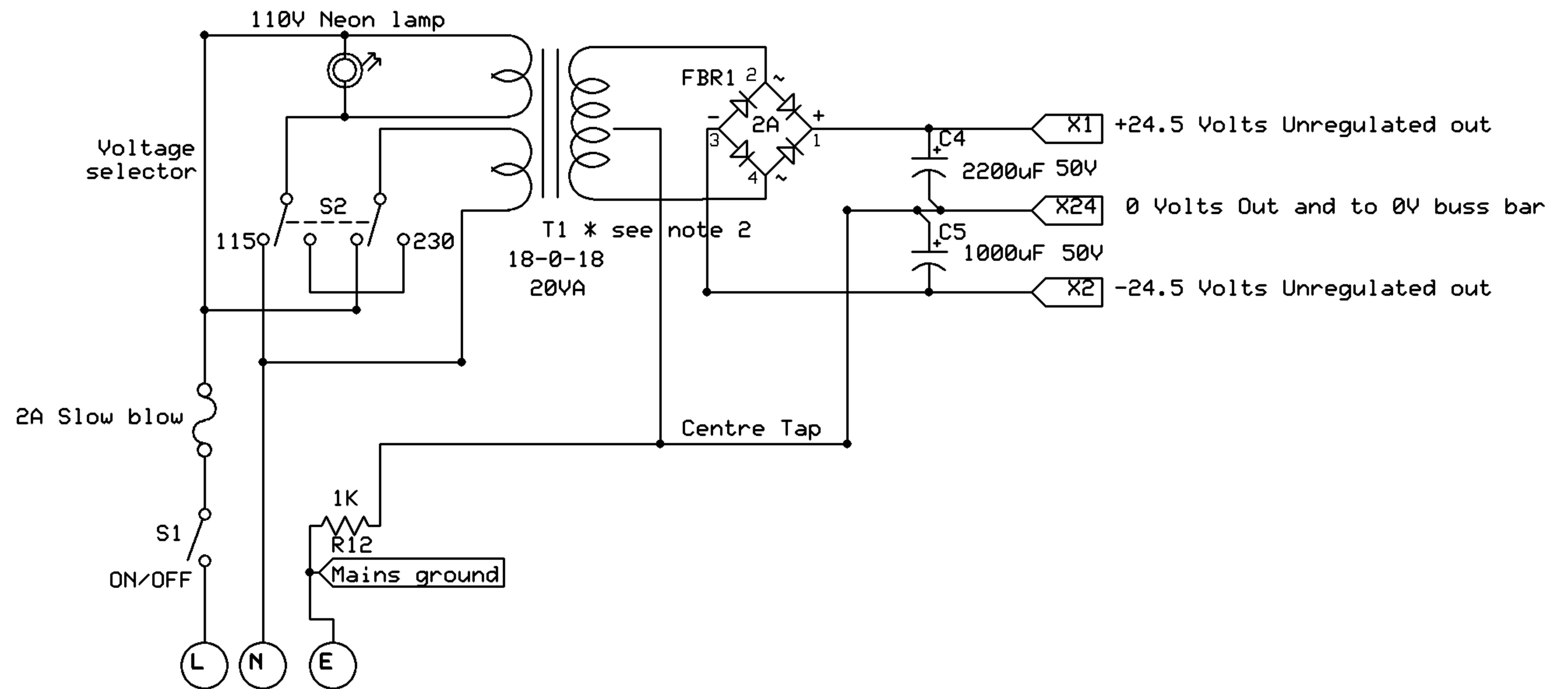


UN-REGULATED POWER SUPPLY



NOTES:

1. Transformer, rectifier, capacitors, power transistors : CHASSIS MOUNTED
2. Transformer on Deodar Synth is 17-0-17, 15-0-15 or 18-0-18 can be used with no known issues

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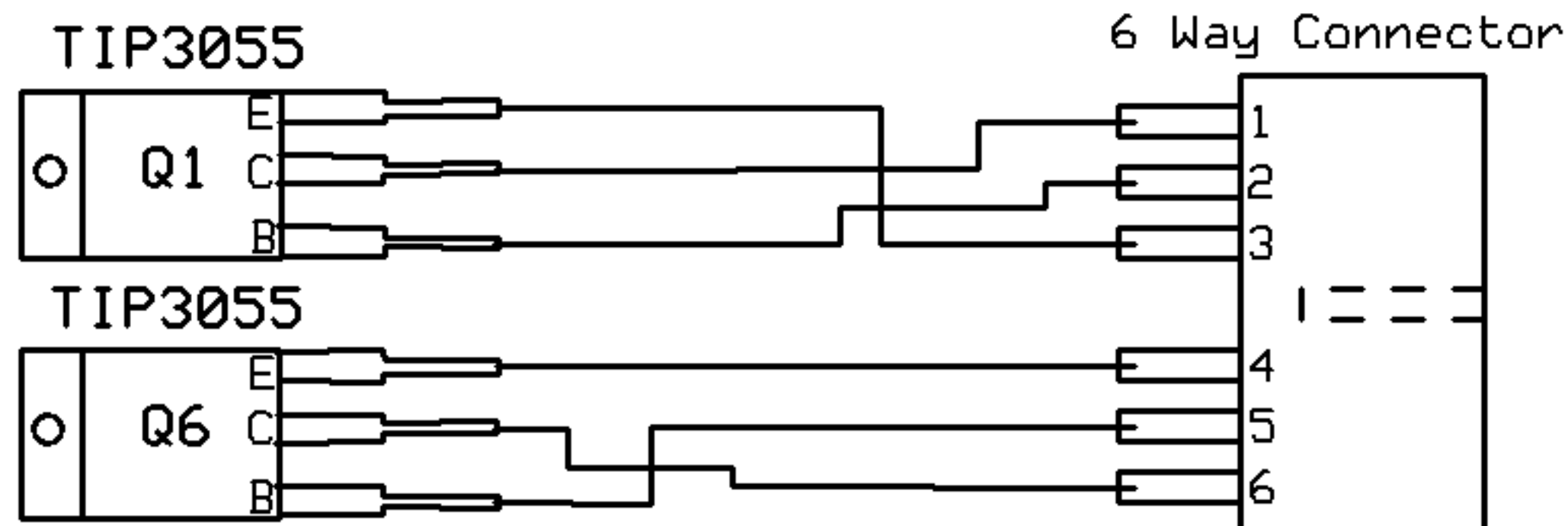
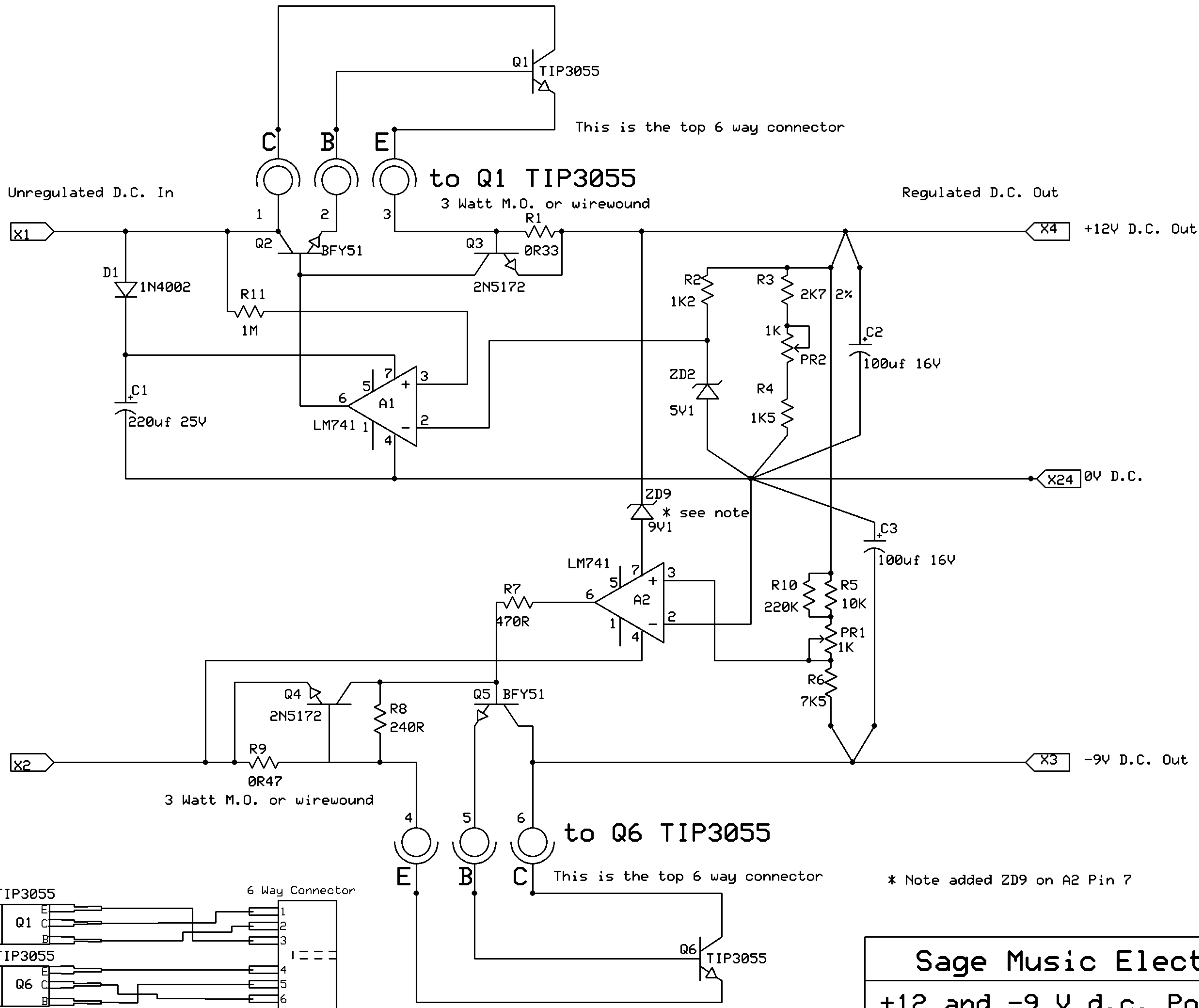
Mains Rectified D.C. output

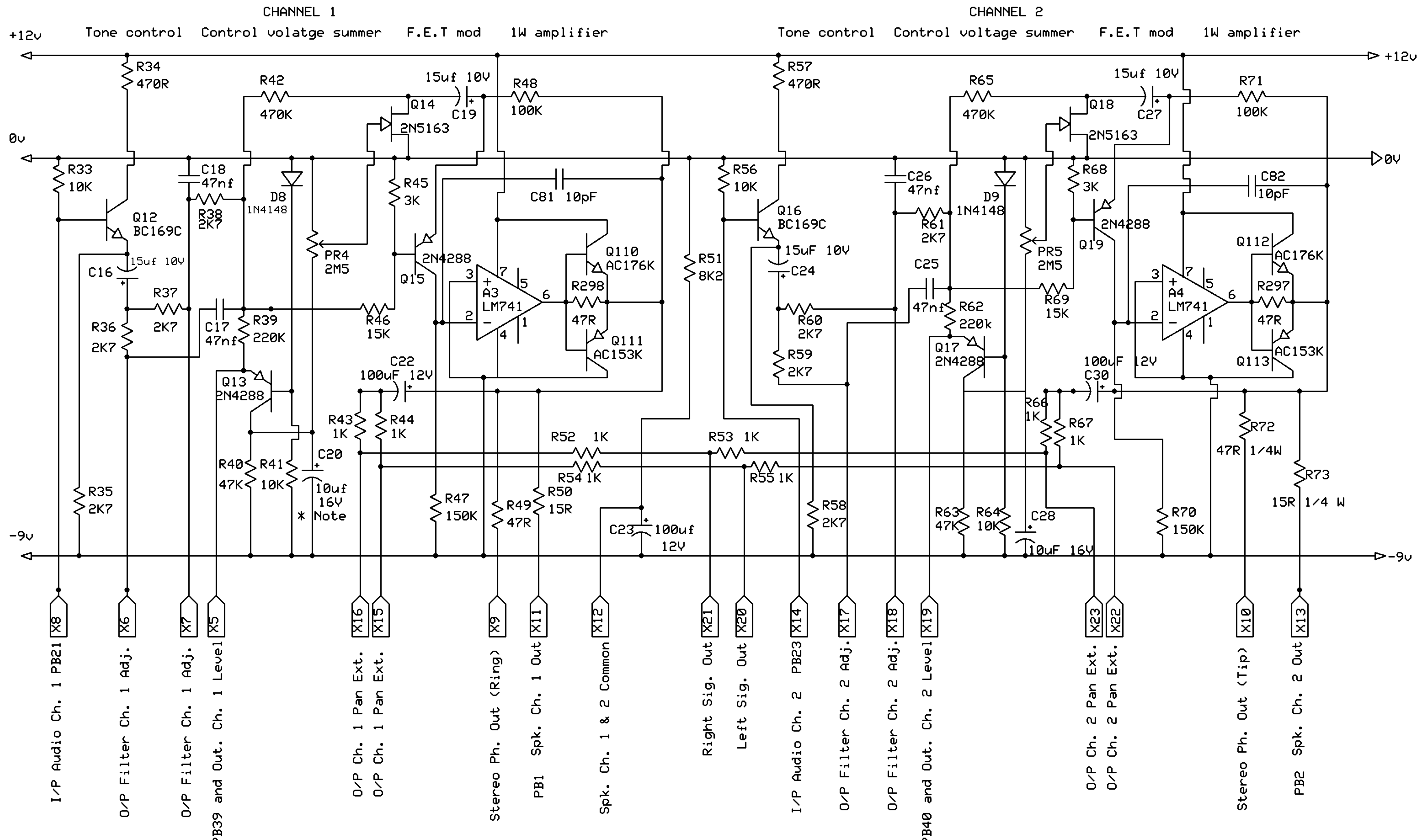
Derek G Revell

Rev 1.2

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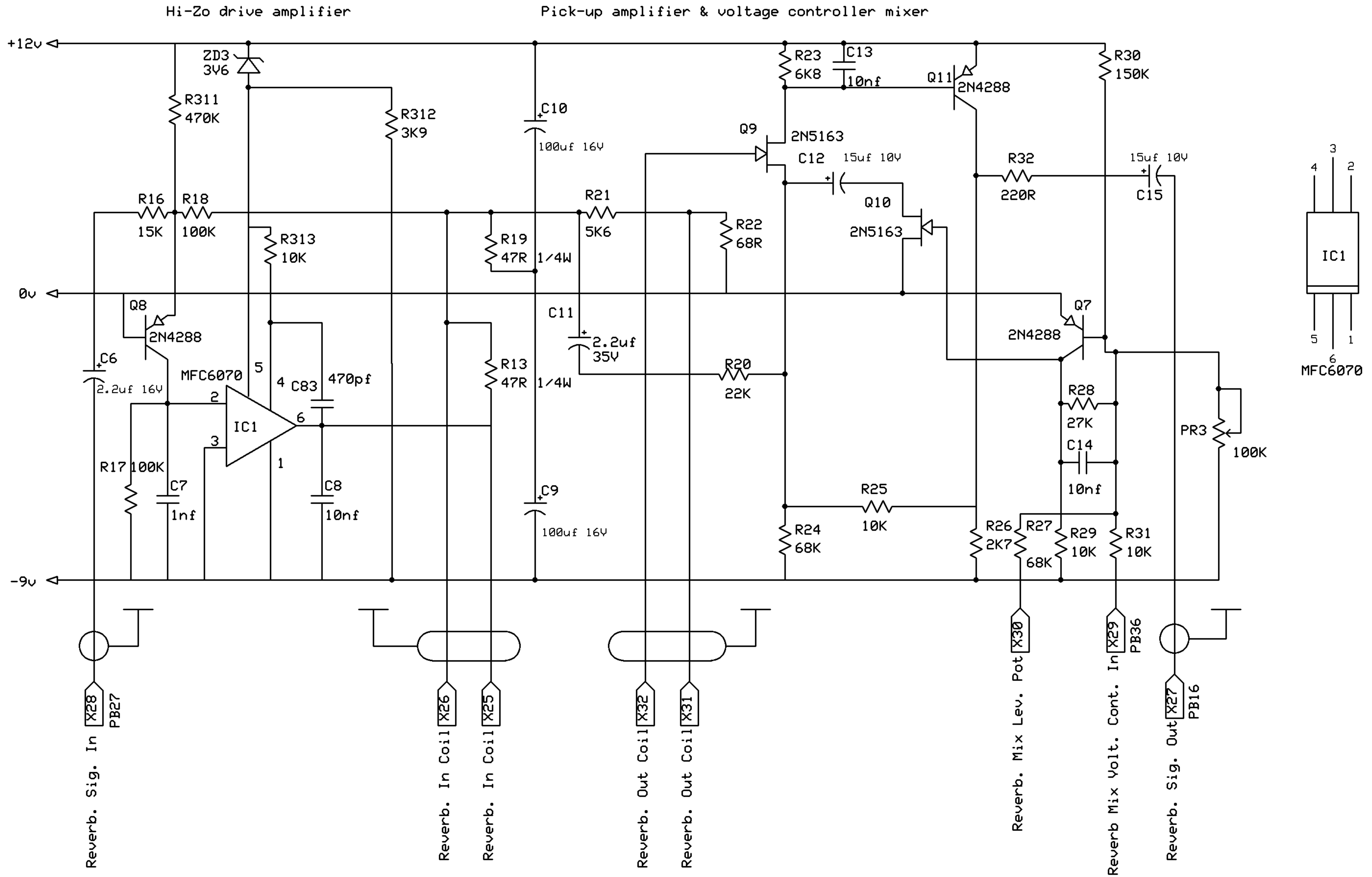




**** NOTE A12 connection has 3 devices it is commoned to. ****
 * Note - added missing capacitor - not on original diagram

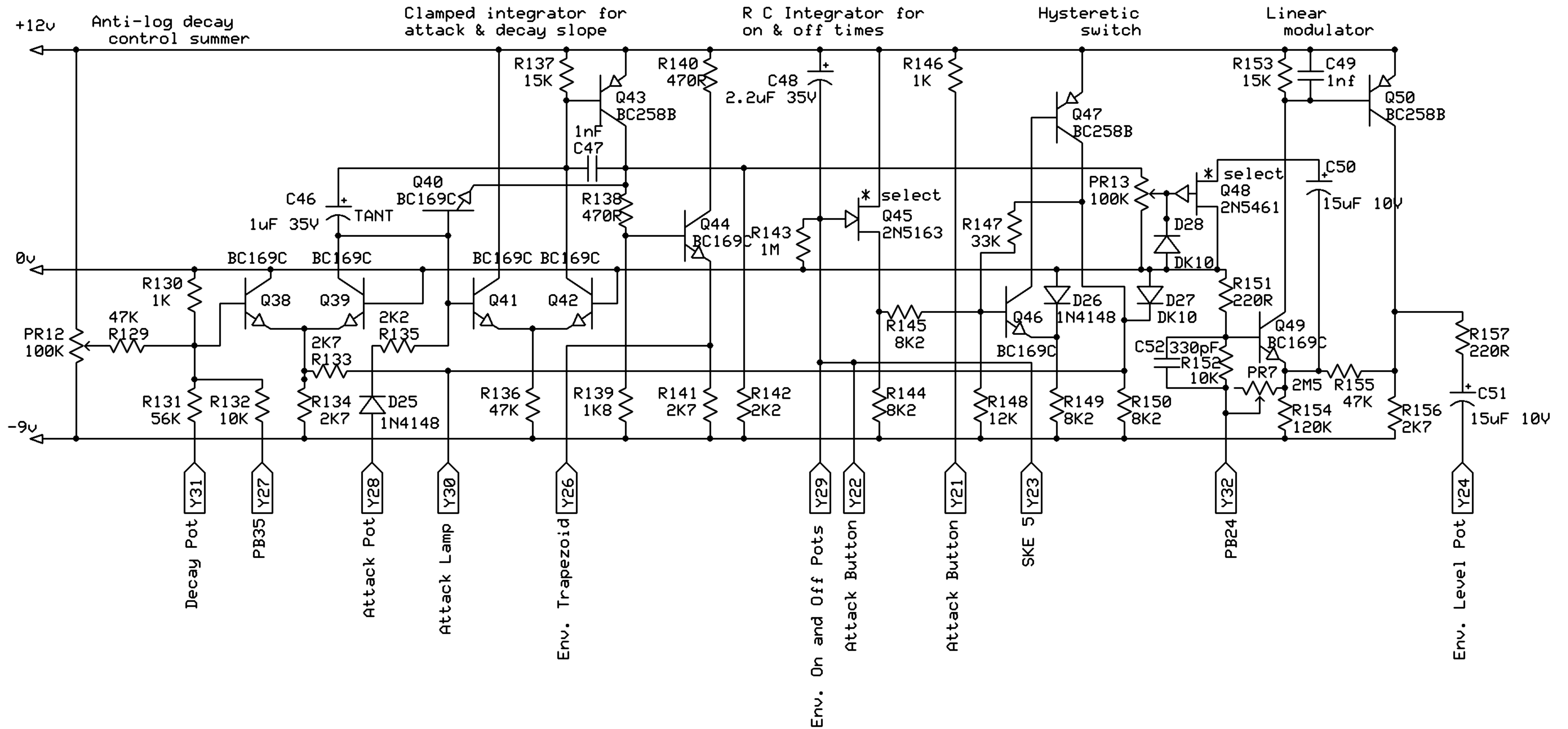
Sage Music Electronics		
Output Channel 1 & 2 Amplifiers		
Derek G Revell	Rev 1.2	Page 3 OF 4
	27/12/2013	

REVERBERATION MIXER AMPLIFIER MKII



Sage Music Electronics
Reverberation V.C. Mix

ENVELOPE SHAPER



Q45 = 3.5 - 4.0 V or > 1.5 adjust R143

Q48 = 2.5 - 3.0 V

Power connections Y25 = 0V, Y16 = -9V, Y18 = +12V

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Envelope Shaper

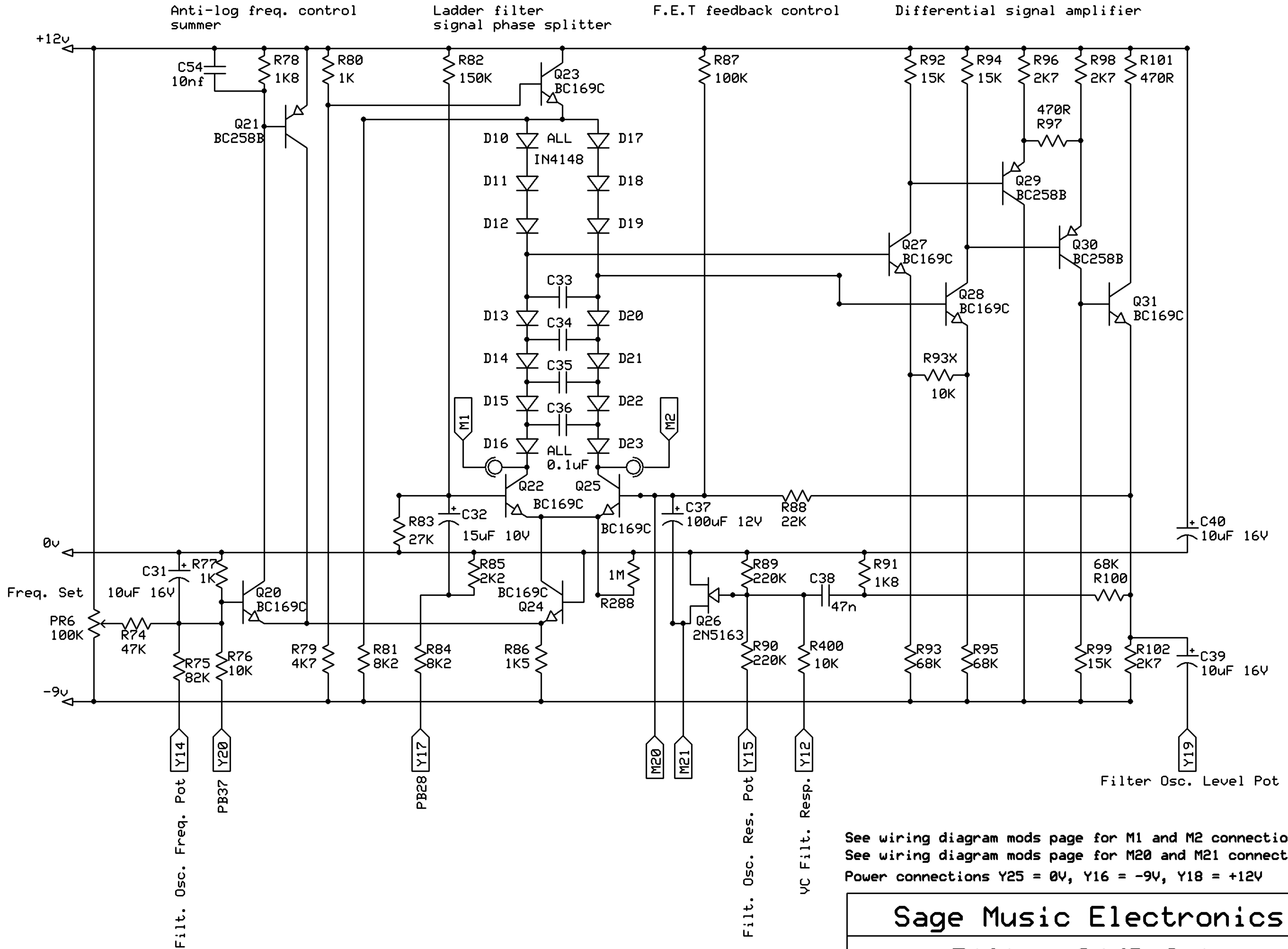
Derek G Revell

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FILTER

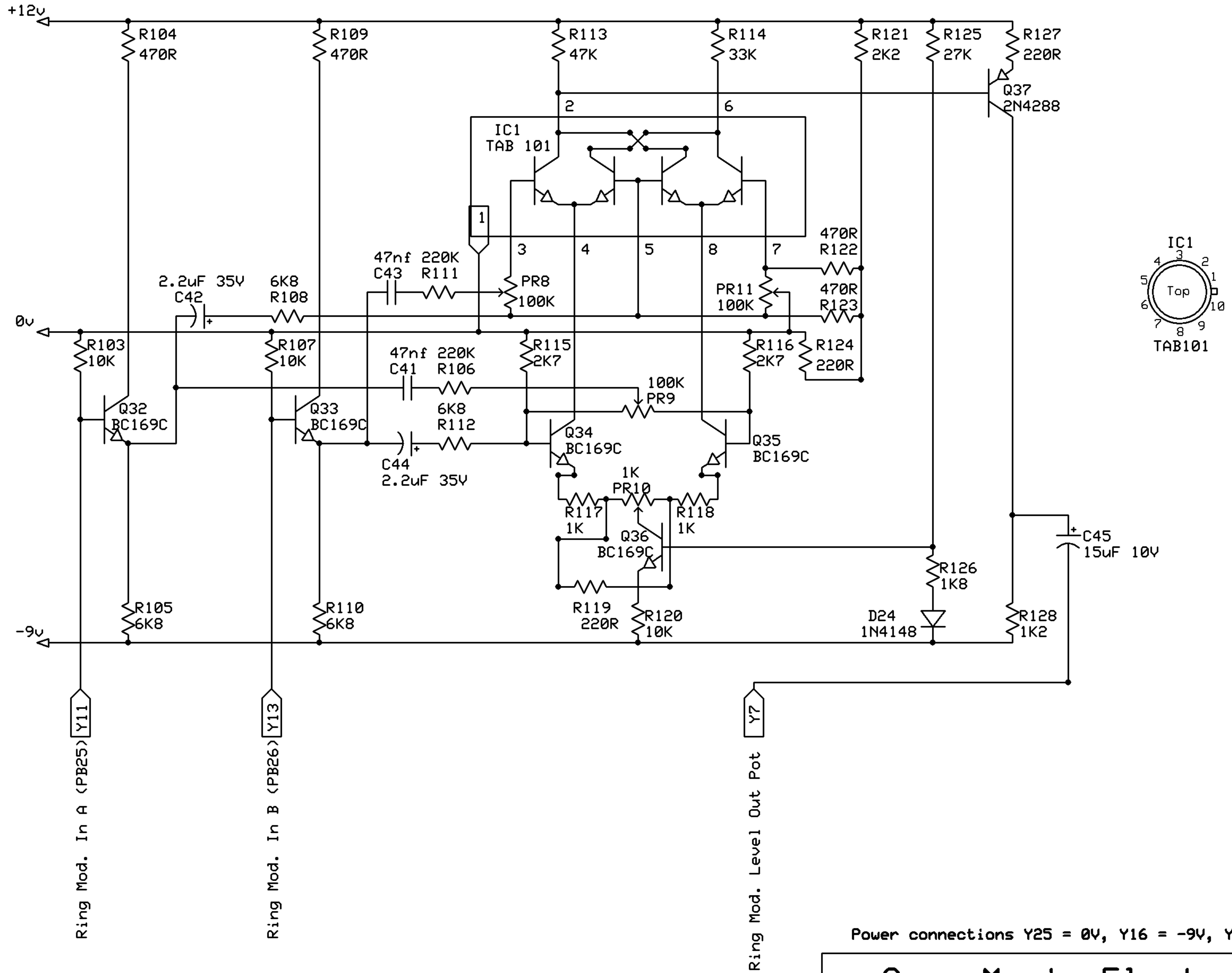


See wiring diagram mods page for M1 and M2 connections
 See wiring diagram mods page for M20 and M21 connections
 Power connections Y25 = 0V, Y16 = -9V, Y18 = +12V

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Filter 24dB/Oct

RING MODULATOR

Double balanced modulator



Power connections Y25 = 0V, Y16 = -9V, Y18 = +12V

Sage Music Electronics

Ring Modulator

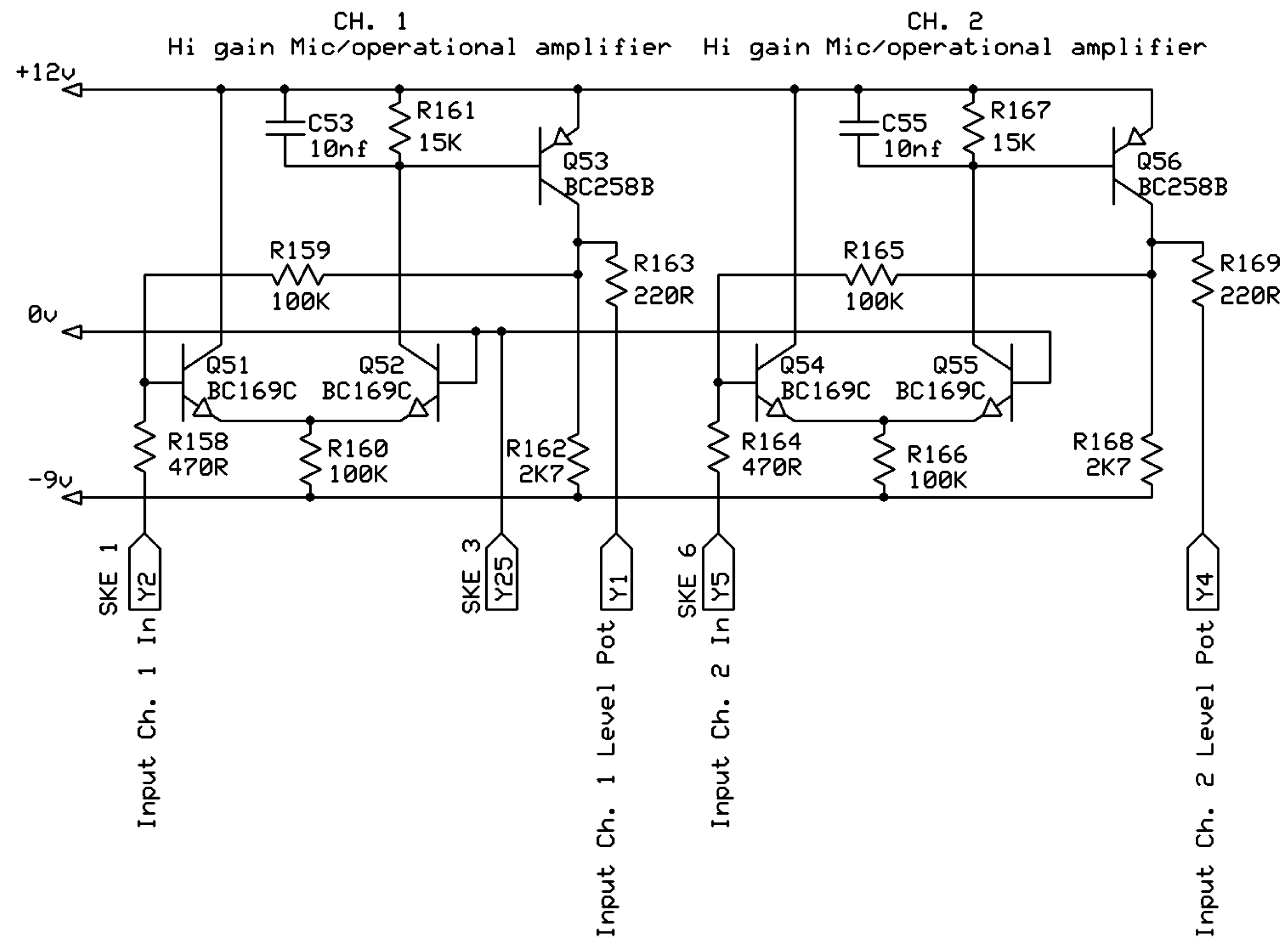
Derek G Revell

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INPUT CHANNEL AMPLIFIERS



Power connections Y25 = 0V, Y16 = -9V, Y18 = +12V

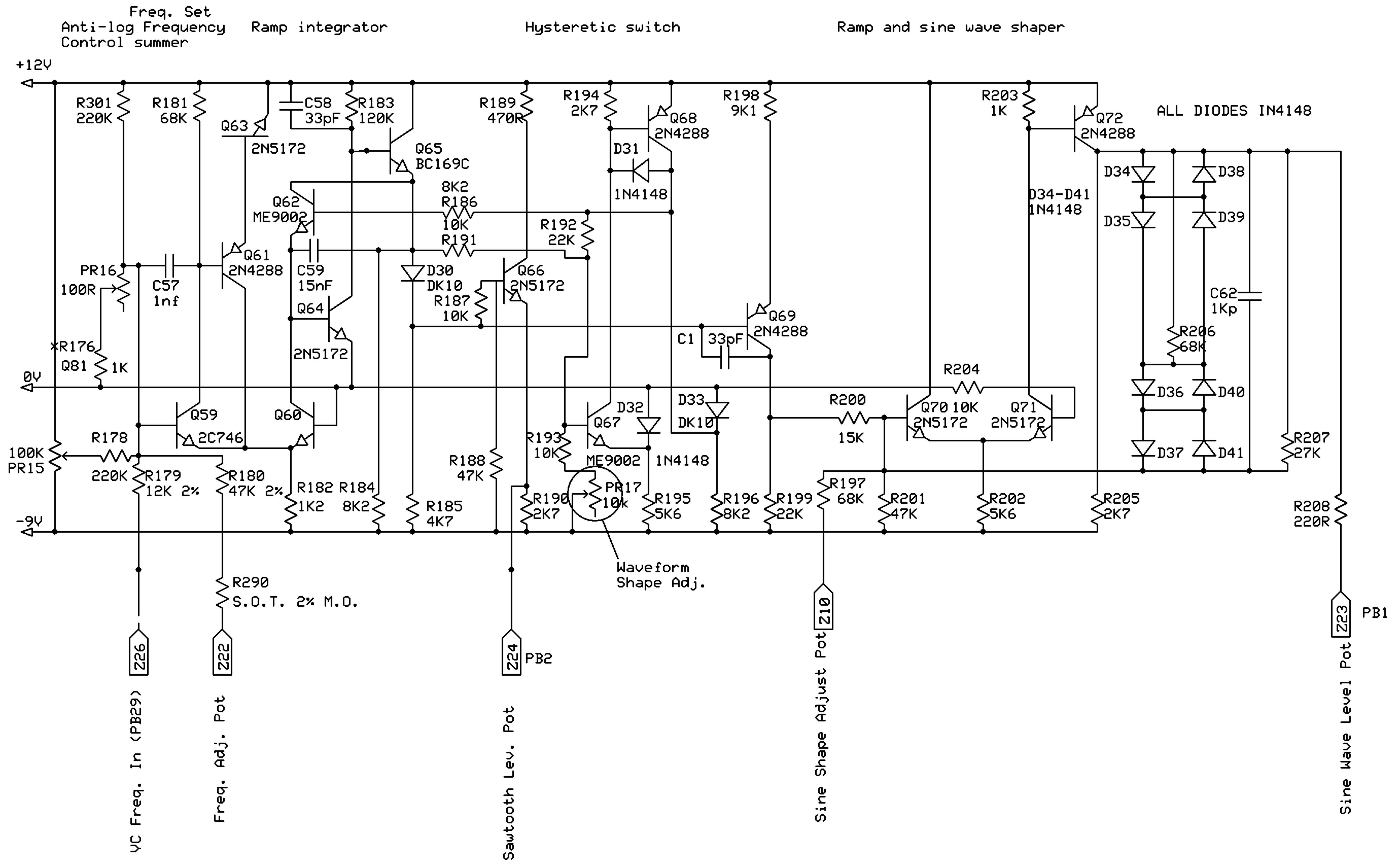
Sage Music Electronics
Input Channel Amplifiers

Derek G Revell

Rev 1.1
25/11/2013

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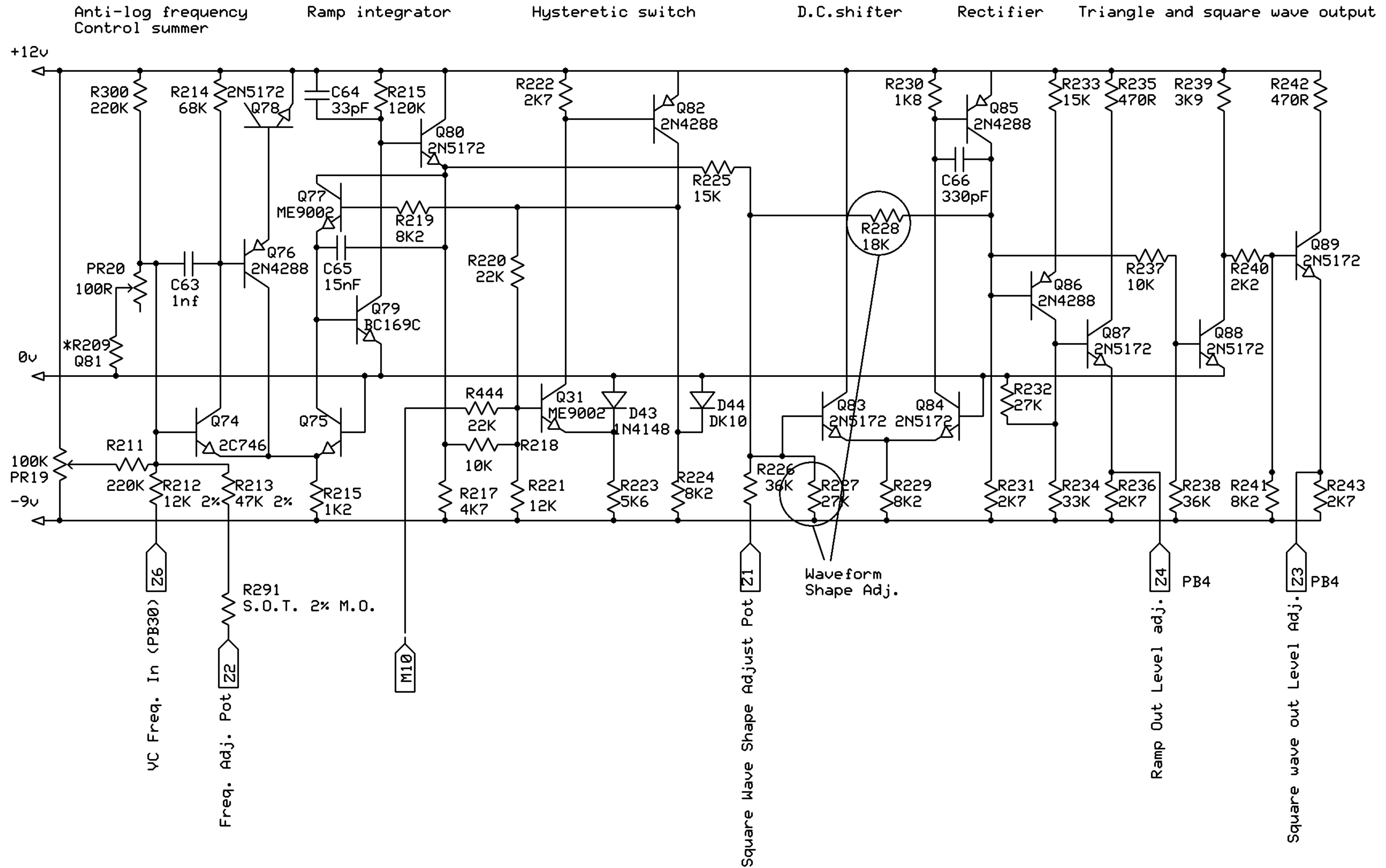
OSCILLATOR 1



Note R176 1K 2% should be a TEL LABS negative temp. co-efficient resistor
 Power connections Z25 = 0V, Z16, Z17, Z18 = -9V, Z19, Z20, Z21 = +12V

Sage Music Electronics		
Oscillator 1		
Derek G. Revell	Rev 1.1 25/11/2013	Page 1 OF 4

OSCILLATOR 2

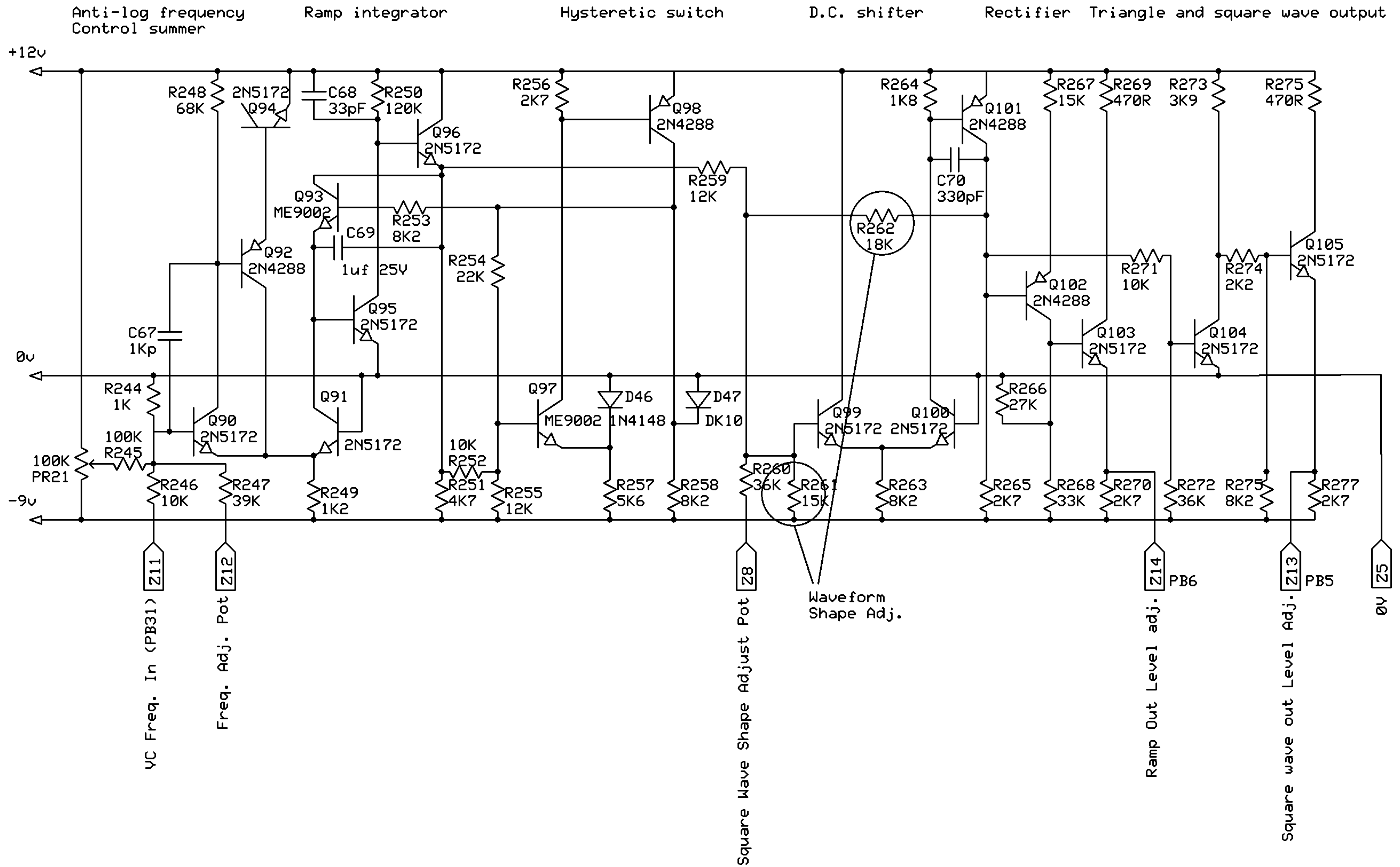


Note R209 1K 2% should be a TEL LABS negative temp. co-efficient resistor

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Oscillator 2

Please note that 0V connections are different for the Noise/Meter and Osc. 1 & 2
Power connections 225 = 0V, 216, 217, 218 = -9V, 219, 220, 221 = +12V

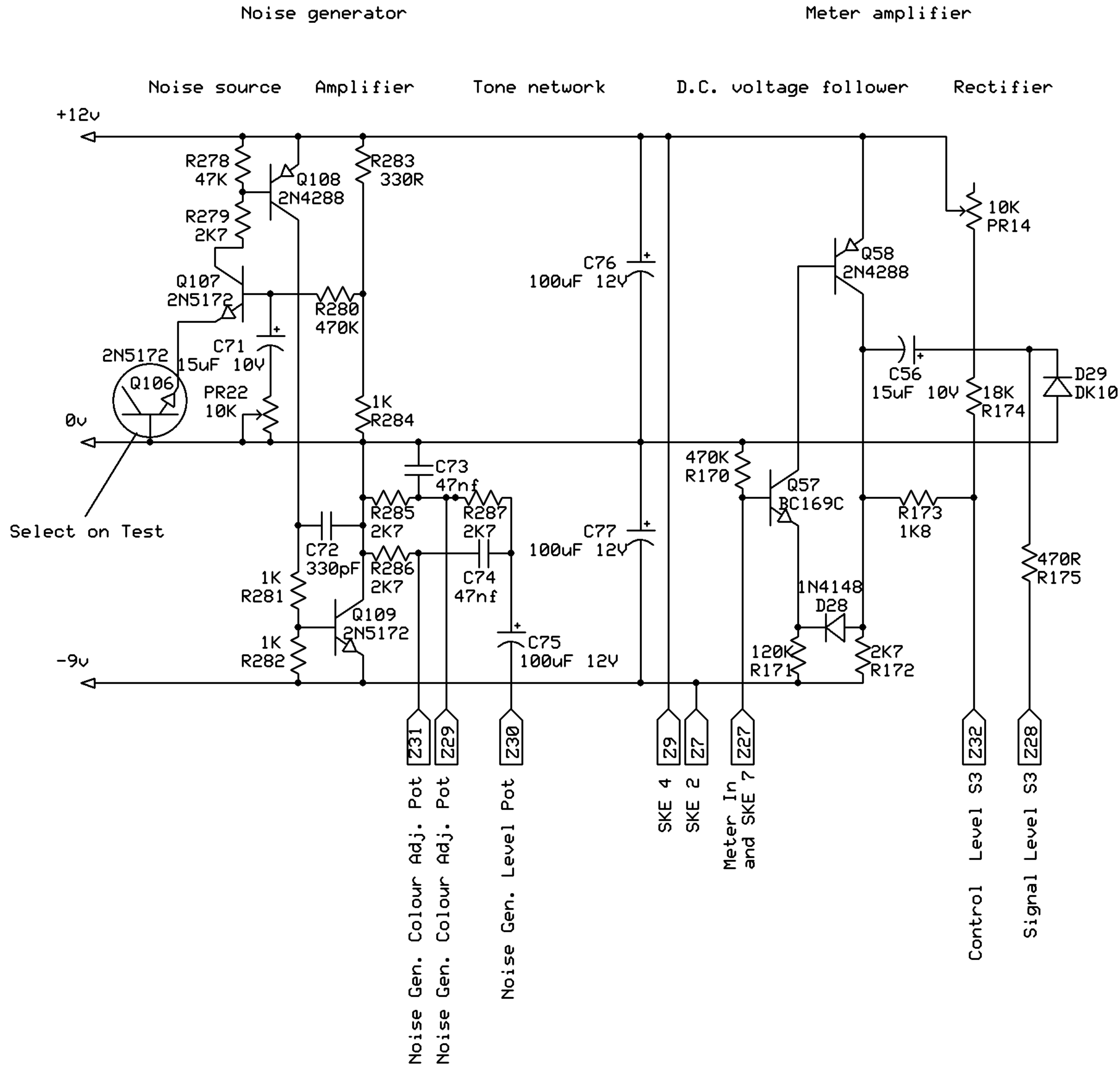
OSCILLATOR 3



Sage Music Electronics		
Oscillator 3		
Derek G Revell	Rev 1.1	Page 3 OF 4
	25/11/2013	

Power connections Z25 = 0V, Z16, Z17, Z18 = -9V, Z19, Z20, Z21 = +12V

NOISE GENERATOR AND METER AMPLIFIER



Power connections Z25 = 0V, Z16, Z17, Z18 = -9V, Z19, Z20, Z21 = +12V

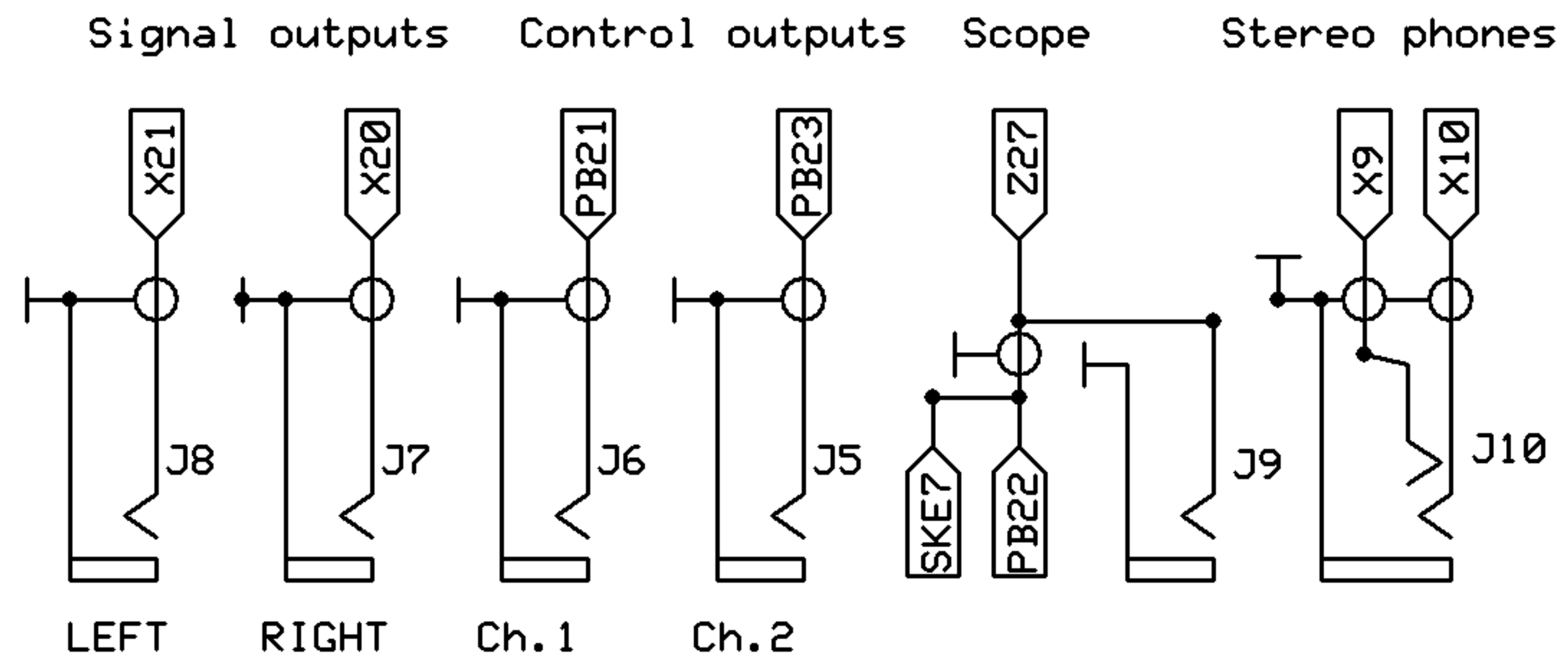
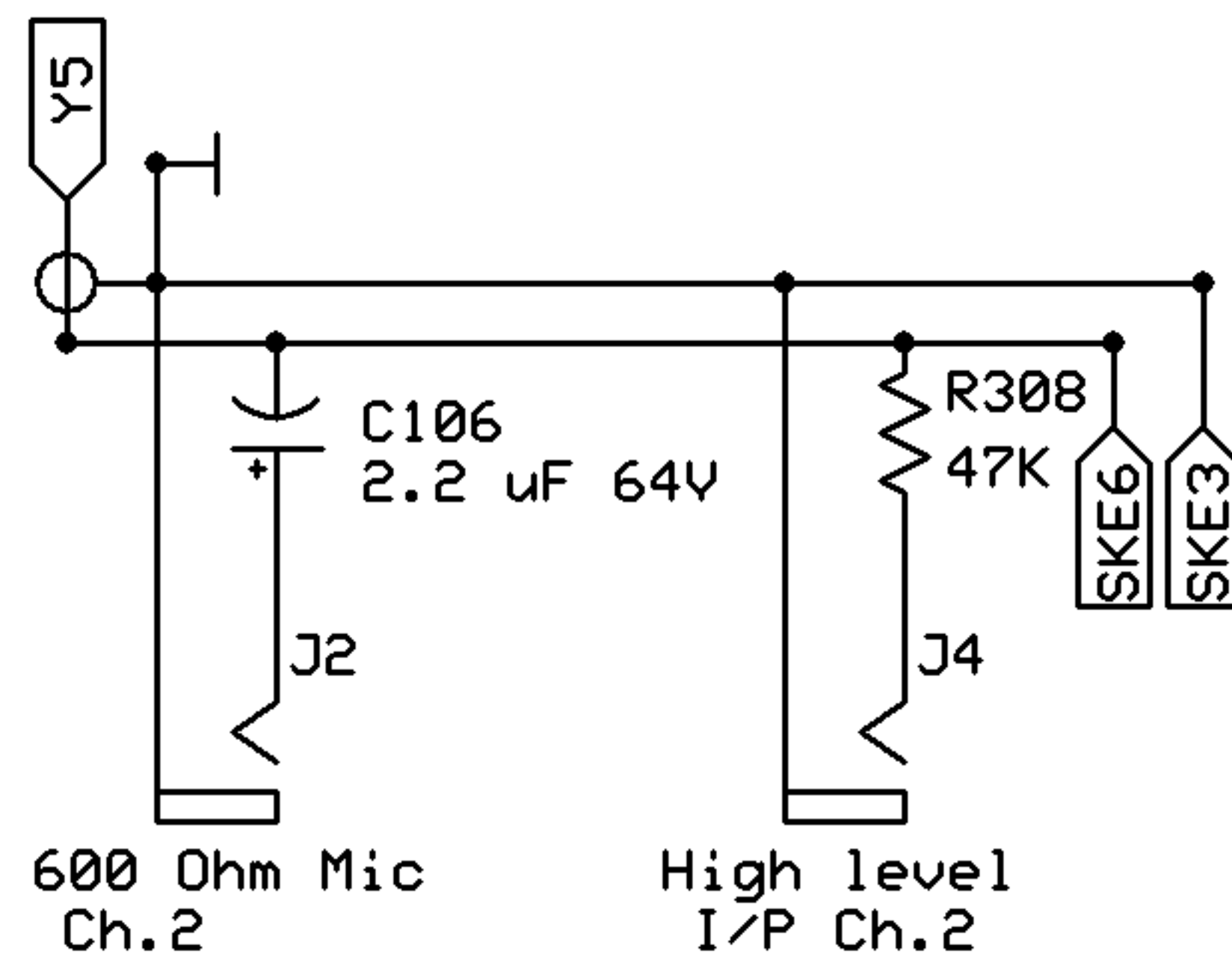
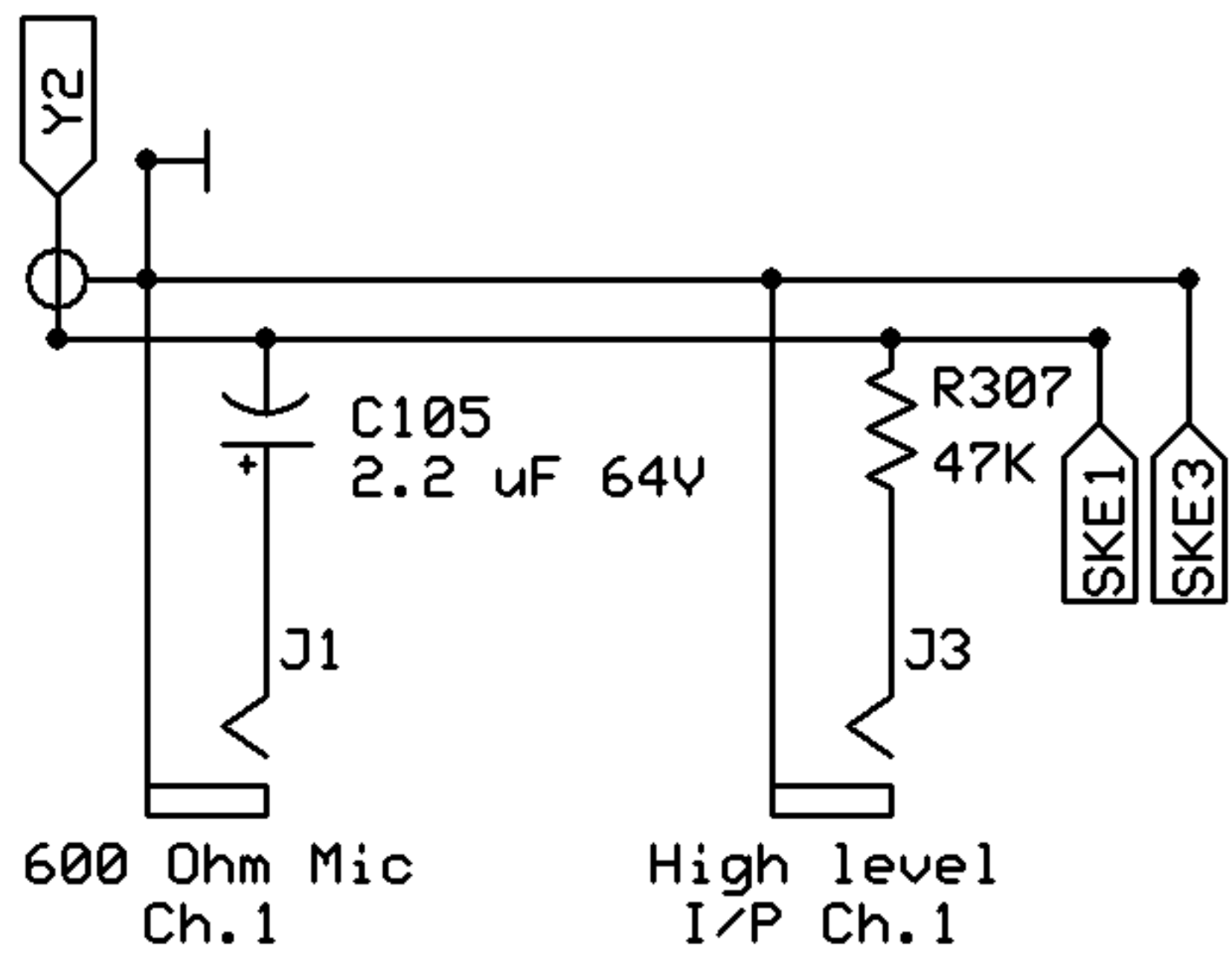
Sage Music Electronics

Noise and Meter Amplifier

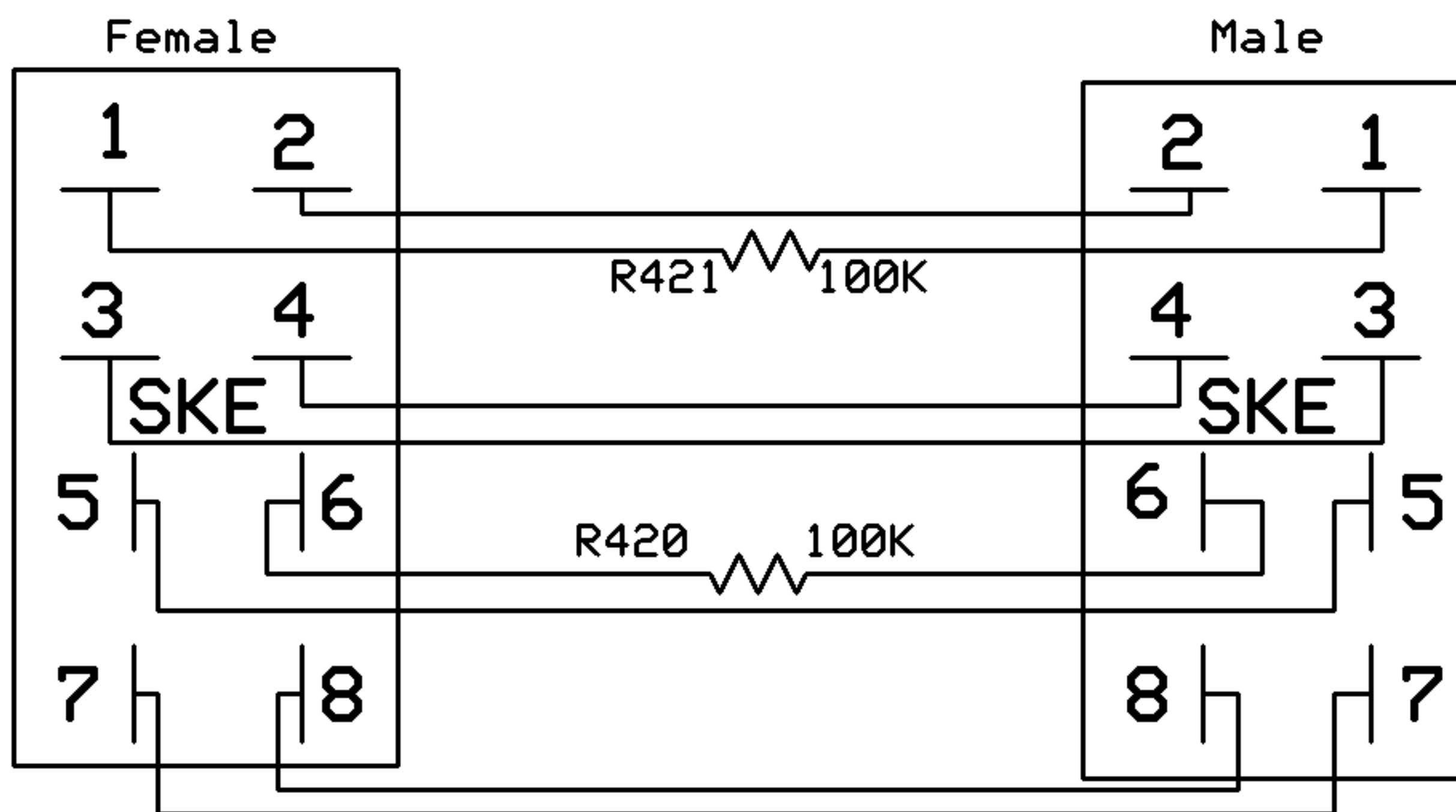
Derek G Revell

Rev 1.0
25/11/2013

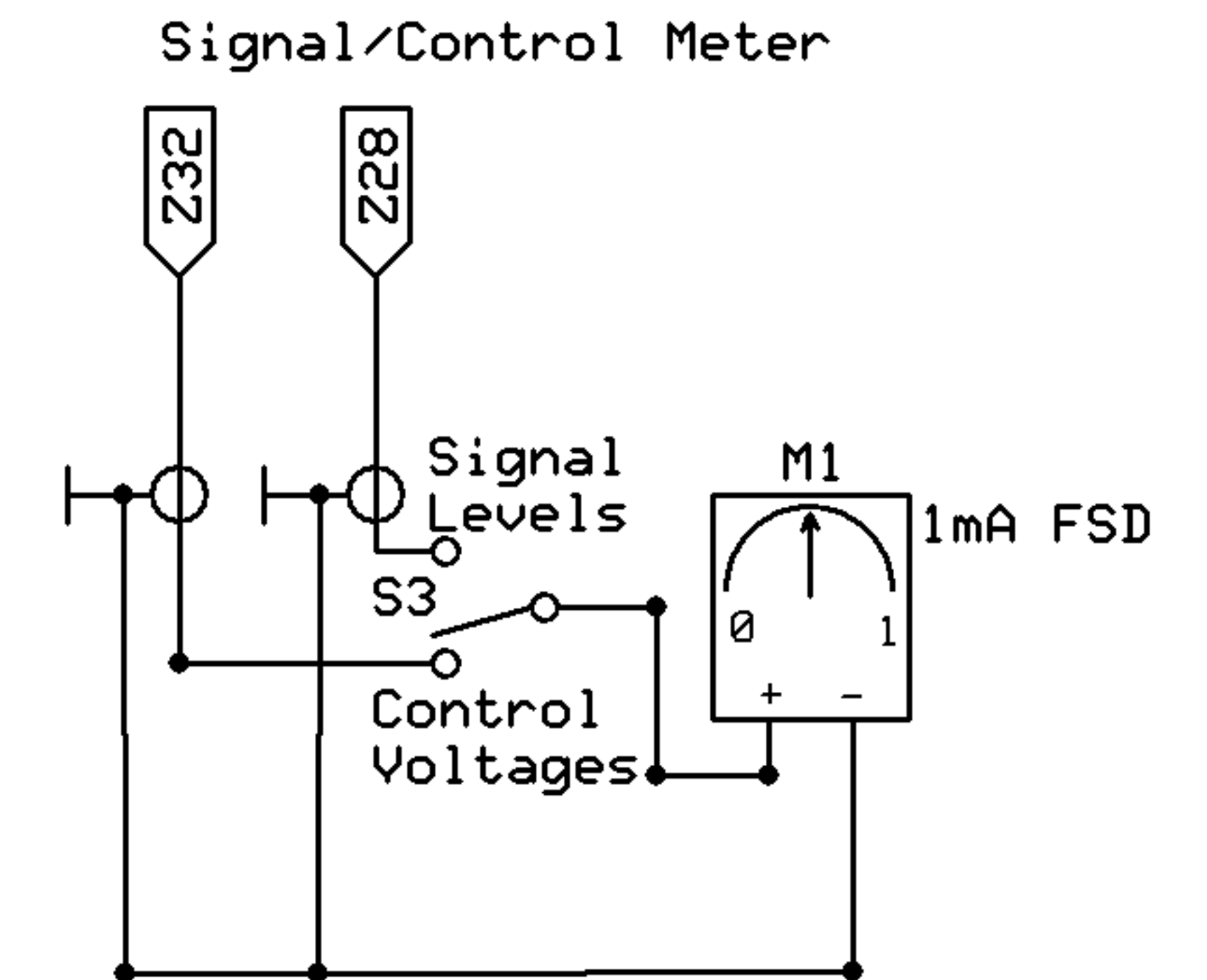
Page 4 OF 4



Keyboard Umbilical Cable

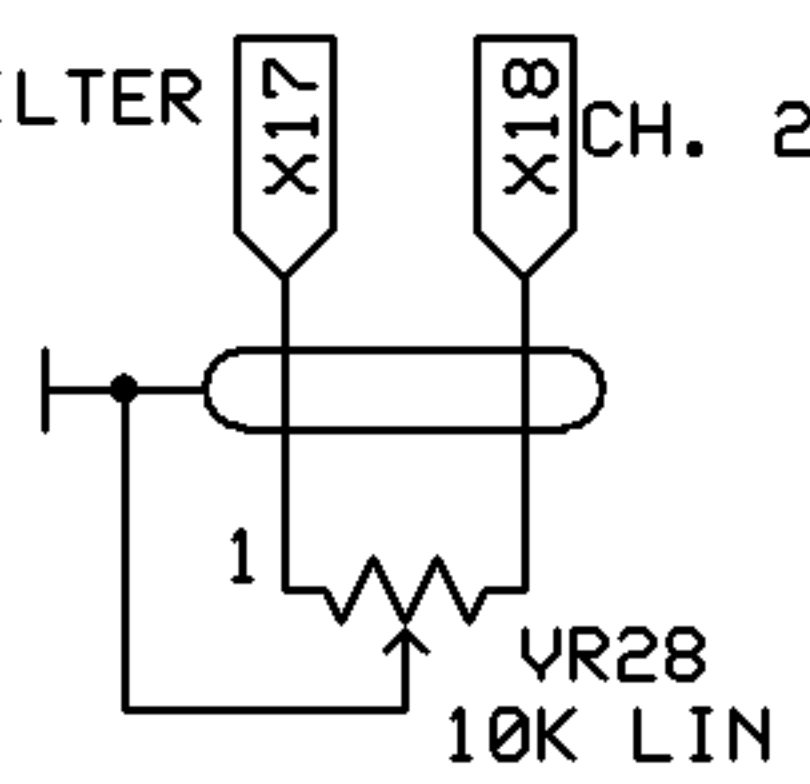
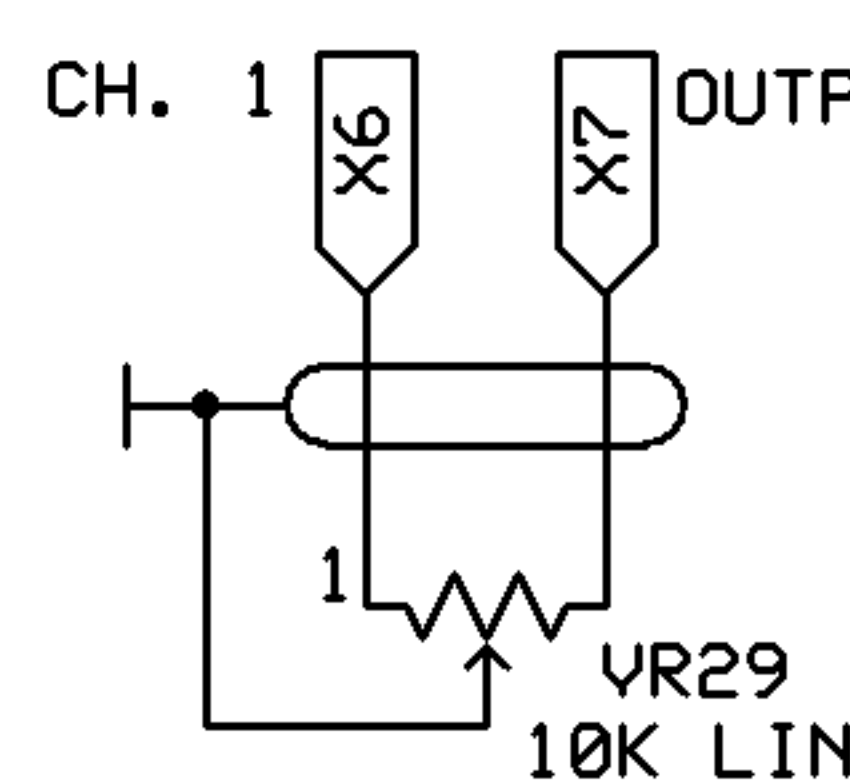
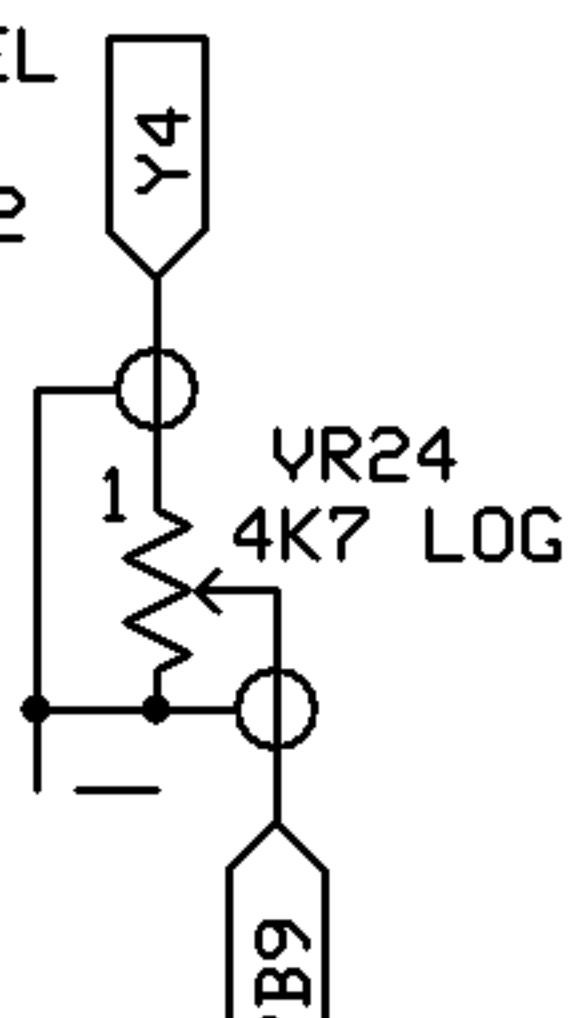
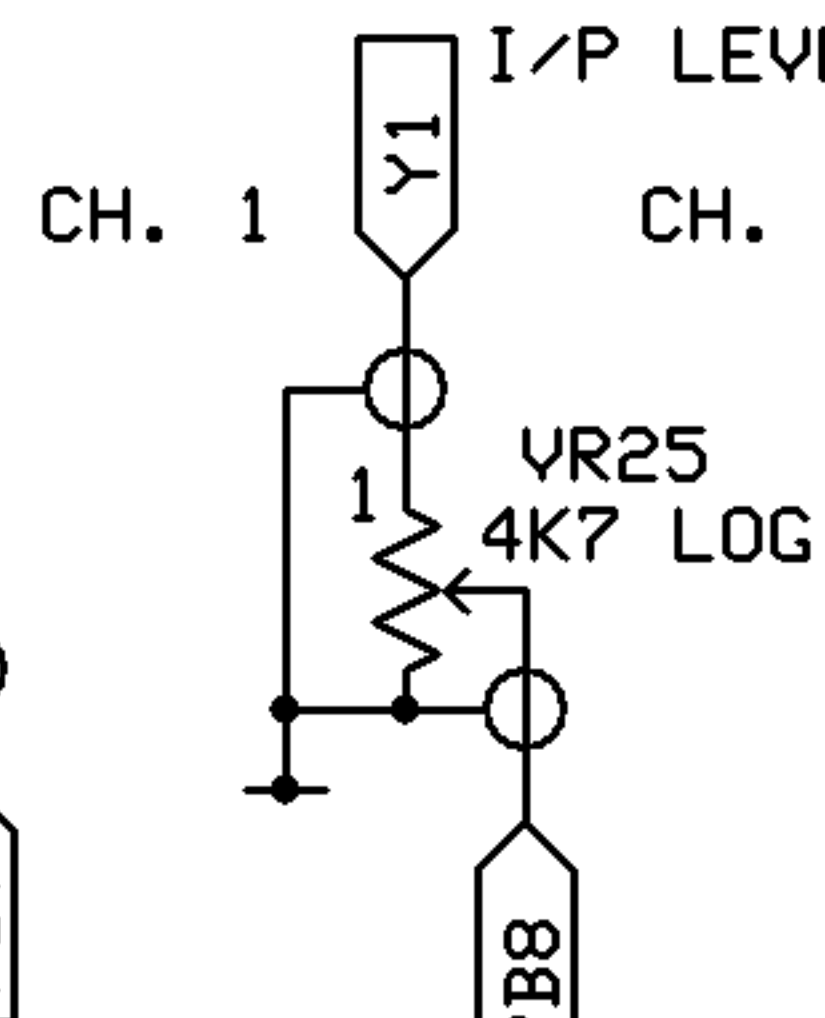
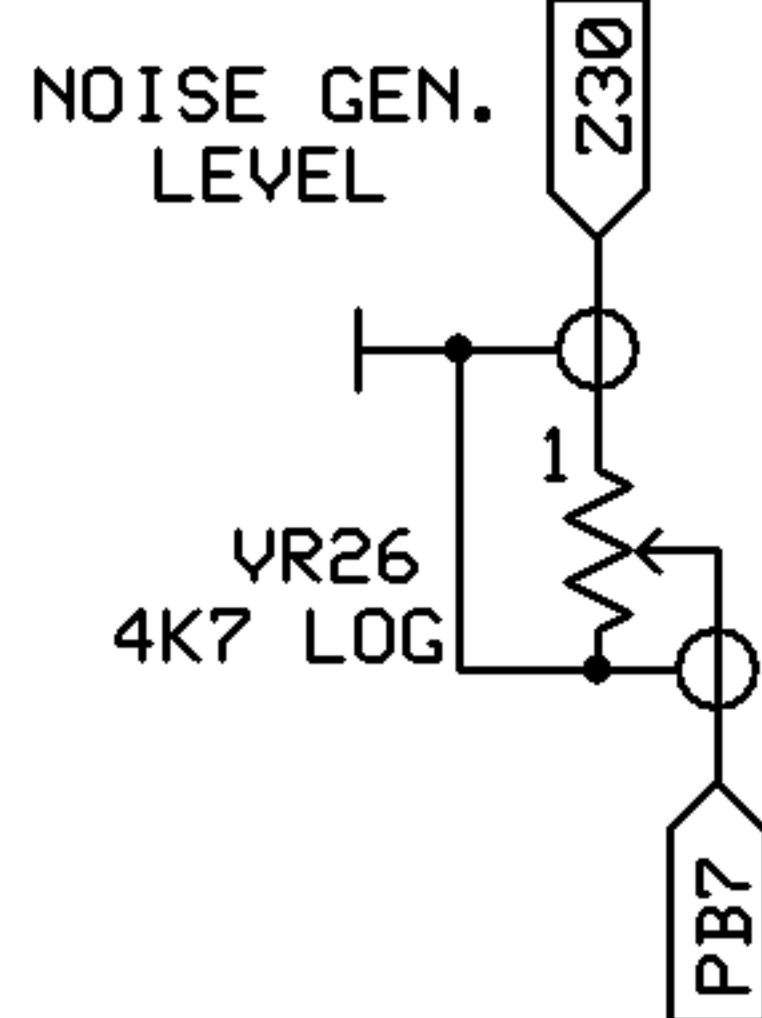
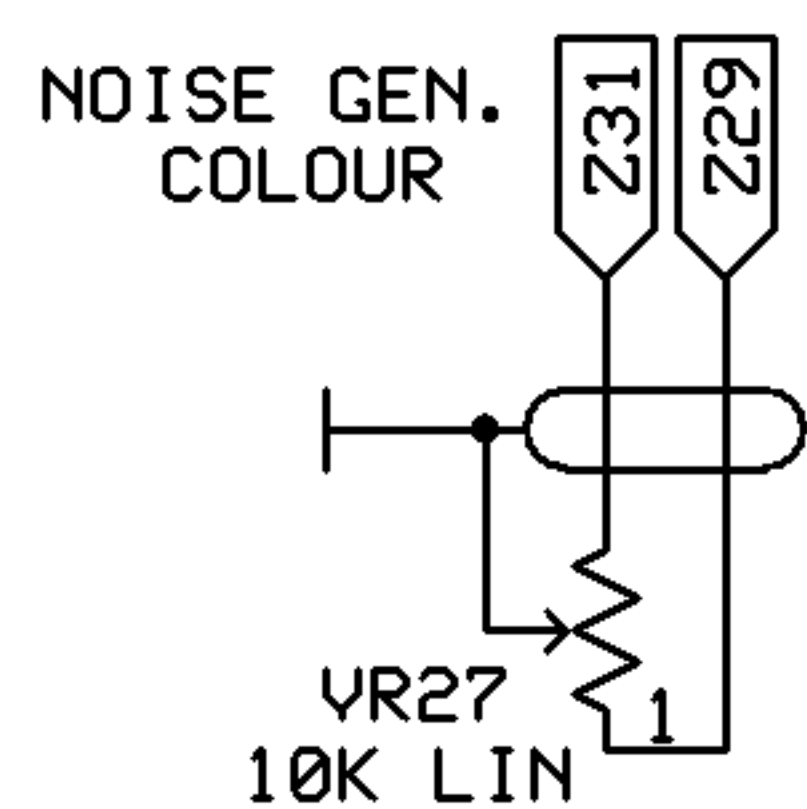
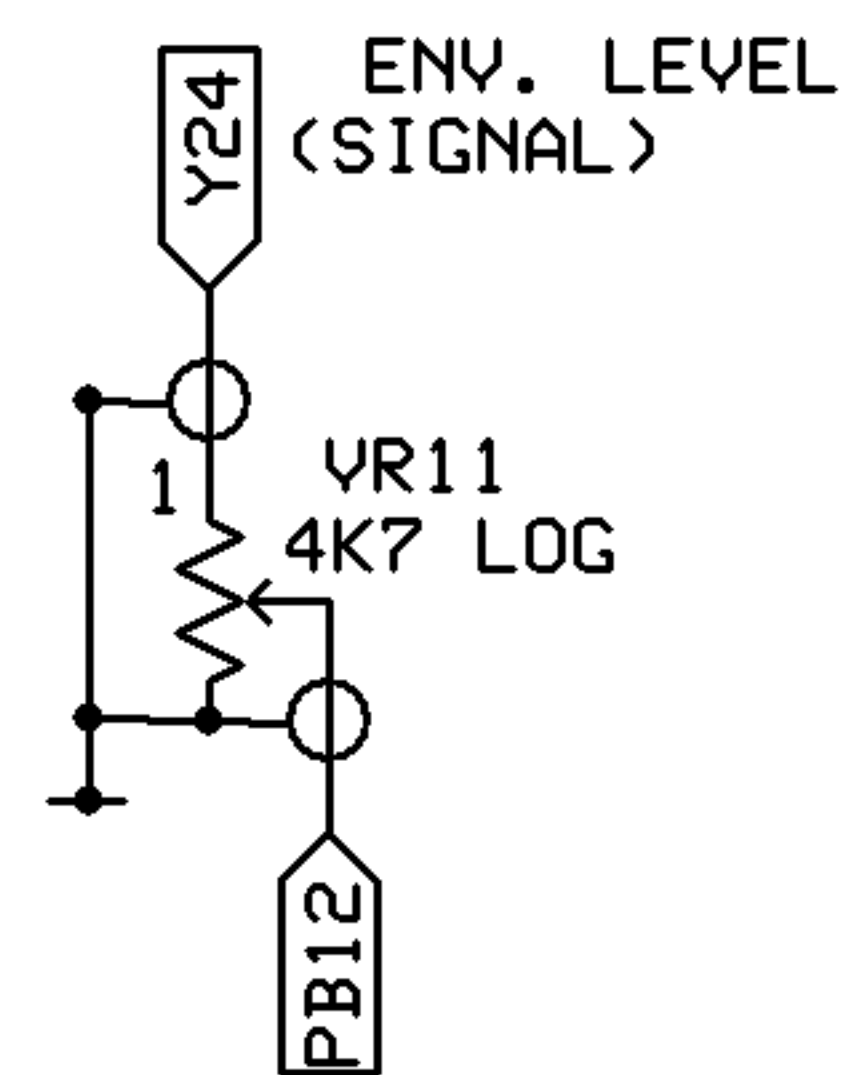
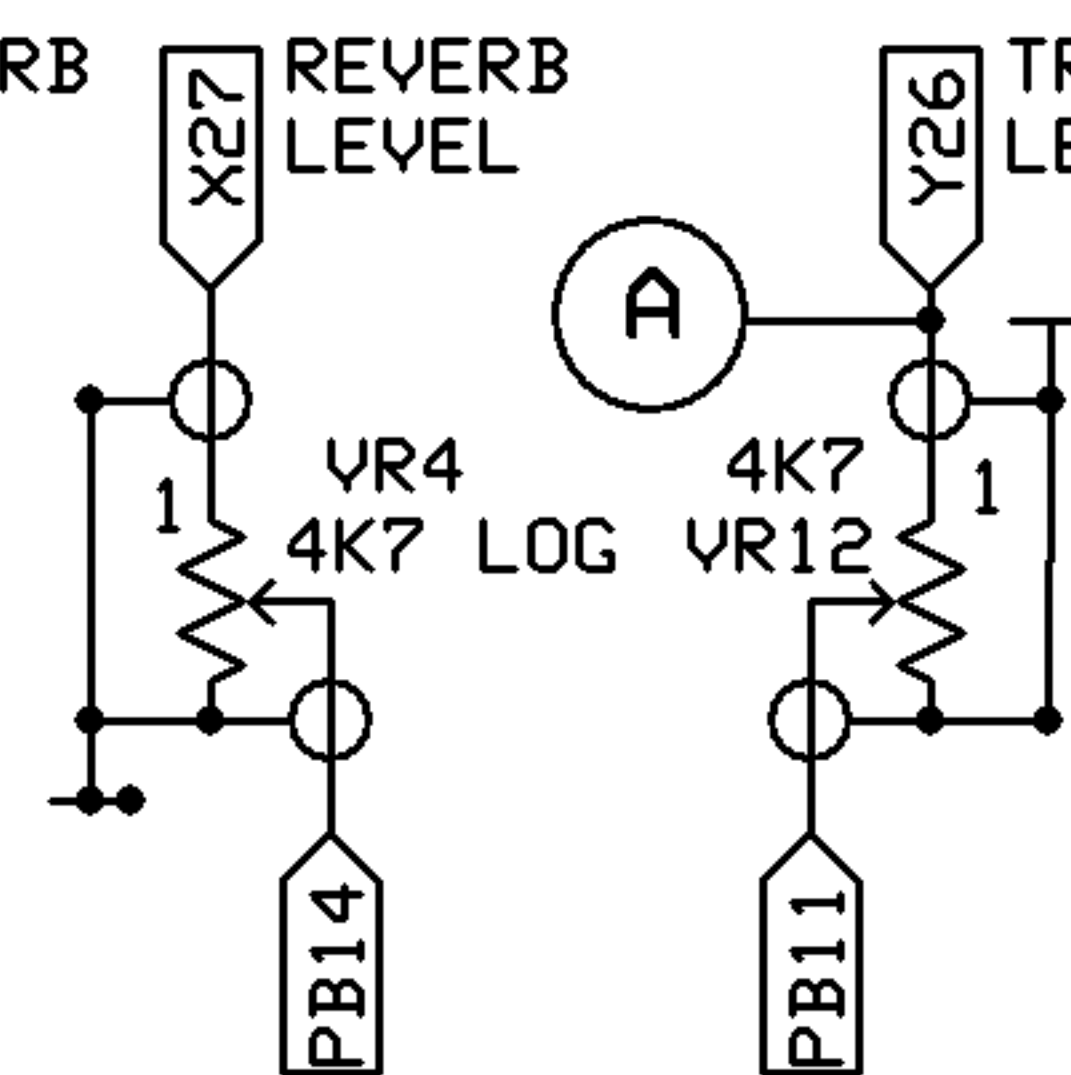
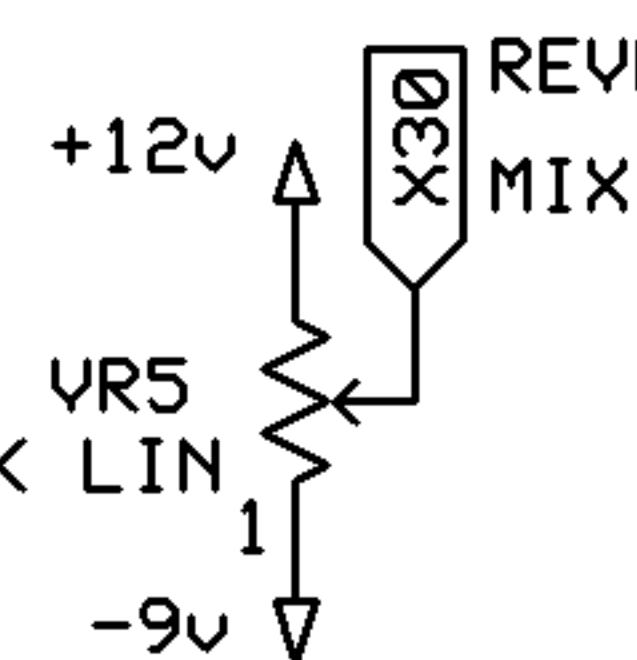
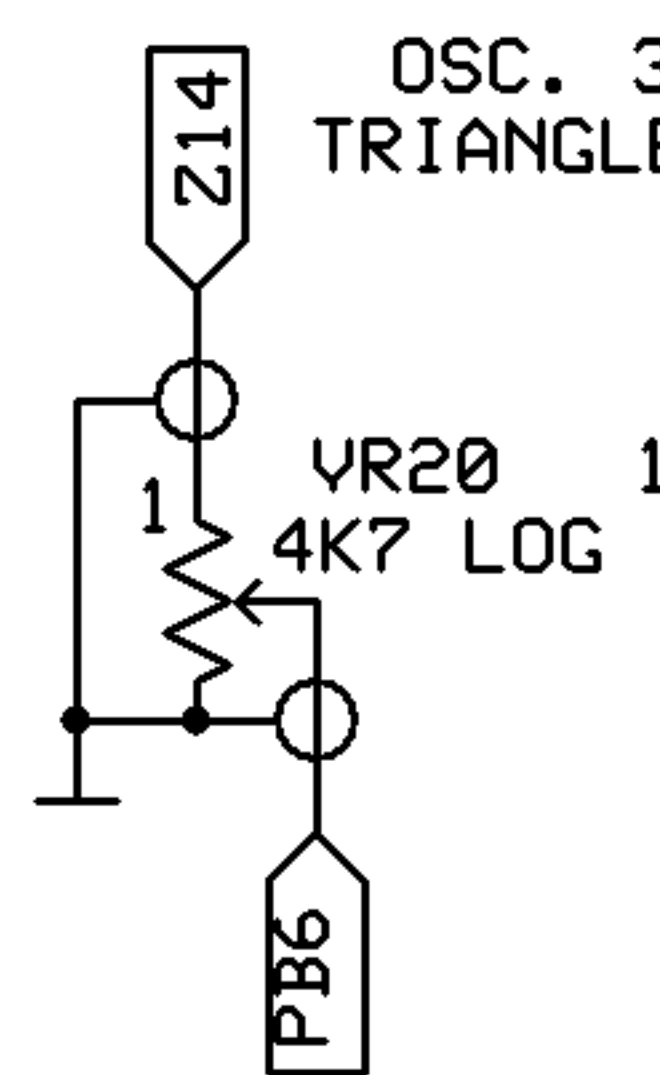
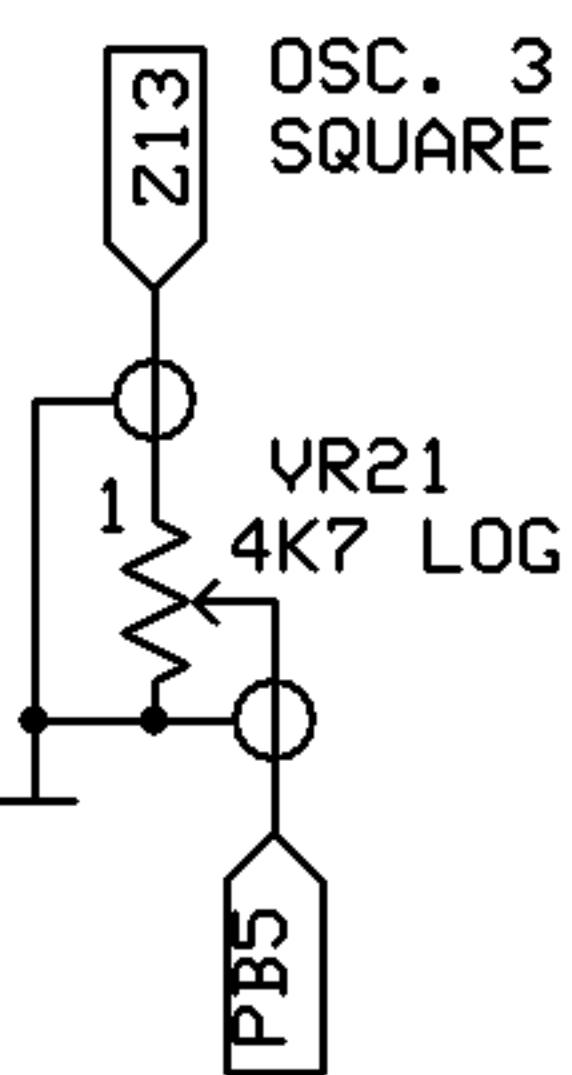
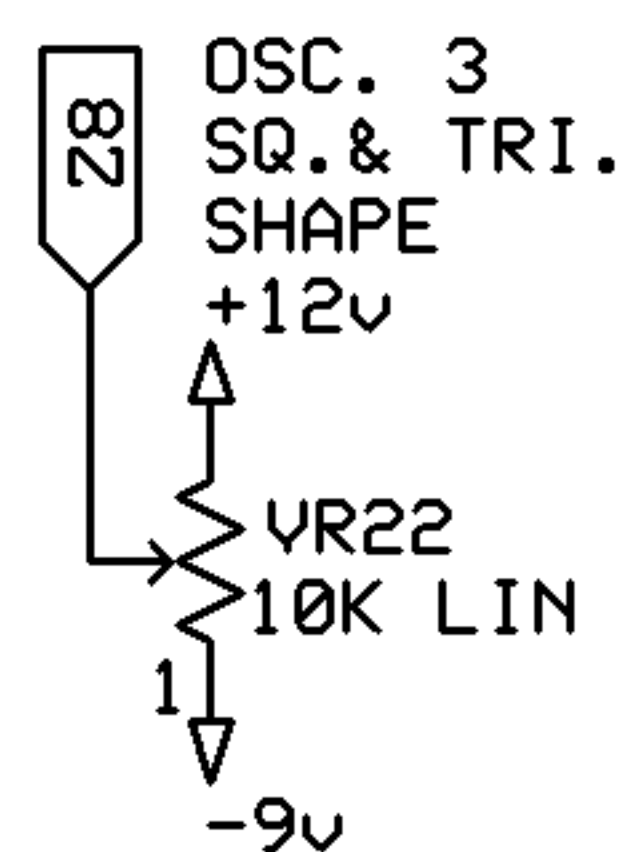
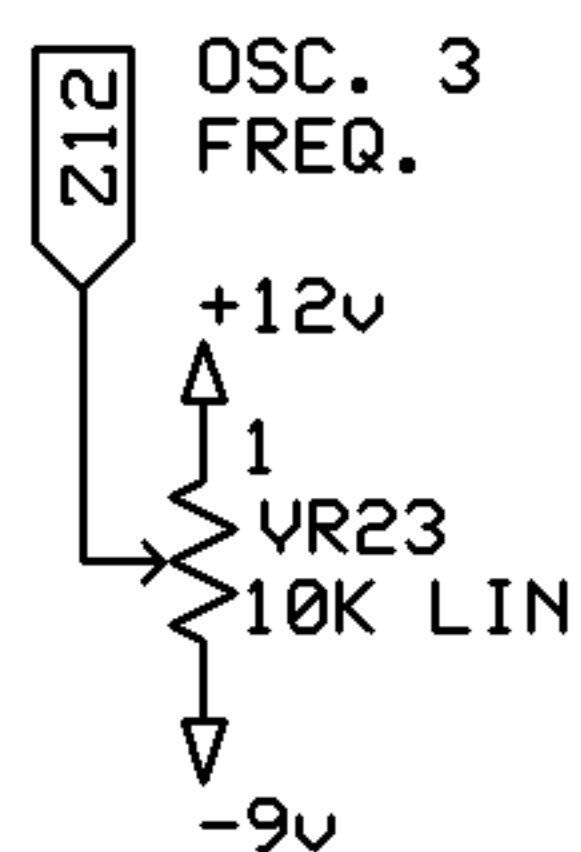
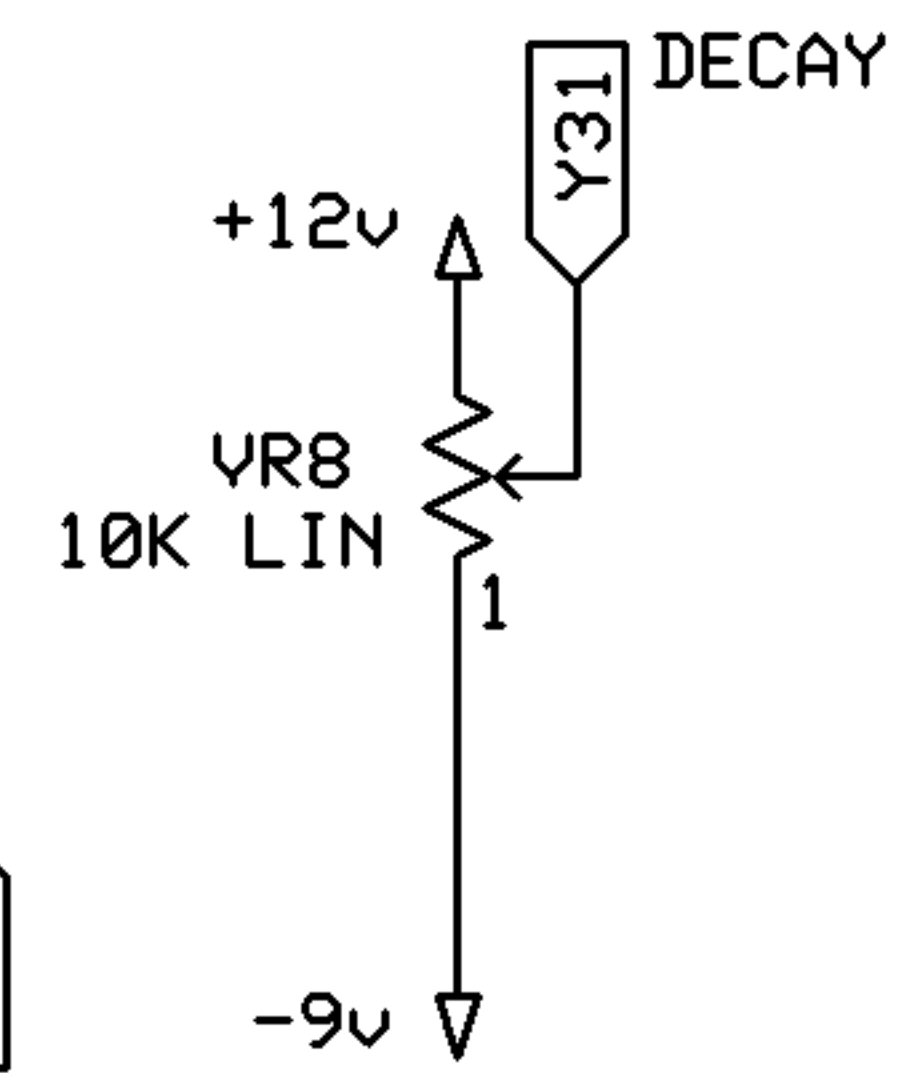
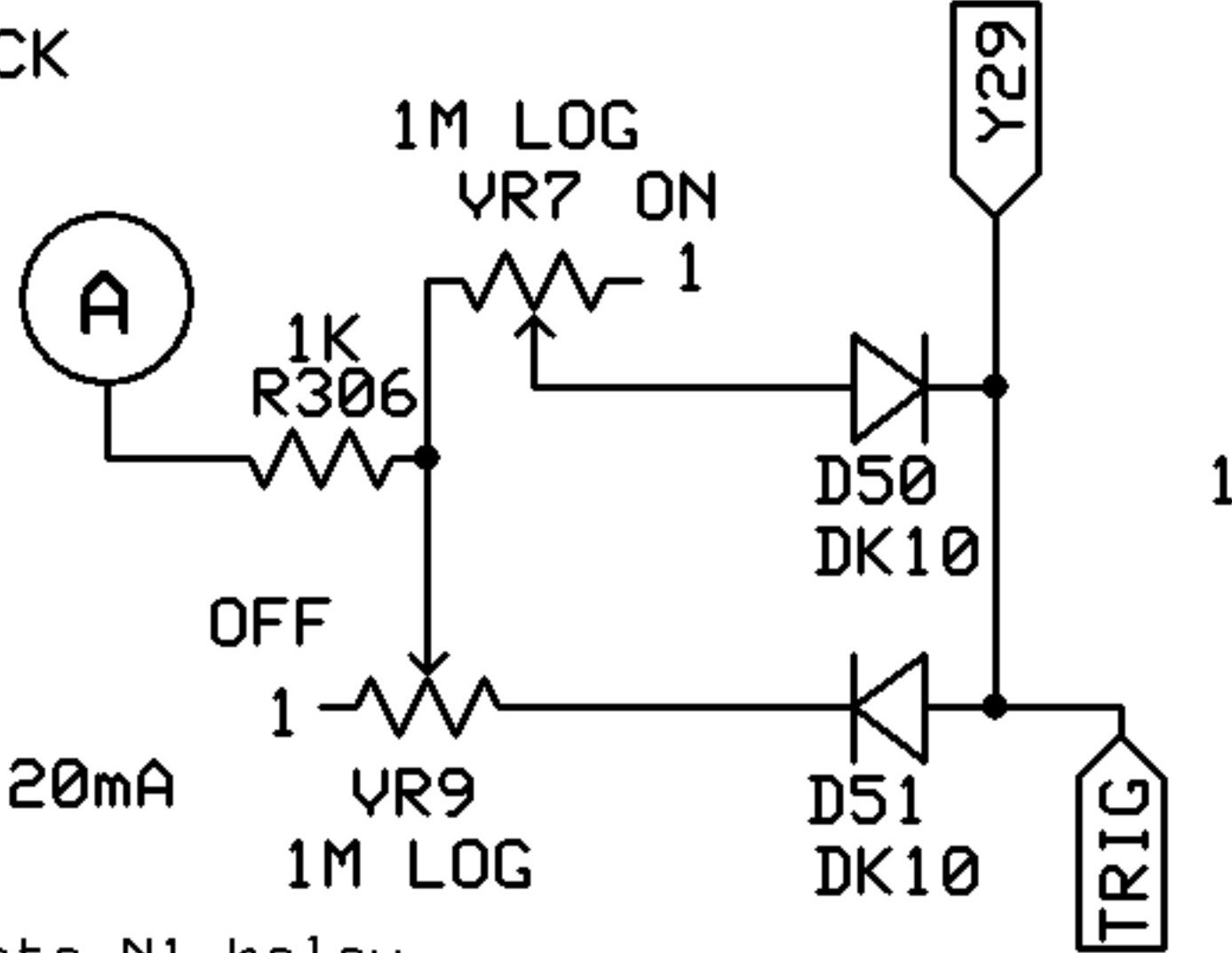
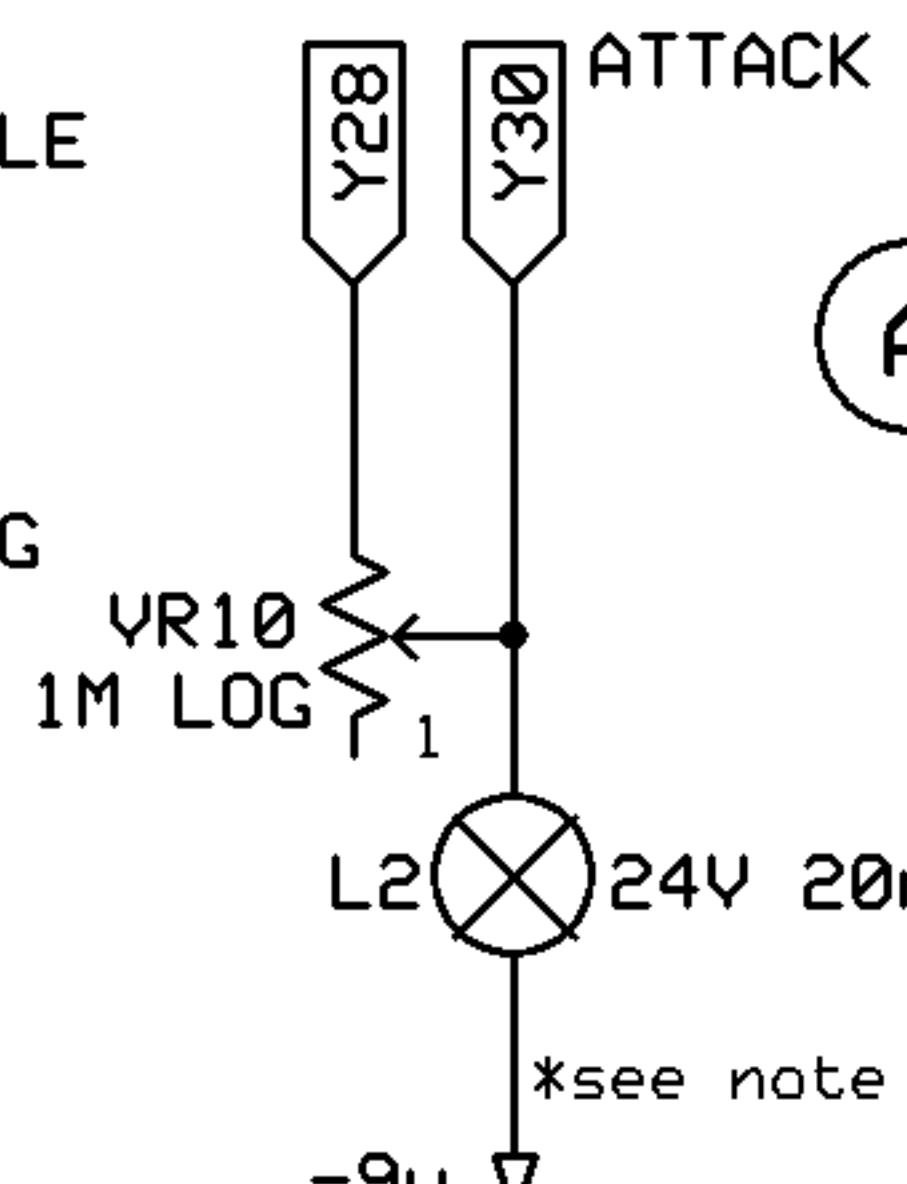
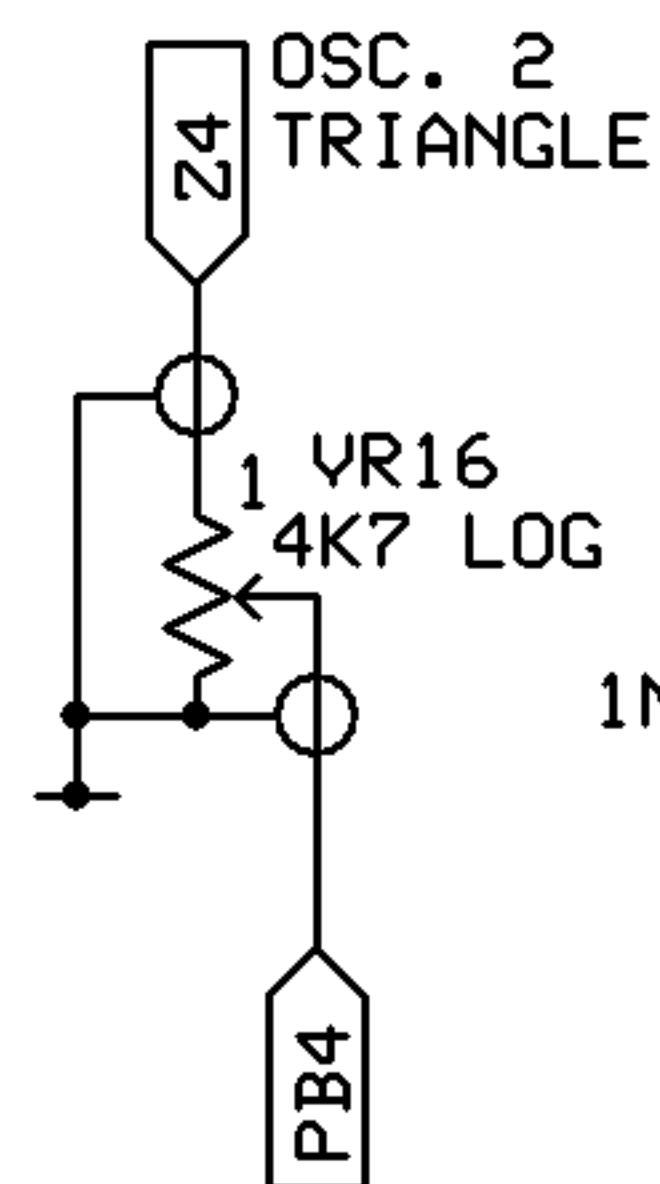
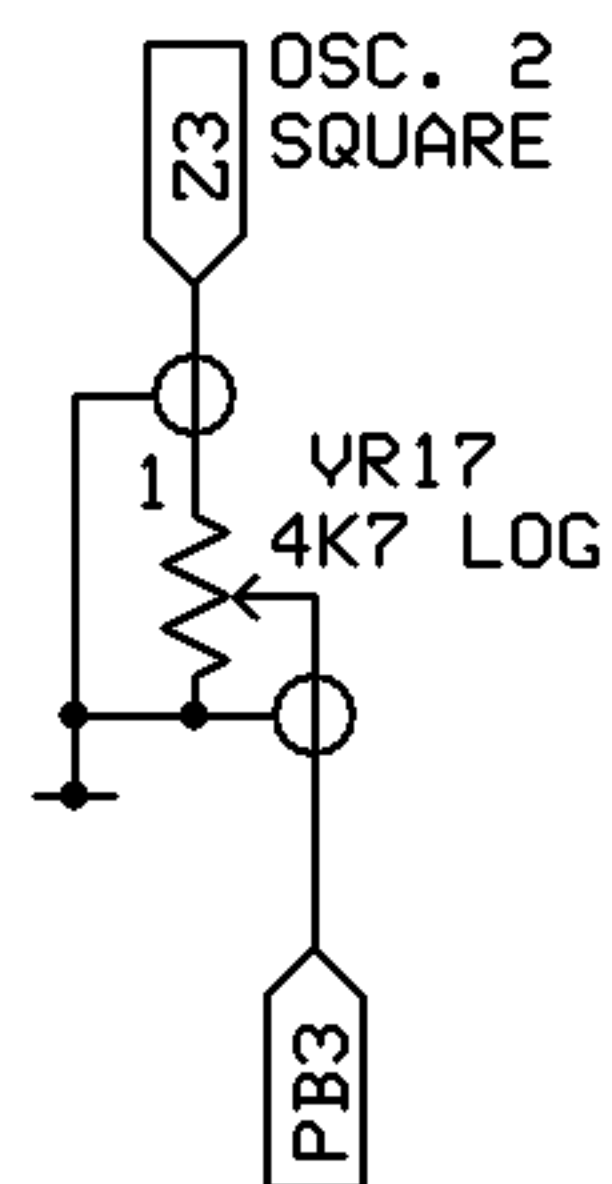
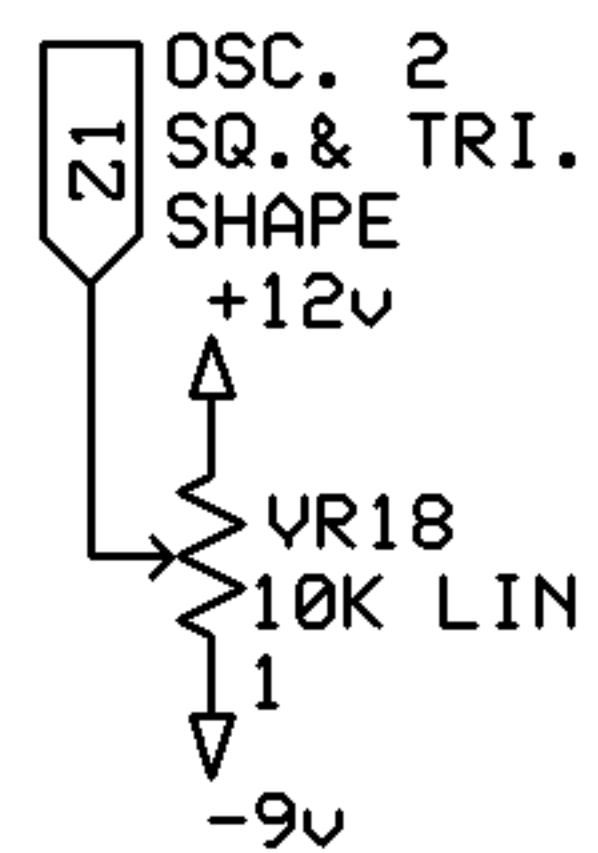
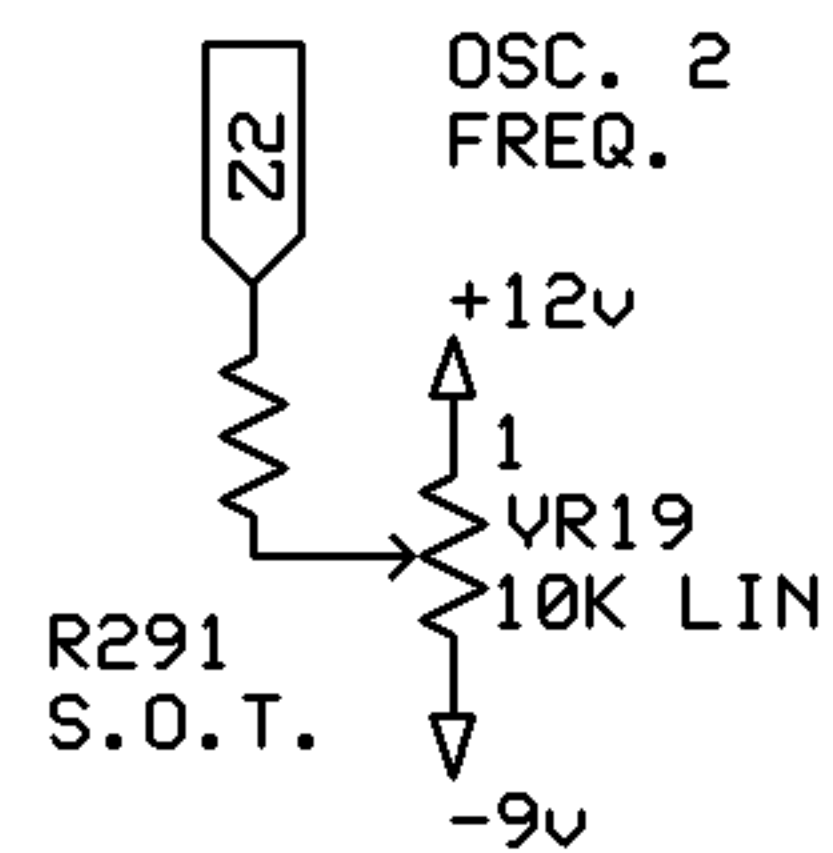
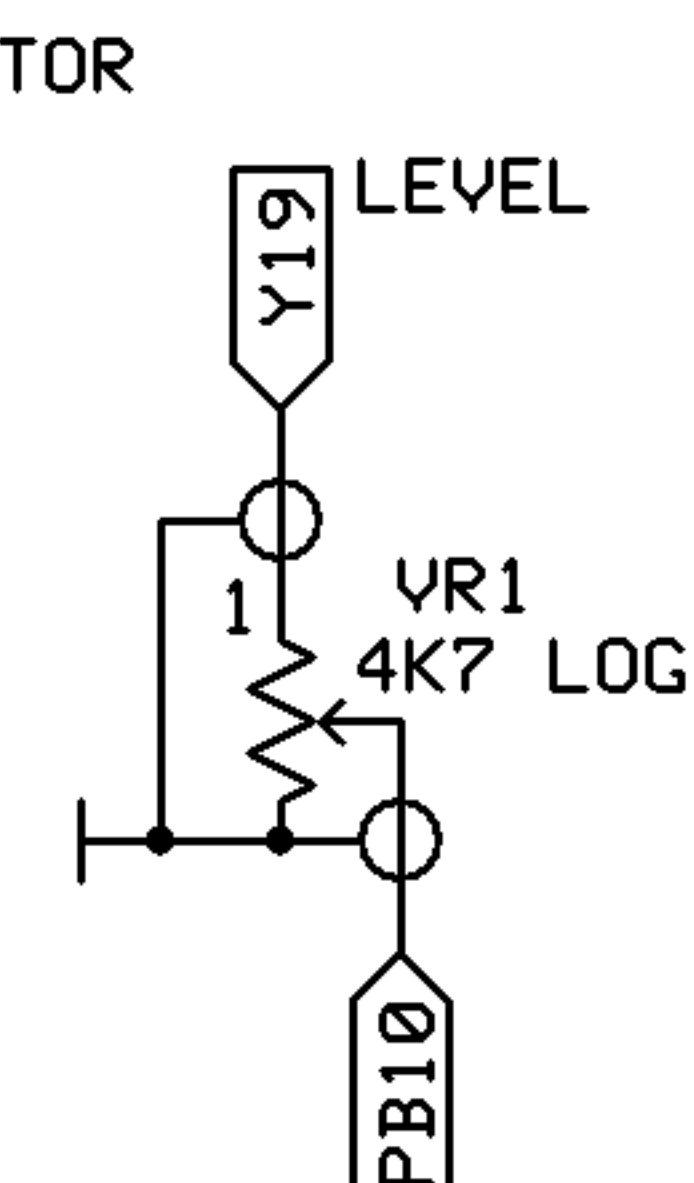
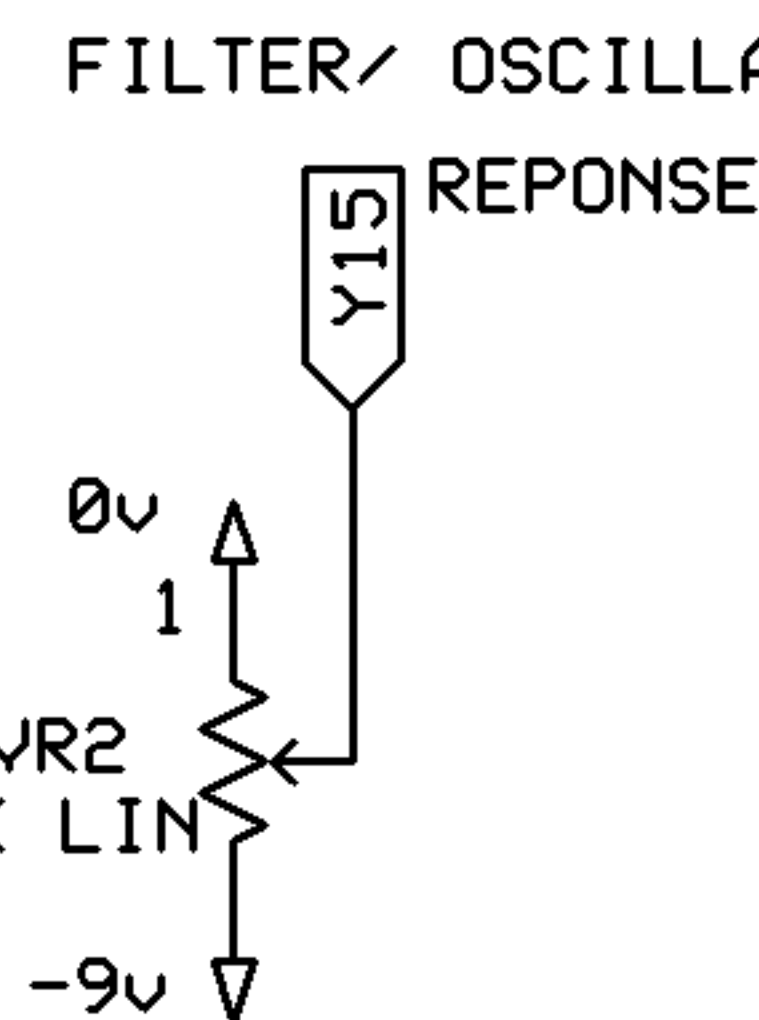
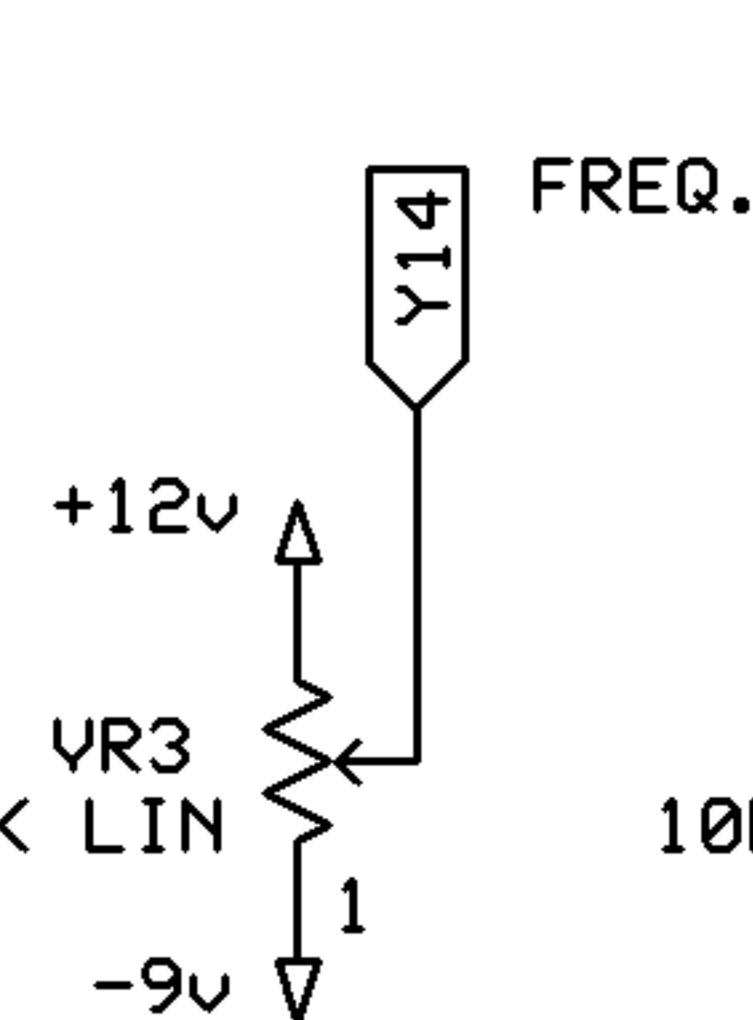
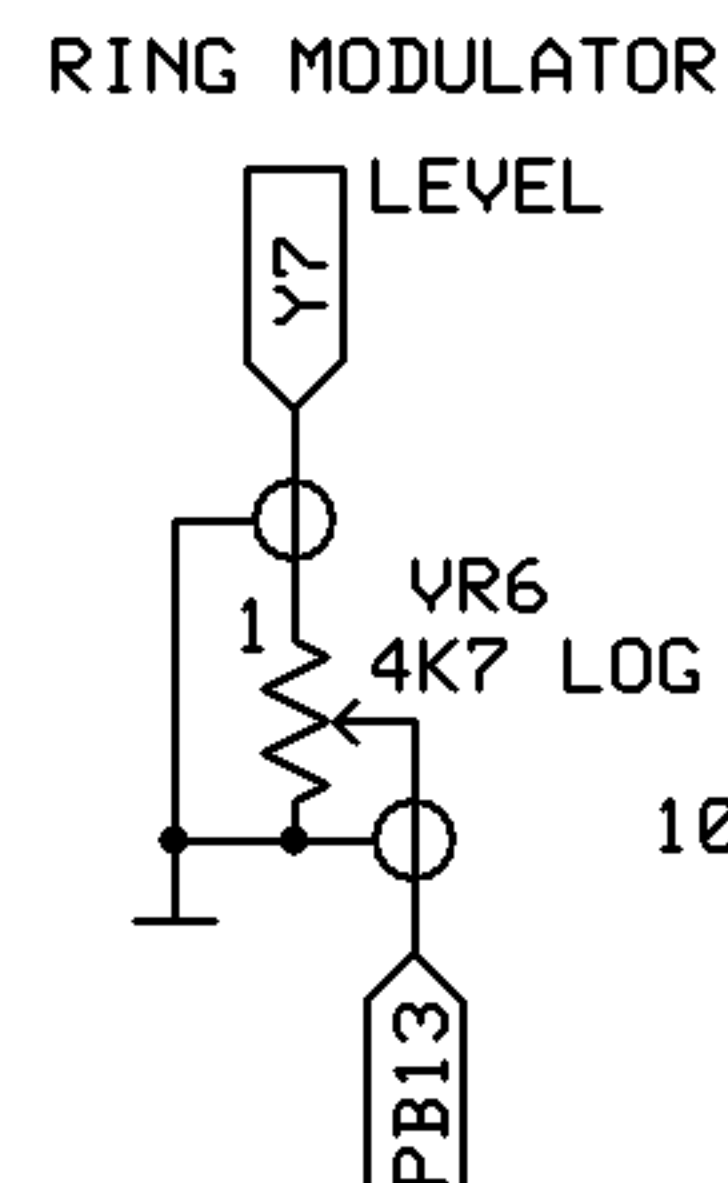
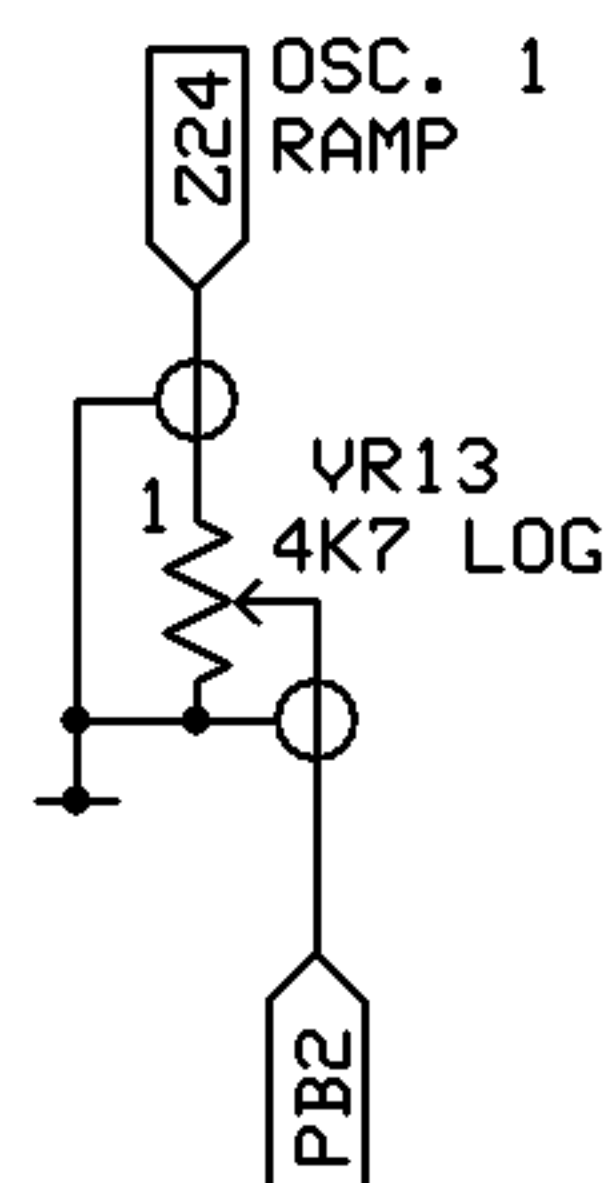
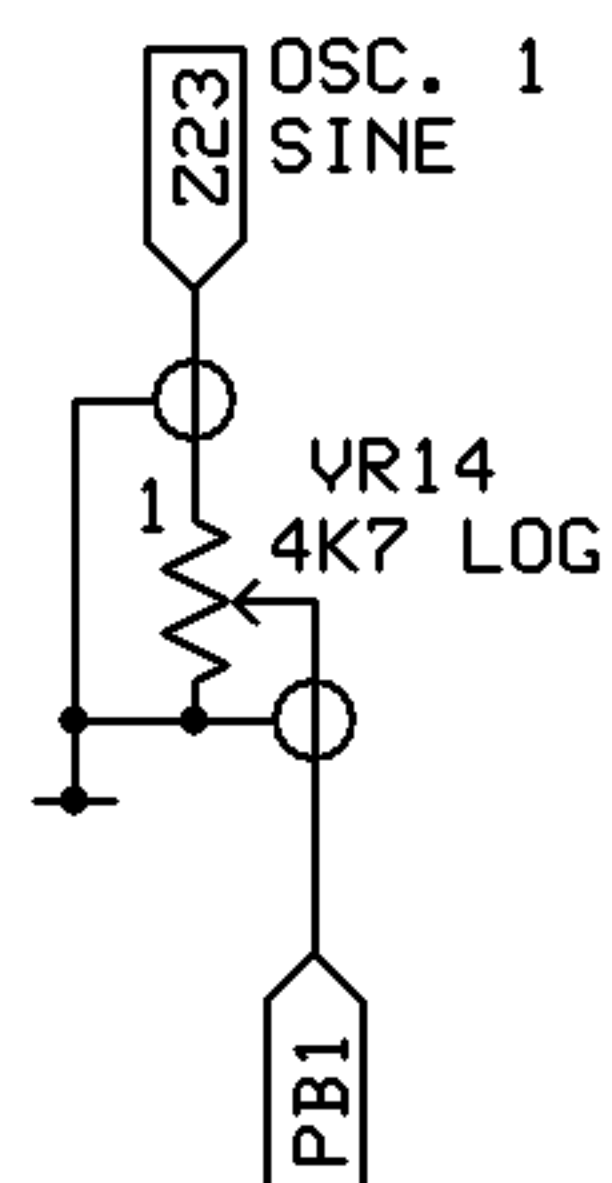
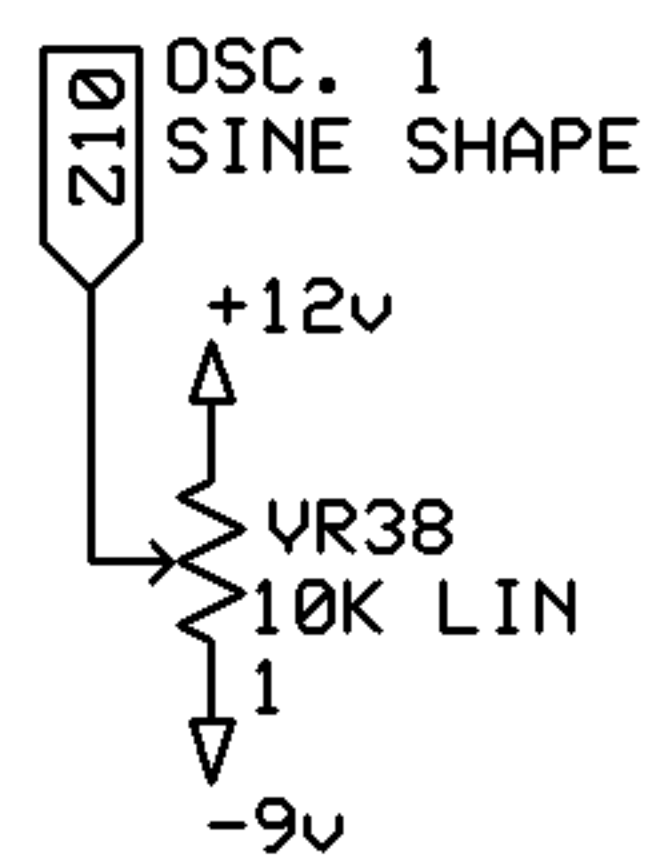
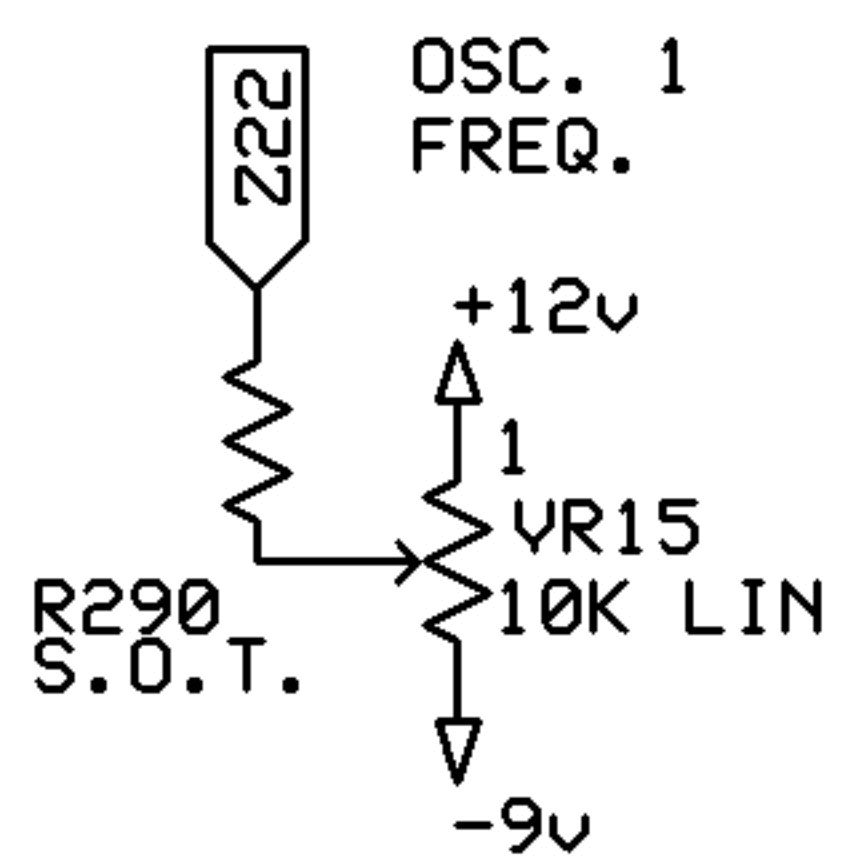


- 1 = Input Ch. 1
- 2 = -9V d.c. to C7
- 3 = 0V d.c.
- 4 = +12V d.c. to C9
- 5 = Keyboard Trigger
- 6 = Input Ch. 2
- 7 = Meter
- 8 = Sequencer ON/OFF

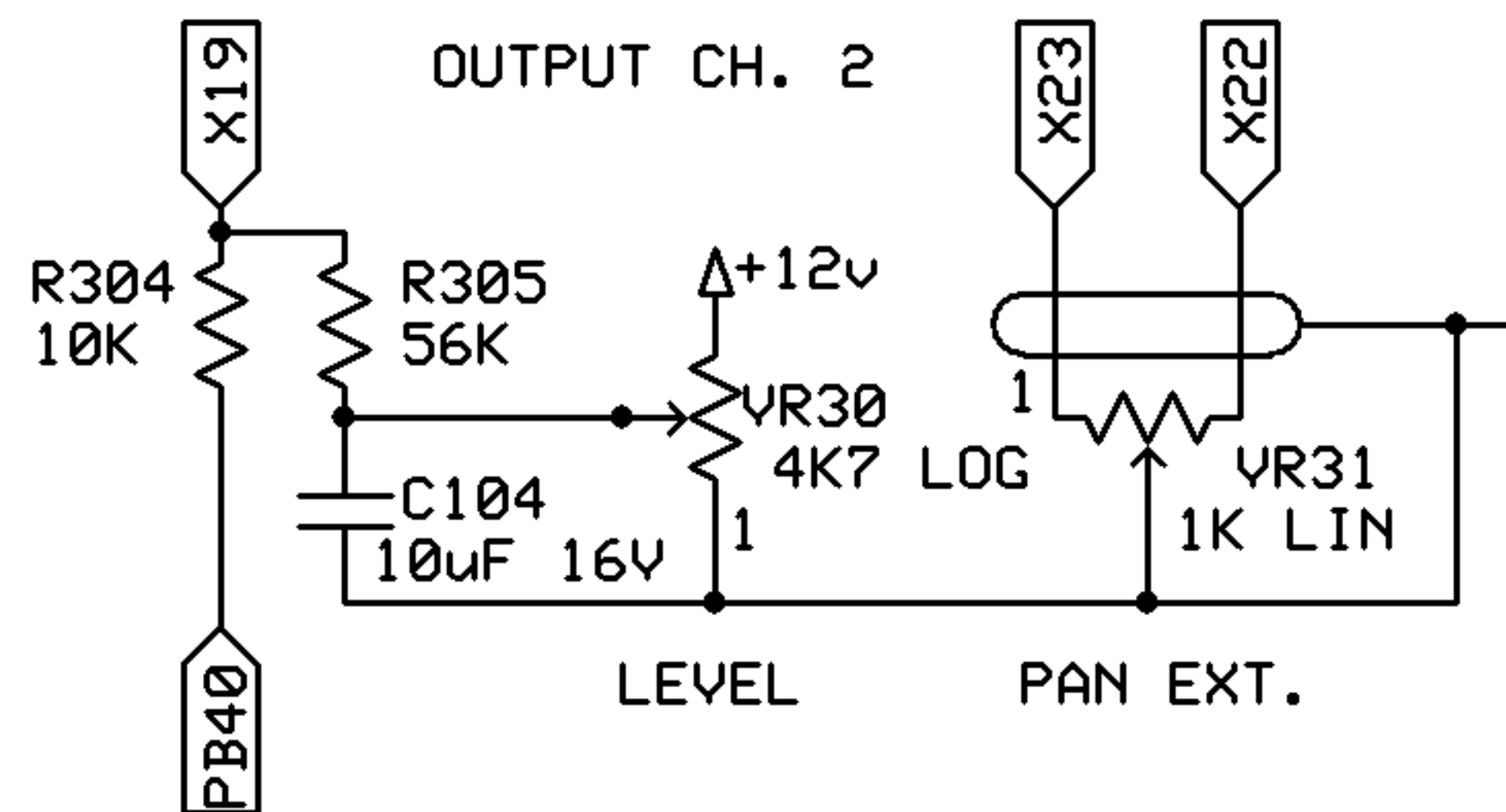
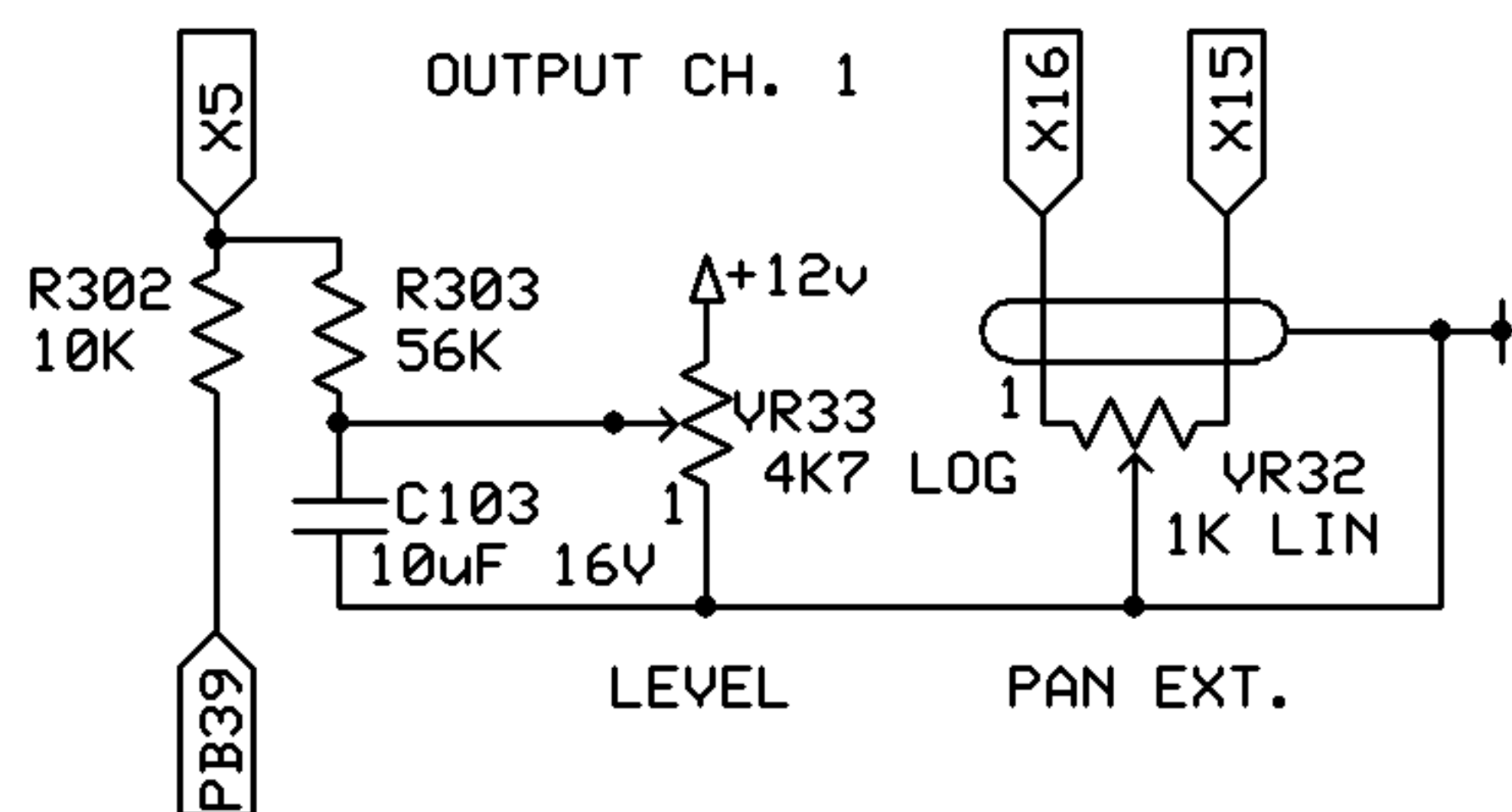
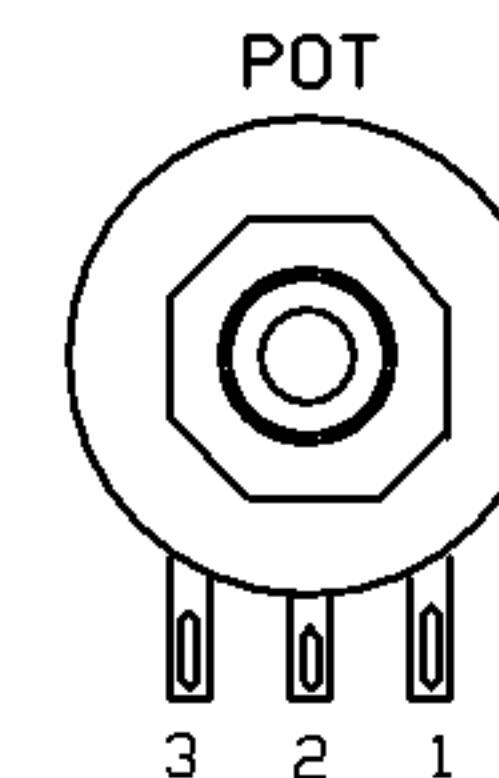


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Internal wiring connections



Viewed from Front



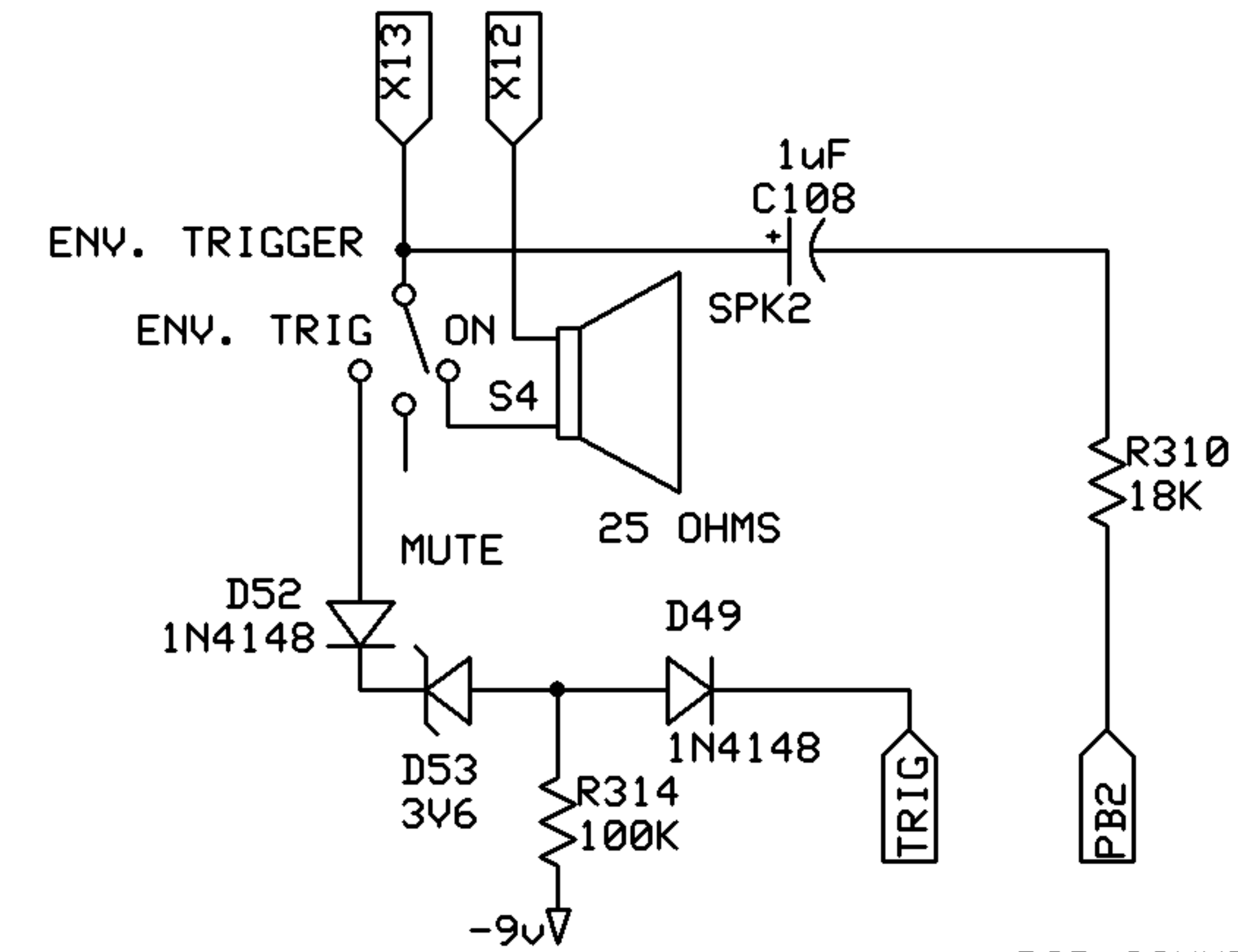
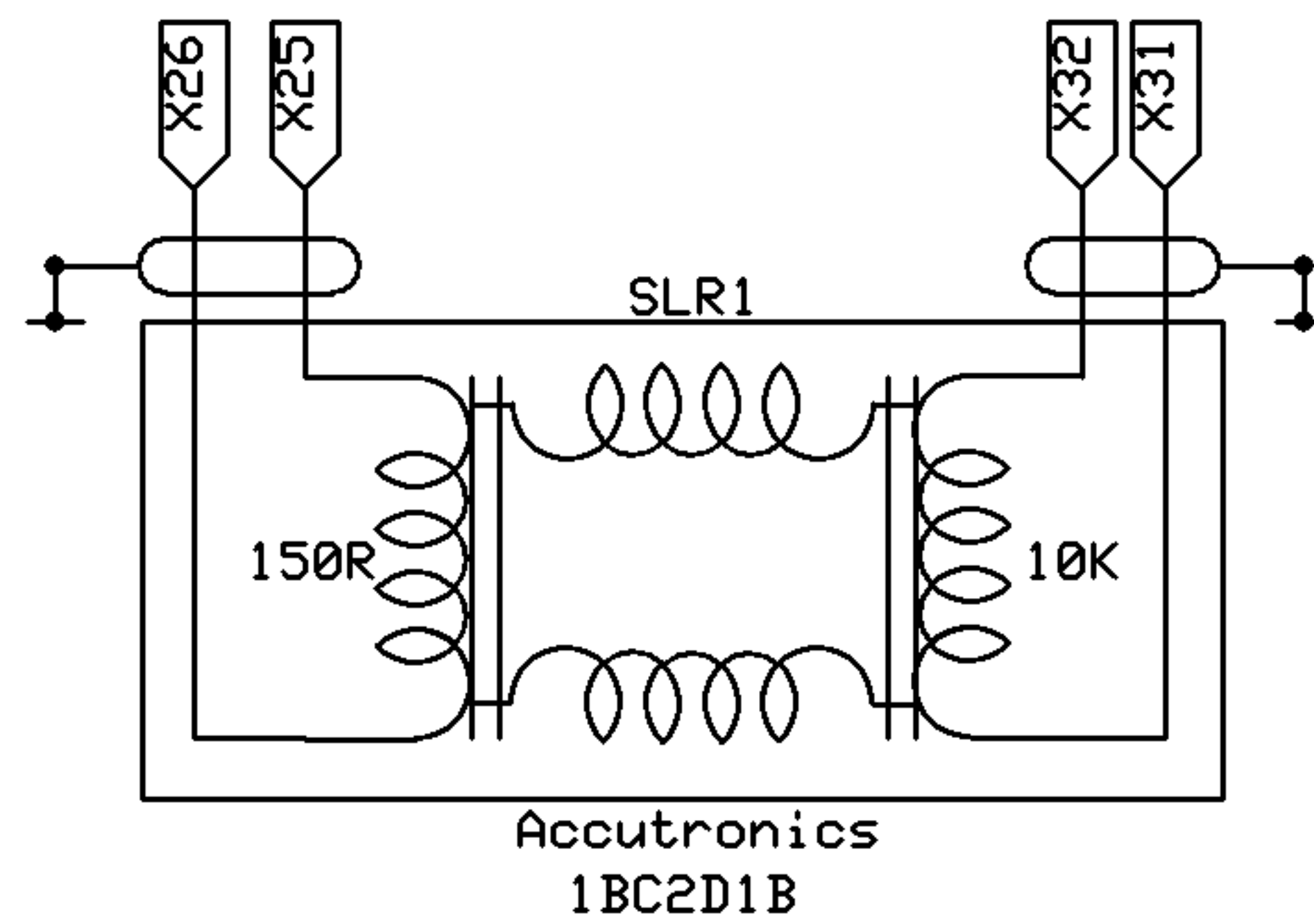
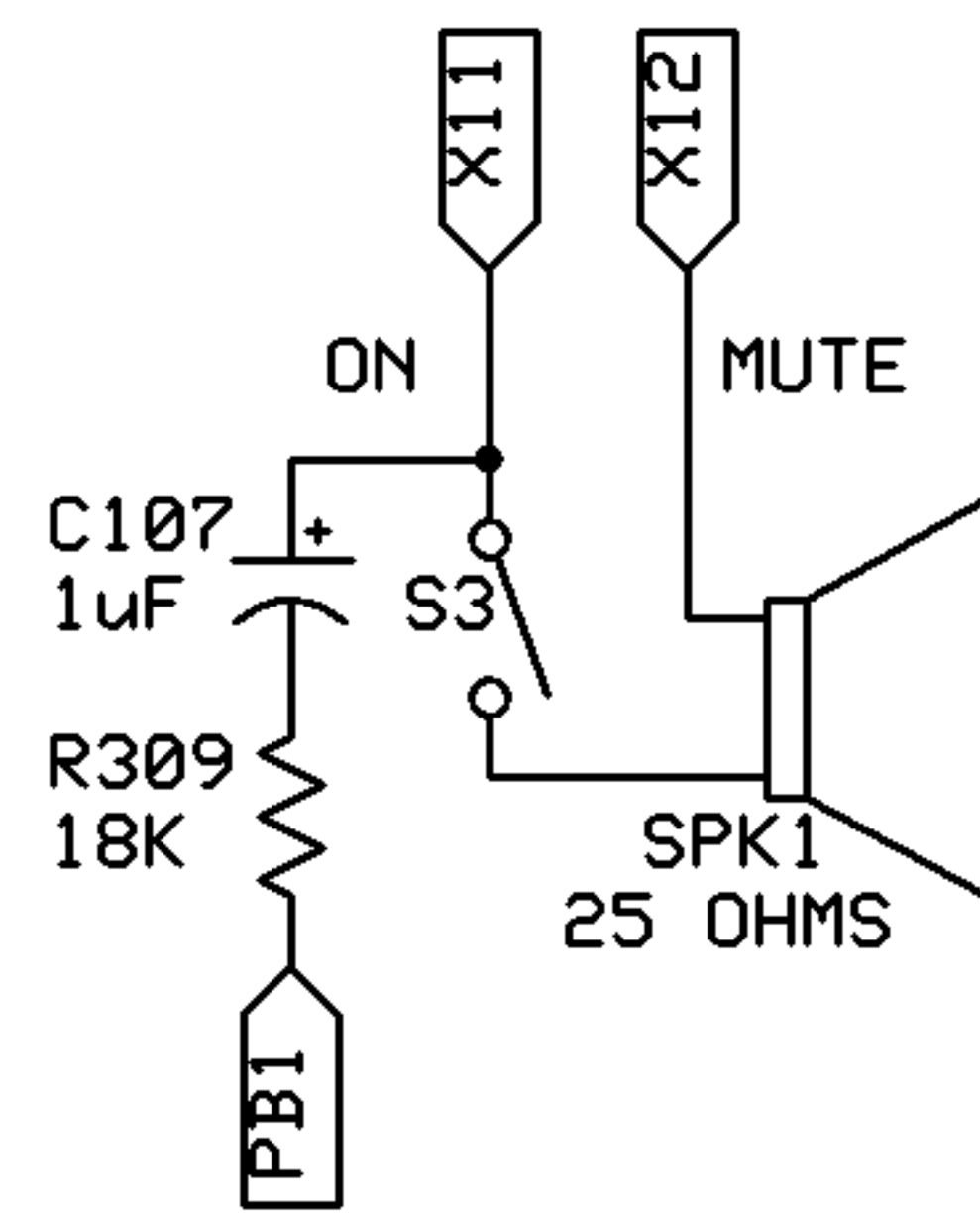
*note L2 can be replaced with an low current LED and a 6V8 Zener and a 200R resistor in series

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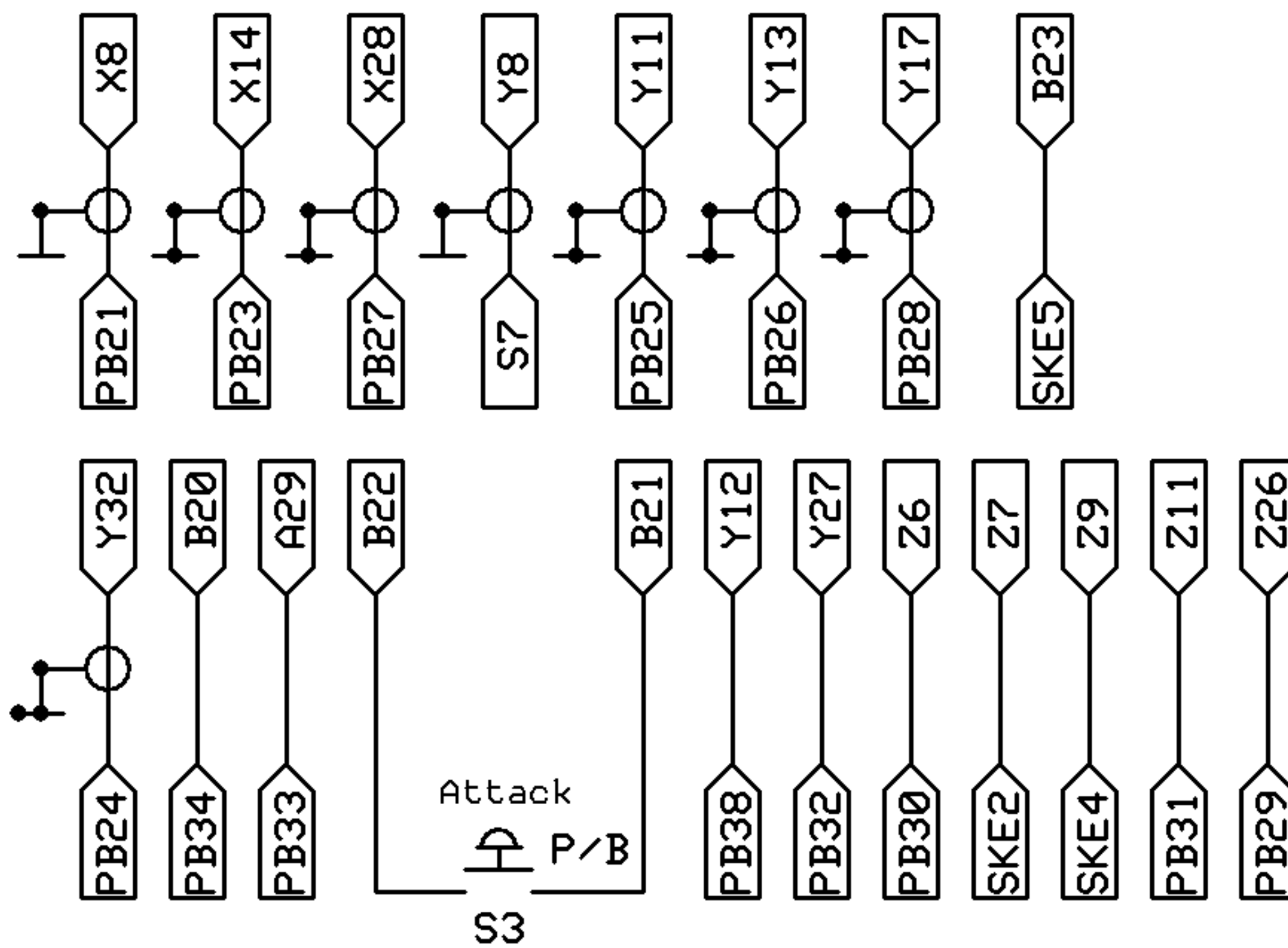
Internal wiring connections

Type 1, B = 150 ohm, C = 10K ohm, 2 = Medium Reverb Time (1.75 to 3 secs), D = Input and Output insulated from chassis, 1 = No locking mechanism, B = Horz. lower open

CH. 1 SPEAKER

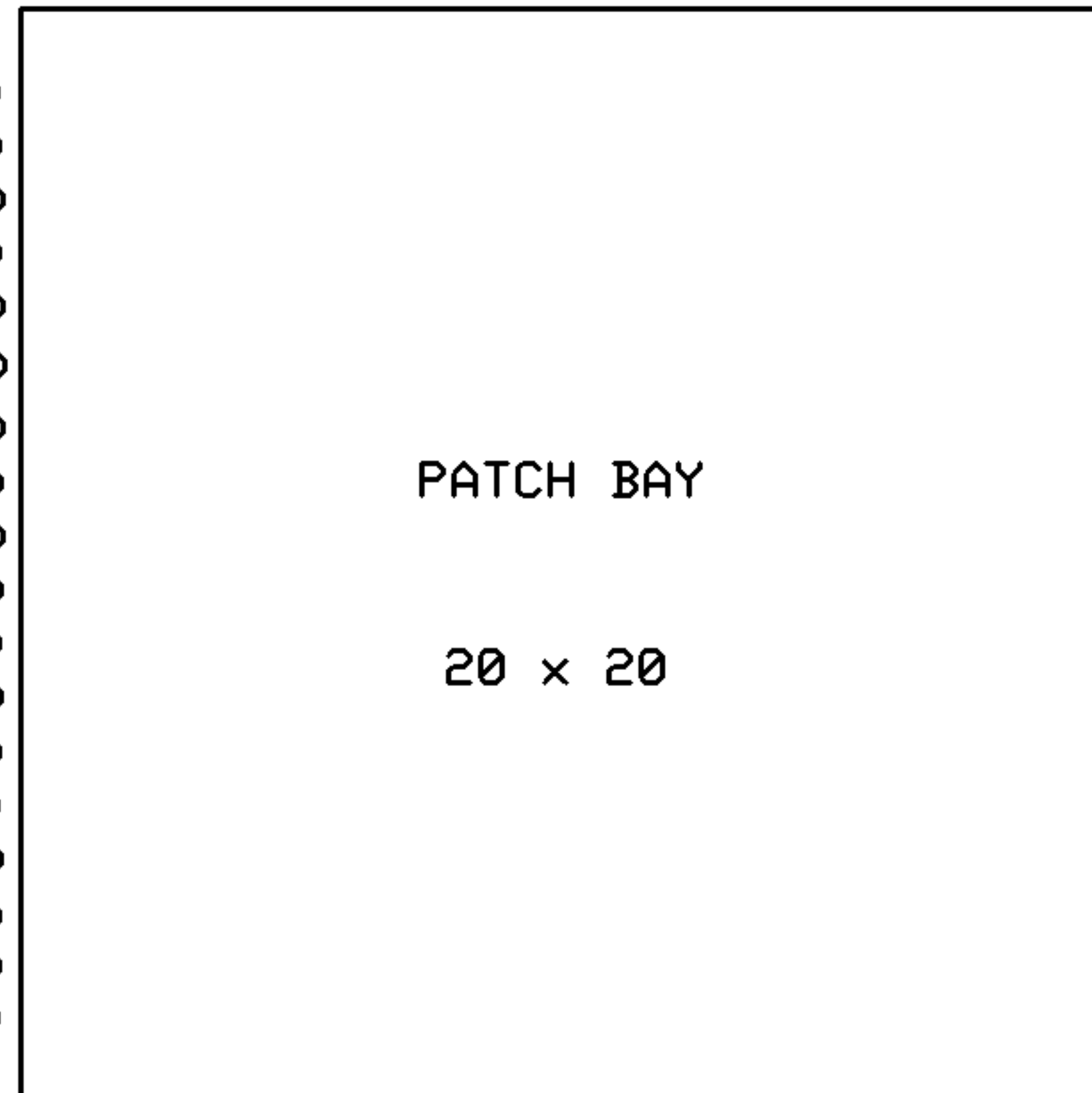


PCB CONNECTOR PINOUTS
(BOTTOM VIEW)



- Output Ch. 1 (PB21)
- Scope/Meter (PB22)
- Output Ch. 2 (PB23)
- Envelope Shaper In (PB24)
- Ring mod. A (PB25)
- Ring mod. B (PB26)
- Reverb. (PB27)
- Filter (PB28)
- Osc. 1 Freq. (PB29)
- Osc. 2 Freq. (PB30)
- Osc. 3 Freq. (PB31)
- Osc. 1 Shape (PB32)
- Osc. 2 shape (PB33)
- Osc. 3 shape (PB34)
- Envelope Decay (PB35)
- Reverb. mix (PB36)
- Filter freq. (PB37)
- Filter resp. (PB38)
- Output Ch. 1 level (PB39)
- Output Ch. 2 level (PB40)

- OSC. 1 Sine (PB1)
- OSC. 1 Sawtooth (PB2)
- OSC. 2 Square (PB3)
- OSC. 2 Ramp (PB4)
- Osc 3. Square (PB5)
- Osc. 3 Ramp (PB6)
- Noise (PB7)
- 1 (PB8)
- Input₂ (PB9)
- Filter (PB10)
- Trapezoid (PB11)
- Env. signal (PB12)
- Ring mod. (PB13)
- Reverb. (PB14)
- Sig. Invert (PB15)
- Sample & Hold (PB16)
- Spare (PB17)
- Spare (PB18)
- Joystick (PB19)
- (PB20)



X1	Y1	Z1
X2	Y2	Z2
X3	Y3	Z3
X4	Y4	Z4
X5	Y5	Z5
X6	Y6	Z6
X7	Y7	Z7
X8	Y8	Z8
X9	Y9	Z9
X10	Y10	Z10
X11	Y11	Z11
X12	Y12	Z12
X13	Y13	Z13
X14	Y14	Z14
X15	Y15	Z15
X16	Y16	Z16
X17	Y17	Z17
X18	Y18	Z18
X19	Y19	Z19
X20	Y20	Z20
X21	Y21	Z21
X22	Y22	Z22
X23	Y23	Z23
X24	Y24	Z24
X25	Y25	Z25
X26	Y26	Z26
X27	Y27	Z27
X28	Y28	Z28
X29	Y29	Z29
X30	Y30	Z30
X31	Y31	Z31
X32	Y32	Z32

- NOTES:
3. X24, Y25, Z5, Z10, Z15, Z25 = 0V
 2. X4, Y18, Z19, Z20, Z21 = +12V
 1. X3, Y16, Z16, Z17, Z18 = -9V

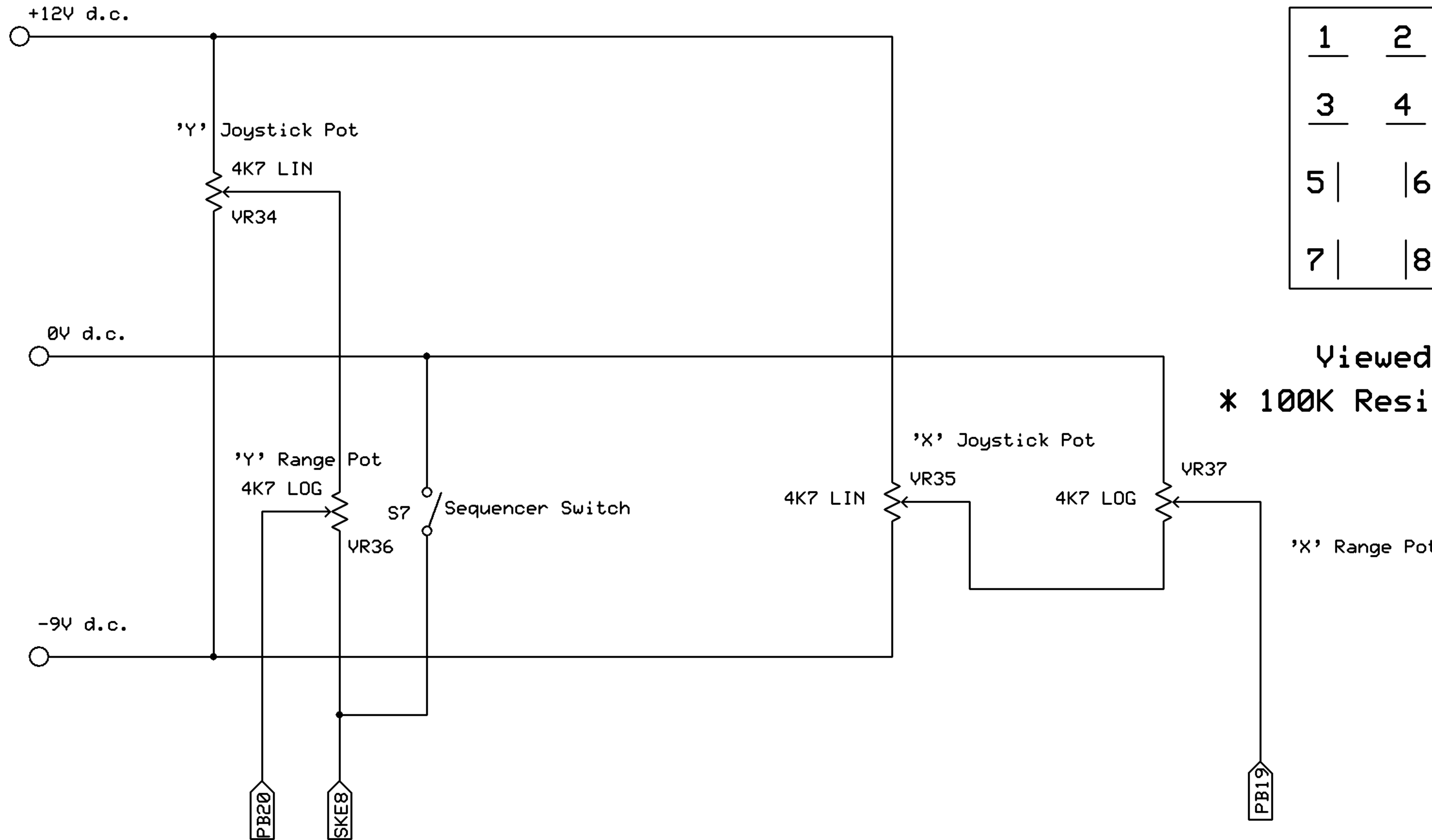
Sage Music Electronics

Internal wiring connections

Derek G Revell	Rev 1.2 25/11/2013	Page 3 OF 5
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Keyboard Connector

Joystick and sequencer switch wiring



Top
Keyboard
Cinch Jones
Female

<u>1</u>	<u>2</u>
<u>3</u>	<u>4</u>
5	6
7	8

- *1 = Input Ch. 1
- 2 = -9V d.c. to C7
- 3 = 0V d.c.
- 4 = +12V d.c. to C9
- 5 = Keyboard Trigger
- *6 = Input Ch. 2
- 7 = Meter
- 8 = Sequencer ON/OFF

Viewed from solder side
* 100K Resistor in Series Ch.I and Ch.II

Sage Music Electronics

Joystick & Sequencer wiring

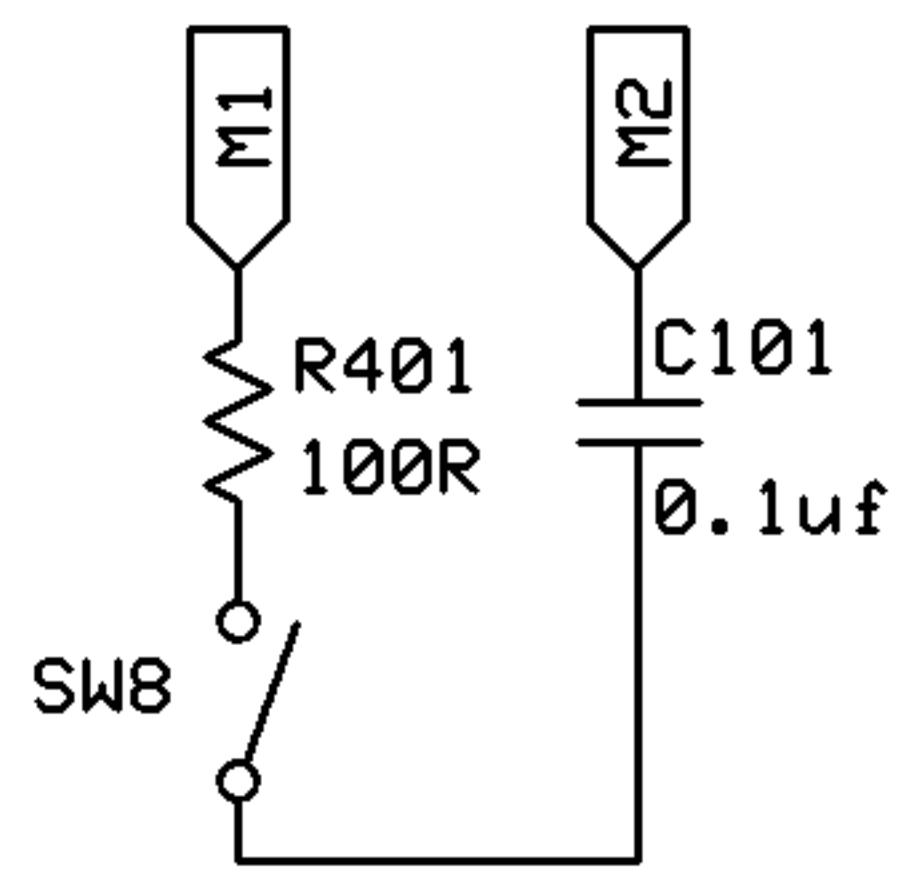
Derek G Revell

Rev 1.1

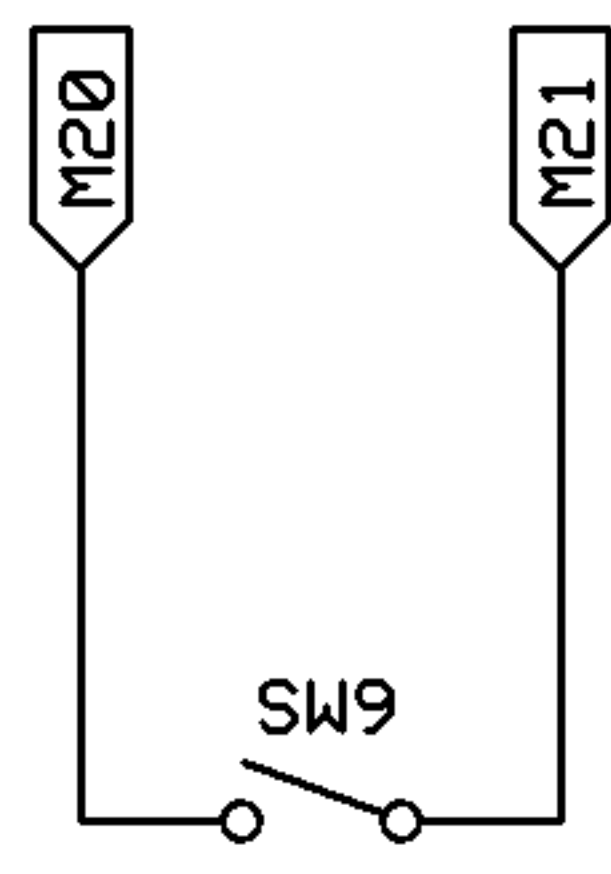
25/11/2013

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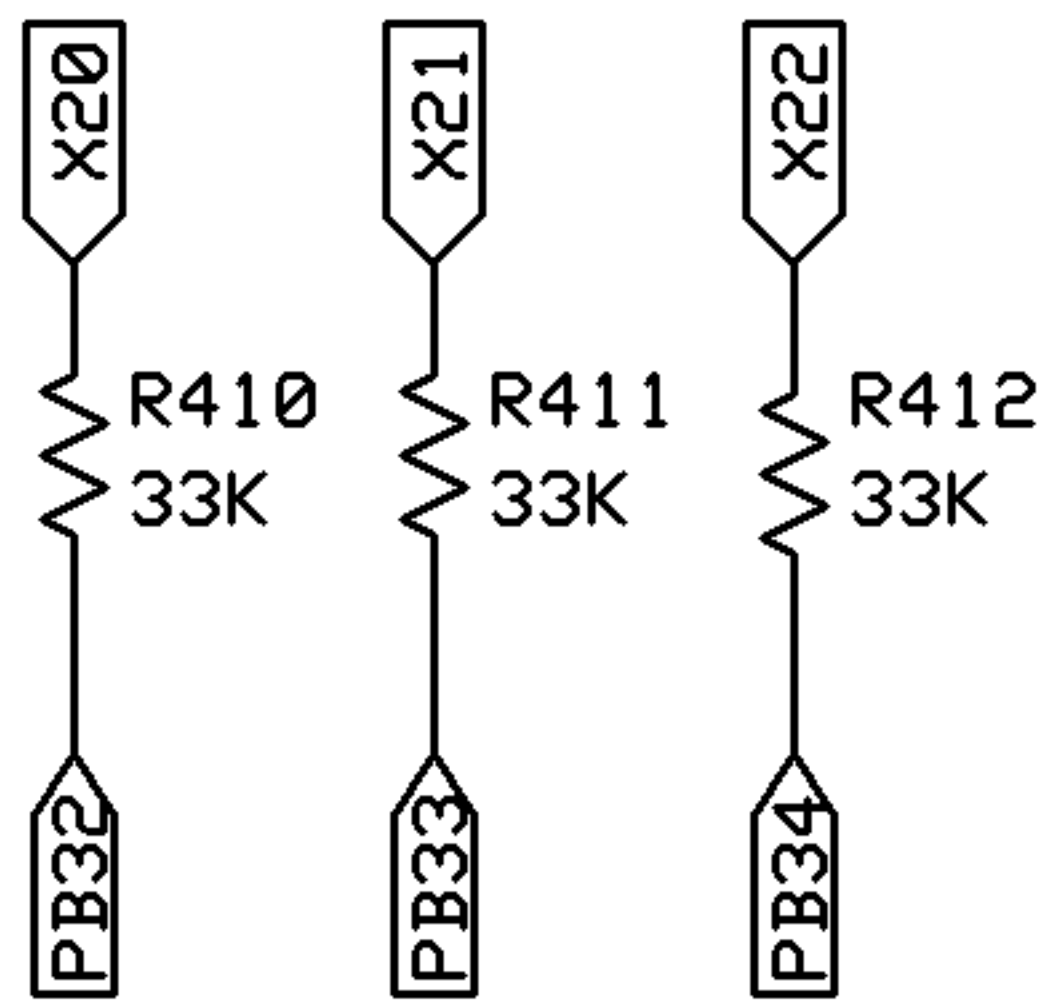
**Filter Mod
Slope Change
24dB/30dB Filter Slope**



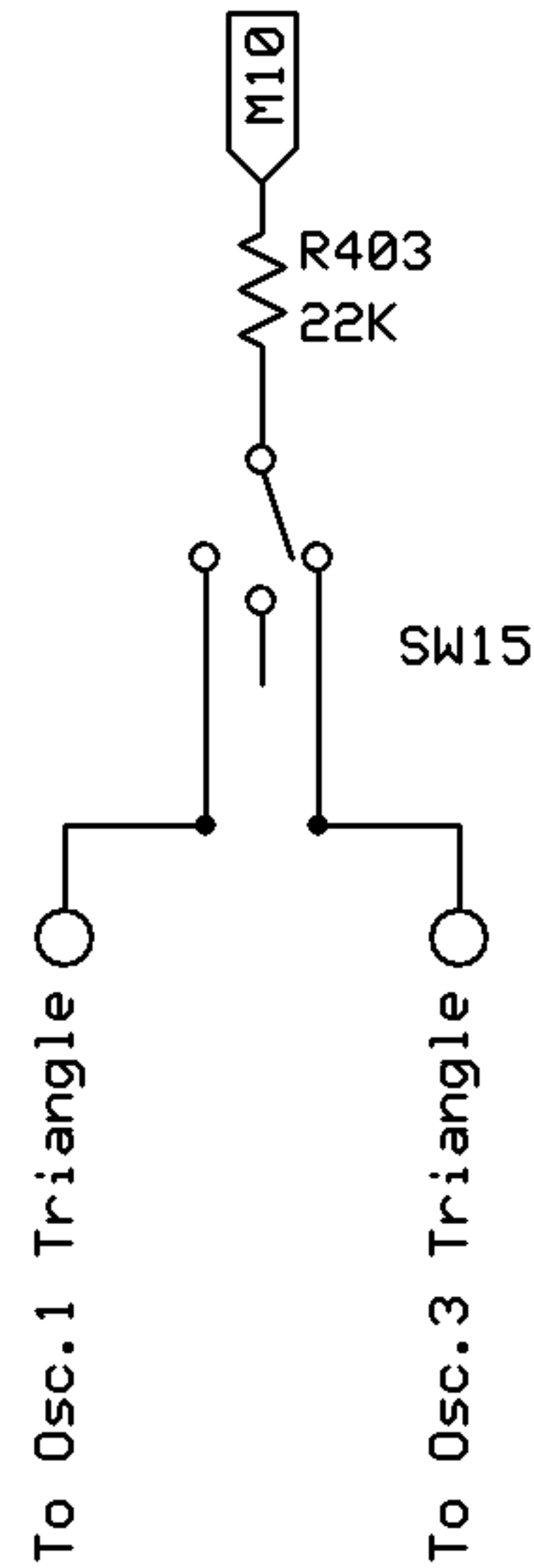
**Filter Mod
Slew/Unslew**



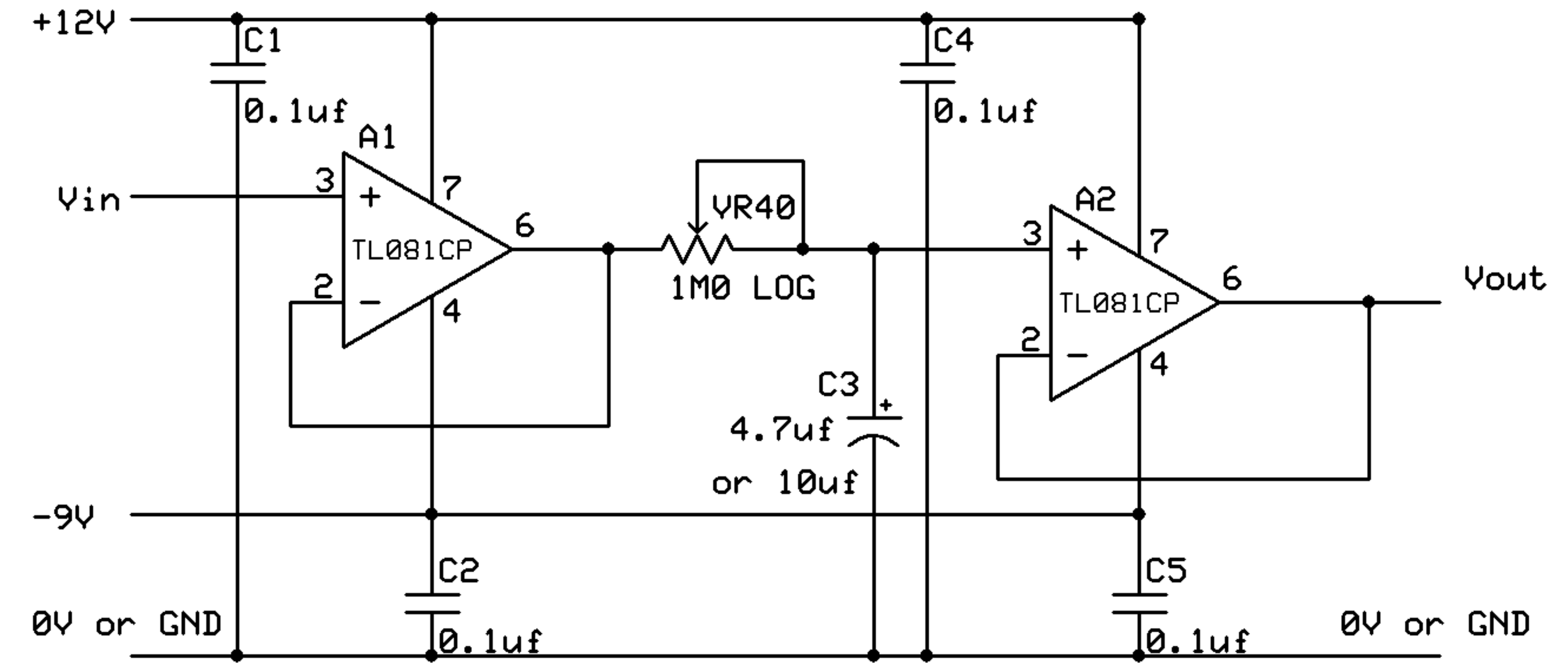
V.C. Waveshape



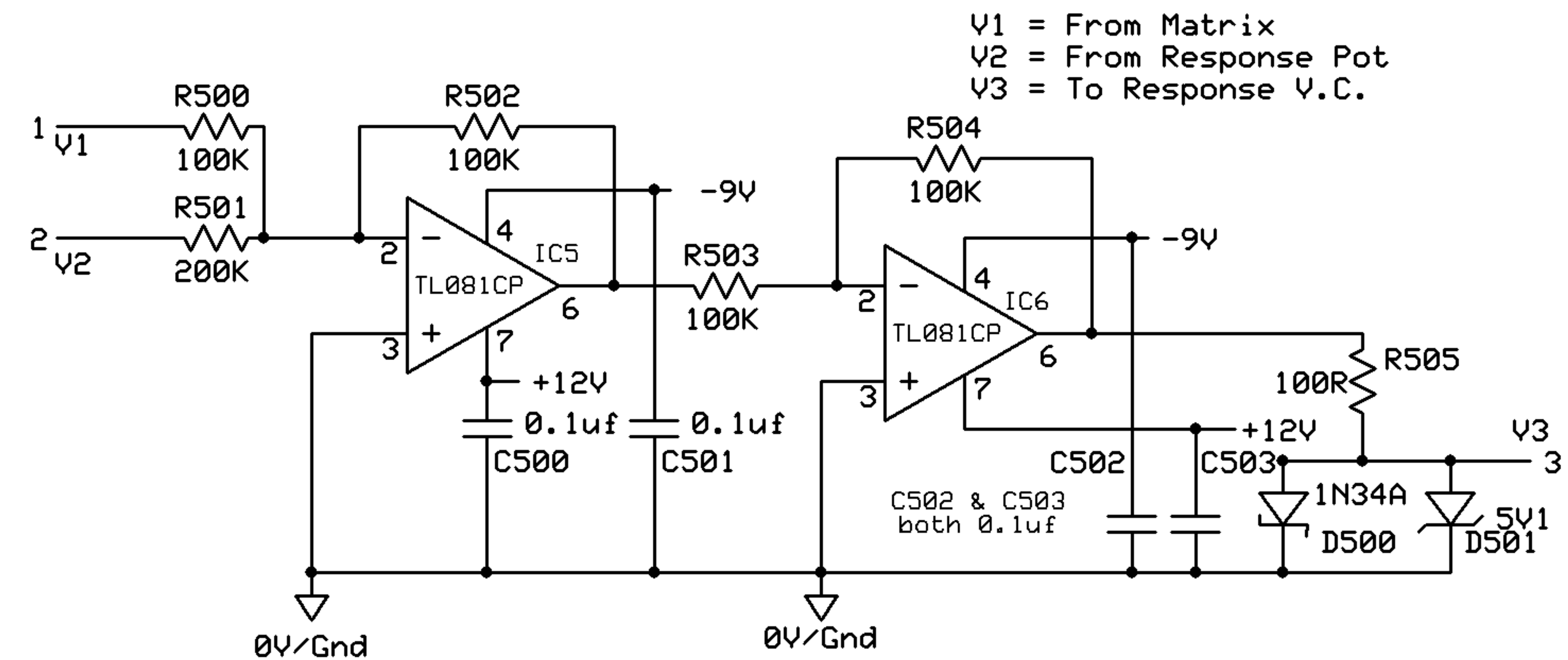
Osc. 2 Sync.



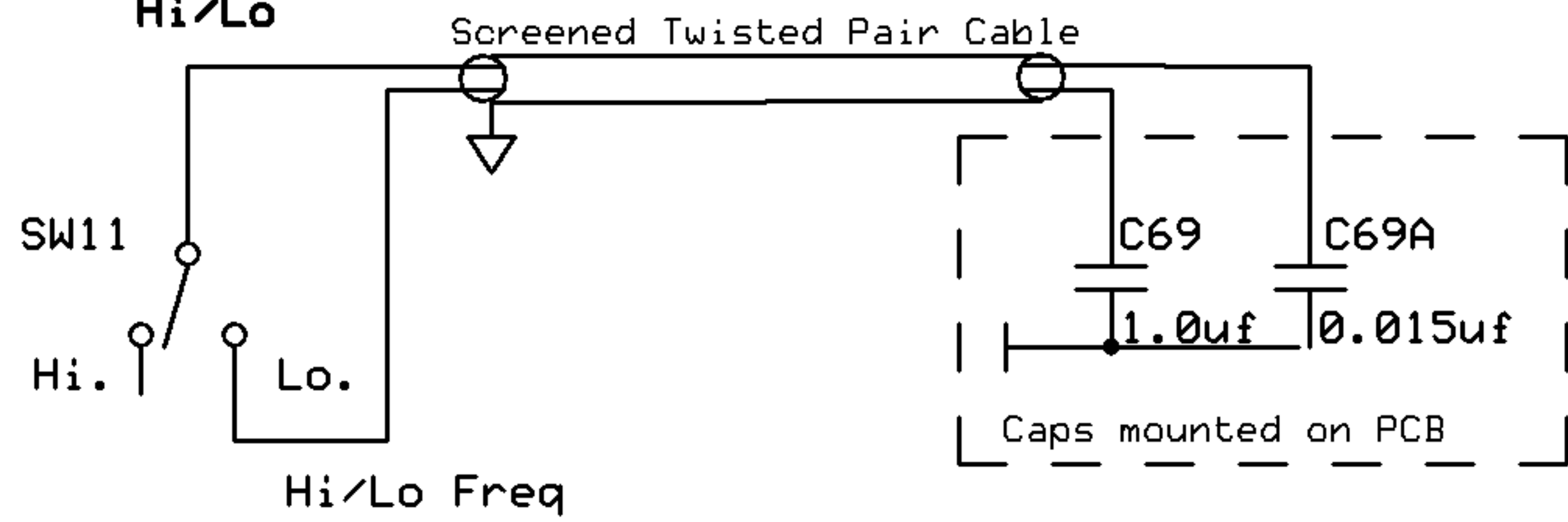
Portamento/Glissando Circuit



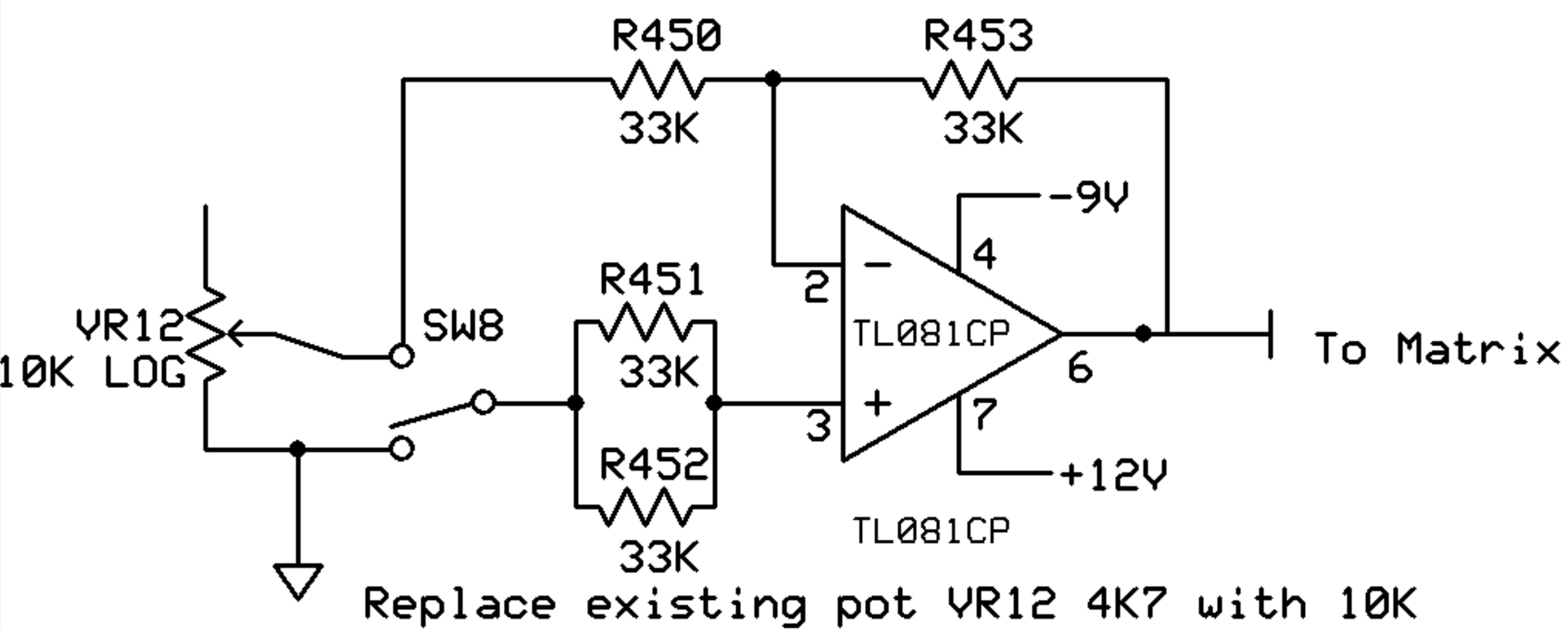
VC Filter Response



**Osc. 3
Hi/Lo**



+/- Trapezoid Invertor



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Various Synthesizer Mods