SEGUE build & BOM

vers 1 (28/8/015)

The Segue is a vactrol based, voltage controlled panner and crossfader. It can also be used as a VCA and reverse VCA (VC attenuator). It is kind of a hybrid between a Buchla 207 panner and a Korg PS3200 VCA. The trimpots allow the gain for each channel to be set independently, which means there is no need to match vactrols.

BOM

47R (1206 or 0805)	1	10 pin power connector	1	
1k (1206 or 0805)	3	10uF (2.5mm lead spacing)	2	
4k7 (1206 or 0805)	2	LED	1	
22k (1206 or 0805)	4	single vactrol	4	
33k (1206 or 0805)	3	100k trimpot	4	
47k (1206 or 0805)	2	100kB pots	4	
56k (1206 or 0805)	1	kobiconn style sockets	5	
100k (1206 or 0805)	6	TL074	1	
180k (1206 or 0805)	1	BC547	2	
10R (thru-hole)	2			

The vactrols should have an off resistance of at least 5MΩ, tho 10MΩ or more is better (most of them are). Faster vactrols are also preferred. Silonex NSL-32 work okay and roll-your-own vactrols using GL5549 LDRs are good too.
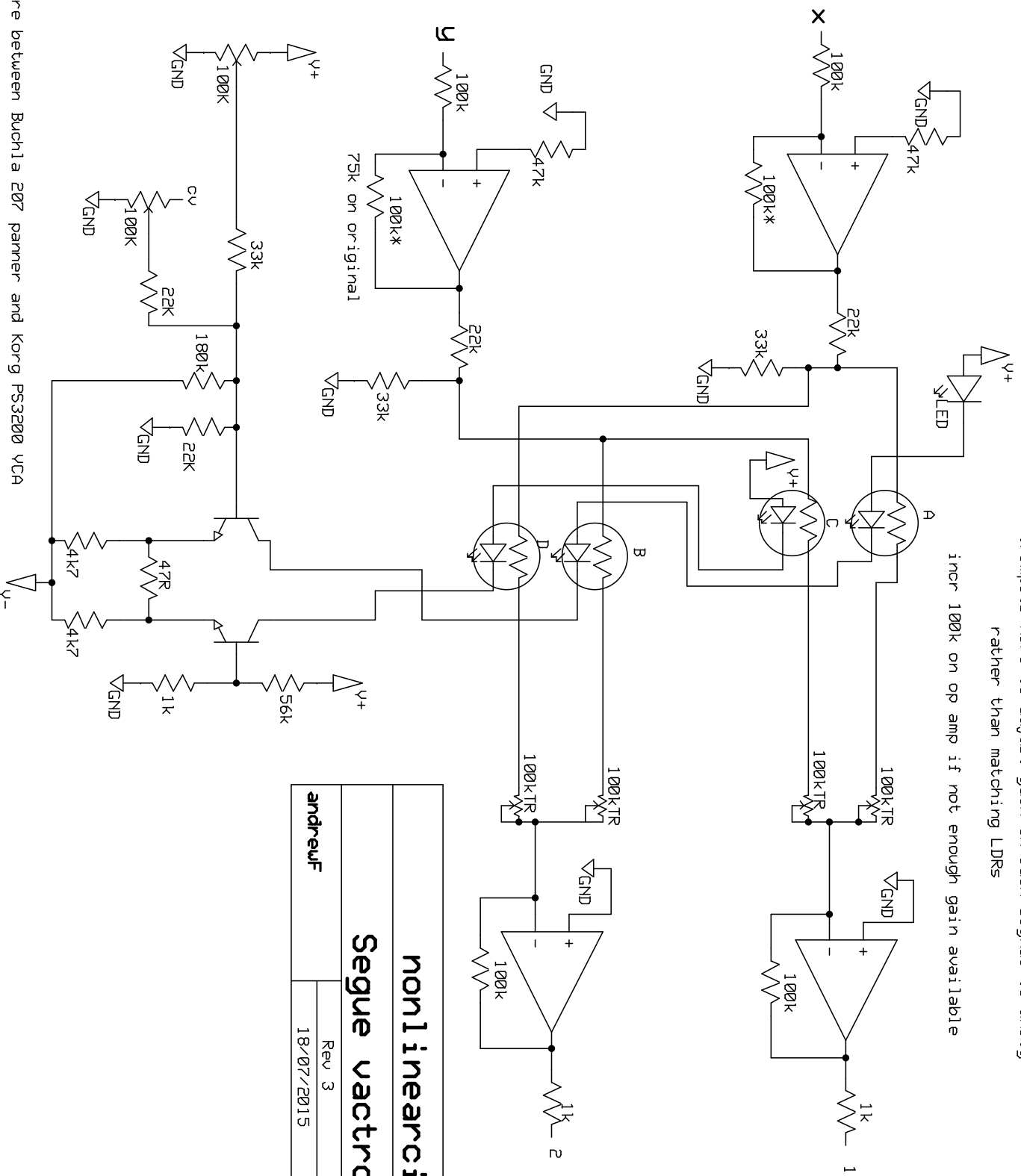
Setup

Best to use an oscilloscope, but by ear is near enough. Put an audio signal into input X and monitor it with your scope. Turn the pan pot to zero and monitor the output from output 2. Adjust trimpot D, so the output is the same amplitude as the input. Now turn the Pan pot to maximum and check the signal at output 1, adjust trimpot A so the output is the same as the input.

Plug the audio signal into input Y and repeat the process, adjusting trimpots B (Pan pot at max) and C (Pan pot at zero)

Voila!

somewhere between Buchla 207 panner and Korg PS3200 VCA

trimpots here to adjust gain on each signal to unity rather than matching LDRs

incr 100k on op amp if not enough gain available

X

Y

100k

100k

100k*

100k*

75k on original

47k

47k

GND

GND

GND

V+

V-

V+

33k

33k

33k

22k

22k

22k

22k

180k

CV

100k

4k7

4k7

47R

56k

1k

1k

GND

LED

100k

A

B

C

D

100kTR

100kTR

100kTR

100kTR

GND

GND

100k

100k

1k 1

1k 2

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