

Build documentation for:

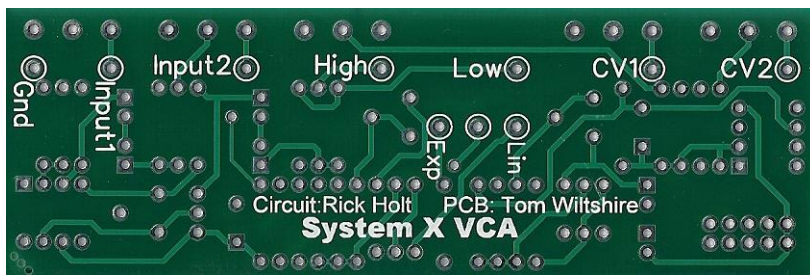
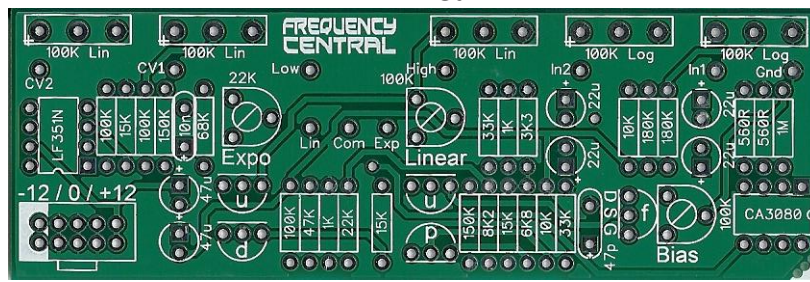
SYSTEM X AMPLIFIER

Based on the Roland System 100M VCA

FREQUENCY CENTRAL

Version 2 / April 2013

B100K CV2 B100K CV1 B100K Initial A100K Input 1 A100K Input 2
Gain



Key to PCB screen print:

- n:** This signifies NPN BC547 transistors. Note the correct pinout as shown by the half circles.
- p:** This signifies PNP BC557 transistors. Note the correct pinout as shown by the half circles.
- f:** This signifies 2N5485 FETs. Note the correct pinout as shown by the half circles.
- Gnd:** Ground

Please observe the correct polarity of the 6 electrolytic capacitors. The 4 x 22uF are configured in sets of 2 back to back (negative to negative).

The PCB shows the correct orientation for BC547/BC557/2N5485. Other transistor types can be used (eg 2N3904/2N3906/BF245), but please observe the correct pinout.

Trimmers

Bias: Adjust Bias trimmer to sweet spot, ie a nice clean undistorted VCA output with no thunk when a snappy ADSR is applied to a CV input. I do this without any audio at the inputs. The chances are that that the sweet spot is around the mid position.

Linear: I tend to turn this to around fully anticlockwise.

Expo: I tend to turn this to around fully anticlockwise.

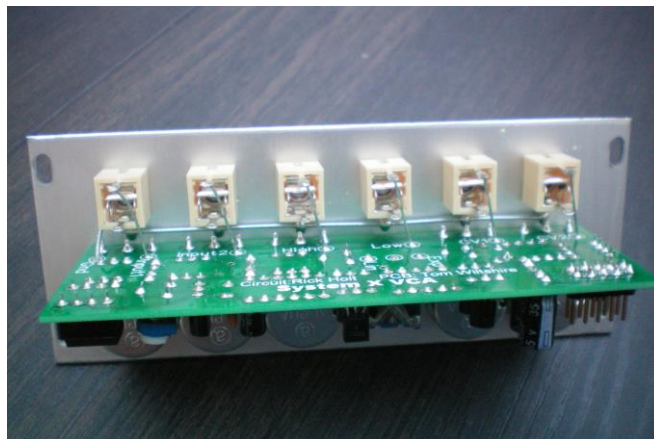
Bill of materials

560R x 2	47pF x 1	CA3080 x 1	A100K x 2
1K x 2	10nF x 1	LF351 x 1	B100K x 3
3K3 x 1	22uF x 4	BC547 x 2	All pots are 16mm Alpha.
6K8 x 1	47uF x 2	BC557 x 2	22K trimmer x 1
8K2 x 1		2N5485 x 1	100K trimmer x 2
10K x 2			All trimmers are 6mm (Tayda)
15K x 3			SPDT toggle
22K x 1			
33K x 2			
47K x 1			
68K x 1			
100K x 3			
150K x 2			
180K x 2			
1M x 1			

Underside of the PCB showing:

- Ground bus between sockets and PCB
- Connections between inputs/outputs and PCB

I use solid core for all of the above.



RDH 31st May 2013

<http://www.frequencycentral.co.uk/>