nonlinearcircuits

Bindubba sequencer build & BOM

This sequencer is a Eurorack version of the bindubba3 sequencer that is in the NLC 4U panels. It is a 16 stage sequencer arranged in a 4x4 grid. There are 2 clock inputs to control horizontal and vertical stepping. There are also two direction inputs to enable forwards and backwards stepping and two jump inputs. This module is intended to be used with the NLC Divide & Conquer.

The jump inputs move the step to a position that depends upon the 3rd and 4th bits of the count of the other clock…..let's just say it is semi-random, but in use you will find it allows for more complex patterns.

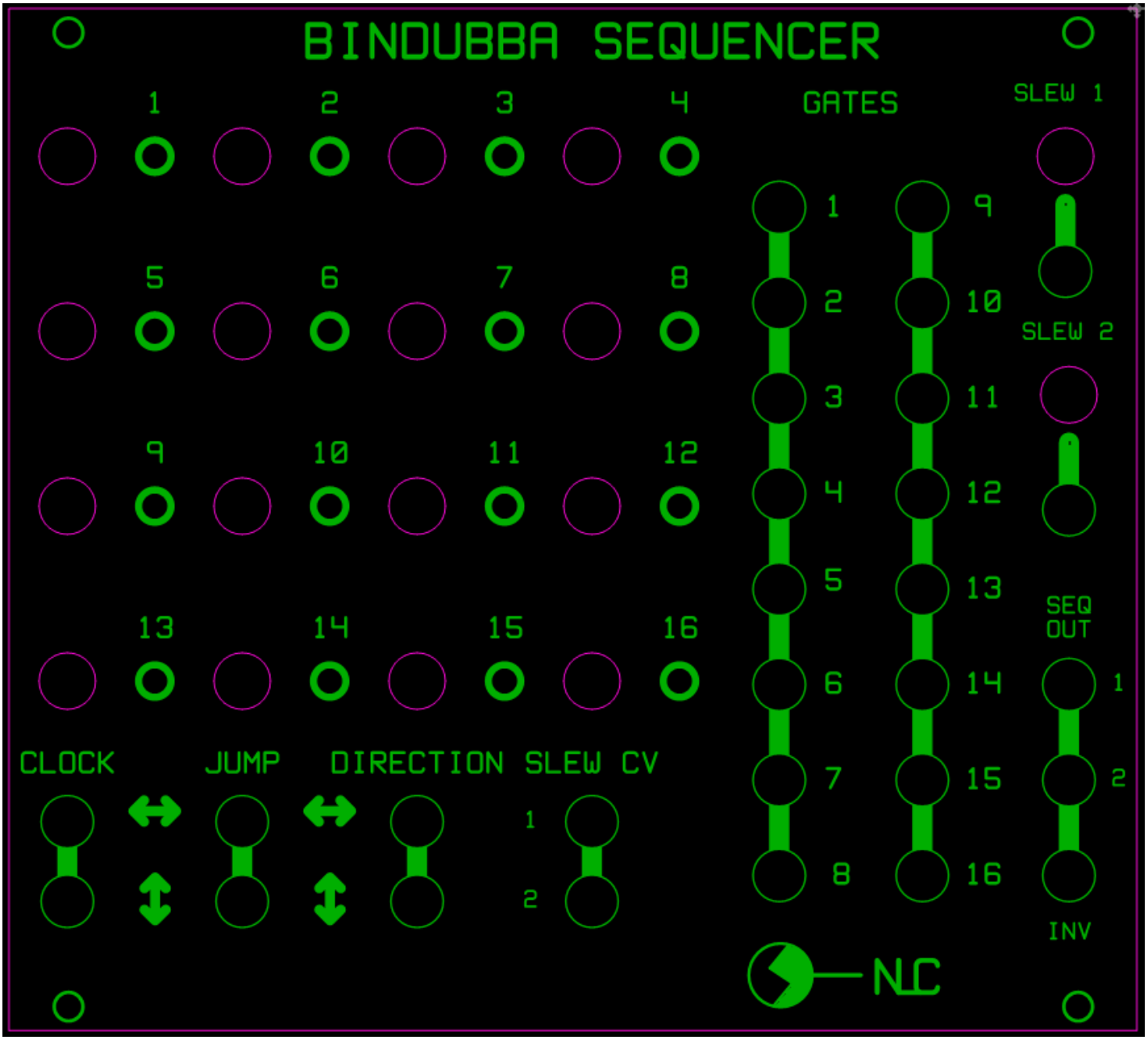
There are 16 gate outputs corresponding to the 16 stages. Two regular CV outs, these are the same, and an inverted version. There are two slew outputs that are initially the same as out1 but can be slewed with pot and CV; these can be controlled separately to each other. The larger the CV voltage the less slew you get, which means they work well with bi-polar signals from modules such as the Sloth.

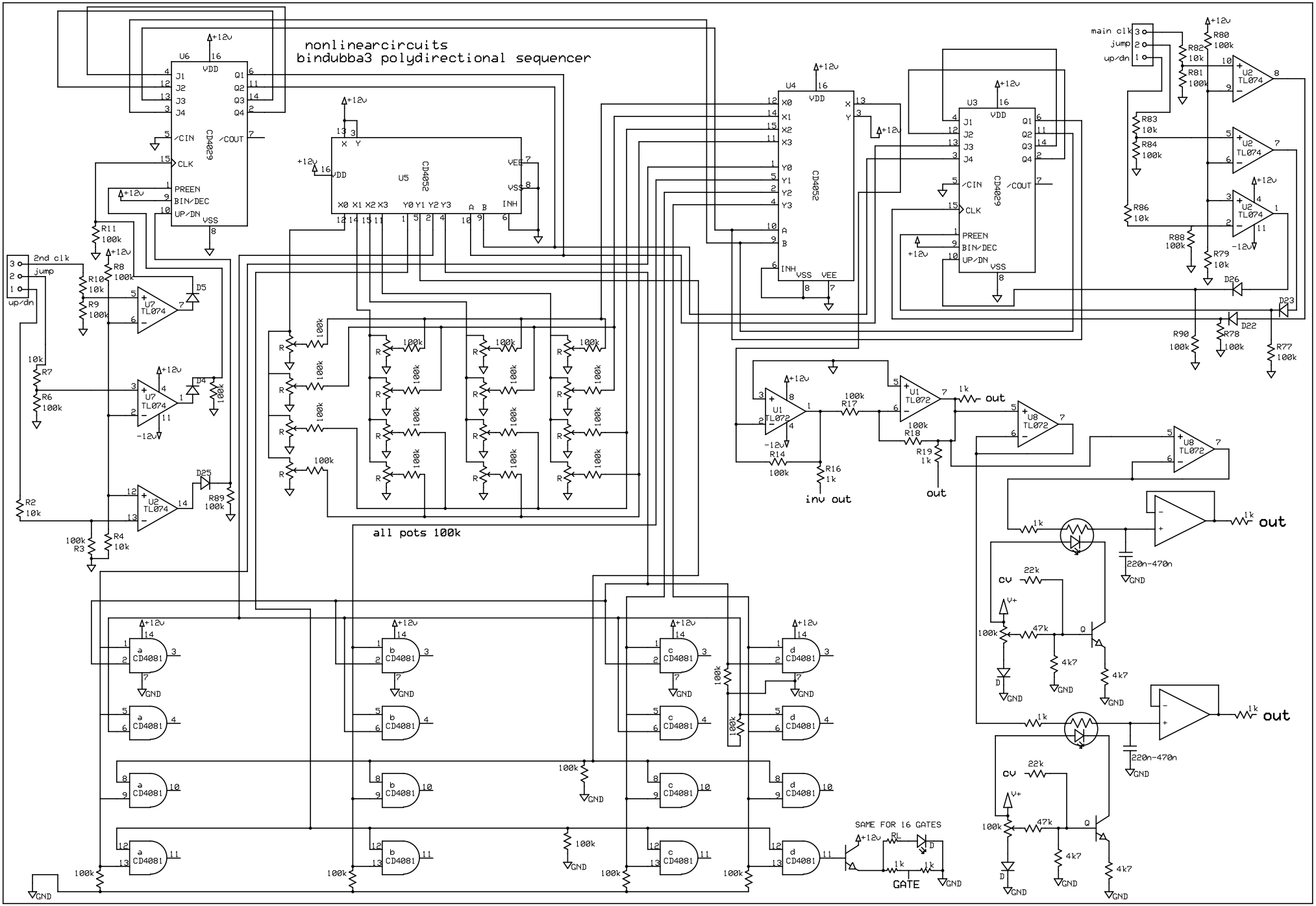
BOM

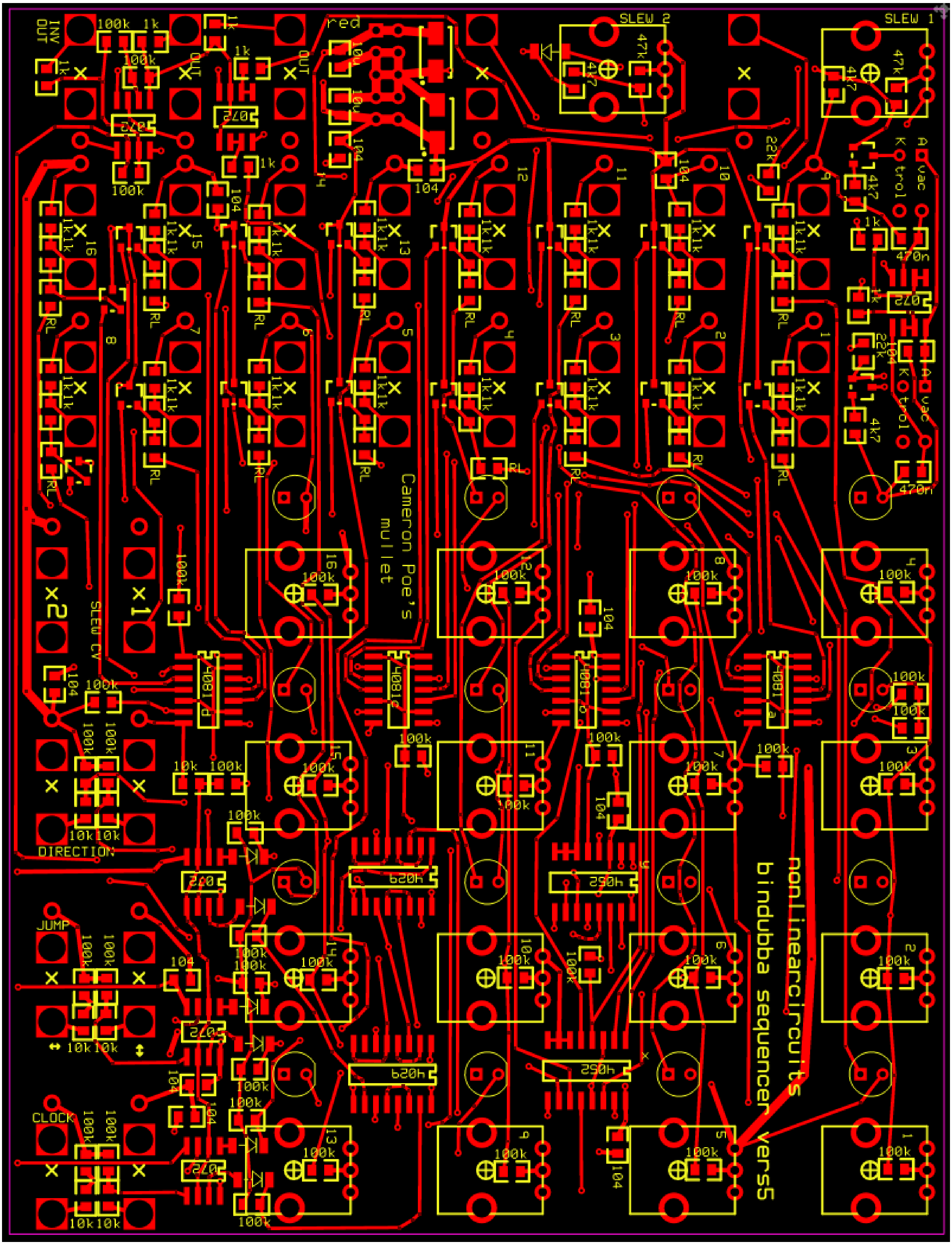
VALUE	QUANTITY	DETAILS
100nF (104)	12	0805 25V rating or higher
470nF	2	0805 25V rating or higher SEE NOTES #2
10µF	2	0805 25V rating or higher Mouser Part No: 81-GRM21BR61E106KA3L
RL	16	0805 select to suit LED brightness
1k	39	0805
10k	7	0805
4k7	4	0805
22k	2	0805
47k	2	0805
100k	40	0805
single vactrol	2	any type, DIY if you like
TL072 or TL082	6	SOIC Tayda: A-1136
4081	4	SOIC Mouser Part No: 595-CD4081BM96
4029	2	SOIC Mouser Part No: 595-CD4029BM96
4052	2	SOIC Mouser Part No: 595-CD4052BM96
BC847	18	NPN SOT-23 Tayda: A-1339
Eurorack 10 pin power connector	1	Tayda: A-198
S1JL or similar, optional - for reverse voltage protection	2	SMD, standard power diode 200-600V 1A, dot on PCB indicates CATHODE (stripe) SEE NOTES #3
LL4148	7	SOD-80 Mouser Part No: 512-LL4148
100k POT	18	Tayda: A-1848
3mm LED	16	**YES 3mm**
3.5MM SOCKET Kobiconn style	29	Tayda: A-865 or get Thonkiconn Jacks (PJ301M-12) from Thonk or Modular Addict

Additional shopping notes:

1. The prices for these capacitors drops to approx. 10c each when buying more than 10….and you should always get plenty of spares, it is easy to drop and lose smd parts.
2. The 470nF caps will probably have to be adjusted to suit your vactrols. My vactrols have an off-resistance of 800k-1MΩ, so 470nF is ok. If your vactrols have a much higher off resistance (simply measure the LDR leads when the vactrol is not in a circuit), you may want to install a lower value cap here, otherwise you get too much slew. Try 100nF or less, you will need to experiment.
3. S1JL Power diode for Reverse voltage protection - Mouser Part No: 821-S1JL. Any similar rectifier with at least 1A rating should be okay.




nonlinearcircuits
bindubba3 polydirectional sequencer
all pots 100k
SAME FOR 16 GATES
GATE
inv out
out
main clk
jump
up/dn
2nd clk
cv
+12v
-12v
GND



SLEW 2
SLEW 1
DIRECTION
JUMP
CLOCK
SLEW CV
Cameron Poe's mullet
nonlinearcircuits
bindubba sequencer vers5