

## nonlinearcircuits

### STATUES build & BOM

This is a 1 to 8 multiplexor....or multiplexer if you prefer....with a thru and hold circuit attached to each output. The active output is chosen by whichever combination of the x00, 0x0 & 00x inputs is high. You can put any signal into these; crossing 1V will send it high. In the demo video, I used the /2, /4 & /8 outputs from a Divide & Conquer which gives it a regular 1-8 count. Using any old signals will give a more random effect but patterns will still emerge. IN is the signal getting processed. This module can be used to process CV and/or audio signals.

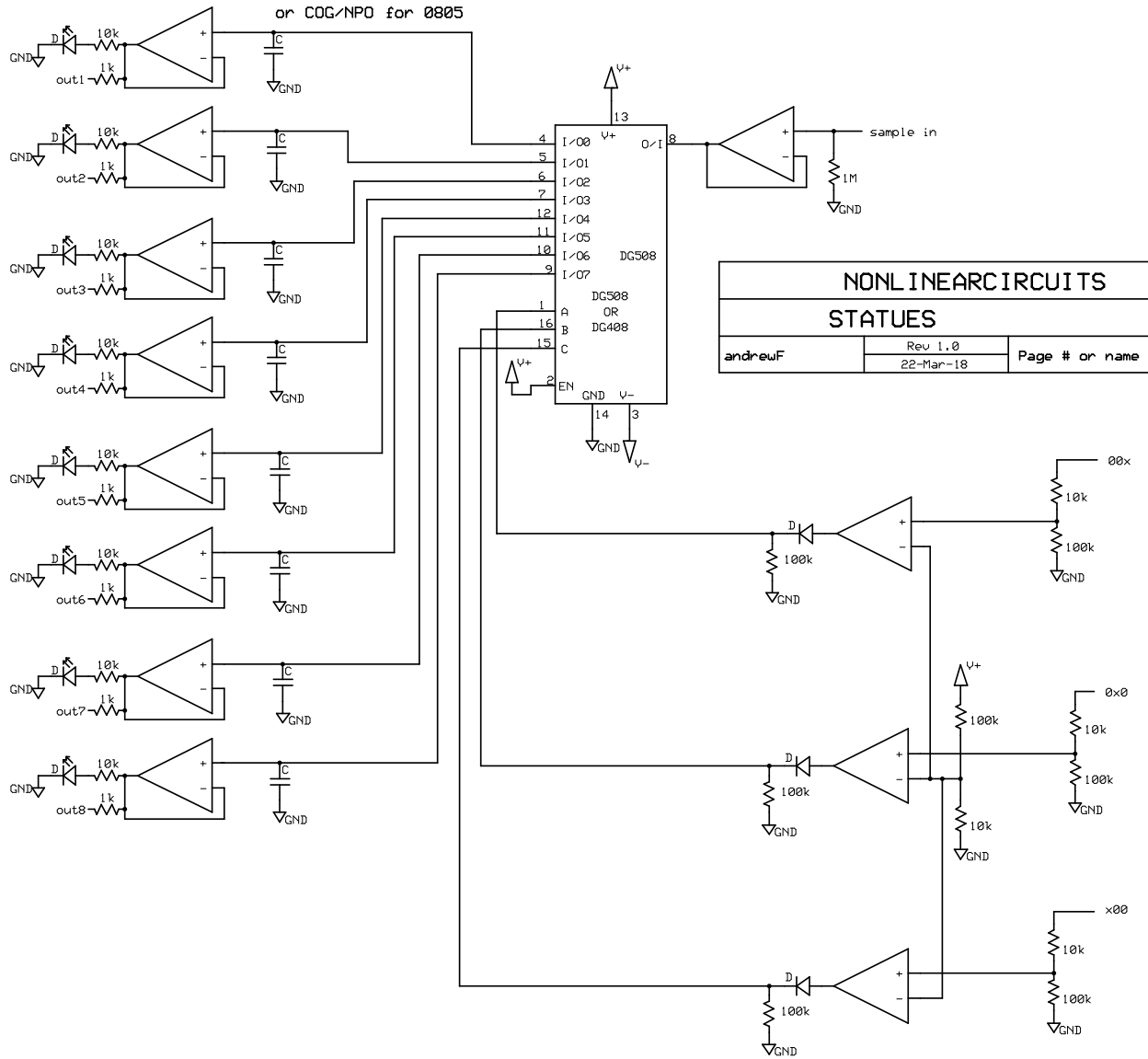
**BOM** – The Tayda part numbers are given as examples, feel free to buy from your favorite retailer if you prefer.

VALUE	QUANTITY	DETAILS
22nF	8	0805(anything from 22nF to 47nF will work)try and get nice COG/NPO types
100nF	3	3
10µF	2	0805 25V rating or higher Mouser No: 81-GRM21BR61E106KA3L (or similar)
1k	8	0805
10k	12	0805 see notes #3
100k	7	0805
1M	1	0805
LL4148 diodes	3	size: SOD-80, mini MELF, LL34, DO-213AA .....they are all same
TL072 or TL082	6	SOIC Tayda: A-1136
DG408 or DG508	1	DIP (thru-hole)
16 pin DIP socket	1	Tayda: A-003
3mm LED	8	should be ultra/superbright see notes #3
Eurorack 10 pin power connector	1	Tayda: A-198
1N400x or S1JL or similar, optional - for reverse voltage protection	2	SMD, standard power rectifier diode 200-600V 1A, dot on PCB indicates CATHODE (stripe on component) SEE NOTES #2
3.5MM SOCKET Kobiconn style	12	Tayda: A-865 or preferably get Thonkiconn Jacks (PJ301M-12) from Thonk or Modular Addict

#### Additional notes:

1. The prices for these 10uF 0805 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. S1JL Power diodes are for Reverse voltage protection - Mouser Part No: 821-S1JL. Any similar rectifier with at least 1A rating should be okay, such as 1N4001, 1N4002, 1N4004. Get these sizes; SOD-123 or sub-SMA (DO-214 is a bit too big, so avoid)
3. The eight 10k resistors **SITTING NEXT TO THE 1k RESISTORS** are for driving the LEDs. You can adjust these to a higher value if your LEDs are too bright, but do not go lower than 10k. If your LEDs are not bright enough, get different 3mm LEDs.
4. The resistors and op amps are cheapest from Tayda. Probably get the caps, DGx08 and diodes from Mouser.
5. Join the Nonlinearcircuits Builders Guild on FB ( <https://www.facebook.com/groups/174583056349286/> ) and ask questions there if you have any. If you prefer not to FB then email is fine.

C = good poly, 22nF to 47nF should be nice  
or COG/NPO for 0805



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