

nonlinearcircuits

Bongo Fury build & BOM

A triple version of the Bong0, one of those simple modules that pumps out way more character than it should.

The changes are only minor; the trimpot has been replaced with a 75k resistor (marked 75k* on PCB), I found I always set the trimpot to the same position, so it seemed redundant, feel free to vary it if you wish to make the circuit easily self-oscillate or not do so at all.

Also there are pads for installing 5v1 zener diodes to prevent the outputs going rail to rail when things get going. These are optional, the original version works fine without them, tho I would suggest installing them on maybe 2 of the sections and leave the third untethered. The reason for them is the Bongo output can be quite varied, at some settings the signal is small, down to +/-2v, at others it is +/-10V, so the zeners keep it to a max of approx. +/-5V making things easier to control downstream in your patch.

C1, C2 & C3 set the operating range for each Bongo. Easiest is to just install 100n which gives a good spread. For higher freq try 10n or 22n or 47n, for lower try 150n or 220n, tho there will be a sub-audio range if you do.



BOM – The Tayda & Mouser part numbers are given as examples

VALUE	QUANTITY	DETAILS
10nF	3	0805 Tayda: A-948 or Mouser Part No: 791-0805N103G500CT
100n, C1, C2, C3	14	0805 Tayda: A-3511 see intro above
10uF	2	0805 25V or higher voltage rating Mouser:963-TMK212BBJ106MG-T
1k	6	0805
10k	3	0805
75k*	3	0805 can adjust, see intro above
100k	21	0805
470k	3	0805
TL072 or TL082	3	Soic Tayda: A-1139
LL4148	6	Tayda: A-1213
5V1 zener	6	optional – see intro above
Eurorack 10 pin power connector	1	Tayda: A-198 cut to size
S1JL, Schottky, power rectifier or 10R, optional - for reverse voltage protection...or not	2	SMD SEE NOTES #1. dot on PCB indicates CATHODE (stripe on component). My current fave is BAT54GWX, Mouser:841-BAT54GWX
3.5MM SOCKET Kobiconn style	9	Tayda: A-865 or Thonkiconn Jacks (PJ301M-12) from Thonk, Synthcube or Modular Addict
100k pot	6	Tayda: A-1848 or similar
LED (5mm)	3	

Additional notes:

1. Schottky (best option) or standard power rectifier diode 50-600v 1A or more, or use a resettable fuse or just a 10R. Examples: BAT54GWX, PMEG2005EGWX, AEC-Q101, 20v, SOD-123, PMEG2005EH DIODE, SCHOTTKY, 0.5A, 20V, 1N400x or S1JL or similar.

2. The chips, resistors, caps are cheapest from Tayda. Schottky diodes, CMOS & 1uF, 10uF 25V 0805 caps from Mouser/E14/Farnell/etc.

3. 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.





