

NLC Bools

Logic module with interchangeable CMOS Logic Gates + S&H

<https://www.nonlinearcircuits.com/modules/p/bools>

This is a multi-purpose module that can be used in a number of ways. It can be used for basic logic functions to generate complex gates. Using multiple inputs allows the creation of a variety of different but related gates which can be used to create complex but nicely sync'd patches. There is a R2R ladder to create a stepped CV signal that corresponds to the gate outputs, this is also fed thru a gate (or CV) controlled sample & hold/Slew circuit to create a smooth output.

Some tricks(depends on your choice of logic):

- Use the module to process audio signals and feed the outputs back into other inputs.
- BOOLS can be used as an envelope generator. Choose an input to determine the height (1 = low, 4 = high), set the slope with the Slew pot, feed the S&H input with various signals to vary the envelope shape.

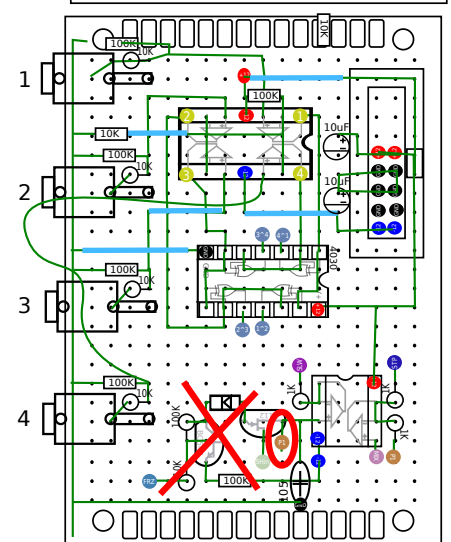
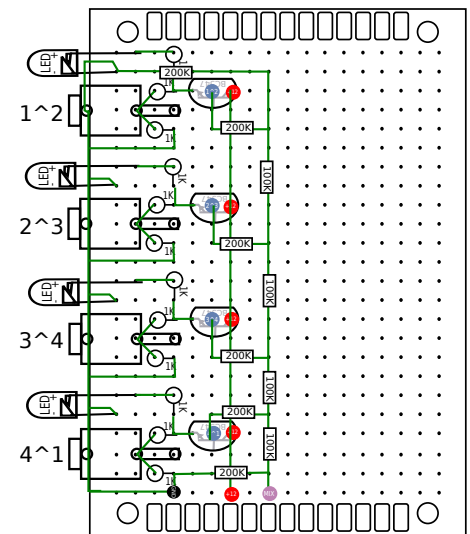
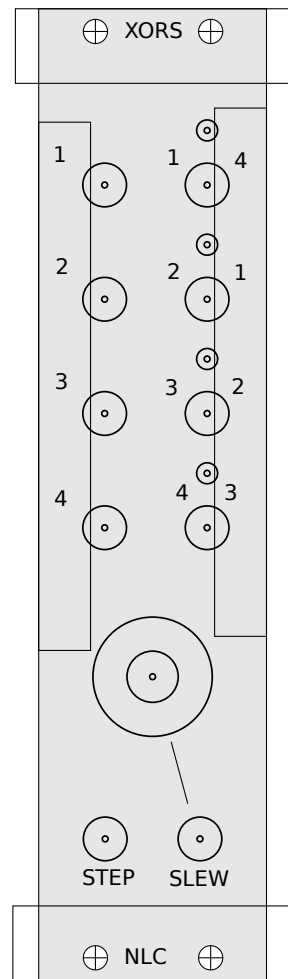
Suitable chips are

4001 NOR
4011 NAND
4071 OR
4081 AND
4077 XNOR
4030 or 4070 XOR

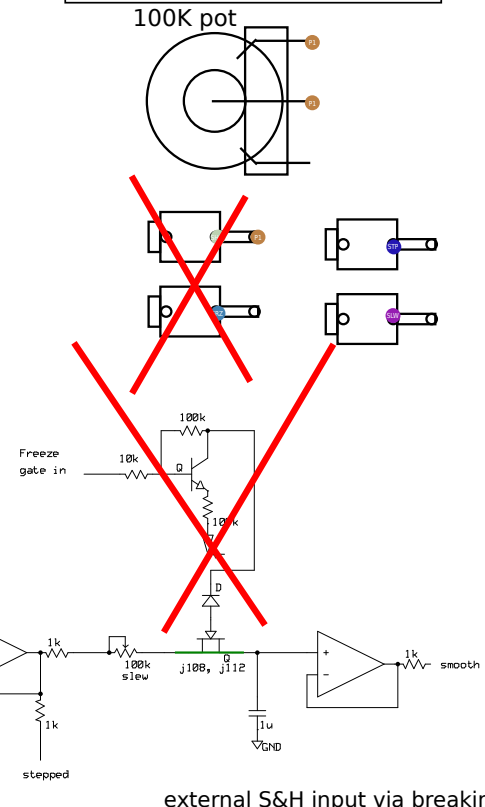
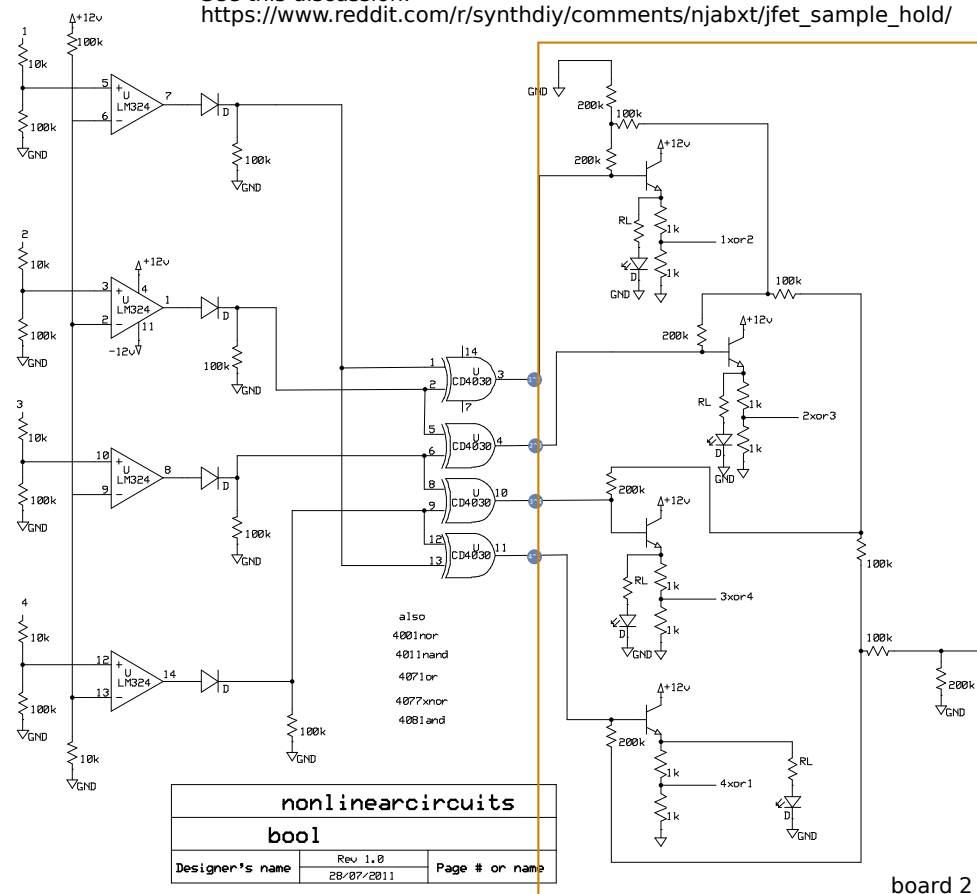
For me, the OR, XNOR & XOR chips are the most interesting.

The input signals can be pretty much anything that crosses 1.1V.

Outputs will be 5V. Audio rate signals are fine; XOR chips give a crude but useful ring modulation effect.



I omitted the S+H part for now, because i could not make it work.
See this discussion:
https://www.reddit.com/r/synthdiy/comments/njabxt/jfet_sample_hold/



board 2