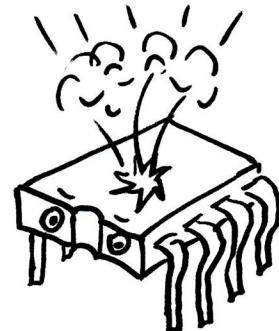


TR-808 Snare project

handwired perfboard construction
layout by Eric Archer 2007
<http://ericarcher.net/devices/tr808-clone>



This analog snare drum circuit is adapted from the schematic in the TR-808 Service Manual. Transistors have been substituted. It is intended to be close to the original sound. The noise generator portion is also taken from the original schematics.

I built it on PC-4 perfboard. you could use any pad-per-hole 0.1" grid board though. Dont build this on a solderless breadboard - you wont want to take it apart!

The layout doesnt include a power connector. The circuit needs +/-15V or +/-12V. You'll have to add the power connections. On the PWR page, the (+) and (-) rails are illustrated but not labeled as to which is which. Remember TL072's pin 8 is (+) and pin 4 is (-) and it will be clear.

Add an ouput jack of some sort. for output I just wired up a 3.5mm mono plug and run it into a mixer.

If you are planning on triggering the circuit from a logic signal, the easiest way is to tie ACCENT to +12V (+15V), and connect the logic signal to TRIGGER. You'll have to make the trigger pulse short (like 5ms) or you'll hear a double-trigger on the negative edge of the pulse. Or you can add my diode-cap-resistor network (described elsewhere) that makes triggering independent of pulselwidth.

I laid this circuit out with 7.2mm x 2.5mm film capacitors like Wima MKP or AVX BQ-series.

---- construction procedure ---

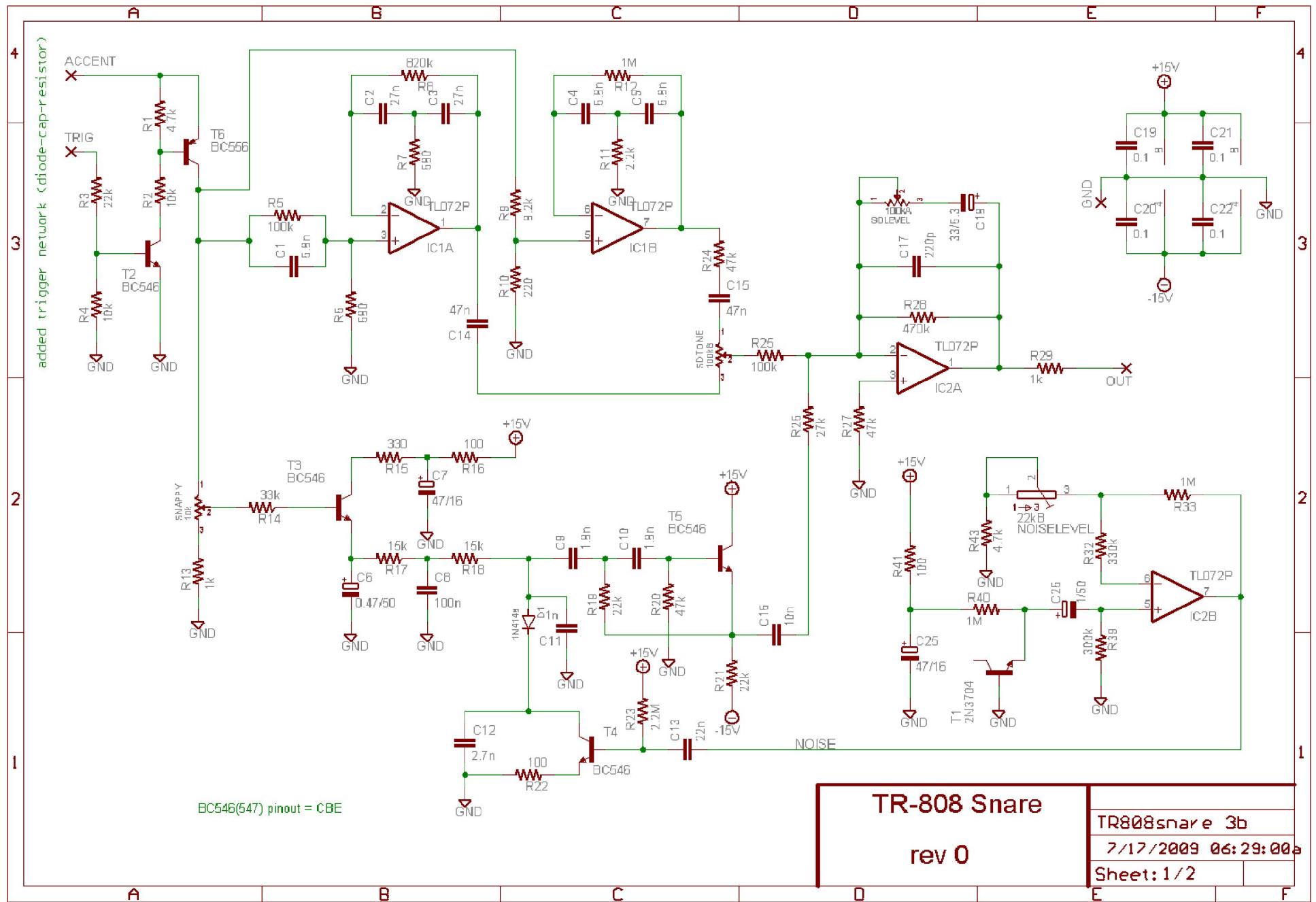
[start by printing out the four pages with wiring routing on them.](#)

STEP 1: referring to the **placement** and **values** pages, install all the components on the perfboard.

STEP 2: referring to **GND**, **PWR**, **route1**, and **route2**, make all the connections that are possible by bending and cutting component leads. use fine tipped needle nose pliers to bend the leads so they make efficient connections. make sure you thoroughly heat all solder joints so there arent any surprise open circuits later.

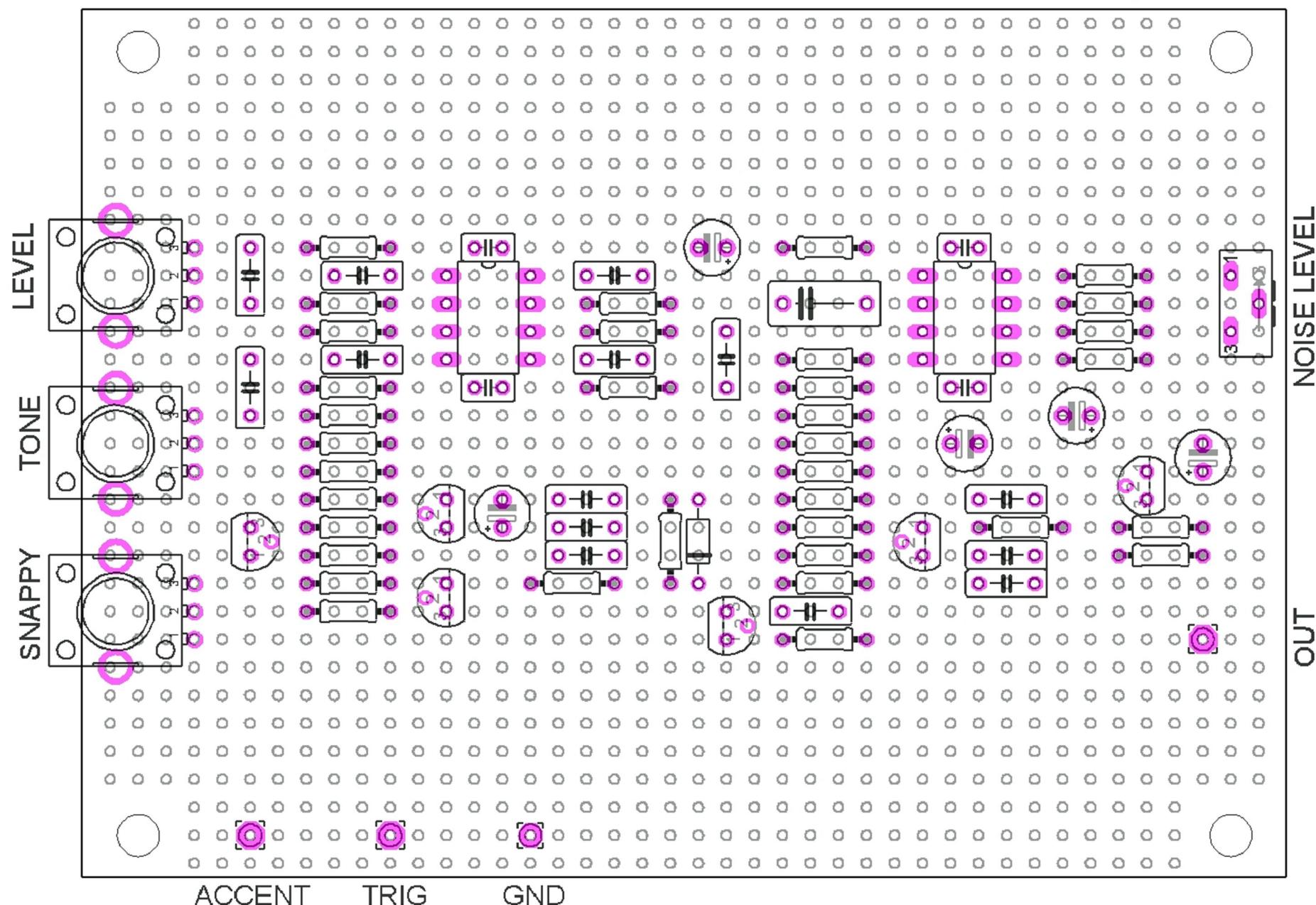
[on the printouts, carefully trace all connections as you make them, using a colored pen or highlighter. that way you can keep track of whats left to do; when all the lines are traced, the wiring is done.](#)

STEP 3: finish the remaining connections using short pieces of wire. 30- or 28- gauge "wire wrap" wire is recommended. this is solid core wire with high-temperature insulation. to do the wiring reliably, you really need high temperature insulation that doesn't shrink when heated. Strip the wires carefully so you don't nick the conductor and make an unreliable connection.



TR808 snare clone

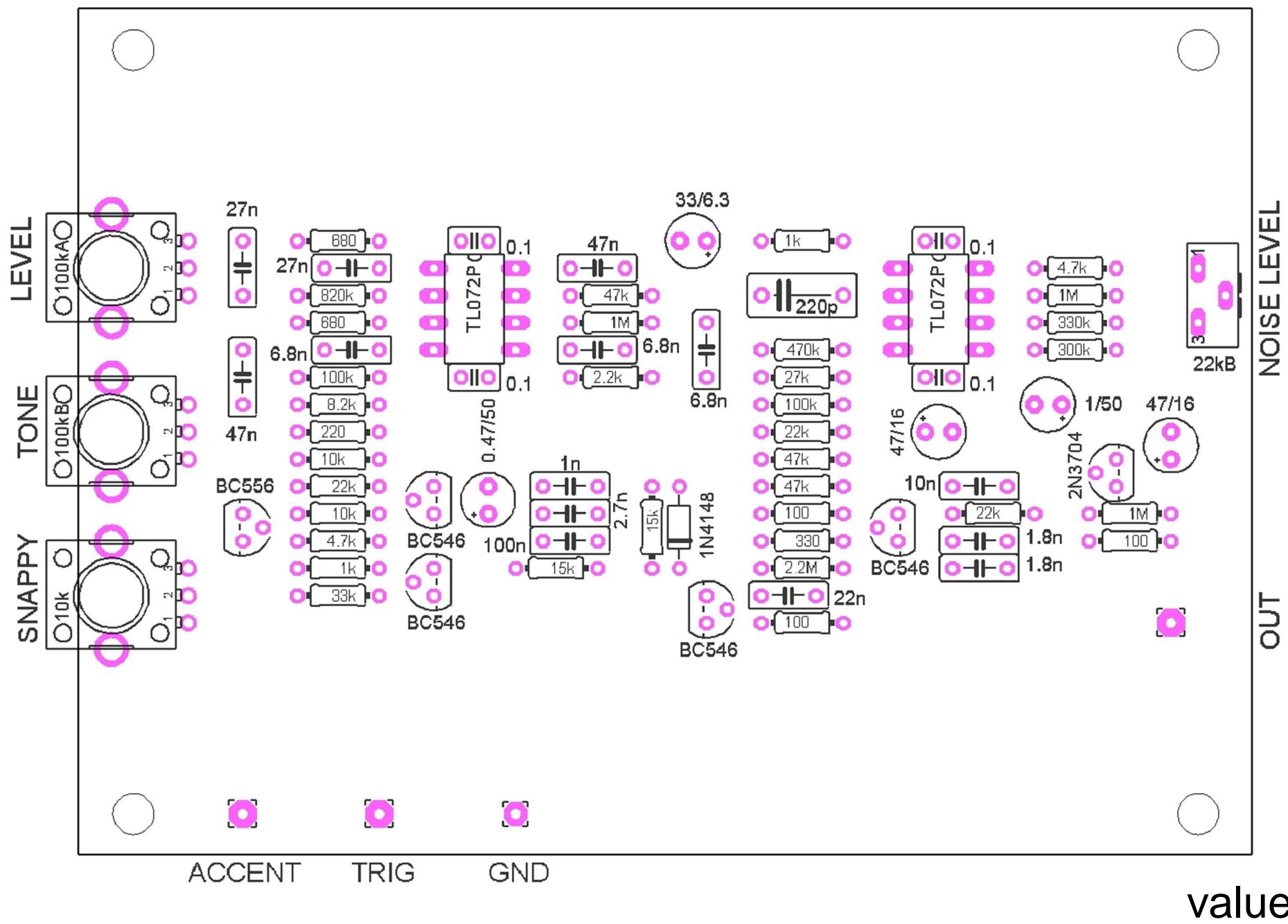
layout - eric archer



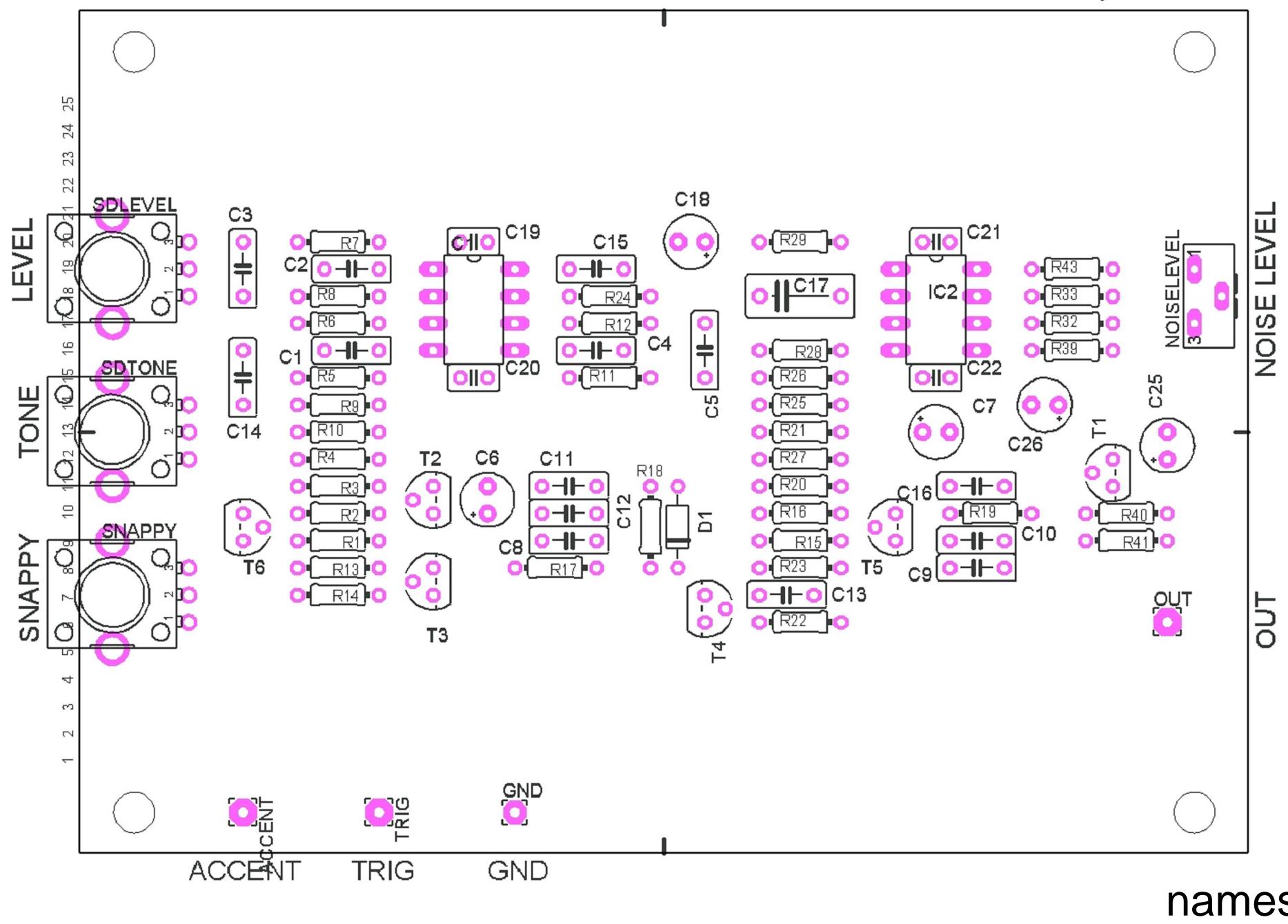
placement

TR808 snare clone

layout - eric archer



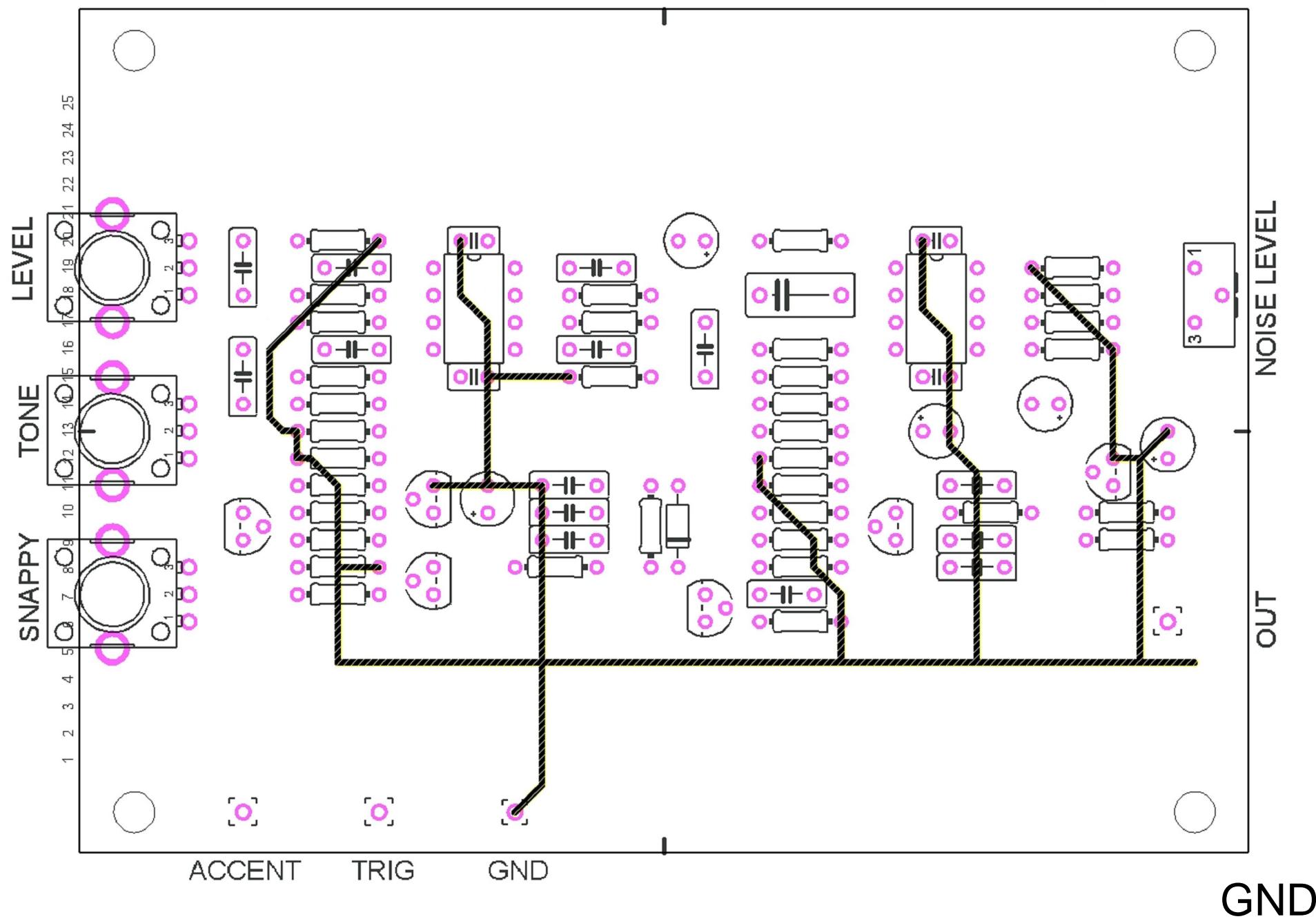
TR808 snare clone



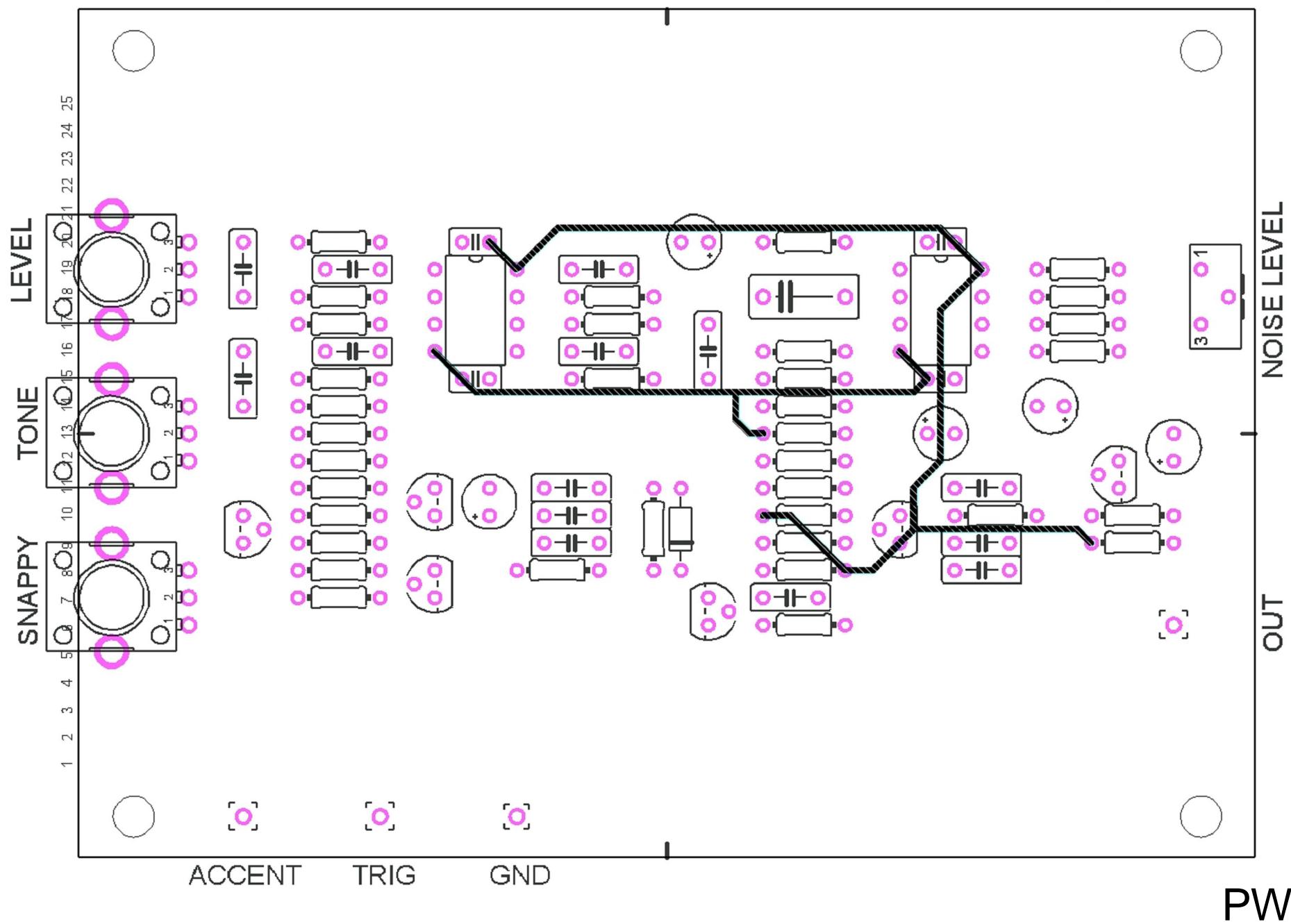
TR808 snare clone

6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35

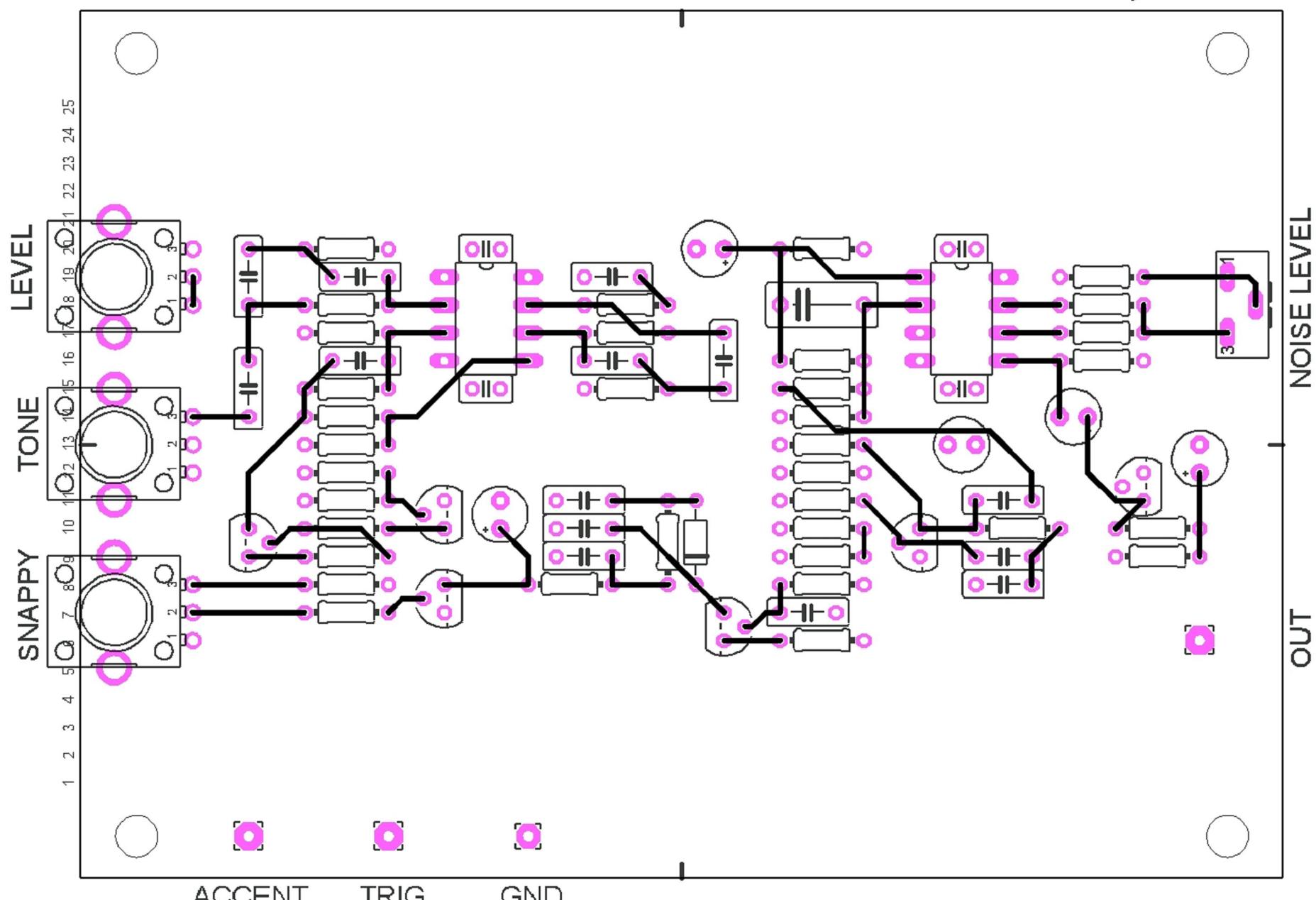
layout by eric archer



TR808 snare clone 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 layouts eric archer

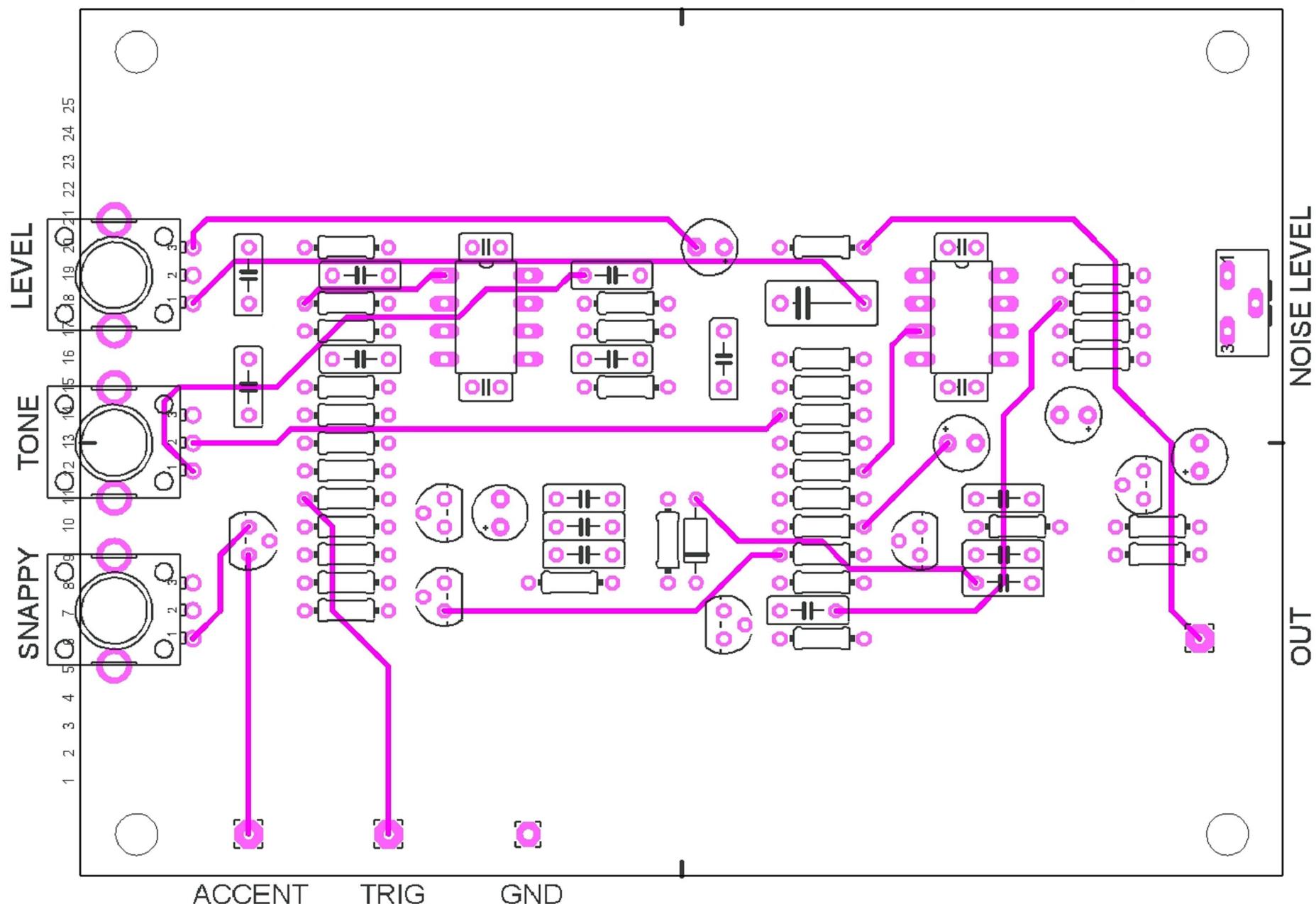


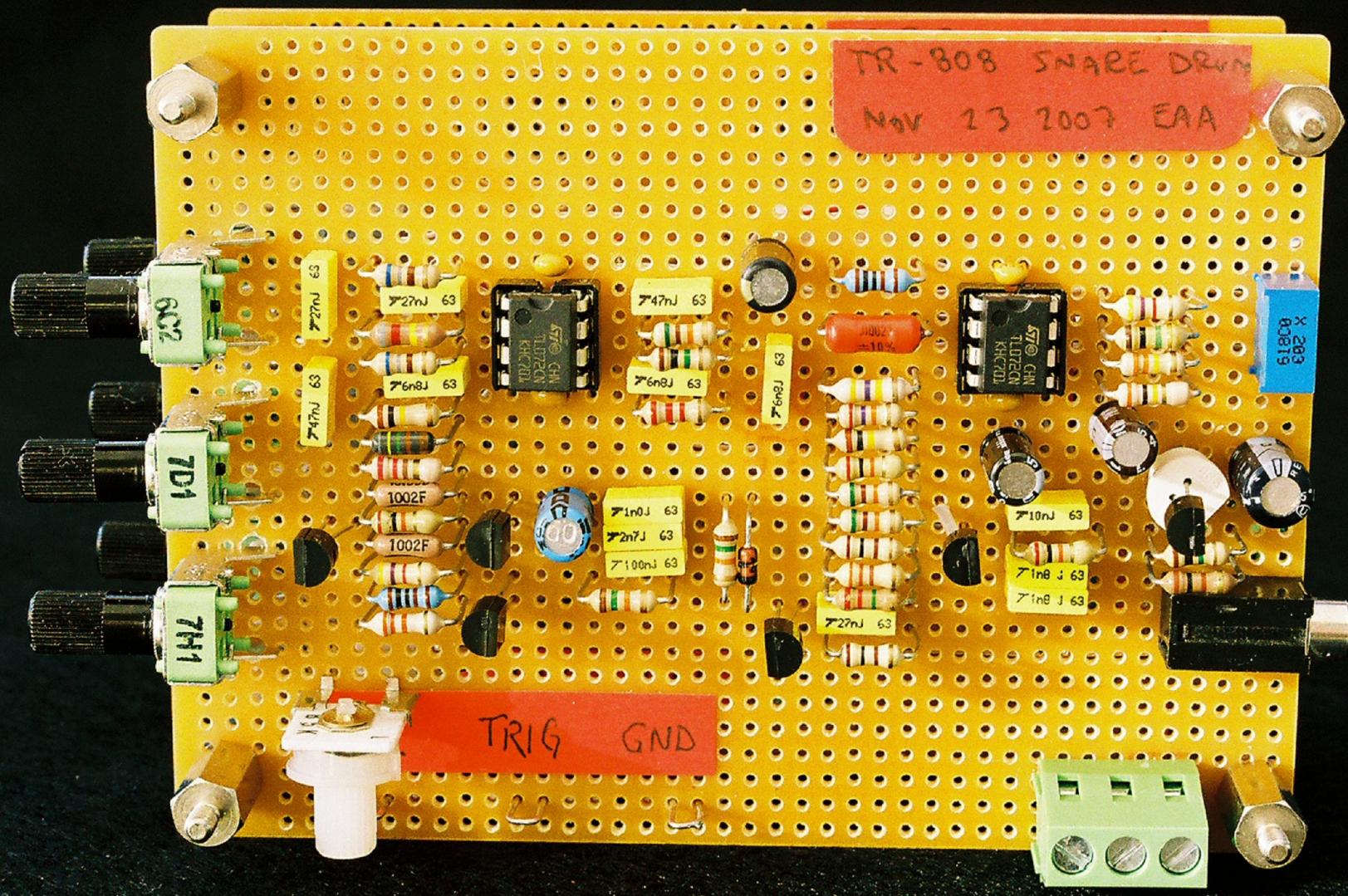
TR808 snare clone 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 layout eric archer



route1

TR808 snare clone 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 layout eric archer





finished

TR-808 SNARE DRUM

PART LIST:

Transistors:

4x 2SC945 (P) NPN
1x 2SA733 (P) PNP

1x 1n4148 Diode
2x TL072 Dual OP-AMP

Electrolytic Cap:

1x 33 μ F/6,3V
2x 47 μ F/16V (PWR bypass)
1x 47 μ F/16V
1x 47 μ F/50V

Caps:

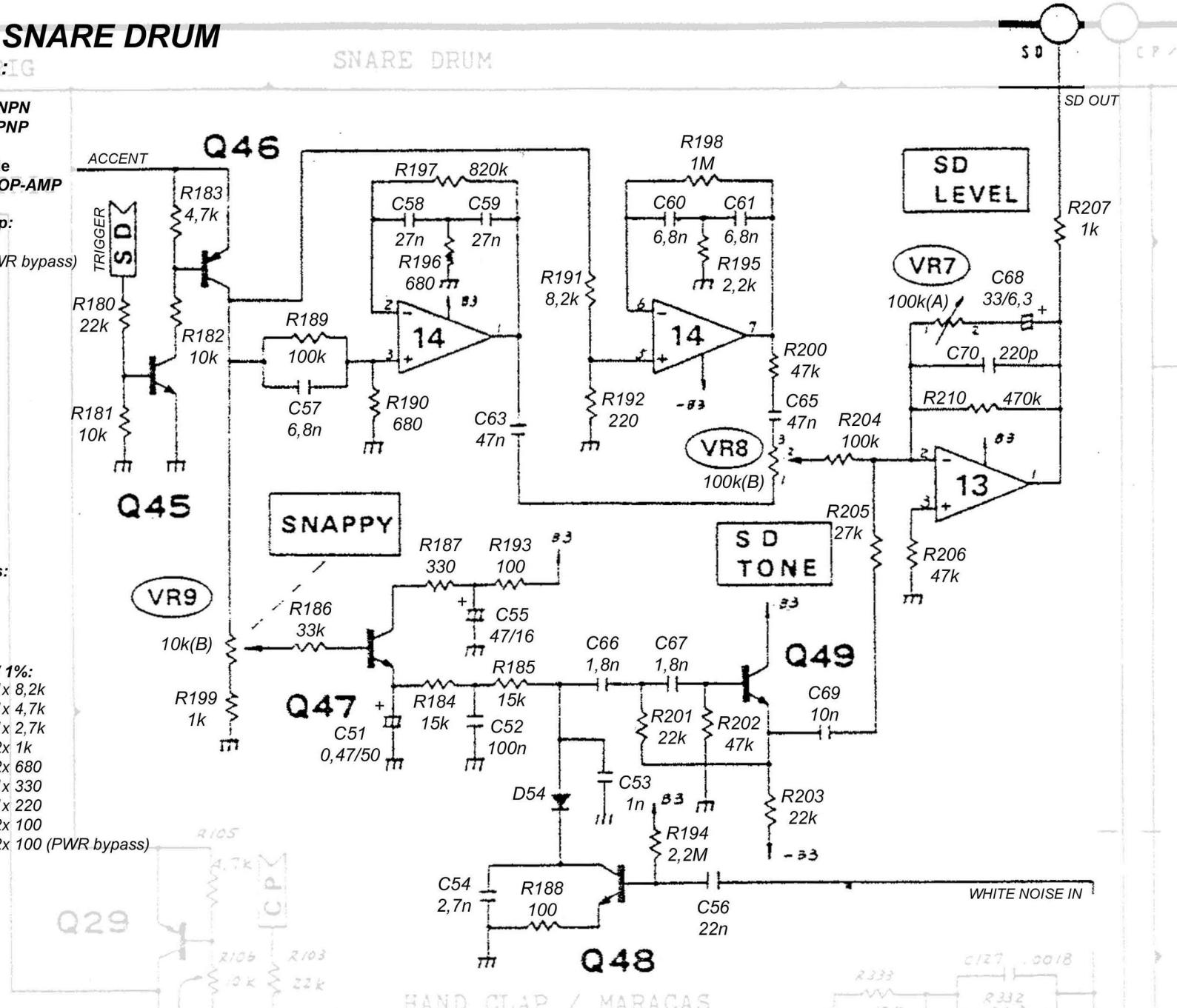
1x 220p
1x 1n
2x 1,8n
1x 2,7n
3x 6,8n
1x 10n
1x 22n
2x 27n
2x 47n
1x 100n

Potentiometers:

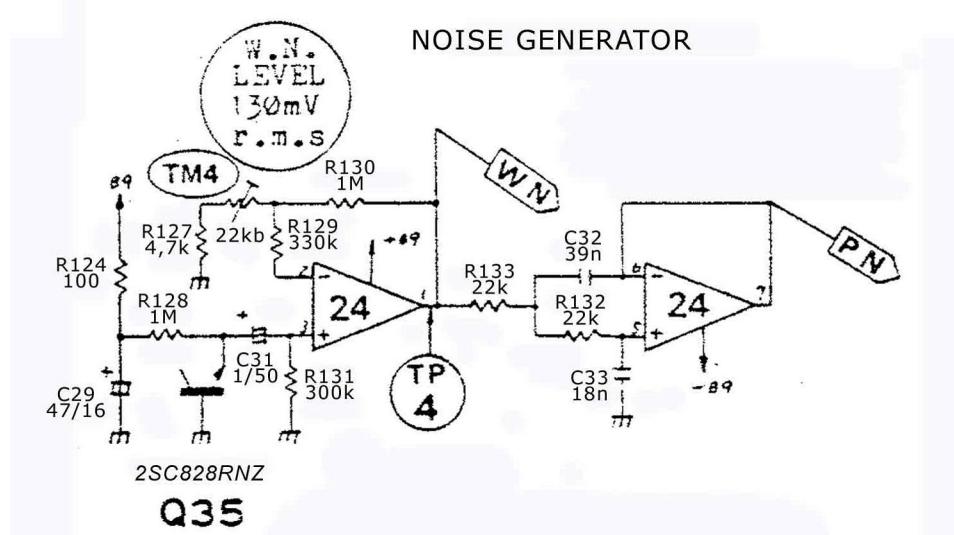
1x 100k Log
1x 100k Lin
1x 10k Log

Resistors 1/4W 1%:

1x 2,2M	1x 8,2k
1x 1M	1x 4,7k
1x 820k	1x 2,7k
1x 470k	2x 1k
2x 100k	2x 680
3x 47k	1x 330
1x 33k	1x 220
3x 22k	2x 100
1x 27k	2x 100 (PWR bypass)
2x 15k	
2x 10k	



original



WN = white noise

PN = pink noise output (not used for snare)

original