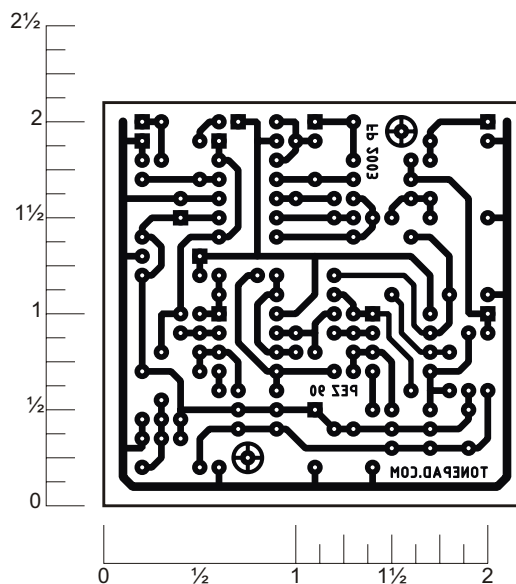
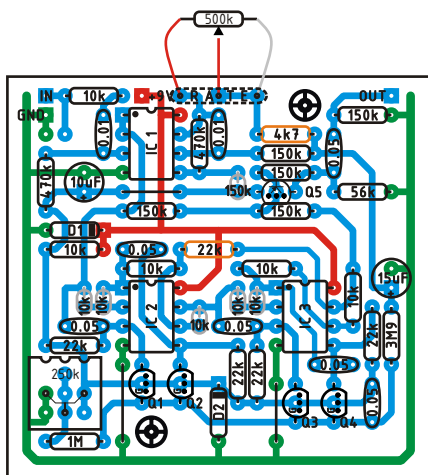


Build the phase90. You must use matched FETs for this circuit to work. Tweaking the value of the zener diode may be needed for some FETs. It's recommended to use sockets for the FETs and zener diode. Also, if using FETs other than those listed, they may need to be rotated 180 degrees, "G" marked pads must match GATE pin on the actual FETs used. Off board wiring except for the potentiometers are not shown on the layout. Trademarks remain property of their owners. Visit [www.tonepad.com](http://www.tonepad.com) for more!



## Parts List

### Resistors

- 1 - 4k7
- 10 - 10k
- 5 - 22k
- 1 - 56k
- 6 - 150k
- 2 - 470k
- 1 - 1M
- 1 - 3M9

### Pots

- 1 - 500k rev. Log.
- 1 - 250k trim.

### Capacitors

- 6 - 0.05  $\mu$ F
- 2 - 0.01  $\mu$ F
- 1 - 10  $\mu$ F
- 1 - 15  $\mu$ F

### Diodes

- D1 - 1N914
- D2 - 5.1V zener

### Transistors & ICs

- 1 - 2N4125
- 4 - 2N5952 (Matched)
- 3 - TL072

## Schematic

