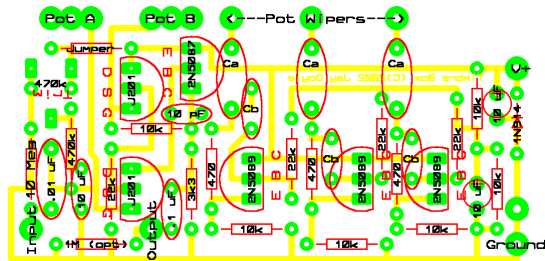
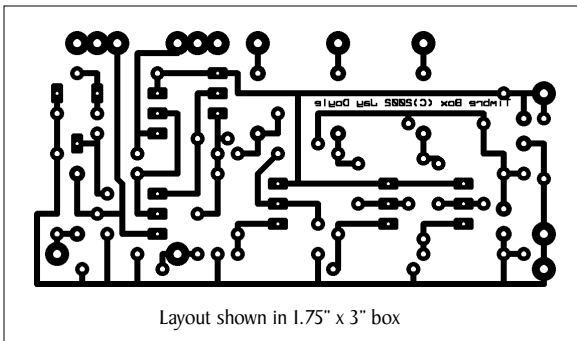
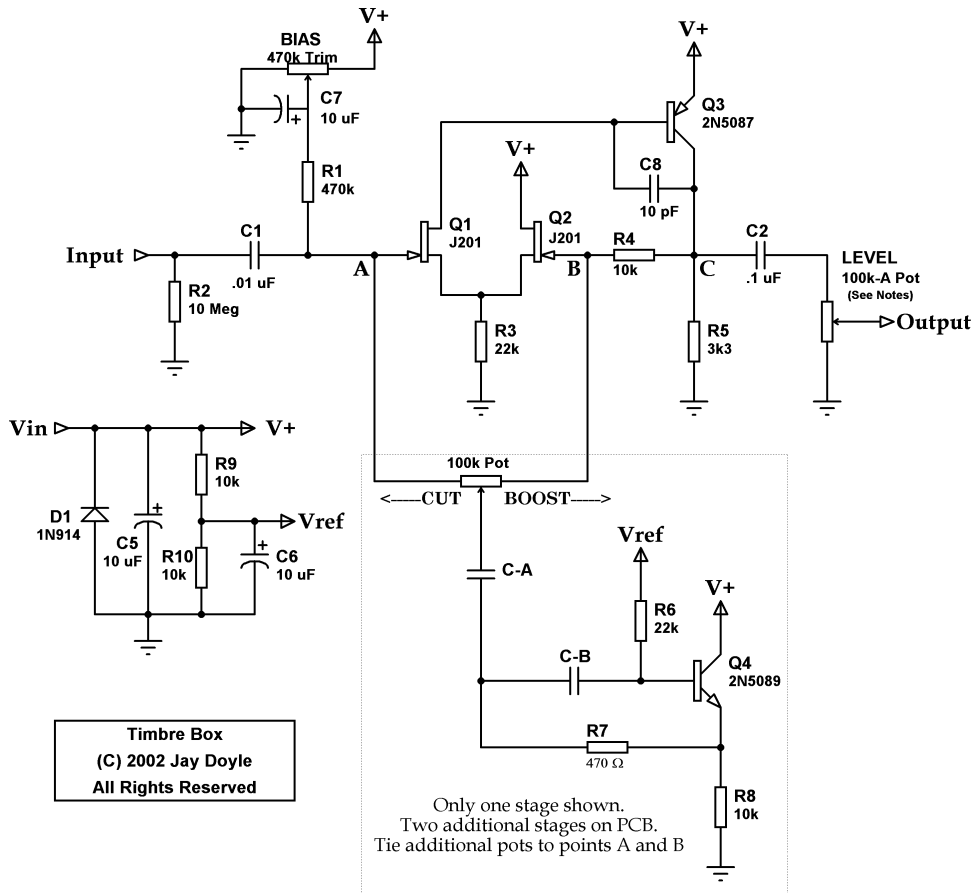


Timbre Box

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TIMBRE BOX

Inspired by Boscorelli, this circuit utilizes a low noise, discrete op amp to attain three parametric EQ sections able to achieve both boost and cut at the center frequency. The operation of the circuit is identical to that of the Ibanez Tube Screamer® tone control, except with a capacitor in series with a simulated inductor, which creates a resonant frequency. Unfortunately, I haven't found any relevant formulas to figure out the simulated inductance, but through simulation I have been able to come up with the chart to the right. The schematic shows an output level pot but if one is not desired a space for an output resistor is supplied to eliminate pops occurring from the output coupling capacitor discharging during switching. To set up the bias, turn "BIAS" trim until the collector of Q3 (point "C" on the schematic) measures 1/2 V+. While this circuit will work on 9V, higher supply voltages will yield better sounding results, just make sure that all capacitors are rated for the voltage used. As always, experimentation is encouraged, once you get the circuit up and running as shown.

Freq _c	Ca	Cb	R7	R8
80 Hz	3.3 uF	.1 uF	470	10k
100 Hz	.047 uF	3.3 uF	470	22k
150 Hz	.22 uF	.47 uF	470	22k
480 Hz	.33 uF	.033 uF	470	10k
550 Hz	.047 uF	.1 uF	470	22k
1 kHz	.047 uF	.047 uF	470	22k
1.5 kHz	.047 uF	.022 uF	470	10k
4 kHz	.01 uF	.01 uF	470	10k