Christine
Oscillating glitch fuzz

Christine is a design by The Tone God (tech.thetonegod.com), which uses a hex inverter chip, the 4049 in linear mode to create a truly insane fuzz. Craig Anderton introduced this chip to guitar effects in his book, Electronic Projects for Musicians. He created a very nice, smooth distortion sound by using the inverters as amplifiers. This design was copied by many distortion pedals over the years.

Christine does things very differently - the goal here isn't smooth "tube sound", but massive, sputtery, velcro-ripping ocillating tones. A wide variety of octave jumping and synth sounds can be coaxed out of it as well. I don't think there's any other project that packs more insanity into fewer parts than this. Since the input is unbuffered, you can even control the oscillation and parameters of the effect using your guitar's volume knob.

Controls

Gain
Oscillator Frequency
Power Starve
Tone
Volume

Bill of Materials

quantity - component [notes]

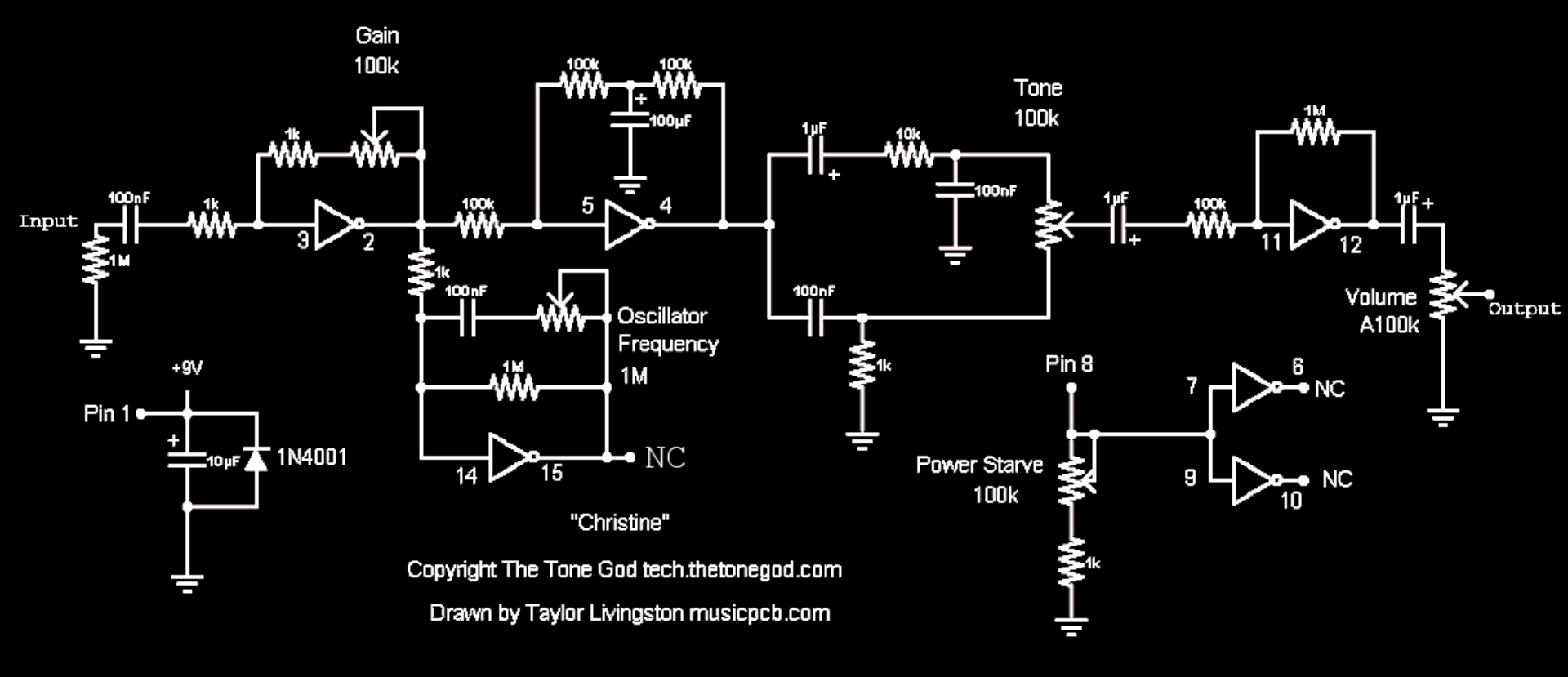
Resistors
5 - 1K
4 - 100K
1 - 10K
3 - 1M
1 - 4K7 [4.7K]

Potentiometers [the board is designed for PCB-mounted pots; Small Bear item#1011]
3 - 100k linear [B100k]
1 - 100k audio taper [A100k]
1 - 1MEG linear [B1M]

1 - 1n4001 diode [marked D1 on the board]

Capacitors
[cap types are only suggestions for what works and fits properly on the board. If you prefer something else and know what you're doing, feel free to substitute]
1 - 100uf electrolytic
1 - 10uf electrolytic
3 - 1uf electrolytic
4 - 100n boxed metal film

ICs
1 - 4049 hex inverter
[CD4049UBE is an unbuffered chip. This will give you slightly more normal sounds, but still lots of craziness. MC14049BCPG is a buffered chip and will make things even more glitchy and weird. Try both and see what you like.]


Gain
100k
Tone
100k
Input
100nF
1k
1M
3
2
100k
100k
100k
100µF
5
4
1µF
10k
100nF
1µF
1M
100k
11
12
1µF
Volume
A100k
Output
1k
100nF
Oscillator
Frequency
1M
1M
14
15
NC
100nF
1k
+9V
Pin 1
10µF
1N4001
Pin 8
7
6
NC
Power Starve
100k
9
NC
10
1k
"Christine"
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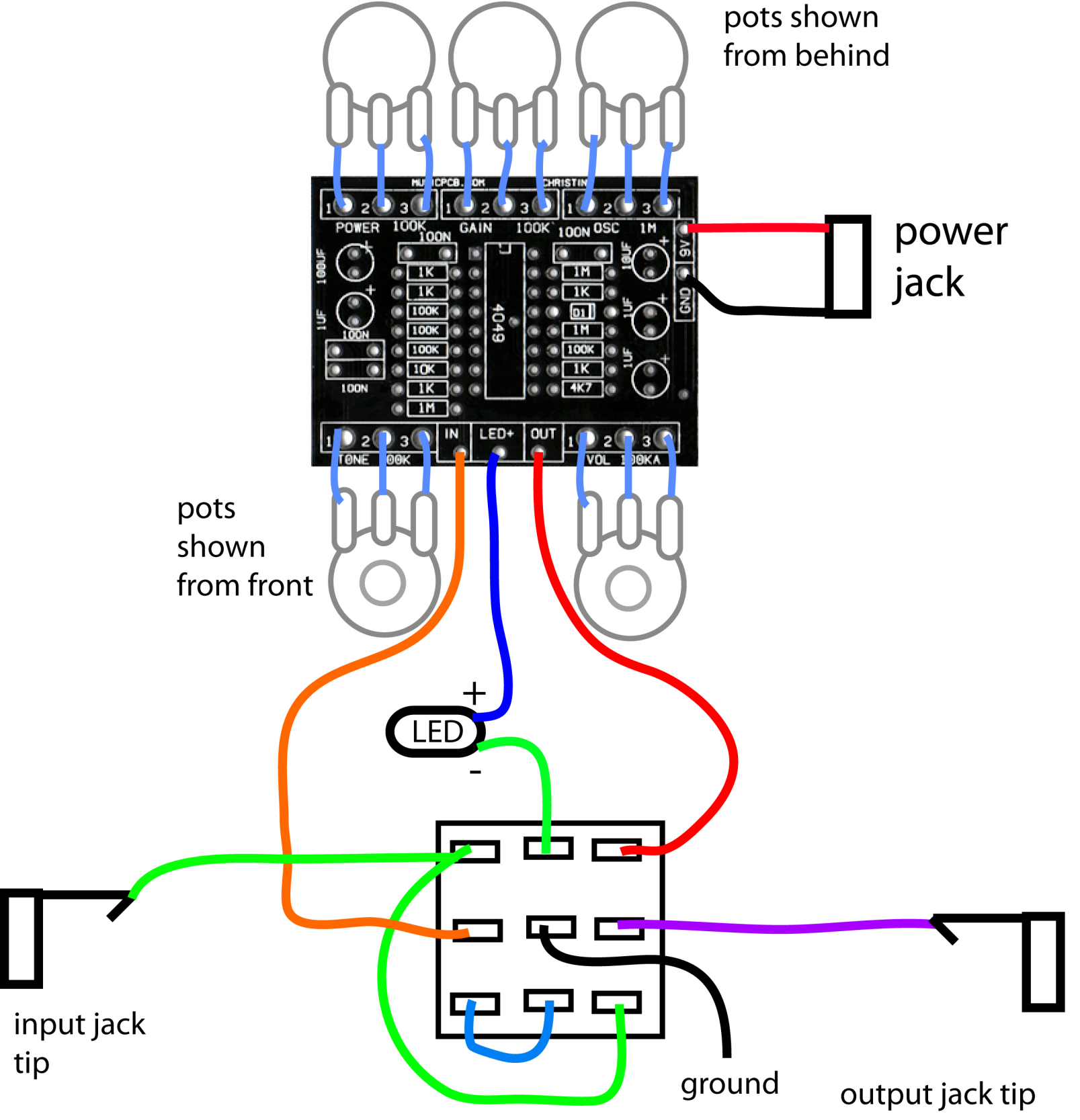

Tie switch ground and input/output jack grounds to power jack negative tab