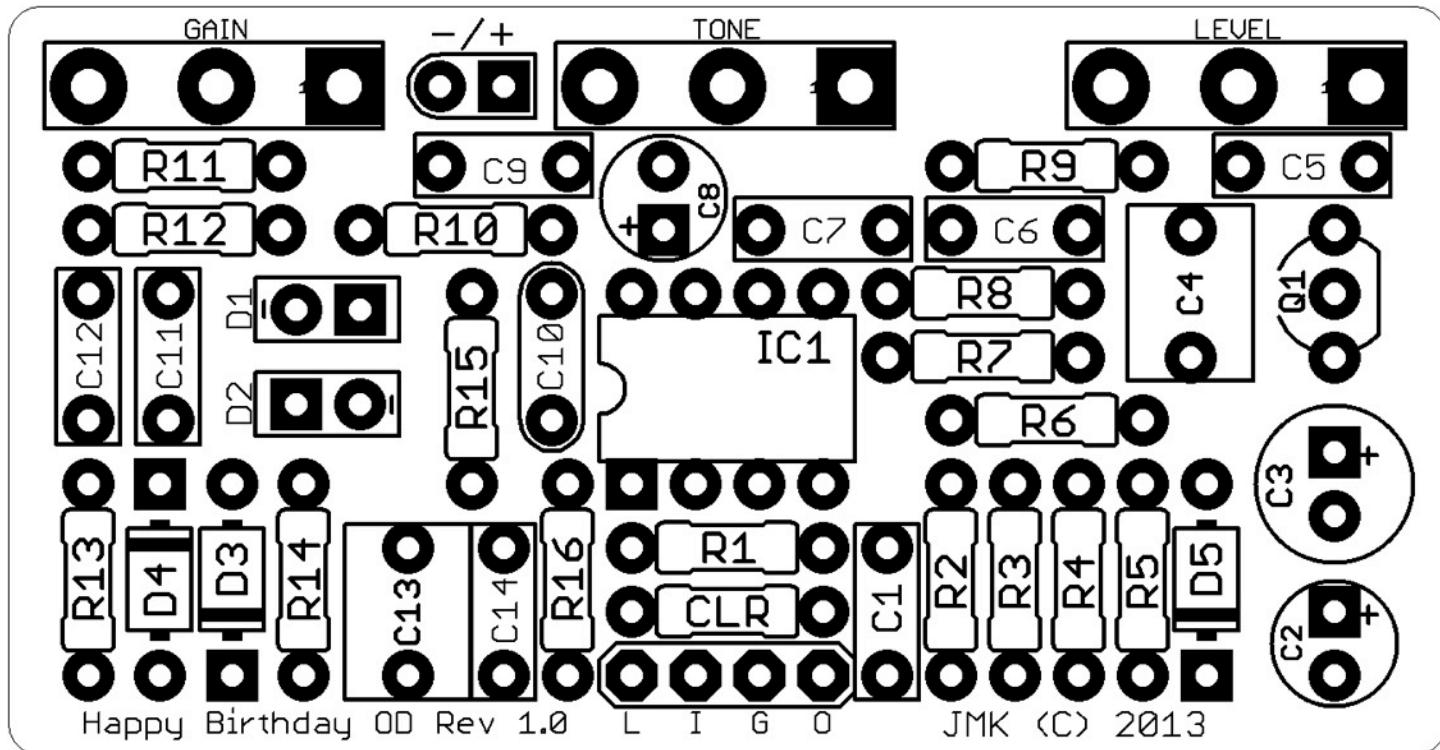


JMK PCBs PRESENTS...

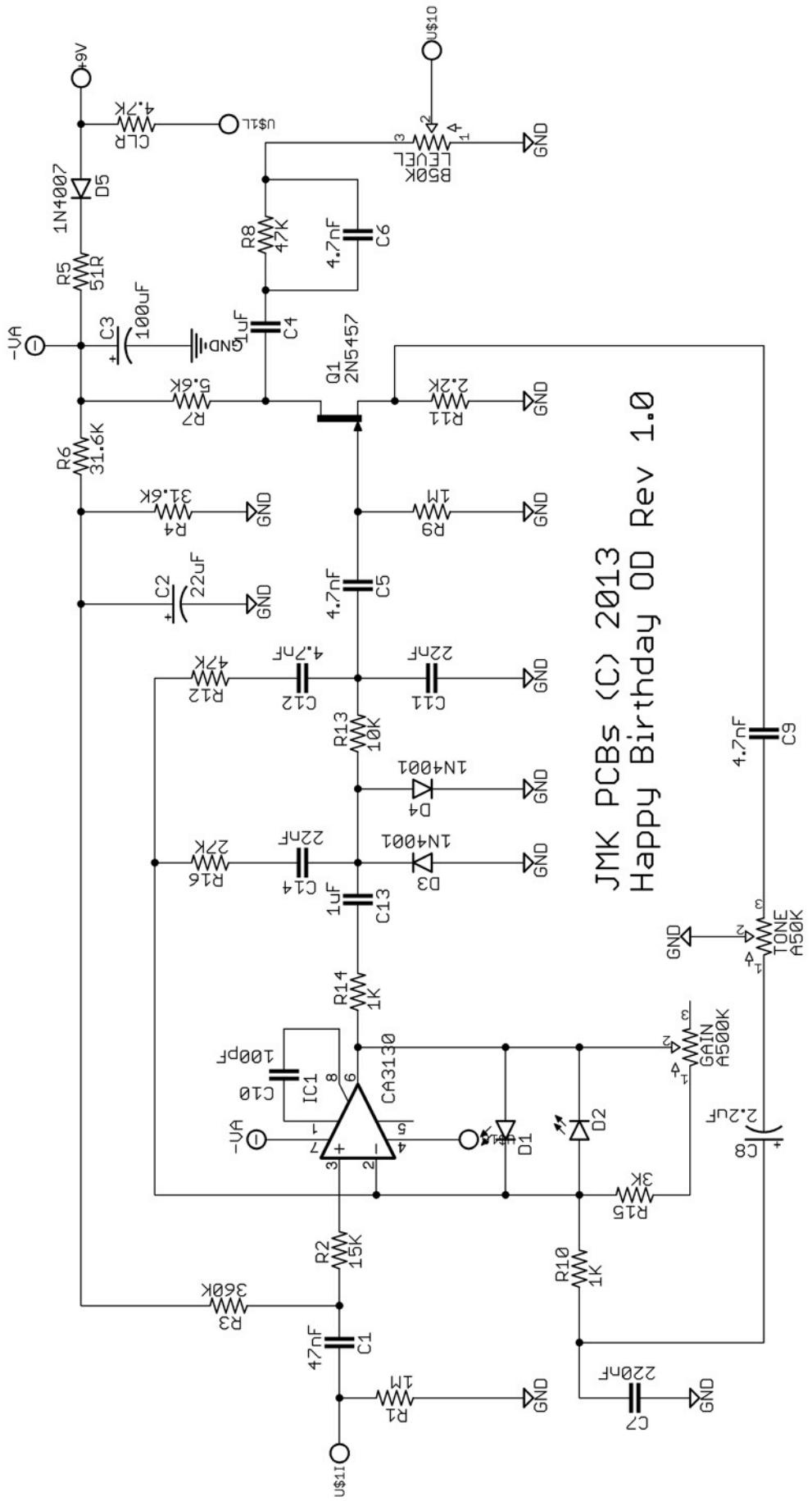
HAPPY BIRTHDAY OD

PCB AND SCHEMATIC ARTWORK (C) 2013 JMK PEDALS
VERSION 1.0: 6/10/2013



Resistors				Capacitors				Semiconductors	
R1	1M	R10	1K	C1	47nF	C8	2.2uF*	IC1	CA3130
R2	15K	R11	2.2K	C2	22uF*	C9	4.7nF	Q1	2N5457
R3	360K	R12	47K	C3	100uF*	C10	100pF	Diodes	
R4	31.6K	R13	10K	C4	1uF	C11	22nF	D1, D2	LED
R5	51R	R14	1K	C5	4.7nF	C12	4.7nF	D3-D5	1N4001
R6	31.6K	R15	3K	C6	4.7nF	C13	1uF	Potentiometer	
R7	5.6K	R16	27K	C7	220nF	C14	22nF	GAIN	A500K
R8	47K	CLR	4.7K					TONE	A50K
R9	1M							LEVEL	B50K

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BUILD NOTES

- The Happy Birthday OD is about a clone of a popular overdrive, the HBOD. The circuit has been cloned many times out there, and our layout is just one version of this circuit.
- Hooking up the PCB is pretty simple, but to clarify: L = the connection for the + end of an LED; I = PCB Input; G = Ground for the Switch; O = PCB Output; + = 9V input; - = Ground for DC Jack
- It should be noted that there are several odd parts in the BOM for this project. Below are some common substitutes for these parts. You can find precise parts if you would like, but in most cases the common values are going to give the same tonal response.

Part Number	Original Value	Common Substitute
R4, R6	31.6K	33K
IC1	CA3130	TL071

- Like with most overdrives, the IC and Diodes are integral to the tone output. Pretty much any single op amp can be used, and pretty much any diodes can be used. Keep in mind that the pinout of the IC needs to be considered when installing. **We highly recommend socketing your IC and Diodes!** Socketing allows you to switch your parts out easily if you have it installed incorrectly and also allows you to swap out and try other ICs to see which you like the best. Options for the IC would include, but is not limited to: CA3140, TL061, TL071, NE5534 and LM386. Options for diodes are just about limitless, but LED and silicon are preferred in many cases.

TRUE BYPASS WIRING DIAGRAM

