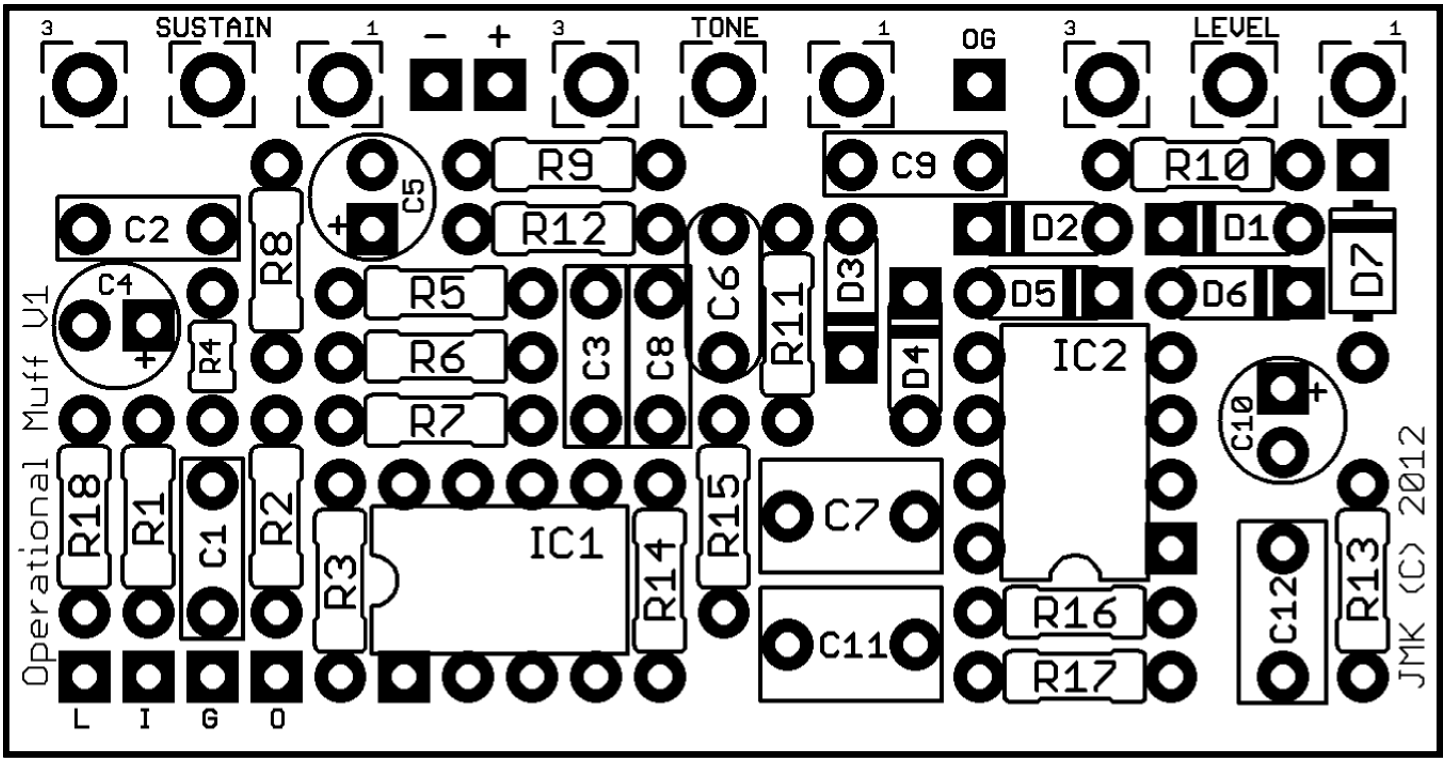
JMK PCBS PRESENTS...

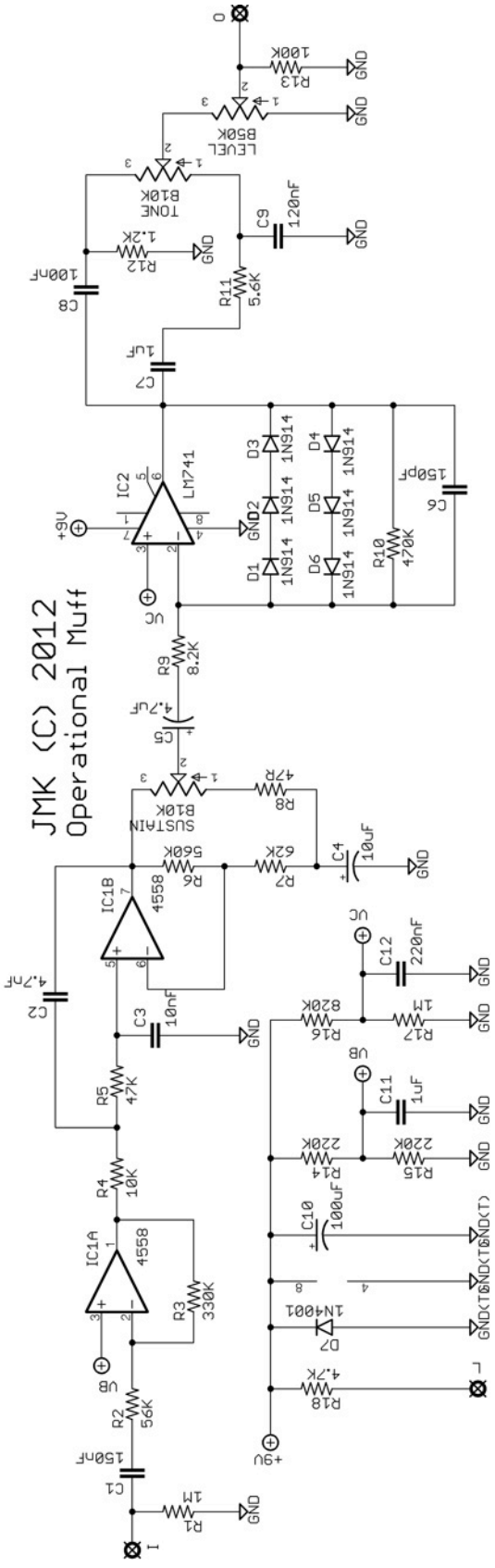
OPERATIONAL MUFF

PCB AND SCHEMATIC ARTWORK (C) 2012 JMK PEDALS

VERSION 1: 10/8/2012



Resistors				Capactitors				ICs	
R1	1M	R10	470K	C1	150nF	C7	1uF	IC1	JRC4558
R2	56K	R11	5.6K	C2	4.7nF	C8	100nF	IC2	LM741
R3	330K	R12	1.2K	C3	10nF	C9	120nF	Diodes	
R4	10K	R13	100K	C4	10uF*	C10	100uF*	D1-6	1N914
R5	47K	R14	220K	C5	4.7uF*	C11	1uF	D7	1N4001
R6	560K	R15	220K	C6	150pF	C12	220nF	Potentiometers	
R7	62K	R16	820K					SUSTAIN	B10K
R8	47R	R17	1M					TONE	B10K
R9	8.2K	R18	4.7K					LEVEL	B50K



Build Notes

• The Operational Muff is a Op Amp or IC Muff clone. The Op Amp Muff is different than the typical transistor based muff in that it's fuzz comes from a combination of Op Amp gain stages and clipping diodes, whereas the classic Muff uses only transistors.

• Hooking up the PCB is pretty simple, but to clarify: L = the connection for the + end of an LED (CLR is marked on the board); I = PCB Input; G = Ground for the Switch; O = PCB Output; + = 9V input; - = Ground for DC Jack; OG = Extra Ground for a 1/4" Jack

• Unlike with most Fuzz Pedals, there are no transistors for creating the fuzz sound. Instead, the ICs and diodes chose may influence the particular sound you get operating this circuit. Try switching out IC2 using various single Op Amps for the most direct influence on the fuzz sound using the ICs. Try socketing or playing with the clipping diode configuration as well.

• **We highly recommend socketing your ICs and Diodes!** Socketing allows you to switch your ICs and Diodes easily, and also allows you to swap out and try other transistors to see which you like the best. Diode options to try include, but are not limited to: 1N4148, 1N4001, BAT41, various Germanium options like the 1n34a and 1n60, and diffused LEDs. For ICs, try using: LF356, CA3130, or the classic TL071. Don't forget to check your pinouts to make sure they match up with the LM741 specified in the Schematic.

True Bypass Wiring Diagram