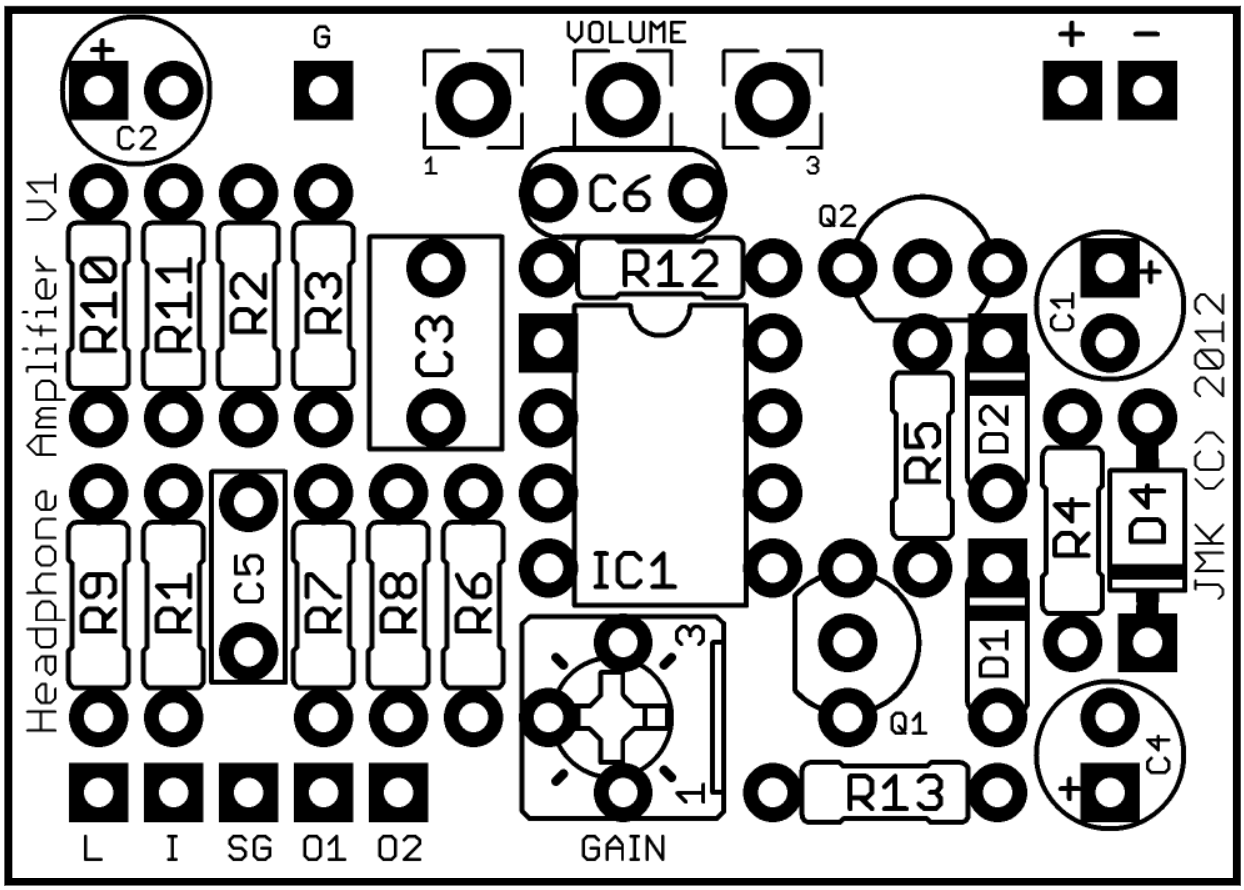
JMK PCBS PRESENTS...

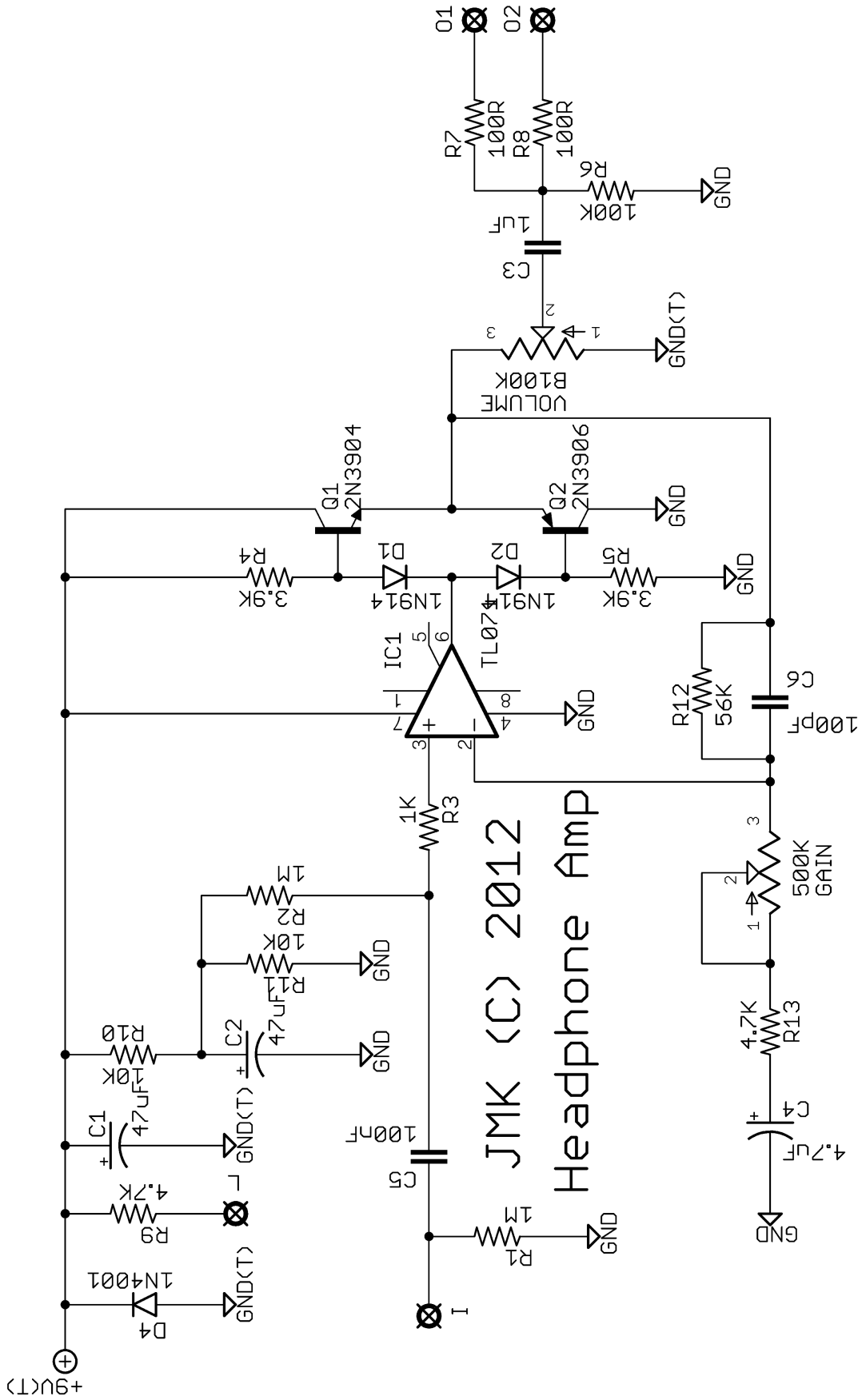
HEADPHONE AMPLIFIER

PCB AND SCHEMATIC ARTWORK (C) 2014 JMK PEDALS

VERSION 1.0.1: 10/1/2014



Resistors				Capactitors		Transistors	
R1	1M	R8	100R	C1	47uF	Q1	2N3904
R2	1M	R9	4.7K	C2	47uF	Q2	2N3906
R3	1K	R10	10K	C3	1uF	Potentiometer	
R4	3.9K	R11	10K	C4	4.7uF	VOLUME	C100K
R5	3.9K	R12	56K	C5	100nF	GAIN	500K
R6	100K	R13	4.7K	C6	100pF	Diodes	
R7	100R			ICs		D1, D2	1N914
				IC1	TL071	D4	1N4001



Build Notes

• The Headphone Amplifier is a modified version of a typical Headphone Amplifier. Whereas the original only featured a single control for the gain of the circuit, the JMK Headphone Amplifier PCB features a trim pot gain control and an output volume control. This allows for more overall control, giving the user the ability to maintain a more realistic volume level while listening to a guitar through the unit.

• The output is doubled so the builder can use a stereo jack for a stereo set of Headphones. Out 1 connects to the tip, and Out 2 connects to the ring of your output jack. Keep in mind that this is not a 'true stereo' output, each of these signals is identical. If you want a 'true stereo' effect, you could use two JMK Headphone Amplifier PCBs and run only one output of each to the tip and ring of your stereo jack. If doing so, we recommend using a Dual Gang Potentiometer to keep the level of each headphone amplifier identical You can also use this effect in mono, tying only one of these outputs to the tip of the mono output jack, however, if you plan to use stereo headphones you will only hear the signal in one earphone.

• The headphone amplifier is capable of driving small speakers for output as well as driving headphones. Consider using a 2"-4" speaker with your headphone amplifier for a mini practice amp. Keep in mind that adjustments may need to be made to the circuit in order to properly output a clean signal in this manner. We haven't tested this, it's just a feasible idea.

• Keep in mind that because this effect uses a mono input and a stereo output, it isn't the sort of effect to truly utilize a bypass switch effectively. If you decide to use this effect with a bypass switch, we recommend using a 3PDT switch with no LED, OR use a 4PDT switch with LED.

• Hooking up the PCB is pretty simple, but to clarify: L = the connection for the + end of an LED (CLR is R9); I = PCB Input; SG = Ground for the Switch; O1 = PCB Output 1; O2 = PCB Output 2; + = 9V input; - = Ground for DC Jack; G = Extra Ground