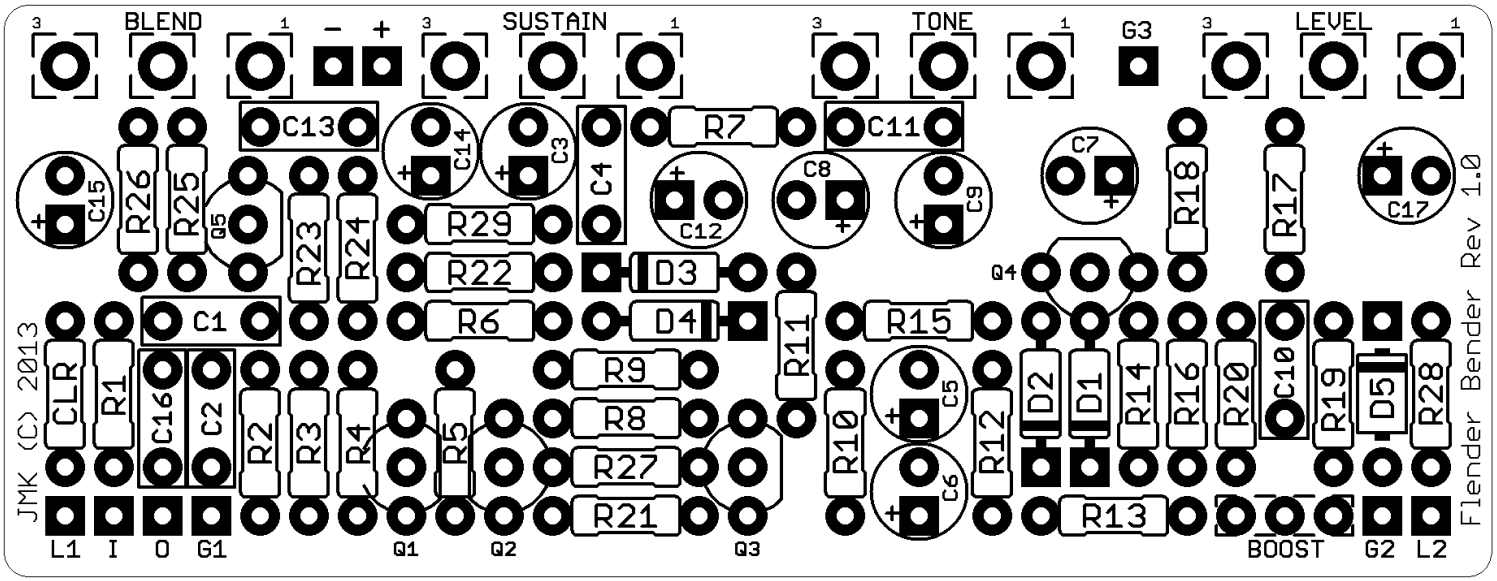
JMK PCBS PRESENTS...

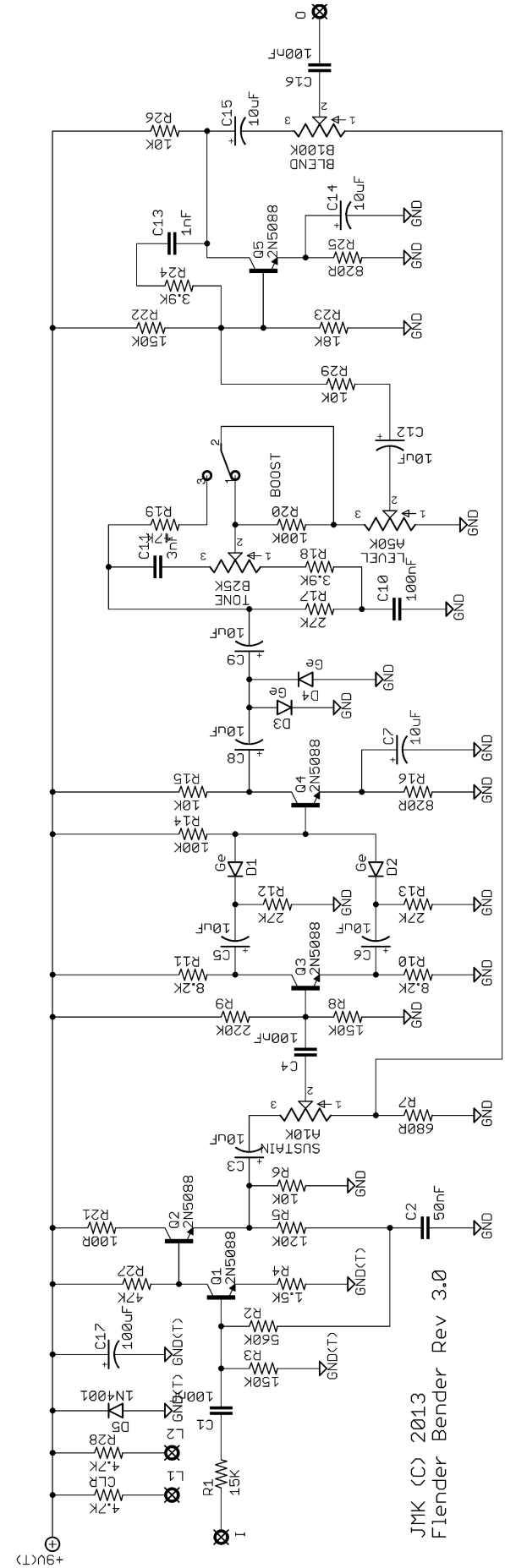
FLENDER BENDER

PCB AND SCHEMATIC ARTWORK (C) 2013 JMK PEDALS

VERSION 1.0.2: 8/31/2015



Resistors						Capactitors				Transitors	
R1	15K	R11	8.2K	R21	100R	C1	100nF	C10	100nF	Q1-Q5	2N5088
R2	560K	R12	27K	R22	150K	C2	50nF	C11	3nF	Diodes	
R3	150K	R13	27K	R23	18K	C3	10uF*	C12	10uF*	D1-D4	Ge
R4	1.5K	R14	100K	R24	3.9K	C4	100nF	C13	1nF	D5	1N4001
R5	120K	R15	10K	R25	820R	C5	10uF*	C14	10uF*	Potentiometer	
R6	10K	R16	820R	R26	10K	C6	10uF*	C15	10uF*	SUSTAIN	A10K
R7	680R	R17	27K	R26	47K	C7	10uF*	C16	100nF	TONE	B25K
R8	150K	R18	3.9K	R28	4.7K	C8	10uF*	C17	100uF*	LEVEL	A50K
R9	220K	R19	47K	R29	10K	C9	10uF*			BLEND	B100K
R10	8.2K	R20	100K	CLR	4.7K					OTHER	
										BOOST	SPDT



Build Notes

• The Flender Bender is a clone of a classic fuzz, the Fender Blender. Originally an 'old school' pedal, it was redesigned and released recently (say that 10 times fast). This version is based off the original, but with some small adjustments for modern DIY pedal building standards.

• This is a super quirky fuzz. Don't think it's going to be like your classic Muff - it won't be. It's got a hint of octave stuff in there, can achieve almost ring mod type sounds, and it's one super heavy, very glitchy type fuzz. You can achieve some 'almost' normal type sounds, but one of the things you might find is that it's hard to get really good, long, decay like you might find on a Fuzz Face or Muff. The Flender Bender has more of a gated decay, so at some points you might find it just stops in the middle of a long held note. Keep that in mind as you play with it, and be careful to play with the full rotation of ALL the knobs to find sounds you like.

• While the BOM calls for a SPDT as a switch, you should consider using a 2PDT footswtich instead, which would allow you to make use of the LED pads beside the Boost switch. Simply wire the LED's + lead to the L2 pad, and then the - to either one of the lugs on the remaining DPDT pole. Then wire the middle lug to the G2 pad.

• 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
C2	50nF	47nF
C11	3nF	3.3nF

• Like with most Fuzz Pedals, the Transistors are an integral part of the sound. This ESPECIALLY holds for this pedal. Pretty much any NPN BiPolar Silicon transistor can be used. Keep in mind that the pinout of the transistor needs to be considered when installing. **We highly recommend socketing your transistors!** Socketing allows you to switch your transistors easily if you have installed them backwards, and also allows you to swap out and try other transistors to see which you like the best. Options to try include, but is not limited to: 2N5088, 2N5089, BC549, BC550, BC560, 2N5113, BC239.

• You can build this pedal in several different enclosures sizes, but we highly recommend going for a 1590BB or larger enclosure. Usually, the Flender Bender would feature two stomp switches (bypass and tone boost), and with the size and orientation of the PCB, you'd be wise to consider a 125BB, 1590BB, or even a 1590Q size box.

• Hooking up the PCB is pretty simple, but to clarify: L1 = the connection for the + end of the bypass LED (CLR is marked); I = PCB Input; O = PCB Output; G1 = Ground for the bypass switch; + = 9V input; - = Ground for DC Jack; G3 = Extra Ground for 1/4" Jack; G2 = Ground for the Boost LED; L2 = the connection for the + end of they boost LED

True Bypass Wiring Diagram