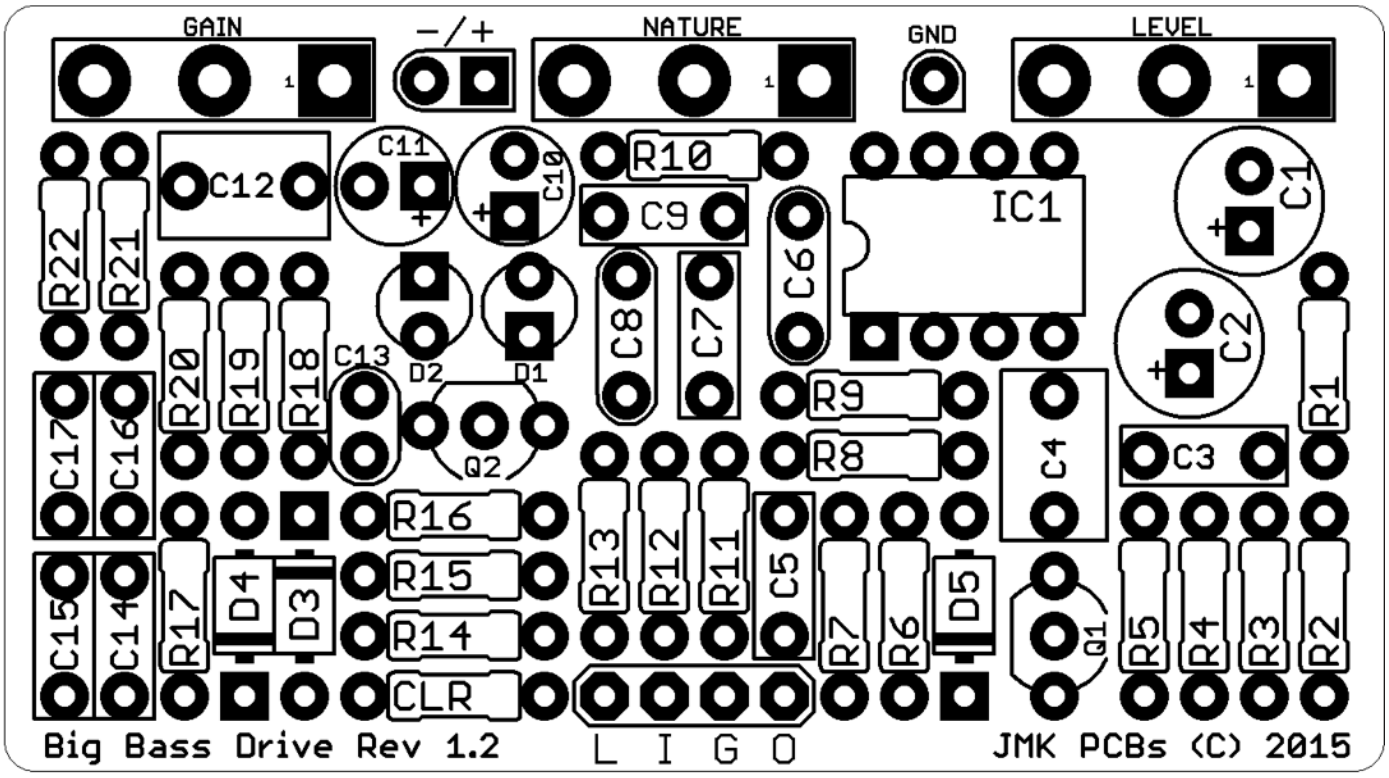
JMK PCBS PRESENTS...

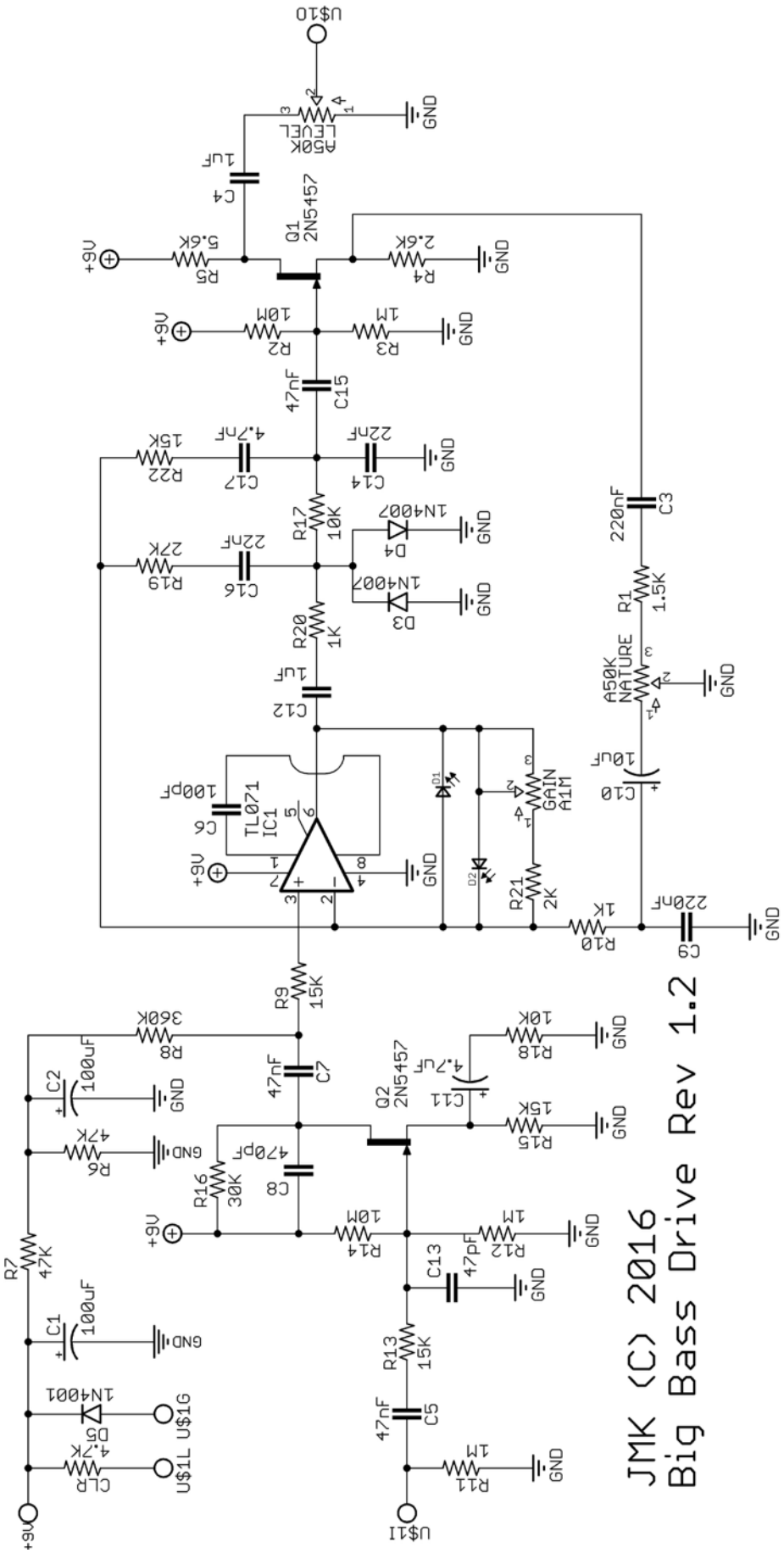
Big Bass Drive

PCB AND SCHEMATIC ARTWORK (C) 2016 JMK PCBS

VERSION 1.2: 11/19/2016



Resistors						Capactitors				Semiconductors	
R1	1.5K	R11	1M	R21	2K	C1	100u	C11	4.7u	Q1, Q2	2N5457
R2	10M	R12	1M	R22	15K	C2	100u	C12	1u	IC1	CA3130
R3	1M	R13	15K	CLR	4.7K	C3	220n	C13	47p	Diodes	
R4	2.6K	R14	10M			C4	1u	C14	22n	D1, D2	Green LEDs
R5	5.6K	R15	15K			C5	47n	C15	47n	D3, D4	1N4007
R6	47K	R16	30K			C6	100p	C16	22n	D5	1N4001
R7	47K	R17	10K			C7	47n	C17	4.7n	Potentiometer	
R8	360K	R18	10K			C8	470p			GAIN	A1M
R9	15K	R19	27K			C9	220n			TONE	A50K
R10	1K	R20	1K			C10	10u			LEVEL	B50K



Build Notes

• The Big Bass Drive is a clone of a modern bass overdrive. It shows many similarities to other designs from the same maker, but it essentially uses a pair of Jfet gain stages as input and output buffers while creating a drive and tone control section based around a single op amp. This makes for a pretty awesome tone, but a high parts count.

• Missing from this build, as compared to many Bass Drives, is a 'blend' circuit which is very handy for overdrives for Bass. If you really value a blend of clean and dirt for you Bass signal, consider boxing the Big Bass Drive along with the Panner PCB, also available from JMK PCBs. These two circuits together will allow you to go from true dry only to true wet only, with a myriad of options between.

• 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; GND = Extra Ground for 1/4" 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
R16	31.6K	30K, 33K
IC1	CA3130	TL071

• The original transistors for this design were BF244a, which are both difficult to come by from typical DIY suppliers, and also unnecessary to be found. Because these are simple gain stages, many values will do. We have set this version up to use a 2N5457 type pinout, so if you do choose to use the BF244a, please make adjustments to the transistor for the different pinout. **We highly recommend socketing your transistors!** Other options to try include, but are not limited to: 2N5952, 2N5458, and J201

• Similar to the transistors, the IC used is not a common type as well, though it is more commonly found from typical DIY suppliers. Keep in mind that the pinout of the IC needs to be considered when installing. **We highly recommend socketing your IC!** Options to try include, but is not limited to: CA3140, TL061, TL071, NE5534 and LM386.

True Bypass Wiring Diagram