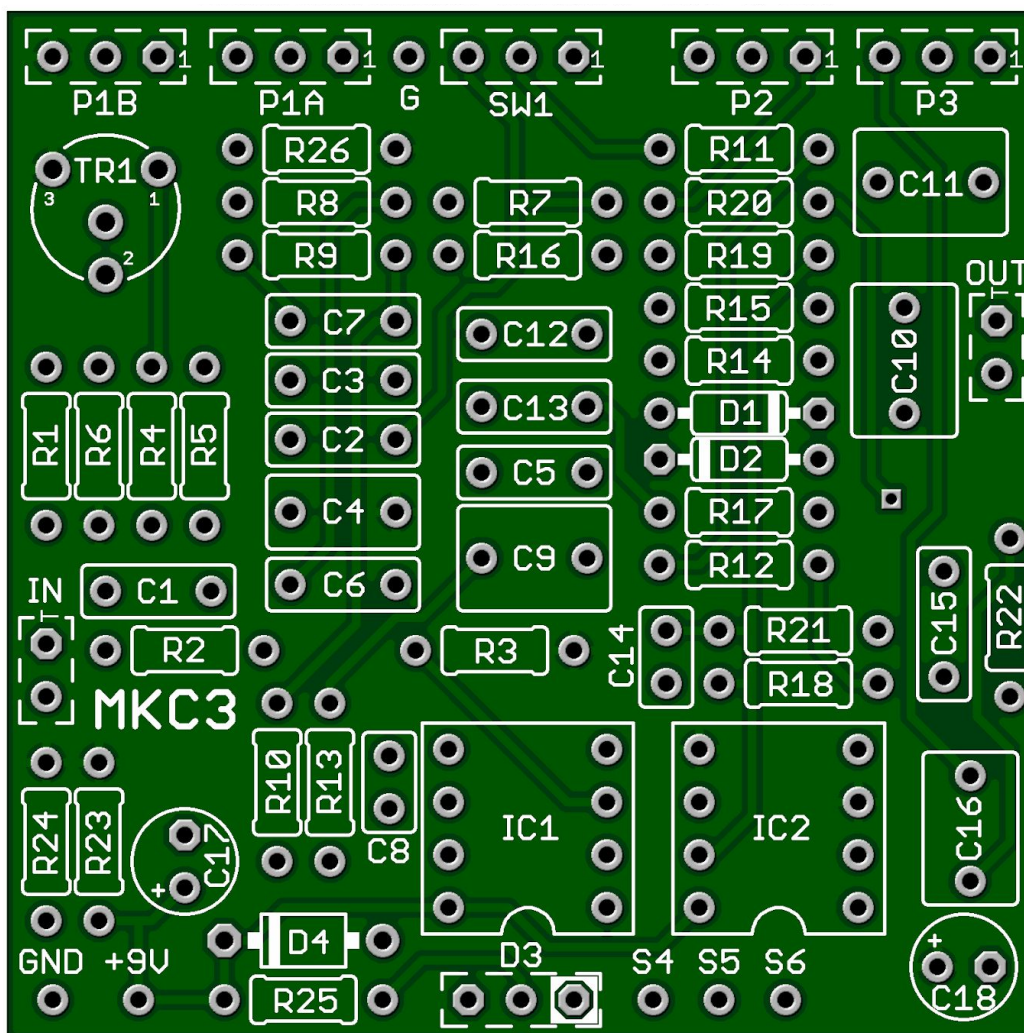


## MKC3 - Modified Klon style Circuit



R1	1M	R14	22k	C1	100n	C14	820p	SW1	SPDT
R2	10k	R15	47k*	C2	100n	C15	4n7		
R3	1M	R16	22k	C3	68n	C16	470n	TR1	100k
R4	4k7	R17	10k	C4	390n	C17	47μ		
								P1A	
R5	1k	R18	470k	C5	100n	C18	47μ	GAIN 1	100k Lin
								P1A	
R6	1k5	R19	2k2	C6	68n			GAIN-2	See Text
R7	10k	R20	4k7	C7	100n	D1	1N34A	TREBLE	10k Lin
R8	2k2	R21	100k	C8	390p	D2	1N34A	VOL	50k Log
R9	15k	R22	100k	C9	1μ				
R10	470k	R23	22k	C10	1μ	D3	CA Bi-color LED		
R11	1k5	R24	22k	C11	1μ	D4	1N4001		
R12	15k	R25	3k3	C12	2n2	IC1	TL072		
R13	1k	R26	68k*	C13	22n	IC2	TL072		

**\*\*Take your time building this. There are a lot of components!**

**Be careful not to mix values like 390pF and 390nF it is a huge difference!**

**Avoid thin glass 1N34A's from China, slightest crack will cause a failure. 1N60 works well.**  
**Buy good quality diodes from GuitarPCB, Mouser or Small Bear if in stock.**

**Alternate IC Chips to TL072 could be NE5532 or and OPA2134PA. Socket and See!**

## MODIFICATIONS

The following mods can be made to the circuit board:

If you do not wish to include the **Bass Boost** switch (SW1) do not install C5 and put a jumper between pads 2 & 3 of SW1.

The original circuit calls for a 100 kΩ Lin stereo pot for the GAIN and GAIN-2 pot. As a stereo pot takes up space (especially if you want to use a small sized enclosure) we have decided to include a few options here.

If you wish to use a stereo pot, do not install the trim pot (TR1) use the GAIN pads on the board for one of the stereo pots and the GAIN-2 pads for the other stereo pot.

You could use two 100 kΩ Lin mono pots, one for GAIN 1 and the other for GAIN-2, in this case do not instal the trim pot TR1.

As neither of the above options are satisfactory in terms of enclosure space, we have included the option of changing the GAIN-2 pot to a trim pot (TR1). **Gain 2 control (P1B)** with the trimmer option is **extremely subtle** and that is why we made it available as a trimmer in our version. The only purpose of it is to mix in more or less clean signal and nothing else. Again it is very subtle.

It is similar to a **Blend Control** but only adds or subtracts clean signal only!

This is the way the circuit is originally designed and supposed to function. Most of the gain or better distortion comes from **P1A**.

If using a Dual Gang potentiometer you would not even notice this at all. It is just the way it was designed to **Blend** a very small bit of clean signal to your dirty signal to give it the signature Klonstyle Boost sound.

\* With the MK3 note we added R26 will compensate for those who wish to turn all knobs up to “11” there can be a “squeal” in some builds. This fixes that problem which is due to tolerances in components. Anything from 47k to 100k should be fine. I have had great success with 47k. If you need more then use a slightly higher value. Those with an older version can easily add this resistor to their build in series quite easily.

### **\*Ultra Drive Mod – This Mod is not Standard for Kits!**

This is an excellent Mod and I highly recommend it.

As most people know the original circuit is most well known as a Clean to Mild Gain Boost to give an already driven amp that something extra! This mod will add an additional switch to your pedal to simulate that and give you that extra boost of Drive. One of my **DPDT Wiring Boards** is handy.

You can use it with just a DPDT On/On Toggle switch and choose between stock (**R15 – 47k**) and Ultra Drive Mode ranging anywhere between 4.7k to 10k. I like 8.2k in mine. Socket and see!

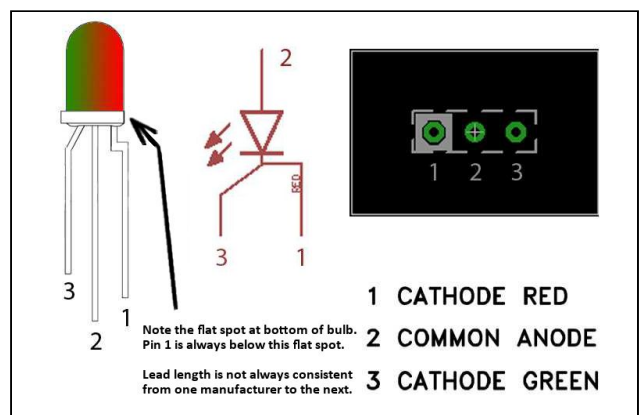
If you use my **DPDT wiring board** you can easily socket the Mod side and choose the correct value you like best for your personal rig and taste.

### STATUS LED

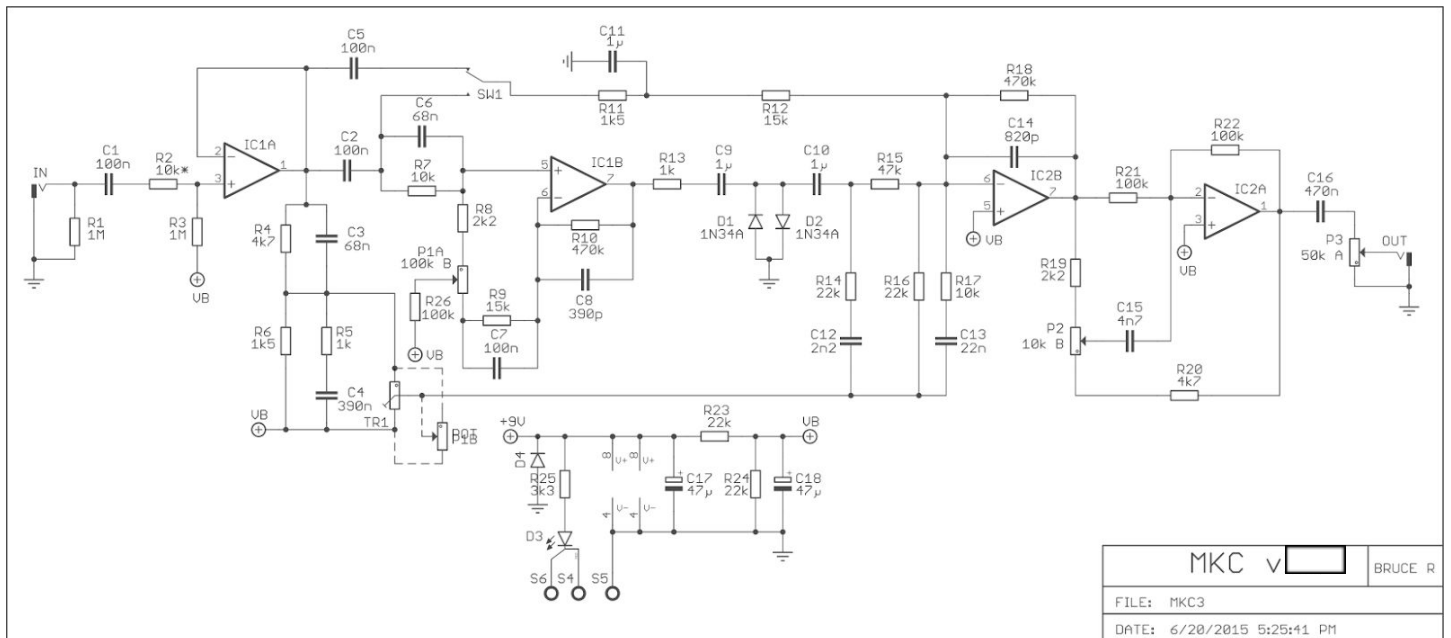
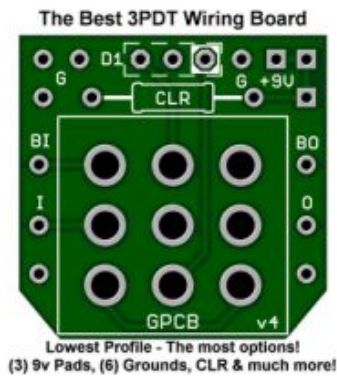
D3 is a common anode bi-color LED. The diagram at right shows the pin-out, schematic symbol and pad connection for a common anode LED. The pin-out for the bi-color LED is typically (but not always) as follows:

The lead 1 pad on the circuit board is marked with a white box.

When connected correctly, the LED will light red when power is applied and the circuit is in bypass mode. The LED will light green when in effects mode. **If you wish to use a standard LED, connect the anode to the middle pad and the cathode to the right (non-white) pad to show the circuit in effects mode.** If you use a 3PDT wiring board that includes an LED, you can omit this LED and R25. \*R25 is the LED's Current Limiting Resistor (CLR). If you use a different LED, you may want to change this value to adjust LED brightness.

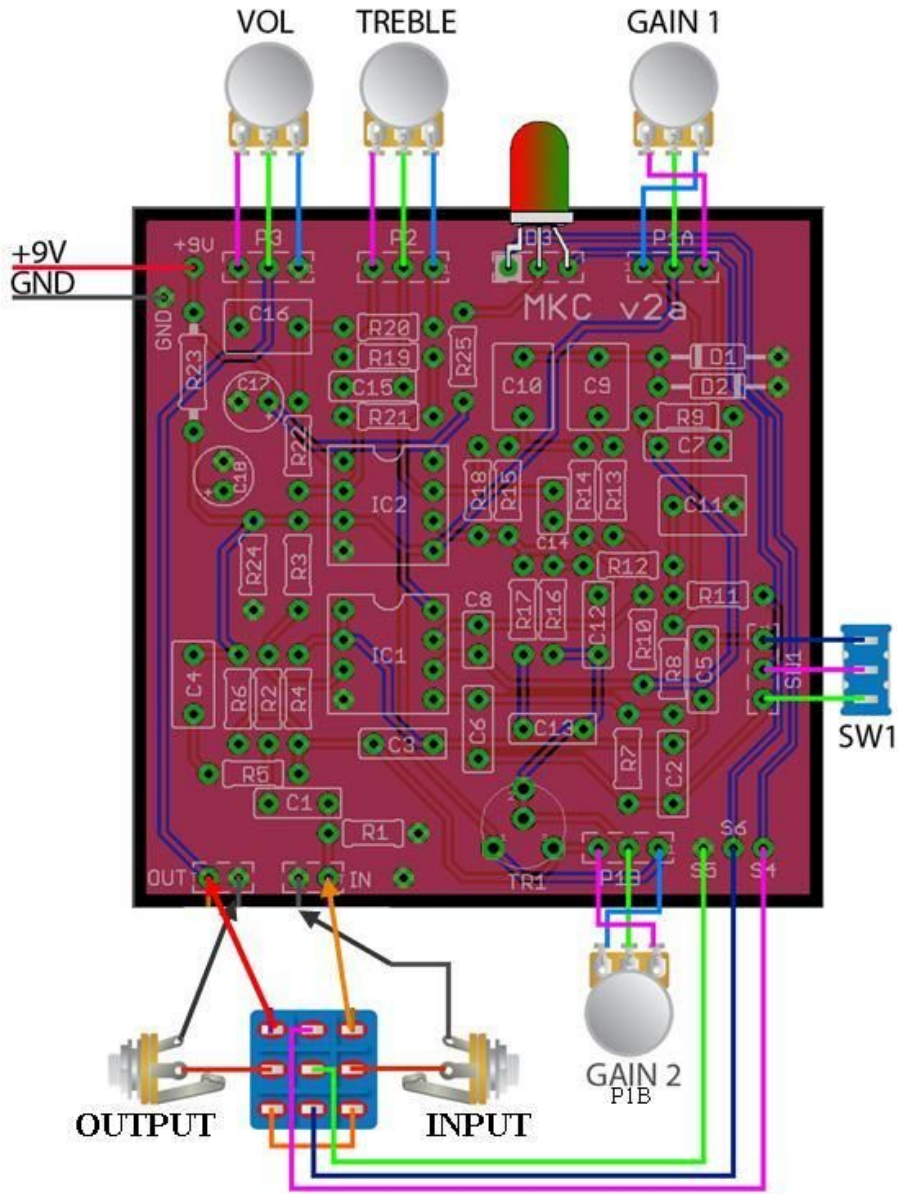


If you are using one of GuitarPCB's handy 3PDT wiring boards, pads S4, S5, S6 and D2 would be ignored and R25 would not be installed. See wiring guide below for reference.



## Wiring Diagram

For Input and Output from the circuit board always use the pad marked (T) the other is ground. This diagram is from an earlier version of the board, less condensed and a few connections have been moved from the original version but the wiring connections remains exactly the same.



Socket your Transistors<sup>o</sup>

You may wish to change them later and makes troubleshooting a lot easier.

**IC's and transistors are easily damaged by heat from soldering and should never be directly soldered to the PCB.**

For transistors, diodes, and LED's, use SIP (Single inline package) sockets. You simply cut the number of sockets required with an Exacto / Stanley knife or by gripping and rocking with pliers. This allows for easy changes and troubleshooting.

