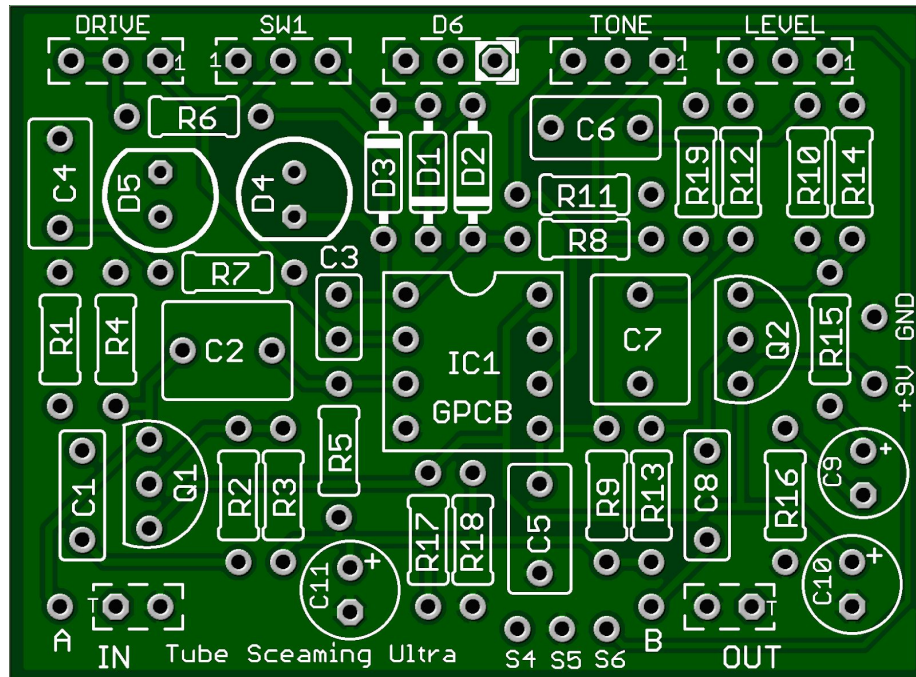


# Tube Screaming Ultra by GuitarPCB

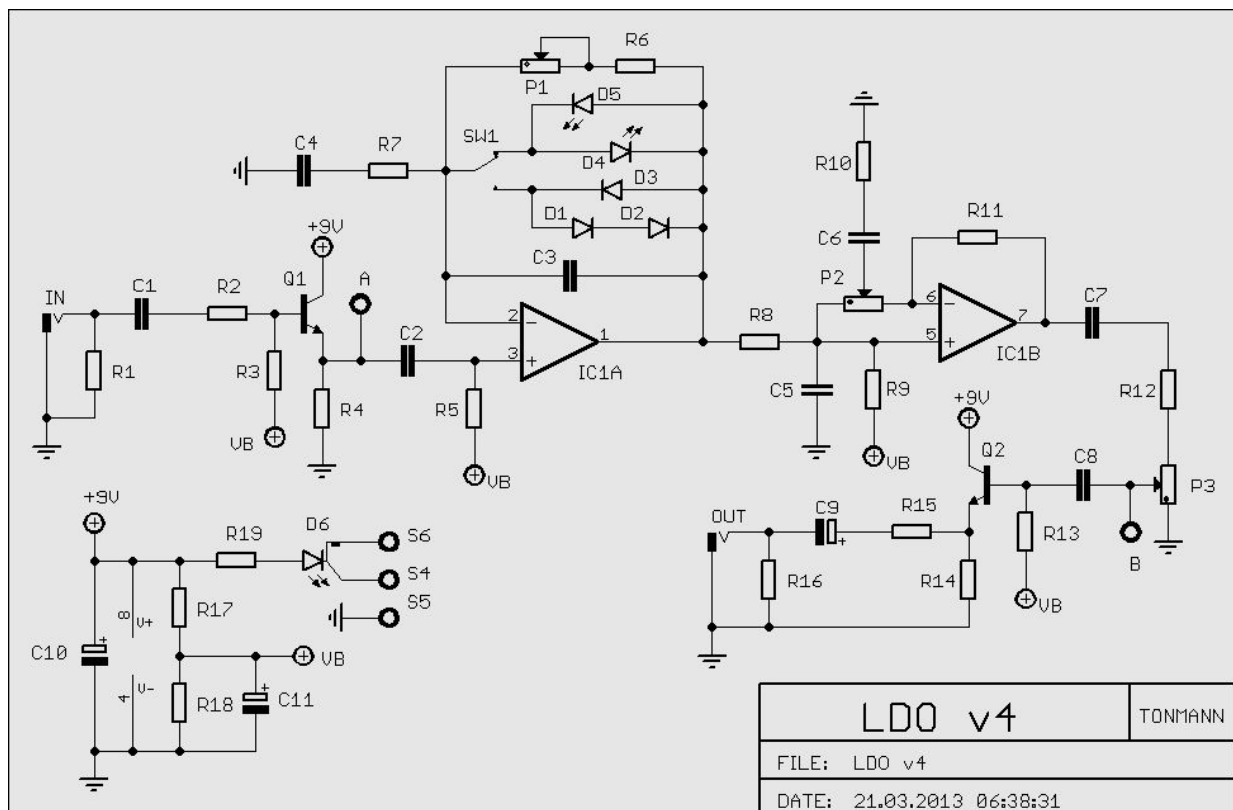
Multiple Boutique TubeScreamers all featuring switchable Diode/Opamp Clipping.

- Landgraff Dynamic Overdrive
- Robin Trower Style Drive
- Classic Ibanez TS808 Style Drive
- King Of T.S. Style Tone!



Board Dimensions (W x H) 2.05" x 1.51" ca. 52 mm x 38.4 mm

Our circuit features an On/Off/On clipping switch SW1 to add Ultra flexibility by offering LED Clipping as well as Stock Diode and pure Opamp clipping which enhances each build while always retaining their stock options.



All builds contain the stock quality buffer. Instructions are available below on how to build without a buffer.

R1	1M		C1	22n		D1	1N914
R2	1k		C2	1 $\mu$ *	<b>22n</b>	D2	1N914 **
R3	510k		C3	51p	51p	D3	1N4001
R4	10k	<b>1M</b>	C4	220n	220n	D4	LED
R5	10k	<b>470k</b>	C5	220n	220n	D5	LED
R6	10k	<b>18k</b>	C6	220n	220n	D6	CA Bi-colour LED
*R7	1k	<b>4k7</b>	C7	1 $\mu$ *	1 $\mu$ *		
R8	1k	1k	C8	100n	100n		** Replace with a jumper for symm
R9	10k	10k	C9	10 $\mu$	10 $\mu$		
R10	220R	220R	C10	100 $\mu$	<b>10<math>\mu</math></b>	P1 DRIVE	B1M LDO / B500k others
R11	1k	1k	C11	47 $\mu$	<b>10<math>\mu</math></b>	P2 TONE	25k Lin
R12	1k	1k				P3 LEVEL	100k Log
R13	510k	510k					
R14	10k	10k	<b>Buffer</b>			SW1	SPDT On-Off-On
R15	100R	100R	Q1		2N5088		
R16	10k	100k	Q2		2N5088		
R17	10k	10k					
R18	10k	10k	<b>IC1</b>		JRC 4558		
R19	*1k8	*1k8					

### Build Notes and Mods:

Q1 and Q2 are purely buffer stages, the choice of transistors is **relatively unimportant**, we have chosen 2N5088 as they are easily obtainable and have **excellent noise specifications** for a quality buffer.

### Four Build Ideas:

1. **LDO** or **Landgraff** boutique build uses all components as listed in black (not highlighted).
2. **RTO** aka **Robin Trower Style** build differs in that the **Input Buffer is not used**, **D2** is replaced by a jumper to give symmetrical clipping and all component values are (marked in yellow). Value Changes are marked in **BOLD**. To remove the input buffer from the circuit **do not install R1, R2 R3, C1 and Q1**. The **input wire** from the switch is connected to **pad A** instead of the **IN pad**.
3. **808 Style Build Notes:** Use all Landgraff Dynamic Overdrive values with these exceptions **C4:** 47n, **Gain Pot:** B500k, **R7:** 4k7, **R6:** 51k and **IC** is 4558.
4. **King of T.S. Tones Note:** Build two boards in series. Build two different styles to be used in tandem. R/B

**Mod Idea:** If you used a 1M potentiometer for the Gain control and decide it is too much you could easily solder a 1M resistor between lugs 1 and 3 of the 1M pot giving you 500K or work out what resistance you'd need for 750K if you want to try that value. This will prevent the Gain resistance from causing any squealing in the final rotation by using two of the three Diode switching options. We suggest 500k always since this is supposed to be a Boost to Medium Gain circuit and even with 500k there is still plenty of distortion on tap.

## STATUS LED

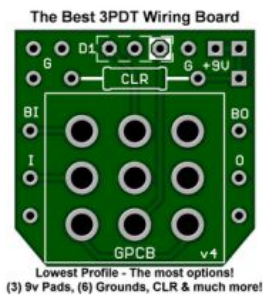
D6 is a common anode bi-color LED. The diagram at right shows the pin-out, schematic symbol and pad connection for a common anode LED. The pin-out for the bi-color LED is typically (but not always) as follows:

1st Color Cathode	Is on the "flat" side of the LED (see graphic); 90 degree bend in the lead
Common Anode	Middle lead
2nd Color Cathode	45 degree bend in the lead

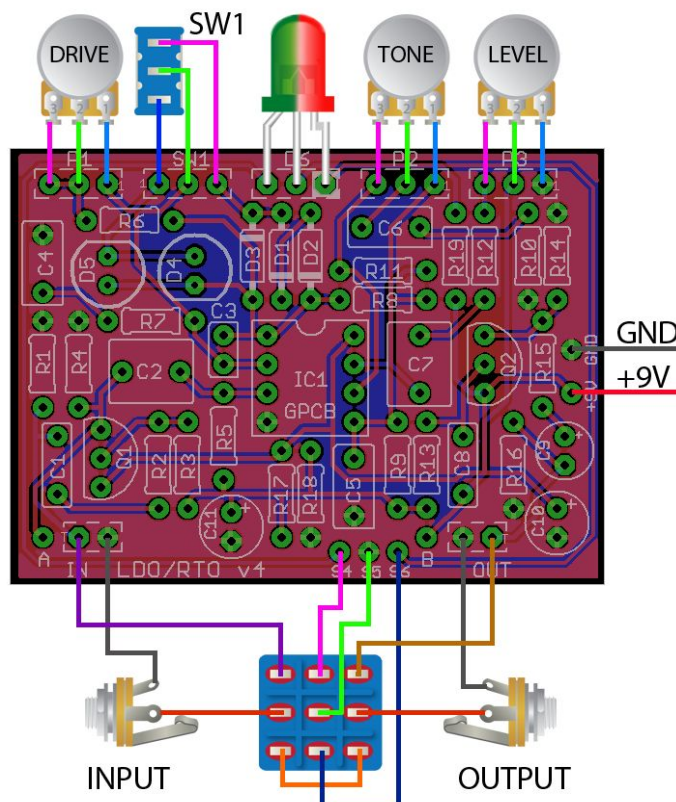
The lead 1 pad on the circuit board is marked with a white box.

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 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 R19. \*R19 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.

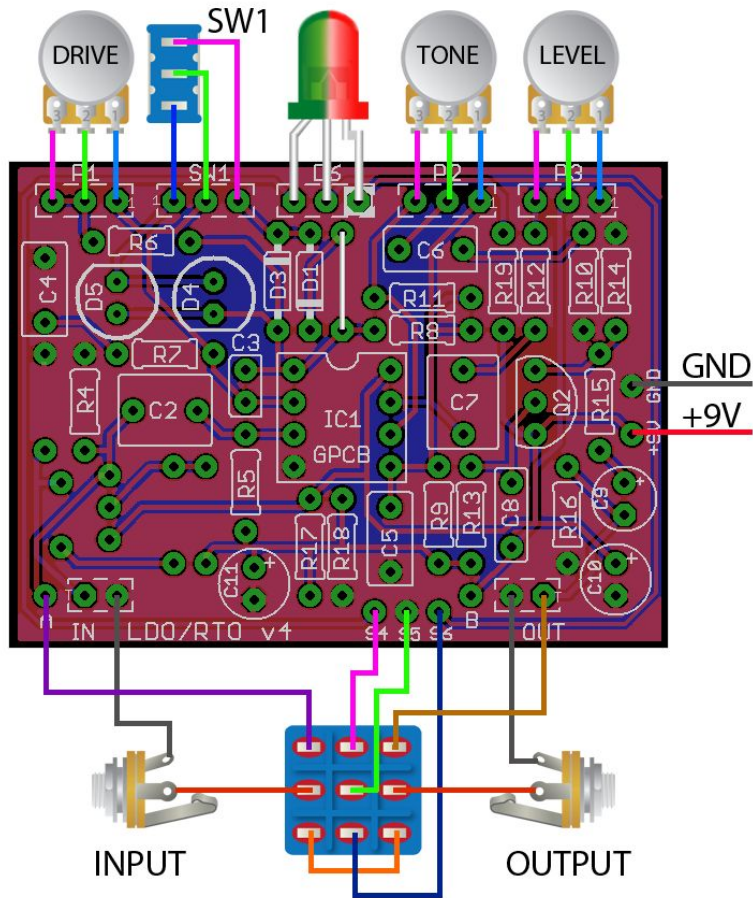
If you are using one of GuitarPCB's handy [3PDT wiring boards](#), pads S4, S5, S6 and D6 would be ignored and R19 would not be installed. See wiring guide below for reference.



Landgraff Dynamic Overdrive Style Build, aka LDO. Note input connection to (T)



# Robin Trower Style Build, aka RTO. Note input connection to A pad



**Modification Idea:** Remove both the input and output buffers and then complete either the **LDO**, **808** or **RTO** build. While we feel that you cannot lose using a quality buffer we made these options possible. **To remove both buffers** do not install R1, R2 R3, R13, R14, R15, R16, C1, C8, C9, Q1 and Q2. **The value of R4 is changed to 1M for both builds.** The **input wire** from the bypass switch is connected to **pad A** and the **output wire** back to the bypass switch is connected to **pad B**.

