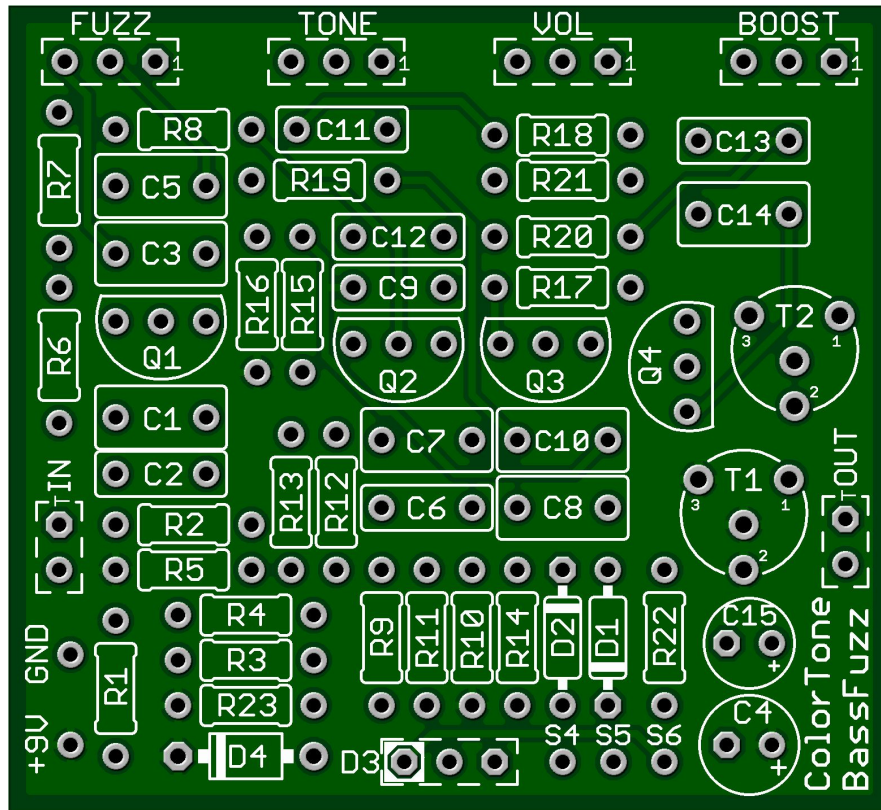


ColorTone Bass Fuzz Build Instructions

This is based on the ColorSound® Bass Fuzz™, with an added clean gain stage connected to the end of the circuit. We feel our implementation of this vintage NPN fuzz with the addition of an added stage sets us apart from the rest and overcomes the chief complaint of the original Bass Fuzz™, a low output level. In addition the added stage gives more clarity without coloring the original.



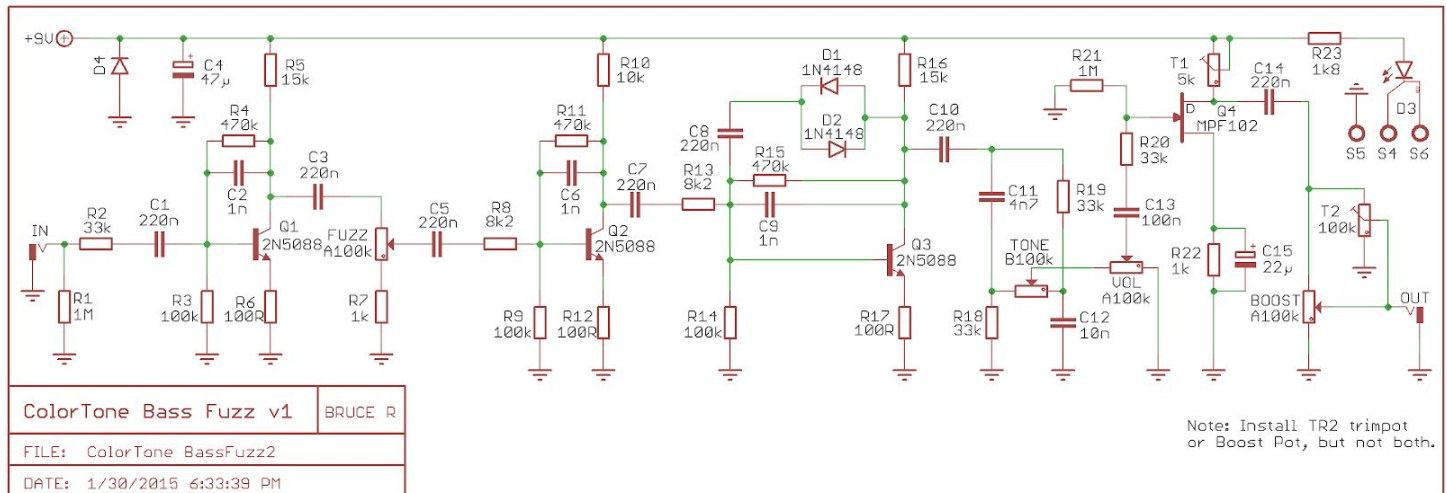
Board Dimensions (W x H) 1.95 x 1.8 inches, i.e.: 49.5 x 45.7mm. This design will fit into a 1290NS/1590B size enclosure or larger.

PARTS LIST

Part	Value	Part	Value	Part	Value	Part	Value
R1	1M	R16	15k	C1	220n	*Q1	2N5088
R2	33k	R17	100R	C2	1n	*Q2	2N5088
R3	100k	R18	33k	C3	220n	*Q3	2N5088
R4	470k	R19	33k	C4	47μ	Q4	J113
R5	15k	R20	33k	C5	220n		
R6	100R	R21	1M	C6	1n	FUZZ	A100k
R7	1k	R22	1k	C7	220n	TONE	B100k
R8	8k2	*R23	1k8 to 3k	C8	220n	VOL	A100k
R9	100k			C9	1n	*BOOST	A100k
R10	10k	D1	1N4148	C10	220n		
R11	470k	D2	1N4148	C11	4n7	T1	5k
R12	100R	D3	Bi-Color CA LED	C12	10n	*T2	100k
R13	8k2	D4	1n4001	C13	100n		
R14	100k			C14	220n		
R15	470k			C15	22μ		

Stock transistors were BC549. We now use *2N5088 which have an opposite pinout from the board silkscreen.

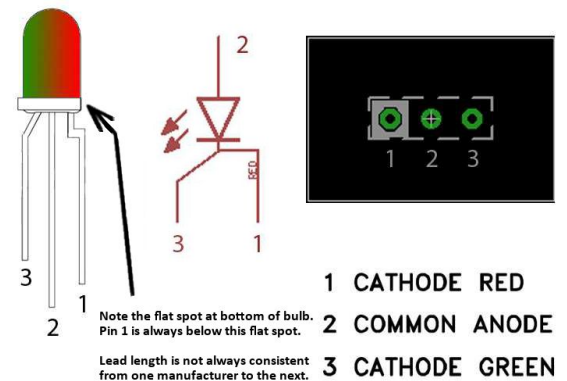
SCHEMATIC



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:

1st Color Cathode	Is on the "4" LED (see ground bend in the)
Common Anode	Middle lead
2nd Color Cathode	45 degree



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 R23. *R23 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.

IMPORTANT NOTES

- The Stage 3 boost section of the circuit includes a 5k Trimpot (T1) for biasing. Try GuitarPCB Trimpots
- T1 adjusts the **Bias** of the **boost portion** of the circuit. To set bias, measure the voltage (using your DMM) between the drain of Q1 and any ground. Adjust Trimpot (T1) so that the voltage on the Drain Leg of J113 is 5V or perhaps higher (up to 6V) if you require higher output level. Try GuitarPCB J113's.

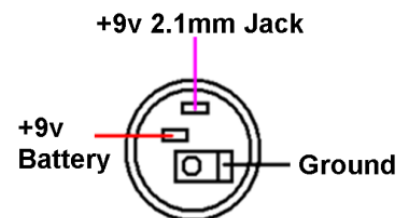
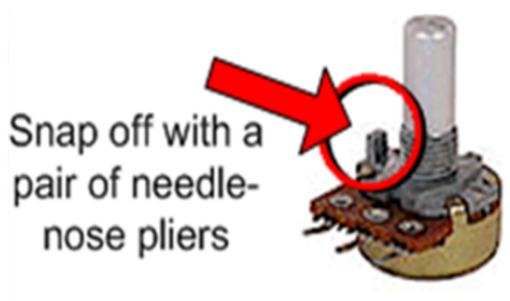
Biasing is both an easy and essential step to achieve the most out of your new pedal.

While measuring Drain leg (using Red Probe) and Ground (using Black Probe) till you get a Voltage reading between 5v and 6v. You are done!

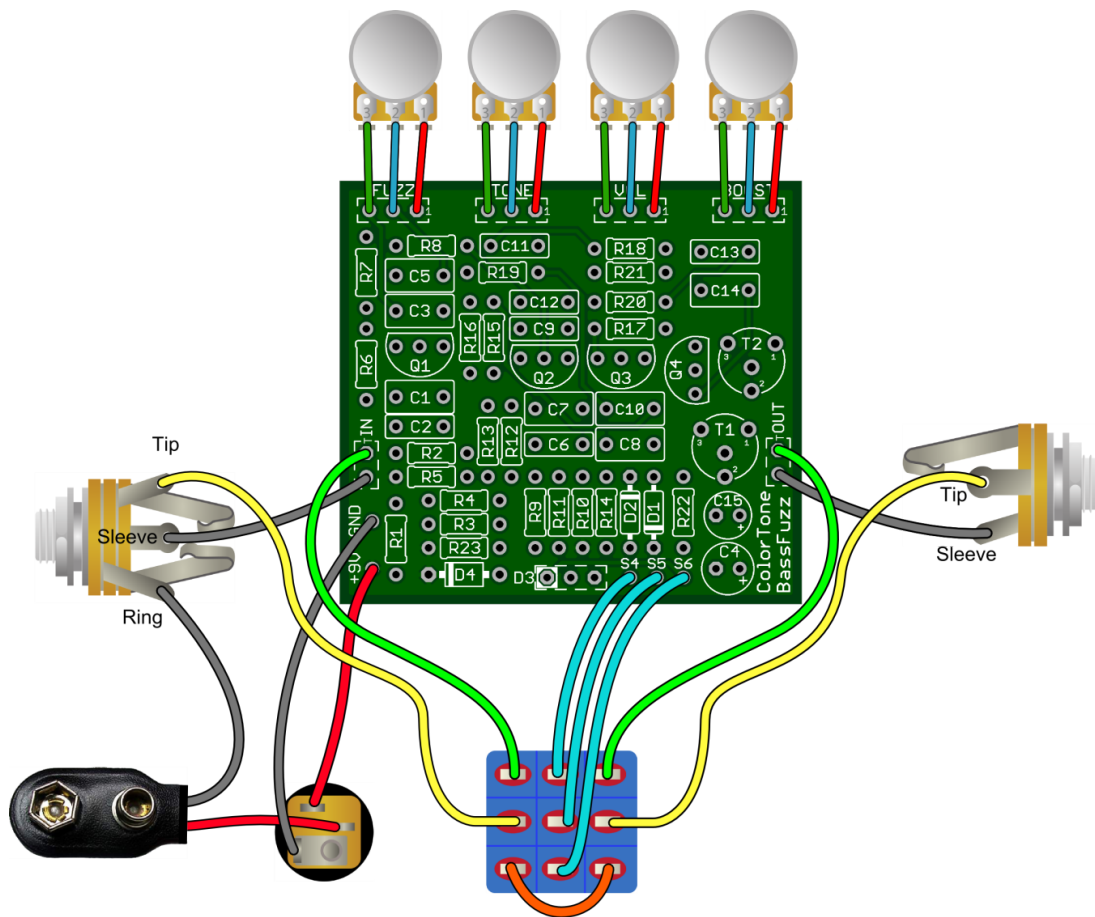
- The ***Boost** potentiometer or optional **T2** are in parallel. Install the Trimpot **T2** (not the Boost pot) if you want to just “set it and forget it” to build a 3-knob pedal, or install a 100k Log **Boost** pot skipping TR2 if you want to adjust the boost using a 4-knob pedal. **(If installing T2 do not confuse T1 Bias with T2 Boost)** We do recommend using the fourth potentiometer on the enclosure for flexibility but the choice is yours!
- The ***Boost Pot or T2** is meant to be set between 75% to 100% full rotation depending on bias & taste.
- If you choose a **Boost** potentiometer instead of a “set and forget” **T2** Trimpot no jumper is needed.
- Socket your Transistors – You may wish to change them later and makes troubleshooting a lot easier.
- **The stock board used BC549’s** (this is our silkscreen transistor orientation) but since ***2N5088’s** are more available and sound fantastic we use those now. As a result please note ***2N5088 transistors have an opposite pinout to the board silkscreen. Simply place them in upside down.** Be sure to verify the pinout of any transistor set you may choose which is yet another good reason to socket first.
- R23 is the current limiting resistor. Brightness is a preference. 1k8 will yield a nice bright LED and the higher the resistance the dimmer the light. 3k or even 4.7k has been used. This is your choice.
- A [YouTube Demo](#) is available using a \$160 Squire passive bass into a Transistor Ampeg Head.

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.



WIRING DIAGRAM



In the wiring diagram above, you notice that the sleeve of each jack is connected to a ground pad on the board next to the input pad or output pad. It does not matter to which ground pad each jack is connected, as long as the sleeve is connected to ground. The pad marked “T” is the input or output, and the adjacent pad is ground.

[Soldering Tutorial on Youtube](#)

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If they do not have a KIT listed send them a note asking if they can help you out.



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