## ColorTone Bass Fuzz v3

> This is based on the ColorSound ${ }^{\circledR}$ Bass Fuzz ${ }^{T M}$, with an added gain stage to further enhance its capabilities. With the boost knob set to fully counterclockwise, it is a stock circuit. As you turn it clockwise you gain both added volume and more articulated Fuzz tones.


Board Dimensions (W x H) $1.95 \times 1.8$

## PARTS LIST

| Part | Value |
| :---: | :---: |
| R1 | 1 M |
| R2 | $33 k$ |
| R3 | $100 k$ |
| R4 | $470 k$ |
| R5 | $15 k$ |
| R6 | $100 R$ |
| R7 | $1 k$ |
| R8 | $8 k 2$ |
| R9 | $100 k$ |
| R10 | $10 k$ |
| R11 | $470 k$ |
| R12 | $100 R$ |
| R13 | $8 k 2$ |
| R14 | $100 k$ |
| R15 | $470 k$ |


| Part | Value |
| :---: | :---: |
| R16 | $15 k$ |
| R17 | 100 R |
| R18 | $33 k$ |
| R19 | $33 k$ |
| R20 | $33 k$ |
| R21 | 1 M |
| R22 | $1 k$ |
| *R23 | $1 k 8$ to $3 k$ |
|  |  |
| D1 | $1 N 4148$ |
| D2 | $1 N 4148$ |
| D3 | Status LED |
| D4 | $1 n 5817$ |


| Part | Value |
| :---: | :---: |
| C1 | $220 n$ |
| C2 | 1 n |
| C3 | $220 n$ |
| C4 | $47 \mu$ |
| C5 | 220n |
| C6 | 1 n |
| C7 | 220n |
| C8 | 220n |
| C9 | 1 n |
| C10 | $220 n$ |
| C11 | 4 n 7 |
| C12 | 10n |
| C13 | 100n |
| C14 | 220n |
| C15 | $22 \mu$ |


| Part | Value |
| :---: | :---: |
| *Q1 | 2N5088 |
| *Q2 | 2N5088 |
| *Q3 | 2N5088 |
| Q4 | J113 |
|  |  |
| FUZZ | A100k |
| TONE | B100k |
| VOL | A100k |
| **BOOST | A100k |
|  |  |
| T1 | $20 k$ |
| **T2 | $100 k$ |

## STATUS LED

*D1 is a Status LED that can be either a Bi-Color Common Anode or a Standard On/Off LED. (See Tip Sheet)

## New in this GuitarPCB 2022 version release:

- D3 now uses a 1 N5817 circuit protection diode.
- Bias Trimmer T1 has been adjusted to 20k.


## SCHEMATIC



## Build Notes

- T1 adjusts the Bias. To set the bias, measure the voltage (using your DMM) between the drain of Q4 and any ground. Adjust Trimpot (T1) so that the voltage on the Drain of J113 is between 4.5 v and 6 v .
- Both the ${ }^{* *}$ Boost potentiometer and optional **T2 Trimmer is in parallel. If you want a simple "set and forget" 3-knob pedal, only install T 2 and not the Boost potentiometer. Then simply adjust the T 2 trimmer where you would like the overall volume of the pedal to be. If you want a Boost adjustable 4-knob pedal then only install the Boost potentiometer and do not install T2.
- Either the *Boost Potentiometer or T2 are meant to be set between $75 \%$ to $100 \%$ full rotation depending on your preference. If you choose a Boost potentiometer instead of a "set and forget" T2 Trimpot option no jumpers are needed.
- Our circuit uses a *2N5088 transistor orientation. If you choose BC546 you must flip the transistor orientation.


## WIRING DIAGRAM



## GuitarPCB Tip Sheet


O Green = Ground Pads (5)
( Red $=+9 \mathrm{~V}$ Power Pads (4)
D1 = LED Pads
CLR = Current Limiting Resistor
BI = From Main Board IN
BO = From Main Board OUT
I = To Jack Tip IN
$0=$ To Jack Tip OUT


Sockets make troubleshooting easier


When soldering wire to a PCB push the protective PVC jacket flush with the board and pad.


## Input/Output Jack Wiring T = Tip | R = Ring | S = Sleeve

A Stereo Jack is only needed if using a Battery. Otherwise use a Mono Jack Battery Strap RED wire is connected to Power Jack Battery Strap Black wire is connected to RING (stereo jack) If wiring an LED to our 3PDT Wiring Board then S4, S5 \& S6 are not needed

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