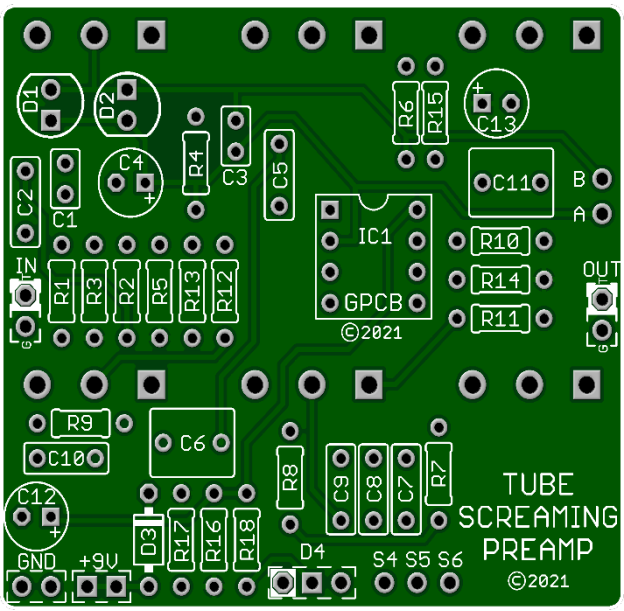
Tube Screaming Preamp 2021

Introducing the Tube Screaming Preamp. Finally, Tube Screamer tone with a Baxandall style 3 Band Active EQ along with Presence control you can now get amazing Tube Screaming tones never before achievable.



Board Dimensions (W x H) 2.15” x 1.95”

Part	Value
R1	2M2
R2	1k
R3	220k
R4	4k7
R5	1k
R6	1k
R7	2k2
R8	3k3
R9	10k
R10	2k2
R11	3k3

Part	Value
R12	10k
R13	10k
R14	10k
R15	1k
R16	10k
R17	10k
R18	1k8
C1	100p
C2	100n
C3	100p

Part	Value
C4	1u
C5	3n3
C6	1u
C7	4n7
C8	4n7
C9	22n
C10	22n
C11	1u
C12	100u
C13	100u
IC1	*TL072

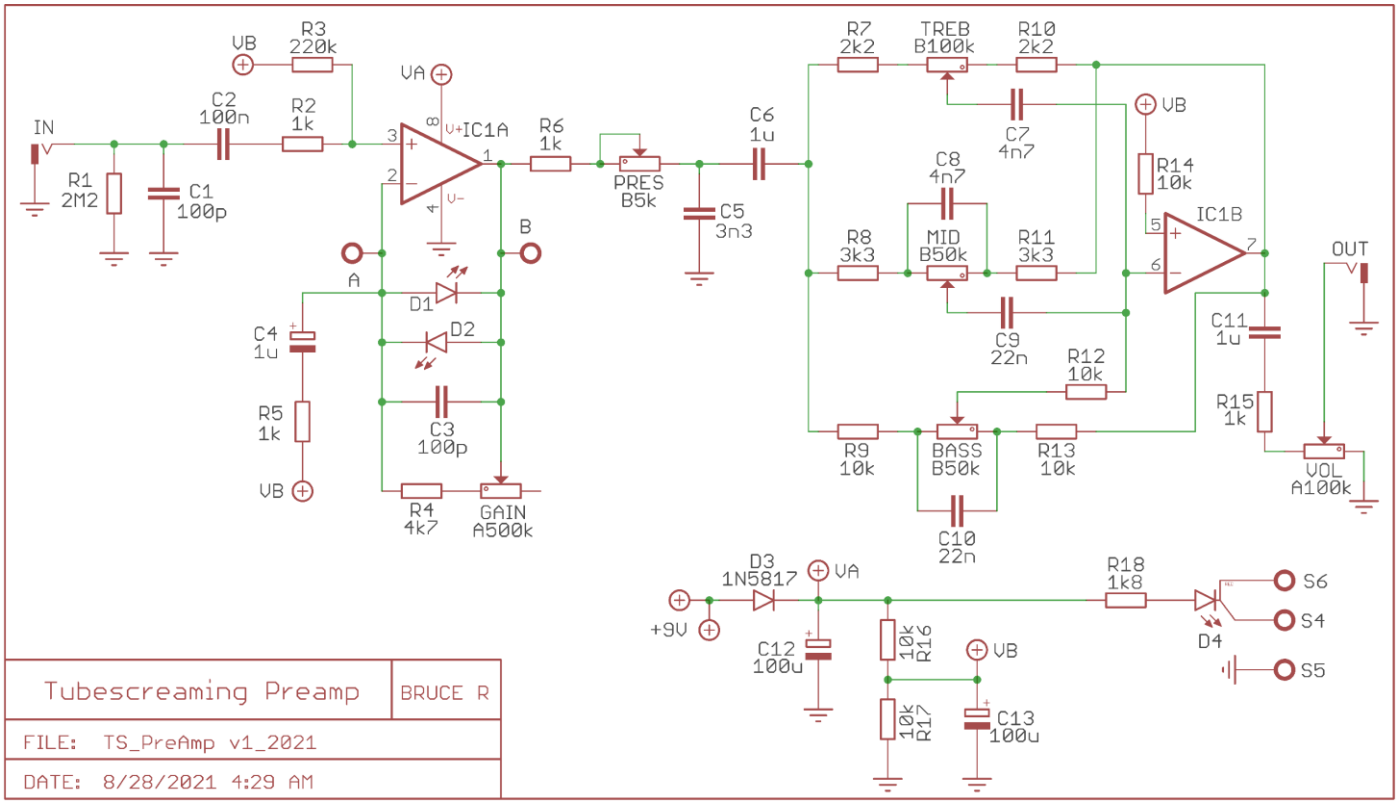
Part	Value
D1	**Clipping LED
D2	**Clipping LED
D3	1N5817
D4	Status LED
IC	*TL072
VOL	A100k
GAIN	B500k
BASS	B50k
MID	B50k
TREB	B100k
PRES	B5k

STATUS LED

***D4** 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 2021 version release:

- Added 1N5817 circuit protection diode.
- Added on-board potentiometers.
- Larger off-board wiring pads.
- Added extra +9v and Ground pads for “Combo Builds” allowing easy wiring options and connectivity

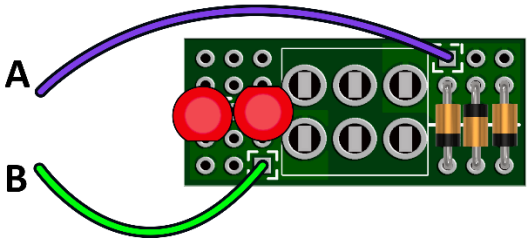


Build Notes:

- **IC: TL072 -** You may also try another Dual Opamp like NE5532, 4558, Burr Brown 2134 etc...
- **** D1 – D2 -** Clipping LEDs – Try Red, Blue or Violet for a warm tube tone or you may also try our "hand tested" Germanium Diodes for a different character. Since the circuit uses a Baxandall Active EQ you will still have enough Gain on tap. Also feel free to try Silicon Diodes as well. Socket and see!
- At **C6 and C11** we often prefer the MLCC type capacitors. MLCC are non-polar & take up less room in height & width compared to Film. Choose MLCC with a 5mm lead spread.

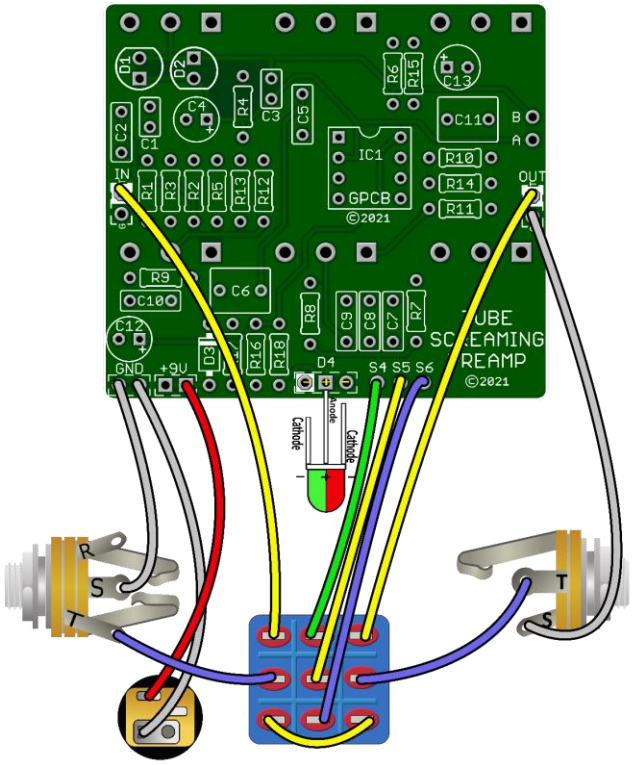
A / B Pads were added if you wish to use an off-board clipping selector like our Roto-Tone or DPDT boards.

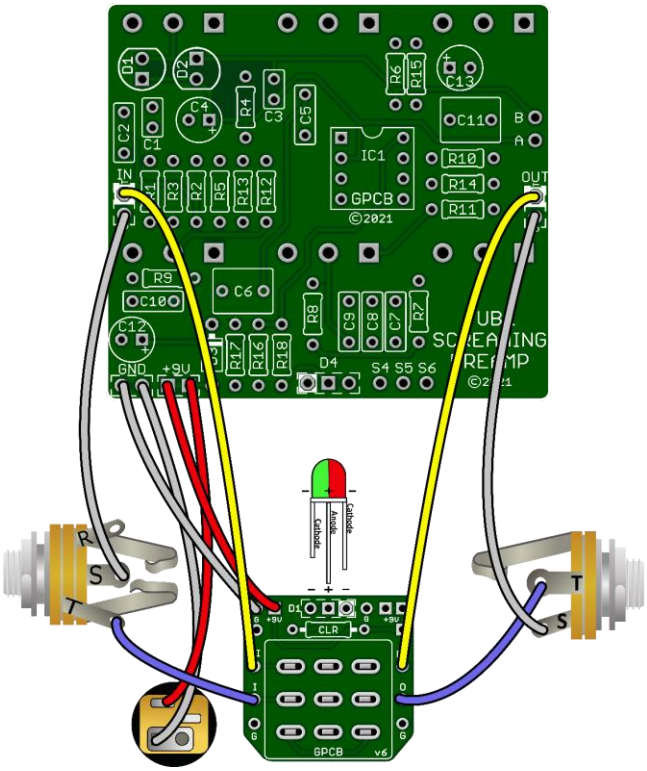
DPDT Wiring Board



Notes about the Tone Section:

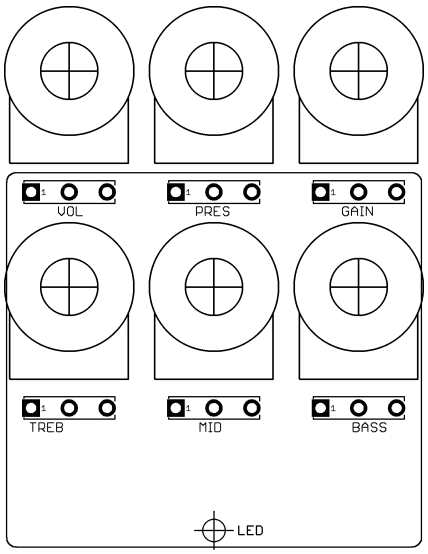
This stage is an active, true tone equalizer. Each band will boost or cut the signal. Start with each control in the center or 50% position. Turn the control clockwise, CW to BOOST and counter-clockwise, CCW to CUT the signal. After achieving the desired tone setting, adjust the final volume level to suit. As with all active equalizers, best results are usually achieved by cutting frequencies rather than over- boosting. There is some interaction between adjacent bands. This permits smooth transitions in the tonal setup. Furthermore, with our Presence control you can easily dial in a Les Paul or a Strat during a guitar change and do it quickly.



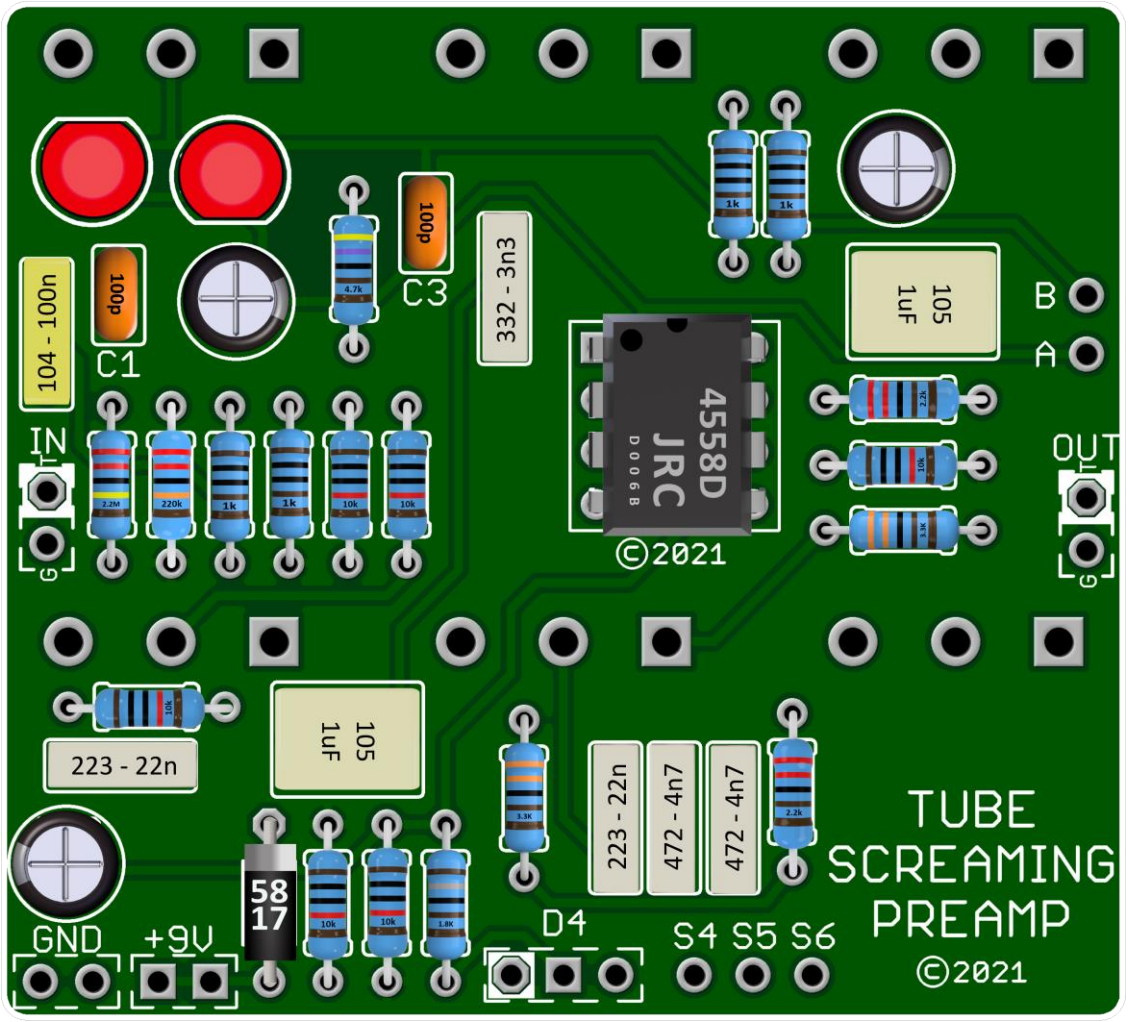


Note: If wiring the LED to our 3PDT board no need to connect S4, S5 & S6 or populate D4 or R18 (CLR) on the main board since you are wiring your LED directly to our board.

Potentiometers. Drill Tips: Measure your components before selecting a drill bit. We recommend drilling the pot holes, mounting the pots in the enclosure, and then soldering the pots to the board. This approach should resolve the issue of the pots not fitting through the holes after soldering. We also recommend you make the holes for the pots a little larger than the threads in case you decide to remove the board and put it back in during the build, to avoid problems. Use this guide at your own risk. Make sure page scaling is turned off when you print this PDF, or the image above may be smaller than expected. Verify everything before drilling.



Populated Board Image for Troubleshooting

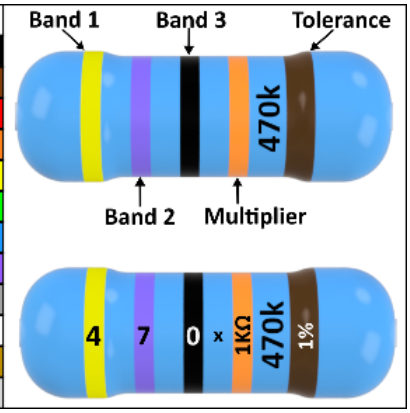


For more build guides and tutorials please visit the Guides Page at GuitarPCB.com
For specific build support please visit our dedicated Support Forum
Soldering Tutorial on YouTube

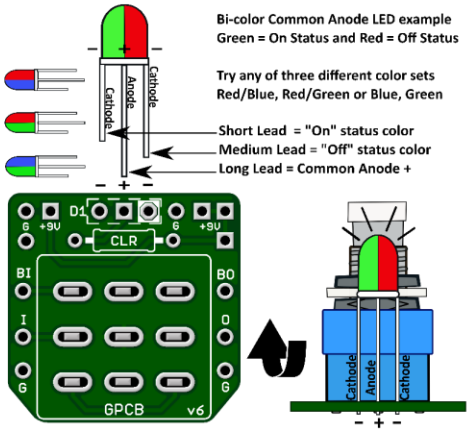
Need Kits - Check out our authorized worldwide distributors:

- **USA – Check out PedalPartsAndKits for all your GuitarPCB kit needs in the USA.**
- **Europe – Das Musikding Order either boards or kits direct from Europe.**
- **PedalPartsAustralia - Order either boards or kits direct from Australia**

COLOR	1st Band	2nd Band	3rd Band	Multiplier	Tolerance
BLACK	0	0	0	1Ω	
BROWN	1	1	1	10Ω	±1%
RED	2	2	2	100Ω	±2%
ORANGE	3	3	3	1KΩ	
YELLOW	4	4	4	10KΩ	
GREEN	5	5	5	100KΩ	±0.5%
BLUE	6	6	6	1MΩ	±0.25%
VIOLET	7	7	7	10MΩ	±0.10%
GREY	8	8	8	100MΩ	±0.05%
WHITE	9	9	9	1GΩ	
GOLD				0.1Ω	±5%
SILVER				0.01Ω	±10%



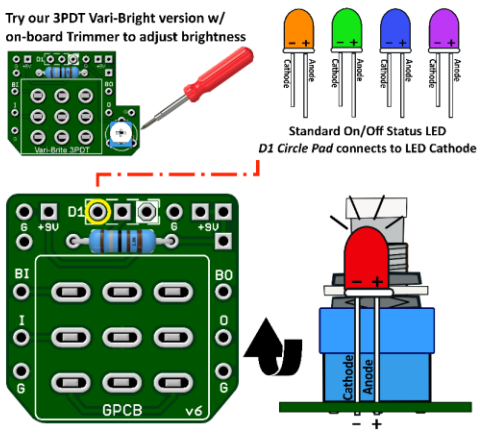
GuitarPCB Tip Sheet



Bi-color Common Anode LED example
Green = On Status and Red = Off Status

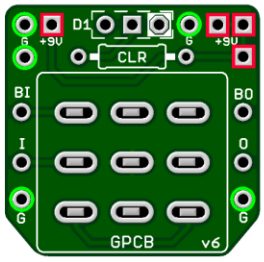
Try any of three different color sets
Red/Blue, Red/Green or Blue, Green

Short Lead = "On" status color
Medium Lead = "Off" status color
Long Lead = Common Anode +

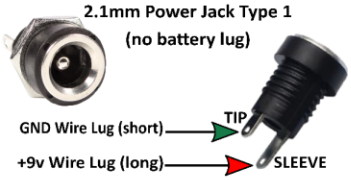


Try our 3PDT Vari-Bright version w/
on-board Trimmer to adjust brightness

Standard On/Off Status LED
D1 Circle Pad connects to LED Cathode



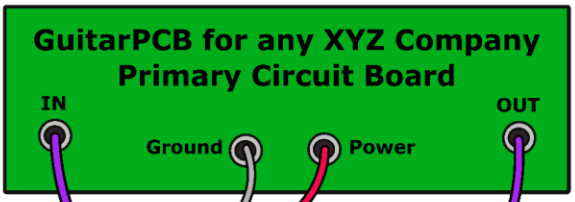
Green = Ground Pads (5)
Red = + 9v Power Pads (4)
D1 = LED Pads
CLR = Current Limiting Resistor
BI = From Main Board IN
BO = From Main Board OUT
I = To Jack Tip IN
O = To Jack Tip OUT

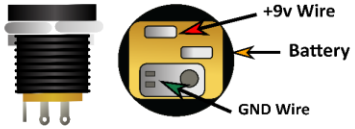


2.1mm Power Jack Type 1
(no battery lug)

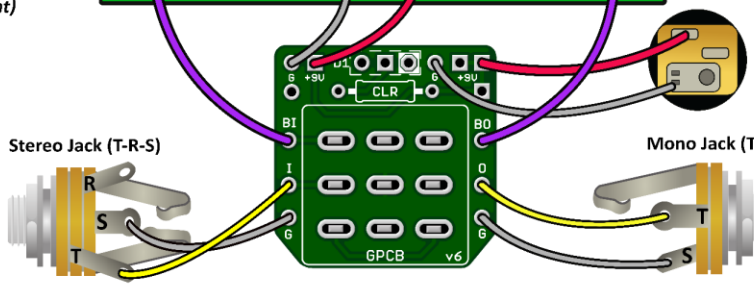
GND Wire Lug (short)
+9v Wire Lug (long)
TIP
SLEEVE

Do not over-tighten (hand tight)





2.1mm Power Jack Type 2



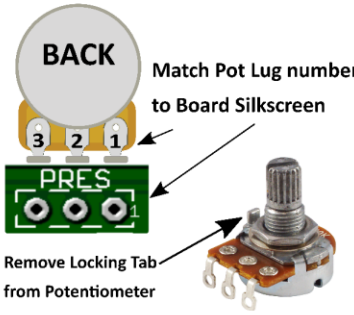
Stereo Jack (T-R-S)

Mono Jack (T-S)

T = Tip
R = Ring
S = Sleeve

T = Tip
S = Sleeve

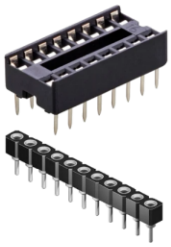
Multiple +9v and Ground Pads are convenient hookup points for additional circuits within the same enclosure. This also allows for diverse wiring schemes to suit indiviual needs.

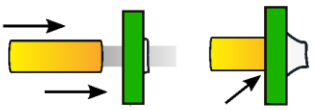


Match Pot Lug number
to Board Silkscreen

Remove Locking Tab
from Potentiometer

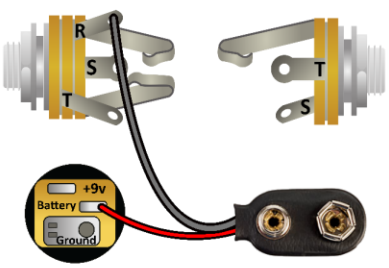
Sockets make troubleshooting easier





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

Main Board IN/OUT Pads



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