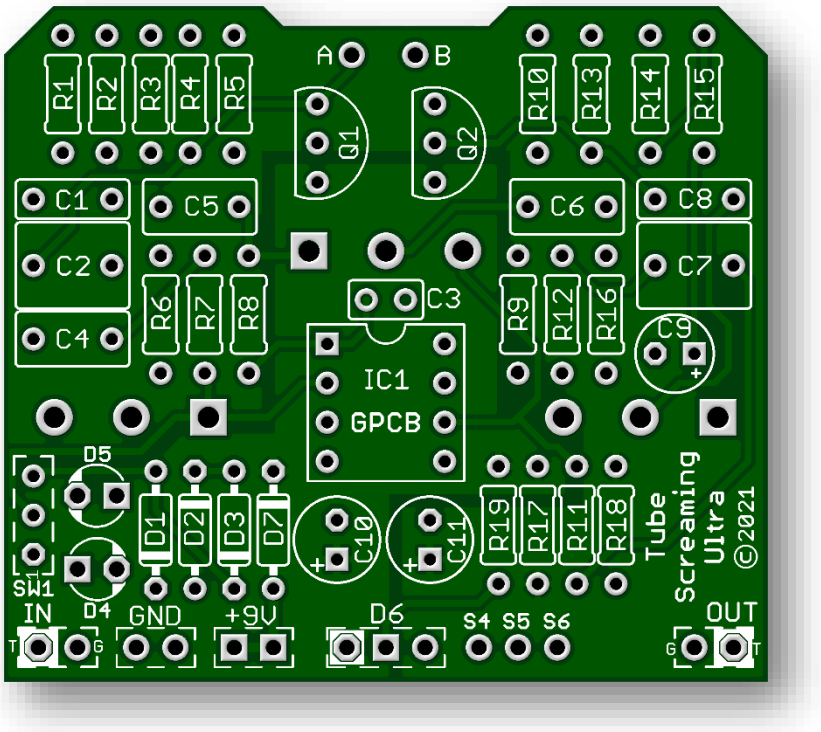
Tube Screaming Ultra v4 2021

You will find no better Tube Screaming PCB featuring four unique builds and ultra-flexible switching. We have included Landgraff Dynamic Overdrive, Robin Trower Style Drive, Classic Ibanez TS808 Style Drive or the "No Buffer Option" similar to Eternity Drive.



Board Dimensions (W x H) 1.95" x 1.72"

Part	Value
R1	1M
R2	1k
R3	510k
R4	10k
R5	10k
R6	10k
R7	1k
R8	1k
R9	10k
R10	220R
R11	1k

Part	Value
R12	1k
R13	510k
R14	10k
R15	100R
R16	10k
R17	10k
R18	10k
R19	1k8
C1	22n
C2	1u
C3	51p

Part	Value
C4	220n
C5	220n
C6	220n
C7	1u
C8	100n
C9	10u
C10	100u
C11	47u
D1	1n914
D2	1n914
D3	1n4001

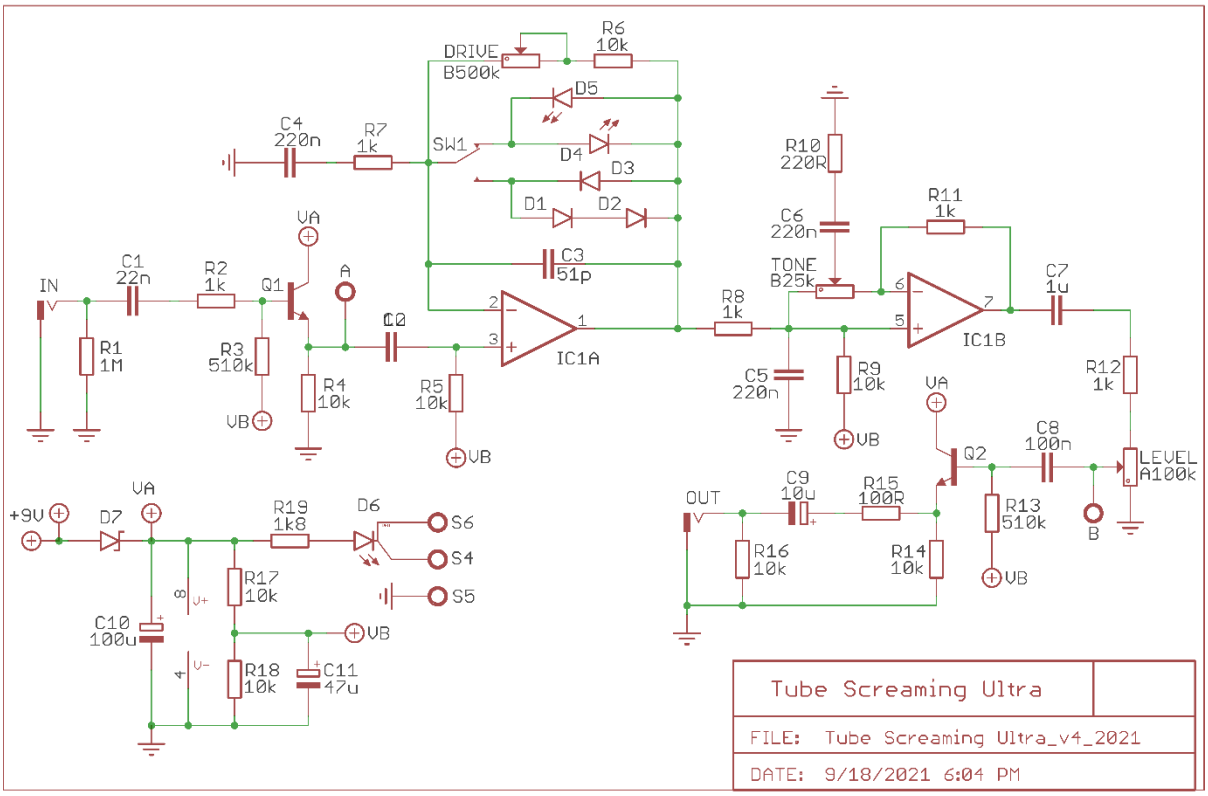
Part	Value
D4	3mm
D5	3mm
*D6	Status LED
D7	1n5817
IC1	JRC4558D
DRIVE	B500k
LEVEL	A100k
TONE	B25k
SW1	SPDT On-Off-On
Q1	2n5088
Q2	2n5088

STATUS LED

***D6** 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:

- Easy to build any of four unique versions.
- Added 1N5817 circuit protection diode which is superior.
- Added on-board potentiometers.
- Larger off-board wiring pads.

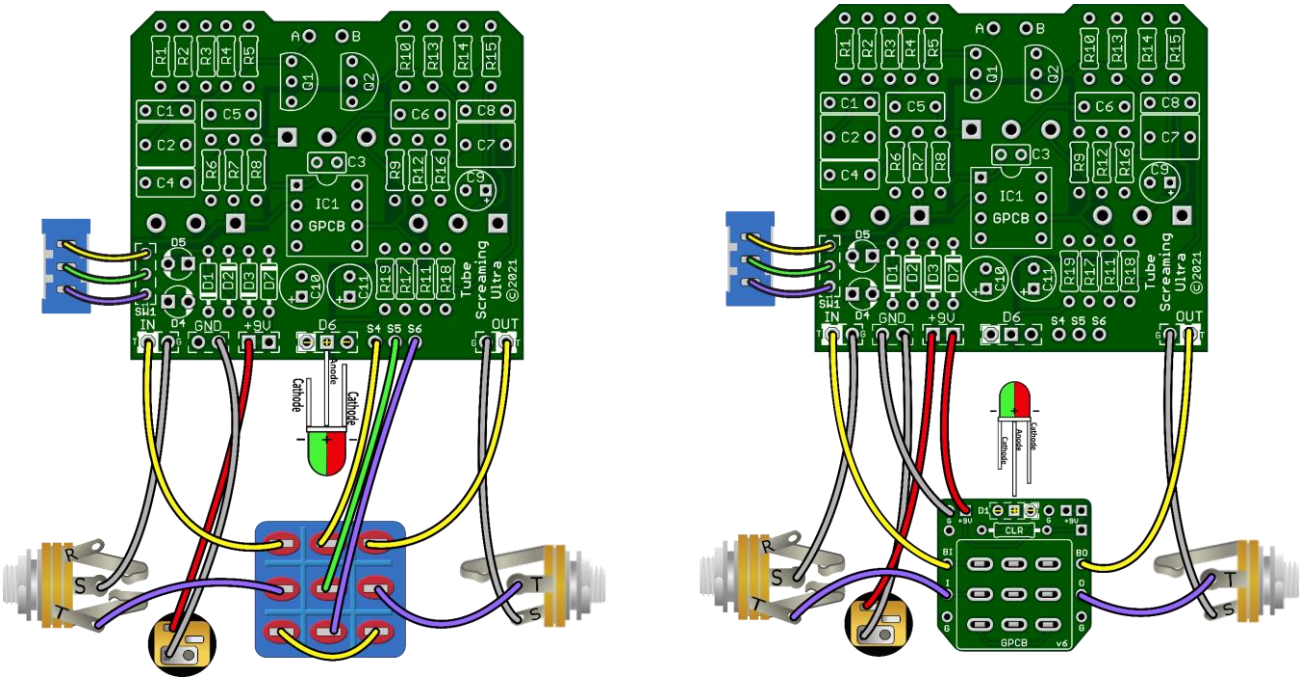


Four Unique Build Offerings:

1. **The Landgraff** boutique build uses all components as listed in the BOM and schematic (you may try a 1M Gain Pot)
2. **Robin Trower Style** build differs in that the **Input Buffer** is not used and **D2** is replaced by a jumper to give symmetrical clipping. To remove the input buffer do not install **R1, R2 R3, C1 and Q1**. The Pink input wire from the Lug 1 of the foot switch is then connected to **pad A** instead of the **IN (T) pad**.
3. **808 Style Build:** Use Landgraff Dynamic Overdrive values with these exceptions **C4: 47n, Gain Pot: B500k, R6: 51k, R7: 4k7**
4. **No Buffer Mod:** This removes both Buffer stages from the circuit and leaves you with pure Tube Screaming tone.

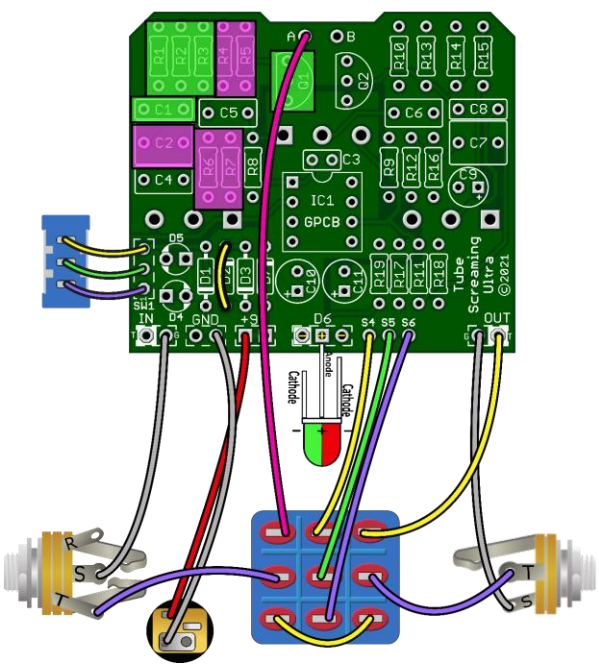
Drive Mod: If you used a 1M potentiometer for the Gain control and decide it is too much you could easily solder a 1M resistor between lugs 1 and 3 of the 1M pot giving you 500K. We suggest 500K since this is supposed to be a Boost to Medium Gain circuit and even with 500k there is still plenty of distortion.

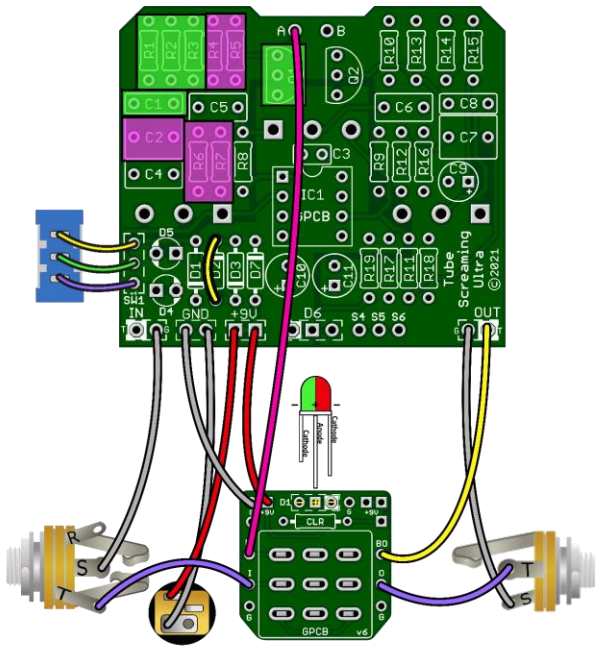
Wiring Diagram (Landgraff Dynamic Overdrive Version) Standard Build



Wiring Diagram (Robin Trower Version)

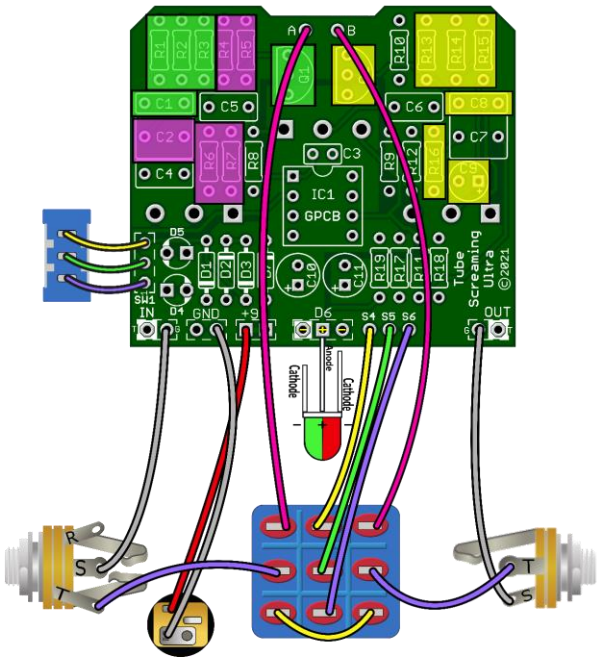
Do not use T Pad on Input. Instead run a wire from Lug 1 of the 3PDT foot switch to the A Pad (Pink Wire). This bypasses the 1st buffer stage. As a result, there is no need to install R1, R2, R3, C1 and Q1. Green Shaded area of PCB below. Finally, JUMPER D2 and change values of R4 to 1M, R5 to 470K, R6 to 18K, R7 to 4k7 & C2 to 22n. Pink Shaded area of PCB below.

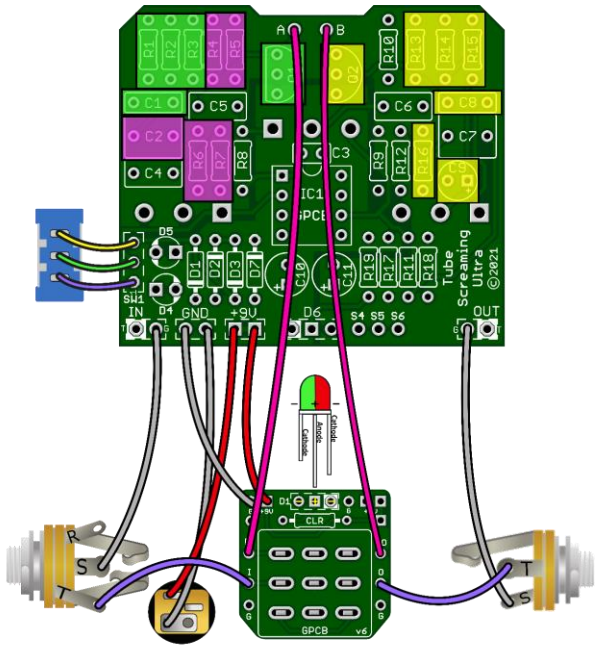




Wiring Diagram for the (No Buffer Version)

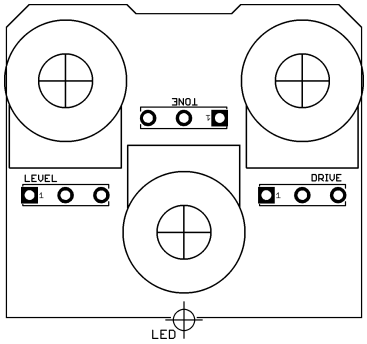
If you wish to remove both buffers then also do not install R13, R14, R15, R16, C8, C9 and Q2. Yellow shaded area of the PCB below. As in the previous diagram do not install the Pink shaded area of the PCB either. Finally run the Pink Wire from Lug 7 of the 3PDT foot switch to Pad B. Feel free to experiment with the values of the Green shaded area of the PCB. Now you are bypassing both buffer stages for the pure tone of the Tube Screaming Ultra.





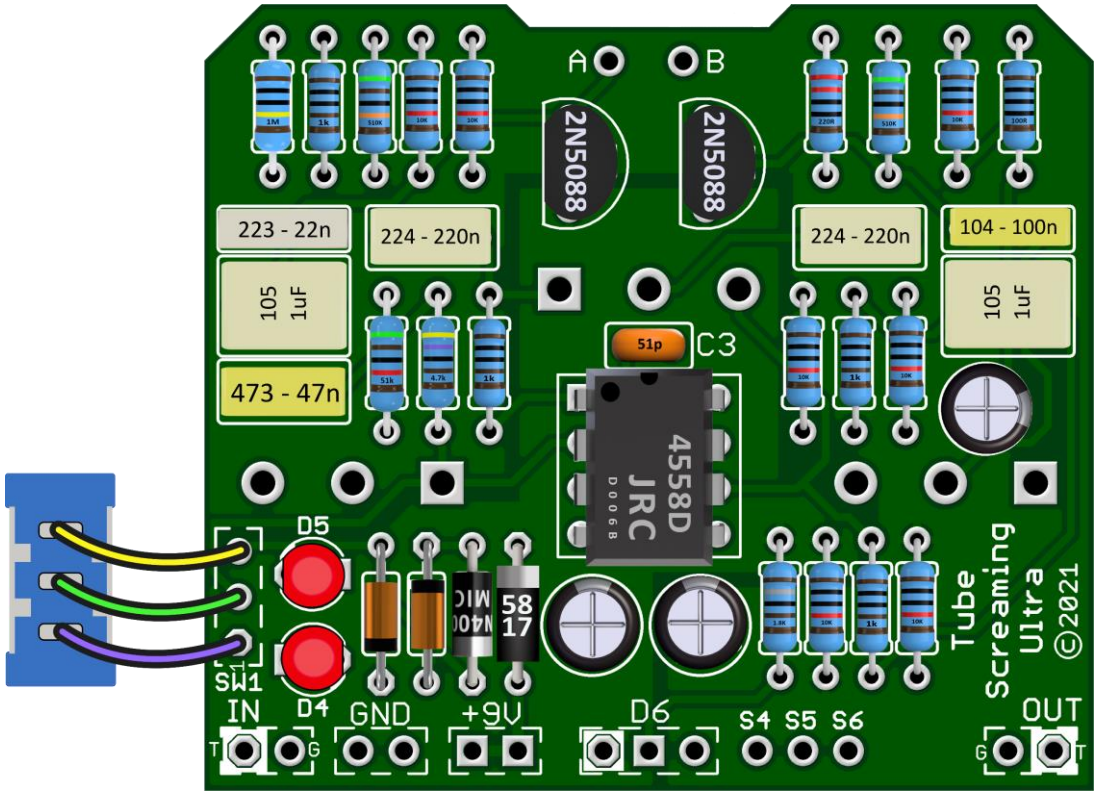
STATUS LED

Note: If you are using our 3PDT board, you should omit wires and parts from S4, S5 & S6, D6 and R19 (CLR). The CLR and LED will be populated on the 3PDT board instead.



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



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For specific build support please visit our dedicated Support Forum
Soldering Tutorial on YouTube

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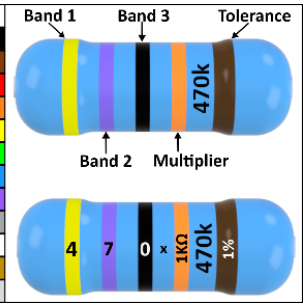
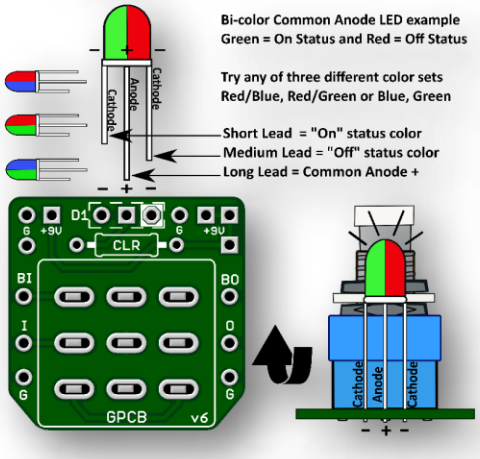
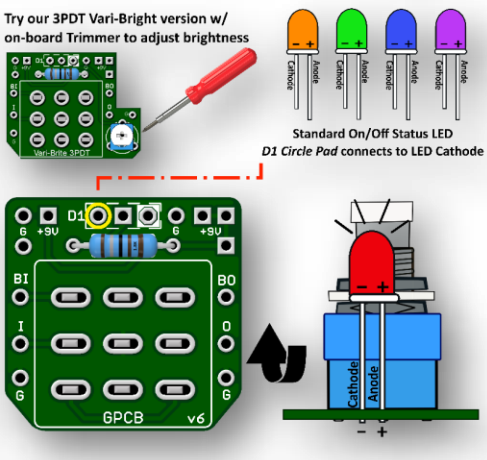
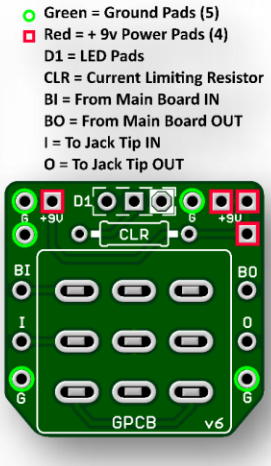
COLOR	1st Band	2nd Band	3rd Band	Multiplier	Tolerance
BLACK	0	0	0	1Ω	
BROWN	1	1	1	10Ω	±1%
RED	2	2	2	100Ω	±2%
ORANGE	3	3	3	1KΩ	
YELLOW	4	4	4	10KΩ	
GREEN	5	5	5	100KΩ	±0.5%
BLUE	6	6	6	1MΩ	±0.25%
VIOLET	7	7	7	10MΩ	±0.10%
GREY	8	8	8	100MΩ	±0.05%
WHITE	9	9	9	1GΩ	
GOLD				0.1Ω	±5%
SILVER				0.01Ω	±10%

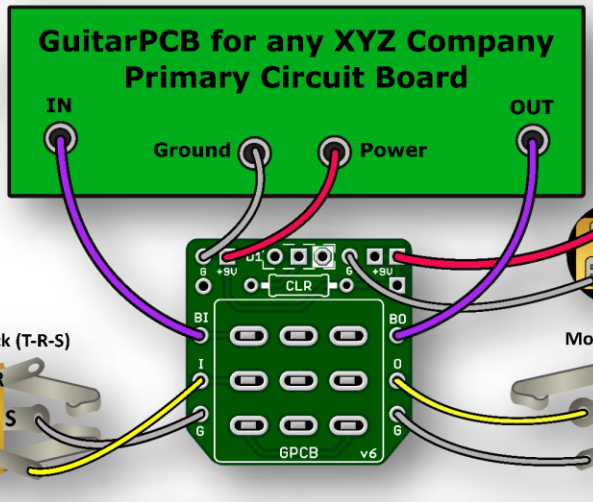


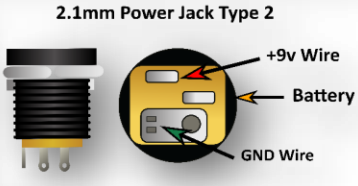
GuitarPCB Tip Sheet











T = Tip
R = Ring
S = Sleeve

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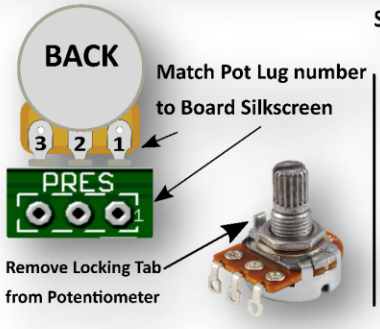
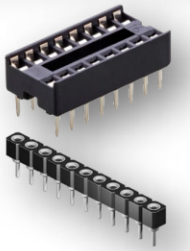
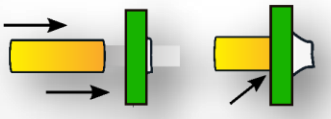
S = Sleeve

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.



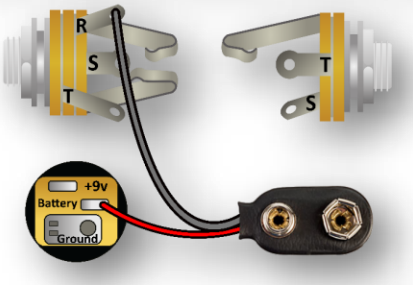
Sockets make troubleshooting easier





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