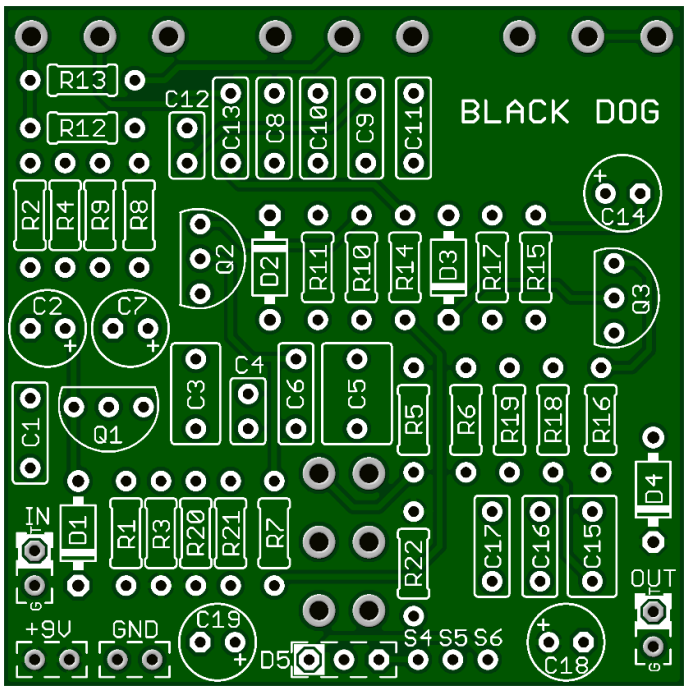
Black Dog

The Black Dog is a pure amp overdrive that offers some really authentic tones guaranteed to satisfy your desires. Not only will it provide the right amount of gain to lift your tones to the next level, but it also has a great passive three band equalizer to sculpt your tone!

Jimmy Page did not use distortion to mask his mistakes. He was all about tone. This circuit is an all Mosfet Stage circuit designed to emulate that sound based on their later albums. Clean, powerful and true.



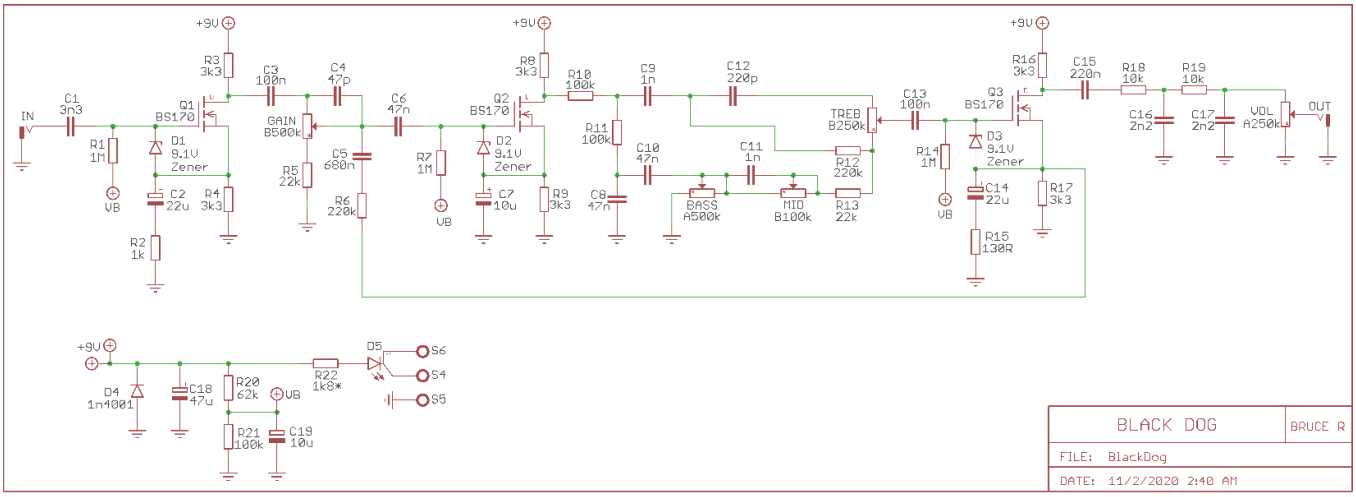
Board Dimensions (W x H) 1.95" x 1.95" or 49.53mm x 49.33mm
Board and Schematic designed by Bruce R.

Part	Value
R1	1M
R2	1k
R3	3k3
R4	3k3
R5	22k
R6	220k
R7	1M
R8	3k3
R9	3k3
R10	100k
R11	100k
R12	220k
R13	22k
R14	1M

Part	Value
R15	130R
R16	3k3
R17	3k3
R18	10k
R19	10k
R20	62k
R21	100k
R22	1k8*
C1	2n2
C2	22u
C3	100n
C4	47p
C5	680n

Part	Value
C6	47n
C7	10u
C8	47n
C9	1n
C10	47n
C11	1n
C12	220p
C13	100n
C14	22u
C15	220n
C16	2n2
C17	2n2
C18	47u
C19	10u

Part	Value
D1	9.1v Zener
D2	9.1v Zener
D3	9.1v Zener
D4	1n4001
D5	BiColor CA LED
Q1 - Q3	BS170
VOL	A250k
GAIN	B500k
BASS	A500k
MID	B100k
TREB	B250k



Controls:

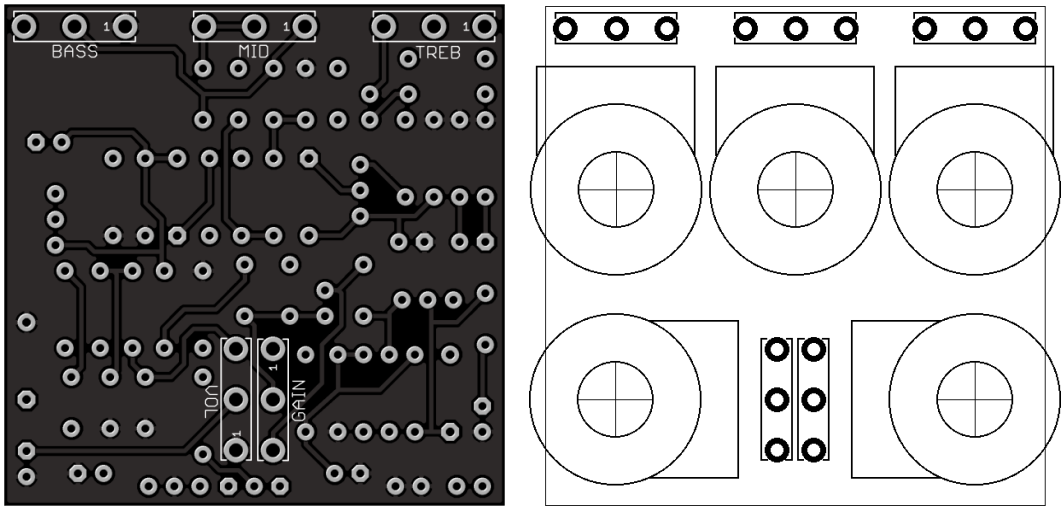
Volume: The best setting which is interactive with the Gain Control is just past unity volume - usually around 1:00. Many people find an additional boost or amp gain in tandem is an excellent creative option.

Gain: Best setting is from 3:00 to max for the best Zep-like response. But for a cleaner response you may want to try lower gain settings. Jimmy Page did not rely on distortion to cover his playing! All tone.

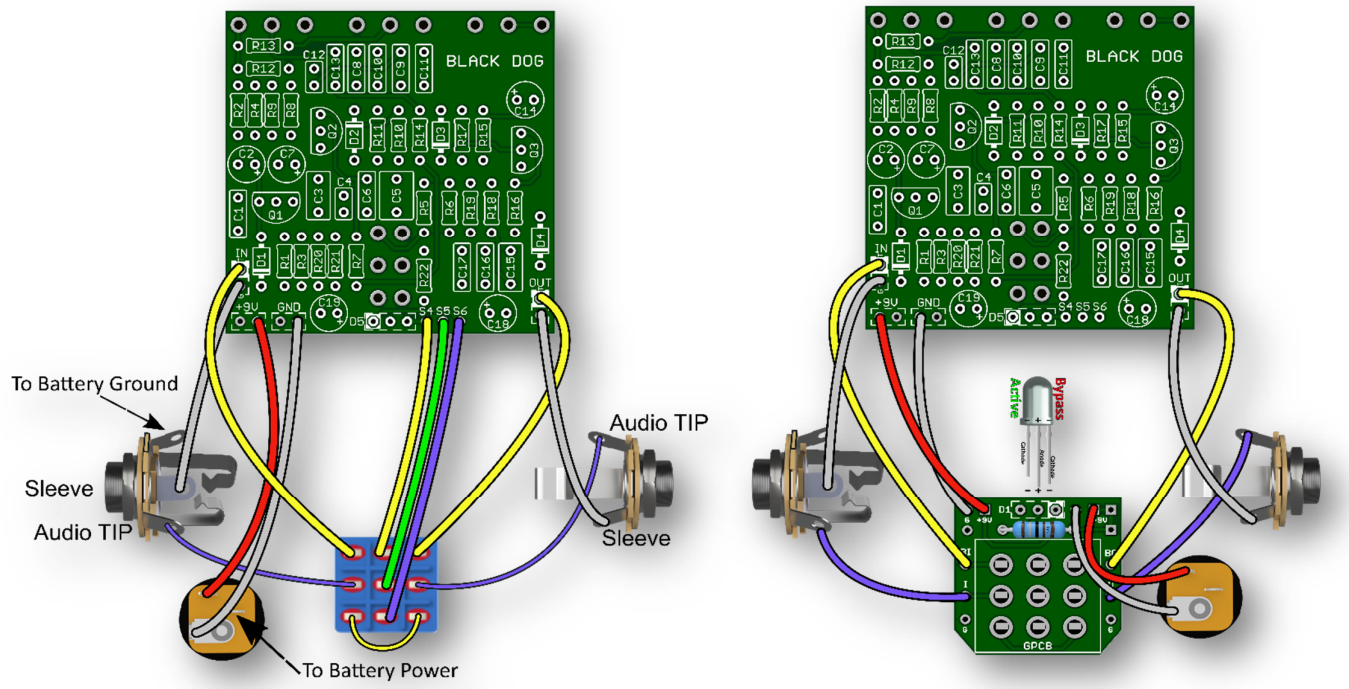
Tone Controls: The three bands of the tone section of the Black Dog function just like many power amp tone controls. They are passive instead of active. Therefore, they do not increase the signal in their respective band but rather they decrease the signal. A change in one band will have an effect on the adjacent band. We suggest that you start with all three tone controls at the mid-point and adjust from there. You are sure to find a tonal setting that is just what you want!

Profile: Bass, Mid and Treble on top. Volume and Gain underneath.

Please note you may always choose to "hand wire" your potentiometers as well.



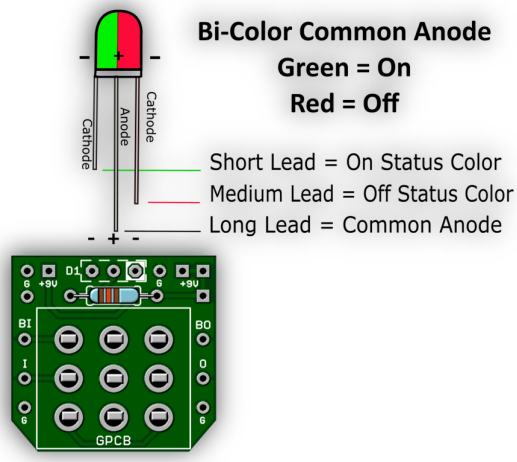
Drill Tips: Measure your components before selecting a drill bit. We recommend drilling the pot holes, mounting the pots in the enclosure, and then soldering the pots to the board. This approach should resolve the issue of the pots not fitting through the holes after soldering. We also recommend you 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.

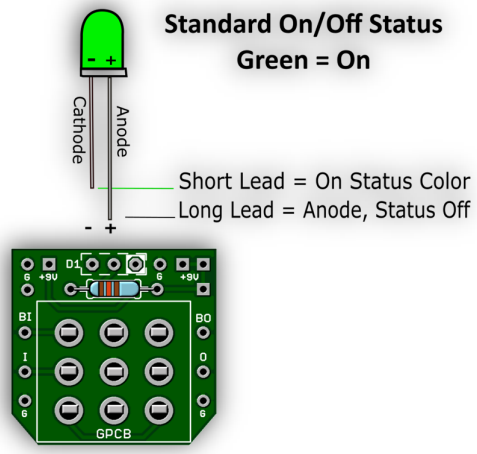


Be sure your In/Out Jack wiring is correct. A Stereo Jack (for battery use only) has a RING lug which is used to connect to the battery ground. If you do not intend to use a battery there is no need for a Stereo Jack. If using Stereo then only use the Tip and Sleeve lugs. S4, S5 & S6 is only needed when the LED is wired to the Main Board.

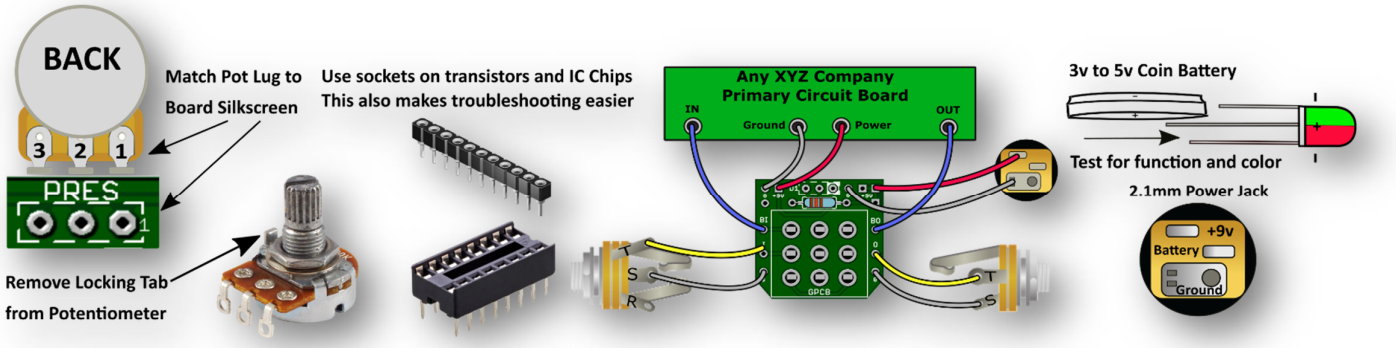
If using our convenient 3PDT Wiring Boards (below) here is an LED wiring guide. You may use Common Anode Bi-Color or Standard On/Off. The wiring boards use the same symmetrical layout as if wiring straight to the switch.

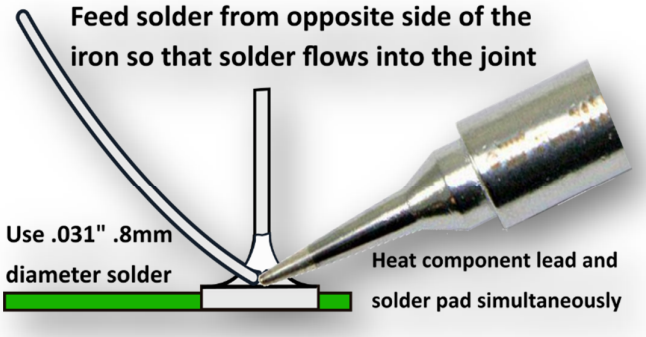
STATUS LED





Note: If wiring the LED to our 3PDT board no need to connect S4, S5 & S6 or populate D5 or R22 (CLR) on the main board since you are wiring your LED directly to our board.





A good solder joint should be shiny and look like this:

*** Carefully re-flow suspect solder joints.**

*** Clean and tin your Tip regularly.**

When soldering wire to the board push the protective PVC jackect flush with the board and pad.

Use the right tools for the job and be patient.
If you need help ask questions first at the GuitarPCB forum.
We are there to help and we know our products best.

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