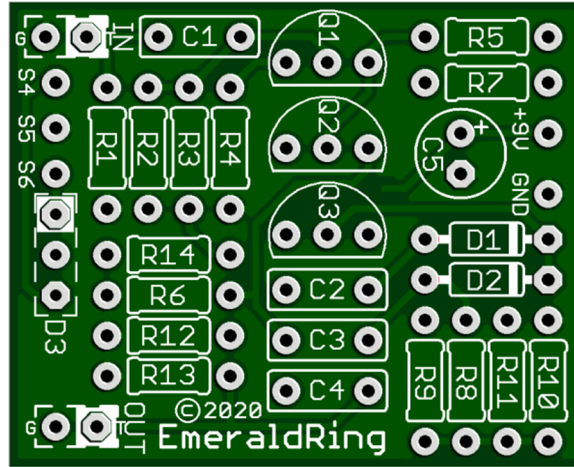


# Emerald Ring by GuitarPCB.com

Emerald Ring is designed to be an easy add-on to just about any Fuzz, or Gain circuit you wish to add an Octave tone to. By driving the Emerald Ring with a Fuzz Face or other circuits such as Angry Llama, Sriracha Fuzz, PUFF (Fuzz face) or Emexar (Dist+) will result in stronger octave/harmonics and less gating splatter.



Board Dimensions (W x H) 1.15" x 1.40" or 29 x 36 mm.

## PARTS LIST

Part	Value
R1	2M2
R2	*** 160k
R3	*** 560k
R4	6k2
R5	18k
R6	*10k
R7	*10k
R8	*68k
R9	*68k
R10	*22k
R11	*22k
R12	10k
R13	47k
R14	1k8

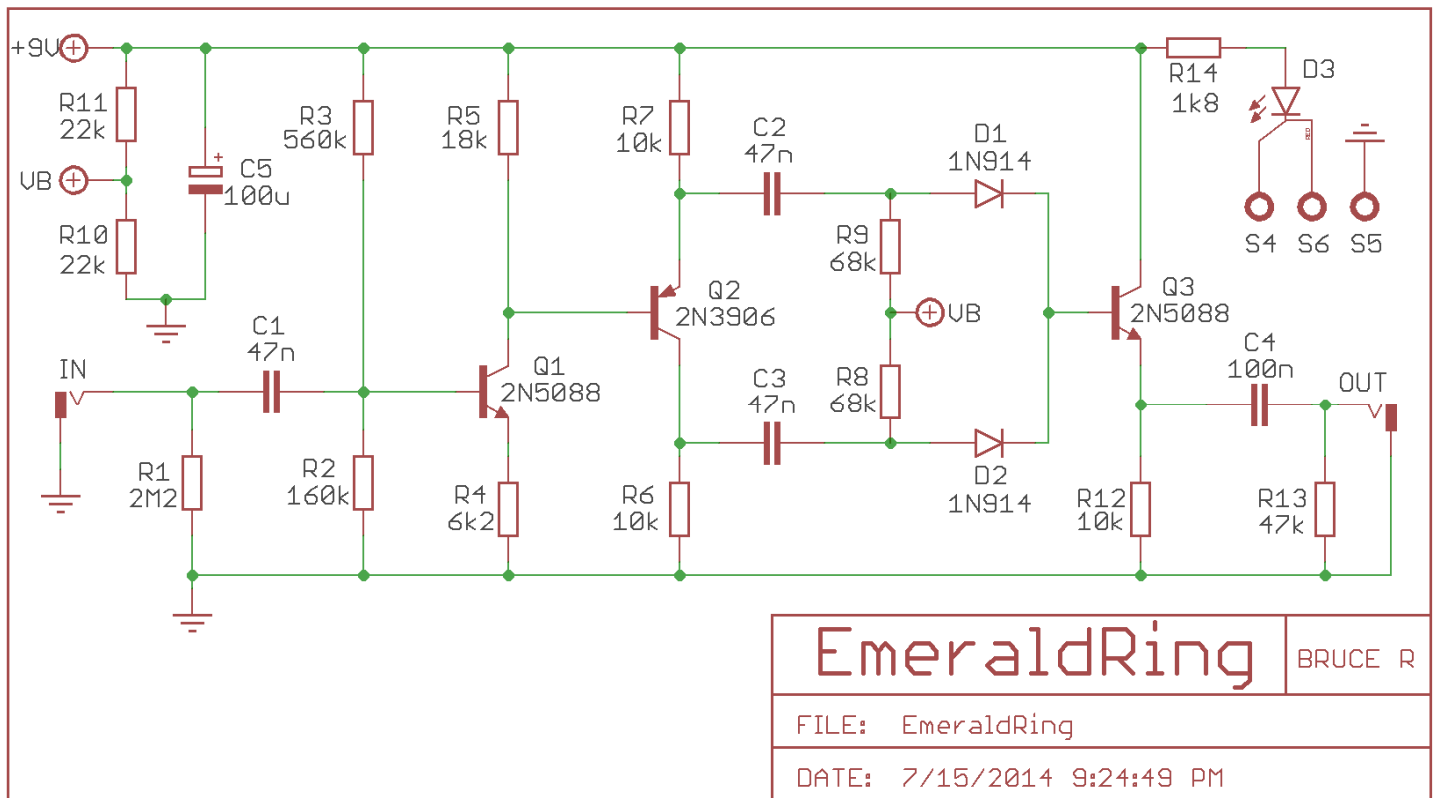
Part	Value
C1	47n
C2	*47n
C3	*47n
C4	100n
C5	100u
D1	**1N914
D2	**1N914
D3	BiColor CA LED
Q1	2N5088
Q2	2N3906
Q3	2N5088

\*Values should be precisely matched using a Digital Multimeter, in particular Capacitors, Use 1% Resistors for a closer tolerance match. Capacitors have a wider tolerance, typically 5% to 20%.

\*\* Silicon or germanium diodes will produce different sounds, with different circuits. Socket and See! If you have a DMM or circuit, capable of matching the forward voltage, it is preferable to do so.

\*\*\* **R2 and R3** is a voltage divider. Since stock values are not as common you may also use **62K at R2 and 220K at R3**

## SCHEMATIC

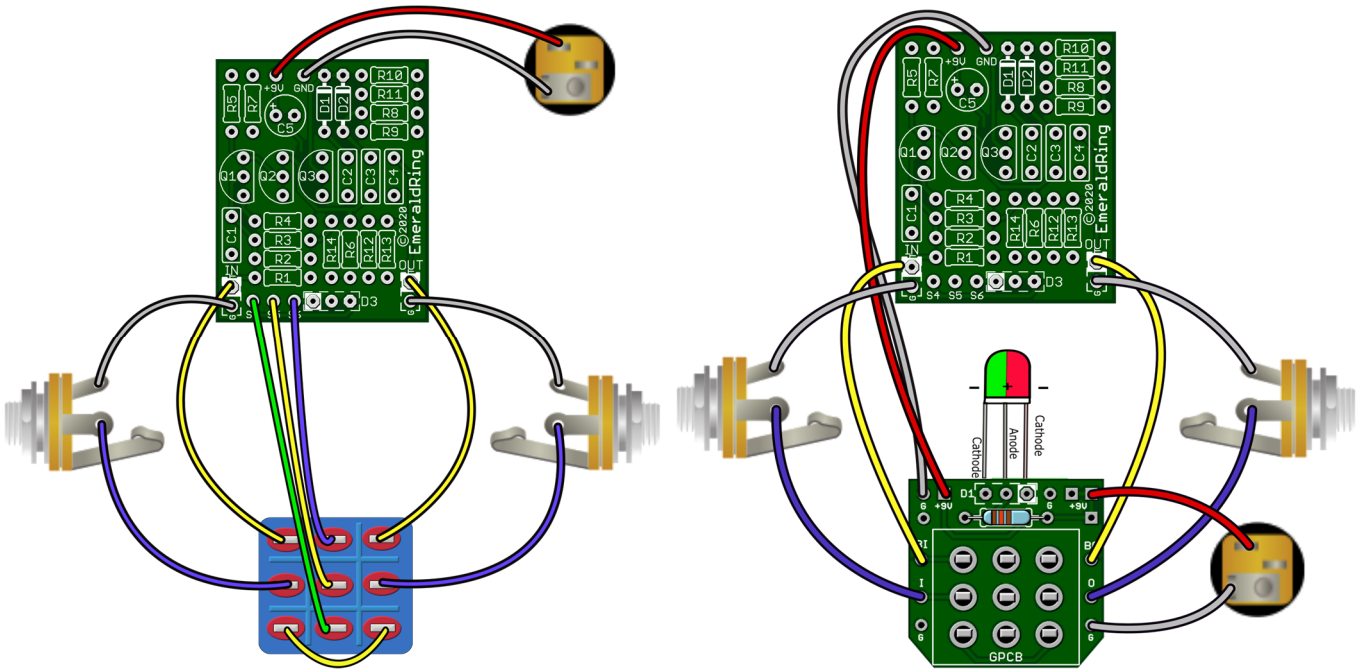


## IMPORTANT NOTES

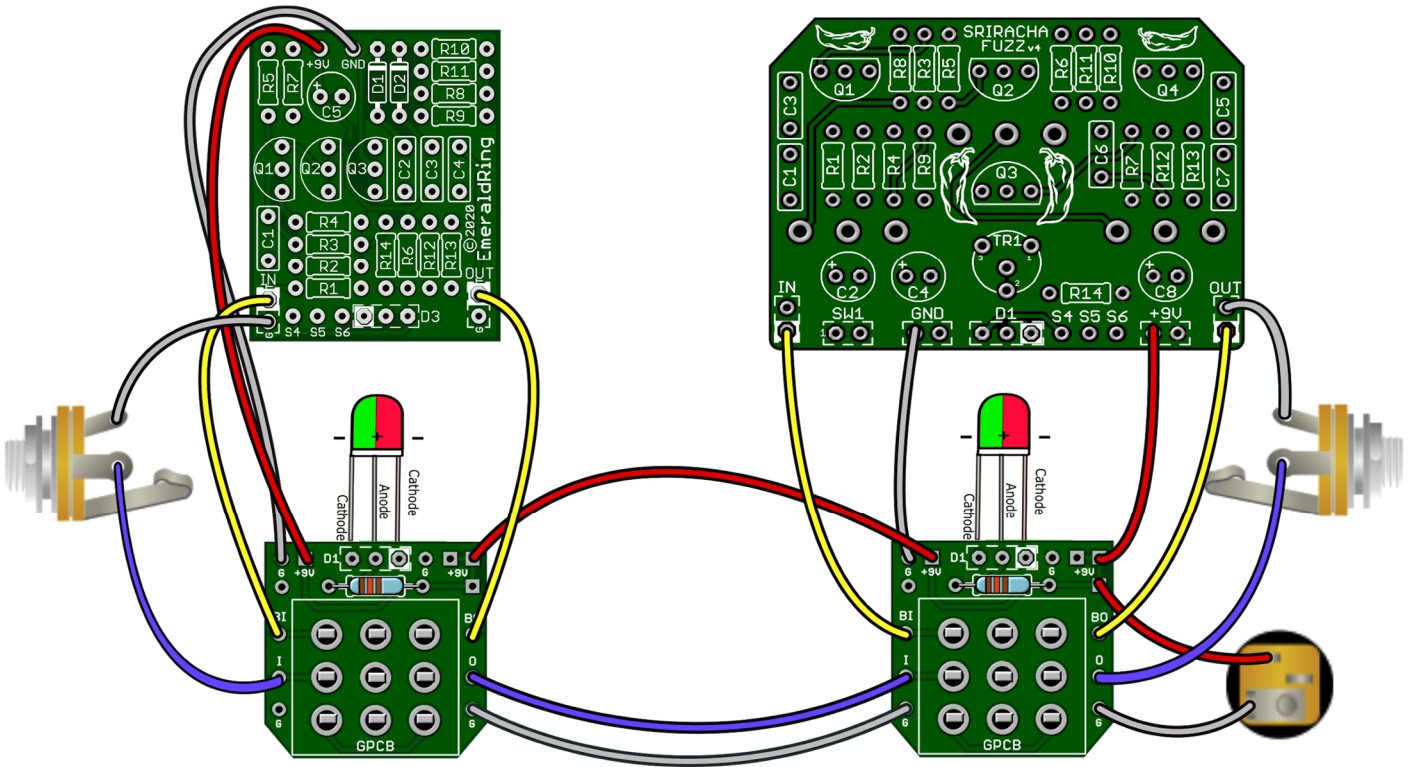
- Emerald Ring is designed to be an easy add-on to just about any Fuzz, or Gain circuit you wish to add an Octave tone to. By driving the Emerald Ring with a Fuzz Face [nice tonal variety] or other, such as Emexar 2 (Dist+), result in much stronger octave/harmonics and less gating splatter.
- FX gurus will remember at some point Way Huge marketed a couple of octave effects: the Purple Platypus™ and the Piercing Moose™. Now you may build a similar project and save the \$500+ price tag on eBay. Also trying different diodes, such as Germanium, you may also achieve other wonderful tones as used by the Foxx Tone Machine, Superfuzz, Kay, and others.
- The Emerald Ring works extremely well with Fuzz Face, Tonebender, Big Muff, Emexar 2, and other Fuzz/Gain circuits. The sky's the limit where creativity is concerned. Just drive the Emerald Ring, in series with your favorite circuit, for an always on application.
- For my Demo, I have the Angry Red Camel first in line from the guitar input, then from the output of that to the input of the Emerald Ring. The Output of the Emerald Ring is then wired to the Output Jack.
- A Mod option is to wire up (2) of my 3PDT Wiring Boards to the Inputs and Outputs for each circuit. Then wire the first 3PDT to the input of the second 3PDT (controlling the Emerald Ring circuit) then through to the output jack. Experiment with clipping diodes to create similarly sounding projects such as the Foxx Tone Machine or Fender Blender™. Silicon or Germanium diodes yield different results. Socket and See.

## WIRING DIAGRAMS

If you are building the Emerald Ring in its own enclosure, use this wiring diagram



Use this for connecting Emerald Ring in series with another Fuzz or Distortion circuit.

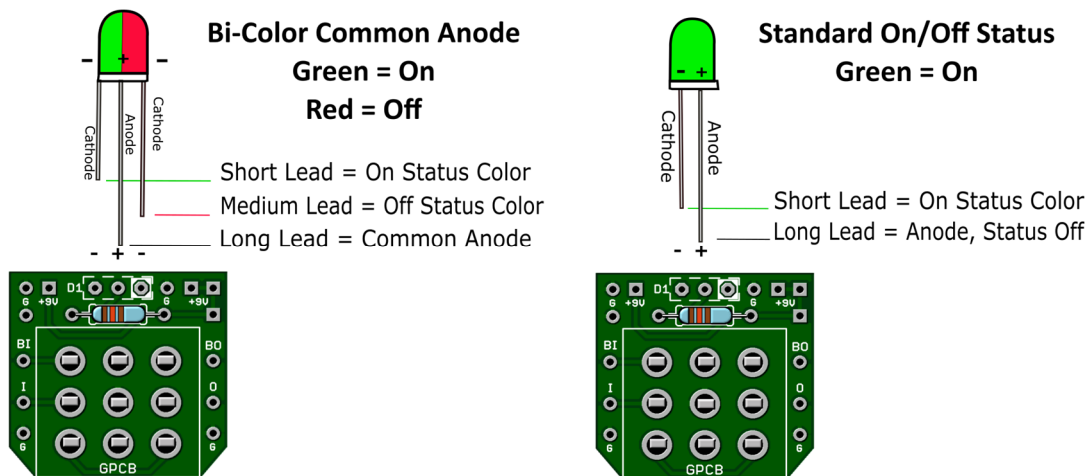




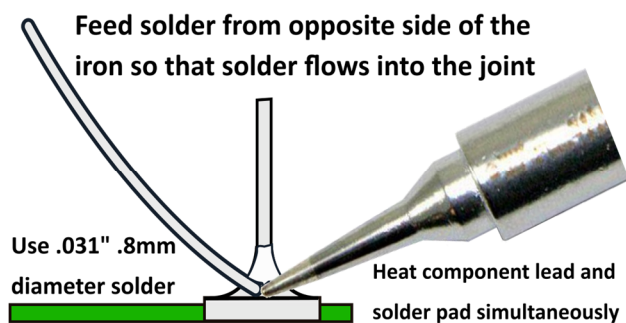
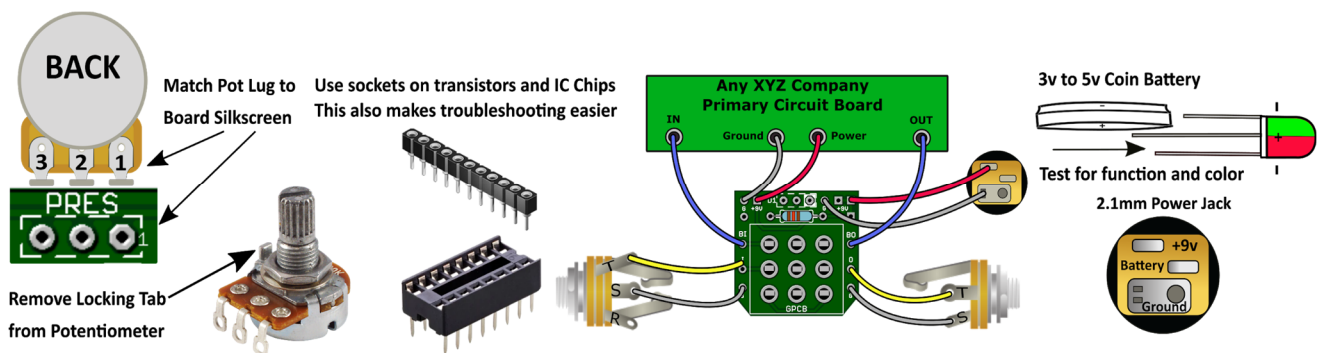
Be sure your In/Out Jack wiring is correct. A Stereo Jack (for battery use only) has a RING lug which is used to connect to the battery ground. If you do not intend to use a battery there is no need for a Stereo Jack. If using Stereo then only use the Tip and Sleeve lugs. S4, S5 & S6 is only needed when 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 D3 or R14 (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.

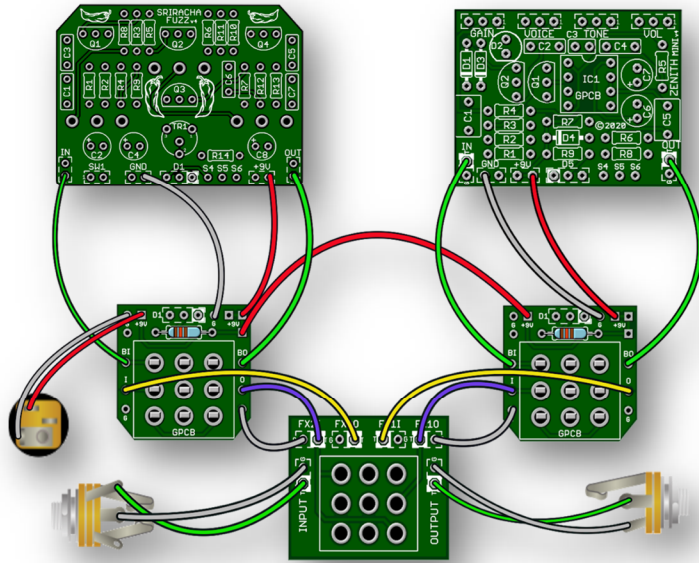
When soldering wire to the board push the protective PVC jacket flush with the board and pad.

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.



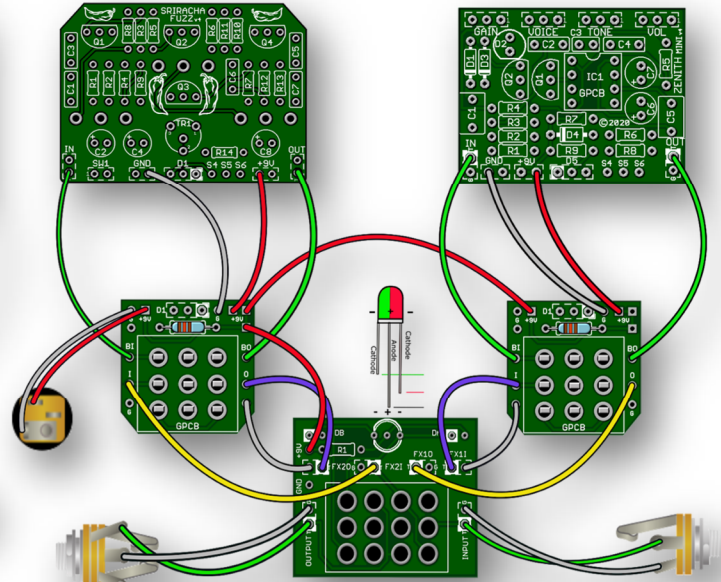
For more versatility try our Easy Order Switching Boards, for switching the order of circuits, on the fly.

This way you can have an Emerald Ring before Fuzz or after Fuzz in the same enclosure.



Easy Order Switch

Toggle Version No LED



Easy Order Switch

4PDT Version w/LED

Using our 3PDT Wiring Boards in tandem with the Easy Order Switch makes it easy to share power with other boards. No need for Star Grounding!!

Need a kit? Check out our authorized worldwide distributors:

USA – Check out [PedalPartsAndKits](http://PedalPartsAndKits.com) for all your GuitarPCB kit needs in the USA.

Europe – [Das Musikding](http://DasMusikding.com) Order either boards or kits direct from Europe.

[PedalPartsAustralia](http://PedalPartsAustralia.com) - Order either boards or kits direct from Australia



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