

Faze90

Psychedelic phasing
fun for all



IMPORTANT STUFF

Go no further until you've read this page.

Some basic info to keep you on the right track.

COMPONENT ORIENTATION

Electrolytic capacitors - long (+) leg goes into the square pad.

Diodes - leg marked with stripe (cathode) goes into square pad.

LEDs - shorter leg (cathode) goes into square pad.

Transistors - check the pinouts if you're using components other than those listed. The Faze90 kit may come with any of several different FET sets which will be detailed later in the document.

COMPONENT PLACEMENT

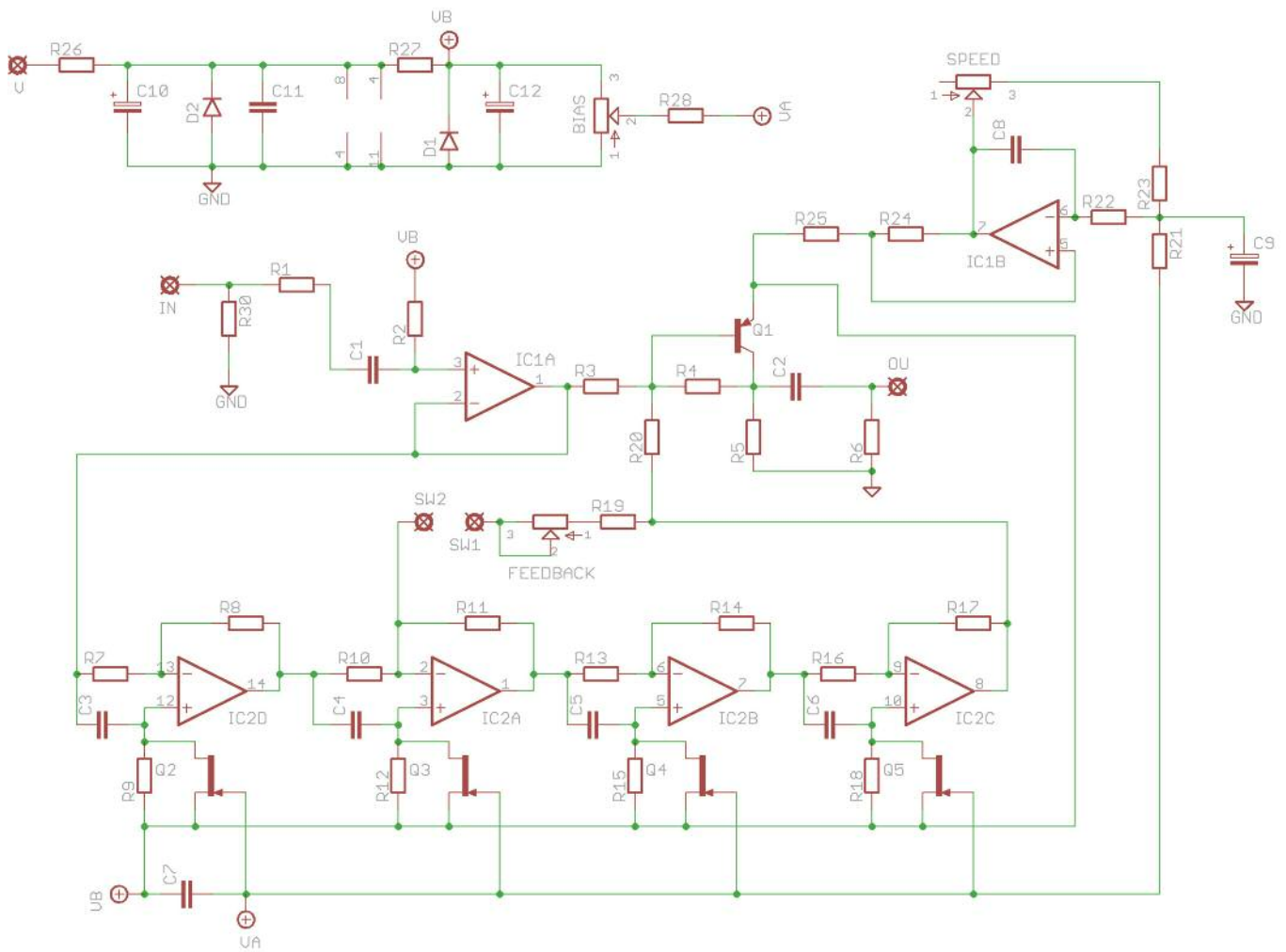
There's not a great deal of clearance for the pot if building this kit into a 1590B. Make sure you keep your components nice and tight to the pcb. If you want to use sockets for the ICs you'll have to take the plastic casing off the pot(s) so they'll fit.

USING THE BOARD WITHOUT THE FOOTSWITCH-MOUNT

The PCB can be cut (carefully!) across the dashed line if you want to wire up the footswitch etc offboard. The remaining power and signal pads match up to the 3PDT Direct Connect daughterboard.

READ ALL THE NOTES ON PAGE 4 BEFORE STARTING

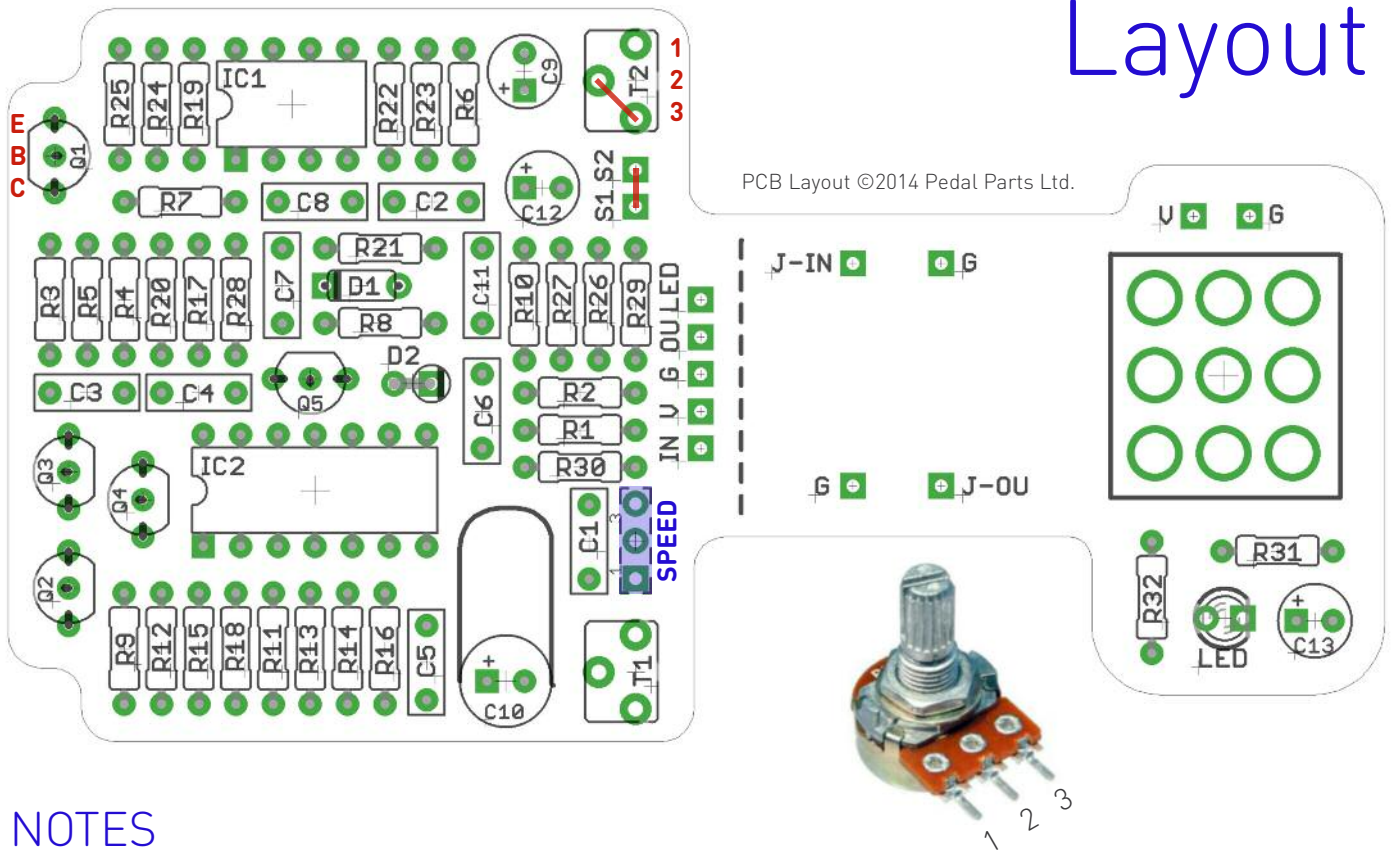
Schematic + BOM



| | | | | | | | |
|------------|------|------------|-------|------------|-----------|--------------|---------------|
| R1 | 10K | R17 | 10K | C1 | 10n | Q1 | 2N5087*** |
| R2 | 470K | R18 | 22K | C2 | 47n | Q2-4 | Matched FETs |
| R3 | 150K | R19 | 22K* | C3 | 47n | D1 | 5.1v zener |
| R4 | 150K | R20 | 150K | C4 | 47n | D2 | 1N4001 |
| R5 | 56K | R21 | 3M9 | C5 | 47n | D3 | LED |
| R6 | 150K | R22 | 150K | C6 | 47n | IC1 | TL072 |
| R7 | 10K | R23 | 4K7 | C7 | 47n | IC2 | TL074 |
| R8 | 10K | R24 | 470K | C8 | 10n | SPEED | 500KC |
| R9 | 22K | R25 | 150K | C9 | 15u elec | T2† | 20KB/22K TRIM |
| R10 | 10K | R26 | 47R | C10 | 100u elec | T1 | 470K TRIM |
| R11 | 10K | R27 | 10K | C11 | 100n | | |
| R12 | 22K | R28 | 1M | C12 | 22u | | |
| R13 | 10K | R29 | CLR** | C13 | 10u | | |
| R14 | 10K | R30 | 1M | | | | |
| R15 | 22K | R31 | 1K | | | | |
| R16 | 10K | R32 | 390R | | | | |

* notes on next page

Layout



NOTES

If not using a feedback-off switch, join pads S1 and S2 with a wire.

*R19 at 22K is the stock value for fixed feedback. If going for stock, place a jumper wire across the pads of T2 as shown above.

**R29 is only required if you're cutting the PCB and wiring the LED offboard.

***Other PNP BJTs can be used, such as 2N3906. Check your pinout. Pads are marked above, and the orientation shown is correct for 2N5087.

‡T2 is an optional variable control for your feedback. This can be a trimmer or an external pot. Use this in conjunction with R19 to set your desired range. FuzzDog recommendation is to have a 12K resistor in R19, and use a 20KB pot. When the pot is in the middle position you will have the stock 22K value. You can use a bigger pot (50KB) and use a jumper wire instead of R19. With the pot towards the CCW end of the turn you'll get oscillation.

The PCB has been designed with 2N5457 for Q2-5. Check the pinouts if you're using different FETs. 2N5952 should be reversed.

Adjust T1 to bias the FETs at between 4-5v. There's no perfect voltage - just tweak it in that range until you get the sound you want.

If you really want to add a feedback-off switch, just connect pad S1 to the middle lug of a SPDT toggle switch, and S2 to either of the outer lugs. Or use a SPST switch and connect either pad to either lug.

Footswitch tags should be orientated as shown above.

The pads to hook up the SPEED pot are marked in blue above.

Wire it up

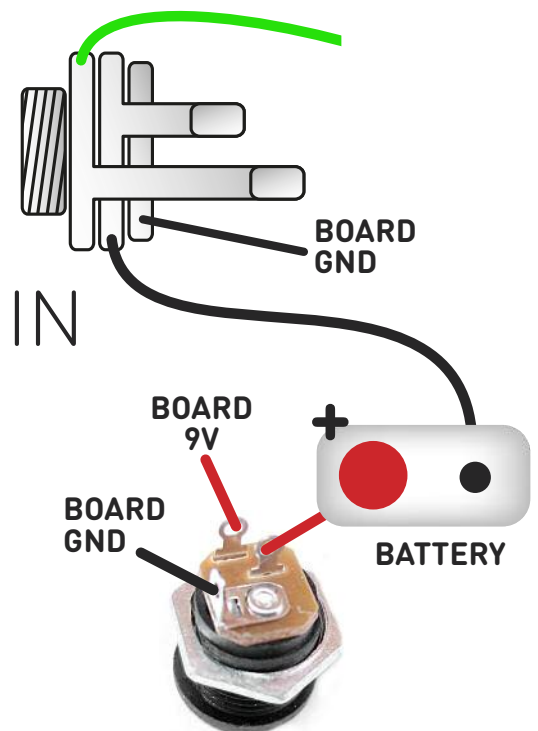
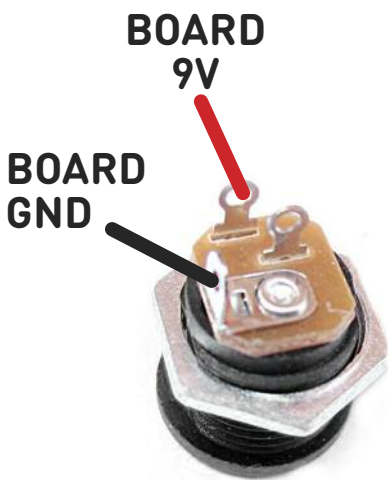
Hang on - there's very little to do!

Wire the jacks as shown -
GND connection to the inner tag,
signal (IN or OUT) to the outer tag.

SIGNAL
(i.e. IN or OUT)



DC Socket connections:



If you're using a bigger enclosure and want to add a battery, use a stereo jack for the input and wire it like this:

This circuit is standard, Negative GND. Your power supply should be Tip Negative / Sleeve Positive. That's the same as your standard pedals (Boss etc), and you can safely daisy-chain your supply to this pedal.

PedalParts.co.uk