

Sonic Stamp

Tweaks your Freqs
to perfection



Important notes - DO NOT SKIP!

If you're using any of our footswitch daughterboards,

DOWNLOAD THE DAUGHTERBOARD DOCUMENT

- Download and read the appropriate build document for the daughterboard as well as this one **BEFORE** you start the build.
- DO NOT solder the supplied Current Limiting Resistor (CLR) to the main circuit board even if there is a place for it. This should be soldered to the footswitch daughterboard. This applies to older PCBs with a pad marked LED next to the IN V G OU pads.

POWER SUPPLY

Unless otherwise stated in this document this circuit is designed to be powered with 9V DC Tip-Negative supply.

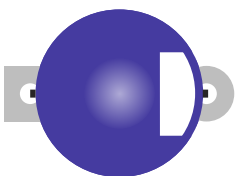
COMPONENT SPECS

Unless otherwise stated in this document:

- Resistors should be 0.25W. You can use those with higher ratings but check the physical size of them. For kits that use 3mm resistors instead of standard 6mm, these will usually be either 0.125W or 0.4W.
- Electrolytics caps should be at least 25V for 9V circuits, 35V for 18V circuits. Again, check physical size if using higher ratings.

LAYOUT CONVENTIONS

Unless otherwise stated in this document, the following are used:



Electrolytic capacitors:

Long leg (anode) to square pad. Stripe indicates cathode.



Diodes/LEDs:

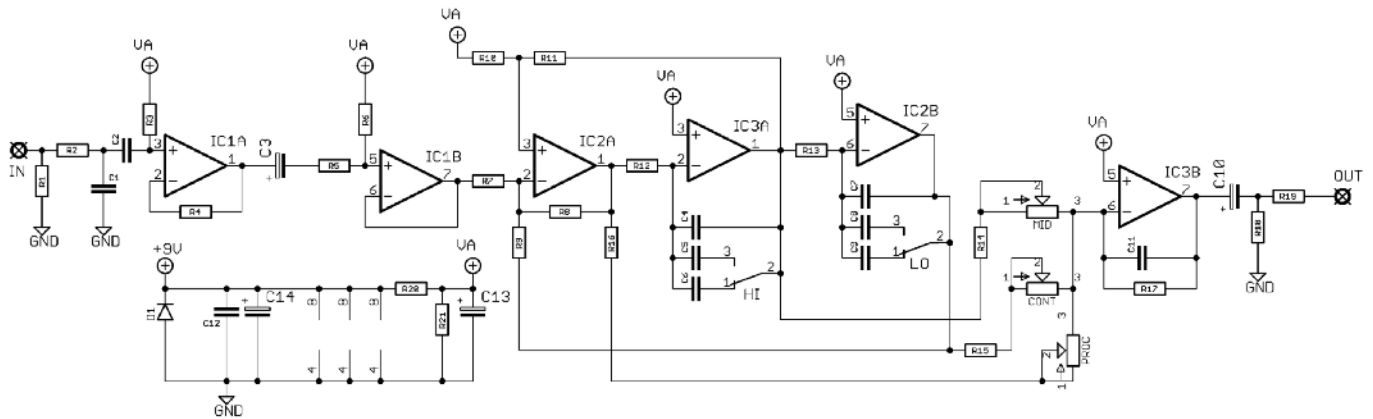
Striped leg (cathode) to square pad. Short leg to square pad for LEDs. The exception to this is with Russian germanium diodes - stripe = anode.

- **ICs:**

Square pad indicates pin 1.

Schematic + BOM

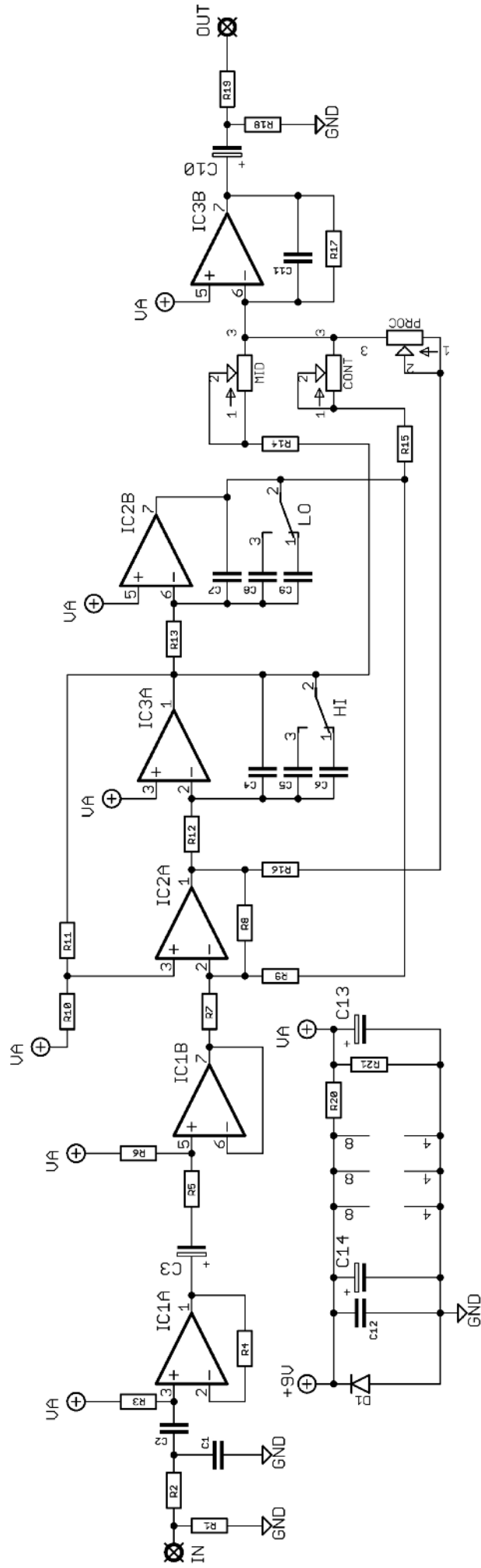
FULL

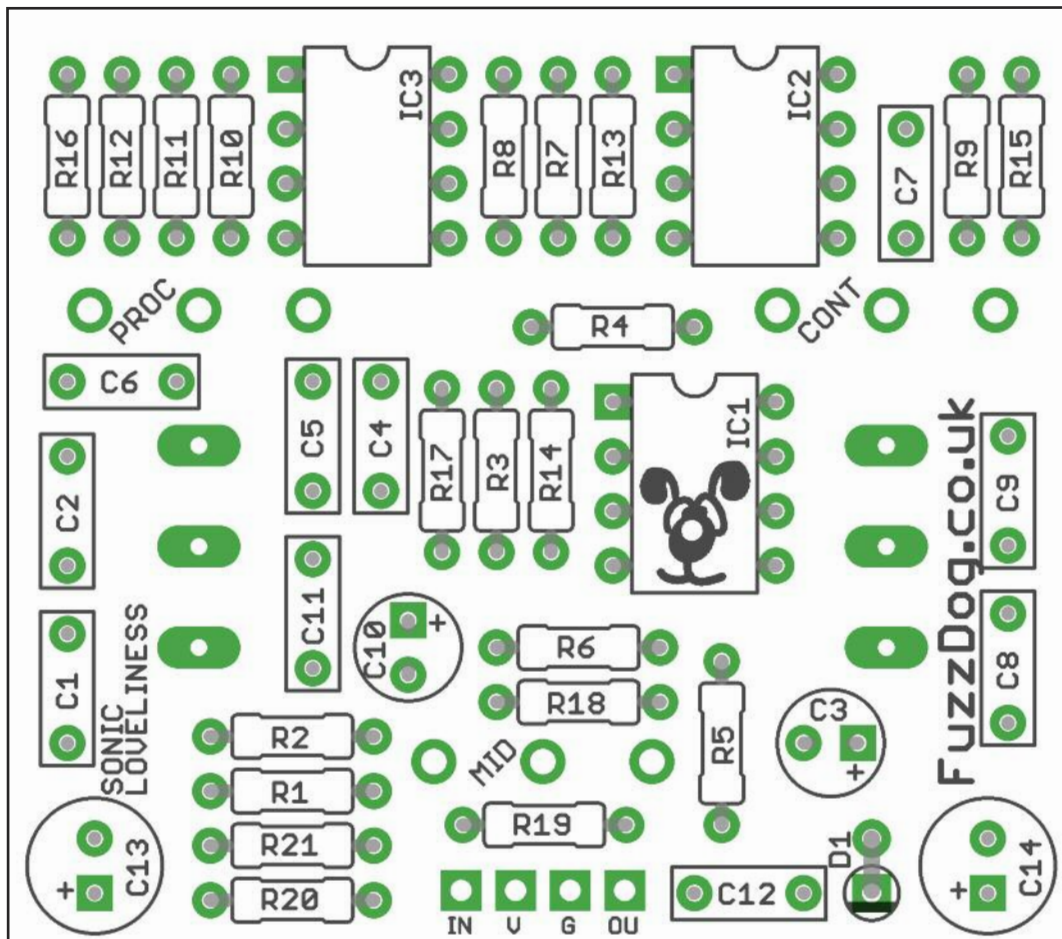


R1	2M2	C1	100p	D1	1N4001
R2	1K	C2	4n7	IC1-3	TL072
R3	1M	C3	10u elec	CONT	50KB
R4	1K	C4	2n7	MID	50KB
R5	1K	C5	2n2	PROC	50KB
R6	1M	C6	6n8	HI / LO	SPDT ON-OFF-ON
R7	22K	C7	18n		
R8	22K	C8	15n		
R9	22K	C9	56n		
R10	22K	C10	10u elec		
R11	22K	C11	100p		
R12	22K	C12	100n		
R13	22K	C13	100u elec		
R14	15K	C14	100u elec		
R15	10K				
R16	10K				
R17	62K				
R18	100K				
R19	1K				
R20	47K				
R21	47K				

The original unit only has two controls - CONTOUR and PROCESS. You can keep it simple and go for that, or add in whichever extras you like. There's an optional MIDS pot and two three-way switches to alter the frequencies in which the two main controls operate. HI alters Process, LO alters Contour.

More details on implementing/removing these later in the doc.





PCB layout ©2023 Pedal Parts Ltd.

The power and signal pads on the PCB conform to the FuzzDog Direct Connection format, so can be paired with the appropriate daughterboard for quick and easy offboard wiring. Check the separate daughterboard document for details.

Be very careful when soldering the diode. They're very sensitive to heat. You should use some kind of heat sink (crocodile clip or reverse action tweezers) on each leg as you solder them. Keep exposure to heat to a minimum (under 2 seconds). Same goes for the ICs if you aren't using sockets.

Snap the small metal tag off the pots so they can be mounted flush in the box.

You should solder all other board-mounted components before you solder the pots and switches. Once they're in place you'll have no access to much of the board. Make sure your pots all line up nicely.

The best way to do that is to solder a single pin of each pot in place then melt and adjust if necessary before soldering in the other two pins. Similar procedure for the switches.



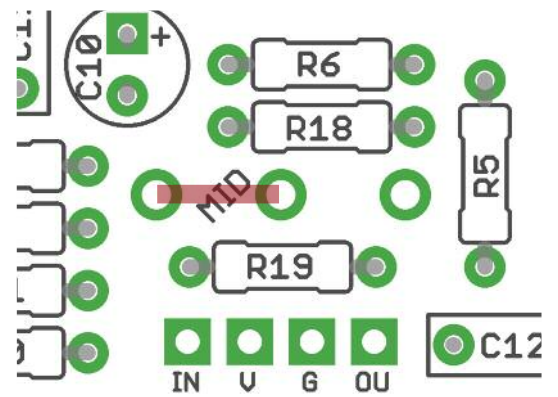
Variations

Stock MIDS

If you want to stick with the fixed Mids control, change R14 to 39K and place a jumper in place of the Mids pot as shown.

No switches

It's very simple to stick to the stock frequency ranges for the Proc and Cont pots. Simply leave out the toggle switches and C5, C6, C8 and C9. No jumpers required.



Test the board!

Check the relevant daughterboard document for more info before you undertake this stage.

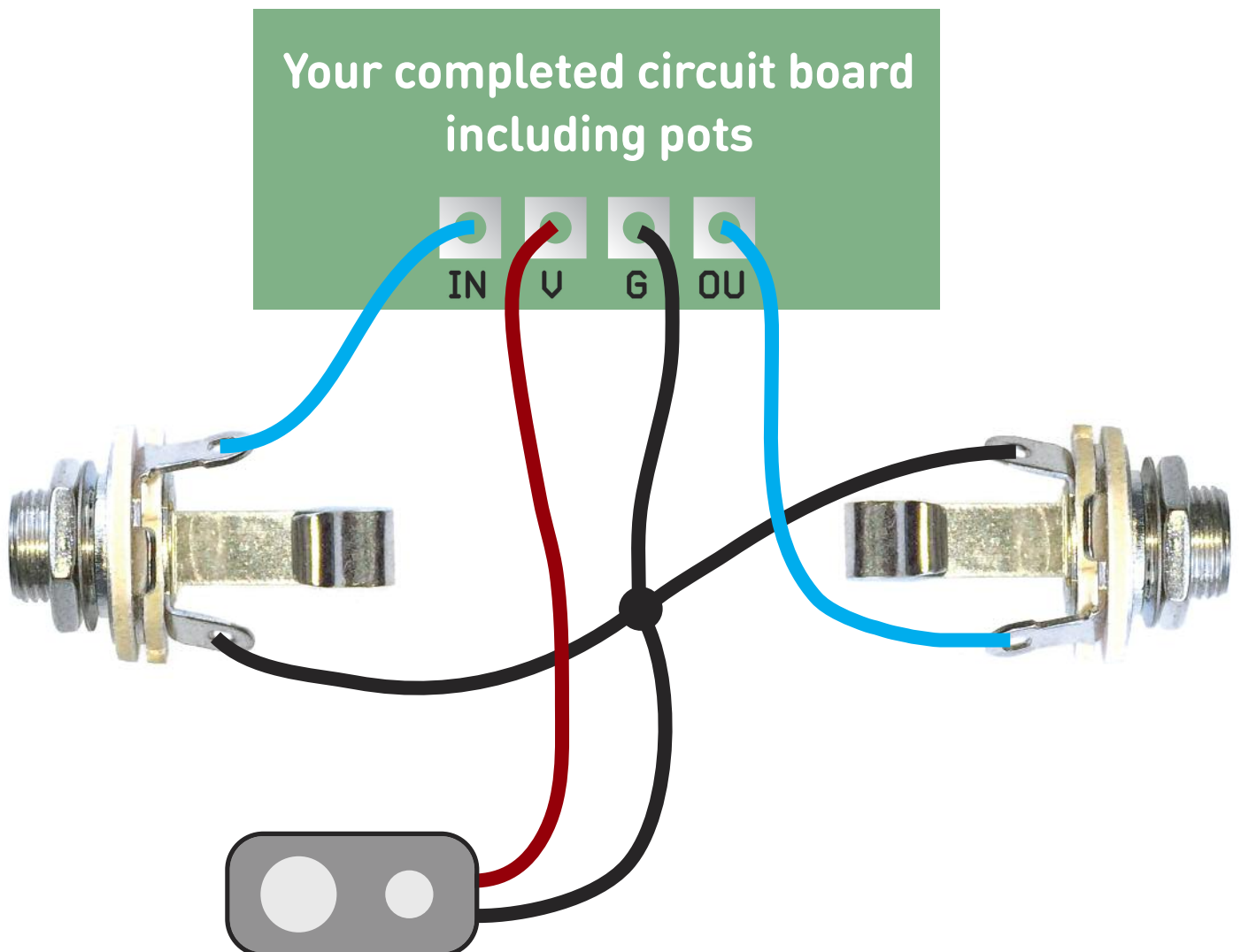
UNDER NO CIRCUMSTANCES will troubleshooting help be offered if you have skipped this stage. No exceptions.

Once you've finished the circuit it makes sense to test is before starting on the switch and LED wiring. It'll cut down troubleshooting time in the long run. If the circuit works at this stage, but it doesn't once you wire up the switch - guess what? You've probably made a mistake with the switch.

Solder some nice, long lengths of wire to the board connections for 9V, GND, IN and OUT. Connect IN and OUT to the jacks as shown. Connect all the GNDs together (twist them up and add a small amount of solder to tack it). Connect the battery + lead to the 9V wire, same method. Plug in. Go!

If you're using a ribbon cable you can tack the wires to the ends of that. It's a lot easier to take them off there than it is do desolder wires from the PCB pads.

If it works, carry on and do your switch wiring. If not... aw man. At least you know the problem is with the circuit. Find out why, get it working, THEN worry about the switch etc.



Now's the time
to refer to the
daughterboard
document for
your chosen
bypass method.

Enjoy your pedal!

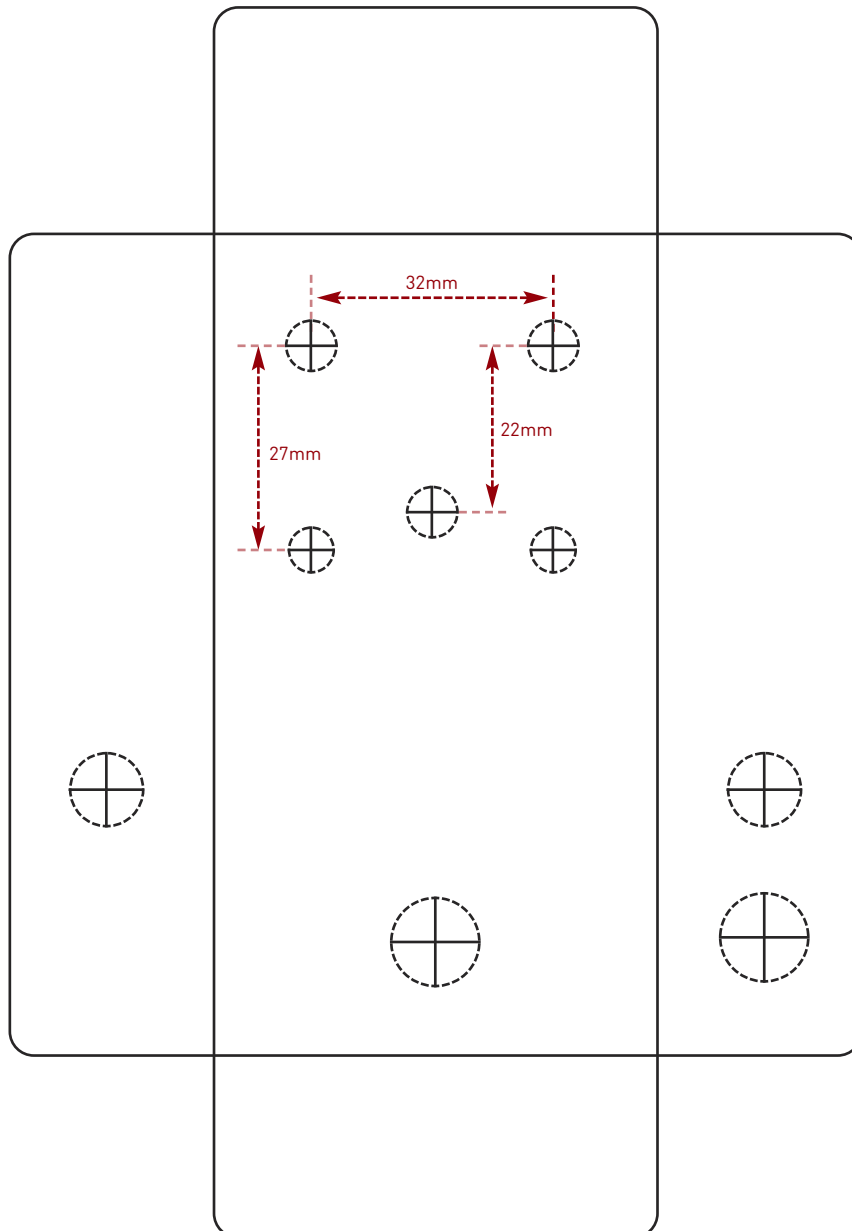
Drilling template without battery - side DC

Hammond 1590B - 60 x 111 x 31mm

It's a good idea to drill the pot and
toggle switch holes 1mm bigger if
you're board-mounting them.
Wiggle room = good!

Recommended drill sizes:

Pots	7mm
Jacks	10mm
Footswitch	12mm
DC Socket	12mm
Toggle switches	6mm



This template is a rough guide only. You should ensure correct marking of your enclosure before drilling. You use this template at your own risk.

Pedal Parts Ltd can accept no responsibility for incorrect drilling of enclosures.

FuzzDog.co.uk