

Stellar Spinner

Out of this world modulated
tape-style delay



Important notes

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.
- 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.

POWER SUPPLY

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

COMPONENT SPECS

Unless otherwise stated in this document:

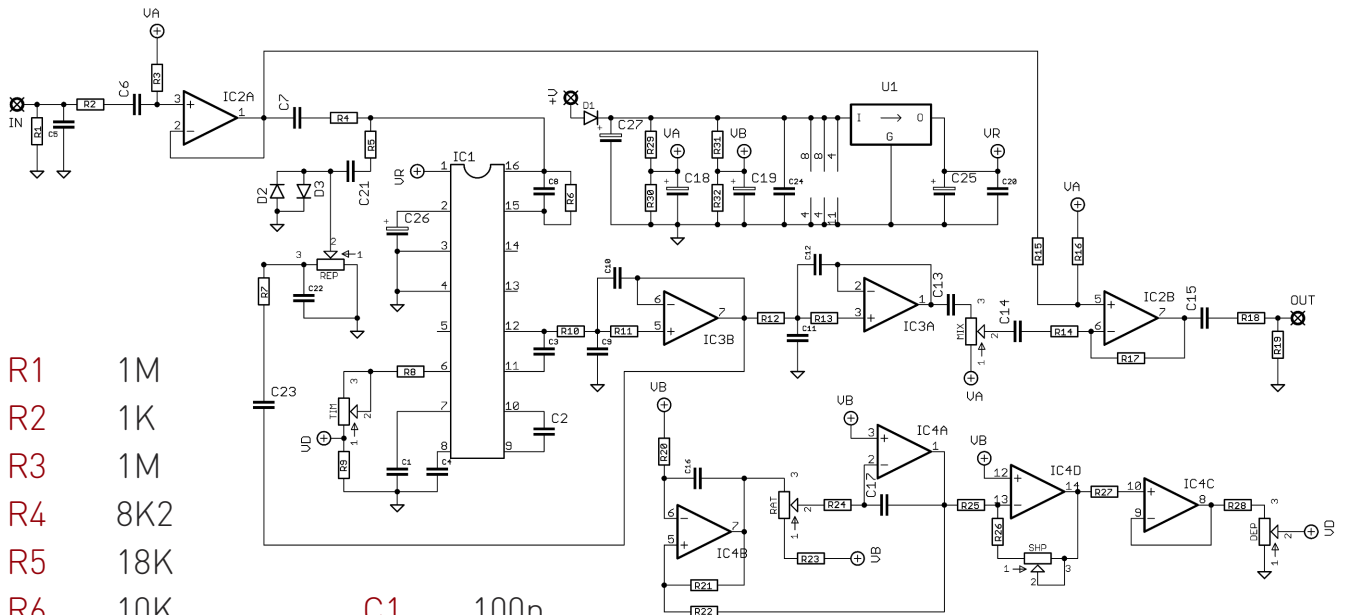
- Resistors should be 0.125W. You can use those with higher ratings but check the physical size of them. 0.4W can also be found in 3mm length.
- Electrolytics caps should be at least 25V for 9V circuits, 35V for 18V circuits. Again, check physical size if using higher ratings.

LAYOUT CONVENTIONS

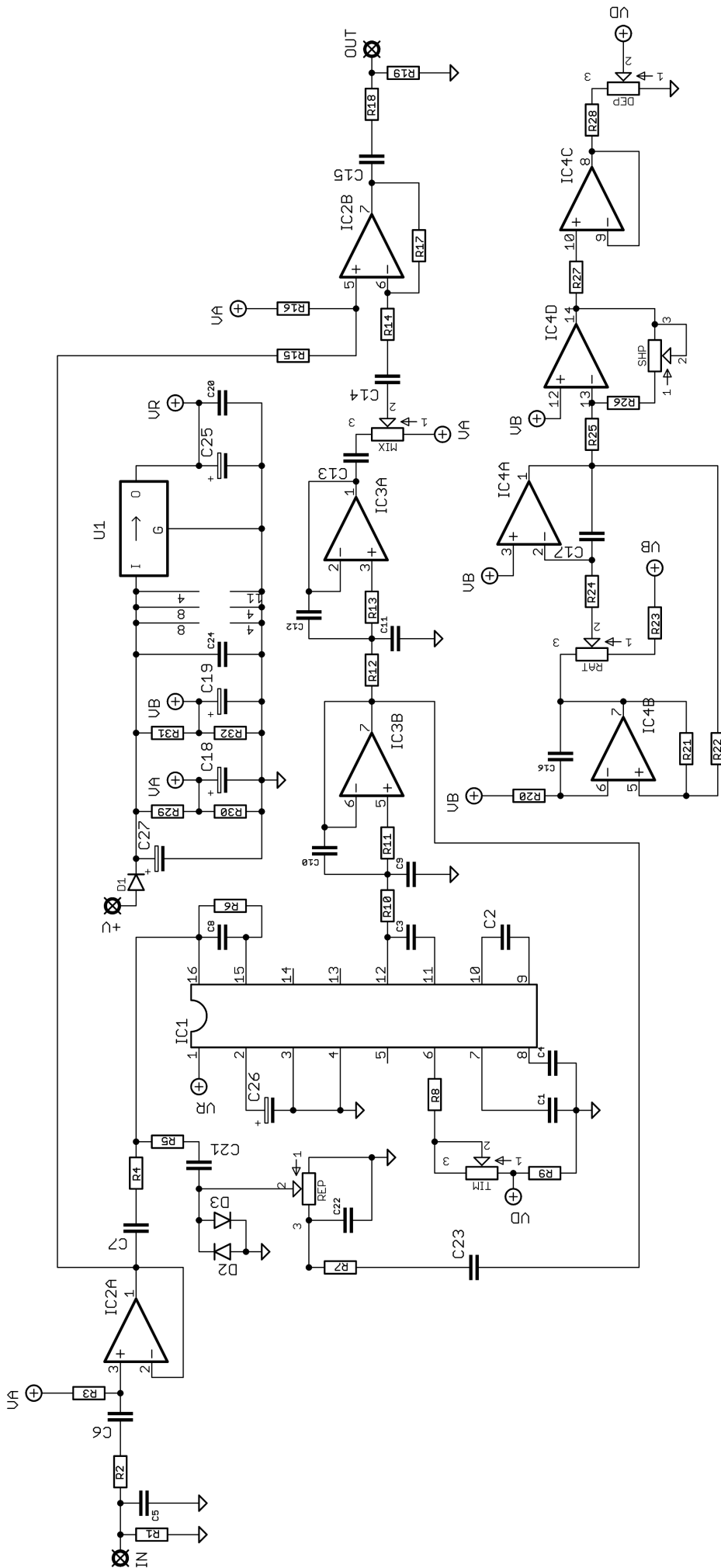
Unless otherwise stated in this document, the following are used:

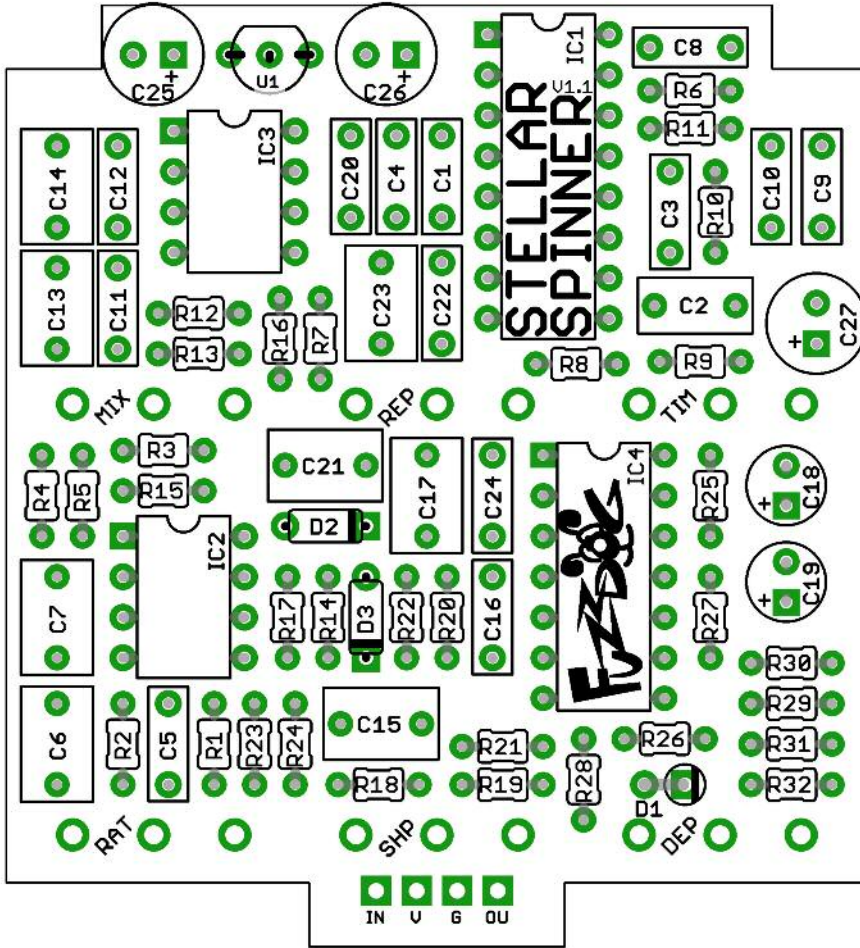
- **Electrolytic capacitors:**
Long leg (anode) to square pad.
- **Diodes/LEDs:**
Striped leg (cathode) to square pad. Short leg to square pad for LEDs.
- **ICs:**
Square pad indicates pin 1.

Schematic + BOM



R1	1M	C1	100n	IC1	PT2399	DEP	50KB
R2	1K	C2	330n	IC2	TL072	MIX	50KB
R3	1M	C3	100n	IC3	LM833	RATE	1MC
R4	8K2	C4	100n	IC4	LM324N	REP	50KB
R5	18K	C5	100p	U1	78L05	SHP	100KA
R6	10K	C6	1u	D1	1N5817	TIM	50KB
R7	1K	C7	1u	D2-3	1N4148		
R8	1K	C8	1n				
R9	1K	C9	4n7				
R10	10K	C10	4n7				
R11	10K	C11	3n3				
R12	15K	C12	10n				
R13	15K	C13	1u				
R14	47K	C14	1u				
R15	22K	C15	1u				
R16	47K	C16	10n				
R17	22K	C17	1u				
R18	470R	C18	10u elec				
R19	100K	C19	10u elec				
R20	100K	C20	100n				
R21	47K	C21	1u				
R22	33K	C22	10n				
R23	10K	C23	1u				
R24	33K	C24	100n				
R25	10K	C25	100u elec				
R26	10K	C26	47u elec				
R27	22K	C27	100u elec				
R28	22K						
R29	47K						
R30	47K						
R31	47K						
R32	47K						





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 diodes and U1. 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.

You should solder all other board-mounted components before you solder the pots. 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. If your pots don't have protective plastic jackets ensure you leave a decent gap between the pot body and the PCB otherwise you risk shorting out the circuit.



Test the board!

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

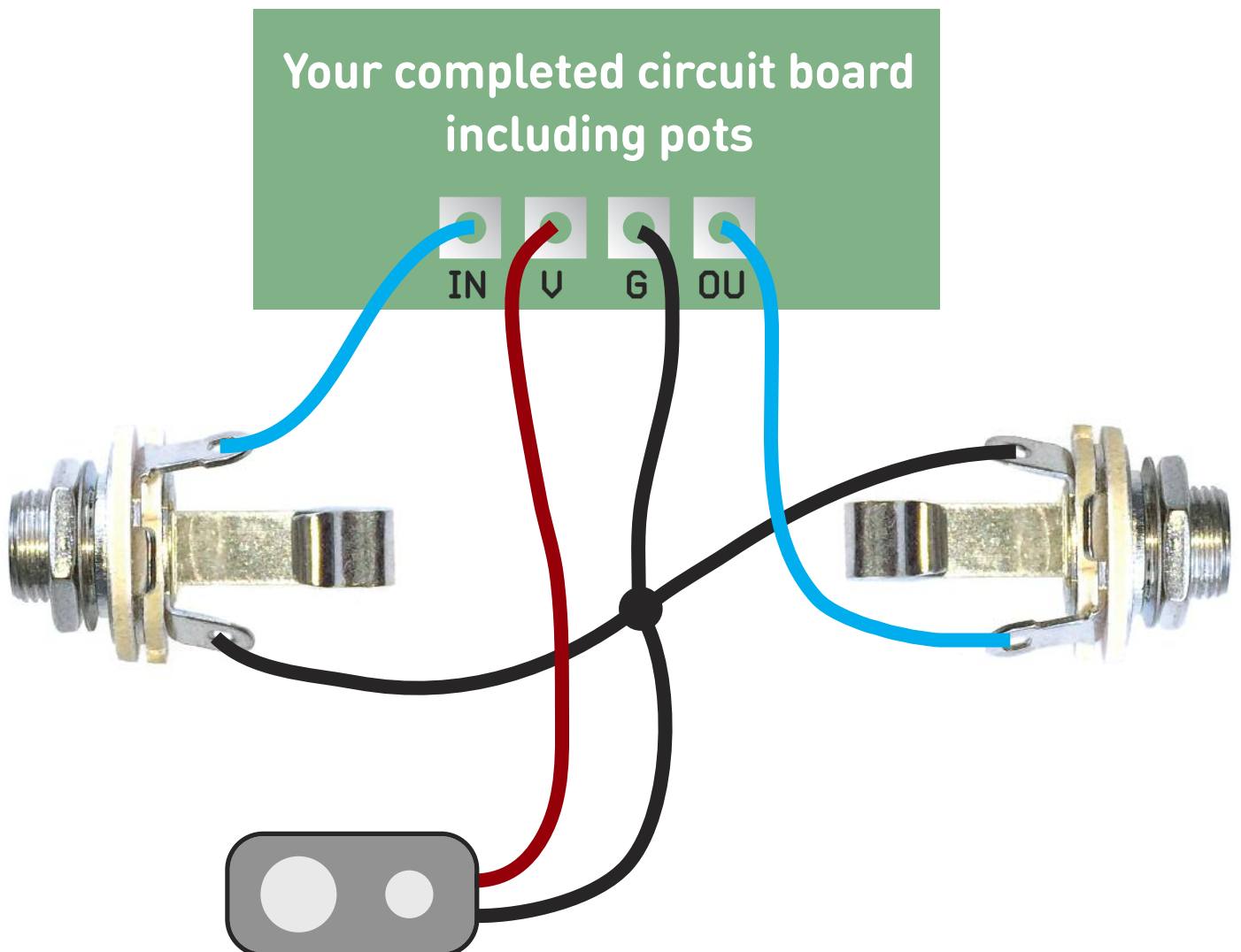
UNDER NO CIRCUMSTANCES will troubleshooting help be offered if you have skipped this stage. No exceptions.

Once you've finished the circuit it makes sense to test it 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 to 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!

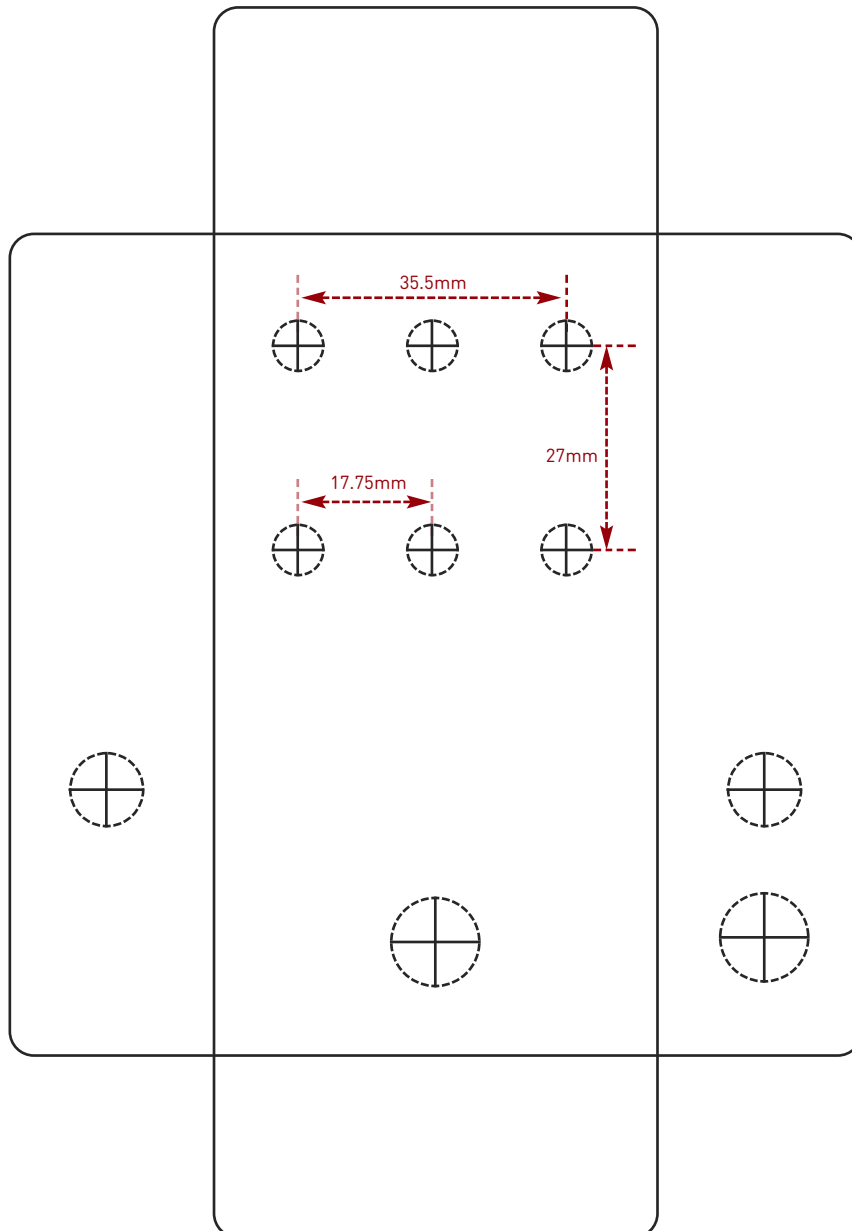
Drilling template

Hammond 1590B
60 x 111 x 31mm

Recommended drill sizes:

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

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



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.

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