

Southern Lights

One board, two or three dirt.

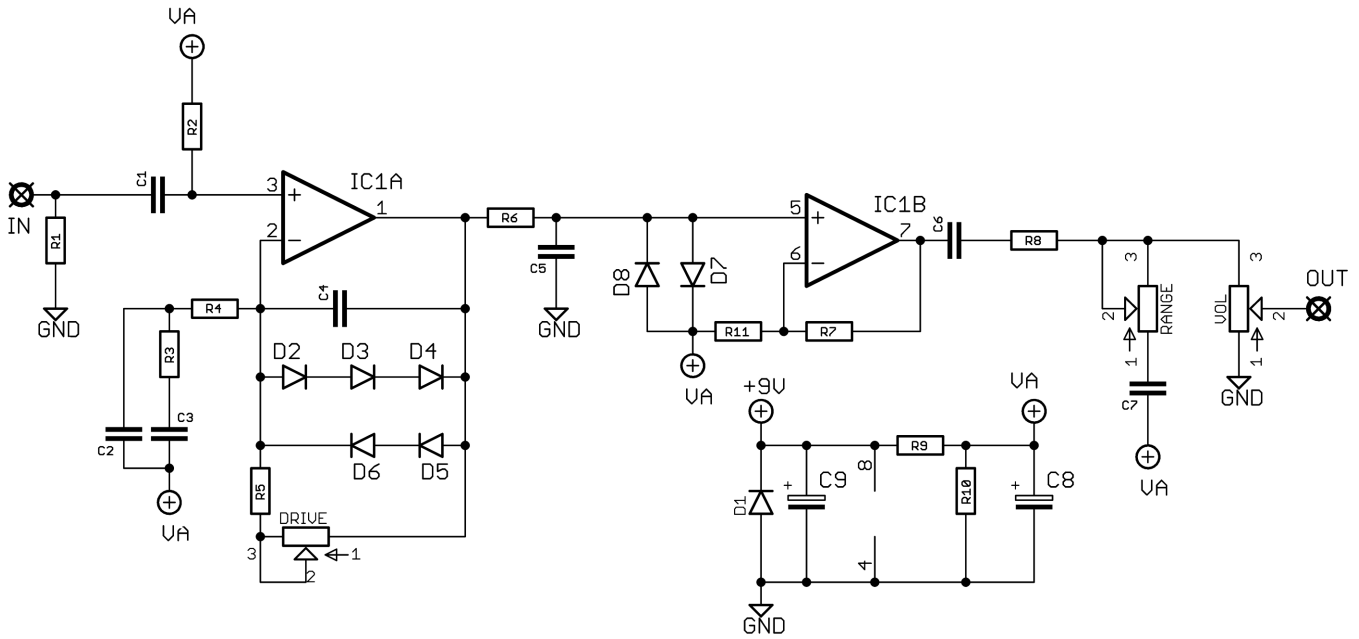


Before you dig in, ensure you download and read the **General Build Guide**.

It contains all the information you need for a successful outcome.



Schematic + BOM



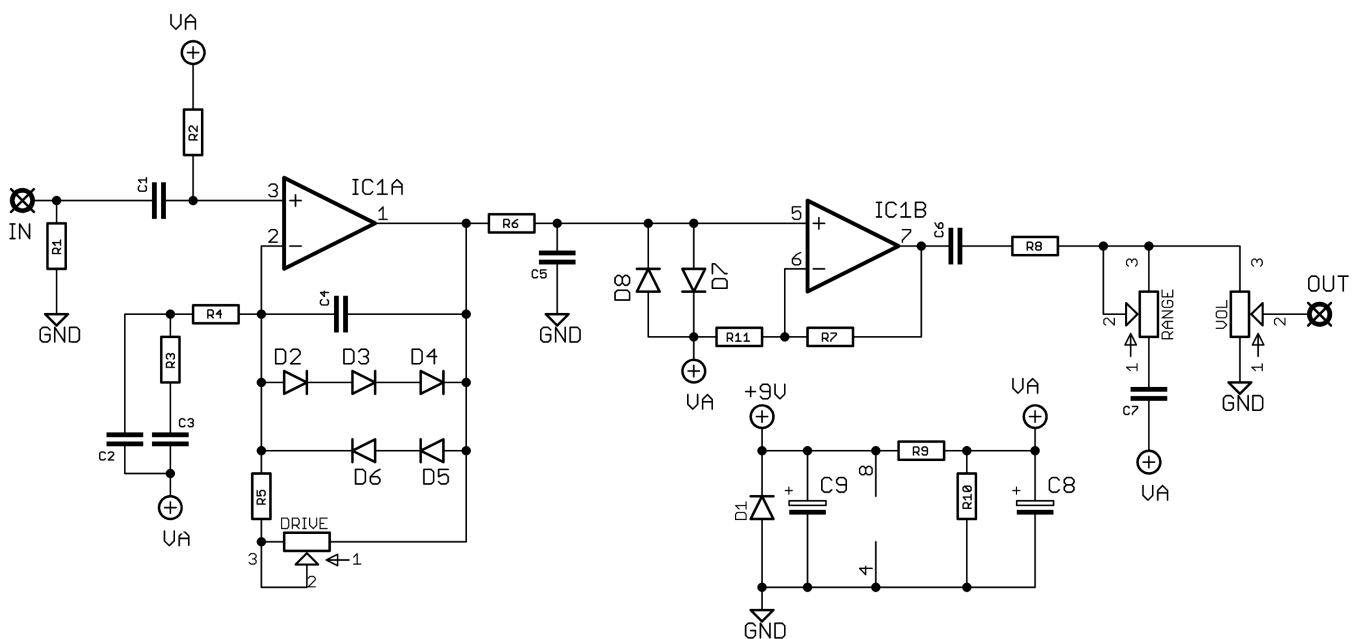
R1	1M	C1	47n	D1	1N4001
R2	430K	C2	47n	D2-6	1N4148
R3	12K	C3	470n	D7-8	BAT41 (empty)
R4	3K3	C4	100p	IC1	TL072 (OPA2134)
R5	5K6	C5	10n	DRIVE	1MA (500KA)
R6	5K6	C6	1u	TONE	10KA
R7	22K (4K7)	C7	220n	VOL	250KA (100KA)
R8	3K3	C8	100u elec		
R9	4K7	C9	100u elec		
R10	5K6				
R11	3K9				

If it works, milk it...

The Southern Drive is almost identical to the 186,282Mps Drive, but we decided to design a new PCB for it rather than have to hack in the two extra diodes required to make the former.

For the Southern Drive follow the standard BOM in black. For the 186,282Mps substitute the parts in blue.

...and the Dark Hill version

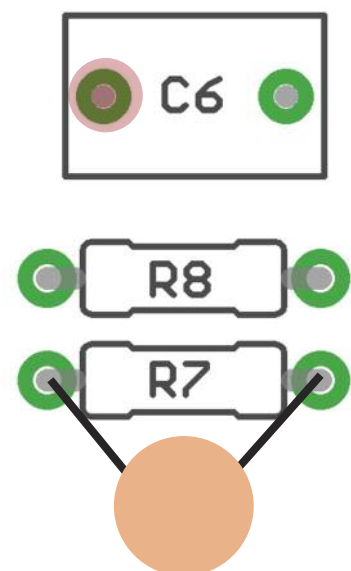


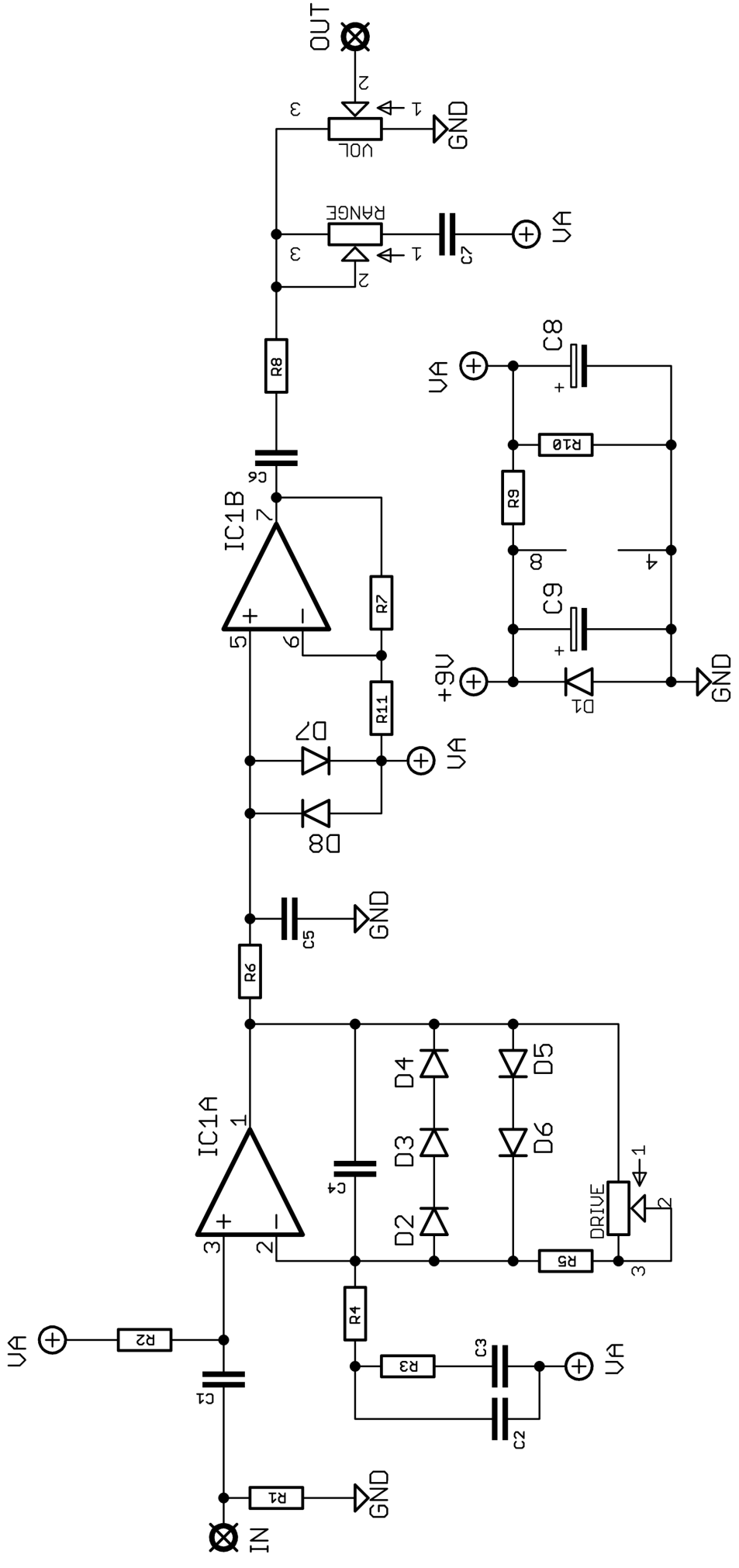
R1	1M	C1	47n	D1	1N4001
R2	470K	C2	Empty	D2-6	Empty
R3	Jumper	C3	100n	D7	BAT41
R4	4K7	C4	220p	D8	1N4148
R5	10K	C5	1n	IC1	TL082
R6	8K2	C6	10u elec*	DRIVE	1MA
R7	100K	C7	220n	TONE	50KA
R8	15K	C8	100u elec	VOL	250KA
R9	10K	C9	100u elec		
R10	10K	C10	100p		
R11	22K				

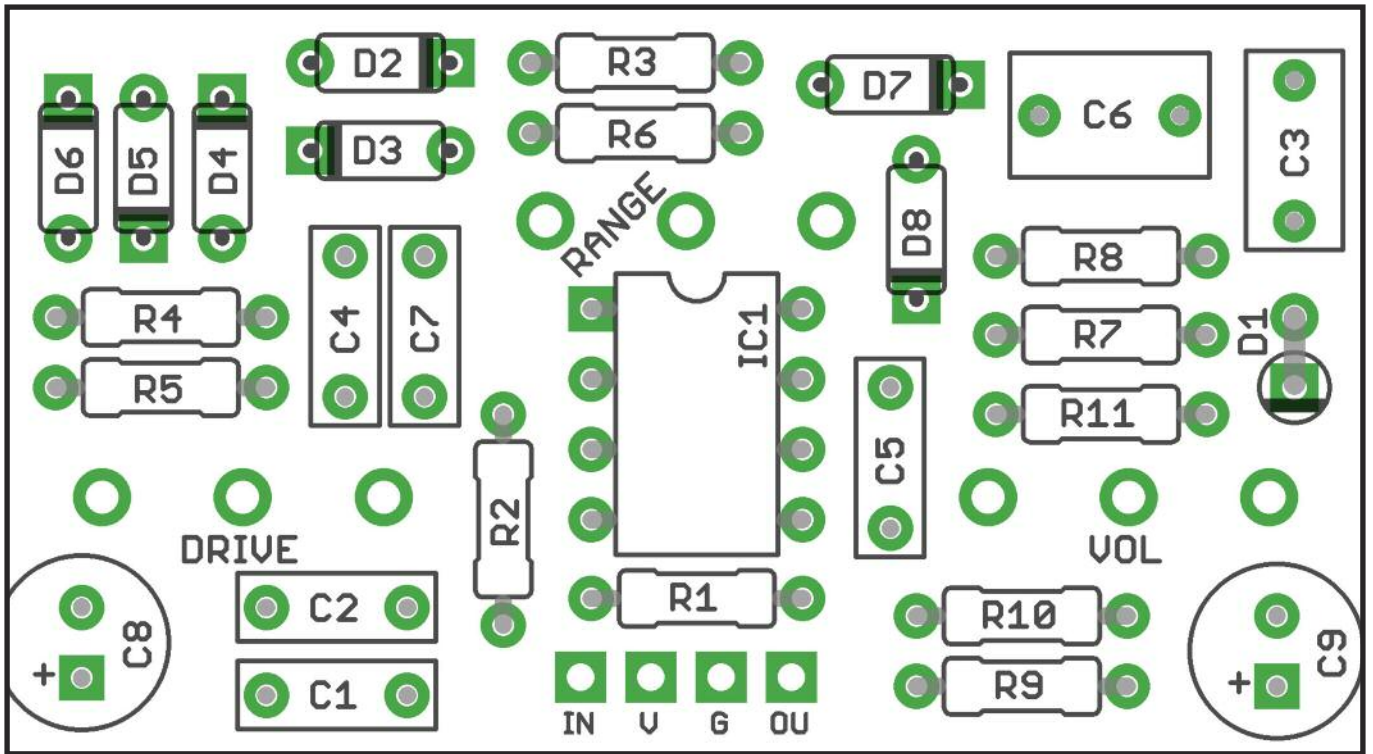
Same circuit, another pedal. A few value tweaks and we have something with a lot more crunch, based on EL34-powered British amps post-Plexi. Needs a small hack to get C10 in there, but it isn't worth putting together another board just for that.

C10 needs to piggyback across R7. Just leave a little extra leg showing when you solder the resistor in so you have something to tack it to.

+ leg of C6 goes into the pad marked in red.







PCB layout ©2021 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 diodes and LED. 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). The same goes for the IC if you aren't using a socket.

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. 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.



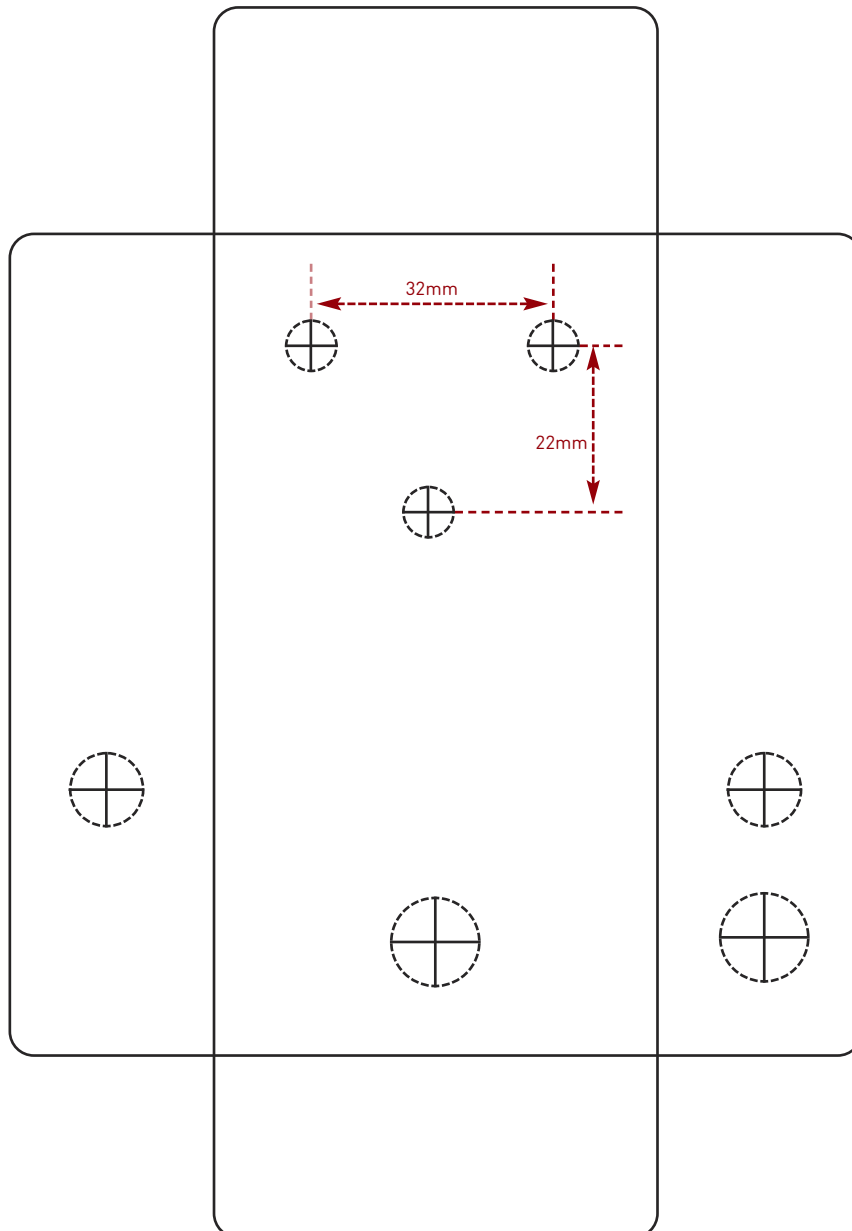
Drilling template

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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