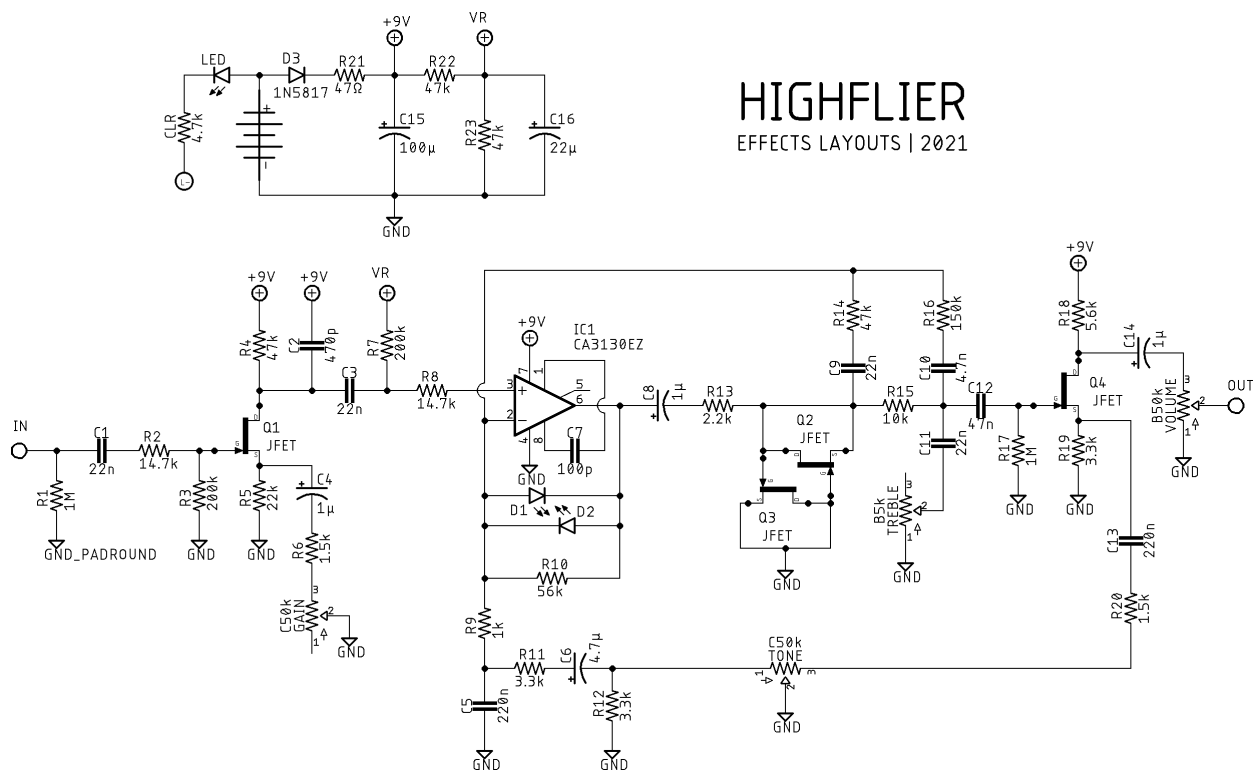


HIGHFLIER

DESCRIPTION

The HIGHFLIER is an amp-like drive modeled after the classic HiWatt amps. It's based on the 3-knob Bearfoot FX Model H, with an added treble control that Bjorn has used in other designs and what I assume is applied to the 4-knob version too. Like many BJFe designs, it's based around a CA3130EZ op-amp, with LED soft clipping as well as hard JFET-clipping before the JFET output stage.

SCHEMATIC



BOM

Resistors

R1	1M
R2	14.7k
R3	200k
R4	47k
R5	22k
R6	1.5k
R7	200k

R8	14.7k
R9	1k
R10	56k
R11	3.3k
R12	3.3k
R13	2.2k
R14	47k

R15	10k
R16	150k
R17	1M
R18	5.6k
R19	3.3k
R20	1.5k
R21	47Ω
R22	47k
R23	47k
CLR	4.7k

Capacitors

C1	22n
C2	470p
C3	22n
C4	1μ
C5	220n
C6	4.7μ
C7	100p
C8	1μ
C9	22n
C10	4.7n
C11	22n
C12	47n

C13	220n
C14	1μ
C15	100μ
C16	22μ

Semiconductors

D1	3mm red LED
D2	3mm red LED
D3	1N5817
IC1	CA3130EZ
Q1	JFET
Q2	JFET
Q3	JFET
Q4	JFET

Electromechanical

Gain	C50k
Tone	C50k
Treble	B5k
Volume	B50k

Notes

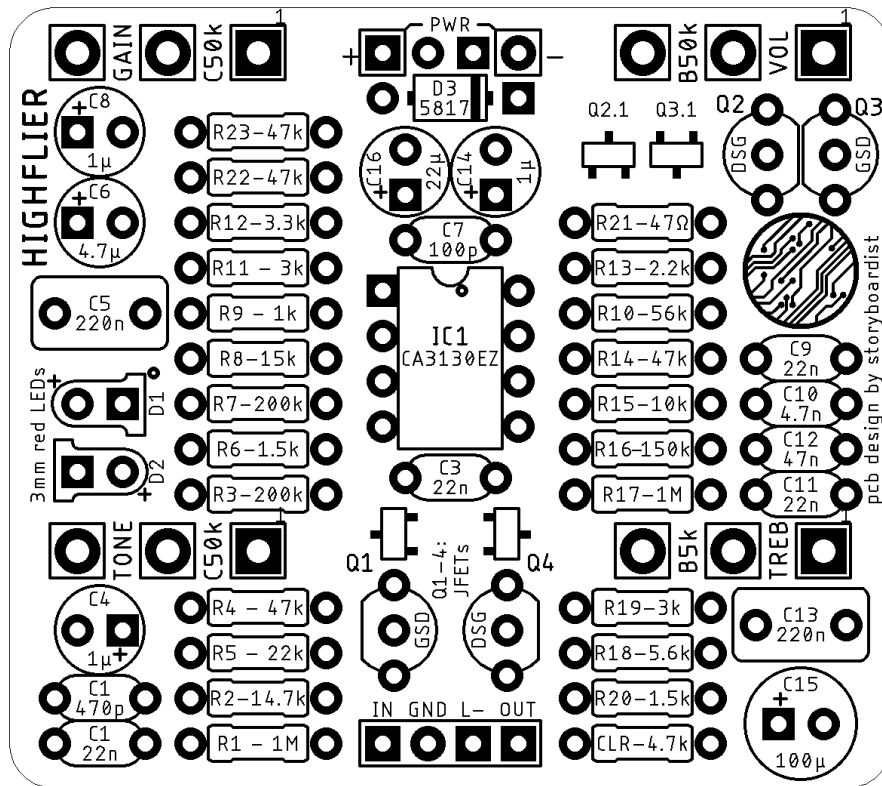
Q1-4 can be 2N5457, J201 or their SMD equivalents. 15k is good sub for R2 and R8.

SHOPPING LIST

Value	Type (suggested)	Quantity
47Ω	¼ watt metal or carbon film	1
1k	¼ watt metal or carbon film	1
1.5k	¼ watt metal or carbon film	2
2.2k	¼ watt metal or carbon film	1
3.3k	¼ watt metal or carbon film	3
4.7k	¼ watt metal or carbon film	1
5.6k	¼ watt metal or carbon film	1
10k	¼ watt metal or carbon film	1
14.7k	¼ watt metal or carbon film	2
22k	¼ watt metal or carbon film	1
47k	¼ watt metal or carbon film	4
56k	¼ watt metal or carbon film	1
150k	¼ watt metal or carbon film	1
200k	¼ watt metal or carbon film	2
1M	¼ watt metal or carbon film	1
100p	Ceramic	1
470p	Ceramic	1

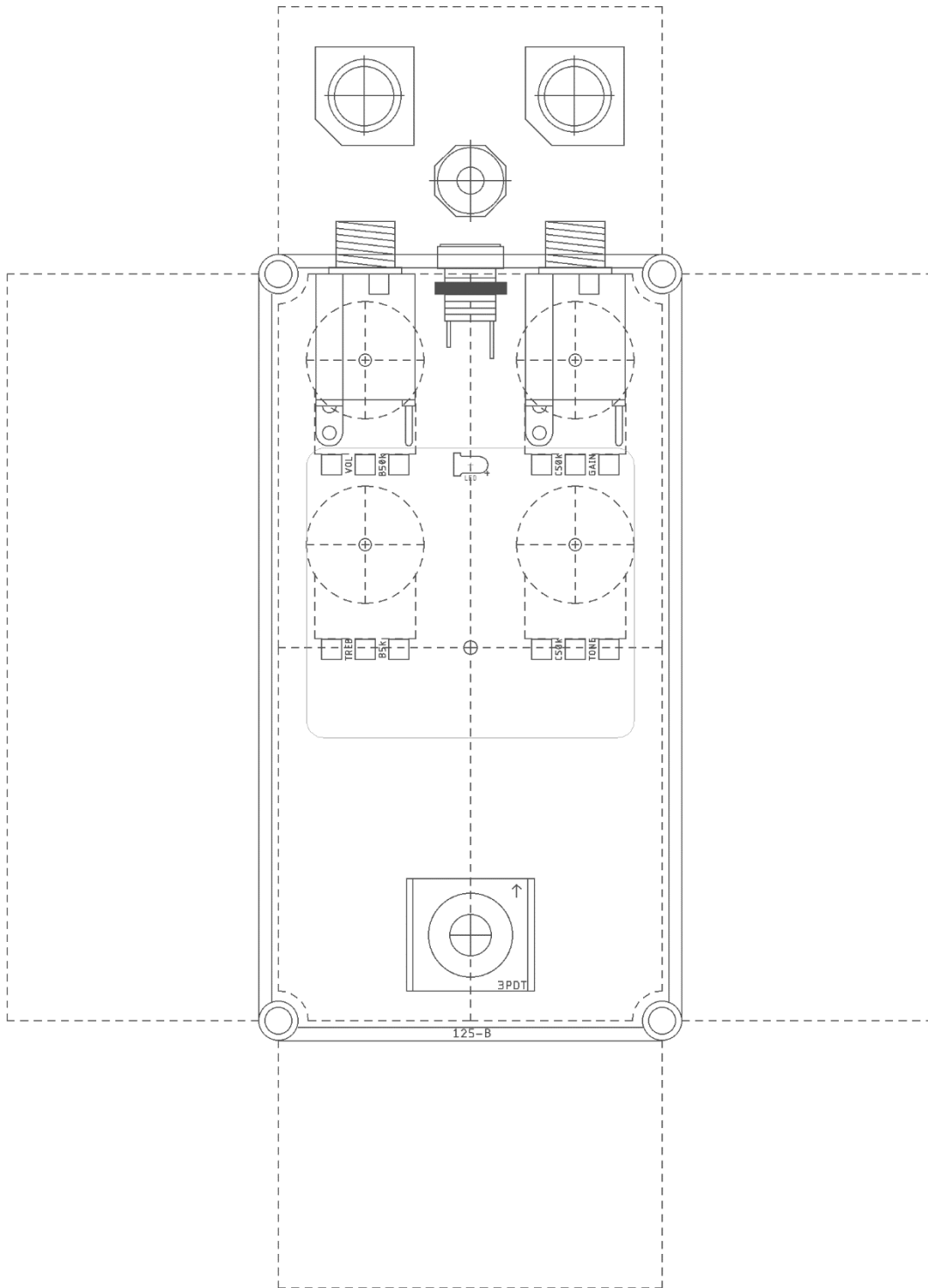
4.7n	Film	1
22n	Film	4
47n	Film	1
220n	Film	2
1 μ	Electrolytic (25v+)	3
4.7 μ	Electrolytic (25v+)	1
22 μ	Electrolytic (25v+)	1
100 μ	Electrolytic (25v+)	1
1N5817	Schottky rectifier diode	1
3mm red LED		2
CA3130EZ	Single op-amp	1
JFET	2N5457, J201 or similar	4
B5k	16 mm right angle PC mount	1
B50k	16 mm right angle PC mount	1
C50k	16 mm right angle PC mount	2

LAYOUT

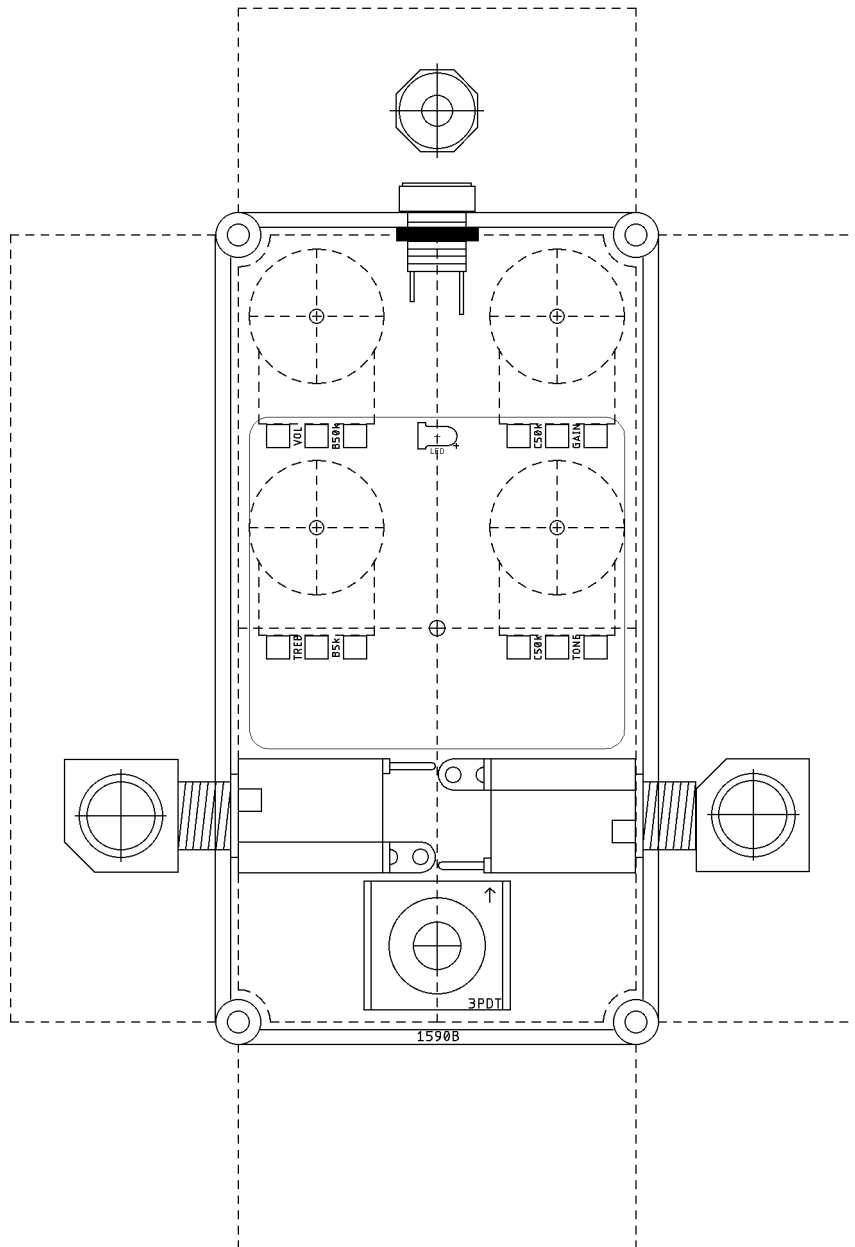


Note—there are a few values that differ on the silkscreen than what appear in the schematic and BOM above. The values listed will work fine if you have them on hand, but defer to the schematic and BOM.

DRILL TEMPLATE (125B)



DRILL TEMPLATE (1590B)



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