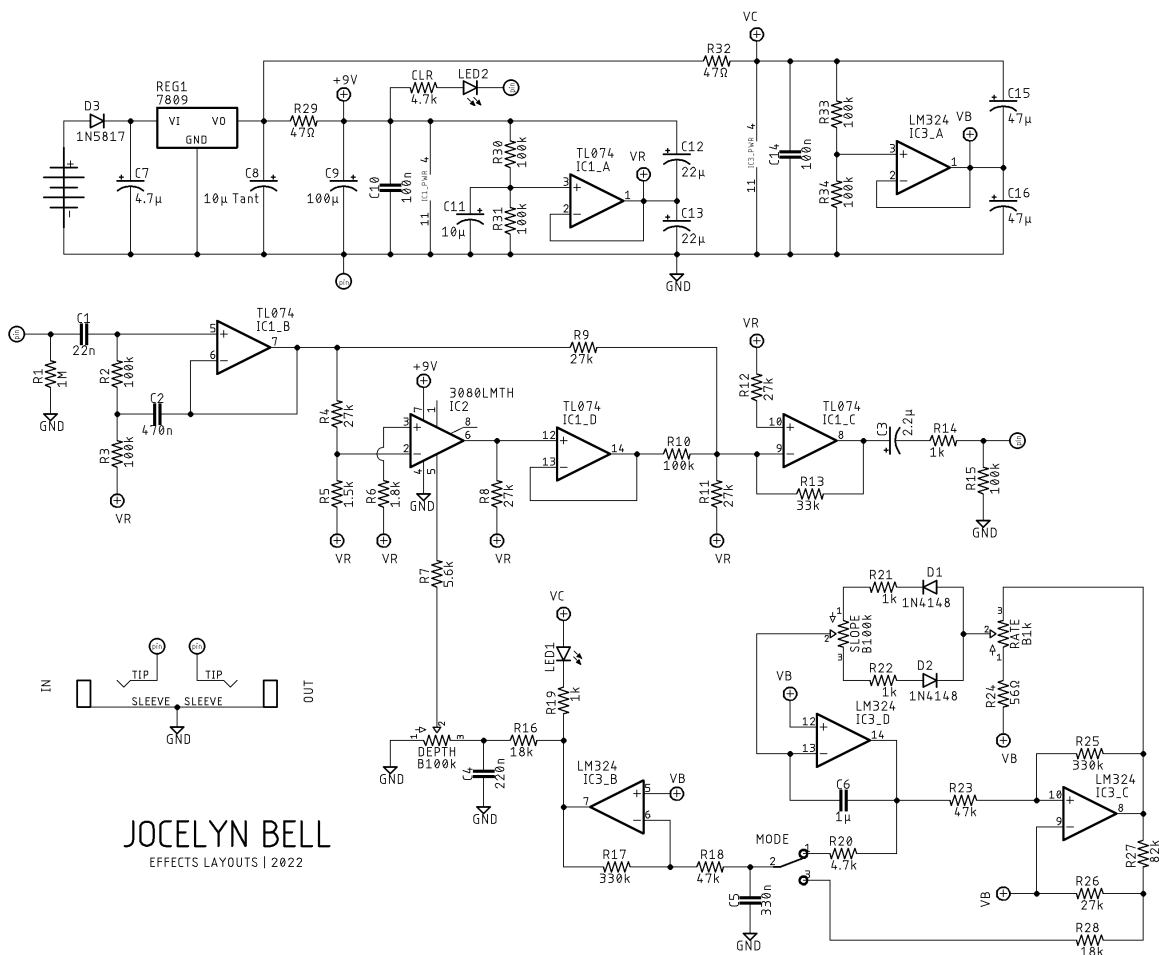


Jocelyn Bell

DESCRIPTION

The JOCELYN BELL is based on the early 2000s version of the EHX Pulsar tremolo. It's an OTA-based design where modulated signal is blended with clean via a CA3080. Optionally, there's an SMD footprint on the backside of the board for a LM13700 (which is likely more easily sourced than the obsolete 3080).

SCHEMATIC



BOM

Resistors

R1	1M
R2	100k
R3	100k
R4	27k
R5	1.5k
R6	1.8k
R7	5.6k
R8	27k
R9	27k
R10	100k
R11	27k
R12	27k
R13	33k
R14	1k
R15	100k
R16	18k
R17	330k
R18	47k
R19	1k
R20	4.7k
R21	1k
R22	1k
R23	47k
R24	56Ω
R25	330k
R26	27k
R27	82k
R28	18k
R29	47Ω
R30	100k
R31	100k
R32	47Ω
R33	100k
R34	100k
CLR	4.7k

Capacitors

C1	22n
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C2	470n
C3	2.2μ
C4	220n
C5	330n
C6	1μ
C7	4.7μ
C8	10μ
C9	100μ
C10	100n
C11	10μ
C12	22μ
C13	22μ
C14	100n
C15	47μ
C16	47μ

Semiconductors

D1	1N4148
D2	1N4148
D3	1N5817
IC1	TL074
IC2	CA3080*
IC3	LM324
LED1	3 or 5mm red LED
LED2	3 or 5mm red LED
REG1	7809

Electromechanical

Depth	B100k
Mode	SPDT on/on
Rate	B1k
Slope	B100k

Note

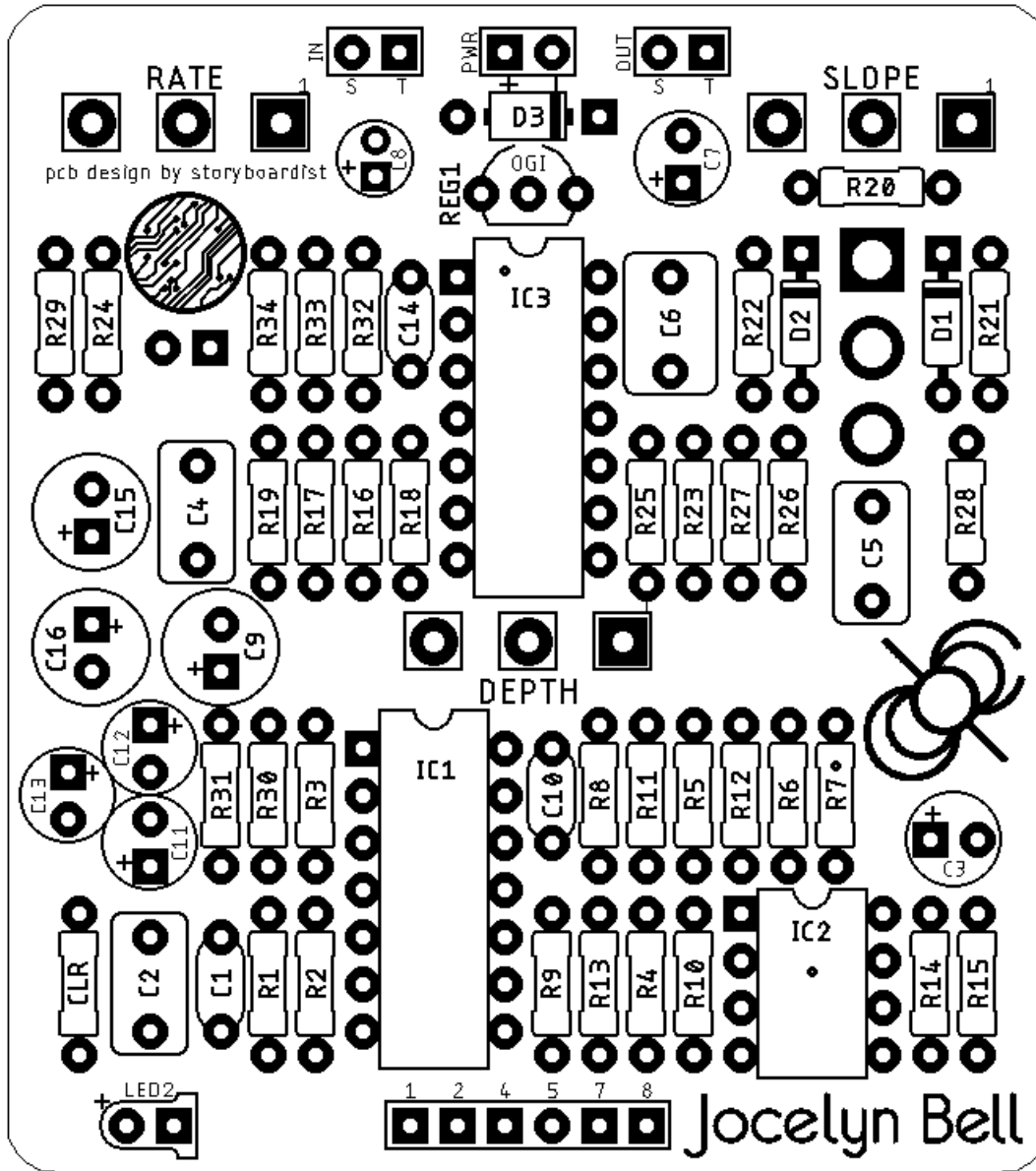
A better value for the Rate pot an A500Ω pot (or an A1k with a 1k resistor across lugs 1 and 3)

*An SMD footprint for an LM13700 is on the back of the board.

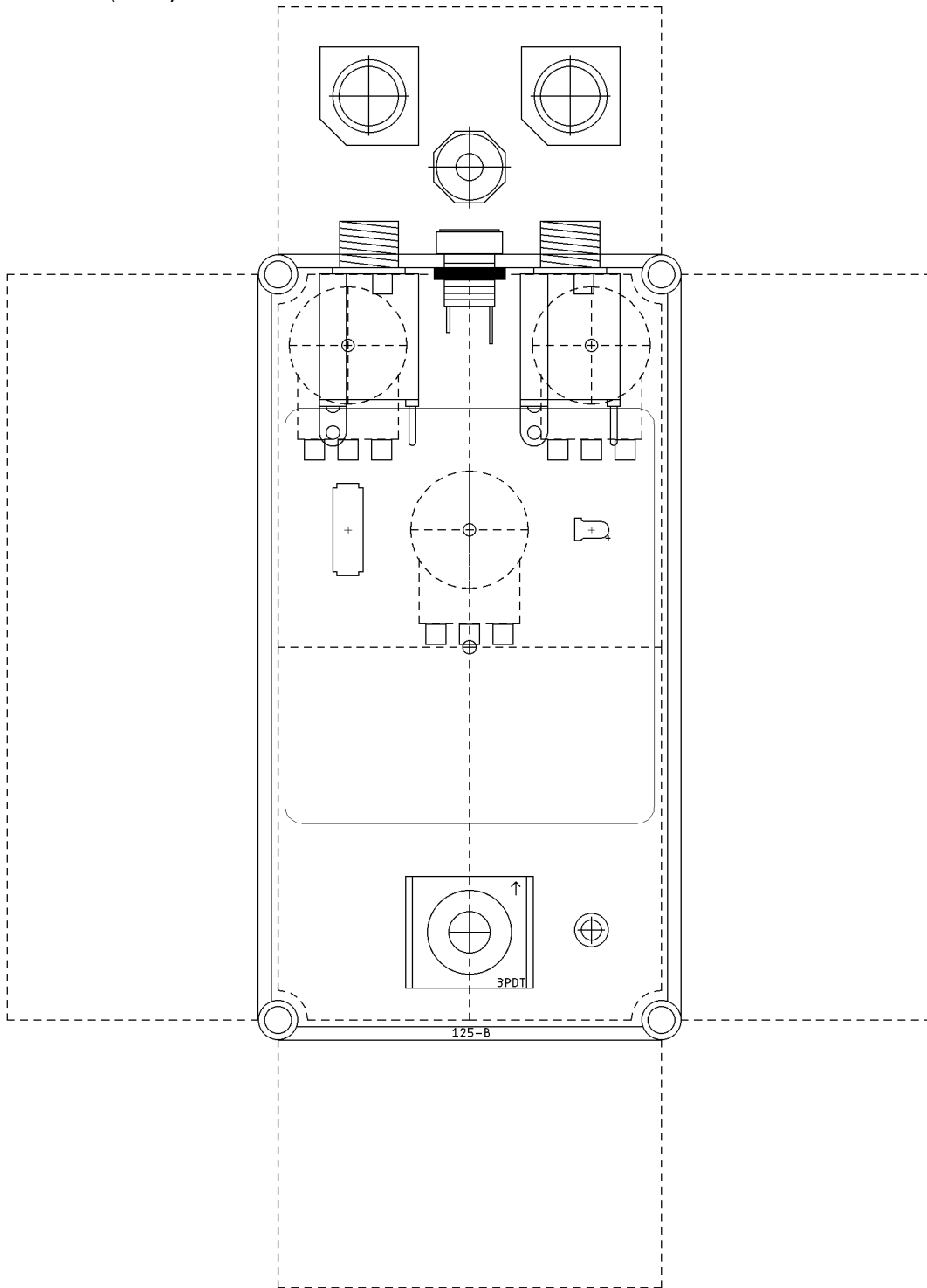
SHOPPING LIST

Value	Type (suggested)	Quantity
47Ω	¼ watt metal or carbon film	2
56Ω	¼ watt metal or carbon film	1
1k	¼ watt metal or carbon film	4
1.5k	¼ watt metal or carbon film	1
1.8k	¼ watt metal or carbon film	1
4.7k	¼ watt metal or carbon film	2
5.6k	¼ watt metal or carbon film	1
18k	¼ watt metal or carbon film	2
27k	¼ watt metal or carbon film	6
33k	¼ watt metal or carbon film	1
47k	¼ watt metal or carbon film	2
82k	¼ watt metal or carbon film	1
100k	¼ watt metal or carbon film	8
330k	¼ watt metal or carbon film	2
1M	¼ watt metal or carbon film	1
22n	Film	1
100n	Film	2
220n	Film	1
330n	Film	1
470n	Film	1
1μ	Film	1
2.2μ	Electrolytic (25v+)	1
4.7μ	Electrolytic (25v+)	1
10μ	Electrolytic (25v+)	1
10μ	Tantalum	1
22μ	Electrolytic (25v+)	2
47μ	Electrolytic (25v+)	2
100μ	Electrolytic (25v+)	1
1N4148	Switching diode	2
1N5817	Schottky rectifier diode	1
7809	9v regulator (TO-92)	1
CA3080 or LM13700	OTA	1
LED	3 or 5mm red LED	2
LM324	Quad op amp	1
TL074	Quad op amp	1
B1k	16mm right angle PC mount	1
B100k	16mm right angle PC mount	2
SPDT	On/on toggle switch	1

LAYOUT



DRILL TEMPLATE (125B)



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Not for non-peer to peer resale.