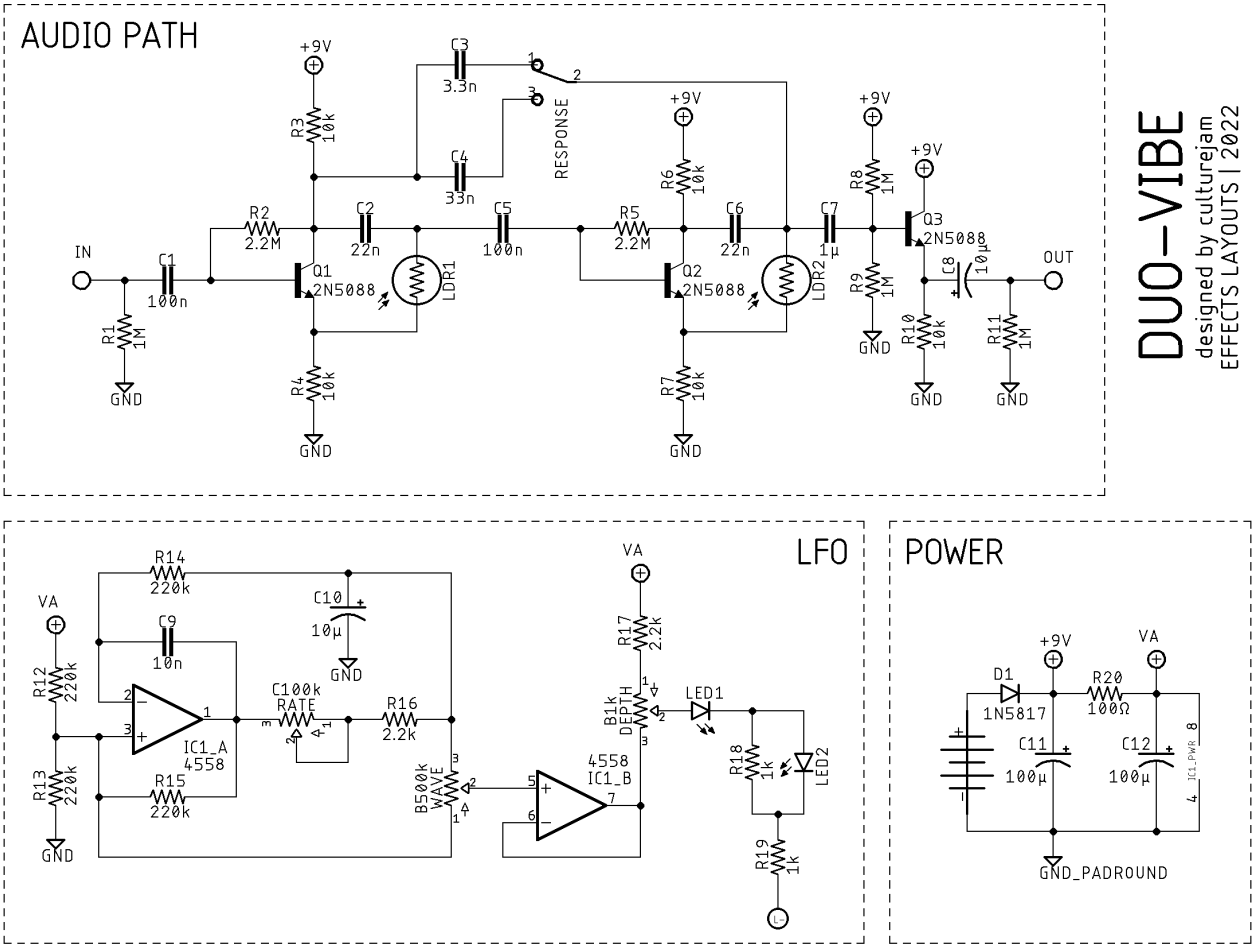
DUO-VIBE

DESCRIPTION

The DUO-VIBE is a simple vibrato circuit originally designed by CultureJam. It's derived from Tim Escobedo's Wobbletron and a is a two-stage optical vibrato that can also get into subtle phaser territory as well with the flick of the Response switch. CJ's original board had a switch selecting between square and triangle waves, but I've changed that to pot so you can blend between those two extremes.

SCHEMATIC



BOM

Resistors

R1	1M
R2	2.2M
R3	10k
R4	10k
R5	2.2M
R6	10k
R7	10k
R8	1M
R9	1M
R10	10k
R11	1M
R12	220k
R13	220k
R14	220k
R15	220k
R16	2.2k
R17	2.2k
R18	1k
R19	1k
R20	100Ω

Capacitors

C1	100n
C2	22n
C3	3.3n
C4	33n
C5	100n
C6	22n
C7	1µ
C8	10µ
C9	10n
C10	10µ
C11	100µ
C12	100µ

Semiconductors

D1	1N5817
IC1	RC4558
LED1	3mm or 5mm
LED2	3mm or 5mm
Q1	2N5088
Q2	2N5088
Q3	2N5088

Electromechanical

Depth	B1k
LDR1	KE-10720
LDR2	KE-10720
Rate	C100k
Response	SPDT on/on
Wave	B500k

Notes

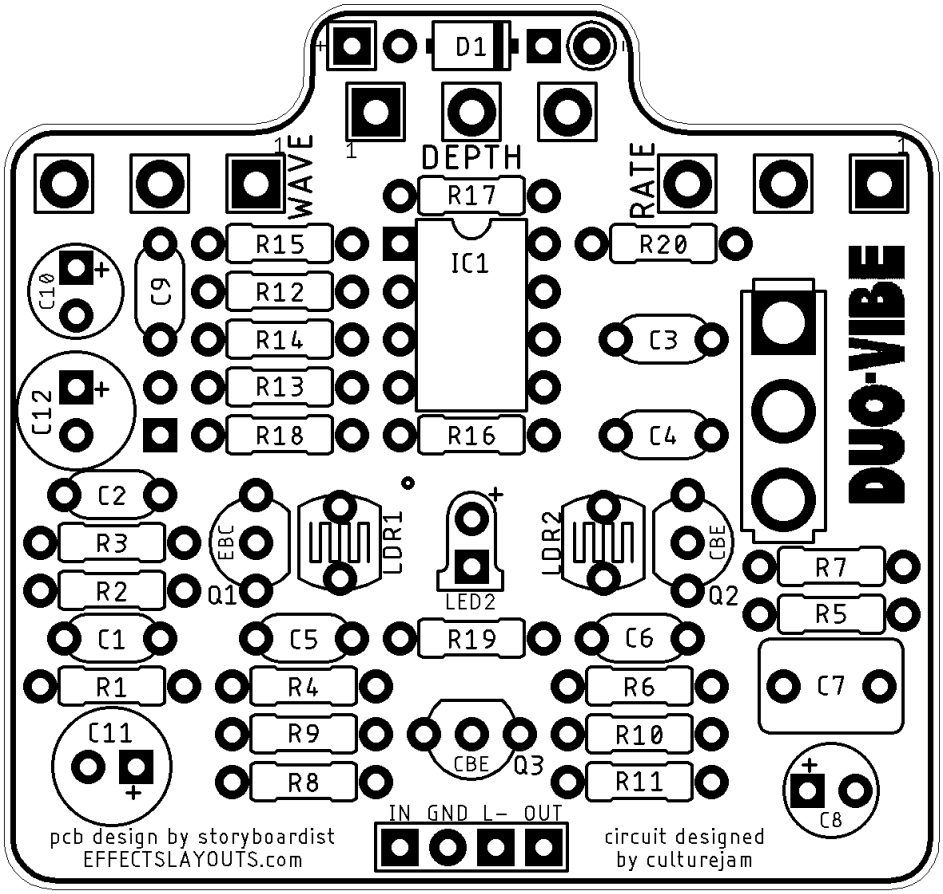
Subs for Q1-3 include 2N5089, MPSA18, etc. LEDs should be two of the same type. Red or yellow should work well. The LEDs are grounded when the pedal is engaged, so in testing make sure the L- pad is grounded.

SHOPPING LIST

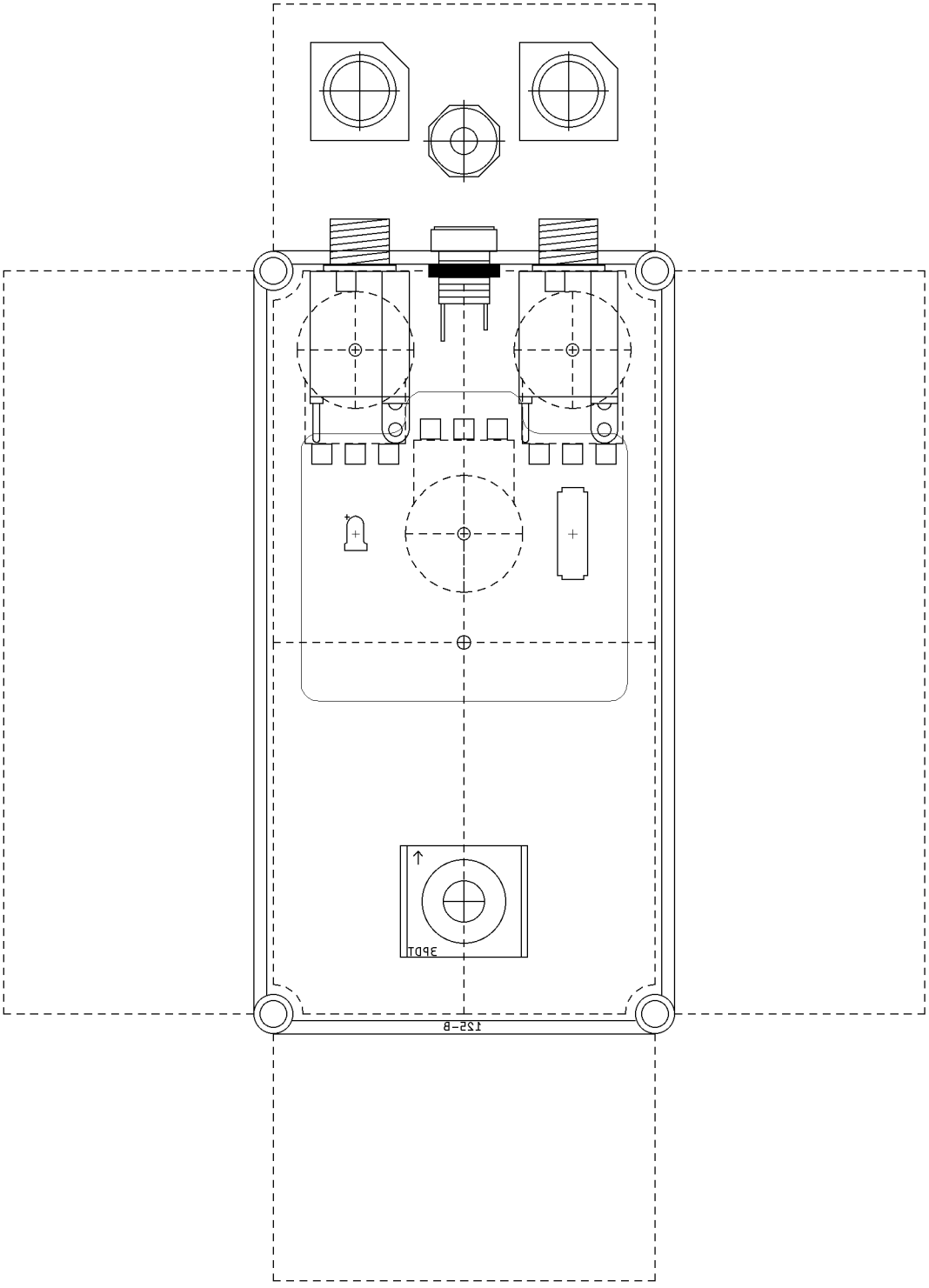
Value	**Type** (suggested)	**Quantity**
100Ω	¼ watt metal or carbon film	1
1k	¼ watt metal or carbon film	2
2.2k	¼ watt metal or carbon film	2
10k	¼ watt metal or carbon film	5
220k	¼ watt metal or carbon film	4
1M	¼ watt metal or carbon film	4
2.2M	¼ watt metal or carbon film	2
3.3n	Film	1
10n	Film	1

22n	Film	2
33n	Film	1
100n	Film	2
1µ	Film	1
10µ	Electrolytic (25v+)	2
100µ	Electrolytic (25v+)	2
1N5817	Schottky rectifier diode	1
2N5088	BJT	3
LED	3 or 5mm	2
RC4558	Dual op amp	1
LDR	KE-10720	2
B1k	16mm right angle PC mount	1
B500k	16mm right angle PC mount	1
C100k	16mm right angle PC mount	1
SPDT	On/on toggle	1

LAYOUT



DRILL TEMPLATE (125B)



DRILL TEMPLATE (1590B)