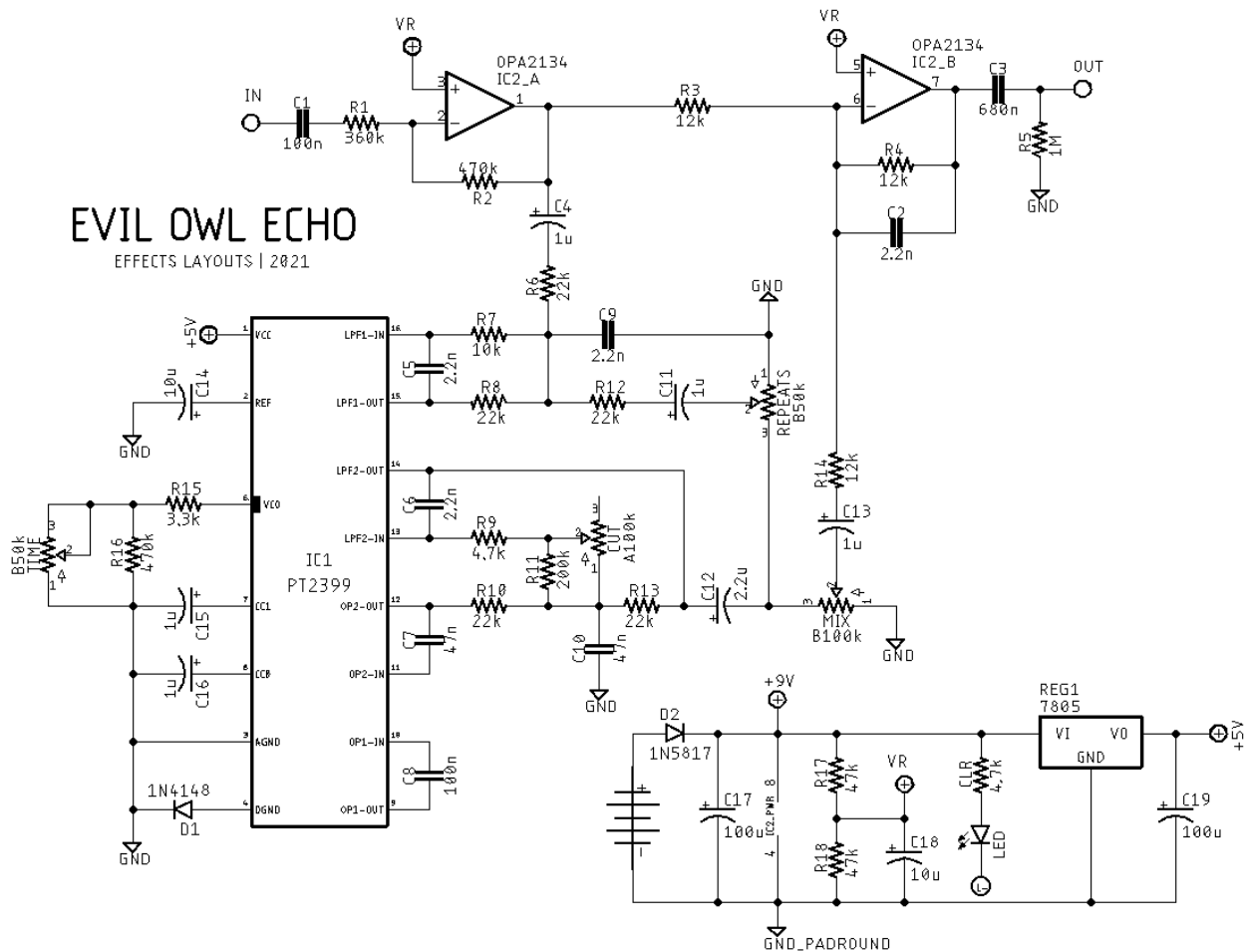


# EVIL OWL ECHO

## DESCRIPTION

The EVIL OWL ECHO is a fairly unique PT2399-based delay inspired by the Catalinbread Montavillian. It features a tone control, effecting the brightness of the repeats, and unique filtering values throughout the delay section. While not critical to function, it does sound best with the OPA2134 opamp. It even handles an 18v power supply just fine (assuming you use appropriately rated electrolytic caps) for more headroom, especially when hitting it with dirt pedals.

## SCHEMATIC



## BOM

### Resistors

R1	360k
R2	470k
R3	12k
R4	12k
R5	1M
R6	22k
R7	10k
R8	22k
R9	4.7k
R10	22k
R11	200k
R12	22k
R13	22k
R14	12k
R15	3.3k
R16	470k
R17	47k
R18	47k
CLR	4.7k

### Capacitors

C1	100n
C2	2.2n
C3	680n
C4	1 $\mu$
C5	2.2n
C6	2.2n
C7	47n

C8	100n
C9	2.2n
C10	47n
C11	1 $\mu$
C12	2.2 $\mu$
C13	1 $\mu$
C14	10 $\mu$
C15	1 $\mu$
C16	1 $\mu$
C17	100 $\mu$
C18	10 $\mu$
C19	100 $\mu$

### Semiconductors

D1	1N4148
D2	1N5817
IC1	PT2399
IC2	OPA2134
LED	3 or 5mm
REG1	7805

### Electromechanical

Cut	A100k
Mix	B100k
Repeats	B50k
Time	B50k

### Note

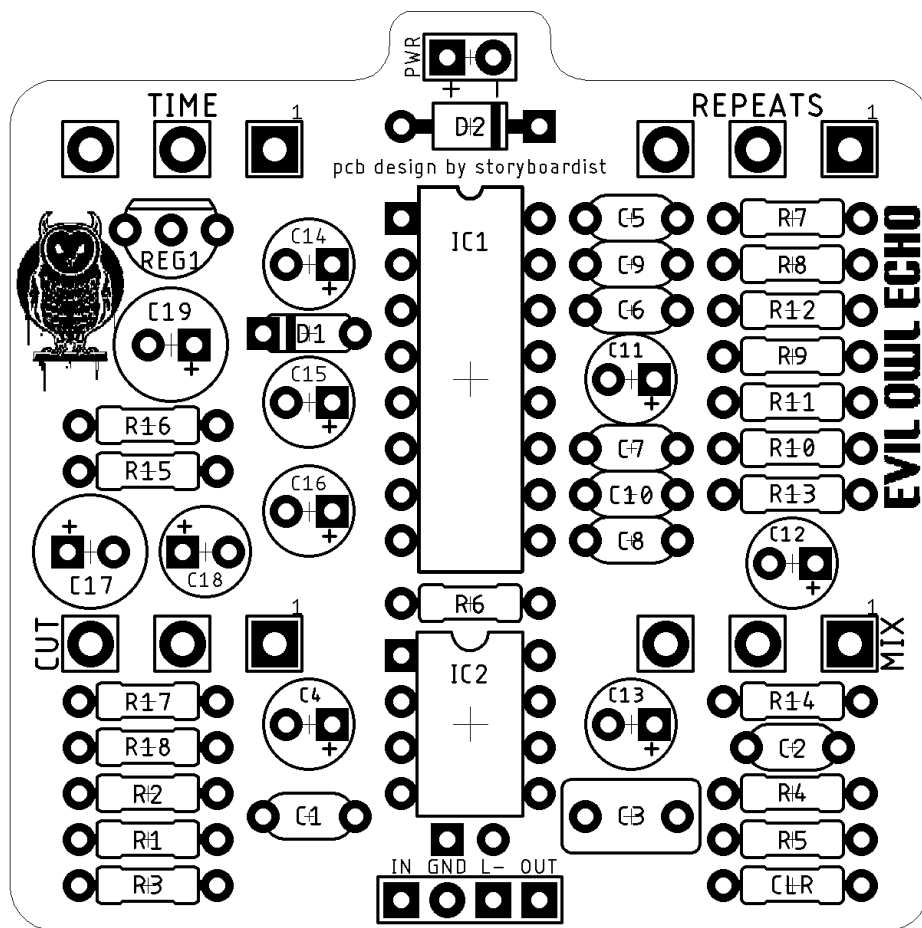
The pinout of the regulator is IGO, left to right.

## SHOPPING LIST

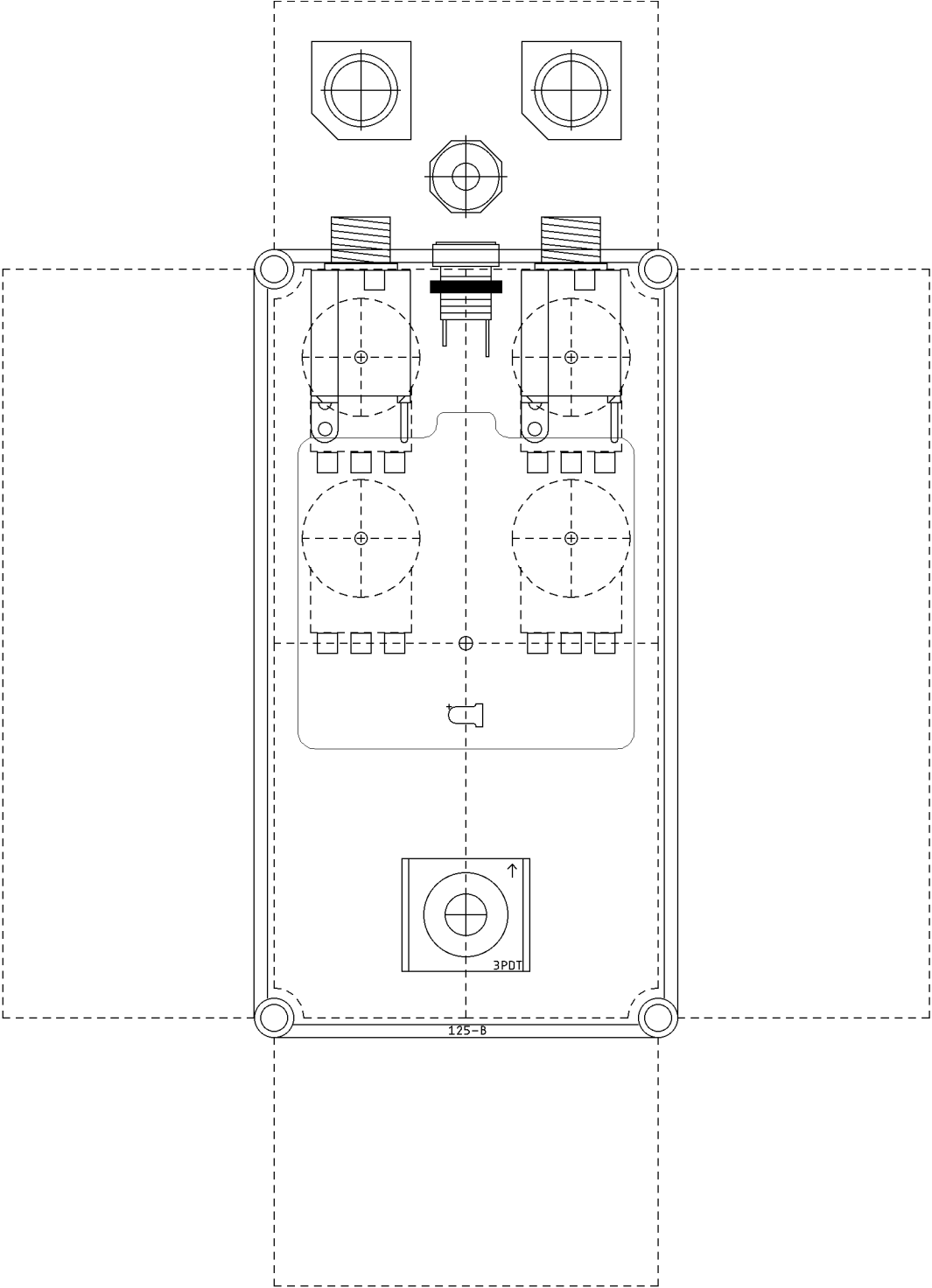
Value	Type (suggested)	Quantity
3.3k	¼ watt metal or carbon film	1
4.7k	¼ watt metal or carbon film	2
10k	¼ watt metal or carbon film	1
12k	¼ watt metal or carbon film	3
22k	¼ watt metal or carbon film	5
47k	¼ watt metal or carbon film	2
200k	¼ watt metal or carbon film	1
360k	¼ watt metal or carbon film	1
470k	¼ watt metal or carbon film	2
1M	¼ watt metal or carbon film	1

2.2n	Film	4
47n	Film	2
100n	Film	2
680n	Film	1
1μ	Electrolytic (25v+)	5
2.2μ	Electrolytic (25v+)	1
10μ	Electrolytic (25v+)	2
100μ	Electrolytic (25v+)	2
7805	5v regulator	1
1N4148	Switching diode	1
1N5817	Schottky rectifier diode	1
LED	3 or 5mm	1
OPA2134	Dual opamp	1
PT2399	Delay processor	1
A100k	16 mm right angle PC mount	1
B50k	16 mm right angle PC mount	2
B100k	16 mm right angle PC mount	1

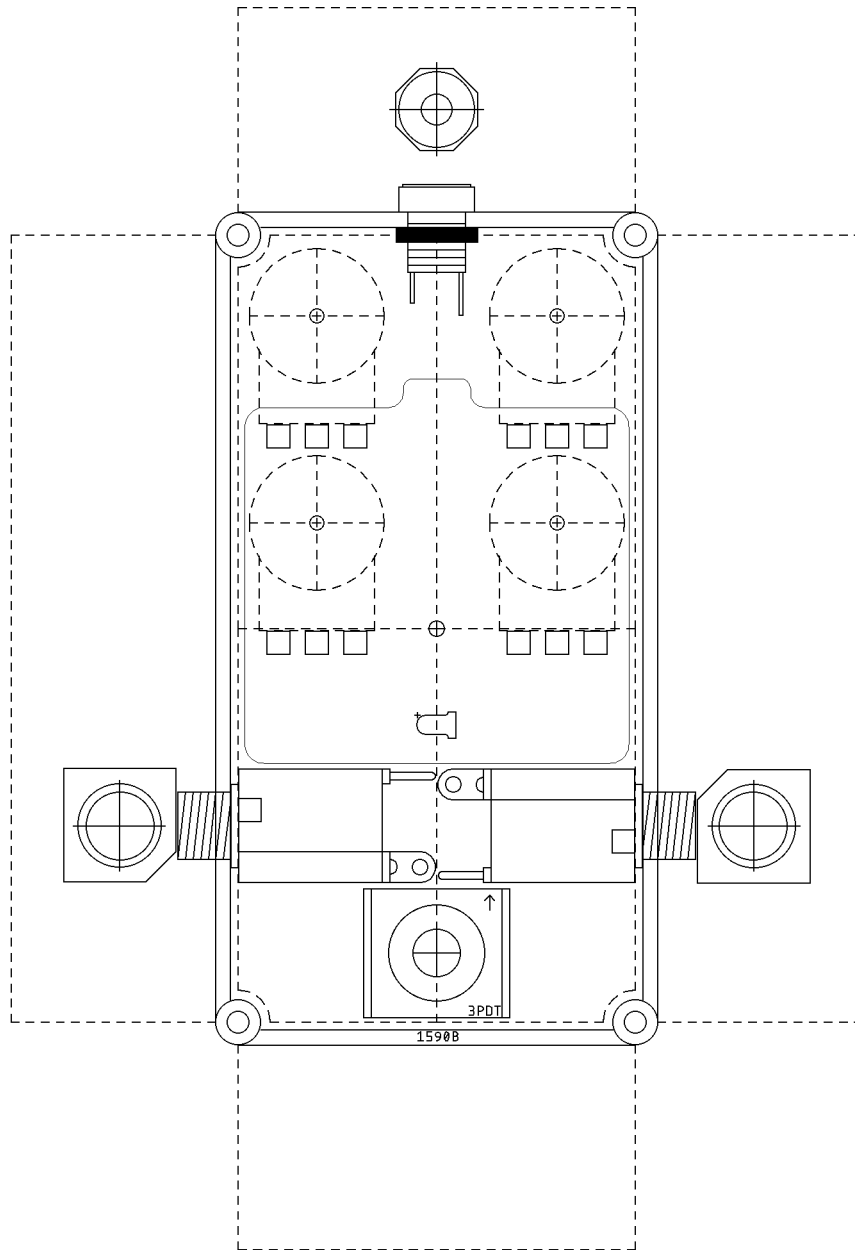
**LAYOUT**



**DRILL TEMPLATE (125B)**



**DRILL TEMPLATE (1590B)**



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