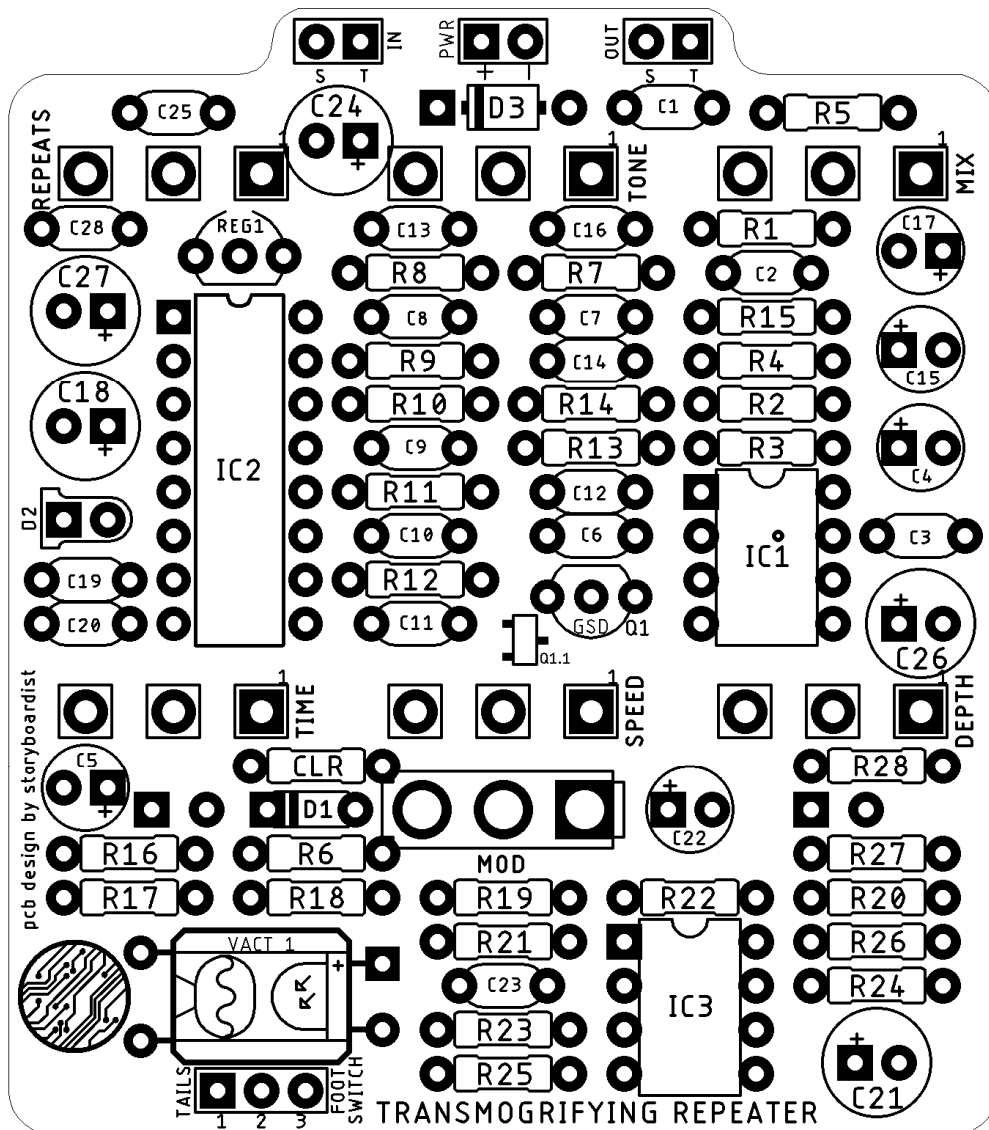


TRANSMOGRIFYING REPEATER

DESCRIPTION

A bit of an amalgamation of several other PT2399-based delay, the TRANSMOGRIFYING REPEATER offers up to 900ms of delay with optical modulation of the repeats. This circuit is not designed to be true bypass, but rather uses a JFET to turn the delay on and off to allow for the tails/trails feature.

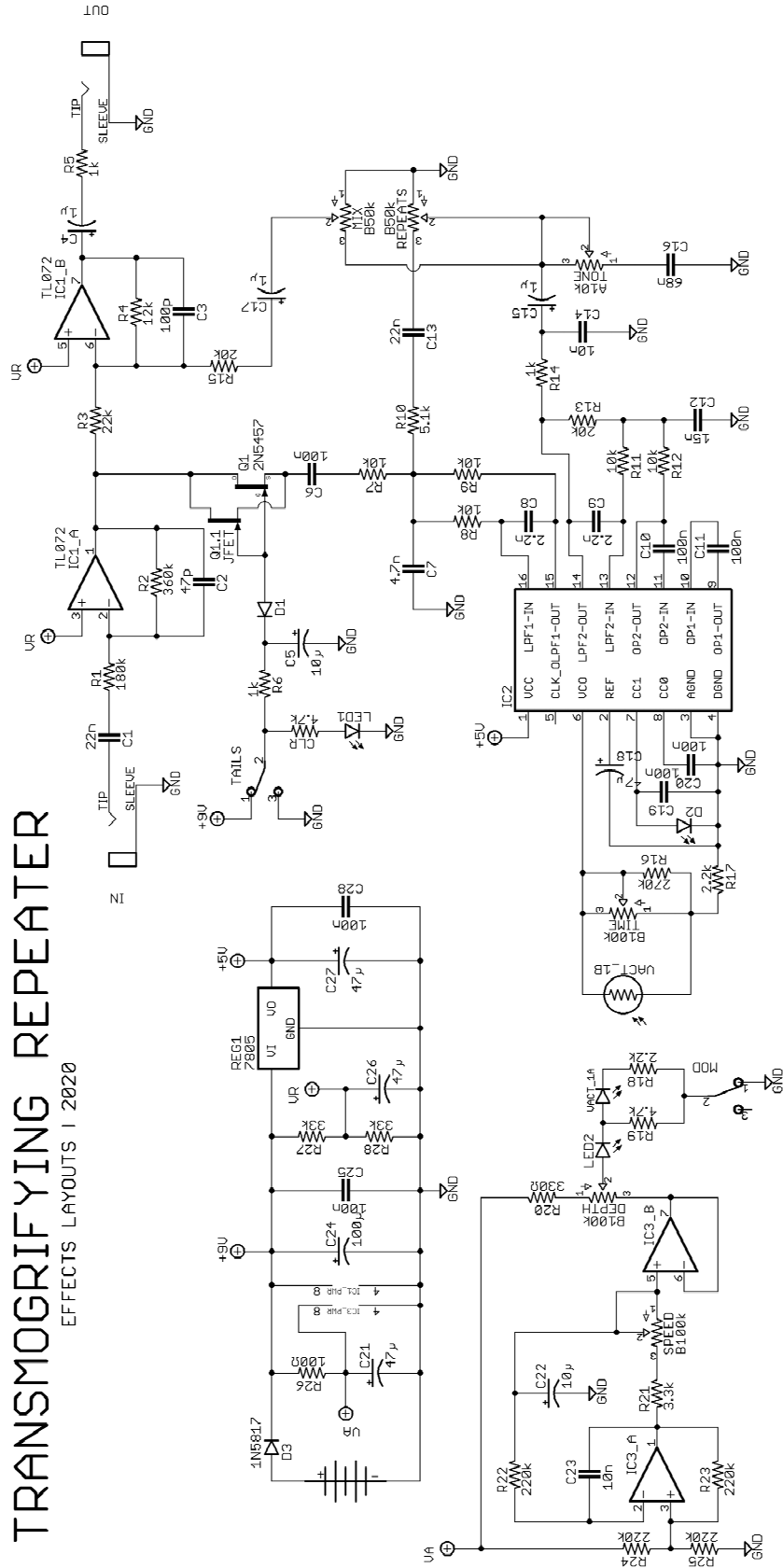
LAYOUT



SCHEMATIC

TRANSMOGRIFYING REPEATER

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BOM

Resistors

R1	180k
R2	360k
R3	22k
R4	12k
R5	1k
R6	1k
R7	10k
R8	10k
R9	10k
R10	5.1k
R11	10k
R12	10k
R13	20k
R14	1k
R15	20k
R16	270k
R17	2.2k
R18	2.2k
R19	4.7k
R20	330Ω
R21	3.3k
R22	220k
R23	220k
R24	220k
R25	220k
R26	100Ω
R27	33k
R28	33k
CLR	4.7k

Capacitors

C1	22n
C2	47p
C3	100p
C4	1μ
C5	10μ
C6	100n
C7	4.7n
C8	2.2n
C9	2.2n
C10	100n
C11	100n
C12	15n
C13	22n

C14	10n
C15	1μ
C16	68n
C17	1μ
C18	47μ
C19	100n
C20	100n
C21	47μ
C22	10μ
C23	10n
C24	100μ
C25	100n
C26	47μ
C27	47μ
C28	100n

Semiconductors

D1	1N4148
D2	3mm green diffused LED
D3	1N5817
IC1	TL072
IC2	PT2399
IC3	TL062 or RC4558
LED1	3 or 5mm LED
LED2	3 or 5mm red LED
Q1	2N5457 or J201
REG1	78L05
VACT1	VTL5C1

Electromechanical

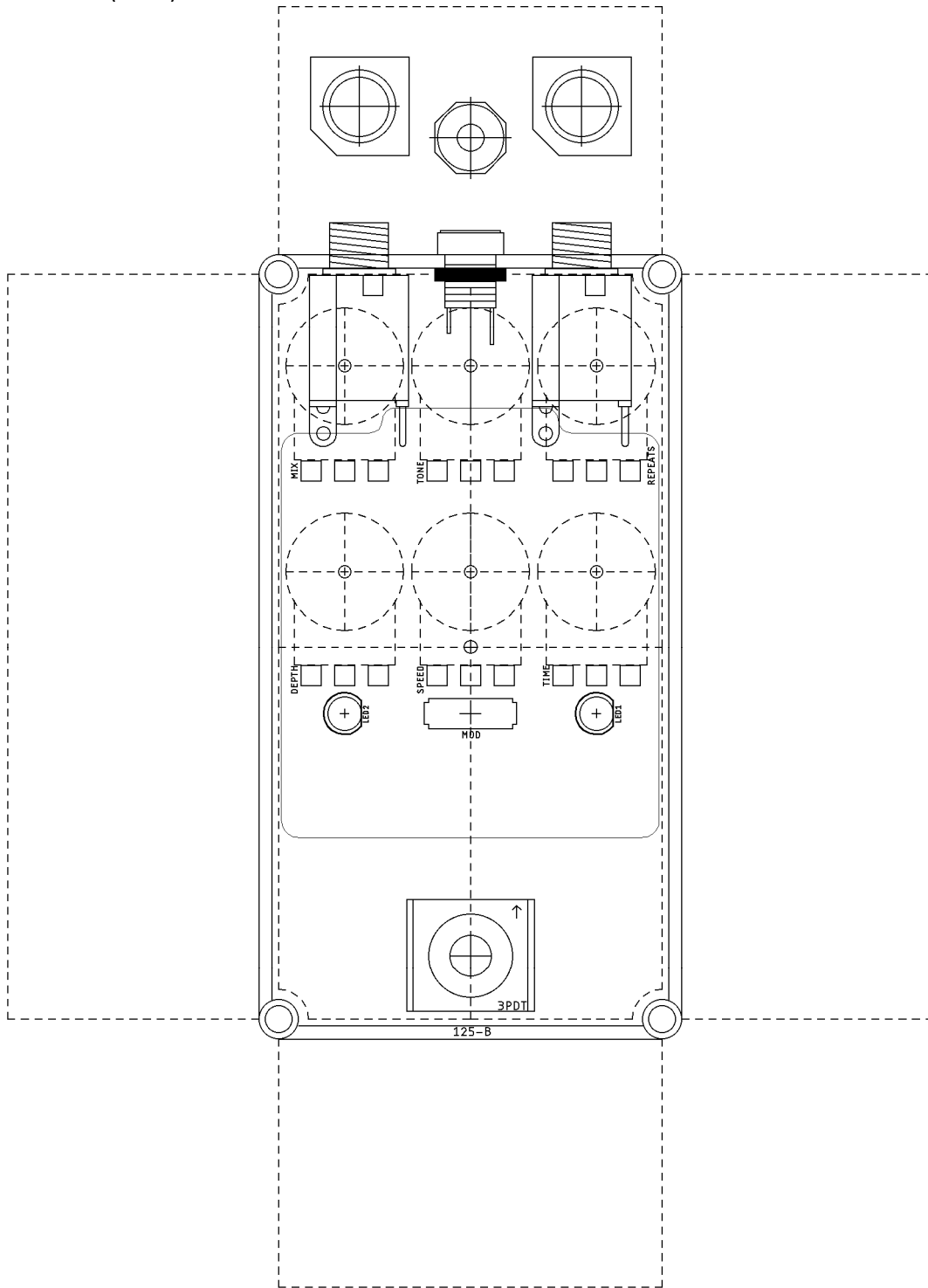
Depth	B100k
Mix	B50k
Mod	SPDT
Repeats	B50k
Speed	B100k
Time	B100k
Tone	A10k

Notes: There are through-hole and SMD pads for Q1. No need to populate both. The vactrol can also be a homemade type. I used a 5mm red LED and a generic LDR from Tayda and it worked just fine. Because of the JFET switching, only a SPDT footswitch is need.

SHOPPING LIST

Value	Type (suggested)	Quantity
100Ω	¼ watt carbon or metal film	1
330Ω	¼ watt carbon or metal film	1
1k	¼ watt carbon or metal film	3
2.2k	¼ watt carbon or metal film	2
3.3k	¼ watt carbon or metal film	1
4.7k	¼ watt carbon or metal film	2
5.1k	¼ watt carbon or metal film	1
10k	¼ watt carbon or metal film	5
12k	¼ watt carbon or metal film	1
20k	¼ watt carbon or metal film	2
22k	¼ watt carbon or metal film	1
33k	¼ watt carbon or metal film	2
180k	¼ watt carbon or metal film	1
220k	¼ watt carbon or metal film	4
270k	¼ watt carbon or metal film	1
360k	¼ watt carbon or metal film	1
47p	Ceramic	1
100p	Ceramic	1
2.2n	Film	2
4.7n	Film	1
10n	Film	2
15n	Film	1
22n	Film	2
68n	Film	1
100n	Film	7
1μ	Electrolytic (35v or higher)	3
10μ	Electrolytic (35v or higher)	2
47μ	Electrolytic (35v or higher)	4
100μ	Electrolytic (35v or higher)	1
1N4148	Silicon signal diode	1
1N5817	Schotky rectifier diode	1
2N5457 or MMBF5457	JFET	1
3mm green LED	Diffused LED	1
Red LED	3 or 5mm	1
LED	3 or 5mm	1
PT2399		1
TL062	Dual opamp	1
TL072	Dual opamp	1
78L05	5v regulator	1
VTL5C1	Vactrol	1
A10k	16mm right angle PC mount	1
B50k	16mm right angle PC mount	2
B100k	16mm right angle PC mount	3

DRILL TEMPLATE (125B)



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For DIY and small commercial applications.
Not for non-peer to peer resale.