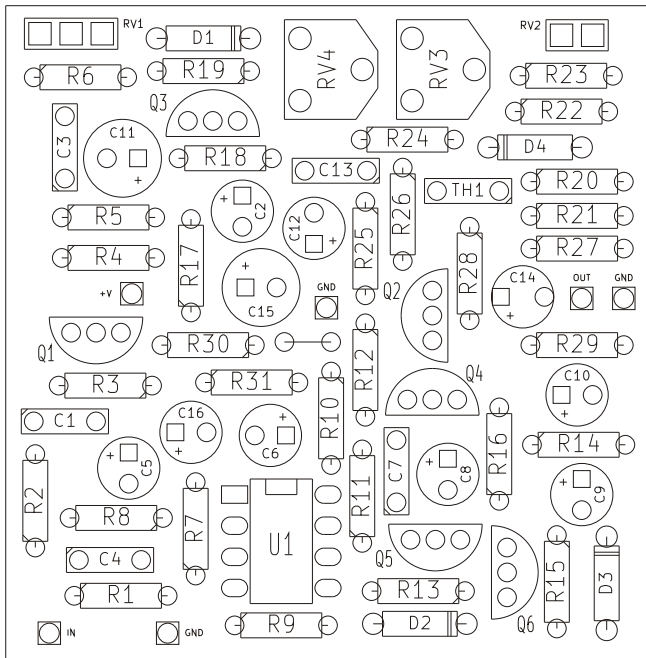


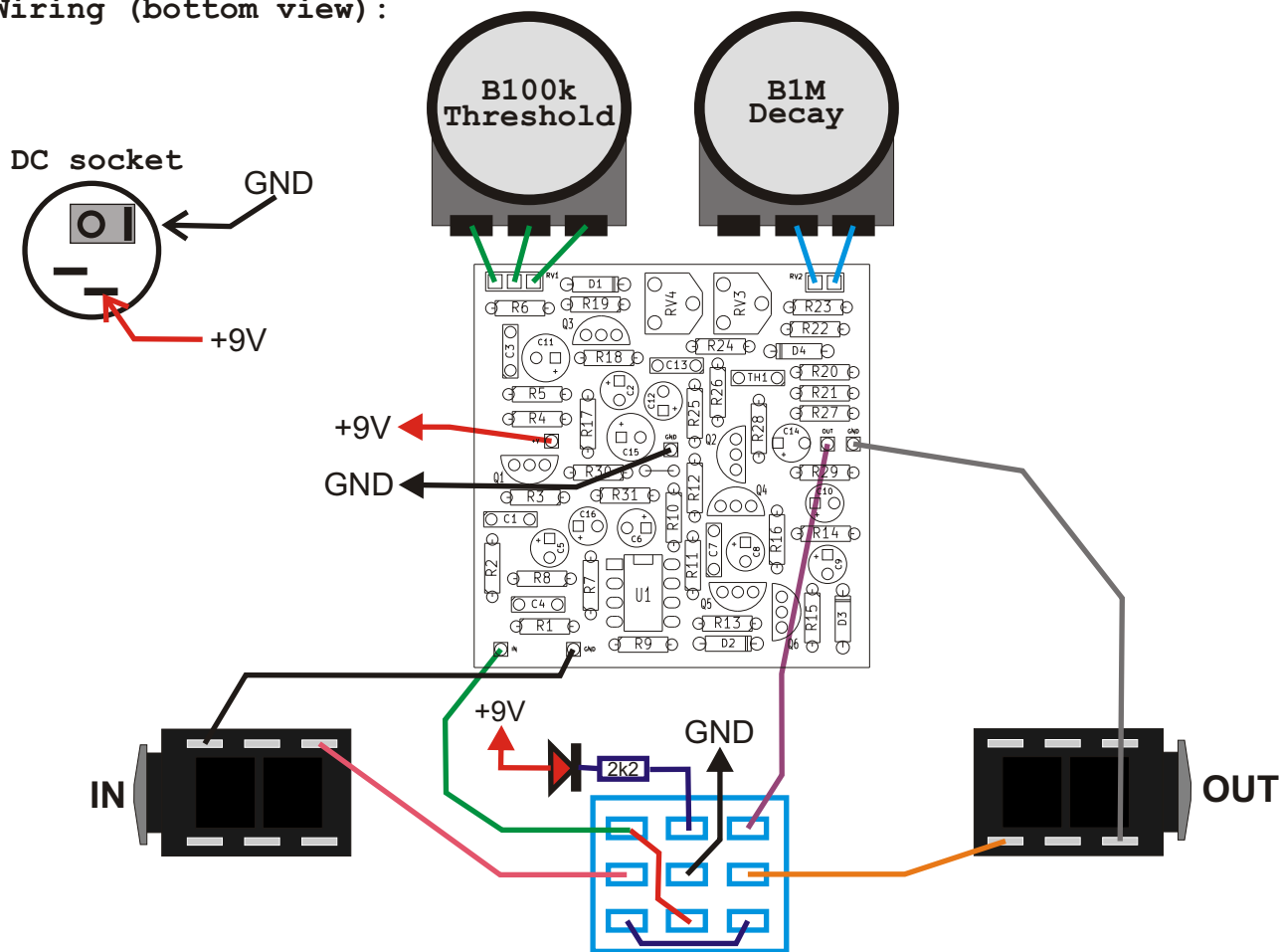
PCB parts placement diagram:



- | | | | |
|-----|------|-----|------------|
| R1 | 1M | R29 | 100k |
| R2 | 1k | R30 | 22k |
| R3 | 470k | R31 | 22k |
| R4 | 10k | RV1 | B100k |
| R5 | 22k | RV2 | B1M |
| R6 | 4k7 | RV3 | Tr. 5k |
| R7 | 220k | RV4 | Tr. 5k |
| R8 | 680R | TH1 | 10kNTC |
| R9 | 1M | | |
| R10 | 1k | C1 | 47n |
| R11 | 390k | C2 | 1u |
| R12 | 4k7 | C3 | 22n |
| R13 | 100k | C4 | 15n |
| R14 | 4k7 | C5 | 1u |
| R15 | 100k | C6 | 10u |
| R16 | 470R | C7 | 1n |
| R17 | 3k3 | C8 | 1u |
| R18 | 470k | C9 | 1u |
| R19 | 5k6 | C10 | 1u |
| R20 | 4k7 | C11 | 47u |
| R21 | 10k | C12 | 2u2 Tantal |
| R22 | 10k | C13 | 33n |
| R23 | 33k | C14 | 1u |
| R24 | 1M | C15 | 47u |
| R25 | 1M | C16 | 10u |
| R26 | 1M | | |
| R27 | 10k | | |
| R28 | 470R | | |

- | | | | |
|----|--------|----|------|
| Q1 | BC550 | D1 | 4v7 |
| Q2 | BC550 | D2 | 4148 |
| Q3 | 2N5485 | D3 | 4148 |
| Q4 | BC550 | D4 | 4148 |
| Q5 | BC550 | | |
| Q6 | Bc550 | | |
| U1 | 741 | | |

Wiring (bottom view):



Use metal enclosure connected to ground.

Power supply: 9V DC

Set "RV2 DECAY" pot to maximum then set RV3 trimpot to get 1.5-2s gate decay.
Set RV4 trimpot to adjust gate attenuation level.

Bill of materials:

Resistors:

2k2 1pcs. "LED"
 470R 2pcs. "R16 R28"
 680R 1pcs. "R8"
 1k 2pcs. "R2 R10"
 3k3 1pcs. "R17"
 4k7 4pcs. "R6 R12 R14 R20"
 5k6 1pcs. "R19"
 10k 4pcs. "R4 R21 R22 R27"
 22k 3pcs. "R5 R30 R31"
 33k 1pcs. "R23"
 100k 3pcs. "R13 R15 R29"
 220k 1pcs. "R7"
 390k 1pcs. "R11"
 470k 2pcs. "R3 R18"
 1M 5pcs. "R1 R9 R24 R25 R26"

Potentiometers:

5k trimpot 2pcs. "RV3 RV4"
 B100k 1pcs. "RV1"
 B1M 1pcs. "Rv2"

Capacitors:

1n 1pcs. "C7"
 15n 1pcs. "C4"
 22n 1pcs. "C3"
 33n 1pcs. "C13"
 47n 1pcs. "C1"

Electrolytic capacitors:

1u 6pcs. "C2 C5 C8 C9 C10 C14"
 2u2 Tant. 1pcs. "C12"
 10u 2pcs. "C6 C16"
 47u 2pcs. "C11 C15"

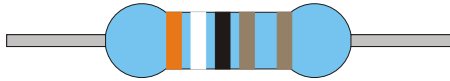
Semiconductors:

1N4148 3pcs. "D2 D3 D4"
 Zener 4v7 1pcs. "D1"
 2N5485 1pcs. "Q3"
 BC550 5pcs. "Q1 Q2 Q4 Q5 Q6"
 741 1pcs. "U1"
 LED 1pcs.

Other:

Thermistor 10kNTC 1pcs. "TH1"
 Knobs 2pcs.
 Footswitch 3PDT 1pcs.
 Jack socket 2pcs.
 DC socket 5.5/2.1 1pcs.

Resistor color code:



$$390 \times 10\Omega = 3,9k\Omega$$

Color	Band 1	Band 2	Band 3	Multiplier	Tolerance
Black	0	0	0	1 Ω	
Brown	1	1	1	10 Ω	1%
Red	2	2	2	100 Ω	2%
Orange	3	3	3	1k Ω	
Yellow	4	4	4	10 k Ω	
Green	5	5	5	100 k Ω	0,5%
Blue	6	6	6	1 M Ω	0,25%
Purple	7	7	7	10 M Ω	0,1%
Gray	8	8	8	100 M Ω	0,05%
White	9	9	9	1 G Ω	
Gold				0,1 Ω	5%
Silver				0,01 Ω	10%

Capacitors markings:

$$471 = 47 \times 10^1 \text{ pF} = 470 \text{ pF}$$

$$472 = 47 \times 10^2 \text{ pF} = 4700 \text{ pF} = 4,7 \text{ nF}$$

$$473 = 47 \times 10^3 \text{ pF} = 47000 \text{ pF} = 47 \text{ nF}$$

$$474 = 47 \times 10^4 \text{ pF} = 470000 \text{ pF} = 470 \text{ nF}$$

$$100 \text{ pF} = 100 \text{ p} = 100 = 101$$

$$220 \text{ pF} = 220 \text{ p} = 220 = 221$$

$$4,7 \text{ nF} = 4 \text{ n}7 = 0.0047 = 472$$

$$10 \text{ nF} = 10 \text{ n} = 0.01 = 103$$

$$100 \text{ nF} = 100 \text{ n} = 0.1 = 104$$

$$220 \text{ nF} = 220 \text{ n} = 0.22 = 224$$

$$470 \text{ nF} = 470 \text{ n} = 0.47 = 474$$

$$1000 \text{ nF} = 1 \mu\text{F} = 1 \mu = 105$$