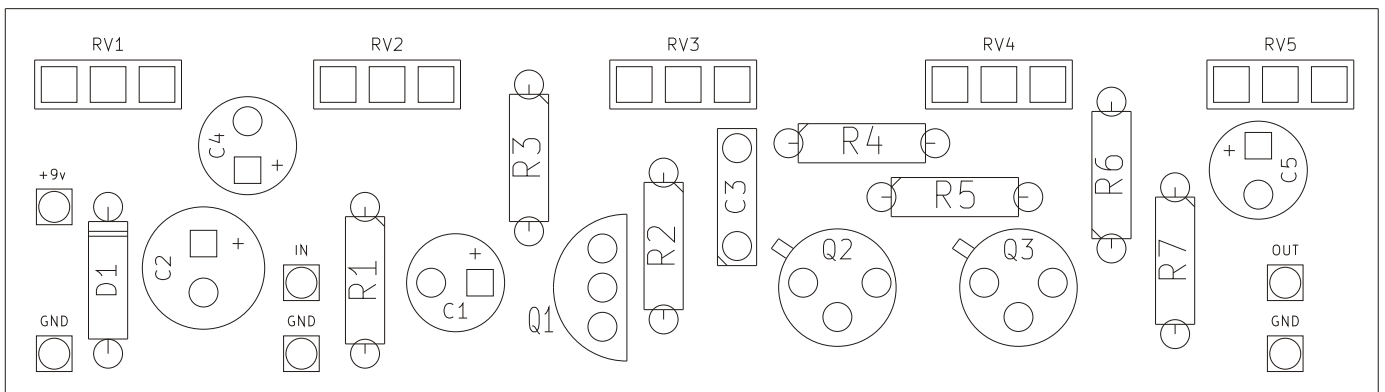
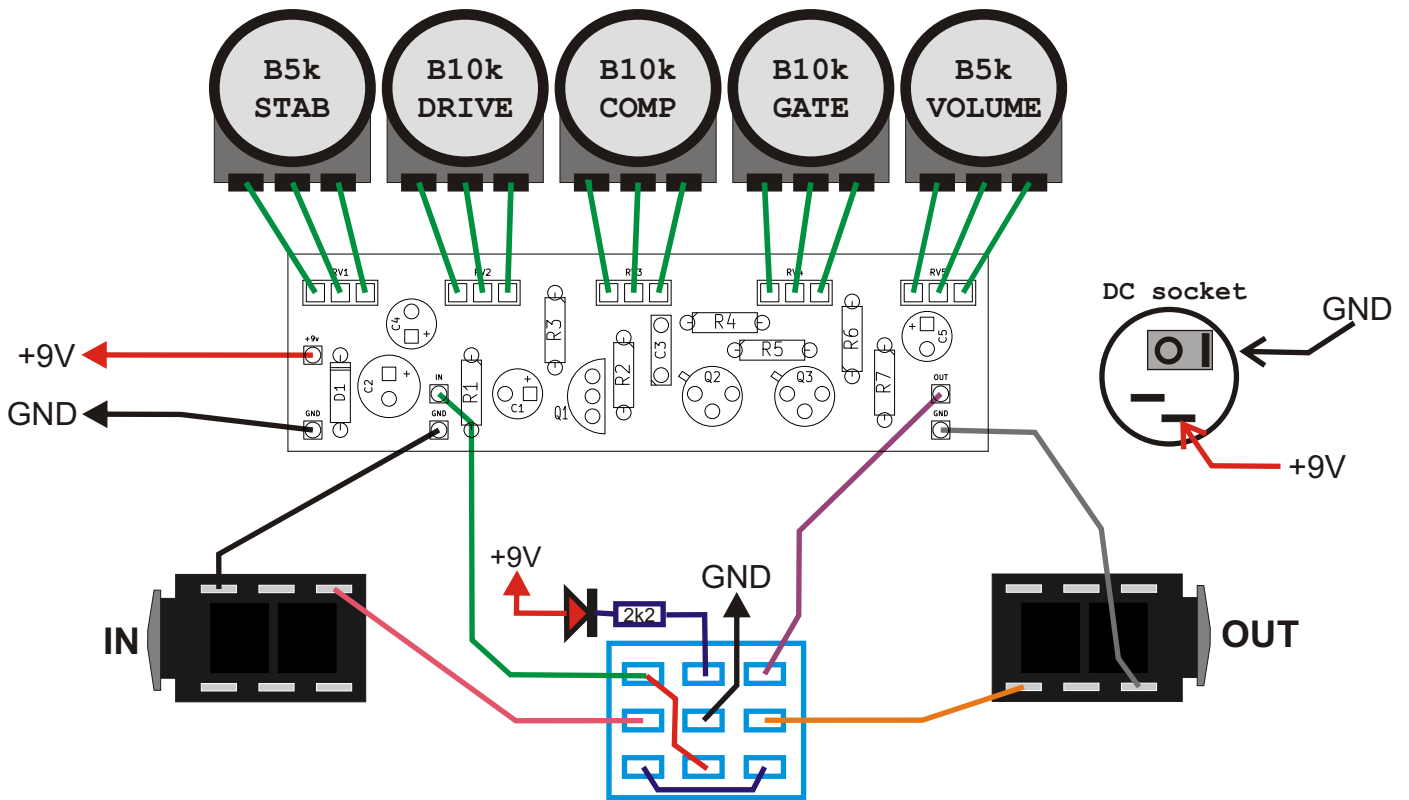


PCB parts placement diagram:



R1	1M	C1	10u
R2	220k	C2	47u
R3	10k	C3	100n
R4	47k	C4	10u
R5	470R	C5	10u
R6	5k1		
R7	220k	D1	1N400X
RV1	B5k	Q1	2N3904
RV2	B10k	Q2	AC128
RV3	B10k	Q3	AC128
RV4	B10k		
RV5	B5k		

Wiring (bottom view) :



Use metal enclosure connected to ground.
Power supply: 9V DC

Bill of materials:

Resistors:

2k2 1pcs. "LED"
470R 1pcs. "R5"
5k1 1pcs. "R6"
10k 1pcs. "R3"
47k 1pcs. "R4"
220k 2pcs. "R2 R7"
1M 1pcs. "R1"

Potentiometers:

B5k 2pcs. "RV1 RV5"
B10k 3pcs. "RV2 RV3 RV4"

Other:

Knobs 5pcs.
Footswitch 3PDT 1pcs.
Jack socket 2pcs.
DC socket 5.5/2.1 1pcs.

Capacitors:

100n 1pcs. "C3"

Electrolytic capacitors:

10u 3pcs. "C1 C4 C5"
47u 1pcs. "C2"

Semiconductors:

1N400X 1pcs. "D1"
2N3904 1pcs. "Q1"
AC128 2pcs. "Q2 Q3"
LED 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:

$$\begin{aligned}
 471 &= 47 \times 10^1 \text{ pF} = 470 \text{ pF} \\
 472 &= 47 \times 10^2 \text{ pF} = 4700 \text{ pF} = 4,7 \text{ nF} \\
 473 &= 47 \times 10^3 \text{ pF} = 47000 \text{ pF} = 47 \text{ nF} \\
 474 &= 47 \times 10^4 \text{ pF} = 470000 \text{ pF} = 470 \text{ nF}
 \end{aligned}$$

$$\begin{aligned}
 100 \text{ pF} &= 100 \text{ p} = 100 = 101 \\
 220 \text{ pF} &= 220 \text{ p} = 220 = 221 \\
 4,7 \text{ nF} &= 4 \text{ n}7 = 0.0047 = 472 \\
 10 \text{ nF} &= 10 \text{ n} = 0.01 = 103 \\
 100 \text{ nF} &= 100 \text{ n} = 0.1 = 104 \\
 220 \text{ nF} &= 220 \text{ n} = 0.22 = 224 \\
 470 \text{ nF} &= 470 \text{ n} = 0.47 = 474 \\
 1000 \text{ nF} &= 1 \mu\text{F} = 1 \mu = 105
 \end{aligned}$$