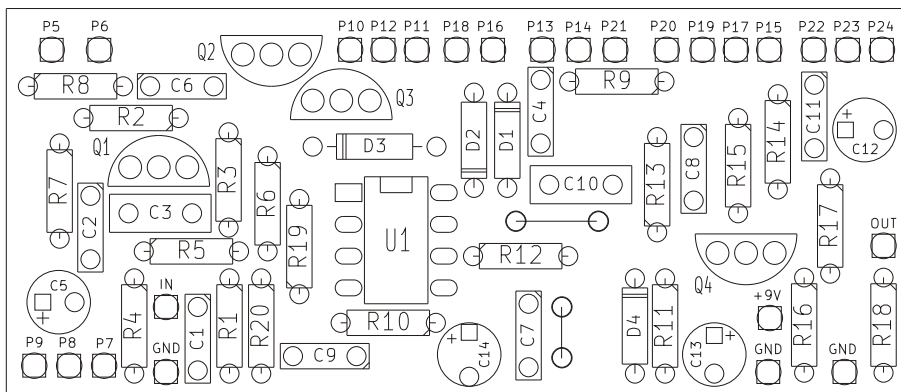
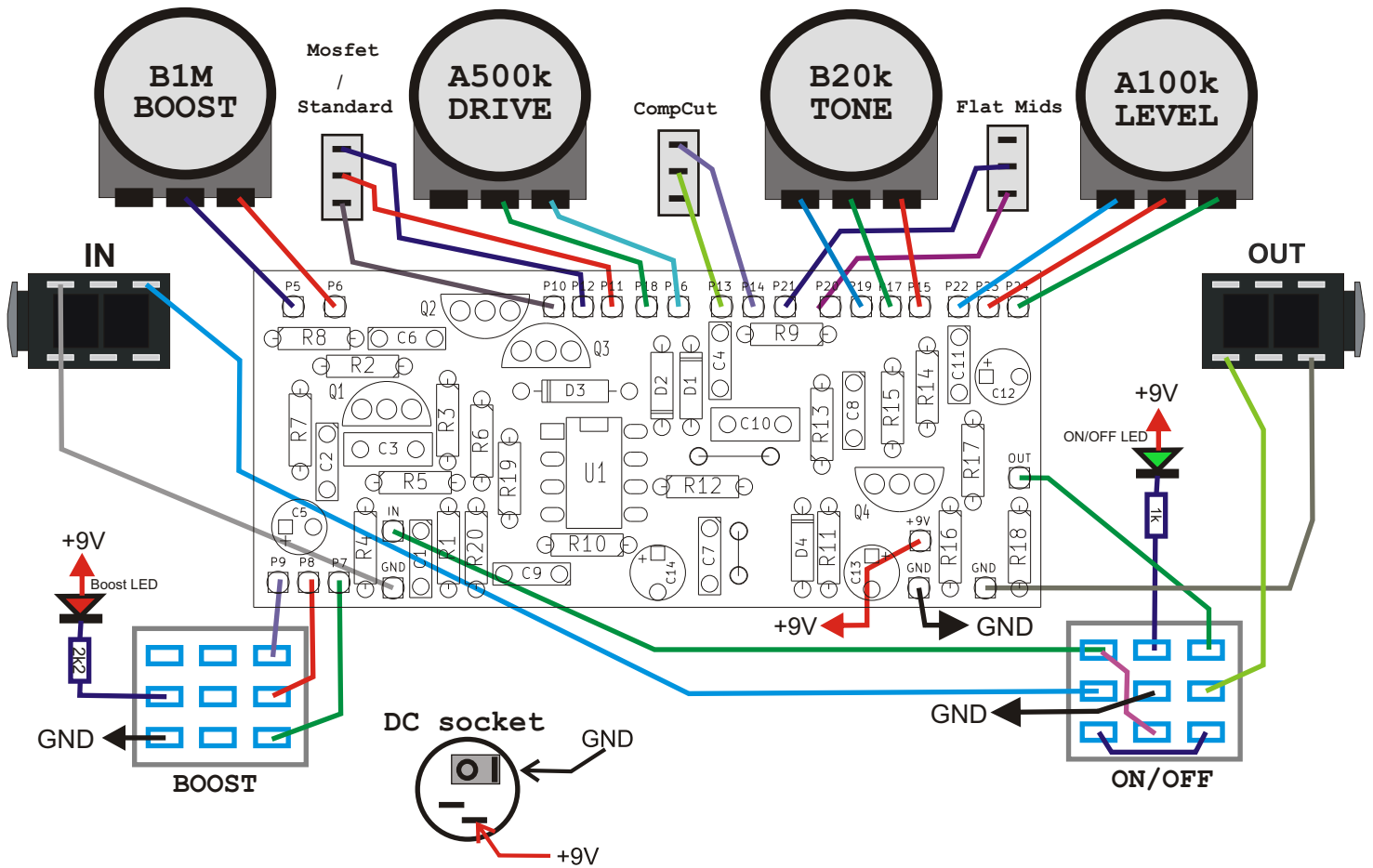


PCB parts placement diagram:



C1	47p	R1	1M	R15	510k	D1	1N400X
C2	22n	R2	1k	R16	10k	D2	1N914
C3	1u	R3	510k	R17	100R	D3	1N34A
C4	100p	R4	10k	R18	82k	D4	1N400X
C5	10u	R5	10k	R19	10k	Q1	2N3904
C6	330n	R6	4k7	R20	10k	Q2	2N7000
C7	68n	R7	22k			Q3	2N7000
C8	220n	R8	22k	Boost	B1M	Q4	2N3904
C9	10n	R9	1k	Drive	A500k	U1	4558
C10	1u	R10	10k	Tone	B20k		
C11	100n	R11	220R	Volume	A100k		
C12	10u	R12	1k				
C13	100u	R13	47k				
C14	100u	R14	1k				

Wiring (bottom view):



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

Bill of materials:

Resistors:

100R 1pcs. "R17"
 220R 1pcs. "R11"
 1k 5pcs. "R2 R9 R12 R14 LED"
 10k 6pcs. "R4 R5 R10 R16 R19 R20"
 1M 1pcs. "R1"
 2k2 1pcs. "LED"
 22k 2pcs. "R7 R8"
 4k7 1pcs. "R6"
 47k 1pcs. "R13"
 82k 1pcs. "R18"
 510k 2pcs. "R3 R15"

Potentiometers:

B1M 1pcs. "BOOST"
 A500k 1pcs. "DRIVE"
 B20k 1pcs. "TONE"
 A100k 1pcs. "VOLUME"

Capacitors:

47p 1pcs. "C1"
 100p 1pcs. "C4"
 10n 1pcs. "C9"
 22n 1pcs. "C2"
 68n 1pcs. "C7"
 100n 1pcs. "C11"
 220n 1pcs. "C8"
 330n 1pcs. "C6"
 1u 2pcs. "C3 C10"

Electrolytic capacitors:

10u 2pcs. "C5 C12"
 100u 2pcs. "C13 C14"

Semiconductors:

4558 1pcs. "U1"
 2N3904 2pcs. "Q1 Q4"
 2N7000 2pcs. "Q2 Q3"
 1N34A 1pcs. "D3"
 1N400X 2pcs. "D1 D4"
 1N914 1pcs. "D2"
 LED 2pcs.

Other:

Knobs 4pcs.
 Footswitch 3PDT 2pcs.
 DC socket 5.5 / 2.1 1pcs.
 JACK spocket 6,3mm 2pcs.
 MTS102 switch 3pcs.

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:

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

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