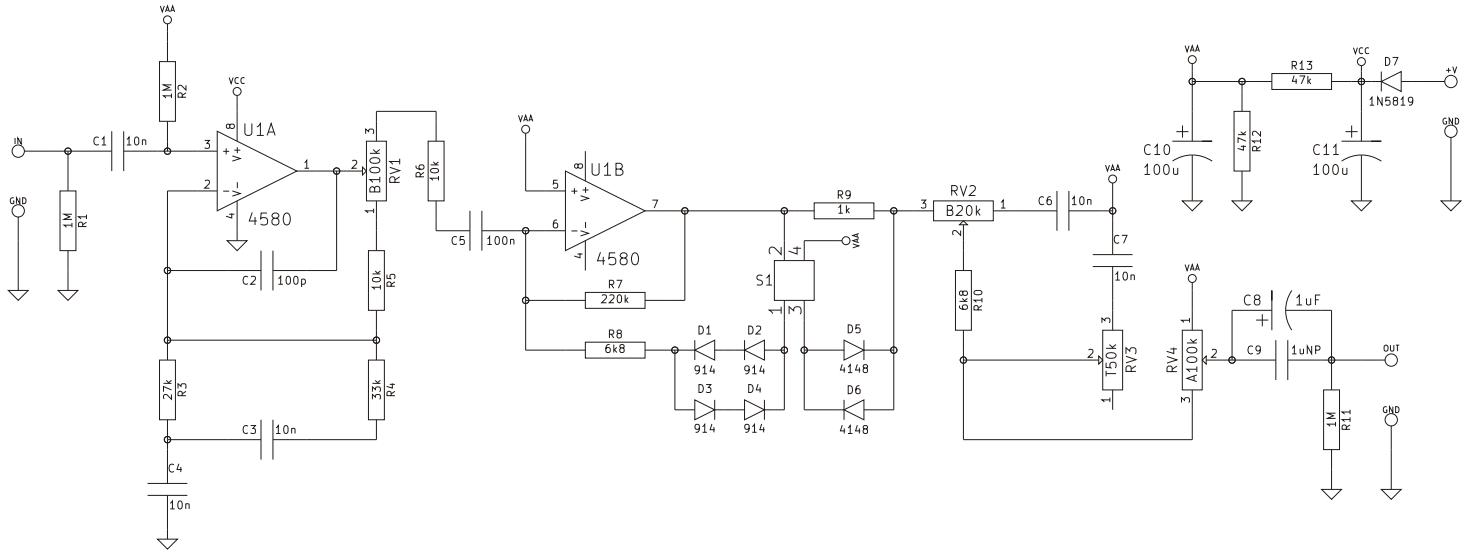
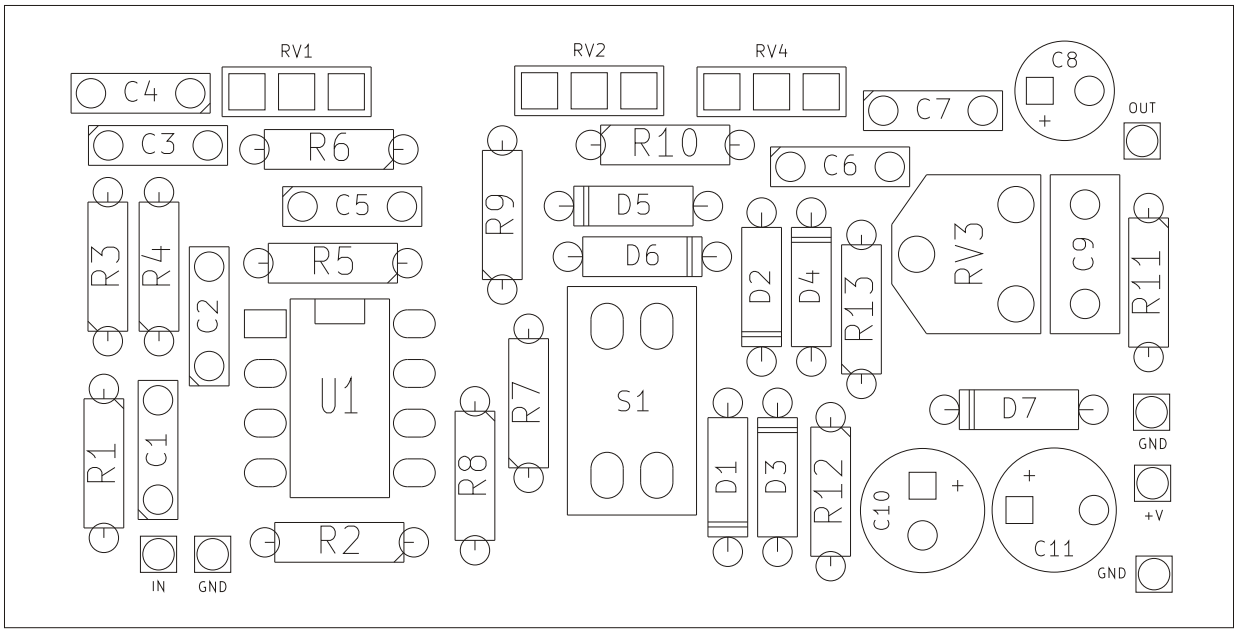
King Of Tone™ (single section): **13.02.2019**



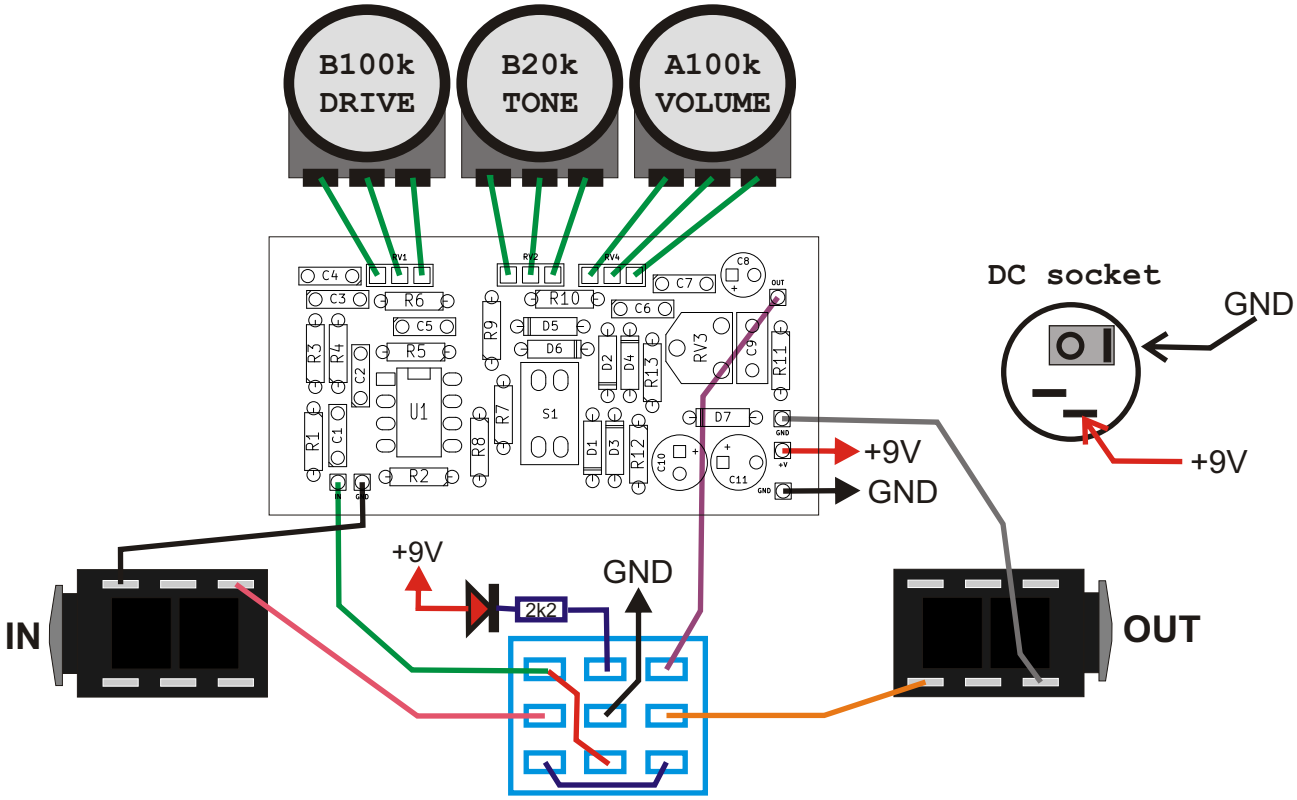
PCB parts placement diagram:



R1	**1M**	**C1**	**10n**	**D1**	**1N914**
R2	**1M**	**C2**	**100p**	**D2**	**1N914**
R3	**27k**	**C3**	**10n**	**D3**	**1N914**
R4	**33k**	**C4**	**10n**	**D4**	**1N914**
R5	**10k**	**C5**	**100n**	**D5**	**1N4148**
R6	**10k**	**C6**	**10n**	**D6**	**1N4148**
R7	**220k**	**C7**	**10n**	**D7**	**1N5819**
R8	**6k8**	**C8**	**1u**	**U1**	**4580**
R9	**1k**	**C9**	**1uNP**		
R10	**6k8**	**C10**	**100u**	**S1**	**DIP2 switch**
R11	**1M**	**C11**	**100u**		
R12	**47k**				
R13	**47k**				

RV1 B100k
RV2 B20k
RV3 T50k
RV4 A100k

Wiring (single version, bottom view):



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

Bill of materials:

Resistors:

2k2	1pcs.	"LED"
1k	1pcs.	"R9"
6k8	2pcs.	"R8 R10"
10k	2pcs.	"R5 R6"
27k	1pcs.	"R3"
33k	1pcs.	"R4"
47k	2pcs.	"R12 R13"
220k	1pcs.	"R7"
1M	3pcs.	"R1 R2 R11"

Potentiometers:

Trimpot 50k	1pcs.	"RV3"
B100k	1pcs.	"RV1"
B20k	1pcs.	"RV2"
A100k	1pcs.	"RV4"

Other:

DIP2 Switch	1pcs.
Knobs	3pcs.
Footswitch 3PDT	1pcs.
Jack socket	2pcs.
DC socket 5.5/2.1	1pcs.

Capacitors:

100p	1szt.	"C2"
10n	5szt.	"C1 C3 C4 C6 C7"
100n	1szt.	"C5"
1u	1szt.	"C9"

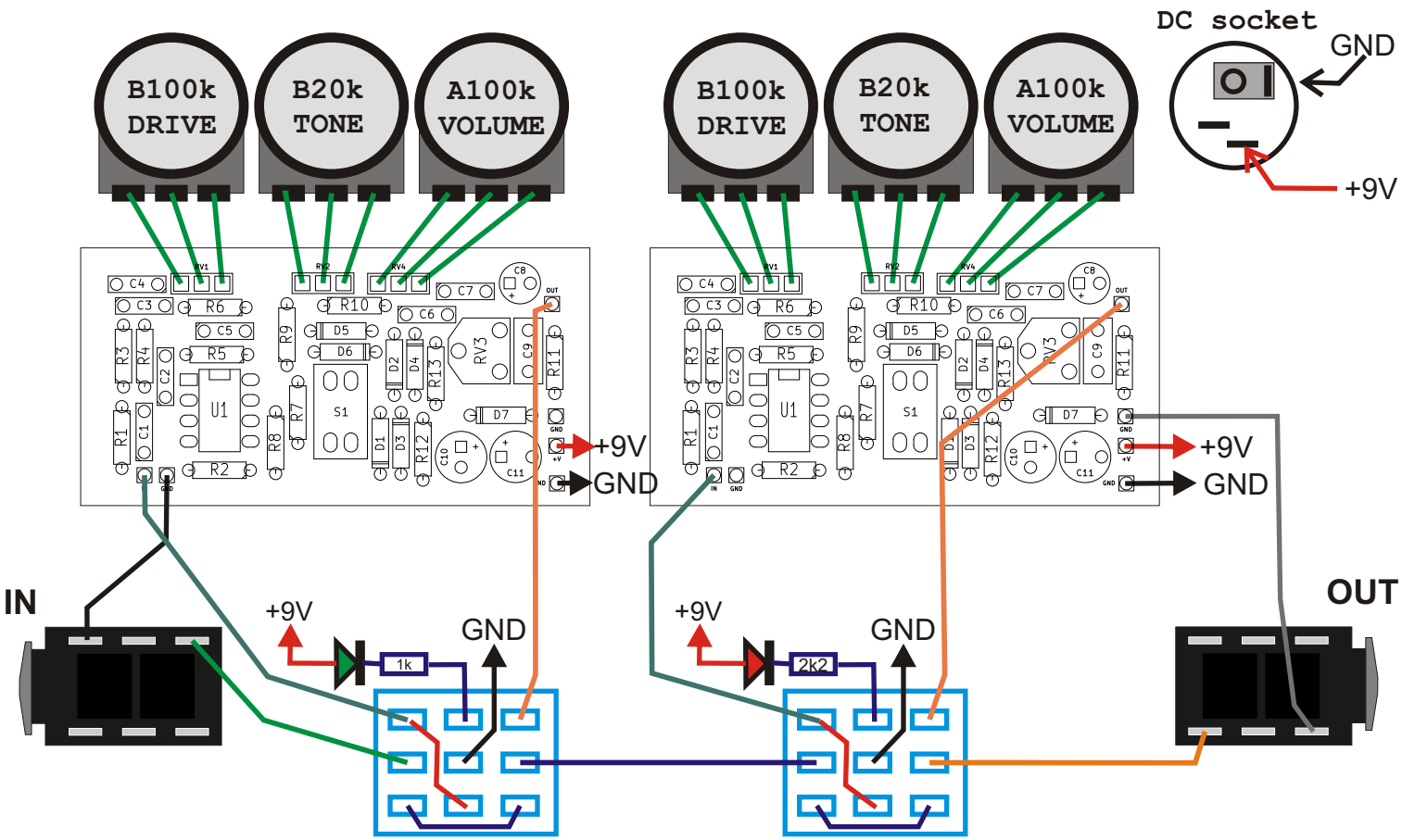
Electrolytic capacitors:

1u	1szt.	"C8"
100u	2szt.	"C10 C11"

Semiconductors:

1N914	4szt.	"D1 D2 D3 D4"
1N4148	2szt.	"D5 D6"
1N5819	1szt.	"D7"
4580	1szt.	"U1"
LED	1szt.	

Wiring (double version, bottom view):



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

Bill of materials:

Resistors:

2k2	1pcs.	"LED"
1k	3pcs.	"R9 LED"
6k8	4pcs.	"R8 R10"
10k	4pcs.	"R5 R6"
27k	2pcs.	"R3"
33k	2pcs.	"R4"
47k	4pcs.	"R12 R13"
220k	2pcs.	"R7"
1M	6pcs.	"R1 R2 R11"

Potentiometers:

Trimpot 50k	2pcs.	"RV3"
B100k	2pcs.	"RV1"
B20k	2pcs.	"RV2"
A100k	2pcs.	"RV4"

Other:

DIP2 Switch	2pcs.
Knobs	6pcs.
Footswitch 3PDT	2pcs.
Jack socket	2pcs.
DC socket 5.5/2.1	1pcs.

Capacitors:

100p	2pcs.	"C2"
10n	10pcs.	"C1 C3 C4 C6 C7"
100n	2pcs.	"C5"
1u	2pcs.	"C9"

Electrolytic capacitors:

1u	2pcs.	"C8"
100u	4pcs.	"C10 C11"

Semiconductors:

1N914	8pcs.	"D1 D2 D3 D4"
1N4148	4pcs.	"D5 D6"
1N5819	2pcs.	"D7"
4580	2pcs.	"U1"
LED	2pcs.	

Resistor color code:

390 x 10Ω = 3,9kΩ

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 kΩ	
Green	5	5	5	100 kΩ	0,5%
Blue	6	6	6	1 MΩ	0,25%
Purple	7	7	7	10 MΩ	0,1%
Gray	8	8	8	100 MΩ	0,05%
White	9	9	9	1 GΩ	
Gold				0,1 Ω	5%
Silver				0,01 Ω	10%

Capacitors markings:

471 = 47 x 10^1 pF = 470pF
472 = 47 x 10^2 pF = 4700pF = 4,7nF
473 = 47 x 10^3 pF = 47000pF = 47nF
474 = 47 x 10^4 pF = 470000pF = 470nF

100pF	100p	100	101
220pF	220p	220	221
4,7nF	4n7	0.0047	472
10nF	10n	0.01	103
100nF	100n	0.1	104
220nF	220n	0.22	224
470nF	470n	0.47	474
1000nF	1uF	1u	105