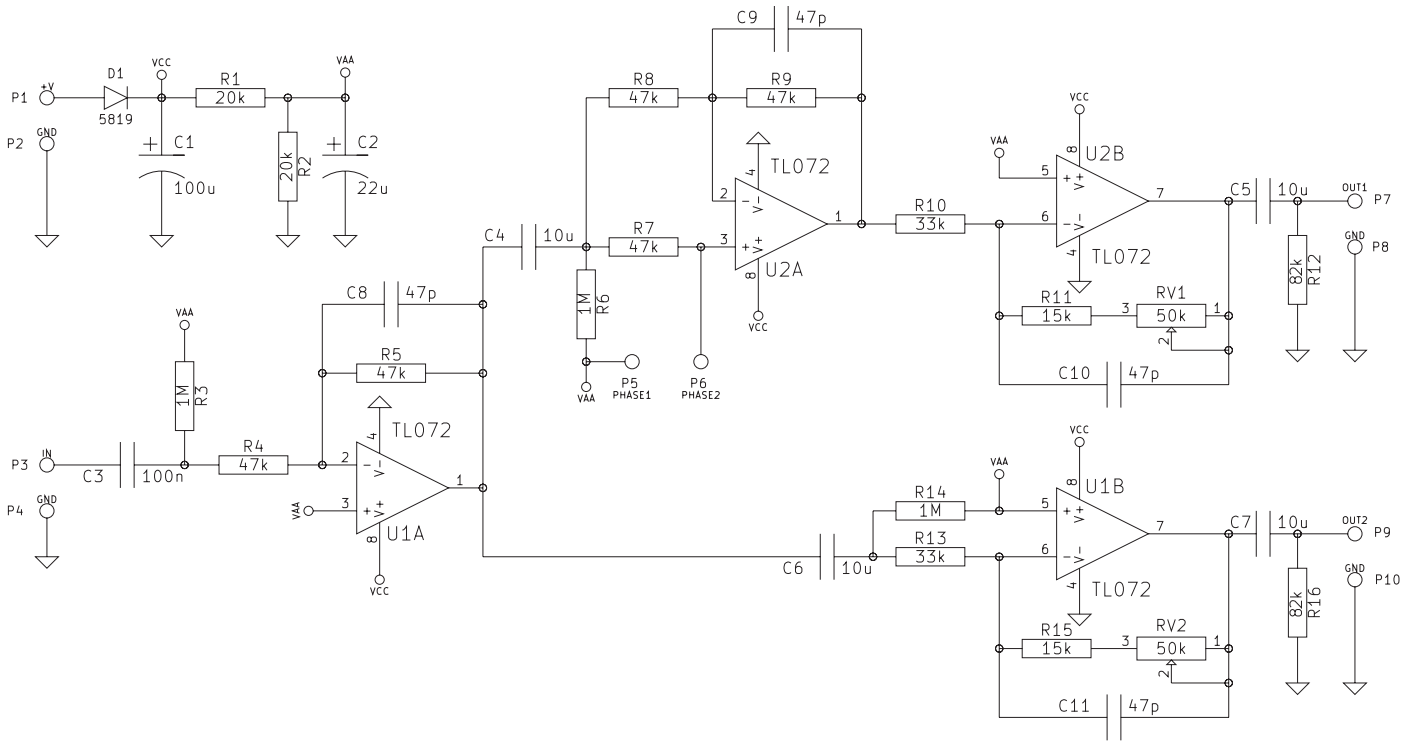
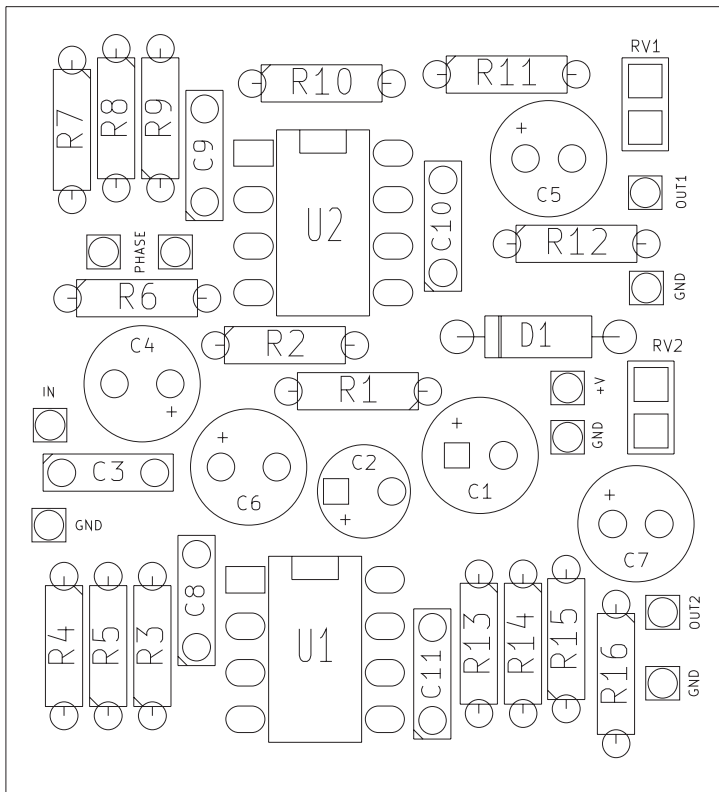


Signal Splitter schematic:

10.07.2022

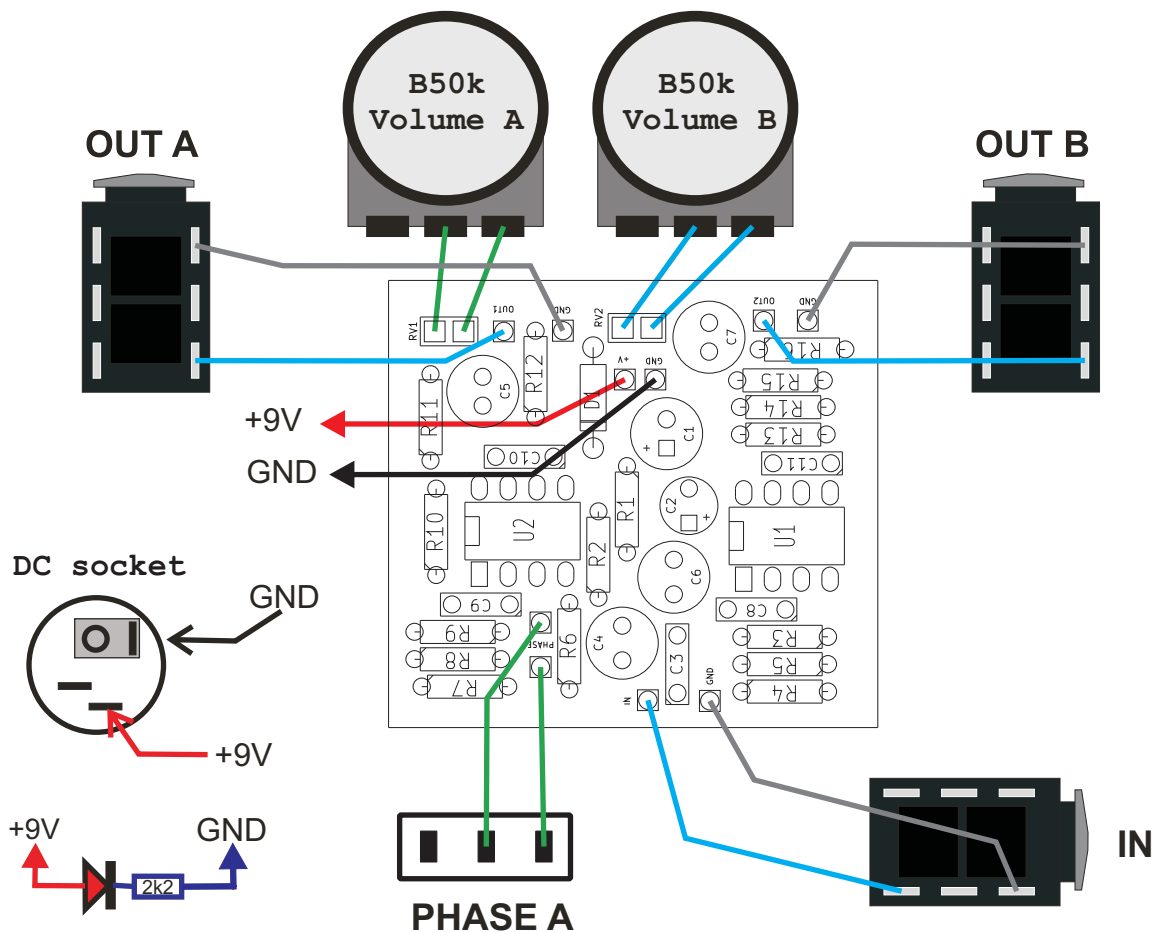


PCB parts placement diagram:



- | | |
|----------|-----------|
| R1 20k | C1 100u |
| R2 20k | C2 22u |
| R3 1M | C3 100n |
| R4 47k | C4 10u |
| R5 47k | C5 10u |
| R6 1M | C6 10u |
| R7 47k | C7 10u |
| R8 47k | C8 47p |
| R9 47k | C9 47p |
| R10 33k | C10 47p |
| R11 15k | C11 47p |
| R12 82k | |
| R13 33k | D1 1N5819 |
| R14 1M | U1 TL072 |
| R15 15k | U2 TL072 |
| R16 82k | |
| RV1 B50k | |
| RV2 B50k | |

Wiring (bottom view):



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

Bill of materials:

Resistors:

2k2 1pcs. "LED"
82k 2pcs. "R12 R16"
15k 2pcs. "R11 R15"
20k 2pcs. "R1 R2"
33k 2pcs. "R10 R13"
47k 5pcs. "R4 R5 R7 R8 R9"
1M 3pcs. "R3 R6 R14"

Capacitors:

47p 4pcs. "C8 C9 C10 C11"
100n 1pcs. "C3"

Electrolytic capacitors:

10u 4pcs. "C4 C5 C6 C7"
22u 1pcs. "C2"
100u 1pcs. "C1"

Potentiometers:

B50k 2pcs. "RV1 RV2"

Semiconductors:

1N5819 1pcs. "D1"
TL072 2pcs. "U1 U2"
LED 1pcs.

Other:

Knob 2pcs.
Switch MTS102 1pcs.
Jack socket 3pcs.
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:

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

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

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

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

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

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

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

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

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

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

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

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