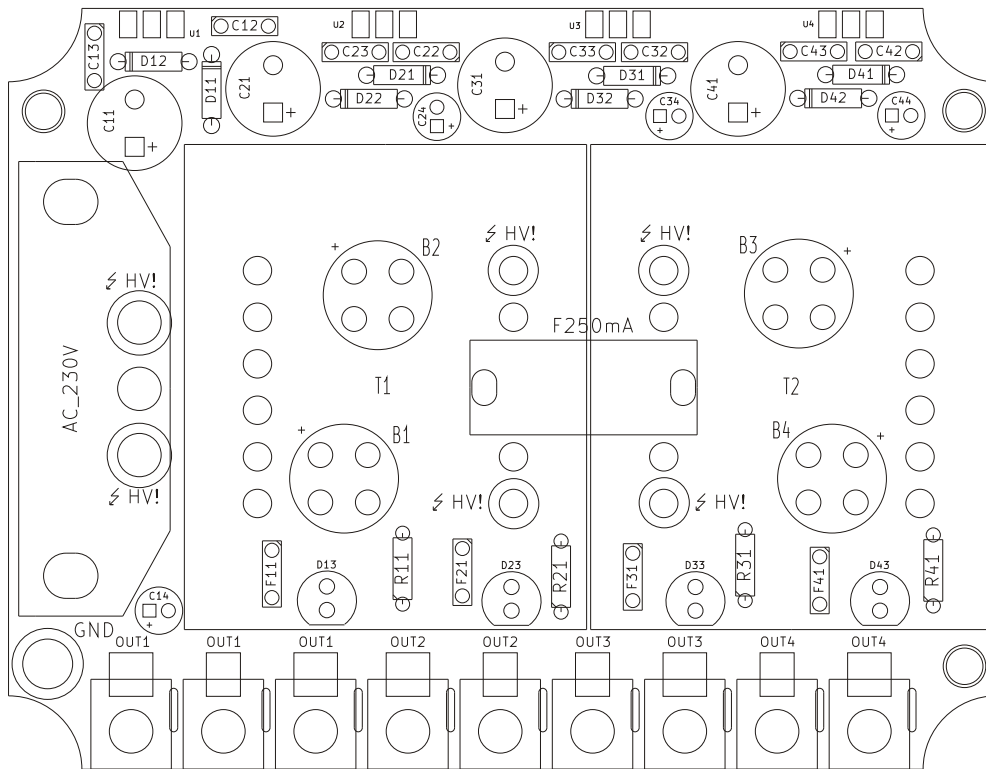


PCB parts placement diagram:

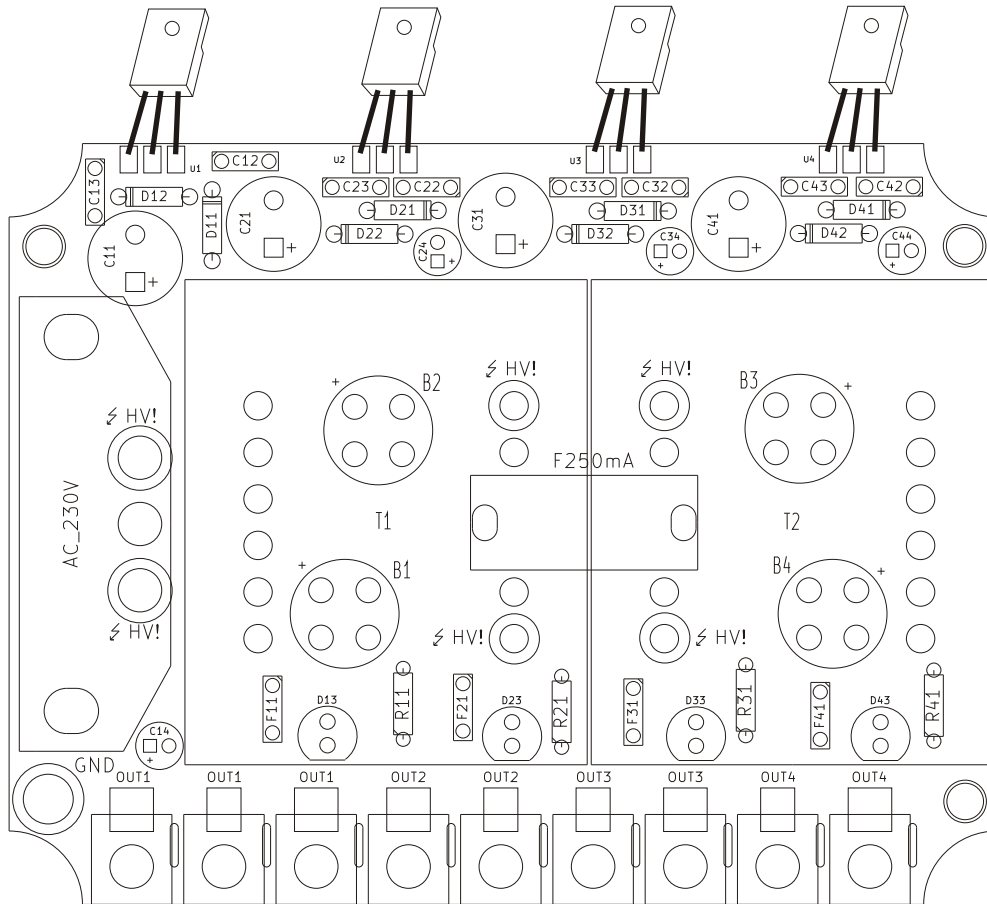


- B1 2A bridge
- B2 2A bridge
- B3 2A bridge
- B4 2A bridge
- C11 2200u
- C12 330n
- C13 100n
- C14 22u
- C21 2200u
- C22 330n
- C23 100n
- C24 22u
- C31 2200u
- C32 330n
- C33 100n
- C34 22u
- C41 2200u
- C42 330n
- C43 100n
- C44 22u
- D11 4007
- D12 4007
- D13 LED 5mm
- D21 4007
- D22 4007
- D23 LED 5mm
- D31 4007
- D32 4007
- D33 LED 5mm
- D41 4007
- D42 4007
- D43 LED 5mm

- T1 TEZ10/D 2x12V
- T2 TEZ10/D 2x12V
- U1 7809 isolated
- U2 7809 isolated
- U3 7809 isolated
- U4 7809 isolated
- F11 65mA polimer fuse
- F21 65mA polimer fuse
- F31 65mA polimer fuse
- F41 65mA polimer fuse
- R11 2k
- R21 2k
- R31 2k
- R41 2k

**WARNING !!! HIGH VOLTAGE !!!**  
 Power supply contain high 230V voltage that can cause injury and even death.  
 Always unplug the power cord from the socket before working on your device.  
**BUILD AT YOUR OWN RISK !!!** It is your own responsibility to follow  
 proper safety precautions.

## Wiring:



Watch the tutorial video:

[https://www.youtube.com/watch?v=NCq2C\\_Fhh1M&t=3s](https://www.youtube.com/watch?v=NCq2C_Fhh1M&t=3s)

- 1) Transformers and 2200uF capacitors mount on the bottom side of the pcb.
- 2) 7809 regulators mount upside down, use M2,5 screws and thermal paste.
- 3) Secure 35mm spacer sleeves with M3 screws.
- 4) Mount the AC outlet. Pins upside down.
- 5) Slide the pcb in place so that the regulator leads out hit the right holes.
- 6) Screw the PCB to the spacers using M3 screws. Solder the leads of the regulators.
- 7) Screw the enclosure cover, insert the 250mA fuse into the power socket. Check with the multimeter continuity test do the housing has a connection to grounding pin in the plug and only then connect the power cord to the network.

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Bill of materials:

Resistors:

2k 4pcs. "R11 R21 R31 R41"

Capacitors:

100n 4pcs. "C13 C23 C33 C43"

330n 4pcs. "C12 C22 C32 C42"

Electrolytic capacitor:

22u 4pcs. "C14 C24 C34 C44"

2200u 4pcs. "C11 C21 C31 C41"

Semiconductors:

7809 isolated 4pcs. "U1 U2 U3 U4"

1N4007 8pcs. "D11 D12 D21 D22

D31 D32 D41 D42"

LED 5mm 4pcs. "D13 D23 D33 D43"

Bridge 2A 4pcs. "B1 B2 B3 B4"

Other:

Transformer TEZ10/D 2x12V 2pcs.

IEC 230V socket 1pcs.

Polimer fuse 650mA 4pcs.

"F11 F21 F31 F41"

Fuse 5x20 250mA 1pcs.

Fuse socket PCB 1pcs.

Scket 5.5/2.1mm PCB 9pcs.

Spacer sleeve 35mm M3 4pcs.

Screw 3,9mm x 9,5mm 4pcs.

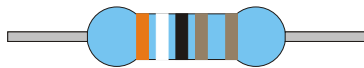
Screw M3x6mm 8pcs.

Screw M2.5x10mm 4pcs.

M2.5 self locking nut 4pcs.

Thermal paste 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 $\Omega$	
Brown	1	1	1	10 $\Omega$	1%
Red	2	2	2	100 $\Omega$	2%
Orange	3	3	3	1k $\Omega$	
Yellow	4	4	4	10 k $\Omega$	
Green	5	5	5	100 k $\Omega$	0,5%
Blue	6	6	6	1 M $\Omega$	0,25%
Purple	7	7	7	10 M $\Omega$	0,1%
Gray	8	8	8	100 M $\Omega$	0,05%
White	9	9	9	1 G $\Omega$	
Gold				0,1 $\Omega$	5%
Silver				0,01 $\Omega$	10%

Capacitors markings:

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

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

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

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

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

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

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

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

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

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

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

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

**WARNING !!! HIGH VOLTAGE !!!**

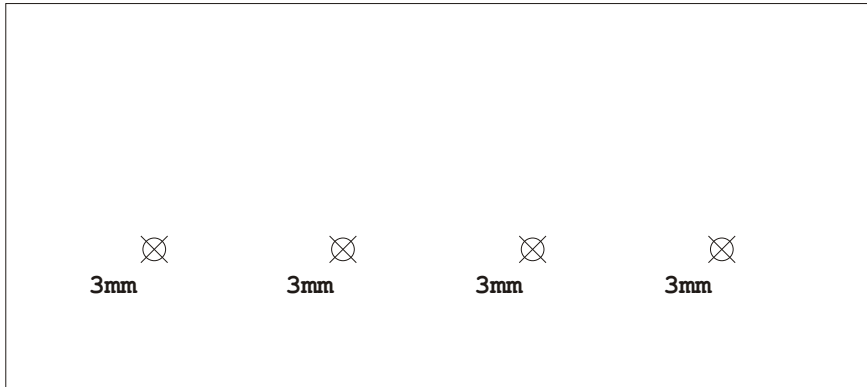
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**Drilling:**

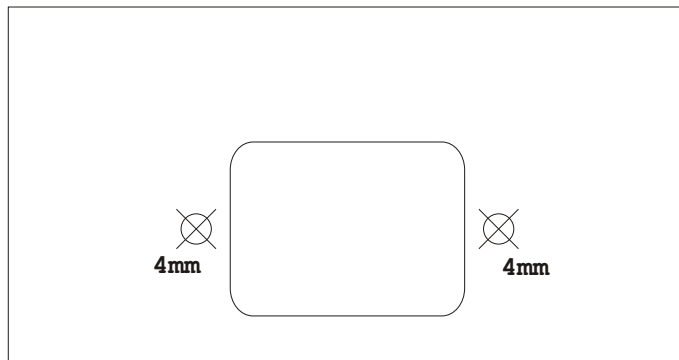
**Front**



**Back**



**Left side**



**Bottom**

