

Power Supply Board TRX “Druzhba-M”

The power supply unit "Druzhba-M" is assembled on a PCB dimensions of 75x45 mm. The board has two voltage regulators +12V and +5V, which are made on the basis L7805 and L7812. Schemes for switching on MS stabilizers do not have any features. Between the input and output of the stabilizer +12V, a control transistor VT1 (KT818) is connected, which allows increasing the output current of the stabilizer to 3-4A.

Operation

All elements of the power supply, with the exception of KT818, are installed on the PSU board. The threaded parts of the KD206 diodes are passed through the holes in the board and fixed with M5 nuts. Next, the board is installed on the chassis near the transformer, the remaining parts of the KD206 bolts pass through the corresponding holes in the transceiver case and are fixed under the chassis with another pair of M5 nuts. The pins of the microcircuits are bent in such a way that the latter can be fixed with M3 screws on the chassis next to the board.

The regulating transistor KT818 is installed through a mica gasket on the rear wall of the case and is connected to the PSU board with a three-wire harness.

- The +5V voltage is used to power units with input voltage up to 5V.
- The +12V source is used to power all the main circuits of the transceiver.
- Unregulated voltage +20-24V is used to power the relays on the boards of band-pass filters, low-pass filters and power amplifier.

This power supply can be used in Druzhba, Desna, Druzhba-M, Rosa, Klopik, Sloboda, Amator transceivers, as well as in other designs due to its versatility.

Transformer

The basis of the power supply is a transformer with voltage on the secondary windings 2x16V. We recommend using a transformer brand TИИИ-278-220-50. Next, we offer the technical characteristics of the transformer and the connection diagram to the power supply board.

Material: ИИИМ25x32

Power: 72W

Current of 2nd winding: 0,72/0,42 A

Weight: 1,7kg

Output PINs	Voltage, V	Current, A
11-12	5	2,2
13-14	5	2,2
15-16	10	2,2
17-18	10	2,2
19-20	1,35	2,2
21-22	1,35	2,2

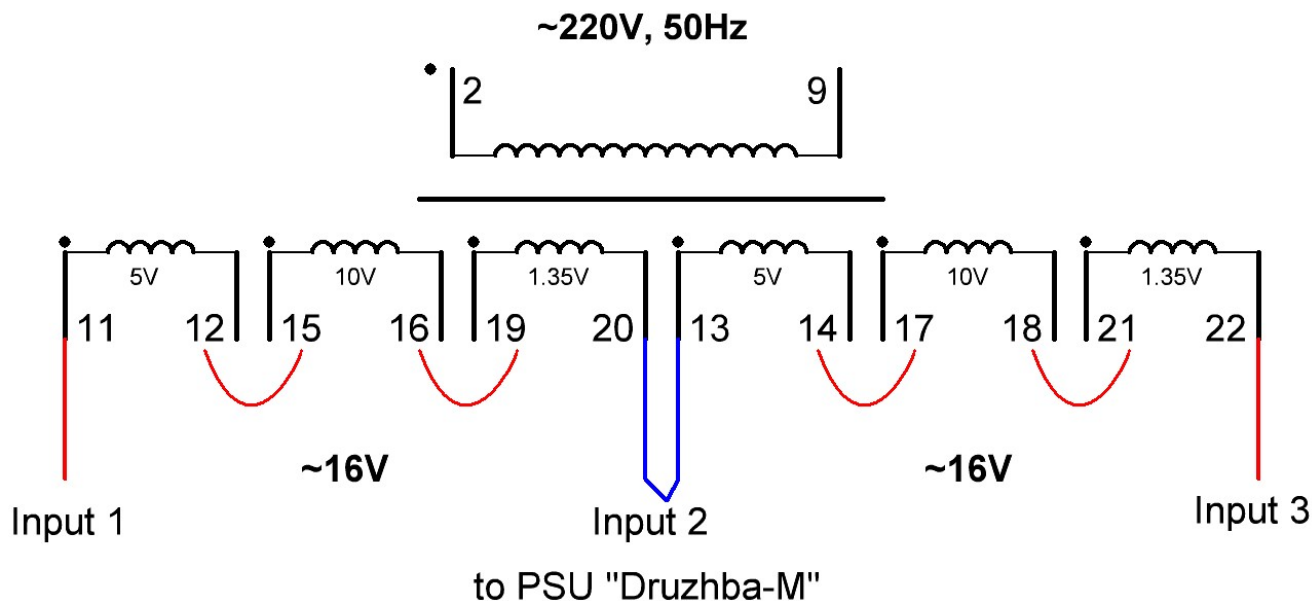


Attention! Transformer is not included to current kit

Sell separately!

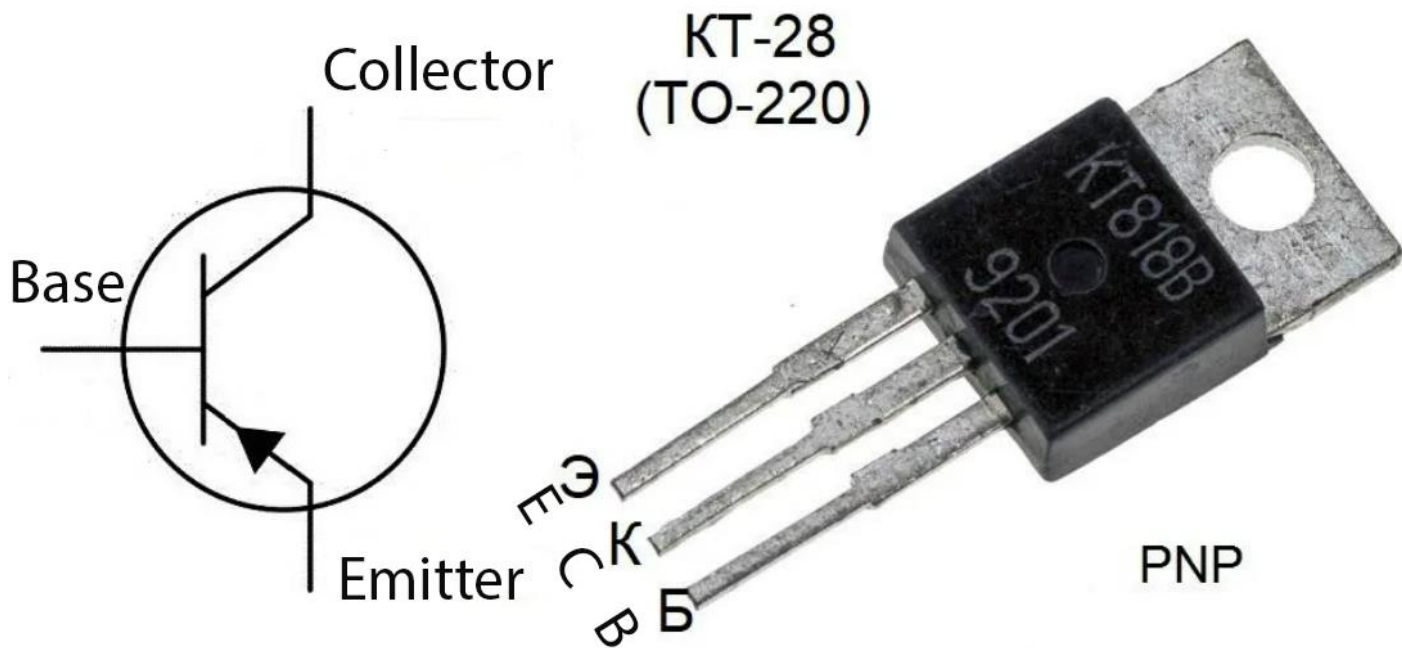
Also shipped separately from other kits to ensure the integrity of other components.

To obtain the required voltage of 2x16V on the secondary windings, it is necessary to connect in series the leads 12-16-19 on one side, and 14-17-21 on the other side. Conclusions 2 and 9 are connected to the electrical network 220V, 50Hz. The connection diagram is shown in the illustration.



Attention! When installing the power supply, transformers must comply with safety requirements when working with electrical networks! Do not work with live and exposed transformer. Children are only allowed to work under adult supervision!

Pinout KT818



Mounting diagram

