

A 10- meter Band CW Transceiver

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It is a variant of a simple DC transceiver. Transistor of PA works like a mixer in receiving mode. So, there is no any commutation in the RF circuits. The transceiver has output power 0.35- Wtts, shift TX/RX- 400-Hz, RX sensitivity 2 microV. Power voltage is 15-V, current at RX/TX – 30/120-mA.

Inductor L4 has 18 turns of wire in 0.6-mm (23-AWG) diameter, winding length is 12- mm, coiled on a form of 8- mm diameter. L3 has 9 turns of wire in 0.25- mm (30-AWG) diameter, coiled on a ferrite ring 10 –mm OD x 5- mm ID x- 10- mm- H with permeability 50, tap made from 6-turn from “cold” end. L2 has 3 turns of wire in 0.25- mm (30- AWG) diameter, coiled above L3. Inductor L1 has 10 turns of wire in 0.6-mm (23-AWG) diameter, winding length is 14- mm, coiled on a form of 10-mm diameter, tap made from 3-turn from “cold” end. L5 has inductance 0.15- H. It is possible to use collector’s coil from an output transformer from any transistor radio.

Figure 1 shows schematic of the transceiver. VFO is made on V2. C6C7L4C8C9C10 is tuned on 14-MHz. L3C4 is tuned on 28- MHz. When key (connected to X2) is “down” (TX- mode) relay K1 provides plus 15- V onto transistor V1. At RX mode the transistor works like a mixer. Audio signal (at RX-mode) goes through filter C3L5C11 (3- kHz cutoff frequency) onto audio amplifier made on V4,V5,V6 (amplification factor more the 10000). High-Ohmic headphones (3- 4-kOhm at DC, old military ones) are used with the amplifier. The phones are connected to X3. Low Ohmic phones does not work good with the amplifier.

Credit Line: V. Polyakov. *Transivory pryamogo preobrazovania, Moscow, DOSAAF, 1984 (DC- Tranceivers, Moscow, P.H.: DOSAAF, 1984)*

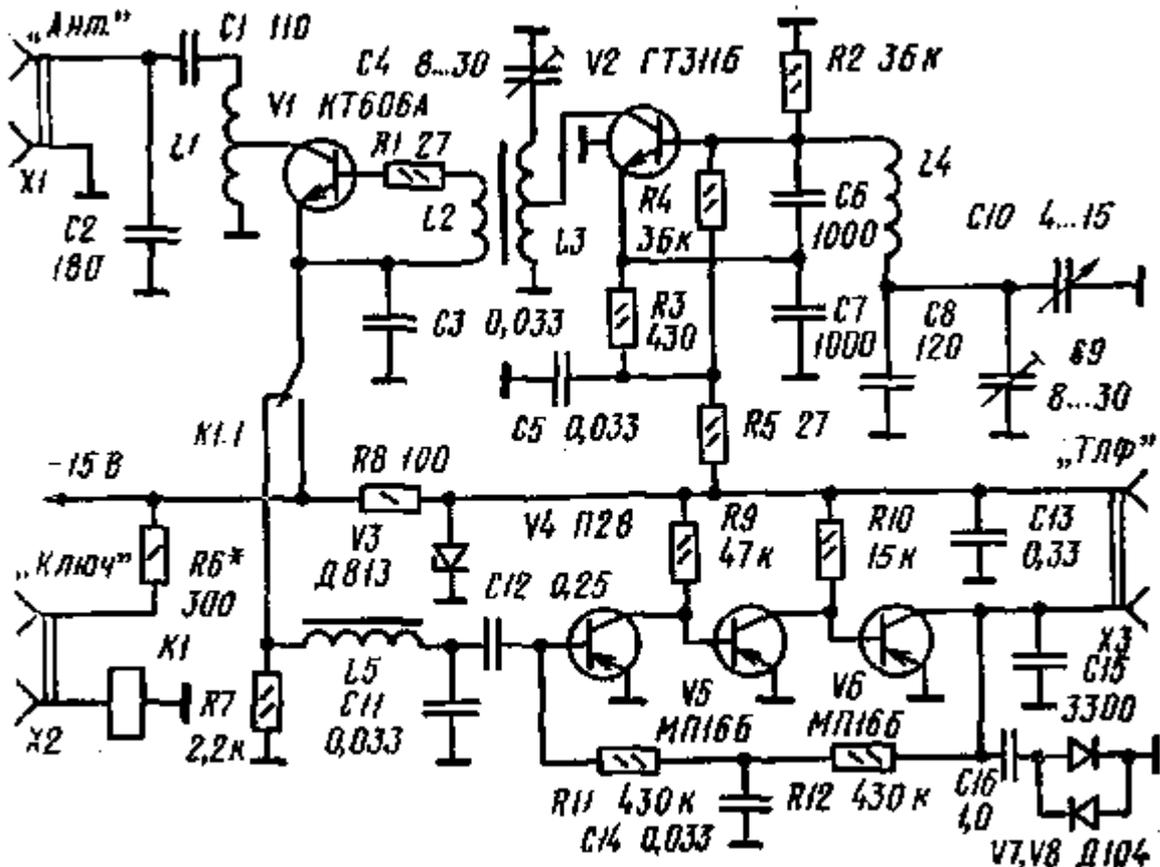


Figure 1 A 10- meter Band CW Transceiver



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