

Soviet Legendary HF- Receiver KUB- 4

The regenerative HF receiver was designed by a group of ham radio in the Leningrad Central Radio Laboratory in the 1929. It was in the group: B. Guk, S. Briman, A. Kershakov and B. Dobrozhansky. The group was called in Russian "Korotkovolnovaya Udarnaya Brigada", or, in English translation: "HF high-extensive work team". So, the receiver was named KUB- 4. Digit "4" means that just four tubes there were used in the receiver. Actually, there were used five tubes but the fifth one was used as a high-ohmic variable resistor.

The prototype of the receiver was a regenerative HF Receiver designed by B. Dobrozhansky in 1928- 1929 years. At the times Armstrong still held patent on his superheterodyne so lots countries produced regenerative receivers for all purposes- for military, navy and civil application. **Figure 1** shows the receiver KUB- 4. **Figure 2** shows schematic of the receiver KUB- 4.

The receiver KUB- 4 was produced since 1930 till 1942 in the Leningrad, at the Kozitsky Radio Plant. **Figure 3** shows a Label of the receiver KUB- 4. The receiver had five bands that could cover the frequencies 1.5... 30.0- MHz (some receivers had the upper band a little lower or a little higher the 30.0- MHz). The needed band was chosen with the help of plug- in inductors. Unused inductors were placed in a separate box or fixed to the upper cover inside of the receiver. Such design had the own advantages and disadvantages... The receiver KUB-4 had weight 8.0- kg and dimensions 500 x 143 x 180- mm. Power battery with +120- V for plate, +40- V for the second grid, + 4- V for heater and – 2- V for the first grid was required for the receiver.



Figure 1A Receiver KUB- 4
Front View

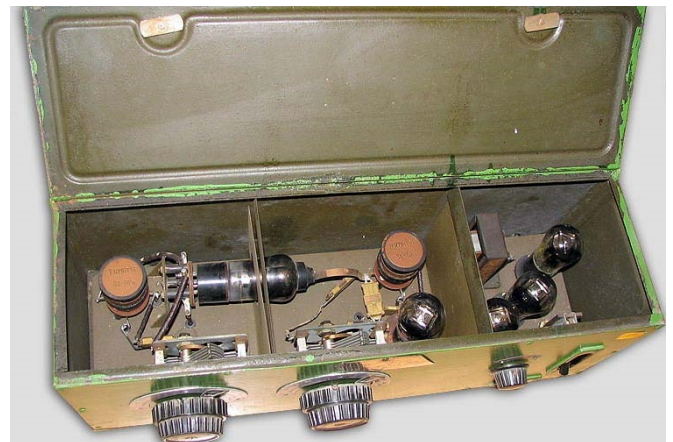


Figure 1A Receiver KUB- 4
Inside View



<http://www.rkk-museum.ru/>

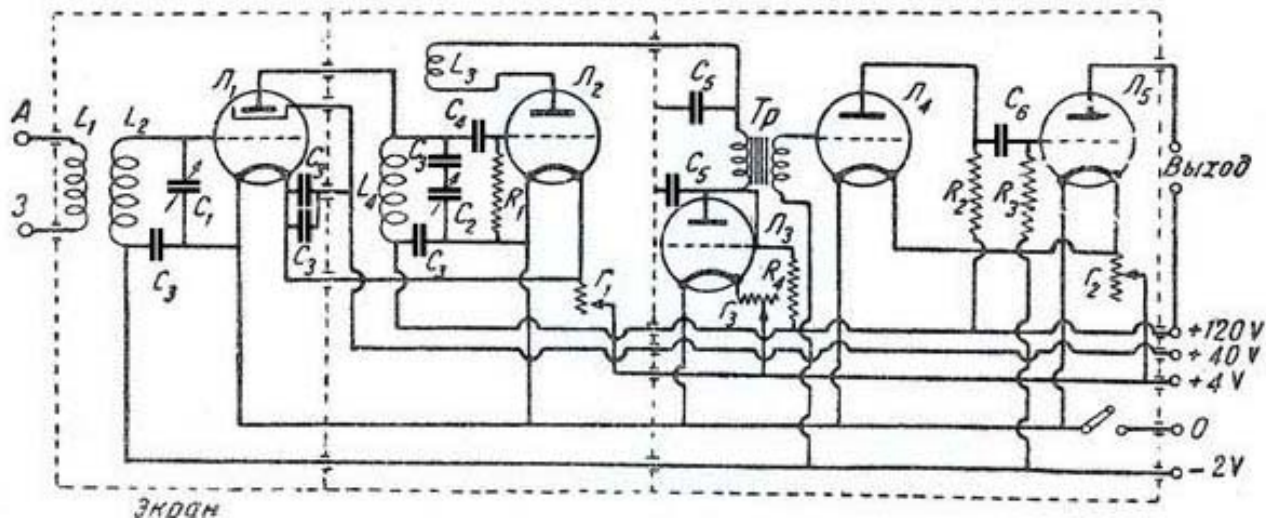


Figure 2 Schematic of the receiver KUB-4

KUB- 4 was widely used in the pre WW2 USSR. The receiver was used by military, navy, radio- intelligence service, in meteorology stations across the country, in civil HF communication and just for radio reception at some areas. The receiver was used on the First Soviet Polar Station. Ernst Krenkel was the polar radioman of the station. Hi promised to give up the receiver to a soviet ham who would make the first QSO with him. The receiver was awarded to V. Saltykov (U1AD) from Leningrad. Figure 4 shows the passing of the KUB- 4 from Ernst Krenkel to V. Saltykov.



Фото: В. Громов, 2011

Figure 3 Label of the KUB- 4

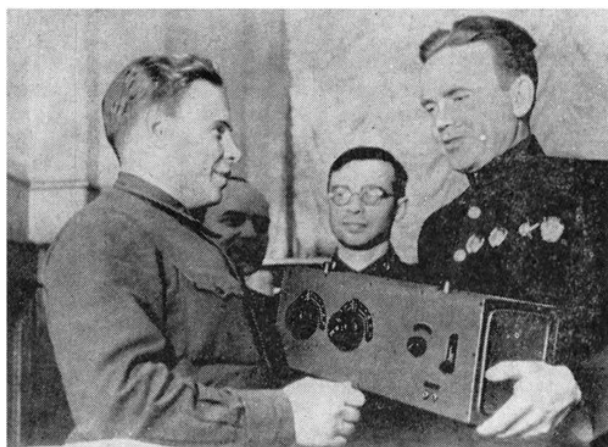


Figure 4 Ernst Krenkel gave away the receiver KUB- 4 to V. Saltykov (U1AD)



Figure 6 Label of the KUB- 4M



According to the military and mostly navy requirement the receiver in the middle of the 1930 was modified. Schematic was modified very slightly but the cabinet was totally remade. The receiver was named KUB-4M.

Figure 5 shows the receiver.

Figure 6 shows label of the receiver.

Dimension of the receiver was 240 x 200 x 285 – mm. The receiver was widely used in the military, navy and submarine fleet. However the production of the KUB- 4M was stopped at June- 1941. The plant began produce another radio equipment for the military for the needs WW2.

It is still possible to find the KUB- 4 and KUB- 4M at the ham hands. However, time is going, and the legendary receiver is going to the past.

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Figure 5A KUB- 4M
Inner View



Figure 5 KUB- 4M
Front View

Info and Pictures were taken from the references (all in Russian):

http://www.rkk-museum.ru/vitr_all/132.shtml

http://www.rkk-museum.ru/vitr_all/exhibits/121.shtml

<http://ru.wikipedia.org/wiki/%D0%9A%D0%A3%D0%91-4>

<http://fotki.yandex.ru/users/ra3cc/view/392627/?page=0>

<http://forum.qrz.ru/sredstva-svyazi-krasnoy-armii/11346-kub-4m-priyomnik.html>

