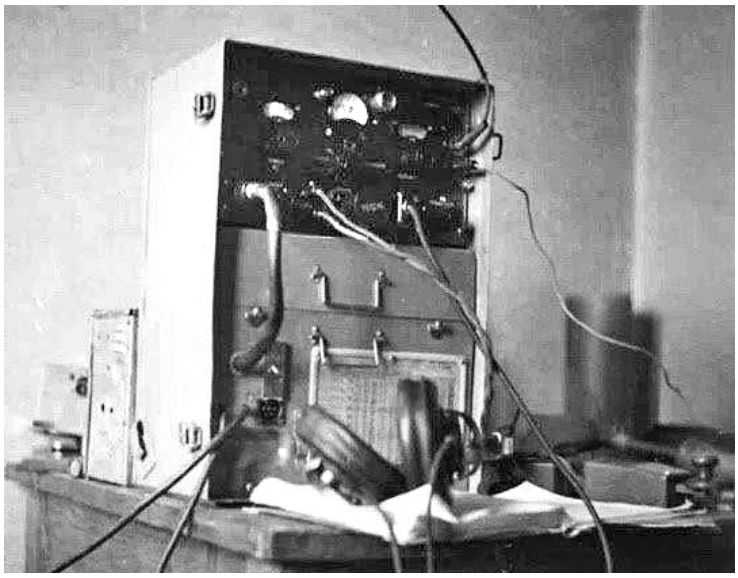


Prima 2

Country of origin: Russia

DATA SUMMARY

Design/Manufacturer:

Year of Introduction: 1944.

Purpose: Para troops, partisans.

Transmitter:

Circuit Features: Crystal oscillator/RF power amplifier. CW only.
Frequency Coverage: 2.8-5MHz.
RF output: 5-6W.
Valve: 2П9М. (2P9M)

Receiver:

Circuit Features: Superheterodyne. RF, Mix, LO, IF stage (2x), Det/BFO, AF/crystal calibrator. IF 465kHz. AM and CW.
Frequency Coverage: 2.8-5MHz.
Sensitivity: 3µV CW; 5µV AM at 2V on headphones.
Valves: 2K2N (7x).

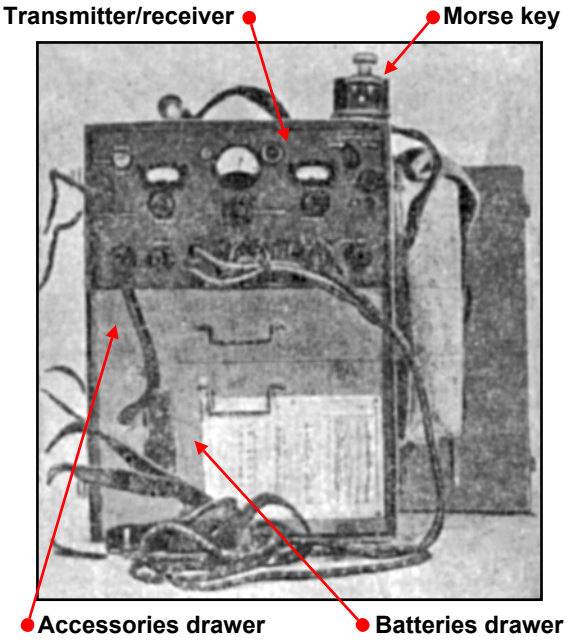
Aerial: 24m wire and 2x7M counterpoise.

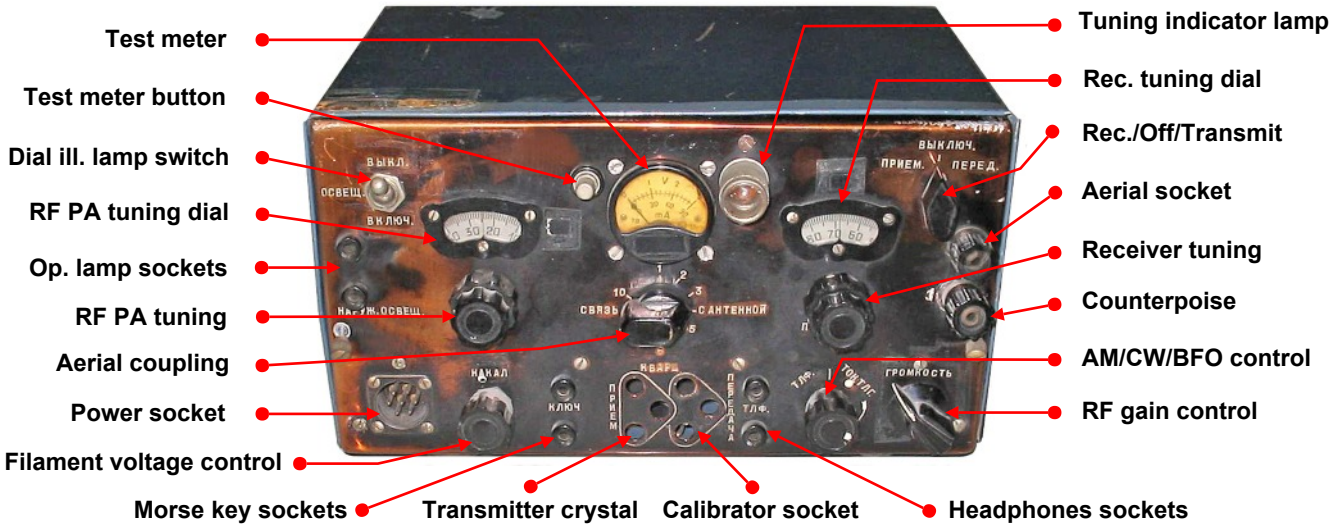
Power Supply: Three 60V type BAS60 HT dry batteries and a 2.4V 2NKN-10 accumulator. 60V HT for receiver and 180V for emergency use of transmitter with a reduced RF output. A separate hand generator provided 300V HT for the transmitter and 2.5V for charging the accumulator.

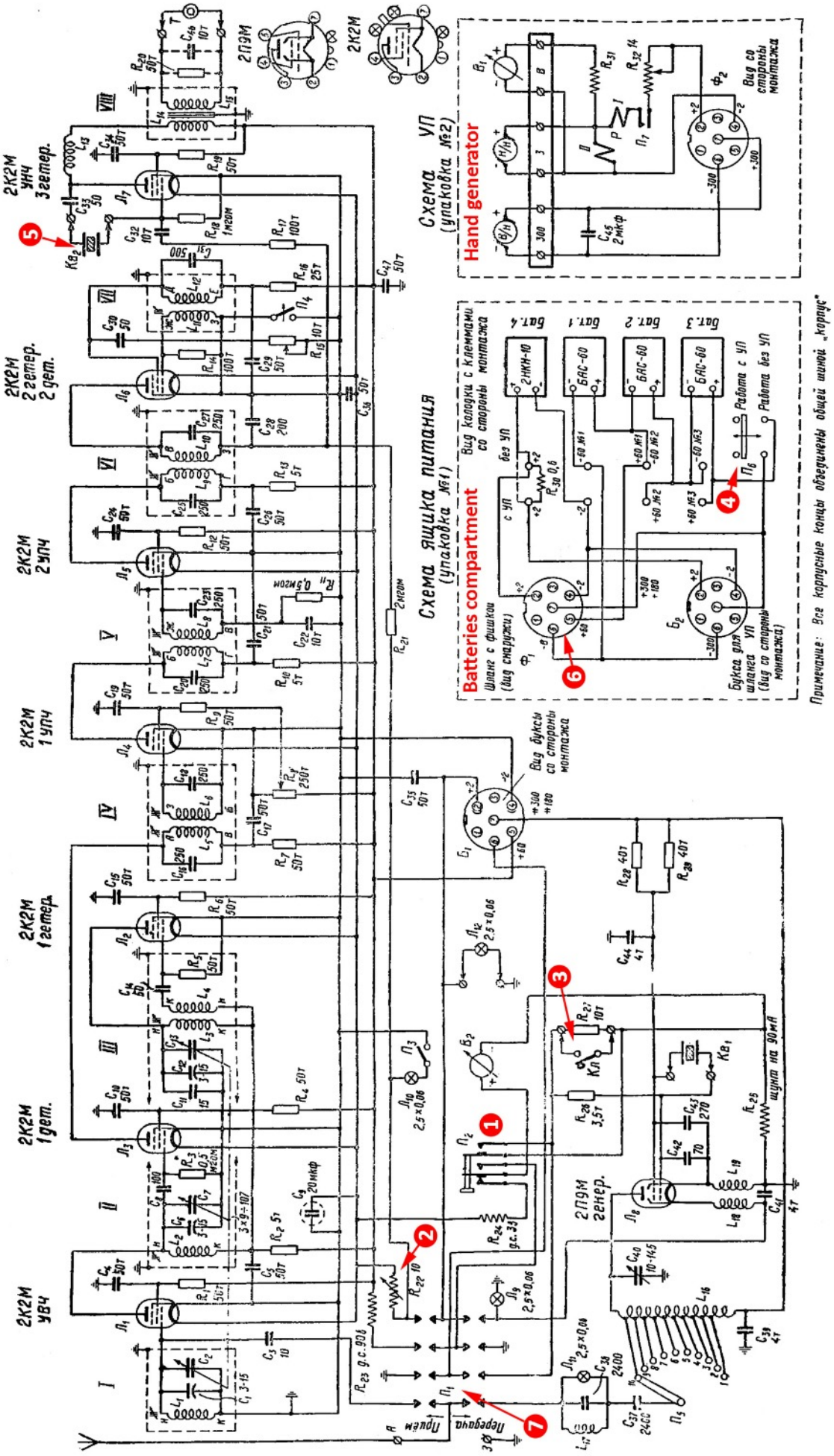
Size (cm):	Height	length	width	weight (kg)
Prima 2	42	20	30	13
Hand generator	38.5	16	36	7

REMARKS

Prima-2 (also referred to as Prima-bis) was a self contained man portable HF radio set, primarily developed for airborne forces and probably partisan communications. It was a follow up of the Prima (see Chapter 236) with similar operational features, but better receiver specifications, and reduced weight and size. In an emergency or for establishing immediate communication after a parachute drop, the transmitter could operate on dry batteries with reduced power. The transmitter operated on CW Morse only with an estimated range of 400kM. The set was powered by internally carried dry HT batteries for the receiver and a 2.4V accumulator for the filaments of the receiver and transmitter. A separately carried hand generator provided 300V HT for the transmitter, and 2.5V for charging the accumulator. A Prima 2 station comprised a plywood enclosure with removable protective cover, with the transmitter-receiver in the top compartment, and accessories and batteries drawers below. It was normally carried as a three man load: transmitter-receiver, hand generator, and aerial masts with aerial and counterpoise wire.







Compared with the photos overleaf, the circuit diagram shown above was probably that of an earlier Prima 2 variation, the most significant (visual) change was a fixed cable and plug (6) on the battery drawer leading to a socket on the transmitter-receiver front panel.

Interesting key features of the circuit were:
1) Test meter push button: In Receive position showing LT filament voltage, and when pressed the receiver HT voltage; In Transmit position, when pressing the button, the transmitter was keyed and anode current shown.
2) Receiver valves 2 Volt filament adjustment rheostat.
3) Morse key sockets.
4) Switch for selection of transmitter HT: (Up) 'Normal' hand generator operation; or (Down) 'Emergency' batteries operation. A lock was provided in order that this switch could not be set to 'emergency' when the hand generator plug was inserted.
5) For netting the receiver to the transmitter frequency, the transmitter crystal was placed in the calibrator sockets whilst the receiver AF output valve functioned as an RF oscillator.
6) This socket was replaced by a fixed cable and plug leading to the receiver power socket in a probably later variation.
7) Receive-Off-Transmit switch