

Believed to be Prima-2. Note the extra socket located centre right on the front panel between the transmitter crystal socket and batteries/power pack switch for connecting an external Morse key

Prima
Country of origin:
USSR

REMARKS

'Prima' (Russian = Прима) was a portable crystal controlled HF CW transmitter/receiver basically intended for communication by special forces (para's/air landing brigades/forward reconnaissance) and partisans. Prima 1 was developed and produced in 1941 at Radioplant 193 in Kharkiv (Ukraine). Before the city was conquered by the Germans the machines and all production facilities were evacuated from September 1941 onwards to Kasli in the Central Ural where, with great difficulties, production resumed in Radioplant 695. Two versions of Prima were known.

The set was comprised of a three man load: transmitter/receiver, aerial bag and power pack. The latter included a hand generator and a rechargeable accumulator, and was only required during transmitting. HT and LT dry batteries for the receiver were located in a compartment at the centre bottom of the transmitter/receiver case.

In an emergency the receiver could be powered by the hand generator. This was physically exhausting to operate and a normal operating time for a soldier was 10-15 minutes. The range of the radio was specified as up to 300km.

References:

- Colour photograph of a Prima-2: Alexander, Donesk, DNR.
- Kennblätter fremden Geräts, heft 13, Nachrichtengerät, Rußland, Funkgerät 429 r, Prima. (Reprint WftW Compendium 4).
- qrz.ru Forum: Агентурная радиосвязь (Agent radio), 2012. Vladimir, (RW4HO).
- Радио, (RADIO) May 2001, pp 68. *Radio stations of the great patriotic war.*

Particular thanks goes to Vladimir Chudnov, the chief editor of RADIO for his kind permission to use information and illustrations from the May 2001 article.

See also the RADIO website at: www.radio.ru

DATA SUMMARY

Organisation: Believed GRU.

Design/Manufacturer: Kharkiv Radioplant No. 193.

Year of Introduction: 1941 and 1942.

Purpose: Special forces, partisans.

Receiver:

Circuit features: Mix/Osc, IF, regenerative detector/AF output/crystal calibrator; AM R/T and CW.

Frequency coverage: 90-60m (3.325-5MHz).

Valves: SB242, 2K2M, SO243.

Transmitter:

Circuit features: CO/RF power amplifier. CW only.

Frequency coverage: 90-60m (3.325-5MHz).

RF Power: 5W. (Probably input).

Valve: 2P9M.

Aerial: 24m sloping wire on a 6m mast. 2x7m counterpoise.

Power Supply: Internal carried 2x BAS60 HT and 2x 1.5V dry batteries for the receiver. External power pack with 2NK10 accumulator, hand generator (believed type DRP) providing 300V, 120V and charging the accumulator.

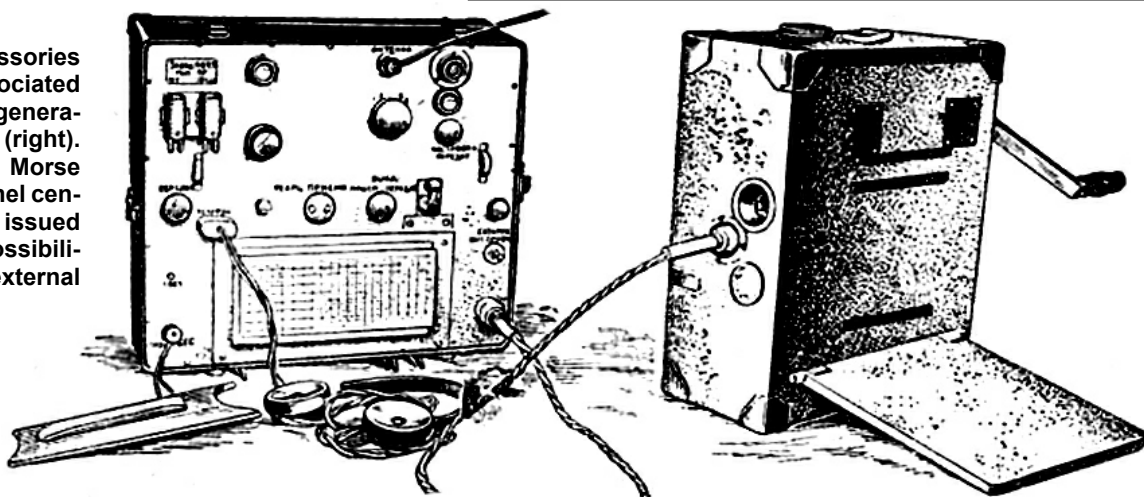
Dimensions (cm) and weight:

Prima 1: Height 38, length 16, width 42; Weight 15.5kg.

Prima 2: Height 38.5, length 16, width 40; Weight 14.9kg.

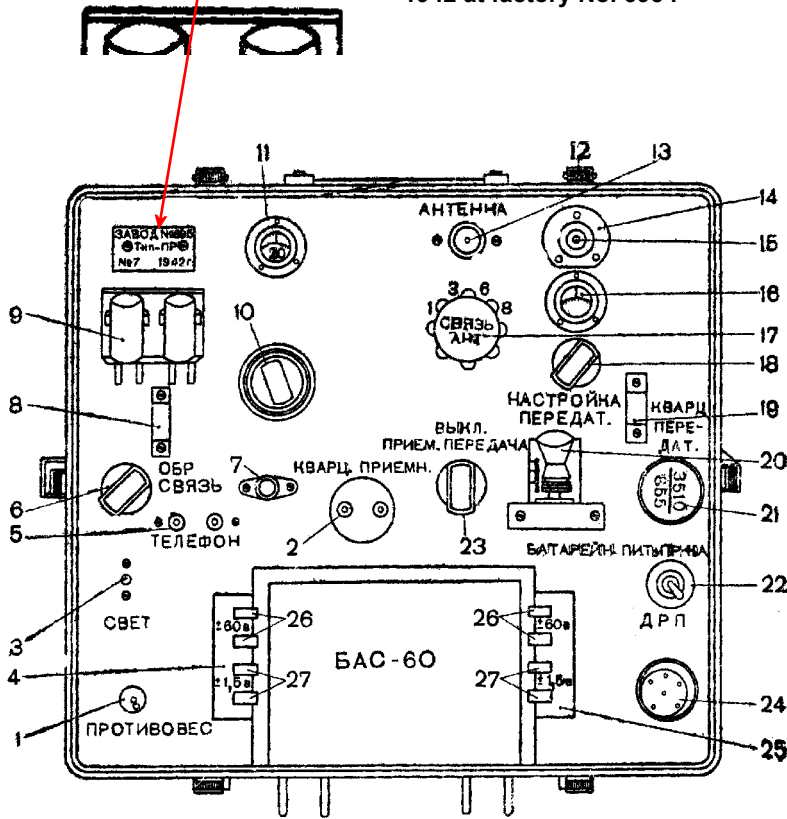
Power pack: Height 40, length 16, width 38.5; 15.5kg.

'Prima-1' with accessories (left) and associated accumulator/hand generator power pack (right). Note the built-in Morse key on the front panel centre right; the later issued Prima-2 had the possibility to connect an external Morse key.





Enlarged type plate of the drawing below showing that the Prima (here known as Type PR) was produced in 1942 at factory No. 695 .

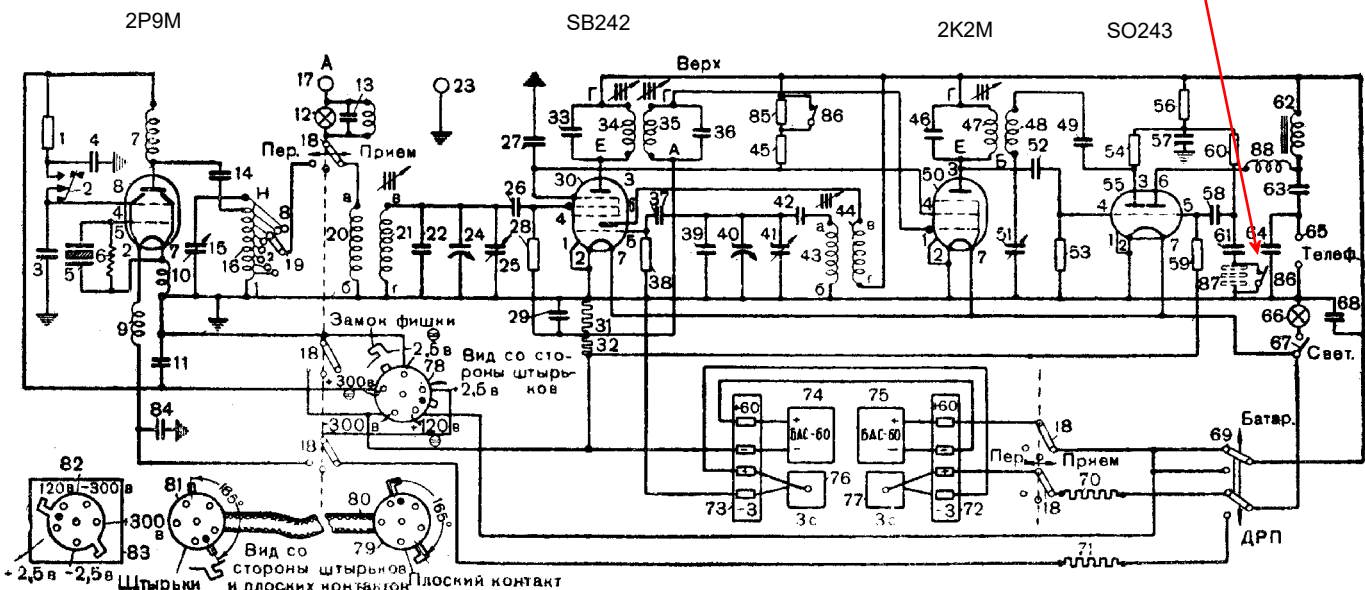


Front panel layout of Prima-1.

Front panel control functions

- 1 Earth or counterpoise socket
- 2 Crystal socket for receiver calibration
- 3 Receiver calibration
- 4 Battery contacts strip
- 5 Headphones sockets
- 6 Reaction control knob
- 7 Pushbutton for receiver dial illumination
- 8 Panel lifting clamp
- 9 Holder for two spare crystals
- 10 Receiver tuning control knob
- 11 Receiver tuning dial
- 12 Protective cover lock
- 13 Aerial connection socket
- 14 Window with tuning indicator lens
- 15 Tuning indicator lamp
- 16 Transmitter tuning dial
- 17 Aerial matching switch
- 18 PA tuning knob
- 19 Panel lifting clamp
- 20 Morse key
- 21 Transmitter crystal
- 22 Batteries/power pack switch for receiver
- 23 Receive-off-transmit switch
- 24 Socket for connecting external power pack
- 25 Battery contacts strip
- 26 Connections for internal HT batteries
- 27 Connections for internal LT batteries

The second triode section of the SO243 valve, apart from its normal function as AF output amplifier, also used as a crystal calibrator for the receiver by placing the transmitter crystal in socket 87, which at the same time actuated switch 86.



Circuit diagram of Prima-1 with internal dry batteries and connections to the hand cranked generator.

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