



BP 3
Country of origin:
Polish in England

Corrections to the BP 3 section in the 'Poland' Chapter of WftW Volume 4:
- The illustration is NOT of a BP 3 but a BP 4 without its receiver section.
- The transmitter frequency of the BP 3 was 2-4MHz and 4-8MHz and NOT 2-5MHz and 5-8MHz.

DATA SUMMARY

Organisation: Polish Home Army (Armia Krajowa); SOE.
Design/Manufacturer: Polish Military Wireless Research Unit, Stanmore, England. (Polski Wojskowy Warsztat Radiowy)
Year of Introduction: 1943.
Purpose: Partisans, resistance, SOE, agents.
Receiver:
 Circuit Features: Mix/osc, IF, Det/AF, AF/BFO. (AM R/T and CW)
 Frequency Coverage: 2-5MHz and 5-8MHz.
 Intermediate Frequency: 1500kHz.
 Valves: 6K8, 6SK7, 6SQ7, 6SC7.
Transmitter:
 Circuit Features: Crystal oscillator, RF power amplifier. (CW only)
 Frequency Coverage: 2-4MHz and 4-8MHz.
 RF power output: 50W max.
 Valves: 6V6, 829.
Power Supply: 120/220V AC mains or 12 DC.
Size (cm): Height 9½, length 21, width 28. Weight: 4kg.
Accessories: Wire for aerial and earth, headphones.

This Supplement chapter is a follow up and should be read in conjunction with the 'BP 3' section in the 'Poland' chapter of WftW Volume 4.

REMARKS

The BP 3 was intended for use by partisans and resistance groups, but also by SOE and other organisations. It was manufactured in England by the Polish Wireless Research Unit in Stanmore.

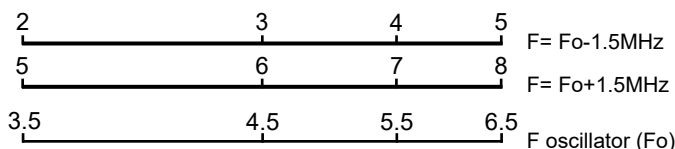
This Supplement chapter, along with Chapters 47, 48 and 61 fills a number of gaps and inaccuracies in the Polish BP series of sets described in WftW Volume 4. Added are better quality colour photos, minor corrections, and more detailed information on the differences between the versions. Interesting is a 'transmitter only' version of the BP 4 (Chapter 61) of which at least two units were encountered. For circuit diagrams, lists of components, development history of the BP series and other Polish sets see WftW Volume 4.

Differences between the Polish BP 3, BP 4 and BP 5.

The 'BP' models were based on a the design of the BP 3, having the same dimensions, construction, layout of controls, identical power arrangements and general similarity in circuit. A model can easily be recognised following the table below.

Model	Freq. range receive	Freq. range transmit	Voice
BP 3	2-5 and 5-8MHz	2-4 and 4-8MHz	No
BP 4	4-9 and 9-16MHz	4-8 and 8-16MHz	No 1)
BP 5	2-5 and 5-8MHz	2-4 and 4-8MHz	Yes 2)

1) The BP 4 receiver had two separate tuning windows.
2) The BP5 had a 4-pt socket for connecting a microphone, and a three position switch above the crystal socket.



BP 3 and BP 5 receiver frequency tuning scales of low and high band compared to oscillator frequency. The use of upper and lower mixing resulted in scales with an identical dividing of frequencies for both receiving bands. This allowed the use of a single receiver tuning window. This feature was used in most receivers of the Polish AP and BP series.

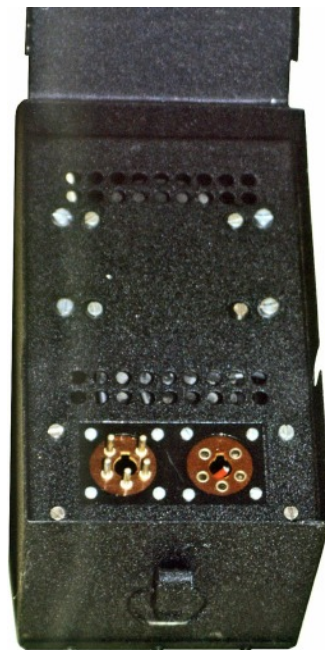
References:
- Photographs courtesy: Collection Marco Moretti, Italy, via Detlev Vreisleben, DC7KG, Germany; Mirko, S52PC, Slovenia; Erling Langemyr, LA3BI, Norway.

12V DC power arrangements for Polish BP 3, BP 4 and BP 5.

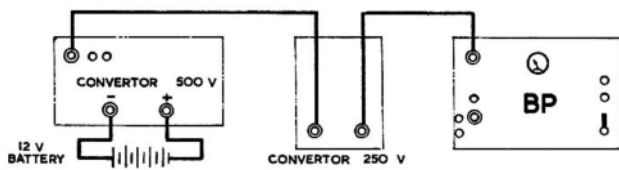
A BP 3, 4 or 5 was powered from 12V DC or 120/220V AC mains. For operation on 12V DC two different Converter Units were required: a 250V unit for the receiver and a 500V unit for the transmitter. These were connected as shown in the drawing left below.



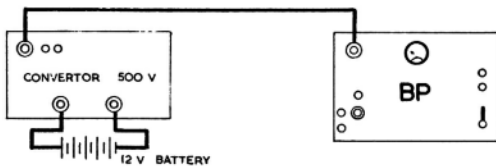
500V Converter Unit with Polish inscriptions.



250V Converter Unit.



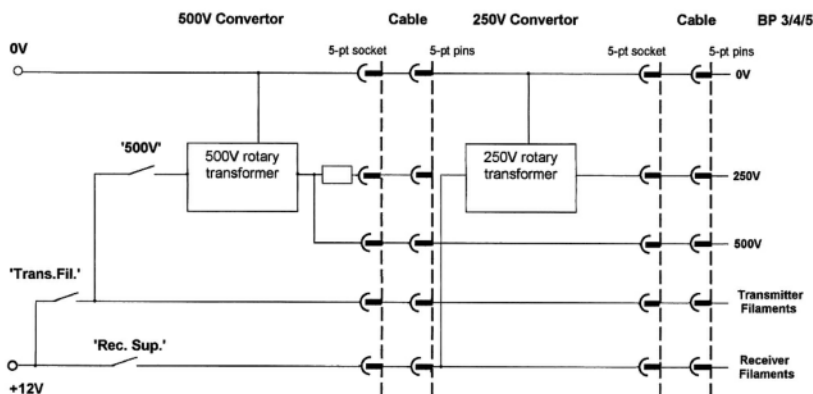
Block diagram of connecting a BP 3/4/5 to a 250V and 500V Converter Unit.



Block diagram of connecting a BP 3/4/5 to a 500V Converter Unit if a 250V unit was not available. This resulted in an extra drain on the 12V accumulator.



500V Converter Unit with English inscriptions and a slightly different construction. Note the different position of the four hex bolts compared to the illustration top left, indicating a different type of rotary converter.

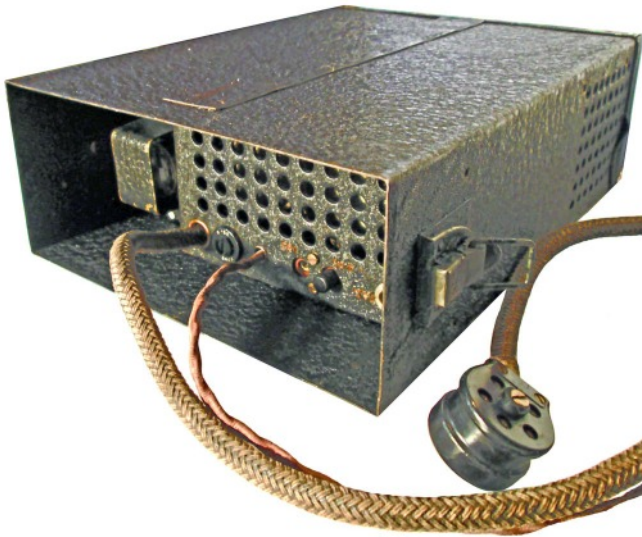


Simplified circuit diagram of connecting a BP 3/4/5 to a 250V and a 500V Converter Unit.

The 250V rotary transformer was used for the receiver and run continuously; the 500V rotary transformer was only switched on when transmitting. If the 250V Converter Unit failed, 250V HT was obtained from the 500V Converter Unit via a series resistor.

AC mains power arrangements for Polish BP 3, BP 4 and BP 5.

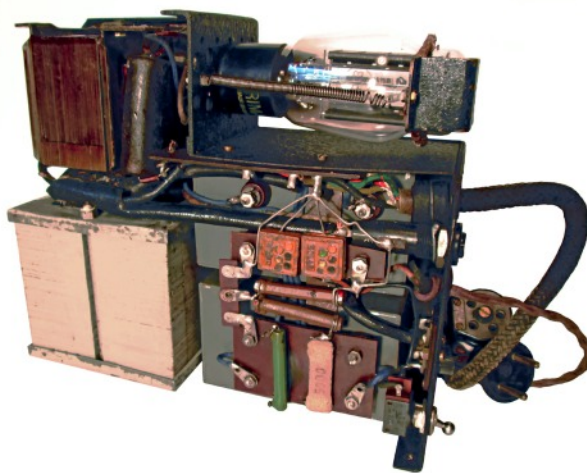
The AC mains power unit for the BP series was of a straightforward design assembled as a complete unit which slid into a transit case.



General view of BP series AC mains power unit fitted in its metal transit case with lid opened.



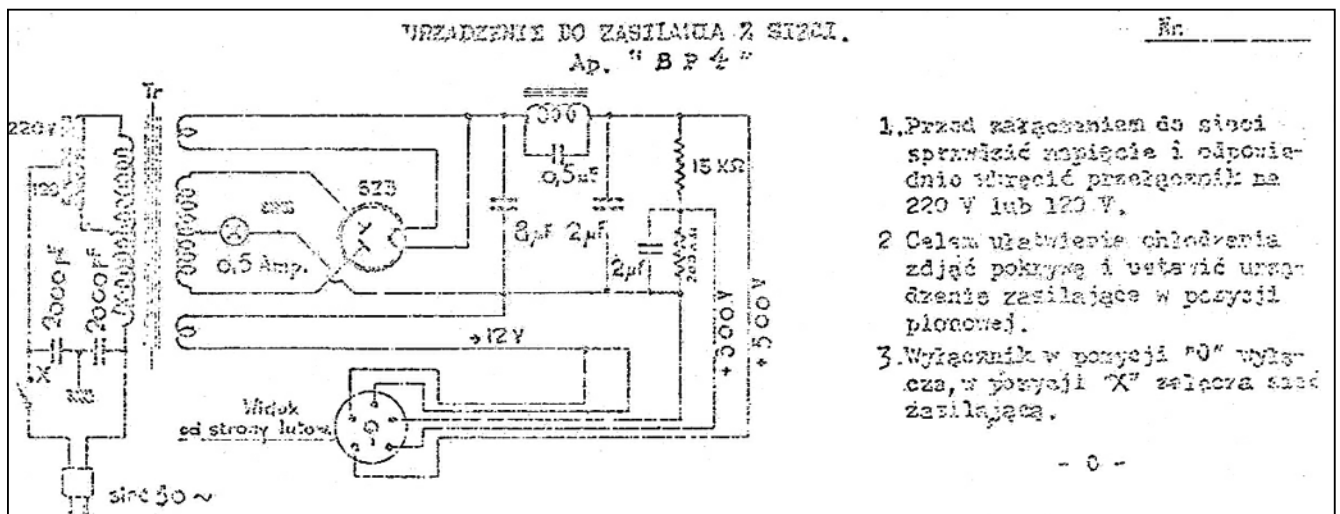
View of BP series AC mains power unit as seen from the right hand side.



View of components in opened BP series AC mains power unit.



Front panel view of BP series AC mains power unit.



Copy of original circuit diagram of BP series mains power unit with description in the Polish language.