



## Polish 60 watt transmitter Country of origin: England

### 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:** Probably late 1943-early 1944.

**Purpose:** Partisans, resistance (SOE).

#### Transmitter

**Circuit Features:** Crystal oscillator, push-pull RF power amplifier. CW only.

**Frequency Coverage:** 2-8MHz and 8-16MHz. Frequency doubling is employed in the 8-16MHz range.

**RF output:** 60W.

**Valves:** 6V6, 829, 5Z4 (2x)

**Power Supply:** 120, 220V AC mains.

**Size (cm):** Height 28, Length 21, Width 10.

**Weight:** 9.4kg.

**Accessories:** Wire for aerial and counterpoise or dipole with feeder, crystals, external Morse key.

### Remarks

The Polish '60 watt' transmitter was designed and built in Stanmore, England, in the latter part of World War 2 by the Polish Military Wireless Research Unit. It was believed to be used by resistance (SOE) and partisan groups.

The transmitter was based on the design of the Polish BP3, 4 and 5 without the receiver section, and having a built-in AC mains power supply unit. It is thought as being a more compact follow-up of the BP4 without the receiver, described in Chapter 61.

The enclosure was identical to that of the AP3 and AP4, apart from extra ventilation openings in the Polish 60W transmitter.

The circuit diagram of the 60 watt transmitter was, as far as could be traced, very close to the BP4. See the 'BP4' section in the 'Poland' chapter of WftW Volume 4.

### References:

- With thanks to Dennis Yates, UK, who took photos, scans and provided all further information for compiling this chapter.

INSTRUCTIONS FOR 60 WATT TRANSMITTER.

1. Connect the aerial and insert crystal into the socket.
2. Powerswitch put into the position "H.P." (half-power).
3. Range switches put into proper position (Proper frequency range 4-8Mc/s or 8-16 Mc/s) according to required transmitting frequency.  
Frequency 4-8 Mc/s is working straight.  
" 8-16 Mc/s is doubling.

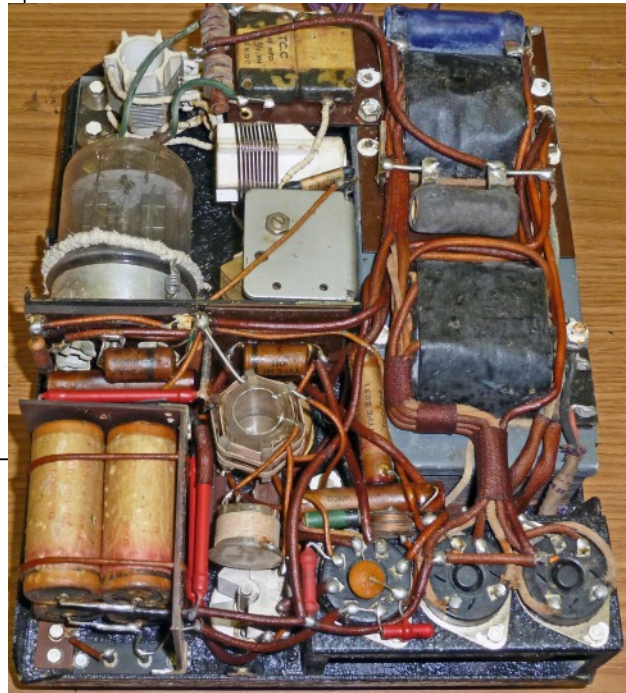
4. Press the key and tune knob "OSC" until bulb indicator gives maximum light.

Example: Crystal 5 Mc/s: If 5 Mc/s is going to be transmitted, put two switches on 4-8 Mc/s and turn the knob "OSC" (Oscylator) tuning around the position 5 until indicator shows maximum brilliance.  
If 10 Mc/s is to be transmitted on same crystal, put two switches on 8-16 range and turn the knob "OSC" (Oscylator) tuning around the position 10 until white bulb indicator shows maximum brilliance.

5. The knob "AE TAPPING" (Aerial tapping) put successively through positions 11 to 1, in every position turn the knob "AE.TUN". (Transmitter tuning) until minimum mAmp deviation is obtained. Good minimum indication on mAmp by half-power is about 200 mAmps. for doubling 150 ma.
6. By "F.P." (Full power) this indication is about 310 mAmps. If meter reads above 310 mAmps, "AE.TAPPING" is too low, high
7. Neon indicator shows resonance of aerial circuit, and its purpose is only to facilitate tuning. Reading of millimeter shows aerial load.
8. Do not press the key when changing the position "AE.TAPPING" (Aerial tapping).

Original operator's instruction sheet for the Polish 60 watt transmitter. (Left)

Chassis view of the 60 watt transmitter with LT and HT AC mains transformers (right), valves holders for the two 5Z4 HT rectifiers and 6V6 crystal oscillator (bottom right), and 829 RF power amplifier valve. (top left)



Right hand side view of the Polish 60 watt transmitter detached from its enclosure showing the push-pull connected type 829 RF power amplifier valve and associated components. (Below)

