

Kongshavn Country of origin: Norway

DATA SUMMARY

Organisation: Milorg/SOE section Norway.

Design/Manufacturer: Harry Kongshavn of the A/S Elektrisk Bureau, Oslo.

Year of production: Estimated from 1942 to 1945.

Purpose: Radio receiver principally intended for Milorg.

Receiver:

Circuit features: Regenerative detector, AF stage.

Frequency coverage: 5.4-12.5MHz. AM and CW.

Valve(s): ECH21. Other valve types which were used included EBC3, EF6, EF9, 6K7, 6J7 and 6F5.

Power Supply: 220V AC mains. The HT rectifier valve could be a TAB2, EZ2 or 6H6, depending what was available.

Size (cm): Height 4.7, Length 18, Width 10; Weight 1.5kg.

Accessories: High impedance headphones, aerial wire, mains lead.

This Supplement chapter is a follow up and should be read in conjunction with the 'Kongshavn' section in the 'Norway' chapter of WftW Volume 4 for more information.

REMARKS

Kongshavn was a small and easy to hide short wave receiver produced in secret during WW2 in Norway. It was principally intended for use by the Norwegian Milorg, as a substitute after most of the civilian broadcast receivers were confiscated by the German occupation force. The receiver was designed by Harry Kongshavn, chief of development for A/S Elektrisk Bureau in Oslo, who along with two others produced about 200 receivers.

The design was simple and straightforward, based on the fact that the choice of materials was very limited, which forced the builders to use components which became available. This resulted in a number of variants of which four were found to date, all based on the same circuit diagram. They shared the same dimensions and approximate front panel layout, but much differing in the mechanical construction and choice of valves.

The rather unique double tuning capacitor (see page 3 in this chapter), designed by Harry Kongshavn, was made clandestine in his workshop and used in any variation.

AC mains power was an obvious choice as dry batteries were impossible to obtain. The mains transformers were very small and not available at the time. Looking at the found examples, it is believed the transformers were made in the same workshop which might have been A/S Elektrisk Bureau.

References:

- Photographs, circuit diagram and detailed information courtesy Tore Moe Namsos, LA5CL, Norway.
- Articles on Kongshavneren published in 'Hallo-Hallo':
 - Tore Moe Namsos, 53-1996 and 106-2009.
 - Tor van der Lende, 136-2017.

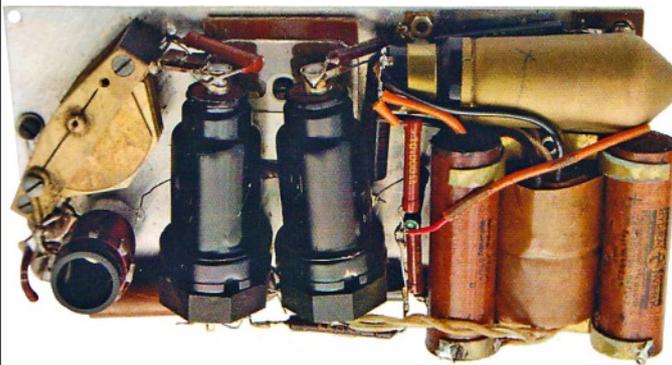


Pictured left and above is what generally believed to be one of the first produced series of Kongshavn receivers (Variation 1). Note the wooden fine tuning knob, with course tuning pointer below.

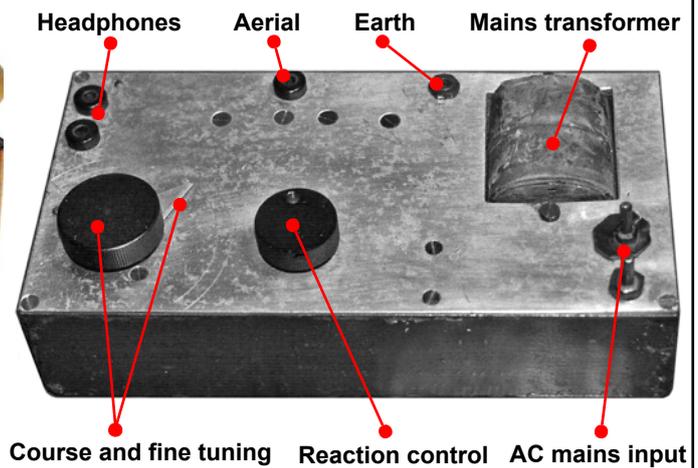


Internal view of Kongshavn variation 1. The valves were an ECH21 regenerative detector/AF amplifier and a TAB2 HT rectifier. Note the ubiquitous double tuning capacitor.

Kongshavn variation 2.



Kongshavn receiver variation 2 using a 6F5, 6J7 and TAB2 rectifier valve. The double tuning capacitor differed in construction to other variations. See the circuit diagram of this variation on page 3.



Front panel and internal view of Kongshavn variation 3. As there were no valve sockets available at the time, the valves were just wired into the circuit. Note that several components and part of the original wiring had been replaced at a much later stage.

Recently discovered Kongshavn variation 4.

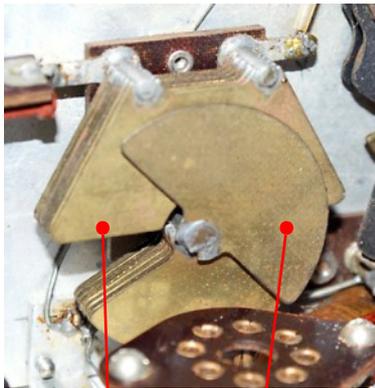


A recently found Kongshavn variation 4 employed a 6K7 and 6F5. There was no rectifier and an external +HT source should be connected to the red marked banana type socket located on the top right of the front panel.

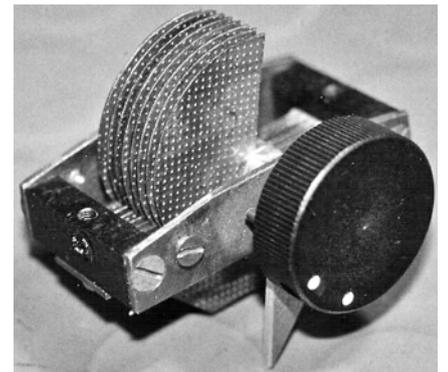


The coil block assembly appears not original, the 6.3V transformer was mounted differently, and proper valve sockets were used in this variation. This *might* lead to the believe to be a post war replica if not for an original Kongshavn double tuning capacitor was used.

Construction of the double tuning capacitor.



One of the interesting features of the Kongshavn was the variable 150pf tuning capacitor which had separate fine/course tuning controls. This was achieved by an extra rotor plate separated from the rest and fixed to a separate thin shaft controlled by a large (often wood) knob. The main (course) tuning had no knob but just a pointer.

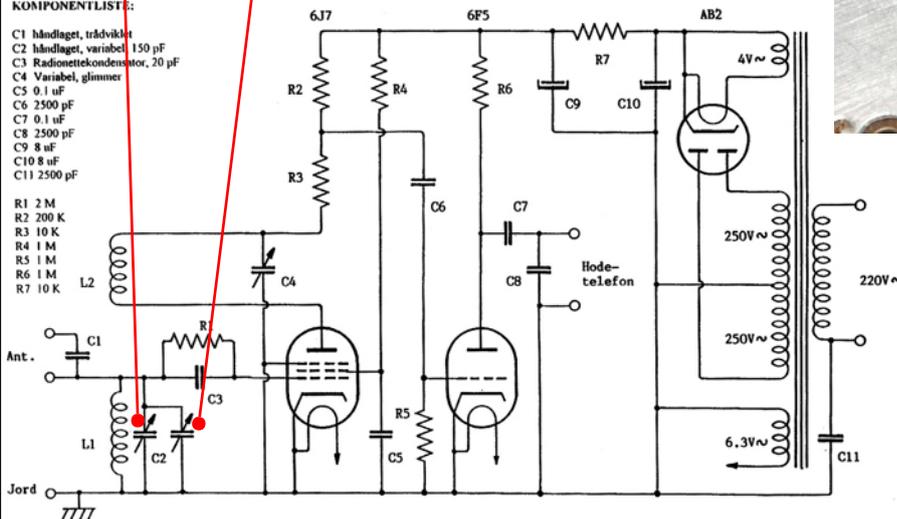


Detail views of Harry Kongshavn's double tuning capacitor.

KOMPONENTLISTE:

- C1 håndlaget, trådviklet
- C2 håndlaget, variabel 150 pF
- C3 Radionettekondensator, 20 pF
- C4 Variabel, glimmer
- C5 0.1 uF
- C6 2500 pF
- C7 0.1 uF
- C8 2500 pF
- C9 8 uF
- C10 8 uF
- C11 2500 pF

- R1 2 M
- R2 200 K
- R3 10 K
- R4 1 M
- R5 1 M
- R6 1 M
- R7 10 K



Circuit diagram of Kongshavn variation 2.