Philips DR 30

Date of issue: July 2023.

After publishing over 340 Wireless for the Warrior Volume 2 'Supplements', the amount of source material gradually dried up. Interesting but not directly related material, out of topic of the WFTW website, will be published in a new range entitled the 'Various Series'.

DR 30

Country of origin: Holland

REMARKS

DR 30 (DR, short of Draagbare Radio = Portable Radio) was a portable (man pack) transmitter-receiver developed by Philips Eindhoven, built by NSF (Nederlandsche Seintoestellen Fabriek) in Hilversum.
Not much is known of the DR 30, the only source found to date was in a 1939 Philips sales brochure. It is not believed that many DR 30s were sold. Two are currently in the Military Museum at Hämeenlinna in Finland, having serial numbers 105 and 108, probably the only two which survived. It might be speculated that these were from a trial or pre-production run, particularly when looking at the two sheets in the upper front cover plate compared to a photo printed in the 1939 sales brochure.

The DR 30 operated on shortwave and could be tuned to a single frequency between 3-5MHz. Both receiver and transmitter were tuned automatically on the same frequency. Minor deviations in the receiver tuning could be adjusted by a corrector control knob. The tuning control was coupled to the tuning scale assembly with numbers, believed to be calibrated in frequency (or wavelength?) in a curve printed on a card.

The receiver was a conventional superheterodyne with RF stage, oscillator/mixer, one IF stage, detector/BFO and AF output stage. The transmitter had two stages: A KF3 master oscillator and KL2 RF output valve. All valves were 'K' series battery types.
The mechanical construction comprised a light alloy frame with front panel on which were fitted two assemblies, with the tuning capacitor and tuning scale assembly in the centre.
The transmitter-receiver unit slid into the top compartment of the plywood and aluminium carrying case, the accessories stowed in a drawer in the centre, and batteries in the bottom. Ten aerial rod sections slid in a compartment of the bottom protective front panel.

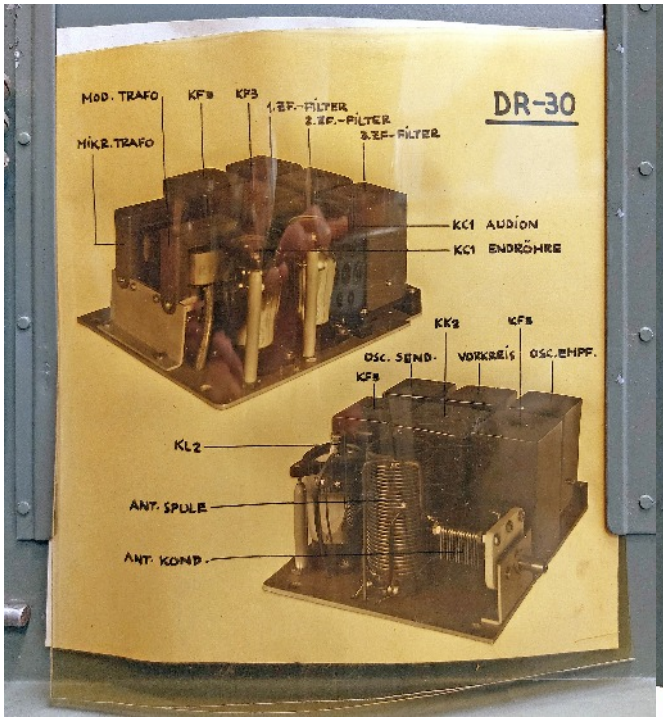
Other currently known radios in the Philips DR series were DR 24, DR 25, DR 32, DR 38, DR 42 and DR 78. Of the DR 38 (and stationary version FR 38) about 200 were built for the Dutch PTT in 1938/9.

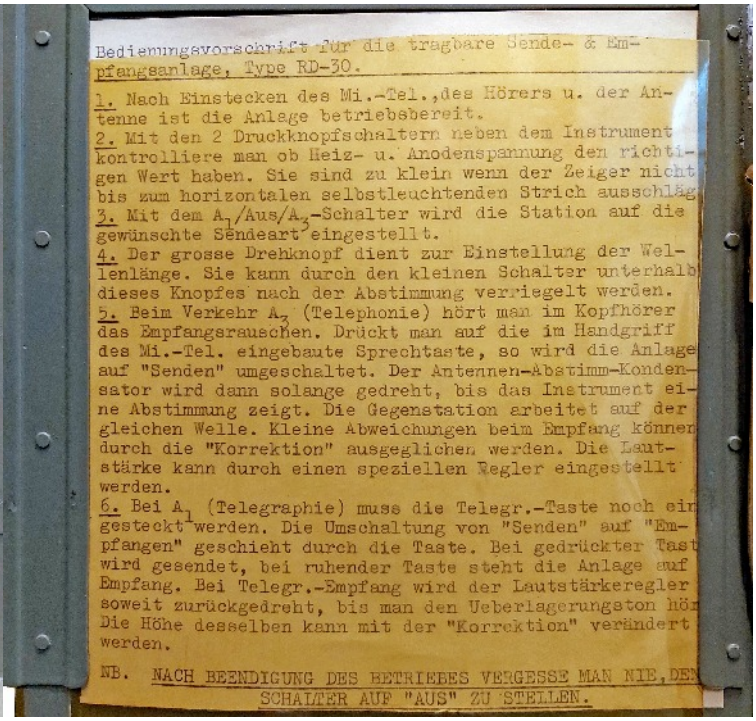
DATA SUMMARY

Organisation: Philips Eindhoven, Holland.
Manufacturer: NSF, Hilversum. Holland.
Year of Introduction: 1939.
Purpose: Portable HF transmitter-receiver.
Receiver:
Circuit features: Superheterodyne with RF stage, mixer/local oscillator, IF, Det/BFO and AF output.
Frequency coverage: 60-100M (5-3MHz).
IF: Not yet known.
Transmitter:
Circuit features: Local oscillator, RF power amplifier. 60-100M (5-3MHz); CW and AM voice.
RF output: 1W (AM voice), 2W (CW).
Valves: KF3 (4x), KC1 (2x), KK1, KL2.
Aerial: Sectional rod aerial.
Power supply: Dry batteries. 3V LT, 150V HT, -18V GB.
Accessories: Headphones, micro-telephone, Morse key, 10 rod aerial sections, HT, LT and GB batteries.

References

- I am indebted to Kari Syrjänen for attending me to the DR 30, and taking photographs of the two radios in the Military Museum.
- Philips sales brochure of communication equipment, issued 1939.
- With thanks to the Finnish sotilasradiomuseo (Military Radio Museum). Website https://putkiradiomuseo.fi/sotilasradiomuseo/
- With thanks to the Military Museum at Hämeenlinna in Finland. See their interesting website: https://museomilitaria.fi.

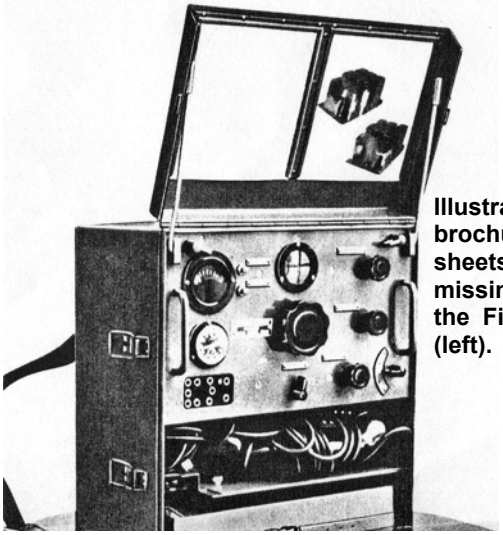




Bedienungsvorschrift für die tragbare Sende- & Empfangsanlage, Type RD-30.

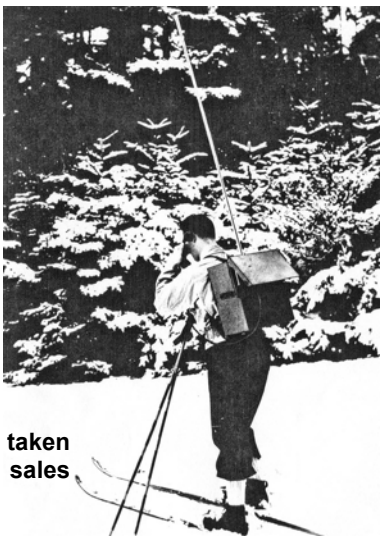
1. Nach Einstecken des Mi.-Tel.,des Hörers u. der Antenne ist die Anlage betriebsbereit.
2. Mit den 2 Druckknopfschaltern neben dem Instrument kontrolliere man ob Heiz- u. Anodenspannung den richtigen Wert haben. Sie sind zu klein wenn der Zeiger nicht bis zum horizontalen selbstleuchtenden Strich ausschlägt.
3. Mit dem A_1/Aus/A_3-Schalter wird die Station auf die gewünschte Sendeart eingestellt.
4. Der grosse Drehknopf dient zur Einstellung der Wellenlänge. Sie kann durch den kleinen Schalter unterhalb dieses Knopfes nach der Abstimmung verriegelt werden.
5. Beim Verkehr A_3 (Telephonie) hört man im Kopfhörer das Empfangsrauschen. Drückt man auf die im Handgriff des Mi.-Tel. eingebaute Sprechtaste, so wird die Anlage auf "Senden" umgeschaltet. Der Antennen-Abstimm-Kondensator wird dann solange gedreht, bis das Instrument eine Abstimmung zeigt. Die Gegenstation arbeitet auf der gleichen Welle. Kleine Abweichungen beim Empfang können durch die "Korrektion" ausgeglichen werden. Die Lautstärke kann durch einen speziellen Regler eingestellt werden.
6. Bei A_1 (Telegraphie) muss die Telegr.-Taste noch eingesteckt werden. Die Umschaltung von "Senden" auf "Empfangen" geschieht durch die Taste. Bei gedrückter Taste wird gesendet, bei ruhender Taste steht die Anlage auf Empfang. Bei Telegr.-Empfang wird der Lautstärkeregler soweit zurückgedreht, bis man den Ueberlagerungston hört. Die Höhe desselben kann mit der "Korrektion" verändert werden.

NB. NACH BEENDIGUNG DES BETRIEBES VERGESSE MAN NIE, DEN SCHALTER AUF "AUS" ZU STELLEN.

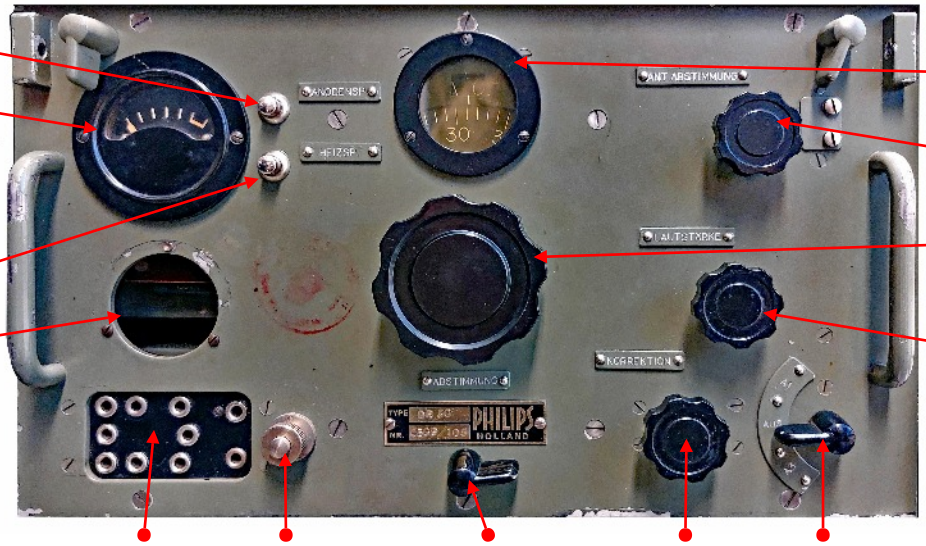


Condensed working instructions in the German language, and layout of main components and valves, printed on two sheets fitted behind a transparent celluloid overlay.

Illustration in the Philips sales brochure showing the two sheets and the clock which is missing from the two sets in the Finnish Military Museum (left).

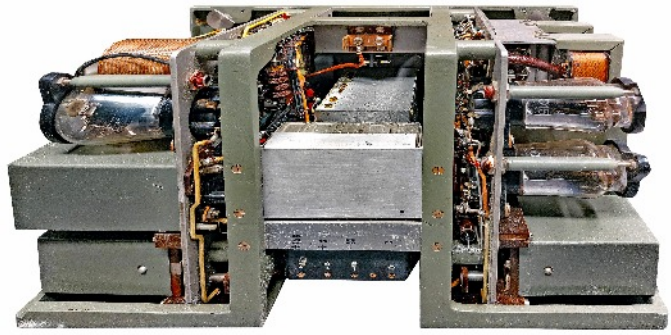


Another illustration taken from the Philips sales brochure (right).

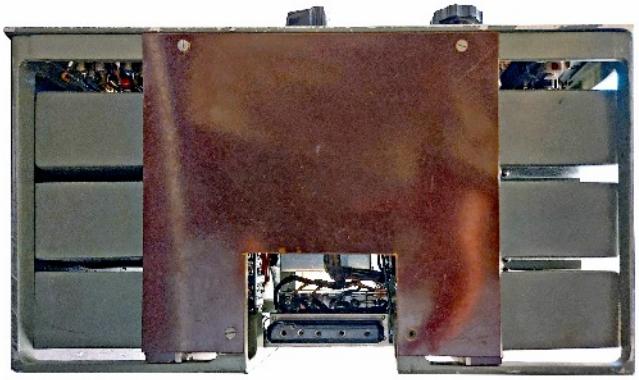


HT test button
Test meter
LT test button
Clock (missing)
Tuning scale
Aerial tuning control
Tuning control
AF gain control
Mic-tel/Morse key sockets
Earth terminal
Tuning lock
Freq. correction control
System switch

Functions of controls Philips DR 30 transceiver.

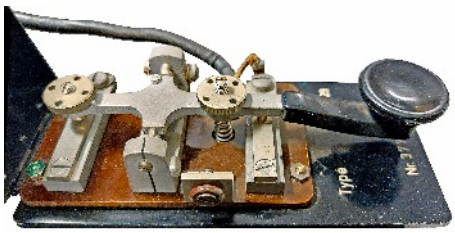


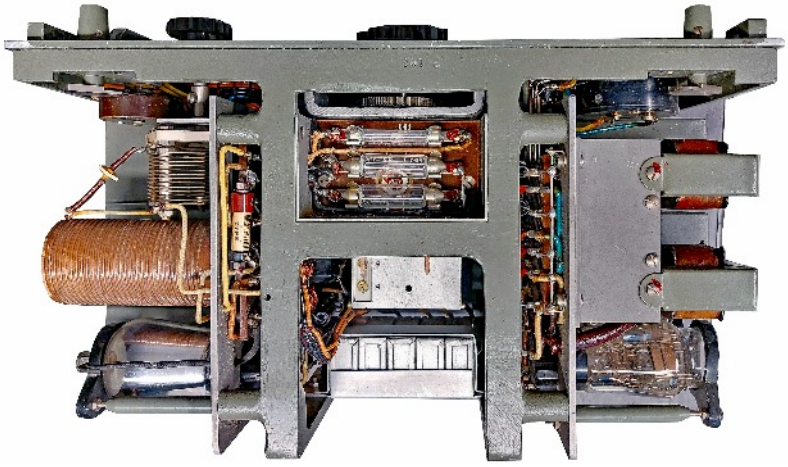
View of the backside showing the two assemblies, and in the centre the tuning condenser, fitted in a light alloy cast frame.



Bottom view showing in the lower-centre a 5-point socket corresponding with a 5-pin plug fitted in the set case, connecting to the batteries.

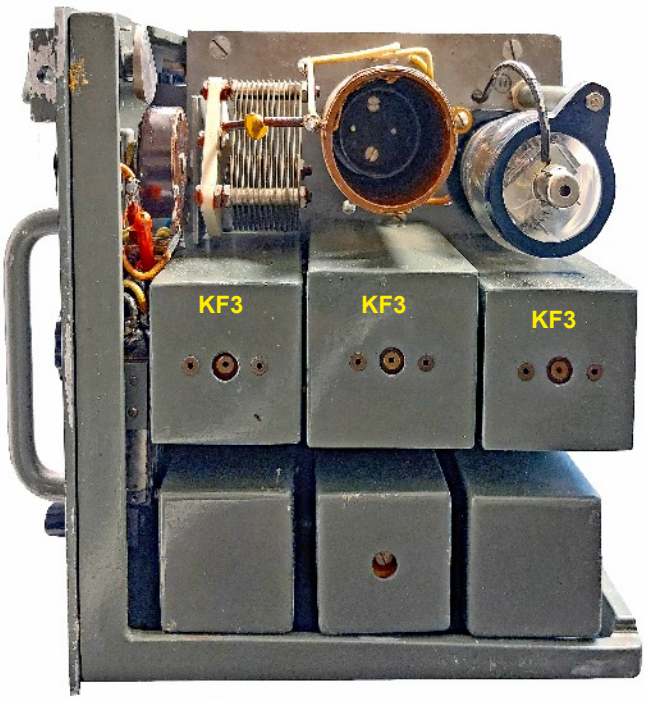
Morse key believed to be issued with the DR 30.



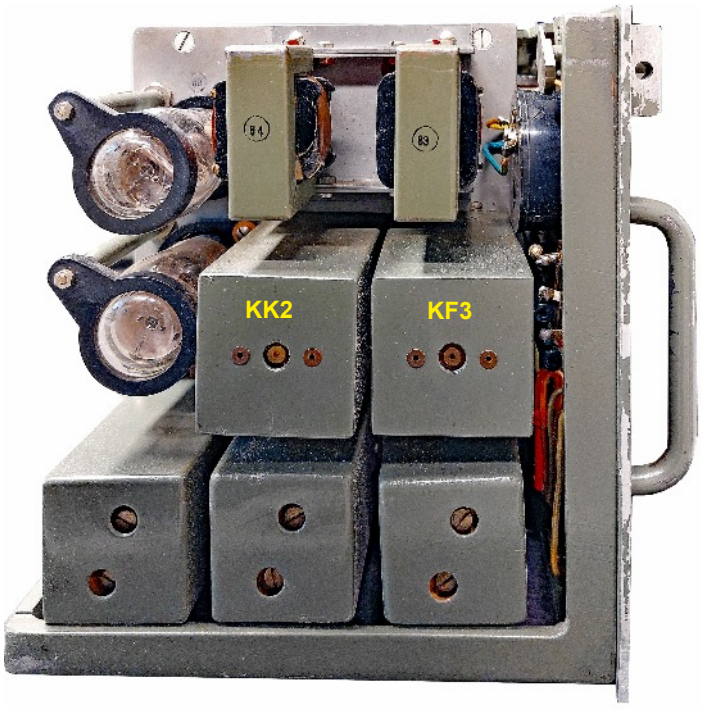


Top view of the DR 30 showing transmitter RF output stage left and fuses in a separate compartment.

Internal views of the DR 30. Most of the valves were in screened cans.



Right hand assembly with transmitter and receiver RF and mixer stages.



Left hand assembly with receiver IF, detector/bfo and AF stages.