



9 2149  
'Indicator'  
Country of origin:  
GDR

## DATA SUMMARY

**Organisation:** HV A Dept VIII/C, Berlin.

**Development/ production:** ITU/ASB

**User:** HV A

**Year of Introduction:** Prototype 1979; production of 10 units in 1982.

**Purpose:** Interception of commercial and security services radio communication.

**Frequency coverage:** 73-74.250 MHz (4m BOS, 150 153.750 MHz (Basestations of the public 'B-Netz') and 171-174 MHz (2m BOS)

**Accuracy:**  $\leq \pm 1\frac{1}{2}$  kHz.

**Channel spacing:** Selectable 20 and 25 kHz.

**Sensitivity:**  $\leq \frac{1}{2}\mu\text{V}$  at 20dB s/n.

**Scanning speed:** 30 channels per second.

**AF output:** Recorder: 50mV at 200 $\Omega$ ; earphone: 500mV at 600 $\Omega$ .

**Power Supply:** 8-15V DC

It also appeared not possible to reduce its size allowing to conceal the 'Indicator' into a commercial portable radio as originally specified. Ten receivers, based on revised specifications, constructed on wooden stackable breadboards, were produced by ITU/ASB in 1982. For operational use the modules comprising a receiver were fitted into an attache case.



The use of a commercial Bearcat 250 scanner, suggested during the discussion of specifications for the 'Indicator' was ruled out mainly because of its large size.

During trials of the 'Indicator' prototype, however, it transpired that it had the same drawback, including the high rate of interference radiation.

## Remarks

'Spezialempfänger' (Special receiver) 9 2149, covert name 'Indicator', was a VHF FM scanning receiver for reception of the 70MHz and 150/170MHz bands used by the public 'B-netz' and the BOS-Funk of the FDR (Germany West).

*The B-netz was a public automatic mobile telephone network (öbL) operational in Germany West, Austria, Holland and Luxembourg, an analogue forerunner of the GSM; BOS-Funk was a non-public mobile VHF analogue land mobile service (nömL) in Germany and Austria, (Behörden und Organisationen mit Sicherheitsaufgaben) e.g. Police, Customs, Fire brigade etc., superseded by the TETRA system.*

The receiver was developed for the Hauptverwaltung Aufklärung, HV A (Main Directorate for Reconnaissance, the foreign intelligence service of the Ministry of State Security (Stasi)), by the Institute für Technische Untersuchungen, Außenstelle Beucha (ITU/ASB), a covert firm with a development branch in Beucha.

The 'Indicator' was intended to monitor activity of radio communication during HV A operations outside the GDR (principally in Germany West) in order to be able to cancel the action in the event of an increase in radio activity.

Intended to be used outside the GDR, the 9 2149 'Indicator' scanning receiver was for this reason constructed using components exclusively produced in Western countries in order not to give away the maker's country in case it was found or captured.

With parameters specified in 1978, a functional prototype was tested in 1979. The major deficiencies were its large size and the high interference radiation which could be detected up to 100m.

## References:

- Special thanks to Detlev Vreisleben, DC7KG, Germany for providing the documents below, photograph, help and encouragement during the preparation of this chapter.
- OTS-Dokumente E009, Spezialempfänger ITU/ASB 92149-140, Suchlauf Spezialempfänger rechnergesteuert, ITU Berlin, 9-85.
- Entwicklungsauftrag 9.2149 'Indicator', HV A, Abt. VIII, Berlin, 23-8-79
- OTF (specifications) für das Gerät 'Indicator', HV A Abt. VIII/B, Berlin, 05-09-1979
- Erprobung des Gerätes 'Indicator' unter operativen Bedingungen, HV A, Abt. VIII/C, Berlin, 09-01-1982.
- Funküberwachungsempfänger 9 2149, Berlin, Feb. 1983.
- Pflichtenheft Spezialempfänger, Thema 9 2149-140, ITU/ASB, Berlin, 20-06-1985.