

33212 (KOS-11)

(GDR bugs X)

Country of origin:  
Bulgaria/GDR



### DATA SUMMARY

**Organisation:** MfS, Abt. 26, GDR.

**Year of Introduction:** Imported about 1984 in the GDR.

**Purpose:** Band V bug used for covert overhearing of conversations in a vehicle.

**Transmitter:** Crystal controlled oscillator (operating on approx. 81.15MHz), 12x multiplied, RF power amplifier, microphone amplifier; Electret microphone; dual FM modulated on a subcarrier of 24kHz.

**Frequency coverage:** One fixed channel in band V 940-980MHz. Recorded frequencies of the 33212 were 972.2MHz and 973.81MHz.

**RF output:** 10mW.

**Aerial:** ¼ wave wire.

**Subcarrier:** K1 24kHz.

**Range:** 150m: good reception; 250m with yagi aerial: good reception; 300m stationary vehicle: good reception; 300m moving vehicle: no reception; 500m stationary vehicle with engine off and carefully aligned yagi aerial reception possible. (Source: Kennblatt KOS-11).

**Power Supply:** 12V (8-15V) at 40mA taken from vehicle accumulator.

**Dimensions (cm):** Height 2, Length 18, Width 2. (Estimated from the photos in this chapter)

### REMARKS

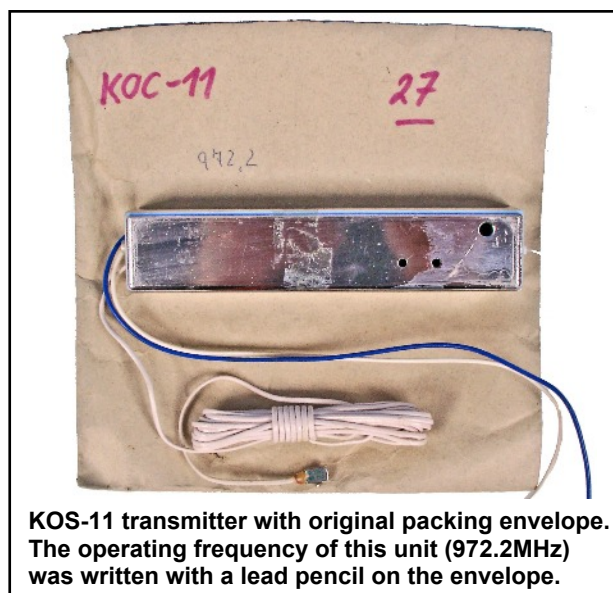
The 33212 or KOS-11 (KOC 11 in Cyrillic) was a 3<sup>rd</sup> generation miniature band V UHF FM bug, developed and produced in Bulgaria, exported to the GDR for covert installation in vehicles. It was fully transistorised and crystal controlled. A 81.15MHz \* crystal controlled oscillator was multiplied 12x and amplified. The aerial was a ¼ wave wire. Lack of selectivity in the multiplier stages resulted in radiated carriers on 242, 322, 406, 486, 566, 649, 741, 811, 891MHz. Apart from the lower three carriers which could be ignored, all other frequencies were only 5dB below the main carrier of 973MHz. Speech was modulated on a 24kHz subcarrier, a system known as dual FM. The 31215 (chapter 126) and 31225 (chapter 131) with an additional demodulator unit (e.g. 31140-11) were normally used for reception of band V bugs

*\*Noted is the use of other crystal frequencies.*

### References:

- With thanks to Detlev Vreisleben, DC7KG, Germany for taking excellent photographs and scans, and providing further information of the KOS-11.
- Kennblatt (Data sheet) KOS-11. VVS-MfS o035-625/84. Oct. 1984.

Printed circuit boards of the KOS-11 as seen from the components side: AF board left and RF board right. The two boards were housed in a stable die-cast box which was closed with a metal lid with openings for alignment.



KOS-11 transmitter with original packing envelope. The operating frequency of this unit (972.2MHz) was written with a lead pencil on the envelope.

