



TF-B tx (2B) Telephone 3

33014

(GDR line bugs VIII)

Country of origin: GDR

(To be read in conjunction with Chapter 163.)

DATA SUMMARY

Organisation: MfS, Abt. 26, GDR.

Design/manufacture: MfS, OTS, Abt. 33.

Year of Introduction: 1980s.

Purpose: Miniature line based bug for use over a standard subscriber telephone line. Fitted in a 10mm metal tube.

FM carrier frequencies: 24kHz, 40kHz, 104kHz; $\pm 1/2$ kHz.

Technical details: See Chapter 168.

Microphone: e.g. Knowles type BT 1751.

REMARKS

TF-B tx (2B) with covert number 33014 was a sub-miniature line based bug, fitted in a 10mm metal tube. It used a standard subscriber telephone line as part of a transmission medium to an Operational Support Point.

When this chapter was compiled no further technical details or a circuit diagram of the 33014 was available. It was functionally similar to the other TF-B tx (2B) bugs described in chapters 168 and 169, using more advanced technologies to achieve a further miniaturisation, catalogued under design variation 5. Noted were two variations: with integrated microphone and external microphone.



Top view of circuit board 33014.



Underside circuit board 33014 showing a thick film module.



The thin steel tube embodying the 33014 bug was usually fitted in a hole drilled in the wall from a neighbouring apartment. An original type of drill used for boring through wood is shown below.



There were, as far as could be traced, five different variations in the design of the TF-B tx (2) bugs, functionally similar but built with different components, used for specific purposes.

Variation 1 [in TF-B tx (2A) and TF-B tx (2C)] used a HEF 4046 PLL;

Variation 2 [in TF-B tx (2B)] used a CD 4046A PLL;

Variation 3 [in TF-B tx (2D)] used a VCO 30 PLL.

Variation 4 [in TF-B tx (2A)] OSA version with unknown components.

Variation 5 [in TF-B tx (2B)] 33014 with unknown thick film chip.

Apart from a different type PLL, there were numerous changes in the circuits, required for each application, e.g. input circuit, power requirement, FM carrier frequency and remote on-off switching.

Currently known covert numbers of TF-B tx (2B) 33014.

33014-101/102/103* TF-B tx. Transmitter with microphone.

33014-111/112/113* TF-B tx. Transmitter only.

* 3 different channels.

References:

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