

TF-B tx (2A)
 AC Mains bugs 2
 33603-140
 (GDR line bugs IV)
 Country of origin: GDR

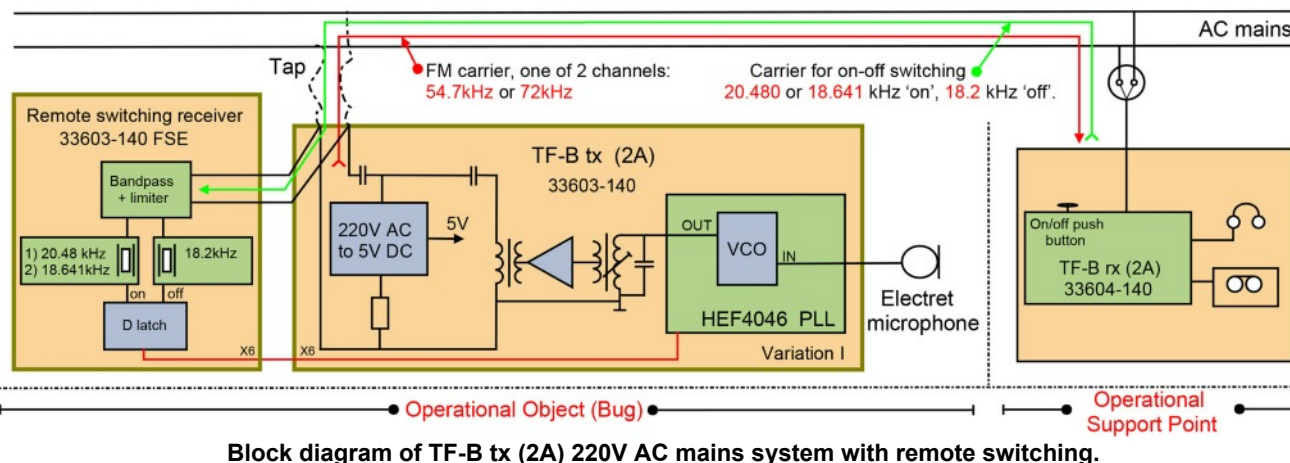
(To be read in conjunction with Chapter 163.)

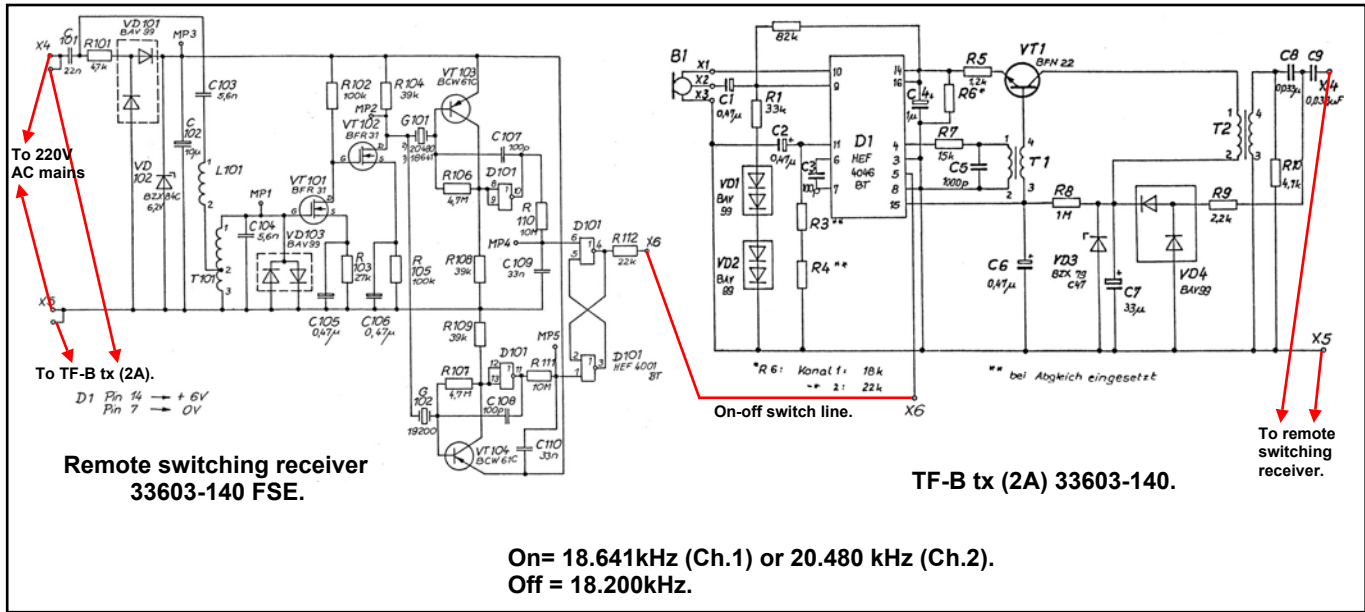
DATA SUMMARY

Organisation: MfS, Abt. 26.
Design/manufacturer: MfS, OTS, Abt. 33.
Year of Introduction: 1983.
Purpose: Covert room overhearing using the existing AC mains wiring for routing the superposed output of a TF-B tx (2A) bug at an Operational Object to an Operational Support Point. This was a stand alone system with local recording and remote on/off switching.
FM carrier frequencies: Ch.1 54.7kHz, Ch.2 72kHz; $\pm 1/2$ kHz.
Carrier frequency remote switching: 'On' Ch.1 20.480kHz or Ch.2 18.641kHz; 'Off': 18.2kHz.
Modulation frequency deviation F3: Max. ± 2.8 kHz.
Frequency response: 0.3-3.5kHz.
Output level: 400mV @ 15 Ω .
Associated receiver: 33604-140.
Range: Limited to local 220V AC mains group.
Power supply: Derived from 220V AC mains.
Size (mm): Height 8, length 40mm, width 13mm.
Microphone: e.g. Knowles type BT 1751 or BT 1759.

REMARKS

220 V AC mains (phase/neutral), in a building or apartment complex was used as transmission medium between a concealed bug (Operational Object) and an Operational Support Point. Known as 'System 33603-140', differing from the system described in the previous chapter, it comprised TF-B tx (2A) bug 33603-140 with Remote switching receiver 33603-140 FSE (FSE= *Fernschaltung Empfänger*), and TF-B rx 33604-140. The latter had a push button for activating and switching on-off the TF-B (2A) tx. The range of this system was limited to the local 220V AC mains group provided the same phase was used. The TF-B tx (2A) bug comprised a PLL chip which generated a carrier, FM modulated by the microphone, superposed on the 220V AC mains. This carrier was 54.7kHz or 72kHz. Two different bugs in the same building could be used simultaneously on the same 220V AC mains group provided different channels were selected. System 33603-140 was principally stand alone, and exclusively used in an OG (German: *Operations Gebiet* = Operational Area - usually W Germany) with no line connection to the CEKO central recording. Recording was consequently done at or near its Operational Support Point. As a measure of deception all components were of Western production in case the bug, or other units of the 33603-140 system, were discovered.





Circuit diagrams and connections system for 33603-140 (Transmit side only.)

Currently known covert numbers related to this variation:

- 33603-140 TF-B tx (2A) Transmitter.
- 33603-140 FSE TF-B Remote switching receiver.
- 33604-140 TF-B rx (2A) Receiver.

References:

- With many thanks to Detlev Vreisleben, DC7KG, Germany for taking excellent photographs and scans, and providing all the technical and historical information for this chapter.
- Various MfS documents via Detlev Vreisleben.