



Angstrom OH (Variation 1)

Angstrom
Country of origin:
Russia

An overview of all currently known Russian covert VHF FM radios is provided in Appendix 3.

DATA SUMMARY

Organisation: KGB.
Design/Manufacturer: Angstrom factory, Zelenograd.
Year of Introduction: Mid 1970s.
Purpose: Security, special forces, surveillance.
Technical features: FM speech, speech inverter (ref. frequency 3706Hz), preamble squelch tone 1853Hz @ 250mS.
Frequency range: 150MHz and 170MHz band, up to 8 channels.
RF output: 0.5W
Power Supply: Rechargeable 7V battery (7D-0.35) attached in a compartment at the back of the radio.
Size (cm): Height 19.7, length 6.6, width 2.5.
Weight: 750 g. Cast aluminium case.
Accessories: Hand speaker/microphone, flex aerial, covert operations ptt switch with separate earphone, microphone and covert speaker-microphone, battery charger.

REMARKS

Angstrom (Russian = Ангстрем; in English Angstrom, a unit of length), was a hand held or body worn fully transistorised VHF FM radio. It was used by KGB security organisations and special forces. Two variations of the radio were known to be produced: Angstrom OH, a 'plain' model (Variation 1) which had a built in speaker and microphone; Angstrom CH (Variation 2) intended for covert operations, was flat, issued with different external remote controls ranging from a hand speaker/microphone, to a remote control with separate miniature microphone, earphone and vibrator for covert operations. Both variations could have had up to 8 channels. Noted are 150MHz and 170MHz band models. Considering the components it appears that the Angstrom was built around a couple of fully sealed modules, used in both variations. Channel and volume control was by two rotary switches: in Variation 1 mounted at the back, and in Variation 2 on top of the radio near the aerial and remote control socket. Noted is Angstrom IT, which was apparently similar to Angstrom CH.

Channel numbers

The apparently cryptic band and channel numbers of the Angstrom and e.g Alycha was basically simple. Remove the C, -, /, add a point before the last three digits, and add a 0 if required. Note 25kHz channel spacing.
 Channel C17-19/25 is 171.925MHz.
 Channel C17-8/75 is 170.875MHz.
 Channel C17-21/25 is 172.125MHz.
 Channel C15-10/25 is 151.025MHz.
 At the time of writing, information on channel numbers in the C9 range e.g. used in the Kama, Acacia and Ataka, had not been found.

Back side view Angstrom CH (Variation 2) with associated hand speaker/microphone.



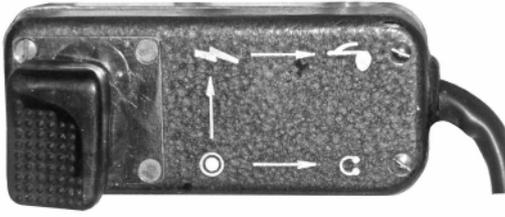
Back view Angstrom OH (Variation 1). Note battery compartment and controls at the top of the back panel.



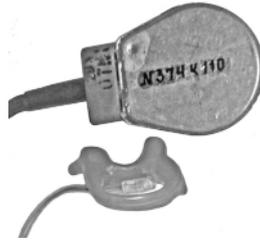
References:

- The photos were derived from Internet sources of which confirmation of the source was not available at the time when this chapter was published.
- www.radioscanner.ru

Covert remote control items.



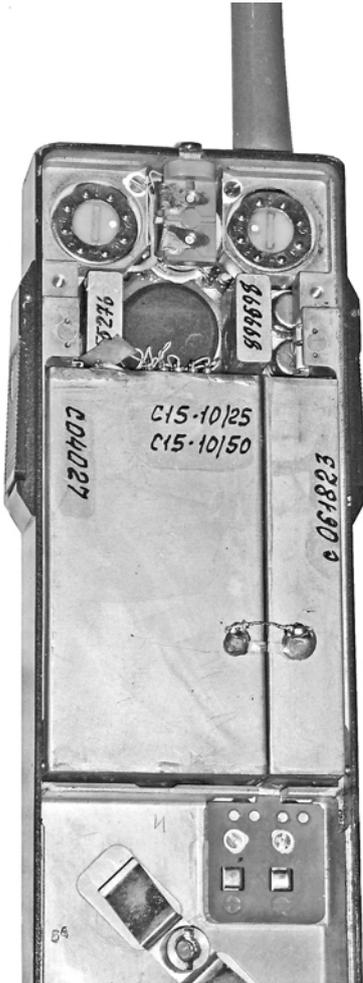
Remote control unit for Angstrom CH. Note its similarity to remote control units used with Neva, Kama, Anker and Alycha.



Vibrator unit (top) and earphone (below).



Covert speaker and microphone.



Internal view of Angstrom OH. Note the two sealed modules.



Internal view of top section Angstrom OH showing the two controls and earphone socket.



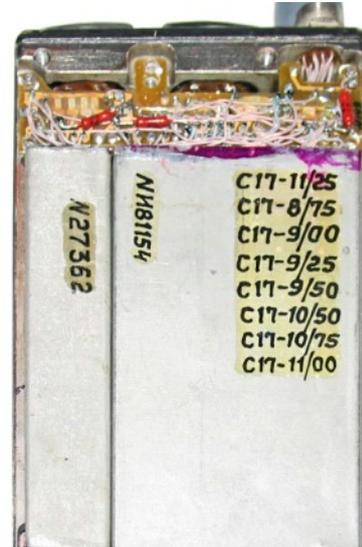
Internal view of top section Angstrom CH, showing controls, aerial socket and remote control socket.



Aerial adapter for the Angstrom connecting the radio to e.g. a vehicle aerial.



The frequency band of the flex aerial was engraved at the bottom.



Internal view of Angstrom CH

Batteries and charging



Battery compartment with serial and type number plate showing channel numbers.



7 volt rechargeable Battery 7D-0.35

Battery charger ZU1 for 10 batteries type 7D-0.35 and 7D-0.26.

