ALTRON
DEVELOPMENT AND PRODUCTION

AKOR-3

Automated radio emission source and bug detection system

System features:

- Checking and monitoring of premises, electric wired networks, telephone lines and office equipment for presence of eavesdropping devices, video cameras and infrared transmitters;
- Detection of information leakage by means of radio transmission (radio broadcast, GSM, UMTS, CDMA, DECT, NMT cellular phones, Bluetooth, Wi-Fi, WiMAX and other communications standards).

Functional capabilities and technical characteristics:

1. Automatic detection of radio emission from eavesdropping devices of any type.
2. Radio emission detection from hidden video cameras.
3. Monitoring of any wire lines for presence of outside voltage variations.
4. Detection of hidden microphones in wired lines or the devices with microphone effect.
5. Diverse receiving, synchronous levels comparing for the signals on outputs from 2 to 4 (and more) antennas.
6. Automatic identification by means of energetic correlation of eavesdropping devices with any kind of modulation and information coding (sources with WFM, NFM, AM, with analog scrambling, with delta-modulation, digital, noise-type).
7. Automatic identification of eavesdropping devices by means of acoustic correlation (sources with WFM, NFM, AM, with analog scrambling).
8. Detection during radio monitoring of signals from the eavesdropping devices working with pseudorandom change of working frequency and with temporary accumulation of the information in time and its fast transmission.
9. Detection of external emission sources in the electric wire lines.
10. Detection of presence for the eavesdropping devices masked in existing VHFs, FM-radio stations, television signals, communication systems (GSM, CDMA, etc) base stations.
11. Detection of the eavesdropping devices adapted for air radio conditions of securable object.
12. High resolution frequency and 3D spectrum real-time signal analysis in coordinates of time, frequency, amplitude.
13. Detailed spectral analysis of detected signals (resolution up to 1 Hz), which allow to recognize eavesdropping devices with complex modulation types (for example, masked for GSM mobile phone)
14. Localization of the eavesdropping devices in the premise:
    I. Triangular method of acoustic location (sources with WFM, NFM, AM, and the frequency scrambling) in three dimensional spaces;
    II. Field strength pattern method allowing localization of eavesdropping devices with any kind of modulation and signal coding, and also for the eavesdropping devices which are handing over the information on the electric system and telephone lines;
    III. Method of automatic comparing of signal levels on 4 miniature antennas;
    IV. Using Loop antenna to locate of eavesdropping devices connected to the wired and telephone lines.
15. Comparing detected signals with reference air panorama and fast search for newly revealed sources.
16. Database of radio emission sources with possibility of automatic signals information adding.
17. Simultaneous remote monitoring of several premises – up to 3 premises in base system configuration.
18. Software includes “Radio Emission Sources search Wizard” with simple and user friendly interface.

Range of working frequencies (with LF-adapter and HF converter)	10 Hz – 14 GHz
Analysis speed (MHz per second) not less	1000
Frequency resolution in the fast scanning mode, kHz	4
Input sensitivity in the fast scanning mode, not more than, μV	1-2
Dynamic measurement range (band 120 kHz), not less, dB	80
Weight (without computer), mobile case, kg	5
Overall dimensions (without computer), mobile case, mm	350x240x115
Power supply, Volts	90-240 or +12

Constructively the system is manufactured in the aluminum box situated in the shock-resistant case which allows stationary or mobile usage, including car usage.

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