



WISE EYE

Integrated Security Solutions

WE ST 007

Electromagnetic field Detector



The ST 007 EMF (electromagnetic field) Detector is designed to detect and locate the sources of electromagnetic radiation from devices intended for the unauthorized obtaining of information (eavesdropping devices), such as:

- radio microphones;
- telephone radio transmitters;
- radio-stethoscopes;
- hidden video cameras equipped with a radio channel for transmitting information;
- systems of special high-frequency radiation in the radio-frequency range;
- systems for transmitting image from computer monitors using a radio channel;
- radio beacons for tracking moving objects (people, vehicles, freights, etc.);
- unauthorized radio stations, wireless phones, and phones with wireless extensions;
- unauthorized use of GSM and DECT cellular phones;
- unauthorized use of Bluetooth and 802.11 (WLAN, WiFi) devices with a frequency range of 2.4 GHz.

The ST 007 utilizes the principles of wideband detection of electric fields. The ST 007 operates in three main modes:

- Search;**
- Monitoring;**
- Log view.**

Search Mode

This mode is intended for detecting sources of electromagnetic radiation.

When in Search mode, the ST 007 receives radio signals in the range of 50 to 2,500 MHz, detects them, and outputs them to the built-in display and as an audio signal to the earphones and the built-in speaker. The level of the signal in comparison to the threshold level is indicated on two 32-segment level meters on the display.

The difference between the two meters is as follows: the top meter indicates the average amplitude of the detected signal; the bottom meter shows the signal's peak values. AM and FM signals will prevail in the top meter; signals resembling pulse types (such as DECT or GSM) will be displayed on the bottom meter. When the ST 007 detects mixed signals on its input (TV signal, for example), it will display them on both bars.

The ST 007 can measure current frequency values of the radio signal and determine its most stable value (for signals with a constant carrier frequency).

The ST 007 also displays the detection of GSM, DECT, Bluetooth, and 802.11 (WLAN, WiFi) signals. In order to attenuate the interference of powerful radio transmitters of up to 300 MHz (TV transmitters from Channel 1 to Channel 10, FM radio stations), a low-pass filter is used.

If you connect a scanning receiver with a special communications port to the ST 007, its reception frequency can be set to match that of the reception signal of the ST 007.

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Monitoring Mode

The Monitoring mode is intended for detecting sources of electromagnetic radiation and storing data in NVRAM. The maximum number of events that can be stored in NVRAM is 4,096. The events can be viewed when the detector is in the Log View mode. The Monitoring mode has an extended range of alarm signals, which can be triggered if the signal passes a certain level or frequency threshold, or if a certain type of signal is detected (GSM, DECT, Bluetooth, 802.11).

It is possible for the user to schedule the ST 007 to turn on and off.

This mode has two basic operations:

User controlled operation

The ST 007 is placed so that it is visible to the user. This is useful for detecting devices for the unauthorized obtaining of information among the visitors of an office, for example.

Autonomous operation

The ST 007 is placed in an area where the use of eavesdropping devices is suspected, and the electromagnetic environment will be monitored during a pre-programmed period without user interference.

Protocol View mode

The Protocol View mode is intended for viewing the log of events stored in the ST 007's NVRAM during Monitoring.

Events can be sorted by:

- time;
- duration;
- signal level;
- frequency value.

The results of are indicated a four-line LCD with a resolution of 97 x 36 pixels as digits and text, as well as additional pictograms at the top of the display. The ST 007 is controlled from a six-button thin film keypad Sound output is available via headphones or speaker. On the screen, help can be displayed, available in both Russian and English.

ST 007 can be powered from either 4 type AA batteries, or a power supply (included).

For software upgrades (new versions, additional features), connect ST 007 via Serial Port to your PC, and visit the manufacturer's site; the instrument will be reprogrammed automatically.

Specifications:

Frequency range	50-2500 MHz
Low-pass filter cutoff frequency	400 MHz
Input sensitivity:	
100-1200MHz	<0.25 mV
1200-2000MHz	<0.5 mV
Frequency meter sensitivity	<15 mV
Frequency measurement error	±0.1 %
Display dynamic range	60 dB
Power supply	internal AAA battery 1.5 V; external power supply 4 V
Average current consumption	<60 mA
Dimensions (without antenna)	85x53x19 mm
Weight (without battery)	0.1 kg

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