ARGUS SOT
Sicherheit- und Ortungstechnik
A company of the ARGUS Security Group

SELENA Electronics

TSCM equipment

Technical surveillance counter measures equipment

Counter terrorism facilities

SELENA ELECTRONICS: LAWENFORCEMENTAND COUNTER-TERRORISM SOLUTIONS

SELENA ELECTRONICS is the supplier of the equipment and solutions uniting more than 20 years of R&D and manufacturing in the field of electronic surveillance, TSCM and counter-terrorism.

The combination of internationally patented technologies, groundbreaking innovations and synergy with security professionals enables us to respond to the market with cutting edge solutions for information threats prevention, lawful interception, criminal investigation, public safety and internal security.

Our products are usually employed by Law enforcement agencies including:

- Police departments
- Security organizations
- Prison Authorities
- Intelligence agencies
- Homeland security
- Military applications
- Audio forensic laboratories
- Loss Prevention professionals as weil as
- Private Security companies.

We are focused on increasing our customers' overall efficiency and effectiveness by meeting their highest expectations for every stage of tactical or day-to-day operations in **three main areas of activity:**

TSCM - Technical Surveillance Counter Measures

The TSCM equipment product range allows carrying the full complex of operations in order to protect the information against illicit threats and includes: Non-linear junction detectors (NLJD), Multipurpose detection devices, Camera detectors, Radio monitoring facilities and systems of active protection: Voice recorder jammers and Noise generators.

Covert surveillance

We provide investigators with complete, flexible, autonomous and reliable solutions which include analog and digital transmitters and receivers, COFDM surveillance systems, covert professional audio/video recorders, audio processing systems for sound cleaning and speech extraction. All surveillance products can be camouflaged or concealed in various objects in accordance with customer request.

Counter-terrorism

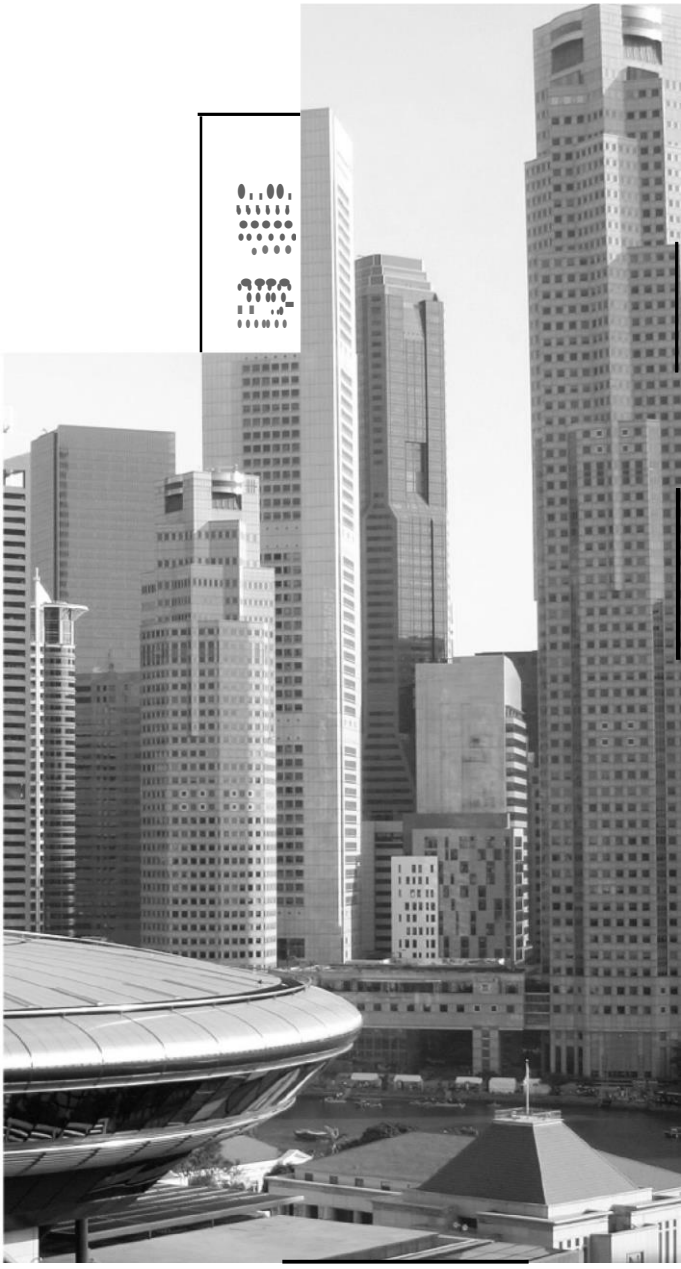
Our counter-terrorism equipment designed especially for critical application requiring detection and localization of improvised explosive devices (IED} in combat or comprehensive urban conditions, optical and optoelectronic round the clock surveillance, optic and anti-sniper detection for investigation, military operation or VIP protection.

Jamming solutions

Our experience in designing and customizing jamming system based on customers' needs allows us to provide equipment for protection against:

- Eavesdropping
- Illegal digital communications
- Micro and mini UAV
- RCIED for VIPs, military personal and convoys

The complexity of jammers varies from simple 0.5W CW to more than 1kW smart responsive solutions.



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Data leakage channel detection

Radio frequency detectors

SpectrumScan High speed spectrum analyzer

KASSANDRA Radio monitoring system

KASSANDRA Radio monitoring software

KASSANDRA Wi-Fi. Wi-Fi monitoring and analysis system

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NR-D Electromagnetic near-field indicator

ST 167WR Search receiver

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Wireline analyzer

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Optoelectronic hidden cameras detectors

Inspection equipment

SHB-DVR inspection video system

VE-6-2 video endoscope

RASKAN 5-7000 holographic subsurface radar

SMD-300M Selective pulse metal detector

SpectrumScan
High speed spectrum analyzer

FEATURES:

- Ultrahigh scanning speed of up to 50 GHz/sec
- Instant detection of unauthorized transmitters
- Spectrum analyzer, Monitoring and Search modes
- Set of internal and external directional antennas
- Optional sensors for low-frequency range
- Portable, light and user friendly
- Autonomous operational time up to 4 hours

The SpectrumScan is an ultrahigh-speed portable software defined radio monitoring solution with built-in antennas that was designed for tactical search of unauthorized transmitters indoors or in open areas.

The extremely high scanning speed of up to 50 GHz/second with 10 kHz resolution makes it easy to detect and register ultra-short or frequency-hopping as well as accumulate signals in a wide range in order to detect ultra- bandwidth signals. Built-in digital receiver performs all main monitoring tasks as signal filtering and demodulation, if it corresponds to required standard type. The software allows carrying out statistical processing of signals for previous monitoring period, classifying and detecting new signals compared to accumulated averaged panorama.

PRODUCT SPECIFICATIONS

Frequency range	9 kHz- 19GHz
Scanning speed with 10 kHz res.	30 - 50 GHz/second
Intermediate frequency	140 MHz
Intermediate frequency range	24 MHz
Digital filters	Software defined
Demodulators	Software defined
Noise figure	Not more then 12 dB
Minimum frequency hopping	1 kHz
Neighboring signal rejection	Not worse than 90 dB
Image rejection	Not less than 70 dB
Spurious-free dynamic range	Typ. 80 dB
Phase noise of heterodyne at 10kHz	Not more than -80 dBc/Hz
Long-term heterodyne instability	Not worse than 10 ppm
Maximum level of input HF signal	Not more than 20 dBm
Level of spurious products	-105 dB
Displayed average noise level	- 115 dB
Input impedance	50 Ohm
Input attenuator with 1 dB step	0 – 30 dB
Operation temperature range	-20…..+60 C°
Power supply	AC 220 V
Operating time on Li-Ion battery	Not less than 4 hrs
Dimensions	350x155x110 mm
Weight	4,2 kg

MULTIPURPOSE APPLICATION

The software allows using the device as spectrum analyzer, radio monitoring or signal localization device. It also provides the analysis of spectral characteristics and measurements without stopping the monitoring process.

NETWORK MONITORING SYSTEM

The SpectrumScan can be remotely controlled via Ethernet or USB3.0 as well as integrated into radio monitoring network of same devices or purchased form third-party.

DESIGN FOR ANY TYPES OF OPERATIONS

The analyzer supplied in different design, depending on customers' application. The available designs are:

- Back pack or brief case for covert operations with tablet PC to control the device via user-friendly interface directly from a screen
- Standalone or installed into Pelican case with a display and built-in battery
- Small portable solution to be used with tablet PC.

REACTIVE JAMMING

The SpectrumScan can operate in connection with IS210 programmable jammer in order to automatically suppress the frequency appeared in controlled area. The whole system is supplied in two casual bags and controlled via tablet PC for covert operations or be installed inside the building for networking monitoring and reactive jamming.

IS210 is already implemented within governmental authorities, national security, defense and low enforcement agencies, banks, where it is necessary to prevent the leakage of secret and confidential information or negotiations.

IS210R REACTIVE JAMMER	
Jamming standards	CDMA, GSM, UMTS, LTE, WiFi and etc.
Operating frequency range	20-6000 MHz*
Jamming channels quantity	4 or 8
Channel maximum width	125 MHz
Maximum jamming band spectrum width	125 MHz
Dimensions (4ch system without antennas)	195x105x80 mm

For more information about IS210 Programmable jammer refer to page 34.

KASSANDRA
Radio monitoring system

FEATURES:

- Extended operating frequency range of up to 21000MHz. Ability of providing radio monitoring without VHF converters.
- Maximum scanning rate is over 14000 MHz/sec within 20 and 40 kHz monitoring bandpass; dynamic range over 130 dB without attenuation.
- The system does not employ a spectrum converter, only high-quality tuners in order to avoid own false combinational signals.
- Digital communication standards classification and analysis.
- Identification and analysis of DECT, TETRA, GSM, 3G(UMTS), Bluetooth, DMR, APCO25, ZigBee.
- Demodulation of APCO25, DMR, TETRA, PAL/SECAM/NTSC.
- IQ data recording

The Kassandra is a radio monitoring system for continuous, periodic or real-time monitoring of radio environment, detection of unauthorized radio emissions with sophisticated algorithms of information suppression and analysis of digital communication standards. The system is a unique combination of the cutting-edge technical solutions and advanced software.

24 HOUR CONTINUOUS AUTONOMOUS MONITORING

Monitoring process can be carried out without participation of an operator. It allows to decrease investment in trained operators quantity, but also to increase results of radio control by reducing impacts on staff. The 24 hour monitoring and history log accumulation allows detection of frequency hopping and UWB transmitters and eavesdropping devices with package transmission.

MONITORING PROCESS AND RESULTS RECORDING

During monitoring process a threshold can be adjusted not only as flat line but as a curve covering each part of spectrum with required level. All data of any signal above the threshold will be automatically recorded into external file (including frequency, signal level, time, as well as digital analysis, demodulated audio signal and IQ, if necessary). The file can be analyzed in future or simultaneously without terminating a monitoring process. Results are stored in the archive and can be recovered for the purpose of comparing radio environment for various periods of time.

The Kassandra can be used as SIGINT system as it allows recording broadband IQ files for further demodulation and decryption.

NETWORK AND REMOTE MONITORING

Even with one module user is able of creating local monitoring network. Built-in antenna switch allows connecting up to 4 antennas and providing monitoring of up to 4 rooms simultaneously in the range from 25MHz to 6GHz. Each antenna can have its' own fully customized task. It also allows to compare spectrum in different rooms in order to find suspicions signals in one of rooms.

The additional software option allows using the device connected via Ethernet remotely from any part of the world. There is no limit of device quantity to be controlled from a monitoring headquarter. This feature is especially useful for embassy TSCM support or for control of areas that are not safe for operator.

DIGITAL SIGNALS ANALYSIS

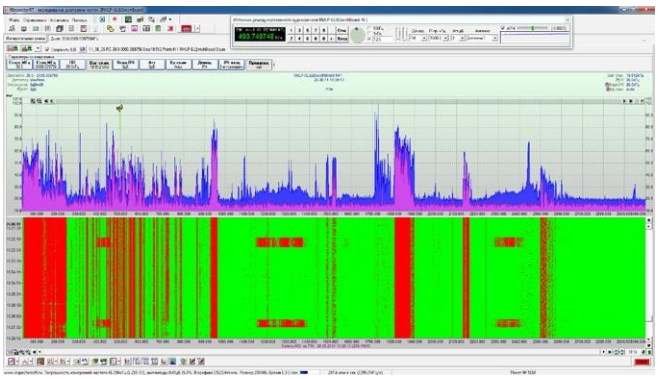
The digital analysis software module is able of:

- detection and identification of devices that operate within popular civil legitimate communication channels (DECT, BlueTooth, Tetra, DMR, APCO25, ZigBee). WiFi analysis is carried out by external Kassanra-WiFi solution.
- analysis of GSM, 3G (UMTS) networks
- voice demodulation of APCO25, DMR (MOTOTRBO), TETRA,
- identification of analog and digital video transmitters and receiving analog video image (PAL, SECAM, NTSC).

PRODUCT SPECIFICATIONS

Operating frequency range	LF input	from 0,009 to 25 MHz
	HF interchange input (4 units)	from 25 to 6000 MHz
	UHF input	from 6000 to 21000 MHz
Sensitivity (without pre-amplifier)		minus 158 dBm/Hz
Dynamic range (without attenuator)		More than 130 dB
Maximum frequency resolution		2 Hz
Maximum scanning rate (with transmission band 20 kHz)		More than 14000 MHz/sec
Mains		Adapter 100-240V, 50Hz
Autonomous		Built-in battery
Continious operation time		2 hours
Dimensions of main unit		549x438x124 mm
Weight of main unit		9.7 kg

KASSANDRA
Radio monitoring software



FEATURES:

- Working with more than 160 receivers and spectrum analyzers including Rohde&Schwarz, Agilent, Tektronix, Advantest, Anritsu, Aeroflex/IFR, AOR, ICOM and more.
- Digital communication standards classification and analysis.
- Identification and analysis of DECT, TETRA, GSM, 3G(UMTS), Bluetooth, DMR, APCO25, ZigBee.
- Demodulation of APCO25, DMR, TETRA, PAL/SECAM/NTSC.
- IQ data recording
- Remote control over TCP/IP network including transfer of demodulated audio signal in real time

The Kassandra software is an applications set for searching, analyzing, locating, monitoring and controlling radio frequency signals in electromagnetic spectrum.

The radio monitoring software can be used to provide efficient and high-speed automated control of radio frequency receivers, spectrum analyzers and scanning radios for spectrum monitoring, inspection of (searching for) dangerous, clandestine, or illegal radio frequency signal sources, performing metrological certified measurements of electromagnetic signal parameters and conducting other applications for radio control and radio monitoring.

DATA STORAGE

The system stores all collected data from the electromagnetic spectrum in digital format. The collected and stored spectrum can be re-produced and re-played enabling all detected signals to be available for processing after the detection event has occurred in the radio frequency spectrum.

LOCAL AND REMOTE CONTROL

Local and remote control of modern Radio Frequency receivers and spectrum analyzers. Receivers and spectrum analyzers can be connected to any computer which is connected via LAN or the Internet to another computer where the software is running.

DIGITAL SIGNAL PROCESSING

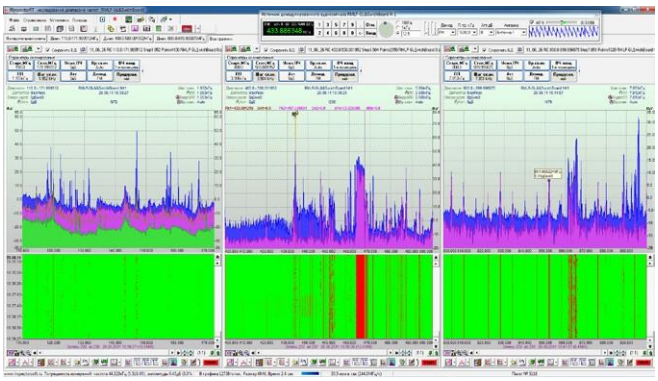
Digital signal processing (vector analysis) and analysis of DECT, TETRA, GSM, Bluetooth, APCO25 signal standards. Software option (Digital Communication Test) option demodulates on-air protocols of DECT, BlueTooth, GSM, Wi-Fi, TETRA, DMR, APCO25. KML displays the addresses of senders and recipients and illustrates if a signal is legal or illicit by comparing them with a list of legitimate users

GEOGRAPHIC INFORMATION SYSTEM SUPPORT

Measurement results are retained with GPS information providing geo-spatial coordinates The software inputs the coordinates into a digital map of an area or region to support analysis of spectral data including calculating coverage area, identifying poor reception areas and displaying the results of direction-finding.

MONITORING OF FREQUENCY RANGES AND FIXED FREQUENCY LISTS

KML performs continual scanning of frequency ranges (e.g. F1 to F2 scans). It also can continuously scan lists of discrete frequencies entered into its database manually by the operator or by an operator provided utility script.



SEARCH AND DOCUMENT SIGNAL PARAMETERS THAT EXCEED A PREDETERMINED THRESHOLD OR BASELINE SPECTRUM MASKS

Searching for illegally operating transmitters and signals that exceed a baseline spectrum mask is important for spectrum management operations.

Searching detects radio stations which violate regulations; finds clandestine electronic surveillance devices in protected facilities and supports engineering analysis of electronic devices for the presence of side (stray) electromagnetic radiation.

TO CHECK IF THE SOFTWARE IS SUPPORTED BY YOUR DEVICE AD FOR MORE DETAILED INFORMATION

PLEASE CONTACT OUR OFFICE.

KASSANDRA Wi-Fi
Wi-Fi monitoring and analysis system

The Kassandra-WiFi is the hardware-software solution designed especially for detection, monitoring and localization of all active WiFi devices in the secured area as well as for identification and localisation of those which are illegal.

The System consists of WiFi Capture and Analysis (CA) Module and Kassandra-WiFi Software installed at tablet-PC or laptop.

The Kassandra-WiFi Software performs the following functions:

- Detection of operating WiFi access points or other devices as PCs, laptops, phones, eavesdropping, etc.
- Detection data transmission between devices and traffic calculation.
- Displaying of information about detected WiFi networks and devices connected with them in text format or graphic form.
- Availability of various filters for displaying devices with required parameters.
- Ability of creating “legal” devices list.
- Working with Log: displaying of device activity; displaying of devices operation for selected time interval.

The Capture and Analysis Module is an independent device with its’ own processor and memory that performs sequential scanning of specified WiFi 2.4 GHz and 5 GHz channels. It captures the data packets, extracts and analyses the following service information:

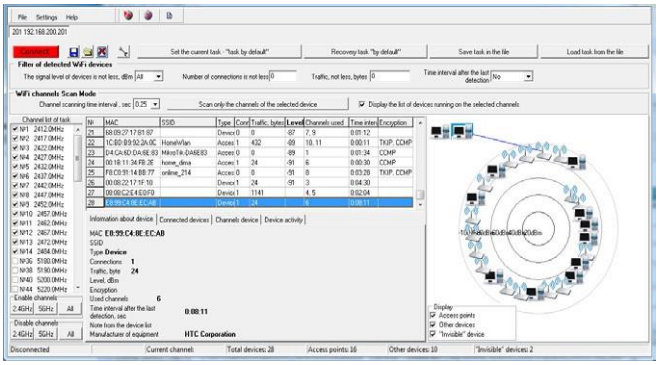
- Working with Log: displaying of device activity; displaying of devices operation for selected time interval
- Packet headers
- MAC-address of the packet sender and MAC-address of the packet recipient
- SSID, device manufacturer, used channels and encryption identification
- Volume of information transmitted and encryption
- Signals strength for its direction finding and localization

NETWORKING

The CA Modules can be connected into a network by Ethernet and is able of saving the monitoring log information into the internal memory for further analysis and investigation.

An operator can access each Module using the software, download the monitoring results, supervise a scanning process, change a task depending on scenario and create devices “white” lists.

The CA Module power supply is provided by AC mains via power supply units or from 5V power supply USB 2.0 or power-bank.



Main operating window with monitoring results

PRODUCT SPECIFICATIONS

WIFI CAPTURE AND ANALYSIS MODULE	
Operating frequency ranges	2.4, 5 GHz
Analyzed standards	802.11 a,b,g,n
Computer connection	LAN 100Mbit or USB-LAN adapter
Minimum operating time	3 month
Antenna	Build-in omnidirectional
Power supply	USB 2.0 or external power adapter 5V, 500 mA
Dimensions	15x9x2.2 cm
Weight	not more than 200 gr

TABLET PC	
Screen dimensions	from 10.8” to 12”
Screen resolution	not less than 1920x1080
OS	Windows 8 or later version
Internal memory	not less than 60 GB
Processor	not less than Intel Core i3 1500 MHz
Connectivity availability	USB2.0, LAN

Raksa
Selective RF detector

FEATURES:

- Selective reception of radio signals
- Detection of wideband and digital signals
- Signals listening
- Signals' frequency and level meter
- Alert log
- Silent alert signal (vibration mode)
- No external antenna

The RAKSA is a selective RF detector designed for near field detection and the locating of covert information access devices that use a wide variety of radio transmitters between 40 MHz and 3.8 GHz. Working with the indicator does not require special technical ability or training.

It takes less than 2 seconds to scan and analyze the cycle of any and all digital and analog signals including:

- DECT and cellular phones of GSM, UMTS, CDMA standards
- Bluetooth and Wi-Fi devices;
- Wireless video cameras;
- Radio transmitters with analog, digital or wideband modulation (AM, FM, PM, FSK, PSK)

The RAKSA can operate in the following modes: guard, sweep, search, difference search and monitoring of digital signals.

PRODUCT SPECIFICATIONS

Frequency range	40 - 3800 MHz
Typical sensitivity	70 mV/m
Dynamic range	50 dB
Bandwidth	10 MHz
Period of full scanning cycle	≤1.5 s
Running time in guard mode	4 - 12 h
Running time in other modes	3 h
Max number of records	200
Display	OLED, 128x64
Operating temperature	+5... +40°C
Storage temperature	-20... +45°C
Humidity	35°C < 90%
Dimensions	77x43x18 mm
Weight	35 g

NR-D Electromagnetic near-field indicator

FEATURES:

- High sensitivity
- Near field indication of active transmitter's eliminating false alarms from background signals
- 4 in 1 design: RF-field detector, frequency meter, digital signals identifier, electromagnetic near-field indicator

The NR-D electromagnetic near field indicator is designed for detection and location of surveillance devices which transmit data between 50 MHz and 3500 MHz using the method of component analysis which helps to decrease the probability of false alarm by allowing a user to distinguish the suspicious radio signal from the local maxima of the background fields.

The NR-D includes power meter channel and a channel of both electric and magnetic components analysis. The results of measuring the phase difference and amplitude ratio is processed and displayed on the display device simultaneously with the classical power scale. The detection range of a radio transmitter with operating frequency of 400 MHz (~0.75 m wave) is up to 0.5 m, and about 0.2 m for 900 MHz.

The device works in Search, Monitoring and Log modes.

PRODUCT SPECIFICATIONS

Frequency range in signal power detector	50 - 3500 MHz
Frequency range in EM field indicator	50 - 3500 MHz
Input threshold detector sensitivity	not less than -60 dBm
Dynamic range of detector indication	50 dB
Frequency meter detector sensitivity	not less than -40 dBm
Continuous signal frequency	no more than 1%
Pulse signal frequency measuring error	no more than 3%
Input threshold sensitivity for EM field indicator	not less than -70 dBm
Dynamic range of EM indication	60 dB
Nonvolatile memory capacity	2048 events
Power supply	2 NiMH AA batteries
Dimensions	135x70x25 mm
Weight	200 g

ST 167WR
Search receiver

The ST167W is a superheterodyne receiver, designed for detection and identification of analog or digital transmitters working between 40MHz and 6GHz, **including the following**:

- Cell phones and modems of SDMA 450, GSM 900/1800, 3G, 4G (LTE);
- Wi-Fi access point identification;
- MAC address identification;
- Number of used Wi-Fi channel
- Wi-Fi devices and wireless 2,4 GHz video cameras;
- Bluetooth devices;
- Cordless phones (DECT).

The ST167W can detect GSM and GPS jammers indicate base stations' signals level as well as identify Wi-Fi signals in operation, their MAC address, operated channel and level of signal.

The ST167W provides a continuous 24 hours automatic monitoring of detected analog and digital radio signals. The information about the alarm events is recorded in the Event Log. Data transmission intensity analysis is provided for the WLAN standard.

The receiver allows user to detect, measure the frequency, demodulate (AM/FM) and locate the sources of analog signals, considering the preset threshold level and the scanning range.

The detection of analog radio transmitters' signals is carried out by scanning a predetermined band in the frequency range from 25 to 6000MHz.

Special software application "ST167 Analyzer" extends unit configuring possibilities, visualizing and saving the data and provides user with the **following options**:

- Display graphic of real-time of operation and event log results;
- Manage the events database;
- Control the operation of the device directly from PC using the USB connection or via ETHERNET.

PRODUCT SPECIFICATIONS

Frequency range		25 - 6000 MHz
Displayed signal power ratio range	25 - 1000 MHz	-80 dBm
	1000 - 6000 MHz	-55 dBm
Bandwidth		2, 5, 10, 15, 20 Mhz
Dynamic range		65 dB
Frequency measurements accuracy		10 kHz
Display		color OLED display, 169x128
Power Supply		Built-in Li-Pol Battery 3.6 V (2.2 A/h)
Current consumption		not more than 500 mA
Dimensions		90x54x21 mm

ST 031M PIRANHA
multifunction detection device

The ST-031M is a new generation multifunction counter surveillance device for detection and localization of eavesdropping devices and for solving other information protection tasks related to information protection technical measures effectiveness evaluation.

ST-031M CAN DETECT:

ST-031M allows us to discover the facts and determine the location of the radio-emitting devices, which creates a potentially dangerous information leakage radiation. These means primarily include the following:

- Radio microphones;
- Telephone transmitters;
- Radio-stethoscopes;
- Concealed video cameras equipped with a radio channel for transmission of information;
- Technical means or systems for spatial radio frequency radiation;
- Beacons of the systems used for moving objects monitoring (e.g. people, transportation means, goods etc.);
- Unauthorized radio stations, radio handsets, and also telephones with radio-extension;
- Radio modems and digital wireless access systems.

Identification of digital protocols used in the detected radio signals. Device is able to distinguish between signals from the base station and signals from cellular phones used to detect and analyze radio signals between 0.01 - 18000 MHz.

ST-031M “Piranha” consists of three detection channels, that were designed to search for signals in a particular frequency range. Set of antennas, sensors and adapters allows to adapt the device to process search for a variety of eavesdropping devices and information leakage of natural origin.

The detection procedure results are shown on a Color-LCD display.

The device has user frienly interface and is controlled by twelve key keyboard.

The interface of ST 031M is simple and intuitive. Its design took long-term experience of operation of our previous models into account.

The device allows to investigate the received signal in spectrum analyzer and oscilloscope mode.

The device has a mode of identification for standard digital data transmission channels (GSM, DECT, BLUETOOTH, WIFI and etc.).

The device has a PC-connection feature, which significantly enhances the ability of the device for imaging and archiving information. Standard USB port provides user the possibility to upgrade software of ST-031M.

ST-031M DELIVERY SET INCLUDES:

1. Ultrahigh frequency sensor (UWBD031M).
2. Conductive wire lines differential generator
3. Battery (for conductive wire lines differential generator) .
4. Attenuator.
5. Test sound emitting device.
6. Connecting cable of sound emitting device.
7. Induction converter (Magnetic field sensor).
8. Main controlling, processing and displaying unit.
9. “Crocodile” type clamps (2 pcs).
10. Multipurpose adapter for checking wire lines - BWLC031M.
11. Cable to connect BWLC031M adapter to telephone lines.
12. Multipurpose cable to connect BWLC031M adapter to wire lines.
13. High-frequency telescopic antenna.
14. Cable to connect BWLC031M adapter to electricity sockets for scanning receiver CH2.
15. Flash drive with software.
16. Cable to connect to a PC.
17. Adapter to connect BWLC031M adapter to the multi-wire cables.
18. Telephone adapters (2 pieces).
19. Cable connectors type RG45: 8?4; 8?6; 8?8.
20. Headphones.
21. Charger.
22. Carrying case.
23. User manual and warranty certificate.

ST 031M PIRANHA
multifunction detection device

PRODUCT SPECIFICATIONS

MAIN UNIT

Channel 1. Selective HF detector		
Input impedance		50 Ohm
Operating frequency range		140 - 4420 MHz
Bandwidth		1 - 40 MHz
Irregularity of the frequency response		±5 dB
Minimally detectable signal in the automatic mode		≤ –65 dBm
Dynamic range		50 dB
Demodulation modes		AM, WFM
Channel 2. Scanning receiver		
Input impedance (symmetrical)		600 Ohm
Operating frequency range		0,05 - 140 MHz
Bandwidth		40 MHz
Scanning speed		35 Mhz/s
Irregularity of the frequency response		±5 dB
Minimally detectable signal in the automatic mode		25 dBuV
Dynamic range (without attenuator)		65 dB
Attenuation of built-in attenuator		20 dB
Demodulation mode		AM, FM
Channel 3. Low-frequency amplifier		
Input impedance		100 kOhm
Operating frequency range		0,025...100 Khz
Irregularity of the frequency response		±1 dB
Integral voltage level of noise		-109 dBuV
Amplification ratio		12, 24, 36, 48 dB
Sound path		
Frequency range		300...9000 Hz
Volume regulation range		-50...+20 dB
Max power output in the output “PHONE”		150 mW
Dispay		
Type of display		LCD-TFT 3,2”
Resolution		240x320
Colour quantity		65000
Power supply		
Lithium-polymer battery with a voltage		3.7 V
Power consumption		1,2...2,5 W
Continuous operating time at max. power consumption		>7 hours
Time to charge a fully discharged battery		7 hours
Weight, dimensions		
Dimensions	Main unit	175x83x36 mm
	Set in case	390x310x170 mm
Weight	Main unit	0,430 kg
	Set in case	3,8

MULTIPURPOSE ADAPTER FOR CHECKING WIRE LINES BWLC031M

In “Channel 1” mode	
Maximal allowed voltage in the power line	300 V AC, DC
Insulation resistance for "input / output"	>10 mOhm
In “Channel 2” mode	
Input impedance	100 Ohm
Operating frequency range	0,05...140 Khz
Maximal allowed signal level	-10 dBV
In “Channel 3” mode	
Input impedance (symmetrical)	27 Ohm
Operating frequency range	0,150...100 Khz
Maximal allowed signal level	10 dBV
In-phase signal attenuation	>65 dB

ULTRAHIGH FREQUENCY SENSOR

Operating frequency range	3 - 12 Ghz
Threshold sensitivity	2*10-10 W/cm2
Polarization	Linear
Directional angle	60...90
Dimensions	100x45x25 mm
Weight	0,07 kg
Cable length	0,95 m

INDUCTION CONVERTER (MAGNETIC FIELD SENSOR)

Operating frequency range	0,07 - 100 Khz
Measuring range of the magnetic field	0,5 - 2000 nT
Attenuation of a homogeneous field in the diff. mode	>30 dB
Dimensions (length, diameter)	Ø20 x 250 mm
Weight	0,11 kg
Cable length	0.95 m

TEST SOUND EMITTING DEVICE

Flash card slot	microSD
Audio file format	MP3
Speaker	RMS 3W, 150...18000 Hz
Power supply	Li-Ion battery 600 mAh
Continuous operating time	3 hours
Charging time	3 hours

ST 300 SPIDER
wire-line analyzer

(page 1 of 2)

ST300 SPIDER wire-line analyzer was designed to detect and analyze eavesdropping devices galvanic connected to high and low-current wire lines of the inspected object. In the analyzer are used passive and active modes. It allows localizing switched-on and temporary switched-off eavesdropping devices.

ST 300 HAS A SET OF FUNCTIONS, NEEDED FOR DETECTION AND LOCALIZATION OF WIRED EAVESDROPPING DEVICES:

- Detection and evaluation of low-frequency signals of cable microphones in low-voltage wire lines.
- Activation of electret cable microphones by filing an in-line bias voltage.
- Detection of eavesdropping devices signals, transmitting information through high and low-voltage lines in the frequency range from 100 kHz to 150 MHz.
- Detection and evaluation of unauthorized galvanic connections to conductive lines and reflectometry.
- Tracking the wires in the walls and other building structures using the line detector.
- Measurement of DC and AC current voltage in the examined line.
- Development of a database of measurement results for later viewing, comparison, and printing.

OPERATIONAL MODES

The analyzer can be used in the autonomous mode as well as in the control mode using PC.

Use of automated modes of the analyzer in combination with electronic commutator allows carrying out various measurements on all possible combinations of multi-wire cable pairs within few seconds. Adapters and cables included in the ST 300 connect the device to the most common types of wired lines.

The versatility of ST 300 is caused by its specifications and passive/ active operational modes.

Hardware and software allow applying the device in following modes:

- Electronic commutator
- Low-frequency amplifier
- Wired receiver
- Non-linear detector of wired lines
- Reflectometer
- Line locator

ST 300 SPIDER
wire-line analyzer

PRODUCT SPECIFICATIONS

LOW FREQUENCY AMPLIFIER	
Frequency range	20 ... 25000 Hz
Input impedance	200 Hz
Amplifier adjustment range	0...60 dB
Max imput signal amplitude	±13.8V
Spectral density of voltage noise	3 nV/Hz
Bias voltage range	± 26V
Signal presentation form	oscillograph / spectrogram
WIRELINE RECEIVER	
Frequency range	100 ... 150 000 MHz
Time to scan the entire range	2 sec
The minimum detectable signal level	-50...-75 dBm
Dynamic range	55 dB
Input impedance	50 Ω
Demodulation	AM, FM
Filter bandwidth	80 kHz
Max voltage allowed	250V (AC), 80V (DC)
Information presentation	oscillograph / spectrogram
NON LINEAR JUNCTION DETECTOR	
Signal amplitude	0...13V
Signal frequency	45... 55 Hz
Split indication of even and odd harmonicas	Yes
Min level of non linear distortions detection	-60 dB
REFLECTOMETER	
Distance range	0...100 m
Measurement error percentage	±1%
Possibility of operation in line	No
DIGITAL VOLTMETER	
Measurement range DC	±80V
Measurement range AC	13V
Frequency range	0 ... 30 000 Hz
TRACE DETECTOR	
Carrier frequency of the test signal	100 kHz
Frequency of modulation of the signal	1 - 2 kHz
Signal amplitude	13V
Indication	Light / Sound
Contact connection to a line	Yes
POWER SUPPLY	
Battery type	Built-in Li-pol accumulator 3.7V
Power consumption	1.2 V
Continuous operation time at max power consumption	>7 hours
Charging time	7 hours
DIMENSIONS	
Dimensions of the main unit	175x83x36 mm
Weight	0.375 kg
Dimensions fully packed	390x310x170 mm
Weight fully packed	4.4 kg

Optoelectronic hidden cameras detectors

VORON - MONOCULAR CAMERA DETECTOR

The VORON is designed for quick detection of concealed micro video cameras, including those with pinhole lenses.

The detector employs LED illumination of targets, thus making the device usage safe for the operator (unlike laser illumination).

Detection distance of concealed video cameras with pinhole lenses (lens diameter is 1 mm) can be from 1 to 50 m depending on operating conditions.

The VORON's principle of detection is based on the effect of light reflection or "return flare". Thus, when a concealed target is detected, there is a bright red spot (reflection from video camera lens) in the VORON field of vision.

Operation in optical, but not in radio frequency range allows detecting any optical devices, regardless of their operation mode (on/off) and type of data transmission (radio or wire).

Radio interference, electromagnetic shielding, masking gauze and lens hoods do not prevent detection of video cameras.

Technical solutions used in the VORON (roof prism and translucent optics) allowed making compact design with excellent optical characteristics: high magnification, wide field of view and exceptional quality of image.

Effective impulse source of power supply insures long operation time on one AA-type battery (1.5 V). The VORON housing is made of aluminum alloy; it has a hand strap and soft rubber eye shade.

PRODUCT SPECIFICATIONS

Detection range	0.5 - 50 m
Magnification	5x
Angle of view	12°
Linear field of view at a distance of 10 m	2.1 m
Diopter correction range	+4, -4
Diameter of exit pupil	4.5 mm
Lighting type	LED (5 pcs)
Lightening color	Red
Power supply	AA battery, 1.5
Operation on one battery	6 hours
Dimensions	50x68x140 mm
Weight	330 gr

OPTIC-2 - BINOCULAR CAMERA DETECTOR

Professional camera detector Optic-2 is designed to detect and locate pinhole cameras, regardless of their operation mode (on/off) and the type of video signals.

FEATURES:

- Operative inquiry activities of law-enforcement agencies
- More comfortable operation comparing to monoculars
- Green LED light allows detection of cameras, that are protected by filters in order to bypass the detectors based on red light.
- 6.5x zoom provides better inspection capabilities of small details and hard to reach elements of the interior.

The detection method implemented in the "Optics-2" is based on the optical detection and allows to detect video cameras due to the effect of reverse reflection or "reverse blink". Upon detection of a hidden camera you will see a green or red dot in the Optic-2 lens as a result of reflection.

The detector is designed as a binoculars in rubberised metal housing.

PRODUCT SPECIFICATIONS

Detection range (depending on light conditions (ambient light))	from 0.5 to 50 meters
Angle of view	7,5 degrees
Multiplicity	6,5x
Focusing range	0,5m to ∞
Operating modes	- solid green
	- continuous red
	- pulsed green
	- pulsed red
	- pulsed red/green
Power type	AA battery, 1.5
Type of light	LED
Number of LED's	22 pcs.
Weight (grams)	450 gr
Weight in the transport bag with charger	800 gr
Operating time (when fully charged)	4-6 hours (depending on mode)

SHB-DVR
inspection video system

The SHB-DVR inspection video system is created for visual inspection of hard to access accessible areas in building structures, vehicles and etc. to detect explosives, eavesdropping devices, and other illegal devices.

The system is designed as a telescopic rod made of carbon fiber with a focus elbow, which includes: a color camera block with IR illumination, digital video recorder, and the battery pack.

During using the SHB-DVR you can activate video recording. The option of voice comments recording available by request. The playback of the recorded image is accomplished on the screen of the DVR, and the PC via connected USB-port.

PRODUCT SPECIFICATIONS

VIDEO		
Television lines resolution		420
Matrix size		1/3”
Matrix type		CCD
Image standard		PAL
Power supply voltage		12V
DIGIRAL VIDEO RECORDER		
Screen size		5”
Video system		NTCS/PAL
Videorecording PAL resolution		up to 1920x1080
Record format		MPEG-4
Internal memory		320 Gb + SD card up to 16GB
Input connector		142x88x30 mm
Dimensions (DVR)		N-type (female)
Weight with battery (DVR)		0.317 kg
Operating length of rod	min	0.9 m
	max	1.9 m
Television lines resolution		+5...+45 C
Continuous recording time	without IR	2.5. 3.0 h
	with IR	1.5. 2.5 h
Weight	ready to use	1 kg
	transport bag	3 kg

VE-6-2
video endoscope

VE-6-2 video endoscope is designed for visual inspection of inaccessible places and closed cavities. Camera with lens and lighting are located at the end of the working part of the video endoscope. Working length is 2 meters, a diameter is 6 mm, and the distal end deflection angle is at least 120°.

Images screening in real time is carried out on 3.5” LCD DVR. The recording of photo and video images on a SD-card memory is available. DVR is powered by a built-in Li-pol battery.

PRODUCT SPECIFICATIONS

Display		3,5” TFT-monitor
Pixels quantity		320x240
Connecters		Mini USB 1.1/AV out
Battery		Li-Pol battery (3.7 V)
Charger		240 V /5.5 V
Power supply voltage		5V
Video signal format		NTSC/PAL
Memory card		SD
Video compression format		MPEG-4
Video format		JPEG (640x480)
Photo format		ASF (640x480)
Operational temperature	Storage	-20 ~+60 / 0 ~ 40 °C
	Charging	
Functions		Photography, video recording, playback of photos and videos on the display, the TV signal output, download files to PC, mirror-image presentation and images angling

OTHER EQUIPMENT OF THIS SERIES IS AVAILABLE. CONTACT OUR OFFICE FOR MORE INFORMATION.

Lornet Star
non-linear junction detector

The Lornet Star is the world's first non-linear junction detector with a spectrum analyzer of 2nd and 3rd harmonic signals of probing frequency re-emitted by a non-linear object with removable antennas of 800, 2400 and 3600 MHz.

The model has been designed especially for accurate classification and further location of electronic devices during investigation operations and identifying of miniature electronic devices in different working conditions.

FEATURES:

- The build-in spectrum analyzer with the resolution of 40 Hz and 10 kHz analysis band enables the operator of faster decision making to identify the corrosive or artificial semiconductor;
- The Lornet Star NLJD displays the level of the reflected signal from the object at a probing frequency to determine the level of metallization of the suspicious object.

The Lornet Star has two antenna units with probing signals in frequency range of 800 and 3600 MHz that are available as an option.

The full antenna set of the Lornet Star allows user to work in different environmental conditions by operating in three frequency ranges:

- 800 MHz (option) - all-weather and relatively low attenuation of signals in dense medium (brick, concrete, etc.);
- 2400 MHz - the opportunity to detect SIM cards and small (about 1 cm^2) semiconductor devices;
- 3600 MHz (option) - spatial selection, facilitates the search operation in the presence of legal electronic devices.

The Lornet Star basic delivery set includes 2400 MHz probing signal antenna unit with built-in spectrum analyzer and a removable rod 70 cm long for hard-to-reach objects scanning which can be used for purposes of both search and security-check.

PRODUCT SPECIFICATIONS

ANTENNA UNIT			08	24	08S/24S	36M
Probing signal frequency range			800 MHz	2400 MHz	2400 MHz	3600 MHz
Output power peak/average	Pulse		10 W/230 mW	10 W/230 mW	10 W/230 mW	18 W/112 mW
	CW		/300 mW	/300 mW	/300 mW	
	Pusle mode with a low duty cycle					6W/375mW
Receiver sensitivity, not worse than			-110 dBm			
Probing signal output attenuation			20 dB			
Dynamic range, not less than			24 dB			
Continuous operating time	Pulse		3,0 h	3,0 h	2,5 h	2,5 h
	CW		1,5 h	1,5 h	1,5 h	1,5 h
Dimensions	ready to operate		400x200x70 mm			400x200x200 mm
	Telescopic rode	folded	540x40x40 mm			
		fully extended	860x40x40 mm			
	standard packing		650x300x200 mm			
Weight	ready to operate		1 kg			
	telescopic rode		0.2 kg			
	standard packing		8 kg			

Lornet-36
non-linear junction detector

FEATURES:

- The world's first NLJD providing spatial selective detection of targets by a narrow (16 degrees) beam with laser pointer;
- High frequency of probing signal (above GSM band);
- Detection of a standard SIM-card at 1m distance;
- Laser pinpointing for a space selective object localization;
- Automatic low noise frequency selection;
- Automatic and manual modes of changing probing signal power;
- Outdoor explosive devices detection;
- Safe to operate (power density within the operator's zone does not exceed 4,0 mW/cm^2).

The Lornet-36 NLJD has been created especially for a quick and reliable location of unauthorized electronic devices during investigation operations and identifying of miniature electronic devices on a considerably safe distance, which is important operating with suspicions objects (possible IED).

High signal operating frequency range makes Lornet-36 capable of detecting semiconductors covered by various materials or through slits and holes, ungrounded shielding, and etc. by means of reflection from a smooth surface.

Laser pinpointing enhances localization accuracy of the found object.

The detector is safe to operate due to a very low duty cycle of probing pulses and the detector's power density withing the operator zone, which does not exceed 4,0 mW/cm^2.

The compact model Lornet-36 mini is available and its' key differences are smaller antenna size and lighter weight.

The Lornet-36 NLJD is capable of detecting wide variety of electronic devices containing semiconductor elements, such as covert audio/ video surveillance devices, microphone amplifiers, audio-recorders, remote control eavesdropping devices, and etc., regardless of whether they are turned on or off.

The Lornet is fitted with LED panel for 2nd and 3rd harmonics levels indication. Furthermore, the 2nd and 3rd harmonics levels can be estimated via the built-in speaker or wireless headphones to evaluate parametric impacts (e.g. knocking) on the suspicious objects.

PRODUCT SPECIFICATIONS

MODEL		LORNET-36	LORNET-36 MINI
Type of a probing signal		Pulse	
Probing signal frequency range		3580 - 3620 MHz	
Output power peak/average:	Pulse (duty ratio 160)	18 W	
	Pulse (duty ratio 20)	12 W	
Energy potential (with antenna gain factor)		2000 W	
Probing signal output attenuation		22 dB (11 steps)	
Receiver sensitivity		-110 dBm	
Dynamic range, not less than		40 dB	
Angle of antenna directivity diagram (at 1st/2nd/3rd harmonics)		16/8/4 grade	30/15/7.5 grade
Power supply		Li-Ion rechargeable battery	
Continuous operating time	Pulse (duty ratio 160)	3 h	
	Pulse (duty ratio 20)	2 h	
Dimensions	ready for operation	470x320x190 mm	210x210x171 mm
	standard packing	440x300x350 mm	270x250x140 mm
Weight	ready for operation	1.4 kg	1 kg
	standard packing	3.6 kg	

Lornet-0836
non-linear junction detector

FEATURES:

- It is possible to operate in one of the frequency ranges and in both of them simultaneously;
- High frequency of probing signal (above GSM band);
- Detection of a standard SIM-card at 1m distance;
- Automatic low noise frequency selection;
- Automatic and manual modes of changing probing signal power;
- Wireless headphones;
- Safe to operate (power density within the operator's zone does not exceed 3,0 mW/cm^2).

The Lornet-0836 is the double probing frequency non-linear junction detector that **combines two detectors at different frequencies**: of one transmitter is **790 MHz**, and another is **3600 MHz**. Therefore the device has undeniable advantage over single-frequency devices due to:

- It is better to detect small-sized and high-frequency semiconductor devices at high frequency (and vice versa);
- It is better to work in wet ground and concrete walls at low frequency;
- Two antennas with wide (at low frequency) and narrow (at high frequency) direction diagrams enable to evaluate the situation first (at low frequency) and then to detect an object precisely using high frequency.

The Lornet-0836 is designed for a quick and reliable location of unauthorized electronic devices during investigation operations and identifying of miniature electronic devices on a considerably safe distance, which is important operating with suspicious objects.

An embedded parabolic antenna with high gain (20 dB at 3600 MHz) enables highly precise detection of semiconductor components from a long distance (up to 10 m). Laser pinpointing enhances localization accuracy of the found object.

High signal operating frequency range makes Lornet-0836 capable of detecting semiconductors covered by various materials or through slits and holes, ungrounded shielding, and etc. by means of reflection from a smooth surface.

PRODUCT SPECIFICATIONS

Type of a probing signal		Pulse
		789.5 – 791.5 MHz
Probing signal frequency range		3581.5 – 3607.5 MHz
Output power: peak/average	Pulse (duty ratio 280)	18 W/64 mW
	Pulse (duty ratio 16)	6 W/375 mW
Energy potential (with antenna gain factor)		2000 W
Probing signal output attenuation		20 dB (11 steps)
Dynamic range, not less than		24 dB
Receiver sensitivity, not worse than		-110 dBm
Angle of antenna directivity diagram (at 1st/2nd/3rd harmonics)		16/8/4 grade
Power supply		Li-Ion rechargeable battery
Continuous operating time	Pulse (duty ratio 280)	2.5 h
	Pulse (duty ratio 20)	1.5 h
Dimensions	ready for operation	310x310x280 mm
	standard packing	440x300x350 mm
Weight	ready for operation	1 kg
	standard packing	4.5 kg

NR-900S
non-linear junction detector

FEATURES:

- New non-linear junction detector NR-SOUND, ensuring sensitivity not worse than -140 dBm;
- Range of detection is comparable to the non-linear detector NR900EK “Eagle”;
- The outstanding solution for the receiving tract provides the possibility of structure analysis of the reflected signal;
- For the first time the possibility of identifying and selecting of active electronic targets against a background of interfering noise generated by other electronic devices is realized;
- Modular design provides user with the possibility to operate the NR-900S in a compact hand-held version as well as using the sliding telescopic rod that allows scanning of the most hard-to-reach objects.

The NR-900S non-linear junction detector is designed for localization of electronic devices containing semiconductor components, such as mobile phones, electronic devices of information interception, audio and video recording, as well as electronic control systems for IEDs.

The detector has a high level of noise immunity that enables to operate in urban areas with complex electromagnetic environment. The NR-900S is first detector that is capable of inspecting active electronic targets working in electronic interference conditions.

AREAS OF APPLICATION:

- Detection of mobile phones at 2 m distance;
- Searching of Improvised Explosive Devices (electronic control systems of IEDs) at background of in electronic interference conditions;
- Detection of hidden electronic devices during TSCM operations.

PRODUCT SPECIFICATIONS

Probing signal frequency range		890 - 891 MHz
Output power	average	0.4 W
	peak	1.5 W
Probing signal power attenuation, not worse than		-9 dB (3 steps x 3 dB)
Receivers sensitivity		-140 dBm
Input signal attenuation for receivers		40 dB (4 steps x 10 dB)
Antenna, polarization		directional, circular
Indication		Audio (headphones) & LED display
Target localization accuracy		not less than 2 m
Power supply		Li-ion battery, 7.4 V
Continuous operating time		2 h
Weight	ready for operation	1.2 kg

NR-2000
non-linear junction detector

FEATURES:

- Effective radiated power (ERP) not less than 700 W;
- Precise target space localization along with high operational efficiency;
- Detects RC IED at the same distance as the “Eagle EK” field NLJD does, resistant to a strong interference condition of urban areas;
- Radio-electronic device detection behind reinforcing building structure;
- Assured small target detection in various medium including that with high humidity;
- Single-block (‘bullpup’ type) design: no connectors or cables, antenna fixed on adjustable telescopic bar, lighting of inspected zone, efficient both for premises and terrain.

The NR-2000 is the multifunction device designed for searching for various electronic devices that contain semiconductor components. The detector can be used for localization of illegally installed covert surveillance devices as well as for mines and improvised explosive devices (IED) distant inspection under strong interference condition of urban environment.

THE NR-2000 CAN DETECT THE FOLLOWING:

- Mobile phone & SIM card detection;
- Electronic components of remote control improvised explosive device (RC IED) investigation eavesdropping device and other unauthorized electronic appliance detection and localization.

PRODUCT SPECIFICATIONS

Probing signal frequency		2400 MHz
Modulation		AM-pulse
Output power	pulse	17 W
	searching mode	200 mW
Probing signal output attenuation		12 dB (8 steps x 1.5 dB)
Receiver input signal attenuation		-40 dB (4 steps x 10 dB)
Operational modes		General search, 20 K
Precise probing signal output adjustment		-15 dB in 1 dB step
Indication		Audio (headphones) & LED display
Power supply		Li-Ion rechargeable battery, 7.4 V
Continuous operating time	Searching mode	4 h
	20 K	1.5 h
Weight	ready for operation	2.9 kg
	standard packing	8.5 kg

NR-900 series
non-linear junction detector

NR-900EMS NLJD

NR-900V NLJD

The **NR-900EMS** and **NR-900V** are professional non-linear junction detectors for building structures investigation and household goods examination. The detectors are intended for searching and localization of illegally installed eavesdropping devices including voice-recorders and other electronic equipment regardless of their operational mode: transmitting, recording, stand-by or even switched off.

The NR-900EMS high power potential (ratio of transmitter power to receiver sensitivity **-173 db**) enables effective detection of electronic devices, hidden inside massive walls, including made of ferroconcrete, as well as detection of eavesdropping devices behind metal reinforcing net. It also allows using the detector for distant IED detection with RC and electronic timers installed.

Broad tuning facilities, high power potential and outstanding noise immunity makes it possible to efficiently operate in complicated urban conditions.

PRODUCT SPECIFICATIONS

Probing signal frequency		848 MHz
Output power	average	0.2 W
	pulse	180 W
	20k	30 W
Probing signal power attenuation	Max	0 dB
	Mid	-9 dB
	Min	-16 dB
Receiver sensitivity		-120 dBm
Receiver input signal attenuation		-50 dB (10 dB x 5 steps)
Antenna polarization		directional, circular
Antenna power gain	transmitter antenna	Not less 6 dB
	receiver antenna	Not less 8 dB
Indication		Audio (headphones) & 4-line LCD
Target localization accuracy		0.1 m
Power supply		Li-Ion rechargeable battery
Continuous operating time	Searching mode	4 h
	20 K	1 h
Weight	ready for operation	3.7 kg
	standard packing	9 kg

The NR-900V is the only radar that automatically distinguishes the corrosive diodes of electronic devices. The principle of automatic identification based on the analysis of the response changes depending on changes in radiation power.

FEATURES:

- High searching efficiency in main building structures inspection, reliable operation under strong EM-interference;
- The first and unique NLJD with an automatic target identification against the corrosion diode background;
- Optional display on the back of antenna unit cover;
- Extended Continuous operating time without battery replacement.

PRODUCT SPECIFICATIONS

Probing signal frequency		848 MHz
Output power	average	0.11 W
	pulse	180 W
	20k	22 W
Probing signal power attenuation		21 dB (3 dB x 7 steps)
Receiver sensitivity		-120 dBm
Receiver input signal attenuation		-50 dB (10 dB x 5 steps)
Antenna polarization		directional, circular
Indication		Audio (headphones) & LED display
Target localization accuracy		0.1 m
Power supply		Soshine 18650 rechargeable battery
Continuous operating time		4 h
Weight	ready for operation	2.9 kg
	standard packing	6.5 kg

NR-CHP
non-linear junction detector

FEATURES:

- Absolute safety (sanitary-hygienic certificate);
- Accurate detection of ultra-miniature electronic devices, which are problematically detected by metal detectors;
- Confident detection of small-sized targets in a wide range of embedding environments (including wet environments);
- Precise identify cations at fast rate of sweep;
- Single body construction, no detachable connections or cables.

The NR-CHP is the special compact version of non-linear junction detector intended for searching of prohibited electronic devices (including voice recorders, mobile telephones, SIM-cards, digital memory devices or covert eavesdropping electronics),as well as fire arms. It can also be used for detection of improvised explosive devices (IED electronic control systems) in hand luggage or on the individual's body.

The NR-CHP is stable against complex electromagnetic interference from the city environment. The detection range for SIM (UIM) card is up to 0.5 m, for mobile phone is up to 1 m.

PRODUCT SPECIFICATIONS

Type of modulation		Pulse-amplitude modulation
Mode of operation		Search
Output power (average)		200 mW
Power supply		2 Soshine batteries 18650 3,7 V
Continuous operating time		4 hours
Weight	ready for operation	1.2 kg

Jammers of mobile phones and RF transmitters Portable and stationary customized solutions

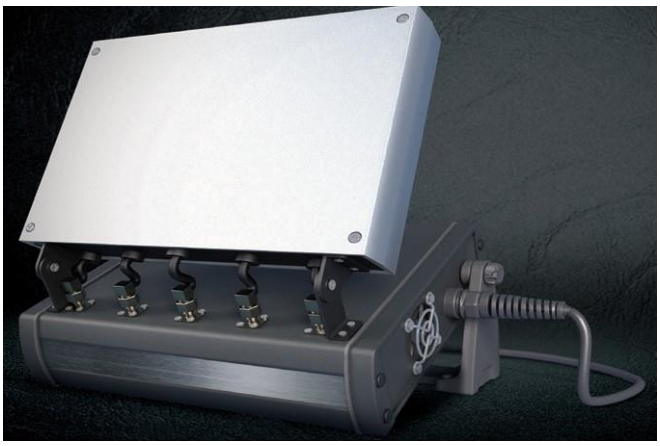
Nowadays the popularity of cellular based eavesdropping device as well as mobile phone surveillance increased significantly. Widespread RF transmitters whether it is audio or video. moved from analog to digital, moreover, into common civilian standards as for example WiFi, Bluetooth and ets.

In order to help our client be protected against wireless data leakage channel, Selena Electronics would like to represent the new state of art line of RF and digital communication standards jammers.

FEATURES:

- Fully customizable solutions by customer request
- Patented signal modulation for efficient performance
- Ability of creating network and reactive jamming
- High level of design and assembling quality
- Service and update in accordance with new frequencies
- Jamming of GSM, UMTS (3G), LTE (4G) WiFi, Bluetooth end etc.

CSS-SOA STATIONARY JAMMER IN IP65 CASING WITH MULTI-DERECTIONAL ANTENNA



CSS-SOA stationary network jammer has a high level ingress protection case (IP65 minimum) to be installed in-doors as well as out-doors under comprehensive environment conditions. The operating temperature range is between -63...+65°C

The unique feature of the device is the antenna system which can be used as a directional for long range sectoral jamming or as an omni-directional for short range circular coverage.

PRODUCT SPECIFICATIONS

Minimum output power		13W
Dimensions	Main unit	225x195x160 mm
	Antenna system	220x220x55 mm
Weight	Main unit	1.5 kg
	Antenna system	0.25 kg

CSS-MRA STATIONARY JAMMER WITH ADJUSTABLE POWER

CSS-MRA stationary network jammer with adjustable output power per each channel. Due to high output power over 13W the device is able of omni-directional medium range suppression.

PRODUCT SPECIFICATIONS

Minimum output power	13W
Dimensions	310x230x115 mm
Weight	2.8 kg

CSS-NRM NETWORK LOW-POWER REACTIVE MOBILE PHONES JAMMER

CSS-NRM stationary network reactive jammer was especially designed for protection of widespread facilities against mobile communication employing reactive approach. The jammer continuously scans the spectrum and in case of any mobile phone tries to connect the base station the CSS-NRM will automatically activate jamming signal.

PRODUCT SPECIFICATIONS

Minimum output power	13W
Dimensions	310x230x115 mm
Weight	1.5 kg

THE SYSTEM CAN BE CUSTOMIZED IN ACCORDANCE WITH CUSTOMER REQUEST AND LOCAL TELECOM STANDARDS
CONTACT OUR OFFICE FOR MORE INFORMATION AND DETAILS

Trombone
portable voice recorder jammers

FEATURES:

- Complex ultrasonic interference in the frequency range from 24 kHz to 26 kHz and Complex Acoustic noise from 10 Hz to 1000 Hz
- Human speech-like noise in the frequency range from 300 Hz to 18 kHz
- Use of the ultrasonic interfering signal, soundless for human
- Continuous single-unit operation on a single charge up to 6 hour or 24 hour on battery charger
- Works both with build-in battery and on external power supply
- Multiphase algorithm for operational analysis of each ultrasonic channel with indication of damage
- Indication of battery charge level

The Trombone device family is designed for jamming voice recorders, mobile phone recording, radio and wired surveillance devices.

THE DEVICE GENERATES 3 TYPES OF NOISE:

- **Ultrasonic interference**, affecting on microphone diaphragm combined with **Acoustic noise**, which affects on AGC (Automatic gain control) of recording device, increasing the ultrasonic interfering signal;
- **HSLN** (Human speech-like noise) with periodic time-change for embarrassment of its fragmentation from valid signal.

The suppression area is from 0,5 to 10 meters (depends on the microphone). The Trombone is able of jamming the iPhone recorder as well professional recorders in 3 meters area using the ultrasonic noise mode.

The ultrasonic noise mode is absolutely silent for people. The Trombone Ultra affects a microphone diaphragm (the area is from 0,5 to 5 meters) by means of 6 ultrasonic transducers.

The complex acoustic noise is an addition to the ultrasonic mode: it increases the suppression by affecting Automatic gain control (AGC) of the recorder.

The Human speech-like noise mode is the only mode the user will hear (the volume can be regulated). This mode also protects voice data against interception by laser microphones.

The Trombone Wallet is the special model for covert operation designed as a double-zipper to be used without attracting attention. The difference from the Trombone Ultra is that Wallet design device is equipped with 12 Transducers and has no HSLN interference.

PRODUCT SPECIFICATIONS

MODEL	TROMBONE ULTRA	TROMBONE WALLET
Ultrasonic transducers quantity	6 units	12 units
Human speech-like noise frequency range	300 Hz to 18 kHz	not applicable
Ultrasonic interference directivity (horizontal/vertical)	90°/90°	120°/80°
Ultrasonic interference frequency range	24 kHz to 26 kHz	
Cancellation range (USR)	from 0,5 to 10 m (depends on microphone type)	
Type of radiated interference	comprehensive, time varying	
Power supply	Li-Ion 2600 mA/h	
Charging input voltage	9V, 1A	
Current consumption	1000 mA	
Battery charging current	500 mA	
Run time of fully charged battery	6 hours	
Charge time	10 hours	
Operating temperature range	+5...+40 C°	
Relative humidity	85%	
Dimensions	160x95x40 mm	200x120x50 mm
Weight	300 g	300 g

Trombone
stationary voice recorder jammers

The Trombone Ceiling mount is the model especially designed for covert operation inside of secured room and looks like standard public announcement speaker to be installed into a false ceiling. The device is highly efficient due to its' increased power provided by 24 ultrasonic transducers and 110° circular directivity pattern.

An operator can activate it via wired or RF remote control. The Trombone wire control is able of connecting 2 devices via the supplied junction box. The power is supplied by12V DC adapter or via direct connection to 220C AC with AC-DC converter installed in the device

The Trombone Ceiling hang system is the same as Ceiling mount but designed to be installed at concrete ceiling.

The Trombone Column is the model for table mount vertical of horizontal installation. The deice is covered with acoustic fabric and looks similar to audio speaker. The quantity of ultrasonic transducers can be chosen between12 and 24 units as well as directivity pattern between 55° and 110° circular.

An operator can activate it via wired or RF remote control. The Trombone wire control is able of connecting 2 devices via the supplied junction box. The power is supplied by12V DC adapter.

PRODUCT SPECIFICATIONS

MODEL	CEILING MOUNT	CEILING HANG	COLUMN
Ultrasonic transducers quantity	24 units	24 units	12 or 24 units
Ultrasonic interference directivity	110° circular	110° circular	55° or 110° horizontal
Human speech-like noise frequency range	not applicable	not applicable	300Hz to 10kHz
Ultrasonic interference frequency range	24 kHz to 26 kHz		
Cancellation range (USR)	from 0,5 to 10 m (depends on microphone type)		
Type of radiated interference	comprehensive, time varying		
Remote control	2m wired, 433MHz RF		
Power supply	12V / 220V	12V / 220V	10-13V
Current consumption	3A	3A	1.5A
Operating temperature range	+5...+40 C°		
Relative humidity	85%		
Dimensions	Ø225 mm	Ø225x185x140 mm	Ø112x273 mm
Weight	1.5 kg	1.7 kg	2 kg


ARGUS SOT
Sicherheit- und Ortungstechnik
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