



SIGNAL-T

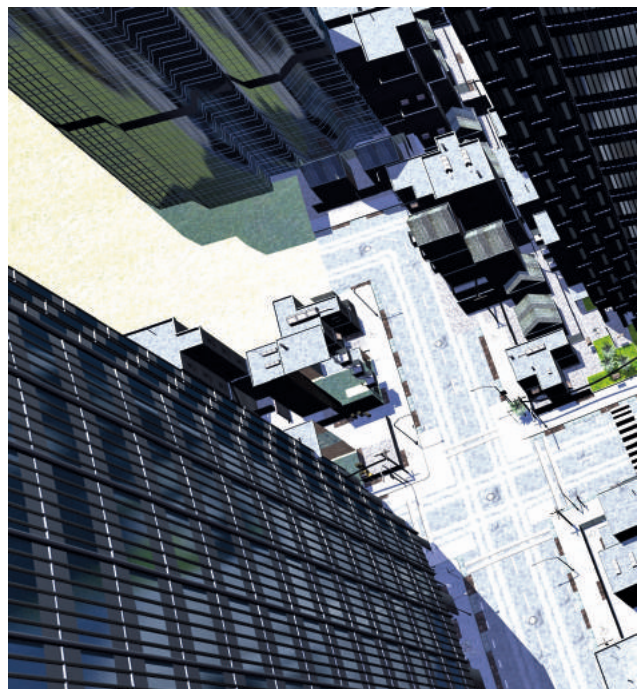
CATALOG 2018

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ST131 «PIRANHA II», ST 131N

Multifunctional detection
devices



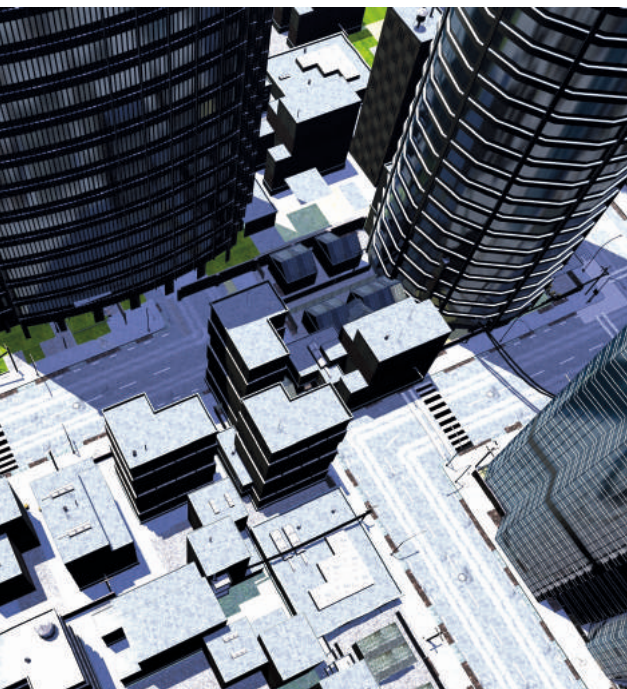
ST 154

RF Monitoring System



ST 171

JAMMER DETECTOR



ABOUT COMPANY

- The team of company «SIGNAL-T» has been working on Information Security market since 1993.
- The key directions of our activities are development and manufactures of equipment intended for detection of electronic eavesdropping devices.



ST 111
Professional
RF detector



ST 167
«BETTA»
Search
receiver



ST 167WB
Search receiver with option of analyzing WiFi
and Bluetooth networks



ST 169
Ster of cellular
and wireless data
jammers



ST 121
Multifunctional
Advanced Simulator



ST131«PIRANHA II», ST131N Multifunctional detection devices



PURPOSE

Multifunctional detection devices **ST 131 PIRANHA-II** and **ST131N** are intended for detecting and localization of eavesdropping devices as well as identification of natural and artificial sources of information leakage.

■ ST131N has additional option of **NON LINEAR JUNCTION DETECTOR IN WIRE LINE.**

The main types of the Bugging devices , for detection of which ST131 is designed are following:

The Bugging devices with transmission of information by radio channel:

- RF microphones including devices with storage and subsequent transfer of information (burst transmitter) and Frequency Hopping Spread Spectrum (FHSS);
- RF stethoscopes.
- Wireless cameras.
- Mobile phones and modems of the CDMA, GSM, 3G, DECT standards used without authorization.
- Devices using digital channels of data transmission of the 4G, WLAN and BLUETOOTH standards.
- GPS tracker

The Hardware wiretap that use telephone, coaxial, security and fire alarm lines for information transfer in audio and RF frequency range

Carrier Current Bug

The Bugs that are characterized by transmission of information in infrared, visible and ultrasonic frequency range



ST131«PIRANHA II», ST131N Multifunctional detection devices

DETECTION CHANNELS

ST131 has four detection channel which cover frequency range 10Hz -18GHz:

- **RADIO** **0.01-18000 MHz**
- **WIRE LINE** **0.0003-3000 MHz**
- **OPTICAL** **770-1600/550-1100nm**
- **ACOUSTOELECTRIC** **0.01-125KHz**

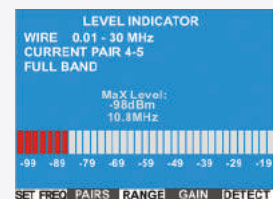
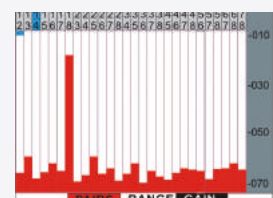
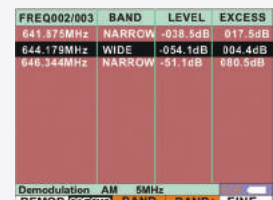
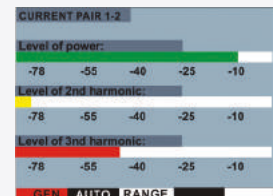
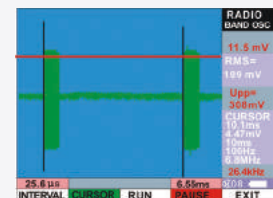
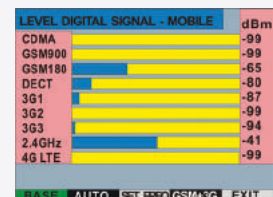
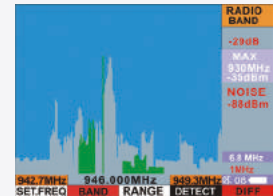
and option

- **NON LINEAR JUNCTION DETECTOR IN WIRE LINES for ST131N.**

The ST131 is used in two basic use case:

“**HANDHELD**” This variant is intended for operational movement on the survey area,

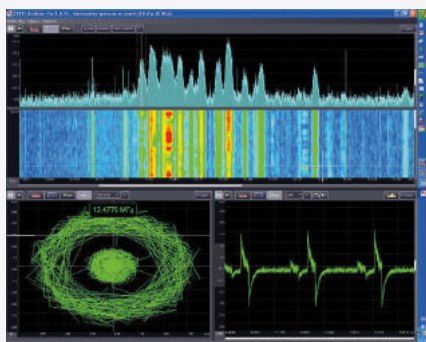
“**STATIONARY**” In this case the ST131 is used with PC running special software «ST131 ANALYZER PRO».



ST131«PIRANHA II», ST131N Multifunctional detection devices



SPECIAL SOFTWARE «ST131 ANALYSER PRO»



Spectral, oscillographic and vector analysis

Signal library

Table with 10 columns: Name, Start Freq, End Freq, Step, Start Channel, End Channel. It lists various wireless standards and their frequency ranges.

Name	Start Freq	End Freq	Step	Start Channel	End Channel
12.480-12.485 MHz	12.480	12.485	0.001	1	1
12.485-12.490 MHz	12.485	12.490	0.001	1	1
12.490-12.495 MHz	12.490	12.495	0.001	1	1
12.495-12.500 MHz	12.495	12.500	0.001	1	1
12.500-12.505 MHz	12.500	12.505	0.001	1	1
12.505-12.510 MHz	12.505	12.510	0.001	1	1
12.510-12.515 MHz	12.510	12.515	0.001	1	1
12.515-12.520 MHz	12.515	12.520	0.001	1	1
12.520-12.525 MHz	12.520	12.525	0.001	1	1
12.525-12.530 MHz	12.525	12.530	0.001	1	1
12.530-12.535 MHz	12.530	12.535	0.001	1	1
12.535-12.540 MHz	12.535	12.540	0.001	1	1
12.540-12.545 MHz	12.540	12.545	0.001	1	1
12.545-12.550 MHz	12.545	12.550	0.001	1	1
12.550-12.555 MHz	12.550	12.555	0.001	1	1
12.555-12.560 MHz	12.555	12.560	0.001	1	1
12.560-12.565 MHz	12.560	12.565	0.001	1	1
12.565-12.570 MHz	12.565	12.570	0.001	1	1
12.570-12.575 MHz	12.570	12.575	0.001	1	1
12.575-12.580 MHz	12.575	12.580	0.001	1	1
12.580-12.585 MHz	12.580	12.585	0.001	1	1
12.585-12.590 MHz	12.585	12.590	0.001	1	1
12.590-12.595 MHz	12.590	12.595	0.001	1	1
12.595-12.600 MHz	12.595	12.600	0.001	1	1
12.600-12.605 MHz	12.600	12.605	0.001	1	1
12.605-12.610 MHz	12.605	12.610	0.001	1	1
12.610-12.615 MHz	12.610	12.615	0.001	1	1
12.615-12.620 MHz	12.615	12.620	0.001	1	1
12.620-12.625 MHz	12.620	12.625	0.001	1	1
12.625-12.630 MHz	12.625	12.630	0.001	1	1
12.630-12.635 MHz	12.630	12.635	0.001	1	1
12.635-12.640 MHz	12.635	12.640	0.001	1	1
12.640-12.645 MHz	12.640	12.645	0.001	1	1
12.645-12.650 MHz	12.645	12.650	0.001	1	1
12.650-12.655 MHz	12.650	12.655	0.001	1	1
12.655-12.660 MHz	12.655	12.660	0.001	1	1
12.660-12.665 MHz	12.660	12.665	0.001	1	1
12.665-12.670 MHz	12.665	12.670	0.001	1	1
12.670-12.675 MHz	12.670	12.675	0.001	1	1
12.675-12.680 MHz	12.675	12.680	0.001	1	1
12.680-12.685 MHz	12.680	12.685	0.001	1	1
12.685-12.690 MHz	12.685	12.690	0.001	1	1
12.690-12.695 MHz	12.690	12.695	0.001	1	1
12.695-12.700 MHz	12.695	12.700	0.001	1	1
12.700-12.705 MHz	12.700	12.705	0.001	1	1
12.705-12.710 MHz	12.705	12.710	0.001	1	1
12.710-12.715 MHz	12.710	12.715	0.001	1	1
12.715-12.720 MHz	12.715	12.720	0.001	1	1
12.720-12.725 MHz	12.720	12.725	0.001	1	1
12.725-12.730 MHz	12.725	12.730	0.001	1	1
12.730-12.735 MHz	12.730	12.735	0.001	1	1
12.735-12.740 MHz	12.735	12.740	0.001	1	1
12.740-12.745 MHz	12.740	12.745	0.001	1	1
12.745-12.750 MHz	12.745	12.750	0.001	1	1
12.750-12.755 MHz	12.750	12.755	0.001	1	1
12.755-12.760 MHz	12.755	12.760	0.001	1	1
12.760-12.765 MHz	12.760	12.765	0.001	1	1
12.765-12.770 MHz	12.765	12.770	0.001	1	1
12.770-12.775 MHz	12.770	12.775	0.001	1	1
12.775-12.780 MHz	12.775	12.780	0.001	1	1
12.780-12.785 MHz	12.780	12.785	0.001	1	1
12.785-12.790 MHz	12.785	12.790	0.001	1	1
12.790-12.795 MHz	12.790	12.795	0.001	1	1
12.795-12.800 MHz	12.795	12.800	0.001	1	1
12.800-12.805 MHz	12.800	12.805	0.001	1	1
12.805-12.810 MHz	12.805	12.810	0.001	1	1
12.810-12.815 MHz	12.810	12.815	0.001	1	1
12.815-12.820 MHz	12.815	12.820	0.001	1	1
12.820-12.825 MHz	12.820	12.825	0.001	1	1
12.825-12.830 MHz	12.825	12.830	0.001	1	1
12.830-12.835 MHz	12.830	12.835	0.001	1	1
12.835-12.840 MHz	12.835	12.840	0.001	1	1
12.840-12.845 MHz	12.840	12.845	0.001	1	1
12.845-12.850 MHz	12.845	12.850	0.001	1	1
12.850-12.855 MHz	12.850	12.855	0.001	1	1
12.855-12.860 MHz	12.855	12.860	0.001	1	1
12.860-12.865 MHz	12.860	12.865	0.001	1	1
12.865-12.870 MHz	12.865	12.870	0.001	1	1
12.870-12.875 MHz	12.870	12.875	0.001	1	1
12.875-12.880 MHz	12.875	12.880	0.001	1	1
12.880-12.885 MHz	12.880	12.885	0.001	1	1
12.885-12.890 MHz	12.885	12.890	0.001	1	1
12.890-12.895 MHz	12.890	12.895	0.001	1	1
12.895-12.900 MHz	12.895	12.900	0.001	1	1
12.900-12.905 MHz	12.900	12.905	0.001	1	1
12.905-12.910 MHz	12.905	12.910	0.001	1	1
12.910-12.915 MHz	12.910	12.915	0.001	1	1
12.915-12.920 MHz	12.915	12.920	0.001	1	1
12.920-12.925 MHz	12.920	12.925	0.001	1	1
12.925-12.930 MHz	12.925	12.930	0.001	1	1
12.930-12.935 MHz	12.930	12.935	0.001	1	1
12.935-12.940 MHz	12.935	12.940	0.001	1	1
12.940-12.945 MHz	12.940	12.945	0.001	1	1
12.945-12.950 MHz	12.945	12.950	0.001	1	1
12.950-12.955 MHz	12.950	12.955	0.001	1	1
12.955-12.960 MHz	12.955	12.960	0.001	1	1
12.960-12.965 MHz	12.960	12.965	0.001	1	1
12.965-12.970 MHz	12.965	12.970	0.001	1	1
12.970-12.975 MHz	12.970	12.975	0.001	1	1
12.975-12.980 MHz	12.975	12.980	0.001	1	1
12.980-12.985 MHz	12.980	12.985	0.001	1	1
12.985-12.990 MHz	12.985	12.990	0.001	1	1
12.990-12.995 MHz	12.990	12.995	0.001	1	1
12.995-13.000 MHz	12.995	13.000	0.001	1	1

Data base of wireless standards

ST Monitoring Task

Name: New Task

Parameters

Channel: Radio Channel (12-3683 MHz)
Frequency: Radio Channel (4-18 GHz)
Start Freq: 32
Wired Channel (0.01-30 MHz)
Optical Channel (0.01-1.25 MHz)
Acoustic Channel (0.01-125 kHz)

Set averaging: x8
Set window: Hanning

Threshold

Exceeding of absolute level: -50 dBm
Exceeding of average value: 20 dB, with coeff of averaging: 128
Use hysteresis: 10 dB

Record signal to: [Browse...]
Recording time available: n/a
Merge events: [x]
Before evaluation skip: 5 cycles

OK Cancel

24/7 Monitoring mode

“ST131 ANALYZER PRO” software expands capabilities of ST131 for analyzing and processing of signals.

Firmware updates via internet.

Pulse Detector Window

Frequency Range: Start Frequency: 2000, End Frequency: 3000, Unit: MHz

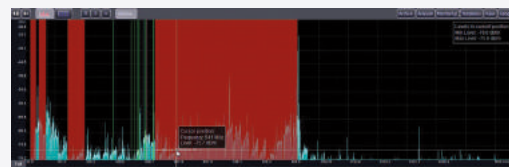
Pulse Duration Range: 0.01 us - 0.4 ms

Trigger Level: Automatic (0.00 mV)

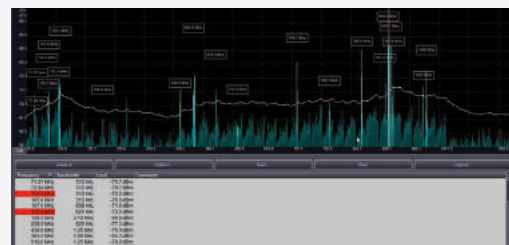
Current Frequency: 22 MHz, 402 MHz, 2692 MHz

Ready

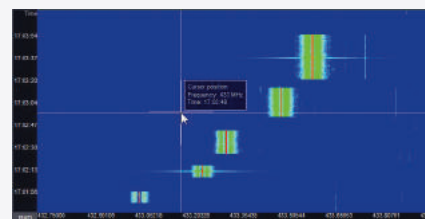
Detection of pulse signals



Using Templates



Automatic analysis and classification of signals



Waterfall mode

ST131«PIRANHA II», ST131N Multifunctional detection devices



COMPLETE SET

Main unit	1
UHF converter (ST131.UHF)	1
Wire line adapter ST 131.AWL (ST 131.AWLN for ST 131N)	1
Wire line radio adapter ST 131.RAWL	1
Adapter «F- BNC-SMA»	1
Telescopic antenna	1
Broadband UHF antenna (ST131.UHF.A)	1
Test Leads	1
Power supply unit	2
Main unit supporting block	1
Main unit shoulder holder	1
Tripod	1
USB cable	1
AA batteries	8
Headphones	1
USB flash drive	1
User manual	1

ADDITIONAL COMPLETE SET

1. SHF antenna-detector ST131.SHF
2. Infrared probe ST131.IR
3. Magnetic field probe ST131.MAG
4. Testing device ST131.TEST

SPECIFICATIONS

DIGITAL SIGNAL PROCESSING MODULE

Simultaneous processing frequency range, MHz	0.01-30
Resolution of ADC, bits	10, 14, and 16
Number of FFT points	32768 (with PC software) 512 (the ST131 main unit)
DDC filter bandwidth, MHz	0.0005-10 MHz
Demodulators	AM, FM, SSB, TV (AM)
Detectors	RMS, average, peak-hold, quasi-peak

RADIO CHANNEL

Frequency range 1, MHz	0.01-30
Displayed noise level FULL RANGE, dBm	Minus 110 (minus 130 for PC software)
Input signal maximum level, dBm	5
Frequency range 2, MHz	30 - 4400
Displayed noise level	
• FULL RANGE, dBm	Minus 90 (minus 100 for PC software)
• 1 KHz bandwidth, dBm	Minus 110
Maximum input level, dBm	5
Analysis speed, not less, GHz/sec, at least	10
Input attenuation value, dB	0 - 30 with step 5
Identifiable standards of data communication	CDMA, GSM, 3G, 4G, WLAN, DECT
Frequency range 3, MHz	4000 - 18000
Threshold sensitivity, dBm	Minus 65

“WIRE” CHANNELS

Frequency range 1, KHz	0.3-15
Displayed noise range, not worse, dBm	Minus 115 (minus 140 for PC)
Common mode rejection ratio (CMRR), not less, dB	60
Maximum allowed input voltage, V	250
Frequency range 2, MHz	0.01-30
Displayed noise level FULL RANGE, dBm	Minus 90 (minus 120 for PC)
Input signal maximum level, dBm	10
Maximum allowed input voltage, V	250
Frequency range 3, MHz	30-3000
Displayed noise level FULL RANGE, dBm	Minus 90 (minus 100 for PC)

“OPTICAL” CHANNEL

Threshold sensitivity, dBm	Minus 70
Dynamic range, not worse, dB	75
Frequency range, MHz	0.01-10

“ACOUSTO-ELECTRIC” CHANNEL

Frequency range, KHz	0.01-125
Displayed noise level FULL RANGE, dBm	Minus 110 (minus 140 for PC software)

NON-LINEAR JUNCTION DETECTOR

Frequency of test signal, KHz	150-220
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MAIN UNIT

Dimensions, mm	190 x 97 x 50
Weight (without batteries), kg	0.8
Indication	TFT, 3.5", 240x320, 262144 colors
Interface	USB 2.0, up to 224 Mbit/s
Supply current, A	0.4-0.6
Power supply	6 AA type batteries (or rechargeable batteries)

PURPOSE

- The «ST131.TEST» is intended to control operability of ST131.

The main unit has six control signal sources which provide a check of all detection channels

SPETIFICATIONS

OUTPUT "UHF":

Frequency, MHz	200, 600, 1000, 1750, 3500
Level of signal, dBm	-45+/-5
Type of modulation	AM, FM, FHSS
Frequency of modulation, Hz	300, 600, 1000, 1500

OUTPUT "CH2" AND SOURCE OF MAGNETIC FIELD "MAG":

Frequency, kHz	1, 5, 15, 60, 120
Level of signal, dBm	-35+/-5

OUTPUT "AWL"

Frequency, kHz	1, 3, 5, 10, 14, 500, 1000, 5000, 10000, 20000
Level of signal, dBm	-30+/-3

SOURCE OF SHF RADIO EMISSION "SHF"

Frequency, GHz	8
Type of modulation	PCM

SOURCE OF INFRARED EMISSION "IR":

Spectral range, by level of 10%, nm	750÷1100
Type of modulation	PCM

POWER

Power	Li pol akk, 2.2A/h
Maximal current consumption, mA	<500
Dimensions of main unit, mm	110X60X28

COMPLETE SET

1. Main unit
2. Cable "RJ-45"
3. Cable "SMA-SMA"
4. Adapter "F-BNC"
5. Power supply



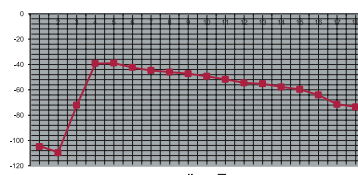
SETTINGS..
RADIO 30 - 4100MHz
RADIO 4 - 18GHz
WR-RD 0.01 - 30MHz
WIRE 0.3 - 15kHz
WIRE 30-1000MHz
OPTIC .001- 30MHz
ACOUST .01-125kHz

RADIO 30 - 4100MHz
Carrier frequency
3500.00MHz
Modulation AM
Freq 600Hz
Power ON

Additional probes for ST131 PIRANHA II and ST131N

ST131.SHF SHF ANTENNA-DETECTOR

Frequency range, MHz	4000-180000
Threshold sensitivity, W/cm ²	2×10^{-10}
Directional pattern width, degree	30-60



ST131.IR INFRARED PROBE

Frequency range, MHz	0.01-30
Dynamic range, dB, not worse	75
Spectral range, nm	770-1600
Angle of sight, degree	30
Total length of stand, m	0,9
Maximal angle of turn, degree	180



ST131.MF MAGNETIC FIELD PROBE

Frequency range, Hz	30 – 30000
Threshold sensitivity, A/m * Hz ^{1/2} , less than	2×10^{-6}



ST131.OV provides biasing voltage in wired line that is used to activate connected devices

Maximum input voltage, V	250
Input	SYMMETRICAL
Input Impedance, kOm	50
Input Impedance, kOm	+/-20
Input Impedance, kOm	+/-2

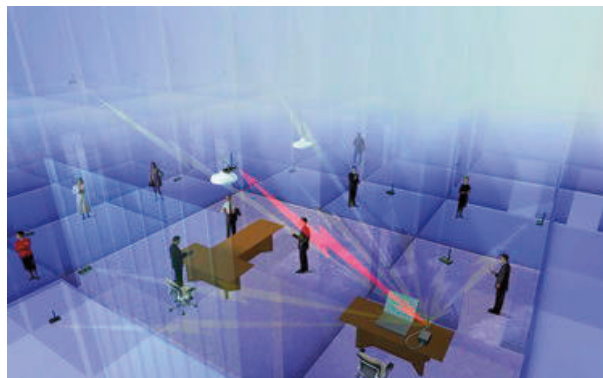


PURPOSE

The main purpose of the system is the detection of unauthorized transmission of data in the area of surveillance.

These areas include::

- Meeting rooms and offices
- Exam rooms and testing facilities
- Prisons and correctional facilities
- Areas with limited use of cell phones, radios, etc.



KEY FEATURES

- Simultaneous monitoring from 1 to 128 local areas.
- No special training required.
- Many opportunities for selecting the configuration of the system.
- Data transmission over wired (ETHERNET) and wireless (WLAN) networks.
- 24/7 monitoring and the event log are provided
- The location finding mode for localization the source of transmission is available, when using multiple CMs or using special SEARCH MODULE

ST154 DETECTS

- RF Bugging devices
- Cell phones and modems (CDMA450, GSM 900, GSM 1800, 3G)*, wireless data transmitters (4G, WLAN, BLUETOOTH 2.4 and 5 GHz), cordless phone systems (DECT) as well as special technical devices using these data transmission standards.

ST154 RF Monitoring System

GENERAL DESCRIPTION

The main unit of the system is the control module (hereinafter **CM**) which performs the reception and analysis of signals.

Detection area of the **CM** depends on many factors and the estimated average value is 10 to 50 square meters.

In addition, there is the search module (SM) that ensures determination the exact location of the radio transmission device.



Technical specifications of the CM:

Frequency range	25-6000 MHz
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Threshold sensitivity, dBm

CDMA450, GSM900, SM1800, 4G,	-80
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3G	-100
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Maximum input level, dBm	-5
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Interfaces USB, WLAN, ETHERNET	
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Supply voltage, V	5
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Consumption current, mA, not more than	800
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Dimensions without antenna mm	109x60x27
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DESCRIPTION OF THE CM

THERE ARE FOUR TYPES OF MODULES:

- **ST154.A – Standalone CM** Alarm indication carried out by sound and light alarms which are located on the CM. Pre-installation parameters are set via USB port.

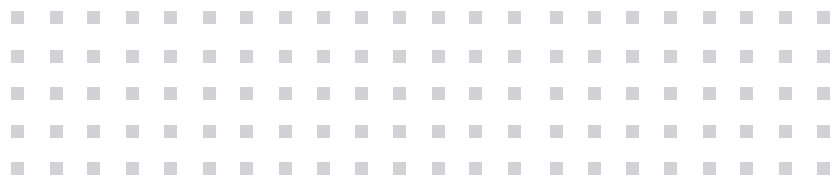
This type of **CM** is intended primarily for the control within the one room.

- **ST154.W = ST154.A+ transmitting via WLAN to the PC**

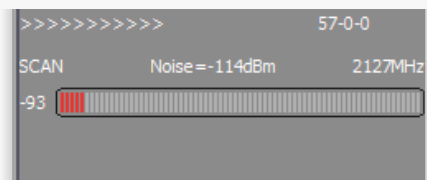
- **ST154.E - ST154.A+ transmitting via ETHERNET to the PC**

- **ST154.E+POE = ST154.A+ transmitting via ETHERNET with POE to the PC**

This variants of **CM** are intended for cover more than one room in a multi-story building with alarm transmission on a computer.



Software



Configuration of the CM can be performed both individually and for the whole system. Also there are many adjustable options.

Each CM is assigned its virtual image that allows to watch changes of the radio emission in the real-time mode.

The logging mode is always enabled and there are a lot of options of sorting events depending on criteria you need

Event Log #1

Date/Time	Duration	Module	Signal Type	Signal Level	Exceeding	Freq.	New
2018.10.18 19:04:20	0:00:09	1.1	SCAN	-104 dBm	5 dBm	811	
2018.10.18 19:19:48	0:00:16	1.1	SCAN	-93 dBm	16 dBm		Load...
2018.10.18 19:20:21	0:00:21	1.1	SCAN	-94 dBm	15 dBm		Save...
2018.10.18 19:21:03	0:00:06	1.1	SCAN	-92 dBm	17 dBm	2116	Export...
2018.10.18 19:28:17	0:04:18	1.1	SCAN	-90 dBm	19 dBm		Filter...
2018.10.19 13:13:01	In progress	1.1	SCAN	-96 dBm	13 dBm	2127	

Refresh ☒ Refresh every 10 s Max events for module: 1000 Events Shown: 6 Close

Locating the source of the radio signal

For locating the source of the radio signal there are two ways:

- Processing data from three or more CM is available. Location of the RF device will be immediately displayed on the floor plan.



- Use the SEARCH MODULE. Information about the signal is transmitted to the SEARCH MODULE via the USB port. The search is based on the signal level indication on the screen of the SEARCH MODULE."

ST167 "BETTA" Search receiver

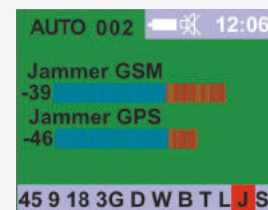
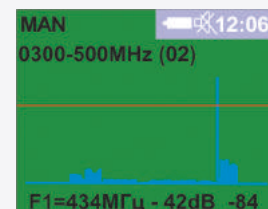
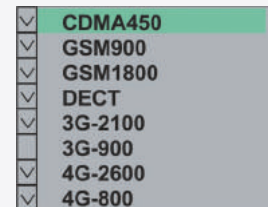
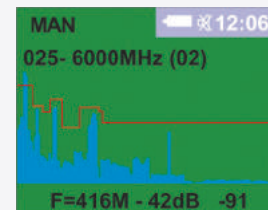
PURPOSE

■ ST167 "BETTA" is intended for:

- detecting and locating of radio transmitting bugging devices in the TSCM survey
- Evaluation of employment of WLAN and DECT channels
- Measuring the level of the GSM, 3G, 4G base stations

KEY FEATURES

- Detect of analog and digital signals in the 25 - 6000 MHz frequency range
- Special algorithms for identification of CDMA 450, GSM, 3G, 4G, DECT, WLAN 2.4, 5GHz and BLUETOOTH
- Frequency measurement of analog signals
- Sound control (AM and FM demodulation)
- 24 hour monitoring with the creation of a database of events. Work on schedule.
- Special mode Jammers detection, including GPS/GLONASS
- SMS detection special mode
- Separate indication of channels for 3G, 4G, DECT, WLAN 2.4 and 5GHz
- Multiple range setting
- Special software "ST167 ANALYZER"
- Firmware update via internet
- Extremely small dimensions for this type of device



ST167 "BETTA" Search receiver



SPECIFICATIONS

Frequency range, MHz	25-6000
Threshold sensitivity, dBm	-80 (1000MHz) -55 (5000MHz)
Passband, MHz	2, 5, 10, 15, 20
Average dynamic range, dB	70
Frequency measurements accuracy, kHz	10
Power Supply	Li-Pol Battery 4.3V (2.2A/h)
Average current consumption, mA	500
Interface	USB2.0

Overall dimensions main unit, mm 90X54X21

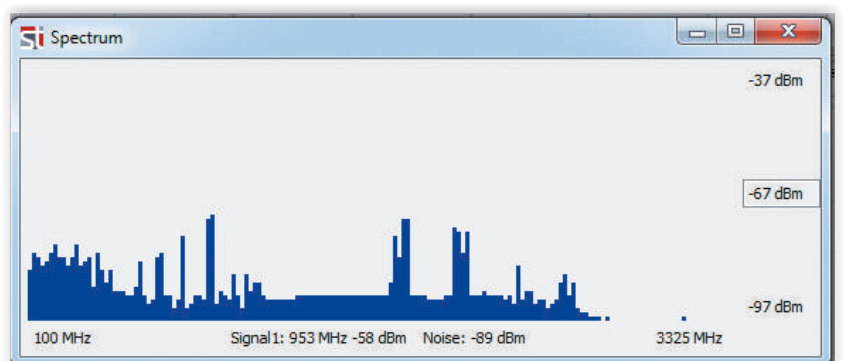
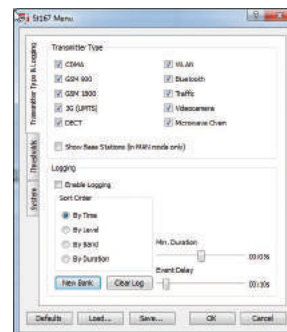
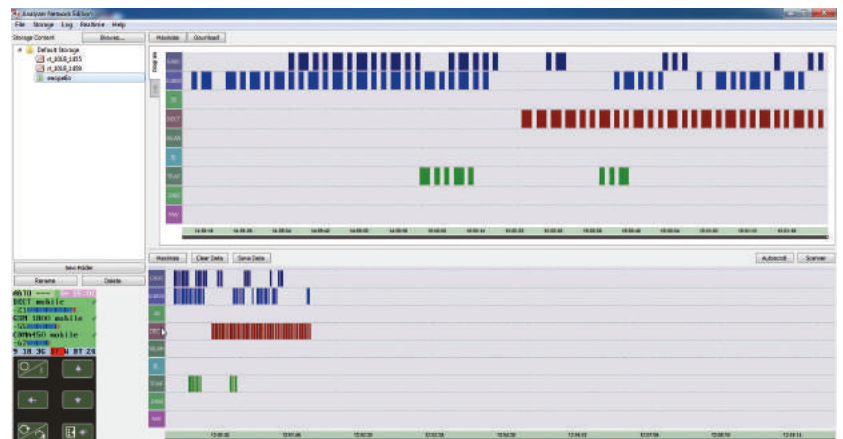
COMPLETE SET

Main unit	1
RF antenna	1
USB cable	1
Power supply	1
USB flash drive	1
USB flash drive with software and «Technical description and operating manual»	1

SPECIAL SOFTWARE «ST167 ANALYZER» allows:

Create a database of logged events

Operate the device directly from a computer.



ADDITIONAL FEATURES

External devices control. Made by built-in relay with control circuit. Designed for additional indication devices connection and cellular jammers control («R» letter is added to the device name)

Vibrocall («V» letter is added to the device name)

ST167WB

Search receiver with option of analyzing WiFi and Bluetooth networks

PURPOSE

- **ST167WB is a modification of ST167 "Betta".**

ADDITIONAL FEATURES

- Displaying list of access points (WLAN), their names, MAC addresses, used channel and signal strength.
- Displaying list of Bluetooth devices, their names, MAC addresses, type of devices and signal strength

KEY FEATURES

- Detect of analog and digital signals in the 25 - 6000 MHz frequency range
- Special algorithms for identification of CDMA 450, GSM, 3G, 4G, DECT, WLAN2.4, 5GHz and BLUETOOTH
- Frequency measurement of analog signals
- Sound control (AM and FM demodulation)
- 24 hour monitoring with the creation of a database of events. Work on schedule.
- Special mode Jammers detection, including GPS/GLONASS
- SMS detection special mode
- Separate indication of channels for 3G, 4G, DECT, WLAN 2.4 and 5GHz
- Multiple range setting
- Special software "ST167 ANALYZER"
- Firmware update via internet
- Extremely small dimensions for this type of device



Selected network:
HP - Print - 91 - Laser
MAC address:
BC:85:56:0D:77:91
WiFi channel: 02
Level (dBm):
-63

WirelessNet -90 03
Linet -54 01
HP-Print -63 02
Netpro -66 09
MyNet -66 11

Searching for
Bluetooth device..

Selected device:
IPhone
Device address:
D6:CF:9C:BE:42:EC
Type 4FDB
Level (dBm):
-60

ST111

Professional RF detector



PURPOSE

■ ST111 IS DESIGNED FOR DETECTING AND LOCATING OF RADIO TRANSMITTING BUGGING DEVICES, SUCH AS:

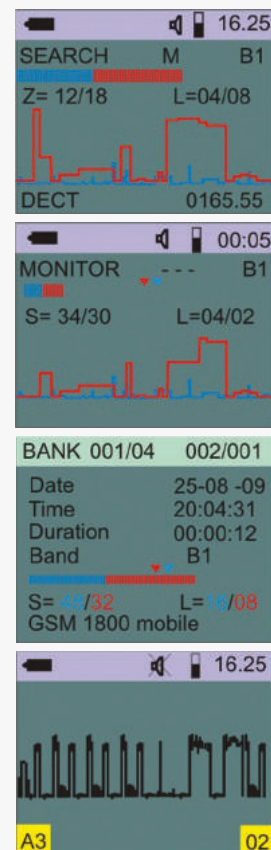
- Radiomicrophones, Including Burst transmitters, and devices with frequency hopping
- GPS TRACKER
- GSM bugs
- Wireless video cameras, stethoscopes
- Unauthorized used WLAN and DECT devices



Principle of operation of ST110 is based on broad band demodulation of electrical field.

KEY FEATURES

- Separate indication of analog and digital signals
- Displaying of identified signals of GSM (2G), DECT, WLAN (2.4GHz)
- Frequency meter
- Oscillograph
- Timing diagram
- Special software "ST111 ANALYZER"
- Firmware update via internet
- 24/7 monitoring
- Log of events



ST 111

Professional RF detector

SPECIFICATIONS

Frequency range 1, MHz	50-2500
Frequency range 2, MHz	2000-7000
Threshold input sensitivity, dBm, less than	-75 (50 MHz) -70 (1500 MHz) -50 (2500 MHz)
Threshold sensitivity, W/cm ² , less than	2·10 ⁻¹⁰ (2500-7000 MHz)
Frequency range of frequency meter, MHz	50-2500
Sensitivity of frequency meter, dBm	-35 (50 MHz) -50 (1500 MHz) -20 (2500 MHz)
Inaccuracy of frequency measuring, %	0.005
Dynamic range of indication 1, dB	55
Dynamic range of indication 2, dB	30
Indication	color TFT display 169X128
Internal power supply	Li-pol acc. battery 3.6V
Consumption current, mA, less than	110
Dimension, mm	90x54x21
Weight, kg, less than	0.13
Gross weight, kg	0.25

COMPLETE SET

Main unit	1
HF antenna	1
USB cable	1
Charger/power supply	1
USB flash drive with software and «Technical description and operating manual»	1

- **SPECIAL «ST 111 ANALYZER» SOFTWARE** is designed for:
 - view real time graphs of the operation on ST 111;
 - the ST 111 remote full control using PC;
 - extended settings assignment for MONITORING mode;
 - load and display textual and graphical information of the operation in MONITORING mode;
 - firmware updating via internet.



ST169

Tester of cellular and wireless data jammers



PURPOSE

- **ST 169 is designed for estimating the emission level of jammers that suppress signals of CDMA-450, GSM, 3G, 4G, Bluetooth, DECT and WLAN data transmission standards.**

- Definition of the real area of suppression
- A check of conformity the frequency range of the jammer to the frequency range and channels of cellular and wireless data transmitters
- Easy to use
- Rapid results

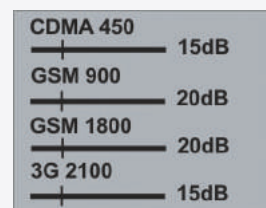
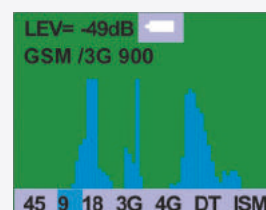
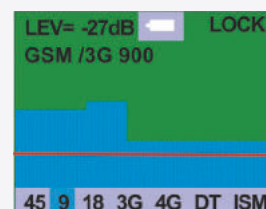
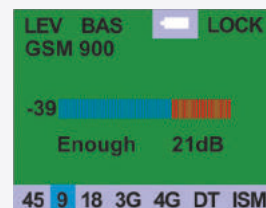


OPERATION ALGORITHM

- Measurement, processing and displaying the emission level of base stations and jammers in numerical and graphical forms
- Displaying the result of the check in the form of an information line.

KEY FEATURES

- Selective reception of radio signals in the frequency ranges of selected standards.
- Comparison signals of the base stations and signal of jammer
- Selection of suppression ratio



ST169

Tester of cellular and wireless data jammers

SPECIFICATION

Frequency range, MHz	463-467.5 925-960 1800-1900, 2110 - 2170, 2400 – 2483.5 2600-2680 5150-5825
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Threshold sensitivity, dB	925-960 1800 - 1900 2110- 2170 2400-2483.5 5150-5825	-75 - 85 -77 -66 -50
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Average dynamic range, dB	65
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Indication	OLED display 160x128
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Power supply	Li-pol battery 2.2A/h
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Interface	USB2.0
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Overall dimensions of main unit, mm	90x54x21
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COMPLETE SET

Main unit	1
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HF antenna	1
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USB cable	1
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Charger/power supply	1
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USB flash drive with the "Technical description and operating manual"	1
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ST121 Multifunctional Advanced Simulator



PURPOSE

■ **ST121 is designed to simulate operation of almost all types of bugging devices, such as:**

- RF microphone
- Carrier current
- Optical
- Ultrasonic

It also imitates electromagnetic interference of electronic devices (TEMPEST), such as solid state dictaphones and cell phones



PLACES OF ACTIVITY

- Training of TSCM personnel
- Testing functionality of the TSCM equipment
- Laboratory measurement

KEY FEATURES

- Complete signal generator in a wide frequency range: 0.01-20MHz and 100-6000MHz
- Self-powered
- Small dimensions
- Robust design



GSM 3G DECT WF BT
Carrier frequency
898.000MHz
Standard GSM
P=+15dBm 32mW

LF/MF .01-120kHz
Carrier frequency
001000 Hz
Modulation PWM
Freq 10Hz
Ratio 1:5
Power 100%

HF/SHF 0.1-6 GHz
Carrier frequency
3500.00MHz
Modulation AM
Freq 600Hz
P=+17dBm 50mW

SETTINGS..
RF/UHF 0.1 - 6GHz
GSM 3G DCT WF BT
LF/MF .01 - 120kHz
RJ45 .01 - 20000kHz
220V 30 - 20000kHz
IR 940nM
Memorize data

ST121

Multifunctional Advanced Simulator



COMPLETE SET

Main module	1
HF antenna	1
«RJ-45» cable	1
«220V» cable	1
«3/RJ-45» cable	1
Power supply/charger 5V/1A	
Technical description and operating manual	1

TECHNICAL SPECIFICATIONS

“RF/UHF” socket

Frequency range, MHz	100-6000
Frequency-tuning step, kHz	10, 100, 1000, 10000, 100000
Signal level, dBm	-42 – +14
Signal	Sinusoidal, DSSS, FHSS, PULSE
Modulation	AM, FM
Data transmission standards for imitation	GSM, 3G, DECT, WLAN, BLUETOOTH
Bandwidth of Hopping, MHz	1, 6, 10, 20, 50, 100
Number of Hopping Channels	25, 50, 125, 250
FHSS frequency of hopping, Hz	1, 2, 4, 8
DSSS bandwidth, MHz	0.3, 0.5, 1, 2, 4
PULSE Signal transmission time, sec	0.0001- 99
PULSE Signal accumulation time, sec	0.01-5999

“RJ-45” socket

Frequency range, kHz	0.01-20000
Maximum signal amplitude, V	3.5
Modulation	AM, FM, PWM

“220V” socket

Frequency range, kHz	30-20000
Maximum signal amplitude, V	3.5
Maximum input voltage, V	380
Modulation	FM, DSSS, PWM

“IR” emitter

Wave length, nm	940
Subcarrier frequency range, kHz	0.01- 5000
Modulation	AM, FM, DSSS

“LF” socket

Frequency range, kHz	0.01-120
Maximum output power, W	0.7 (power supply),
Impedance, Ω	8
Modulation	AM, FM, DSSS

Magnetic field emitter

Equivalent magnetic moment of magnetic field source with frequency 1kHz, A*m ²	2*10 ⁻⁴
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Power

Power supply	Li-Polymer battery, 2.2A/h or 220V
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Main module dimensions, mm

110X60X28

PURPOSE

■ ST171 IS DESIGNED FOR DETECTION OF:

- Cellular jammers (blockers)
- GPS/GLONASS receiver jammers (blockers)
- Ultrasonic and electromagnetic jammers of sound recording devices, dictaphones etc.

■ ADDITIONAL FEATURES:

- Detection logging
- Environment snapshot at detection moment
- Location fixation at detection moment
- Base stations signals spectrogram indication in 900 and 1800MHz, sonic and ultrasonic ranges.

KEY FEATURES

• Control and indication of work results is done by using of Android device – smartphone or tablet. Data transfer between smartphone and RM is done using BLUETOOTH connection. Alarm signal – vibrating and display indication.

• Special knowledge for device operation is not required. It is enough to select needed working mode and and further installation will be done automatically.

• For advanced users additional settings are provided.

• Fast detection time: 0.1-1.5sec

• Detection jammer in the car at speeds up to 100km/h

• Detection range of low power portable cellular networks blockers on open space is about 10 meters, ultrasonic Dictaphone blockers – about 5 meters.



SPECIFICATION

Frequency range, MHz	901-907, 925-975, 1570-1580, 1795-1820
Dynamic range, dB	65
Interface	Bluetooth, USB
Internal power source	Li-ion battery 3.6V
Current consumption, mA, no more than	450
Degree of protection	IP54
Temperature range, C	-30/+30
Dimensions, mm	83X52x15
Weight, kg	0.06

ST 171 Jammer detector

Field of use

«OFFICE»

- Visit to the premises, where, imperceptibly for others, it is necessary to control presence of cellular jammers or Dictaphone blockers.



«CAR»

- Stationary control of cars for cellular blockers or GPS receivers presence on entry/exit of the parking area. In this case RM is installed in security booth or any other place nearby the barrier.



- Stationary control for cellular blockers or GPS receivers in cars moving along a highway, street etc.



- Search of cellular blockers or GPS receivers, installed in stationary car, for example in stolen one. Car can be as inside the garage, as on open area.



COMPLETE SET

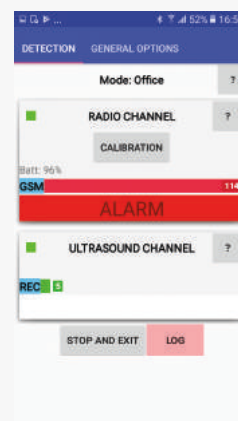
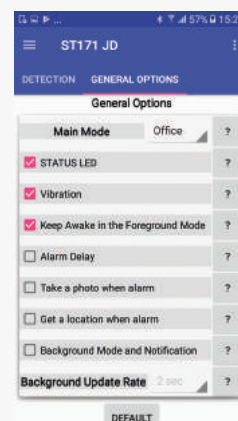
Receiving module ST171R

Charger

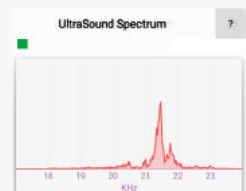
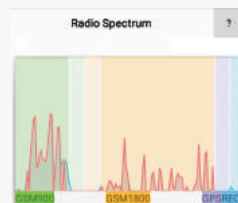
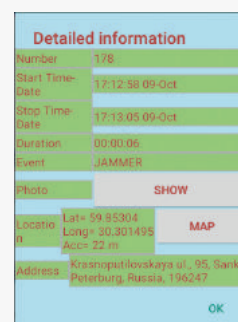
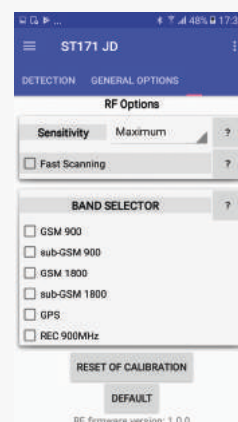
«USB micro – USB» cable

USB flash drive

BASIC WINDOWS



ADDITIONAL WINDOWS FOR MANUAL CONFIGURATION



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