TS-Market Product Catalogue

www.SpyShopEurope.com

EDIC-mini Tiny

Series Characteristics

Voice recorders of the Edic-mini Tiny series are professional devices, intended for making high quality record of voice messages into the built-in flash memory. You can playback recorded messages using the headphones and save them into your PC as standard sound files.

Tiny voice recorders are of extremely small size and weight, have a long record duration (varies depending on the modification - up to 1200 hours) and autonomy operation (up to 160 hours), a wide dynamic range and a highly sensitive built-in microphone.

Easy-to-use and versatile software allows selectable sample rate and compression algorithms to extend recording duration with recording modes - voice activation, continuous loop, single pass & scheduled timer. Windows software controls the device configuration, file transfer and message listings, which allow you to listen to recordings through your PC. Recorders of this series use ADPCM compression method, which makes possible perfect compressing of any sounds without specific distortions.

Voice Activating System (VAS), supported by Tiny audio recorders, effectively compresses pauses in messages, therefore increasing the actual record time. Using this system saves memory during pauses, but the time intervals remain. When downloading records to PC, the pause length can be either restored (as silence) or passed, depending on the settings made.

APPROVED GUINNESS WORLD RECORDS — THE KEEPER OF THE RECORDS

The Edic-mini Tiny series is the Guinness World Records winner.

B21 and A31 models were registered in Guinness World Records as the world's smallest professional audio recorders.

Having traditionally small size, the models of Edic-mini Tiny series feature the following:

- Recording time: up to 1200 hours;
- Battery life: up to 160 hours (the Solar Model can work uninterruptedly in loop recording mode, if there is enough sun light);
- Extended recording frequency band (100-10000 Hz), sampling rate: from 5.5 to 22 K Hz;
- 4 compression modes:
    - without compression, u-law (64 K bit/sec), ADPCM2, ADPCM4 (16K bit/sec);
- Built-in microphone sensitivity 7-9 m;
- Signal/noise ratio: - 64 dB;
- Data exchange with the PC through the supplied USB adapter (USB 1.1 interfaces);
- Built-in real time clock;
- Timer recording;
- Information protection system;
- Unique digital signature of the recordings made;
- Opportunity to use the recorder both for message recording and as a flash-disc to store and transfer data of any format;
- Warranty period - 1 year.

EDIC-mini Tiny B47
Miniature digital audio recorder

Compact digital Edic-mini Tiny B47 is able to match many special requirements operating up to 160 hours from a single charge and recording up to 1200 hours without a break. Voice Activation System provides with even longer recording time within the fixed memory volume.

Opportunities and advantages

B47 features high sensitivity microphone and wide frequency band, password protection and timer-recording function. And all this is realized in the extremely small size with the simplest control. Pleasant cylindrical shape and metal case of the recorder are very convenient. B47 is powered by three batteries, G 13-A or zinc-air batteries that provide continuous recording for 160 hours. Such batteries can be easily purchased in any store.

Technical characteristics

- Dimensions: 50x15 mm;
- Weight: 19 g;
- Case: Metal;
- Power supply: G13-A battery or air-zinc batteries;
- Battery life in record mode: 40h from G13-A and 160h from air-zinc batteries;
- Battery life in VAS mode: 168h;
- Battery life in stand-by mode: 4,5 months;
- Built-in flash memory: 2Gb, 4Gb, 8Gb;
- Interface: USB 1.1
- Audio recording format : Mono;
- Frequency band: 100-10000 Hz;
- Dynamic range: -64 dB;
- Sample rate: 5.5, 8, 16, 22;
- Voice Activating System: YES;
- Timer recording: YES.

Modifications

B47-300h
B47-600h
B47-1200h

Last digits in the models' names show the maximum recording duration (sampling rate 8 kHz, 2 bit ADPCM) in hours.

Delivery set

| Voice recorder | USB cable | Software CD | Instructions | Battery, 3 pieces |

Optional accessories

- External microphone with compressor
- Programmed External Microphone with AGC

Recording duration

in the mode: 2 bit ADPCM, and sampling rate 8 kHz, 16 K bit/sec

Modification	Recording time, hour	Memory size, Gb
300 h	300	2
600 h	600	4
1200 h	1200	8

EDIC-mini Tiny A45-1Gb

Miniature digital audio recorder

Thinner, then a pen! Unprecedented shape and continuous recording during up to 50 hours.

Opportunities and advantages

The new Tiny series model is produced in thin cylindrical case made of aluminum, just 9 mm in diameter. Record control is performed by a switch at the front edge of the case. The recorded data is uploaded onto the PC with the help of USB cable included into the package.

A45 is a professional device with well-implemented voice-recording features: modest, but sufficient recording time, long battery life, fast and convenient transfer to computers.

Technical characteristics

- Dimensions: 79x9 mm;
- Weight: 13 g;
- Case: Metal;
- Power supply: rechargeable battery;
- Recording time: 150h;
- Battery life in record mode: 50h;
- Battery life in VAS mode: 3000h;
- Battery life in stand-by mode: 7 months;
- Built-in flash memory: 1Gb;
- Interface: USB 1.1
- Audio recording format : Mono;
- Frequency band: 100-10000 Hz;
- Dynamic range: -64 dB;
- Sample rate: 5.5, 8, 11, 16, 22;
- Voice Activating System: YES;
- Timer recording: YES.

Modifications

A45-1Gb-150h

Last digits in the models' names show the maximum recording duration (sampling rate 8 kHz, 2 bit ADPCM) in hours.

Delivery set

| Voice recorder | USB cable | Software CD | Instructions |

Optional accessories

- External microphone with compressor
- Programmed external microphone with AGC

Recording duration

in the mode:
2 bit ADPCM, and sampling rate 8 kHz, 16 K bit/sec

Modification	Recording time, hour	Memory size, Gb
150 h	150	1

Please note!

This model is also available with leather case, handworked with application of the most exquisite technologies in various color tints and design - every case is individual and unique.

Miniature digital audio recorders

EDIC-mini Tiny16 series

Voice recorders of the Edic-mini Tiny16 series are professional devices, intended for making high quality record of voice messages into the built-in flash memory. You can playback recorded messages using the headphones and save them into your PC as standard sound files.

Tiny voice recorders are of extremely small size and weight, have a long record duration and autonomy operation, a wide dynamic range and a highly sensitive built-in microphone.

This series of recorders is distinguished by higher recording quality because of its 16 bit audio codec that provides more accurate signal digitizing. Built-in AGC system provides flexible adjustment of settings according to the acoustic conditions. All these characteristics including microphone's high sensitivity allow get high-quality recording in challenging environment: disturbances, noise, or a long distance.

Easy-to-use and versatile software allows selectable sample rate and compression algorithms to extend recording duration with recording modes - voice activation, continuous loop, single pass & scheduled timer. Windows software controls the device configuration, file transfer and message listings, which allow you to listen to recordings through your PC. Recorders of this series use ADPCM compression method, which makes possible perfect compressing of any sounds without specific distortions.

Voice Activating System (VAS), supported by Tiny16 audio recorders, effectively compresses pauses in messages, therefore increasing the actual record time. Using this system saves memory during pauses, but the time intervals remain. When downloading records to PC, the pause length can be either restored (as silence) or passed, depending on the settings made.

Stylish design makes the models ideal for custom surveillance installations.

Having traditionally small size, the models of Edic-mini Tiny16 series feature the following:

- Recording time: up to 1200 hours;
- Battery life in record mode: up to 110 hours;
- Recording frequency band (100-10000 Hz), sampling rate: from 50 to 20 KHz;
- 4 compression modes: without compression, u-law (64 K bit/sec), ADPCM2, ADPCM4 (16K bit/sec);
- Recording mode: Mono
- Built-in microphone sensitivity 10-12 m;
- Signal/noise ratio: - 80 dB;
- Data exchange with the PC through the supplied USB adapter (USB 1.1 interfaces);
- Built-in real time clock;
- Timer recording;
- Information protection system;
- Unique digital signature of the recordings made;
- Opportunity to use the recorder both for message recording and as a flash-disc to store and transfer data of any format.

Telesystems Ltd.

10/1, Sosnovaya alleya St. Zelenograd, Moscow, 124489, Russia

To Honored Customers

Telesystems Ltd hereby appoints TS-Market Ltd as its only unique Export Agent of all product lines of digital voice recorders, produced by Telesystems Ltd.

Due to the fact that TS-Market Ltd. is unique manufacturer's Export Agent, has the right to provide Certificate of Origin, Certificate of Quality and warranty services to all products of Telesystems. TS-Market Ltd. can't confirm and ensure the product quality, can't provide Certificate of Origin and will not take charge of giving warranty to other digital voice recorders, produced by Telesystems, which are imported worldwide by the third companies.

Sincerely yours,
director of Telesystems Ltd.

M.V. Ivanov-Dal

EDIC-mini Tiny16 U49

Miniature digital audio recorder

Thanks to 5 divided microphones the U49 voice recorder can record audio from certain direction at a distance of 15 m and considerably reduce background noise of the microphone.

Perfect choice for professional recording.

Opportunities and advantages

U49 will help you to record exactly what you need without anything irrelevant - 5 built-in microphones form operation coverage area, which bears resemblance to an oval, and provide sensitivity up to 16 m! The result - background noises reduced, recorded sound is clear.

The model consumes power from AAA rechargeable or standard batteries, built-in AGC system and password protection are provided.

Among additional features - linear and circular recording, digital signature of recordings, daily timer and once timer.

Technical characteristics

- Dimensions: 143x13x18 mm;
- Weight: 24 g;
- Case: Metal;
- Power supply: AAA rechargeable battery or battery;
- Battery life in record mode: 220h;
- Battery life in VAS mode: 456h;
- Battery life in stand-by mode: 36 months;
- Built-in flash memory: 2Gb, 4Gb;
- Interface: USB 1.1
- Audio recording format : Mono;
- Frequency band: 100-10000 Hz;
- Dynamic range: -80 dB;
- Sample rate: 5.5, 6.6, 8, 10, 13.3, 20;
- Voice Activating System: YES;
- Timer recording: YES.

Recording duration

Index	Recording time, hours	Memory size
300 h	300	2 Gb
600 h	600	4 Gb

Sampling rate 28 kHz, 16 K bit/sec

Modifications

U49 - 300h
U49 - 600h

Last digits in the models' names show the maximum recording duration in hours (sampling rate 8 kHz, 2bit ADPCM).

Delivery set

Voice recorder   USB cable   3AAA batteries   Instructions

Cover removing device

Optional accessories

- Miniature amplifying external microphone (+10 dB)
- Programmed External Microphone with AGC
- Telephone adapter RecAdapter for Tiny16

Miniature digital audio recorders

EDIC-mini Weeny&Dime series

Edic-mini Weeny Recorders are professional devices intended for making high quality record of voice messages into built-in flash memory. The series includes small-sized voice recorders featuring one or two digital microphones and internal flash memory. The records have digital markers, which helps to prevent record from unauthorized changes, as well as significantly increase its evidentiality. In our new series of voice recorders, we radically changed not only the principle of control, making the Recorder **available for almost any device**, but also switched to completely **new digital microphones and 24-bit codec** that provide excellent recording quality and acoustic sensitivity up to 15m. There is also a **new type of memory**, opening up new opportunities in the desire to get maximum performance and reliability, at **the smallest possible size.**

Simple operation allows you to turn on quickly the recording in a critical situation.

The system of **built-in markers** allows you to check the absence of editing records, confirm the time and date of recording, type and serial number of the recorder on which the recording was made. Weeny&Dime recorders can be connected to a computer / tablet / smartphone and other device that supports the external media connection, **Windows, MAC** etc. !

Having traditionally small size, the models of Edic-mini Weeny&Dime series feature the following:

- Voice Activation System (VAS)
- Timers to start recording at the preset time
- Linear and circular recording
- Built-in clock, calendar, attachment of records to time and date
- Password protection of the access to records
- Control and indication: on / off buttons and LED
- Operates under wide temperature range, under the conditions of shaking or dust.
  Permissible temperature of operation and storage from 0 to + 50C
- Low current consumption
- No way to change records' data of the internal memory of the Recorder
- Operating lifetime 3 years

Delivery set:

1. Voice recorder
2. USB cable
3. Operation manual

EDIC-mini Weeny&Dime series

Technical characteristics

Power supply	Rechargeable battery 20 mAh
Autonomy	17 hours*
Microphone sensitivity	15 m
Charging frequency	once in six months
Signal-to-noise ratio	64dB
Dynamic range	90dB
Sampling rate	8, 16, 22 kHz
Frequency band	from 100 to 10 000Hz
Exchange rate	300 KB/s
Bit depth	up to 24 bit
Information carrier	internal non-volatile memory

EDIC-mini Weeny A110

Dimensions: 29x24x3,5mm
Weight: 4g

EDIC-mini Weeny A113

Dimensions: 37x15x4,5mm
Weight: 4g

* Estimated recording duration is specified for record mode 8 kHz / ADPCM. The autonomy is lower with higher sampling rate or bit depth. Current consumption in standby mode is 1 µA. In record mode (8kHz / 16 bit) – ~1mA.

Miniature digital audio recorders

EDIC-mini Card16 series

Professional Voice Recorders EDIC-mini Card16 are designed specifically for high-quality audio recording on microSD card in WAV format, supported by all media players on the PC and other audio devices. EDIC-mini recorders have unique characteristics (the smallest size in the world, the largest autonomy, high acoustic sensitivity). The recorders are designed as a personal mean of audio information documentation. They are also intended for domestic use by mass customer.

Having traditionally small size, the models of Edic-mini CARD16 series feature the following:

- High-quality audio recording from a distance of up to 15 meters
- Up to 600 hours of continuous operation from the rechargeable battery
- Removable microSD card from 2 to 32 GB enables up to 1088 hours recording in mode 8 bit, 8 kHz
- Records can be played back on any operating system : Windows, MAC, Linux, Android.
- Manual or automatic start: by switch, voice (VAS) or four once-timers
- LED indication of the operation
- 4 timers to enable recording at the necessary time
- Built-in clock and calendar
- Linear and circular recording modes
- Long recording duration in sound activation mode (up to 1 year)
- The Recorder is operational under wide temperature ranges under shaking or dustiness.

Technical characteristics

- Case: metal
- Power supply: rechargeable battery
- Audio recording format: mono
- Frequency band: 0,1-10 kHz
- Dynamic range: 96 dB
- Sample rate: 8, 16 kHz

Delivery set:

1. Voice recorder
2. USB cable
3. MicroSD card
4. Cardreader for micro SD
5. Operation manual

EDIC-mini Card16

EDIC-mini Card16 A91

This model has the longest recording duration among Card16 series – up to 600 hours!

97x65x7mm, 72g

EDIC-mini Card16 E92

The model with external power supply! Suitable for stationary installation. Continuous recording time is unlimited!

30x17x5mm, 5g

EDIC-mini Card16 A95

Very thin recorder in a metal case!

77x27x3.5mm, 12g

EDIC-mini Card16 A96

High autonomous operation and recording onto removable microSD card enable long-term recording!

19x65mm, 28g

EDIC-mini Card16 A97

The smallest model among Card16 series with weight of only 7 g.

55x17x5mm, 7g

Edic-mini Tiny + series

Digital records made by the recorders of the Edic-mini Tiny + series are counterfeit proof owing to the custom developed system of markers.

These distinctive marks being unnoticeable for the user go through all the recording stages and help to define the integrity of the recorded voice information. These marks help to identify the recorder's model, its serial number, record start time as well as the attempt to modify it.

This system of markers is more reliable as compared to the previous one. The main difference is that now record's integrity can be checked not only by RecManager, but also by a specific program used in the Ministry of Internal Affairs.

If a record has been modified, the recorder won't identify it as authentic.

This is an important step for broader implementation of digital recording as proof in court enabling to apply the Recorder as an incorruptible witness to record precisely and objectively all the conversations and sounds within a radius of up to 12 meters and save it for any period of time. Besides it won't change evidence as opposed to what some people do.

Having traditionally small size, the models of Edic-mini Tiny+ series feature the following:

- Recording time up to 150 hours (for 150HQ models);

- System of digital markers: inaudible markers are added to the record allowing it to identify the record's time and date as well as the recorder's type and its serial number; and the attempts to modify it;

- Low power consumption;

- Password protection of records;

- Broad frequency band up to 100-10000 Hz;

- Continuous high-quality audio recording without signal's compression at the distance of up to 12 meters;

- Recording is enabled with Switch, Voice Activation System (VAS), or daily and once timers;

- Linear and circular record modes;

- LED Indication of the recorder's operation.

Telesystems Ltd.

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To Honored Customers

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Sincerely yours,
director of Telesystems Ltd.

M.V. Ivanov-Dal

EDIC-mini Tiny+ A77

Miniature digital audio recorder

The recorder has extremely small dimensions (29×15×12 mm), small weight (only 7 grams), high sensitivity and large memory capacity.

Opportunities and advantages

This is the tiniest recorder in the world, enabling it to conduct recording from built-in rechargeable battery for more than two days. Owing to these extreme characteristics, high recording quality and a wide range of functions, the recorder is perfectly suited for everyday use, recording everyday events and unexpected situations in life.

Technical characteristics

- Dimensions: 29×15×12 mm
- Weight: 7 g
- Case: metal
- Power supply: Li-Pol rechargeable battery 105 mA/h
- Interface: USB 2.0
- Audio recording format: mono
- Frequency band: 100-10000 Hz
- Dynamic range: -65 dB
- Sample rate: 8, 11, 16, 22
- Voice Activating System: yes
- Timer recording: yes

Modifications

150HQ (4Gb)

Last digits in the models' name show the maximum recording duration in hours (sampling rate 8kHz, u-Law)

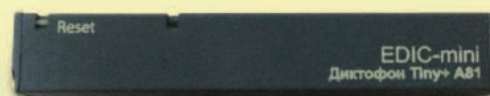## Delivery set

Voice recorder

Software CD

USB cable

Instructions

EDIC-mini Tiny+ A81

Miniature digital audio recorder

Thanks to powerful rechargeable battery A81 can provide up to 250 hours of continuous recording!

Opportunities and advantages

Edic-mini Tiny+ A81 is the most powerful representative of the series, built-in Li-Pol rechargeable battery provides up to 250 hours of operation in record mode, and up to 500 hours in VAS mode! Miniature size (78×13×13 mm) and light weight (19 g) unites in solid metal case. A81 is easy-to-use: there is one switch to control operation of the recorder.

Technical characteristics

- Dimensions: 78×13×13 mm
- Weight: 19 g
- Case: metal
- Power supply: Li-Pol rechargeable battery 500 mA/h
- Interface: USB 2.0
- Audio recording format: mono
- Frequency band: 100-10000 Hz
- Dynamic range: -65 dB
- Sample rate: 8, 11, 16, 22
- Voice Activating System: yes
- Timer recording: yes

Modifications

150HQ (4Gb)

Last digits in the models' name show the maximum recording duration in hours (sampling rate 8kHz, u-Law)

Delivery set

Voice recorder

Software CD

USB adapter

Instructions

EDIC-mini Tiny+ A83

Miniature digital audio recorder

The embodiment of extremely high autonomy, excellent quality and convenience! Model for those who need to make a long professional recording without charging.

Opportunities and advantages

The main distinctive feature of the A83 is exceedingly powerful Li-pol battery 800 mA/h enables up to 200 hours of continuous work that allows in VAS mode to record up to 30 days or 720 hours! So using not only linear but also circular mode you may rich constant recording. Together with small sizes (38x18.5x23.5 mm) it is simple and easy to use. The recorder packed in a robust metal case, which protects it from damage and enables convenient exploitation. The system of digital markers allows determining the authenticity of record and application of the USB 2.0 with high speed up to 7 Mb/s adapter allows to quickly upload records onto the PC.

Technical characteristics

- Dimensions: 38x18.5x23.5mm;
- Weight: 26 g;
- Case: metal;
- Power supply: rechargeable battery;
- Battery life in record mode: up to 200h;
- Battery life in VAS mode: up to 30 days;
- Battery life in stand-by mode: up to 7 years;
- Built-in flash memory: 4Gb;
- Interface: USB 2.0;
- Audio recording format: mono;
- Frequency band: 100 — 10000 Hz;
- Dynamic range: -65dB;
- Sample rate: 8, 11, 16, 22;
- Voice Activating System: YES;
- Timer recording: YES.

Modifications

150HQ (4Gb)

Last digits in the models' name show the maximum recording duration in hours (sampling rate 8kHz, u-Law)

Delivery set

Voice recorder

Software CD

USB cable

Instructions

EDIC-mini Tiny+ B70

Miniature digital audio recorder

The size of B70 surpassed our own record listed in the Guinness Book of Records! But even so the Recorder provides remarkable recording quality, ease of use and a broad set of functions.

Opportunities and advantages

This recorder is, in fact more compact, than its predecessors - the Guinness World Records winners, but nevertheless it has extensive characteristics, providing from 10 to 70 hours of recording time, depending on selected Mode (Record or VAS) from standard RL43 battery. Moreover, 4 Gb of removable memory card allows to record up to 150 hours (in the mode 8kHz, u-Law). The combination of convenient interface, super-miniature size and multiple functions of the recorder made it one of the most popular models.

Technical characteristics

- Dimensions: 37x15x7 mm;
- Weight: 7 g (without battery);
- Case: plastic;
- Power supply: battery;
- Battery life in record mode: up to 10 hours;
- Battery life in VAS mode: up to 70 hours;
- Battery life in stand-by mode: up to 9 months;
- Removable flash memory: 4Gb;
- Interface: USB 2.0;
- Audio recording format: mono;
- Frequency band: 100 — 10000 Hz;
- Dynamic range: -65dB;
- Sample rate: 8, 11, 16, 22;
- Voice Activating System: YES;
- Timer recording: YES.

Modifications

150HQ (4Gb)

Last digits in the models' name show the maximum recording duration in hours (sampling rate 8kHz, u-Law)

Delivery set

Voice recorder

USB cable

LR43

LR43 battery

i

Instructions

EDIC-mini Tiny+ B73

Miniature digital audio recorder

The tiniest recorder for the time being!*

Opportunities and advantages

Owing to many years of experience in developing
and manufacturing professional audio recording devices with
extreme characteristics, we managed to produce Edic-mini Tiny+
B73, the size of which amounted only 46x14x6 mm, with the weight
of 7 grams. In spite of a tiny case, the device combined
the characteristics of a professional device, namely: high recording
quality and broad opportunities.

Technical characteristics

- Dimensions: 46×14×6 mm
- Weight: 7 g
- Case: metal
- Power supply: battery of LR43 type
- Interface: USB 2.0
- Audio recording format: mono
- Frequency band: 100-10000 Hz
- Dynamic range: -65 dB
- Sample rate: 8, 11, 16, 22
- Voice Activating System: yes
- Timer recording: yes

Modifications

150HQ (4Gb)

Last digits in the models' name show
the maximum recording duration in hours
(sampling rate 8kHz, u-Law)

Delivery set

Voice recorder

Software CD

USB cable

Instructions

*among the recorders produced by Telesys Ltd.

EDIC-mini Tiny+ B74-1

Miniature digital audio recorder

The thinnest of all the Edic-mini recorders, only 4 mm in thickness.

Opportunities and advantages

Professional voice recorder Edic-mini Tiny+ B74 features tiny dimensions (56x26x4 mm) to represent the thinnest of all the Edic-mini recorders. Despite its small size, B74 is able to carry out continuous high-quality audio recording working from a standard battery for more than a day. Ease of use and wide set of features make it convenient and effective to record in different situations, for example, phone calls, holding it against mobile phone and record both sides of conversation. To power the recorder a widespread CR2016 battery is used, which can be replaced by a new one in a second to promptly continue recording.

Technical characteristics

- Dimensions: 56x26x4 mm;
- Weight: 16 g (without battery);
- Case: plastic;
- Power supply: battery;
- Battery life in record mode: up to 25 hours;
- Battery life in VAS mode: up to 70 hours;
- Battery life in stand-by mode: up to 9 months;
- Built-in flash memory: 4 Gb;
- Interface: USB 2.0;
- Audio recording format: mono;
- Frequency band: 100 — 10000 Hz;
- Dynamic range: -65 dB;
- Sample rate: 5.5, 8, 11, 16, 22;
- Voice Activating System: YES;
- Timer recording: YES.

Modifications

150HQ (4Gb)

Last digits in the models' name show the maximum recording duration in hours (sampling rate 8kHz, u-Law)

Delivery set

Voice recorder

USB adapter

Operation manual

EDIC-mini Tiny+ B76

Miniature digital audio recorder

The recorder is remarkable for tiny dimensions (30×25×6 mm), small weight (only 16 grams),high sensitivity and large memory capacity.

Opportunities and advantages

Professional recorder Edic-mini Tiny+ B76 features tiny dimensions (37x25x6 mm), high recording quality, broad functionality being easy and convenient to use at the same time. Owing to standard battery as a power supply, B76 is flexible and effective in operation. It is perfectly suited both for everyday use and for those who keep the recorder handy without recording too much.

Technical characteristics

- Dimensions: 30×25×6 mm
- Weight: 16 g
- Case: metal
- Power supply: CR2016 battery
- Interface: USB 2.0
- Audio recording format: mono
- Frequency band: 100-10000 Hz
- Dynamic range: -65 dB
- Sample rate: 8, 11, 16, 22
- Voice Activating System: yes
- Timer recording: yes

Modifications

150HQ (4Gb)

Last digits in the models' name show the maximum recording duration in hours (sampling rate 8kHz, u-Law)

Delivery set

Voice recorder

Software CD

USB cable

Instructions

EDIC-mini Tiny+ B80

Miniature digital audio recorder

B80 the most bright representative of new professional voice recorders Tiny+ series.
It is hard to imagine, but in such miniature case, the device enable to record up to 250 hours!

Opportunities and advantages

Due to miniature size (48x32x7 mm), low weight (only 10 g) and solid metal case the device is easy to carry and always keep on hand at the right time to promptly record. B80 has standard battery (CR2450) power supply that can be quickly replaced when discharged. So you can insert the battery in a second and record until the memory is full! Moreover the recorder's microphone is distinguished by high sensitivity and low noise level providing professional audio recording from up to 12 meters.

Technical characteristics

• Dimensions: 48x32x7mm;
• Weight: 10 g;
• Case: metal;
• Power supply: battery;
• Battery life in record mode: up to 250h;
• Battery life in VAS mode: up to 500 hours;
• Battery life in stand-by mode: up to 30 months;
• Built-in flash memory: 4Gb;
• Interface: USB 2.0;
• Audio recording format: mono;
• Frequency band: 100 — 10000 Hz;
• Dynamic range: -65dB;
Sample rate: 8, 11, 16, 22;
Voice Activating System: YES;
Timer recording: YES.

Modifications

150HQ (4Gb)

Last digits in the models' name show the maximum recording duration in hours (sampling rate 8kHz, u-Law)
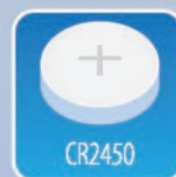
Delivery set

Voice recorder

Software CD

USB adapter

Instructions

CR2450

CR2450 battery

EDIC-mini Tiny+ E71

Miniature digital audio recorder

High quality recording, miniature size and external power supply makes the recorder attractive for people who quality and convenience.

Opportunities and advantages

Miniature size (32x14x6 mm), built-in memory of 4 GB, the option of record not only in the linear, but also in the circular mode allows the recorder Edic-mini Tiny+ E71 to conduct continuous high quality audio recording. The application of external power supply provides stable continuous audio recording until the recorder's memory is full. And when enabling circular record mode, E71 can serve as "black box" to restore the latest details and events of your life.

Technical characteristics

• Dimensions: 32×14×6 mm
• Weight: 6 g
• Case: metal
• Power supply: external power supply 3,5-6V
• Interface: USB 2.0
• Audio recording format: mono
• Frequency band: 100-10000 Hz
• Dynamic range: -65 dB
• Sample rate: 8, 10, 13.3, 20
• Voice Activating System: yes
• Timer recording: yes

Modifications

150HQ (4Gb)

Last digits in the models' name show the maximum recording duration in hours (sampling rate 8kHz, u-Law)

Delivery set

Voice recorder

Software CD

USB cable

Instructions

EDIC-mini Tiny S+ E84

Miniature digital audio recorder

Model features two external microphones which enable to record in Stereo Mode.

Opportunities and advantages

Due to its compact sizes, only 46x14x6 mm, the device can be installed in any undistinguished place with two microphones spaced on different sides of the room. Such system provides the clearest and upscale recorded sound! 4 Gb of built-in memory allows Edic-mini Tiny S+ E84 to record 150 hours. The application of external power supply provides stable continuous audio recording until the recorder's memory is full. Moreover, the option of record in circular mode allows the device to conduct continuous audio recording which makes it an ideal "black box" to reconstruct the sequence of important events of your life!

Technical characteristics

- Dimensions: 46x14x6 mm;
- Weight: 7 g;
- Case: Metal;
- Power supply: external power supply (3,5-6V);
- Built-in flash memory: 4Gb;
- Interface: USB 2.0;
- Audio recording format : Mono, Stereo;
- Frequency band: 100-10000 Hz;
- Dynamic range: -65 dB;
- Sample rate: 8, 11, 16, 22;
- Voice Activating System: YES;
- Timer recording: YES.

Delivery set

Voice recorder

USB adapter

Operation manual

Modifications

150HQ (4Gb)

Last digits in the models' name show the maximum recording duration in hours (sampling rate 8kHz, u-Law)

Edic-mini Tiny16 + series

Digital records made by the recorders of the Edic-mini Tiny16+ series are counterfeit proof owing to the custom developed system of markers.

These distinctive marks being unnoticeable for the user go through all the recording stages and help to define the integrity of the recorded voice information. These marks help to identify the recorder's model, its serial number, record start time as well as the attempt to modify it.

16-bit audio codec

The main difference of the Edic-mini Tiny16+ series is the application of 16-bit audio codec, which made it possible to significantly improve record quality. A new algorithm of sound digitizing made it possible to reduce digital noise. Thus noise disturbance that distort human speech sound has disappeared.

Automatic Gain Control (AGC)

The recorders of the Edic-mini Tiny16+ series provide the option of AGC enabling it to control recording sound level. That makes it possible to perfectly record very loud sounds and amplify silent ones. This adjustment can be performed either manually (using the corresponding settings in the software) or automatically. There are 5 types of AGC for recording:

- to record in silent area;
- to record in noisy area;
- to record from long distances;
- to record in large noisy areas;
- to record in busy street.

Having traditionally small size, the models of Edic-mini Tiny16+ series feature the following:

- recording time up to 150 hours (for 150HQ models);
- low power consumption;
- checking records' integrity;
- password protection of records;
- 16-bit audio codec;
- acoustic sensitivity up to 15 meters;
- built-in AGC system;
- Voice Activation System (VAS) ;
- daily and once timers ;
- models with solar cells available.

Telesystems Ltd.

10/1, Sosnovaya alleya St, Zelenograd, Moscow, 124489, Russia

To Honored Customers

Telesystems Ltd hereby appoints TS-Market Ltd as its only unique Export Agent of all product lines of digital voice recorders, produced by Telesystems Ltd.

Due to the fact that TS-Market Ltd. is unique manufacturer's Export Agent, has the right to provide Certificate of Origin, Certificate of Quality and warranty services to all products of Telesystems. TS-Market Ltd. can't confirm and ensure the product quality, can't provide Certificate of Origin and will not take charge of giving warranty to other digital voice recorders, produced by Telesystems, which are imported worldwide by the third companies.

Sincerely yours,
director of Telesystems Ltd.

M.V. Ivanov-Dal

EDIC-mini Tiny16+ A75

Miniature digital audio recorder

Very thin voice recorder in a metal case

Opportunities and advantages

Professional voice recorder Edic-mini Tiny16 + A75 is the thinnest among the recorders of the Tiny16 + series (77x27x4 mm), and it weighs only 12 grams . Despite its dimensions the recorder is a professional recording device designed for high- quality audio recording in complicated acoustic environment and from long distance. Portability and ease of operation, high-quality and broad functionality make this recorder applicable for a wide range of tasks.

Technical characteristics

- Dimensions: 77×27×3,5 mm
- Weight: 14 g
- Case: metal
- Power supply: Li-Pol rechargeable battery 150 mA/h
- Interface: USB 2.0
- Audio recording format: mono
- Frequency band: 100-10000 Hz
- Dynamic range: 80 dB
- Sample rate: 8, 10, 13.3, 20
- Voice Activating System: yes
- Timer recording: yes

Modifications

150HQ (4Gb)

Last digits in the models' name show the maximum recording duration in hours (sampling rate 8kHz, u-Law)

Delivery set

Voice recorder

Software CD

USB cable

Instructions

EDIC-mini Tiny16+ A79

Digital audio recorder

First recorder in our product line with highest battery capacity and the greatest record time!

Opportunities and advantages

Owing to built-in rechargeable battery capacity of 5000 mA/h voice recorder A79 is able to conduct high quality recording throughout 1500 hours. Even when its memory capacity is full (memory is enough for 600 hours of recording time, 16 Gb), you may quickly upload records to PC and continue operation without wasting time for charging. Due to long recording duration it is convenient to keep the recorder turned on constantly and fix everything that happens around.

Technical characteristics

- Dimensions: 57x73x17 mm;
- Weight: 112 g ;
- Case: plastic;
- Power supply: rechargeable battery;
- Battery life in record mode: up to 1500 hours;
- Battery life in VAS mode: up to 2500 hours;
- Battery life in stand-by mode: up to 3 years;
- Built-in flash memory: 16Gb;
- Interface: USB 2.0;
- Audio recording format: mono;
- Frequency band: 100 — 10000 Hz;
- Dynamic range: 80dB;
- Sample rate: 8, 10, 13.3, 20;
- Voice Activating System: YES;
- Timer recording: YES.

Delivery set

Voice recorder

USB adapter

Instructions

Modifications

600HQ (16Gb)

Last digits in the models' name show the maximum recording duration in hours (sampling rate 8kHz, u-Law)

EDIC-mini Tiny16+ A82

Miniature digital audio recorder

Stylish recorder with highly sensitive microphone,
16-bit audio codec and low power consumption.

Opportunities and advantages

A82 provides high quality recording, long operation (up to 160 hours) from built-in rechargeable battery with low power consumption. Also the device is equipped with the system of digital markers. Inaudible markers are added to the record allowing it to identify the record's time and date as well as the recorder's type and its serial number; and the attempts to modify it.

Technical characteristics

- Dimensions: 90×13×13 mm
- Weight: 21 g
- Case: metal
- Power supply: Li-Pol rechargeable battery 500 mA/h
- Interface: USB 2.0
- Audio recording format: mono
- Frequency band: 100-10000 Hz
- Dynamic range: 80 dB
- Sample rate: 8, 10, 13.3, 20
- Voice Activating System: yes
- Timer recording: yes

Modifications

150HQ (4Gb)

Last digits in the models' name show
the maximum recording duration in hours
(sampling rate 8kHz, u-Law)

Delivery set

Voice recorder

Software CD

USB adapter

Instructions

EDIC-mini Tiny16+ E72

Miniature digital audio recorder

E72 provides high-quality audio recording in complicated acoustic environment

Opportunities and advantages

Miniature dimensions (46x14x6 mm), built-in memory of 8 GB, the option of record not only in the linear, but also in the circular mode, as well as an external power supply allow the recorder Edic-mini Tiny16 + E72 to continuously perform high-quality audio recording in all situations and from long distances, which makes it an ideal "black box" to reconstruct the sequence of events and important parts of your life.

Technical characteristics

- Dimensions: 46×14×6 mm
- Weight: 7 g
- Case: metal
- Power supply: external power supply 3,5-6V
- Interface: USB 2.0
- Audio recording format: mono
- Frequency band: 100-10000 Hz
- Dynamic range: 80 dB
- Sample rate: 8, 10, 13.3, 20
- Voice Activating System: yes
- Timer recording: yes

Modifications

150HQ (4Gb)

Last digits in the models' name show the maximum recording duration in hours (sampling rate 8kHz, u-Law)

Delivery set

Voice recorder

Software CD

USB cable

Instructions

EDIC-mini Tiny16+ S78

Miniature digital audio recorder

*Unique voice recorder
with two solar batteries*
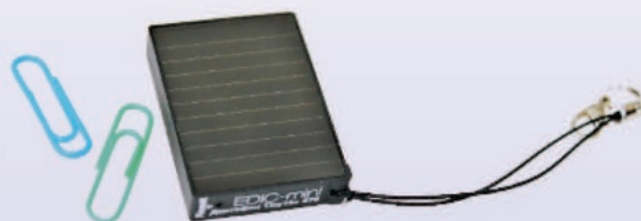
Opportunities and advantages

In addition to the built-in rechargeable battery, S78 has two solar batteries, allowing it to perform real-time battery charging while recording. This solution will help to avoid situations when rechargeable battery or batteries get low at the critical moment. And by placing S78 in the place to be exposed to a sufficient amount of light to operate, and setting circular record mode, you turn it into a "black box" to record everything that sounded in the room in the last 150 hours (depending on the settings specified).And that will help you restore the entire course of events.

Technical characteristics

- Dimensions: 41×29×8 mm
- Weight: 14 g
- Case: plastic
- Power supply: Li-Pol rechargeable battery 105 mA/h, two solar batteries
- Interface: USB 2.0
- Audio recording format: mono
- Frequency band: 100-10000 Hz
- Dynamic range: 80 dB
- Sample rate: 8, 10, 13.3, 20
- Voice Activating System: yes
Timer recording: yes

Delivery set

Voice recorder

Software CD

USB cable

Instructions

Modifications

150HQ (4Gb)

Last digits in the models' name show
the maximum recording duration in hours
(sampling rate 8kHz, u-Law)

EDIC-mini PRO
Series Characteristics

We announce a new series of the Edic-mini PRO recorders. The professional recording quality, a reliable autonomy, and a convenient high speed interface are the distinguishing features of the new series. Recorders of this series have higher recording quality due to its 16 bit audio codec, which provides more accurate signal digitizing. The recorders have USB 2.0 interface, making recordings download 10 times quicker compared to the preceding models.

Wider functionality - the possibility to play the recordings back using headphones or upload them onto a computer as standard audio files. OLED indicator provides high contrast and wide-angle viewing. Added date label function.

Recording modes
Circular and linear modes of recording. When the linear mode is on, the duration of the recording is limited by the recorder's memory capacity only. The circular recording mode allows to continue recording when there is no free memory left, in this case the recorder starts recording newer data over the oldest ones.

Data protection
When using password protection, only an authorized user has access to the recorder's data and settings. Every recording made with the audio recorder has a time and date of the beginning of the recording, giving it a digital watermark that allows to detect exactly in which recorder the recording was made and if the recorded file was modified.

Timer recording
Recorder can start recording automatically, for this the recorder has two timers: a once timer (the beginning and end of the recording are to be set) and a daily timer (the time and date of the beginning and end of the recording are to be set).

Voice Activation System
Voice Activation System (VAS) allows to save memory consumption (increasing a real recording's duration) and power consumption. When VAS is on, the recorder does not record pauses, but saves the pauses' durations so after the recordings are uploaded onto a computer the pauses can be restored as silence depending on previous settings.

Control button.
A LED provides the indication of the recorder's operating modes.

Connecting to a computer
Connect the recorder to a computer USB port using the shipped USB cable. The supplied software is available for Windows 98/2000/ XP/Vista and Windows 7, 32bit and 64 bit. The software allows to save the recorded data as standard audio files, set the recorder's settings, and use the recorder as a flash drive to save files 2-8Gb, depending on the modification. The recorder's firmware can be updated using the recorder's USB interface.

Time marking
Time marking is a new function that allows to print the time of the beginning and the end of the recording on the recorded data. For instance, if you know that the data were recorded between 3 pm and 5 pm, you will find this recording easily. This function is especially useful when your recorder has a big memory capacity.

Optional Accessories
PRO models can work with the external microphones that improve the recording quality when the recorder is in an acoustically closed place, for instance, in a pocket. Microphones allow to increase low signals and decrease loud ones.

EDIC-mini PRO B42

Miniature digital audio recorder

Attractive long metallic case available in five colours. Power supply - battery or rechargeable battery. Convenient OLED display.

Opportunities and advantages

Extending the new Pro series, our company offers a new professional recorder – this is Edic-mini Pro B42. This model is distinguished by its peculiar design as well as by OLED display and control buttons on the recorder's case. That makes the control process very easy and informative! The option to play the records from the device itself with the help of mono headphones (included into the package) is preserved.

The new originally shaped model is produced in metallic case, available in five colors. The device gets power supply from a standard battery or AAA rechargeable battery. OLED display offering high contrast ratio as well as control buttons on the case of the device considerably simplify the recorder's setting and provide easy menu navigation. The records can be played both from the device itself and with the help of headphones included into the package.

Technical characteristics

- Dimensions: 94x13x13 mm;
- Weight: 16 g;
- Case: Metal;
- Power supply: standard battery or AAA rechargeable battery;
- Battery life in record mode: 108h;
- Battery life in VAS mode: 240h;
- Battery life in stand-by mode: 12 months;
- Built-in flash memory: 2Gb, 4Gb, 8Gb;
- Interface: USB 2.0;
- Audio recording format : Mono;
- Frequency band: 100-6000 Hz;
- Dynamic range: -72 dB;
- Sample rate: 4, 8, 16;
- Voice Activating System: YES;
- Timer recording: YES.

Recording duration

in the mode: 2 bit ADPCM, and sampling rate 8 kHz, 16 K bit/sec

Modifications

B42-300h
B42-600h
B42-1200h

Last digits in the models' names show the maximum recording duration in hours (sampling rate 8 kHz, 2 bit ADPCM).

Delivery set

| Voice recorder | USB cable | Software CD | Instructions | Headphones | AAA Rechargeable Battery, 2 pieces |

Optional accessories

- External Microphone + Remote Control Unit for PRO and PLUS
- Impulse power supply unit with USB (5V, 1A)

Modification	Recording time, hour	Memory size, Gb
300 h	300	2
600 h	600	4
1200 h	1200	8

EDIC-mini Plus A32

Miniature digital audio recorder

*Model with wide range of possibilities, features
3 control buttons and 8 built-in recording profiles!*

Opportunities and advantages

Among competitive advantages of Edic-mini Plus A32 recorder, besides high record quality and autonomy, it should be noted presence of 8 built-in recording profiles allowing configuring recorder according to your needs and 3 control buttons which help quick and comfortable switching between profiles. Model also features timestamp – ability to playback and transfer to PC the specified recording interval. Recordings are saved in WAV format with 4 available compression modes: without compression, u-Law, ADPCM 4-bit, ADPCM 2-bit.

Technical characteristics

- Dimensions: 54x24x11 mm;
- Weight: 12 g ;
- Case: plastic;
- Power supply: rechargeable battery;
- Battery life in record mode: up to 30 hours;
- Battery life in VAS mode: up to 120 hours;
- Battery life in stand-by mode: up to 5 months;
- Built-in flash memory: 2 Gb;
- Interface: USB 1.1;
- Audio recording format: mono;
- Frequency band: 70 — 6000 Hz;
- Dynamic range: -70 dB;
- Sample rate: 4, 8, 16;
- Voice Activating System: YES;
- Timer recording: YES.

Delivery set

Voice recorder

USB-SPI cable

Operation manual

Modifications

300HQ (2Gb)

*Last digits in the models' name show
the maximum recording duration in hours
(sampling rate 8kHz, u-Law)*

Miniature digital audio recorders
Edic-mini LED series
Series Characteristics

Edic-mini Led is the series of professional recorders, remarkable for high recording quality and ability to charge and record simultaneously.

The system of special markers helps to use the recordings made in court, they are completely acceptable for linguistic and phonoscopic expertise.

Distinctive features of the series:

- LED time indication
- Real time clock
- Information protection system
- Built-in microphone sensitivity: up to 10 m
- Digitizing by 16-bit codec, which reduce distortion of sound
- Built-in AGC system, which helps to regulate recording information volume
- Built-in memory from 300 to 1200 hours
- Models with rechargeable batteries are able to record and charge simultaneously
- High speed of data exchange with PC thanks to USB STI interface
- Signal-to-noise ratio: -80 dB
- Wide frequency band: up to 40 kHz

Software required for settings and conversion of records is located on the CD supplied with the recorder. The converted wav-files can be played in any standard media player. You can upgrade built-in program (firmware) of the recorder via USB interface. The recorders can be used as a flash media to store and transfer data of any standards.

## Supplied Software makes it possible to:

- Save the recorded messages on the PC as standard sound files;
- Restore compressed pauses when uploading files onto the drive;
- Set the Recorder's parameters;
- Apply password protection of the access to the Recorder's settings and information;
- Update software.

Model	Case	Dimensions, mm; Weight, g	Power supply	Battery life			Rec. time, hours
				In record mode, h	In VAS mode	In stand-by mode, months	
S51	Metal	42x32x7; 20	Li-Pol rechargeable battery, solar cell	Up to 70	Up to 5	Up to 12	300, 600

EDIC-mini LED S51

Miniature digital audio recorder

Professional digital recorder Edic-mini LED S51 is ideal for everyday life- it is always at hand starting in an instant when you need it.
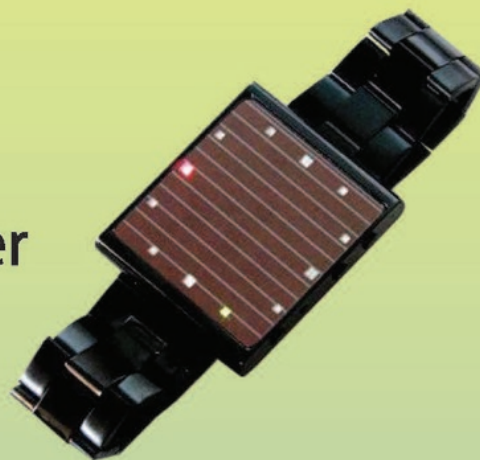
Opportunities and advantages

Digital audio recorder Edic-mini LED S51 is intended for professional recording, it is easy to operate the recorder: you can play the records not only from the PC, but also from the device itself. Edic-mini LED S51 is equipped with the most comfortable indication of the Recorder's operation and condition executed in the form of 12 LEDs in different colours.

Operation and navigation through records as well as setting of Edic-mini LED S51 – all these are carried out with the help of three buttons suitably located on the Recorder's front edge.

Technical Characteristics

- Dimensions: 42X 32X 7 mm
- Weight: 20 g (without wrist band)
- Case: Metal
- Power supply: Li-Pol rechargeable battery, solar cell
- Battery life in record mode: up to 70 hours
- Battery life in VAS mode: up to 5 days
- Battery life in stand-by mode: up to 1 year
- Interface: USB-SPI
- Audio recording format: Mono
- Frequency band: 100 — 10000 Hz
- Dynamic range: -80 dB
- Voice Activating System: YES
- Timer recording: YES

Modifications

S51-300h
S51-600h

Last digits in the models' names show the maximum recording duration (sampling rate 8 kHz, 2 bit ADPCM) in hours.

Delivery set

Recorder   USB-SPI adapter   Software CD

Instructions   Headphones

Recording duration

in the mode: 2 bit ADPCM and sampling rate 8kHz

Modification	Recording time, hour	Memory size, Gb
300h	300	2
600h	600	4

SOROKA-11E

Digital Voice Recorder

The model is powered by LR1 battery of 1.5 V!

Opportunities and advantages

Voice recorder SOROKA-11E is designed to record audio in Mono format from built-in digital MEMS microphone to the microSD or microSDHC memory card Class4 or higher. This model is unique because of its LR1 battery of 1.5 V. The device is able to operate in record mode up to 10 days from its battery. Then you just need to insert a new one to continue recording. Solid metal case of the model is handy and stylish, its dimensions are 80×40×8.5 mm. The device is easily and quickly activated using one button. There are plenty of convenient features available in SOROKA-11E: voice activation (VOX), automatic sound gaining, cyclic recording, ability to set discretization frequency and resolution, usage of alarm clock (up to 10).

Technical characteristics

- Dimensions: 36,7x14,2x17,7mm;
- Case: metal;
- Battery life in Record Mode: up to 10 days;
- Recording format: WAV;
- Power supply: LR1 battery of 1.5 V;
- Compact flash card capacity; 32 GB;
- Frequency band: 3 Hz - 13.536 kHz;
- Audio codec: 8, 16, 20;
- Dynamic range: at least 60dB;
- Sample rate: 8, 16, 24, 32;
- Voice Activating System: YES;
- Timer recording: YES;
- Automatic and Manual Gain Control : YES;
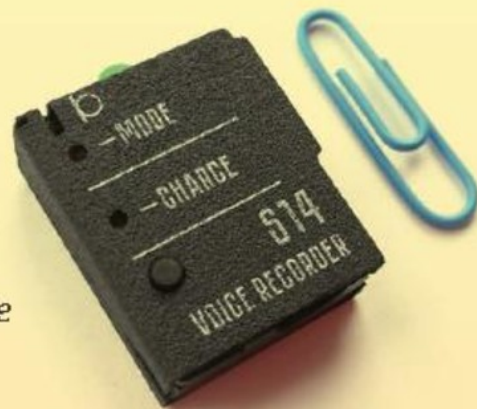- Function of digital signature: YES.

Delivery set

- Voice Recorder
- Micro SDHC memory card 32 GB
- Card reader
- LR1 battery of 1.5 V
- CD with software and user manual
- Passport

SOROKA-14E

Digital Voice Recorder

It is not only miniature recorder, but also very handy due removable micro SD card.

Opportunities and advantages

The recorder SOROKA-14E is an upgraded version of SOROKA-07 model. Despite its small dimensions of only 28x22.5x9.7 mm it is able to record up to 133 hours (in the mode 16kHz, µLaw compression) until the battery is discharged. The recorder's microphone is distinguished by high sensitivity and low noise level providing professional audio recording from up to 9 meters. Also there is external microphone in the delivery set.

The device controls are two LEDs and one button. With the help of special software the user can easily adjust the quality and time of recording as well as to enable and configure professional functions.

Technical characteristics

- Dimensions: 28x22.5x9.7 mm;
- Battery life in Record Mode: up to 133 hours.
- Recording format: WAV, Mono.
- Case: metal;
- Power supply: rechargeable battery;
- Removable memory: 32Gb;
- Frequency band: 3 Hz - 13.536 kHz
- Audio codec: 16, 20;
- Dynamic range: 60dB;
- Sample rate: 8, 16, 24, 32;
- Voice Activating System: YES;
- Timer recording: YES;
- Automatic and Manual Gain Control : YES;
- Function of digital signature: YES.

Delivery set

- Voice Recorder
- Micro SDHC memory card 32 GB Samsung EVO
- Card reader
- External microphone
- USB adapter (USB - micro USB)
- User manual
- Software

SOROKA-15E

Digital Voice Recorder

New miniature recorder with external microphone!

Opportunities and advantages

The recorder SOROKA-15E is an upgraded version of SOROKA-09 model. Its thickness is only 5 mm and overall dimensions (33.3x26x5.3 mm) are comparable with adapter for SD card. Due to the miniature size, light weight and removable microSD card voice recorder SOROKA-09M is very mobile and easy to use. Moreover model 15E could record up to 83 hours from rechargeable battery (in the mode 16kHz, µLaw compression). With the help of Automatic and Manual Gain Control (AGC) function it is possible to control recording sound level by perfectly recording very loud sounds and amplifying silent ones.

Technical characteristics

- Dimensions: 33.3x26x5.3 mm;
- Battery life in Record Mode: up to 83 hours.
- Case: metal;
- Power supply: rechargeable battery;
- Removable memory: 32Gb;
- Frequency band: 3 Hz - 13.536 kHz
- Audio codec: 8, 16, 20;
- Dynamic range: 60dB;
- Sample rate: 8, 16, 24, 32;
- Voice Activating System: YES;
- Timer recording: YES;
- Automatic and Manual Gain Control: YES;
- Function of digital signature: YES.

Delivery set

- Voice Recorder
- Micro SDHC memory card 32 GB Samsung EVO+
- Card reader
- External microphone
- USB adapter (USB - micro USB)
- User manual
- Software

SOROKA-16E

Digital Voice Recorder

The model has extremely long record duration and powerful rechargeable battery!

Opportunities and advantages

Voice recorder SOROKA-16E is designed to record audio in Mono format from built-in digital MEMS microphone to the microSD or microSDHC memory card Class4 or higher. This model provides extremely long recording duration (up to 1122h) from powerful rechargeable battery. Power consumption of the recorder is extremely low: device is able to operate in record mode for more than a month from its built-in rechargeable battery. Solid metal case of the model is handy and stylish, its dimensions are 80×40×8.5 mm. The device is easily and quickly activated using one button. There are plenty of convenient features available in SOROKA-16E: voice activation (VOX), automatic sound gaining, cyclic recording, ability to set discretization frequency and resolution, usage of alarm clock (up to 10).

Technical characteristics

- Dimensions: 80x40x8.5 mm;
- Case: metal;
- Battery life in Record Mode: up to 1122 hours;
- Recording format: WAV, Mono;
- Power supply: rechargeable battery;
- Compact flash card capacity; 32 GB;
- Frequency band: 3 Hz - 13.536 kHz;
- Audio codec: 8, 16, 20;
- Dynamic range: at least 60dB;
- Sample rate: 8, 16, 24, 32;
- Voice Activating System: YES;
- Timer recording: YES;
- Automatic and Manual Gain Control : YES;
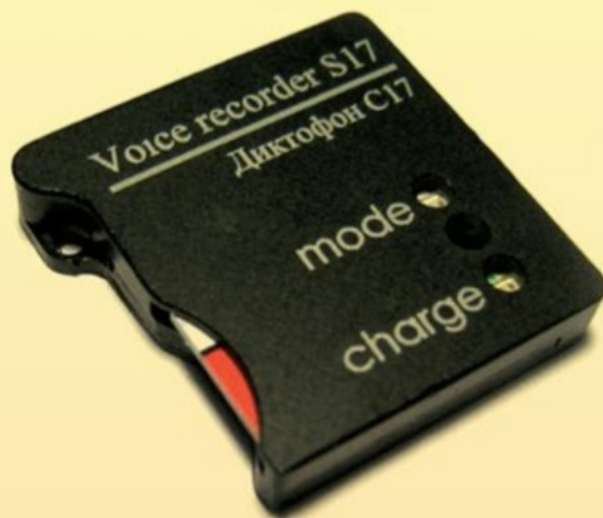- Function of digital signature: YES.

Delivery set

- Voice Recorder
- Micro SDHC memory card 32 GB Samsung EVO+
- Card reader
- External microphone
- USB adapter (USB - micro USB)
- User manual
- Software

SOROKA-17E

Digital Voice Recorder

The tiniest recorder of all Soroka recorders!
Its dimensions are only 26,5x26,8x5,3 mm!

Opportunities and advantages

Voice recorder SOROKA-17E is designed to record audio in Mono format from built-in digital MEMS microphone to the microSD or microSDHC memory card Class4 or higher. This model has extremely small dimensions 26,5x26,8x5,3 mm. Despite its small size, the recorder provides high-quality recording of phonograms and is capable of continuous sound recording up to 65 hours. The recorder's microphone is distinguished by high sensitivity and low noise level providing professional audio recording from up to 9 meters. The device is easily and quickly activated using one button. There are plenty of convenient features available in SOROKA-17E: voice activation (VOX), automatic sound gaining, cyclic recording, ability to set discretization frequency and resolution, usage of alarm clock (up to 10).

Technical characteristics

- Dimensions: 26,5x26,8x5,3 mm;
- Battery life in Record Mode: up to 65 hours;
- Battery charge time: up to 4 hours;
- Recording format: WAV;
- Power supply: rechargeable battery;
- Compact flash card capacity; 32 GB;
- Frequency band: 3 Hz - 13.536 kHz;
- Audio codec: 8, 16, 20;
- Dynamic range: at least 60dB;
- Sample rate: 8, 16, 24, 32;
- Voice Activating System: YES;
- Timer recording: YES;
- Automatic and Manual Gain Control : YES;
- Function of digital signature: YES.

Delivery set

- Voice Recorder
- Micro SDHC memory card 32 GB
- Card reader
- USB cable
- Adapter for battery charging
- CD with software and user manual
- Passport

Personal Video Recorders

DOZOR

*Is found to be the world smallest body camera
which can record continuously up to 8 hours HD*

Competitive advantages:

- Small size
- Faces recognition from the distance up to 10 meters
- Low battery/memory visual indicator and audible alarm
- Movement activated recording.

Technical characteristics

Sensor	CMOS 1/2.5", 5MP
Viewing angle	160° (diagonal), 110° (horizontal)
Video format	H.264, MOV
Video quality	1080p/30fps, 720p/30fps, 480p/30fps
Video standard	PAL / NTSC
Storage capacity	32GB MicroSD (built in)
Battery life in record mode	Up to 8 h
Dimensions	75x55x25 mm

STRAZH PVR-02

*Is intended for autonomous video recording of the environment
in the area of the employee's service*

Competitive advantages:

- External camera
- GPS/GLONASS optionally (reproduction of the place of the event on the map)
- Universal mount provides reliable fixation on various types of uniforms, belt
  and special outfit like helmets, body armor and etc.

Technical characteristics

Sensor	CMOS 1/2.5", 5 MP, External camera 1/4" CMOS, 2 MP
Viewing angle	45° (built-in camera), 130° (external camera)
Video format	MPEG
Video quality	1920x1080P @ 30k/s (built-in camera); 1280x720P @ 30k/s (external camera)
Video standard	PAL/ NTSC/ SECAM
Storage capacity	32GB MicroSD (built in)
Battery life in record mode	Up to 7 h
Dimensions	115x70x30 mm

Personal Video Recorders

STRAZH PVR-03

is used for round-the-clock recording outdoor and indoor, creating an evidence if any offences

Competitive advantages:

Elaborated construction - can be used both as a single video recording unit (video camera and registration unit together) or separate video recording unit and external video camera connected by wire - any option without loss of quality.

Technical characteristics

Sensor	CMOS 1/2.5", 5 MP
Viewing angle	160° (diagonal); 110° (horizontal)
Video format	MPEG4
Video quality	1920x1080P @ 25k/s; 1280x720P @ 25k/s
Video standard	PAL / NTSC / SECAM
Storage capacity	32GB MicroSD (built in)
Battery life in record mode	Up to 9 h
Dimensions	86x58x29 mm

STRAZH PVR-04

is used for round-the-clock recording outdoor and indoor as well as to increase discipline and ensure the staff safety

Competitive advantages:

• Built-in GPS locator
• Motion sensor
• Support of SDHC 32GB memory card
• Additional external battery for 11000 mAh
• Dustproof, waterproof housing

Technical characteristics

Sensor	CMOS 1/2.5", 5 MP
Viewing angle	135° (horizontal)
Video format	MOV H.264
Video quality	1920x1080, 1280x720, 848x480 / 16 MP (photo)
Video standard	PAL / NTSC / SECAM
Storage capacity	32GB SDHC memory card, class 4
Battery life in record mode	Up to 10 h
Dimensions	85x60x30 mm

Lornets Non-Linear Junction Detectors

The non-linear junction detectors Lornet are used for search and location
of electronic devices both in active and switch-o state.

LORNET Compact locator of classical type

Allows to detect various kinds of electronic devices containing semiconductor elements, such as eavesdropping devices, microphone amplifiers, audio-recording devices, remote control devices etc., both in switched-on and switched-off modes.

Lornet simultaneously displays the 2d and 3d harmonics levels at its LED panel. Besides, the 2d and 3d harmonics levels can be estimated in turn aurally by click repetition rate reproduced through a built-in loudspeaker or wireless earphones.

• **No analogues regarding size and weight.**
• **Easy-to-use**

- Type of a probing signal: pulse, CW
- Power of pulse /CW signal: 15/1 W
- Sensitivity (at signal-to-noise ratio of 10): not worse, than -120 dBm
- Automatic and manual modes of power change of the probing signal
- It is possible to operate in hard-to-reach places and under conditions of limited space (antenna thickness does not exceed 18 mm).

LORNET-24 Compact non-linear junction detector of examination type

Lornet-24 is often used while conducting strategic and search work afield, in rooms, transport. An automatic system of frequency selection is integrated into the device and it can tune away from narrowband interference automatically (by a criterion of minimum noise of the receiving channel of the 2nd harmonic).

Lornet-24 simultaneously displays the 2d and 3d harmonics levels at its LED panel. Besides, the 2d and 3d harmonics levels can be estimated in turn aurally by the click repetition rate reproduced through a built-in loudspeaker or wireless earphones.

This device is very effective when it comes to identify a suspicious object (e.g. in the luggage), and compared to radio-metal locator, allows to detect even an unauthorized unpackaged audio-recorder in protected premises.

Detector of the returned RF signal envelope enables tapping radio microphones and using the acoustic feedback mode which facilitates search work.

• **Unique due to its frequency, weight and dimensions**
• **High detection potential**

- Type of a probing signal: pulse, CW
- Power of pulse /CW signal: 10/1 W
- Sensitivity (at signal-to-noise ratio of 10): not worse, than -108 dBm
- Automatic and manual modes of power change of the probing signal
- Low electromagnetic effect on a person
- It is possible to operate in hard-to-reach places and under conditions of limited space (antenna thickness does not exceed 18 mm).

LORNET-36

Superhigh frequency non-linear junction detector

Lornet-36 is an indispensable tool for quick and reliable location of unauthorized electronic devices during search operations in premises with a high density of electronic equipment.

The model was designed for detecting devices which contain semiconductor elements (diodes, transistors, circuits). Lornet36 detector operation is based on the property of semiconductor components to generate a response at the 2d and 3d harmonics when radiated by an RF probing signal.

The detectors analyze the 2d and 3d harmonics response of the radiated objects, which enables a quick and reliable identi cation of electronic devices and natural oxide semiconductors.

• **This model defines location of the SIM card of the cell phone at distance 1 meter.**

- Type of probing signal: pulse
- Pulse signal ratio: 160 pulses per second
- Probing signal frequency range: 3580-3620 MHz
- Dynamic range: > 40 dB
- Time of continuous operation at the maximum probing power: 3,0 hours
- Fully equipped weight: 1,4 kg

LORNET 0836

Double probing frequency non-linear junction detector

The unique device combines two detectors at different frequencies in one case.

Operating principle

Lornet 0836 is an indispensable tool for quick and reliable detection of devices containing semiconductor components. It can be used for counter- surveillance search works in premises (covert transmitters identification), as well as for location of explosive devices outdoor. The DPF (double probing frequency) technology with a patent pending antenna system places it beyond comparison.

Main competitive advantages:

- **The first nonlinear detector** which combines the advantages of a **microwave detector** and **the detector of traditional range**.

- **Convenient display** and control elements, **easy to operate, light weight**.

- Unique opportunity to **detect semiconductor elements hidden by different materials** (detection through cracks, unearthed screens, reflections from smooth surfaces, **SIM card is detected at the distance of 60 cm**, etc.).

- An embedded parabolic antenna with high gain (20dB at 3600MHz) enables **highly precise detection** of semiconductor components **from a long distance (up to 10m)**.

- **Laser pinpointing** for a space selective object localization.

- **Significantly reduced electromagnetic impact on the operator** because of high duty ratio of the probing impulses and significant reduction of undesirable radiation towards the operator.

JOINT STOCK COMPANY **ELVIRA** PRODUCTION ENTERPRISE

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Zheleznodorozhny,
July 30, 2012

To Honored Customers,

ELVIRA Production Co. Ltd. herewith appoints TS-Market Ltd. as its non-exclusive Export Agent and authorizes it to promote the following products: (1) the complete family of non-linear junction detectors (NLJDs) LORNET including Lornet, Lornet-24, Lornet-36, Lornet-0836 and (2) manual frequency and power meters MFP-8000.
Export Agent has the right to provide Certificate of Origin, Certificate of Quality as well as warranty services for the above mentioned products.
Export Agent shall not be kept liable in any way for ELVIRA products sold via alternative distribution channels.

Sincerely yours,

Anatoly Belchikov
General Manager

Technical characteristics:

Probing signal frequency	789.5-791.5 MHz; 3581.5-3607.5 MHz
Probing signal type	pulse
Duty cycle	0,3% and 5%
Transmitters peak power in each frequency range	40 W/20 W
Receivers sensitivity	<-110 dBm
Operation time with changeable battery (duty cycle 0,3% and 5%)	>3.0/1.5 h

LORNET STAR The world's only non-linear junction detector featuring

- **integrated spectrum analyzer of 2nd and 3rd harmonics** and
- **interchangeable ransmitter-receiver modules** of 3 frequency bands: 800 MHz, 2400 MHz and 3600 MHz.

Antenna module
for 800 and 2400 MHz
with spectrum analyzer

3600 MHz   2400 MHz   800 MHz

Telescopic rod

Main Competitive Advantages:

- Facilitates decision-making on the separation of corrosive and artificial semiconductors
- there is a built-in module measuring the reflected power of the probing signal from the research object, which allows it to estimate the extent of the reflecting surface of the object
- automatic protection system against centered jamming by criterion of a minimum noise in the receiver path of the 2nd harmonic
- electromagnetic radiation towards the operator is many times less than one set by the Regulator

Lornet Star delivery set can include up to 3 interchangeable antenna modules from 5 available:

Lornet Star //08 - with antenna module for 800 MHz (all-weather and relatively low attenuation of signals in dense medium (brick, concrete, etc.))

Lornet Star //08c - with antenna module for 800 MHz with spectrum analyzer

Lornet Star //24 - with antenna module for 2400 MHz (opportunity to detect SIM cards and small (about 1 cm²) semiconductor devices) or

Lornet Star //24s - with antenna module for 2400 MHz with spectrum analyzer

Lornet Star //36m - with antenna module for 3600 MHz (provides spatial selection, which facilitates search operations in premises containing legal electronic devices)

Lornet Star features:

800 MHz **2400 MHz** **3600 MHz**

Combination of operating options in absorbing medium with high humidity; detection of small (less than 1cm2) semiconductor elements and the remote detection with spatial target selection

Integrated spectrum analyzer of 2nd and 3rd harmonics, that can significantly improve the identification of semiconductor elements (for 800 MHz and 2400 MHz antennas)

Universal control knob with interchangeable antenna units and universal telescopic rod, that can easily convert the detector from discover to inspection tool and back

Reliable detection of the SIM-card at a distance of 15 cm (2400 MHz) and 60 cm (3600 MHz)

Graphical LED pannel

Spectrum of re-emitted signal of 3rd harmonic

Level of probing signal power in dBm

Level of probing signal re-emitted by the object in dBm
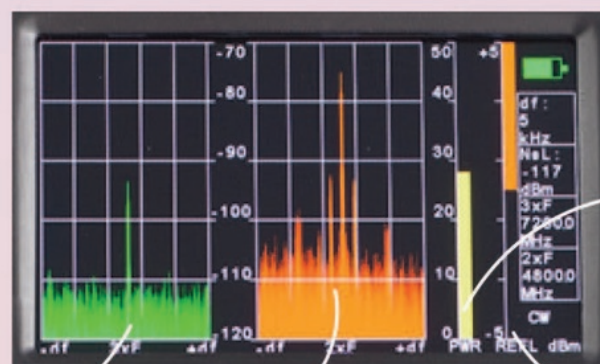
Spectrum of re-emitted signal of 2nd harmonic

Technical characteristics:

Antenna module	08	08c	24	24s	36m
Frequency of probing signal in the range	800 MHz	800 MHz	2400 MHz	2400 MHz	3600 MHz
The maximum power of the probing signal (max. // average):					
Pulse mode	10W//230mW	10W//230mW	10W//230mW	10W//230mW	18W//112mW
Continuous mode	300mW	300mW	300mW	300mW	-
Pulse mode with low off-duty factor (CW)	-	-	-	-	6W//375mW
Receiver sensitivity	-110dBm(-140dBmW)				
Probing signal power adjustment range	20dBm				
Receiving path dynamic range	24dBm				
Battery life at maximum power in a pulse (continuous) mode	3,0h	2,5h	3,0h	2,5h	2,5h
	(1,5h)	(1,5h)	(1,5h)	(1,5h)	(1,5h)
Module dimensions	40x20x7cm	40x20x7cm	40x20x7cm	40x20x7cm	40x20x20cm
Telescopic rod sizes	54x4x4 (86x4x4)cm				

Cayman

Non-Linear Junction Detectors

These professional detectors are designed for search and detection of hidden electronic devices, mobile phones and SIM cards, checking of mail and packages for contraband or forbidden objects containing semiconductors as well inspection of people, whether the electronic target is radiating, hard wired, or even turned off.

Main distinctive feature of non-linear junction detectors CAYMAN is multifrequency irradiation mode, which provides wide range of advantages:

- increased selectivity (ability to distinguish electronic components with background of metal-oxide-metal structure);
- increased probability of detection electronic devices behind partially shielded surfaces (such as the grid "netting");
- optimal ratio of radiation power and detection range;
- ability to identify detected objects in Audio mode;
- high detection sensitivity at a low output power;
- ability for effective operation in complicated interference environment (reinforced structures, corrosion, etc.).

Delivery set:

- CAYMAN non-linear junction detector
- 4 Rechargeable batteries of type 18650
- Power supply charger
- Charging unit
- Headphones
- Semiconductor simulator (red marking)
- Metal-oxide-metal structure simulator (blue marking)
- Operation manual
- Transportation shockproof package

Cayman ST-400 (402)

Features ergonomic design, large telescopic bar and retractable armrest.

Cayman ST-401 (403)

Compact version of Cayman 400.

Device is used for search and detection electronic devices containing semiconductor components. Cayman 400 allows detecting and precise localizing both working devices and even turned off ones. Using this non-linear junction detector operator is able to distinguish natural semiconductor from the artificial one (metal, corrosion, metal-oxide-metal structure).

The key difference from base model 401 is lack of telescopic bar, which makes it much smaller and more convenient for transportation. This model is especially helpful when working in confined space, checking small cargo and mail, as well as *inspection of people.*

Technical characteristics:

	Cayman 400	Cayman 401
Frequency range	2-3 GHz	2-3 GHz
The maximum radiated peak power	Less than 2W	less than 2W
Antenna	circularly polarized	elliptically polarized
Operating modes	«search», «audio», «adaptation»	«search», «audio», «adaptation»
The range of sensitivity adjustment in manual mode	40 dB (5 steps of 8 dB each)	40 dB (5 steps of 8 dB each)
Indication: **- visual;** **- audible**	three 16 LEDs bars; built-in speaker, headphones	three 16 LEDs bars; built-in speaker, headphones
Power supply	2 Li-ion rechargeable batteries 3,7V (18650 type)	2 Li-ion 3.7 V rechargeable battery (18650 type)
Run time of a fully charged battery	3-4 hours (depending on the operating mode)	2 to 3 hours (depending on the operating mode)
Charge time	not more than 3 hours	not more than 3 hours
Operating conditions: **- temperature** **- humidity (under +25C°)**	+5°C...+40°C; not more than 85%	
Weight with battery	1.75 kg	0.85 kg
Dimensions when folded (length, width, height)	510x130x145 mm	220x130x95 mm
Dimensions with a fully extended telescopic handle and armrest	1500x130x250 mm	-
Weight of the full set	5.8 kg	up to 3.7 kg

BIRUCH

Explosive Detector

BIRUCH (C04) is intended to detect traces of explosives in gas phase during inspection of personal belongings, baggage, mail, parcels, packages, vehicles, buildings.
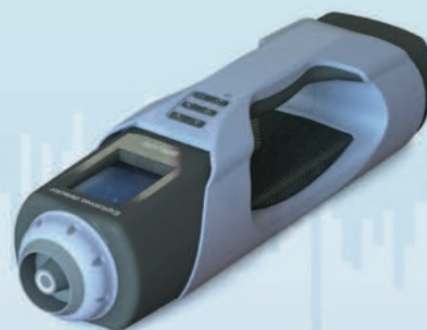
Opportunities and advantages

Explosives Detector BIRUCH exceeds characteristics of the best mass-produced analogue devices because of the most optimal construction, which combines high sensitivity, compact size of basic elements, and low power consumption. Device operation is based on the principle of nonlinear dependence of ion mobility on the electric field.

- direct non-contact detection of TNT vapor and less volatile explosives, including RDX and HMX;
- detection of traces of low-volatile explosives on the surface using a piezo desorber;
- explosives detection by using defining points;
- self-cleaning and automatic protection against concentration overload;
- despite the application of radio-emitting source, is absolutely safe for operator and have confirming certificates.

Technical characteristics

Parameter	Unit	Value
Sensitivity to TNT vapors, at least	g/cm^3	10^{-14}
Analysis time, up to	sec	2
Target detectable substances	–	TNT, RDX, HMX, PENT
Signal indication of a target substance detection	–	sound, light
Distance of vortex sampling, at least	mm	60
Range of operating temperatures	℃	5..50
Bbattery life on a single battery	hour	3,5
Dimensions, LxWxH, up to	mm	350x103x94
Weight, up to	kg	1,7

Delivery set

- Explosives detector C04 (Biruch)
- Safety cover;
- Additional battery unit;
- External power supply GS60A18-P1J or of similar characteristics;
- Power cord;
- Source of TNT vapor imitator;
- Evaporation chamber of piezo desorber;
- Removable filter grids - 3pcs.;
- User manual;
- Device passport;
- Passport to the source of ionization radiation - 2 pcs;
- Packing case for storage and transportation;

The comparison of the Explosive detector BIRUCH (C04) with the rival products

Designation / Specifications	Detector BB C04 (IC Biruch, CJSC, Russia)	Pilot-M1 (Lavanda-U, LLC, Russia)	MO-2M (Sibel, CJSC, Russia)	Kerber (Modus, LLC, Russia)	Sabre 5000 (Smiths Detection, USA)	Quantum Sniffer (Implant Sciences Corp., USA)
Threshold sensitivity, g/cm^3	10^{-14}	10^{-13}	10^{-13}	10^{-14}	10^{-12}	10^{-14}
Analysis time, sec	2	1,5	2	5	10	10
Ramp-up time, sec	6	10	10	900	900	900
Distance of sampling, mm	100	100	100	Remote sampling is absent	Remote sampling is absent	Remote sampling is absent
Battery life, h	4…6	4	3	4	4	4
Ionizer type	Radioactive source	Coronary discharge	Radioactive source	Coronary discharge	Radioactive source	Photon source
Overall dimensions, mm	350x103x94	300x180x90	310x100x90	410x162x110	363x110x130	493x127x188
Weight, kg	1,7	2	1,4	3,7	3,2	5,4
Appearance						

Explosives Vapor Detector Pilot

Pilot-M1

Has no radioactive source and is absolutely safe for operator and environment

Opportunities and advantages

Pilot-M1 is intended for detection both vapor and trace amounts (microparticles) of explosives (type DNT, TNT, HMX, PENT) at surface of various objects. Detection is ensured by taking air samples from inner space of inspected objects and their subsequent analysis. Remote trier with grid thickener (part of delivery set) allows to take samples in dusty and smoky areas. Special software allows comparing registered spectrum to typical spectrum of pure and mixed explosives and sending it to a remote PC.

Technical characteristics

Detected explosive vapours	TNT, EGDN, PETN, cyclonite, NG and compositions on their base
Sensitivity threshold (TNT sample) at 20 ± 2 °C, not worse than, g/cm^3	10-13
Response time, sec	1
Readiness time, sec	10
Remoteness at taking air samples up to, sm	10
Alarm indication	Visual and audible
Dimentions, mm	310 x 190 x 90
VD mass (incl. rechargeable battery), kg	1.8
Power source	DC 7.2V rechargeable battery / AC (190-242)V 50 Hz
Battery life at least, hours	4
Operating conditions:	
- temperature, °C	from + 5 up to + 40
- humidity at 25 °C, %	up to 90

The list of substances which could be detected by Pilot-M1

Nitroglycerine (NG), EGDN, trinitrotoluene (tol, trotyl, TNT), PENT (tetranitrapentaerythrit, pentaerythrittetranitrate, Pentrit, PETN), hexogen (RDX), oktogen (HMX), tetryl (Tetril), threeacetonethreeperoxide (Cyclethreeacetonethreeperoxide, TATP) and nitrocellulose powders, engaging mixing explosives on their ground: Semtex and other plastic and elastic explosives on the basis of RDX, PENT or their mixture, B-type compositions (ТТ-20, ТТ-40, ТТ-60, ТТ-80, МС, ТТАФ)*, C-type (C1, C2, C3, C4, ПВВ-4*, ПВВ-5А*, ПВВ-7*, ПВВ-12М*, ЭВВ-11*, ЭВВ-32* and etc.), H-6, HBX, Minol-2, Amatol (ammatol, ammonite, 6-ЖВ*), Primacord, Primasheet, Tetritol, Tritonal, Cordit N, A-IX-1, A-IX-2, A-IX-20, octols*, ocfols* and some other mixing explosives.

* - explosives of Russian origin

Explosives Vapor Detector Pilot

Pilot-M1 Premium

The Premium model distinguishes with color LCD monitor to display ionogram using which the operator is able to identify type of explosive detected

Opportunities and advantages

Gas analyser of explosives Pilot-M1 Premium is intended for detection of explosives in non-tight volumes and traces of explosives on a surface of surveyed objects. Detection is carried out by sampling air from internal volumes of surveyed objects or from their surfaces and the analysis of tests on contents of characteristic components of explosive vapor.

Signal level and ionogram of the test are displayed on the color graphic display of the device. Position of the 'peak' of the ionogram makes it possible to draw a preliminary conclusion regarding detected explosive. Device's memory stores information about more than million ionograms.

Technical characteristics

Explosives substances under identification	NG, TNT, EGDN, RDX, PENT and etc.
TNT Threshold Sensitivity (under +20°C, 80% humidity)	not less 10-13 g/cm³
Warm-up time	no more 10 sec.
Analysis time	no more 1 sec.
Indication	Audio & LCD
Power Supply:	
- AC (via 12 V adapter - supplied)	100…240 V / 50…60 Hz
- DC (1 rechargeable batteries - supplied)	7.2V 31.7 Wh
One battery pack continuous operation time	
- in «SEARCH» mode	not less 5 h
- using sample heater	not less 3 h
Operation conditions:	
- Temperature	+5°C…+40°C
- Relative humidity	up to 90% (under +25°C)
Survive after strong environment effect:	
- Temperature	-50°C…+50°C
- Relative humidity	98% (under +25°C)
Storage conditions:	
- Temperature	+5°C…+35°C
- Relative humidity	80% (under +25°C)
Main Unit:	
- Dimensions	300x180x90 mm
- Weight (with battery)	1.8 kg
Total weight in carrying case	no more 7.5 kg

Delivery set:

- Pilot-M1 Premium
- Test unit (Imitator)
- Sample Heater
- Self-contained Gauze Sampler Pump
- Metallic Gauze Sampler - 3 pcs.
- Special Swab Sampler - 30 pcs.
- Power cable for the Charger
- Charger
- Rechargeable Battery - 2 pcs.
- Tweezers
- AC / DC Adapter
- USB cable
- User's Manual
- Carrying case
- 15. Software

Metal Detectors AKA

Professional, computerized, highly sensitive selective metal detectors

Designed to search for and identify metal objects in the dielectric (dry sand, wood) and low conducting (soil, brick walls) media

Signum MFT 7272M

an eddy current selective metal detector that works on induction balance principle

Device uses the original technology of signal processing sensor-technology space and harmonic filtering (SFT), minimizing the hindering effect of ferrous soil (salinity) and, thereby, increasing the reliability of the identification of deep and small objects. Software and hardware unit allows it to initiate and process signals in the range from 1 to 30 kHz. Signum allows working in water depths of up to 15 meters, without submerging the control box.

Main distinctive features

- unique algorithm to identify flat iron objects (S-algorithm)

- the multi-frequency technology (MFT) allows the use of different any search coils regardless of their operating frequency (Hz). That is, the device itself will make adjustments and calibrate to the selected coil

- static mode of operation to pinpoint the exact location of the detected object

- mode TURBO - high coil current mode, which is used to improve response from good signals at depth.

- unique option to suppress indication of "hot rocks" without discrimination

Technical Specifications:

Maximum detection range of metal objects	60 cm or 23.5 in - coin Ø 25 mm; 150 cm or 59 in - large objects
Display modes	audio, 5 modes (RT, RT-M, RT-ST, RTL-ST, STP); visual (LCD display with resolution of 128x64 pixels)
Search modes	all metals; sectored discrimination with 2° step
Operation time	up to 18 hours in normal mode, 6-7 hours in TURBO mode, up to 40 hours in economy mode

Sorex PRO 7281
selective eddy current metal detector with equalized induction transducer (searchcoil)

Metal detector has several switchable main algorithms of signal processing which allows adjustment for various search conditions: from trashy areas to deep search of single targets. The device equipped with 15DD-3kHz searchcoil may detect soldier's helmet down to 1.4 m.

Main distinctive features

- multi-frequency technology (MFT)

- switch option for the so-called searchcoil signal main algorithm (MA) processing. This option provides better customization to search conditions and increases target identification reliability

- ability to process signals with three independent algorithms (MSF, SSF, M/T)

Technical Specifications:

|	
Maximum detection range of metal objects	47 cm - coin Ø25 mm (brass);
Operating frequency range	from 1 to 22 kHz
Operation time	4 batteries 2800 mAh type AA (1.2V) - 20-40 hours;
	4 batteries type AA (1.5V) - 10-20 hours;

Berkut-5
new model in the world market

Metal detector has technology of mediated imaging of objects in form of spectral hodographic images on the graphic LCD display (128x64 pixels). Programmable function button allows the user to set up one of the possible functions to be performed when the button is pressed. Possible functions: control of the sensor's current, display highlight control, enabling of power-saving mode, switching on/off the analog mode.

Main distinctive features

- multi-frequency technology (MFT)

- broad programmable options of sound indication of five types (1, 2, 3, 10 and 91 tones)

- automatic, semi-automatic and manual ground balance
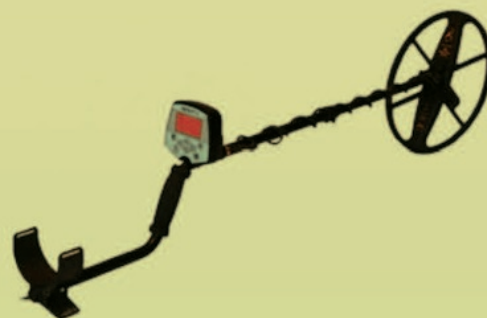
Technical Specifications:

The maximum detection range:	45 cm - coin Ø25 mm (brass); 250 cm - large objects
Search modes	All metal; Discrimination; Pinpoint
Operation time	27 hours in normal mode; 12 hours in TURBO mode

Handheld Metal Detectors AKA

Portable Metal Detectors designed to search for metal objects in the dielectric and low conductive media

Reliable and safe detectors in compact case allow quick search of weapons and metal details even in remote places.

Handheld Metal Detectors may be used in:

- MoI, bank security services, companies, customs, etc. to detect luggage containing cold steel and firearms, explosive devices, smuggling goods, etc., and different types of metal insertions in room walls, furniture;
- field military surgery to detect bullets and splinters in human's body;
- building construction to detect position of reinforcement bars, hidden wire cables;
- archeology.

Also our portable detectors are often used as a supplement to ground metal detectors for precise location of objects.

For instance, when full-sized metal detector recognizes small object under ground, then searcher digs up area of ground pointed by metal detector. And using our handheld metal detectors it is very easy and fast to localize small metal objects among excavated soil.

AKA 7202 M

The model distinguishes with high sensitivity and scanning pace, provides low power consumption and ergonomic design (dimensions 415x85x35mm, weight 410g). The model may optionally be supplied with inspection mirror and lantern. AKA-7202M also features a built-in automatic battery discharge control.

Maximum detection range of metal objects, mm:

F-1 grenade	150
Makarov pistol	180
Sword-bayonet for AKM submachine carbine	120
Bandsaw blade of 150 mm length	90
Safety razor (non-magnetic stainless steel)	30

Technical Characteristics:

Dimensions, mm	415x85x35
Power source	DC 9V (6F22 type battery)
Continuous operational time powered by fresh 6F22 type battery, at least, hours	40
Weight, up to, g	410

Uniscan 7215 M

The model distinguishes objects of ferrous and non-ferrous metal, has audible and visual alarm. For instance, the detector allows it to distinguish Makarov gun from any portable household item made of non-ferrous metal.

Uniscan 7215M may be used to detect ferrous metals only.

Maximum detection range of metal objects, mm:

Makarov pistol	300
Drain hatch	800
Screw M3×7	80
Brass disk 25×1	150

Technical Characteristics:

Dimensions, mm	400x145x35
Power source	DC 9V (6F22 type battery)
Continuous operational time powered by fresh 6F22 type battery, at least, hours	40
Weight, up to, g	260
Alarm type	Audible and visual

Rascan-5/7000

Portable holographic radar system

Radar produces plan view gray scale images of the subsurface objects using five simultaneous frequencies

RASCAN-5/7000 is intended for sounding structural components of buildings (brickwork, wall panels, cast in place concrete and reinforced concrete, etc.) for detection of buried objects (wiring, reinforcement, voids, various kinds of discontinuities and foreign bodies). Software forms representation of the internal structure of examination area. Received images can be focused by special algorithms for improving their resolution.

Technical characteristics

Maximum sounding depth (depends on medium properties), mm:	75
- in concrete	150
- in brick wall	180
- in wall board	180
- in wood	1.5
Resolution in plane of sounding at shallow depths, cm	5
Number of frequencies	< 10
Transmitter power, mW	< 3
Power source, W	
Supply voltage, V	
AC	100-230 (50-60 Hz)
DC	12
Dimensions, mm:	
Control unit	157 x 63 x 200
Head	95 x 148 x 119
Weight, kg	1.9
Productivity, m^2 per hour	4...6
Operating temperature, °C	+10...+35
Relative humidity, %	< 90

Results of Rascan operation:

Word "RASCAN" cut from aluminum foil, under 6 cm of foamed concrete (frequency is 6.6 GHz)

Two reinforcement rods in concrete (depth is 11 cm, distance between rods is 8 cm, frequency is 6.6 GHz)

Joint use of Lornet-24 and Rascan 5/7000

facilitates and accelerates search operations

Note! *RASCAN (holographic radar system) is the best supplementary exploration tool of Lorent-24 (compact non-linear junction detector of examination type).*

A non-linear junction detector Lornet-24 is used while conducting strategic and search work afield, in rooms, transport, and is designed to find special equipment containing semiconductor components. An automatic system of frequency selection is integrated into the device, and it can tune away from narrowband interference automatically (by a criterion of minimum noise of the receiving channel of the 2nd harmonic).

They are an ideal combination owing to the fact that Lornet allows promptly localize areas of device placement, and RASCAN then allows getting the accurate picture of the selected areas. That could help to save much time and make the searching more effective! You will be able to provide high-end and incomparable service!

The detection of objects boils down to two steps:

1. prompt localization of devices placement areas with Lornet-24
2. getting the accurate image of the selected areas wirh Rascan-5/7000

Lornet + **Rascan**

RASCAN with Lornet-24 will be useful in the following areas:

- Counterintelligence activities for detecting of bugging devices;
- Operative inquiry activities of law-enforcement agencies;
- Surveying of building structures for determining the position of defects, reinforcement, voids and other heterogeneities;
- Inspection of the objects of culture heritage.

RAKSA iDet

Selective RF Detector

We are happy to present you a unique device which can be used to detect and locate in the near field a wide variety of radio transmitters used for secret access to information.

Opportunities and advantages

RAKSA iDet Selective RF Detector is remarkable for its small dimensions (77443418). Scanning and analyzing cycle period is 1.0-1.5 sec. RAKSA iDet can operate within monitoring, sweep, search, difference search modes and monitoring of digital signals. Soundless alarm indication (vibration mode) and absence of external antenna helps the device to attract little attention.

Application

RAKSA field detector is designed to detect near-field location of radio transmitting equipment used for secret retrieval of audio and video information. Among them:

- Cell phones of GSM 850/900E/1800/1900, UMTS 850/900/1800/1900/2100, CDMA 450 (A-H)/ 800/1900 standards
- Cordless DECT phones
- Bluetooth and Wi-Fi devices
- Wireless video cameras
- Radio transmitters with analog modulation (AM, FM, PM)
- Radio transmitters with digital modulation and continuous carrier (FSK, PSK, etc.)
- Radio transmitters with wideband modulation up to 10MHz bandwidth
- Wireless microphones with analog, digital and broadband modulation

Technical characteristics:

Frequency band:	40-3800 MHz	Running time in guard mode:	4-12 h
Typical sensitivity:	70 mV/m	Running time in other modes:	3 h
Dynamic range:	50 dB	OLED display:	128x64
Bandwidth:	10 MHz	Dimensions:	77x43x18 mm
Period of full scanning cycle:	≤1.5 s	Weight:	35 g

RAKSA iDet Selective RF Detector is a superheterodyne receiver with low IF and frequency synthesizer. It provides continuous scanning of frequency range and analysis of spectrogram peaks. The standard digital signals are identified by their amplitude-time characteristic.

Scanning and analyzing cycle period is 1.0-1.5 sec. Filtration of short-term noise requires at least two scanning cycles, so the signal is detected in 2-3 seconds.

Any continuous radio signal with the amplitude modulation index ≤0.5 without frequency hopping is treated as an analog signal. Such are the analog signals of AM, FM, PM modulation and digital signals of FSK, PSK and the like modulations.

Special features:

- Signal detection against the background interference;
- High speed of scanning and analyzing;
- Detection of digital, analog and wideband signals;
- Adaptation to the background noise in Monitoring Mode
- Difference search mode;
- Audio monitoring through the built-in speaker;
- Signal frequency and level measurement;
- Alarm events log;
- Silent alert signal (vibration mode)
- No need for external antenna;
- Interface languages: English, German, Spanish, French, Italian, Russian.

Spectr-Express

Portable complex for eavesdropping devices search

The complex is designed to detect radiation of radio microphones, radio stethoscopes, hidden wireless cameras, as well as to detect signals from eavesdropping devices in 220V mains, low-voltage lines (fire and burglar alarm systems, telephone lines) and in infra-red (IR) range.
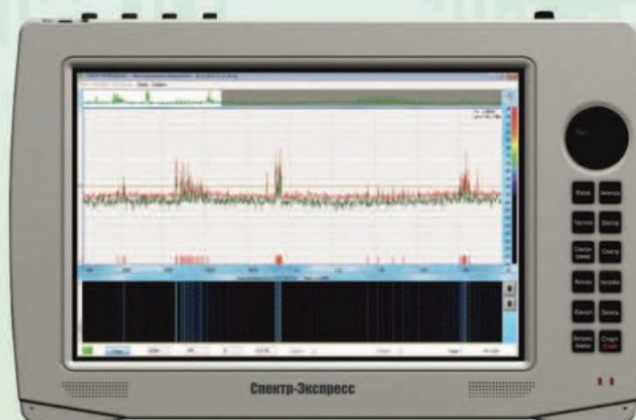
About complex

Spectr-Express is made as a monoblock, featuring built-in control PC, high-speed radio receiver, analog-to-digital converter, electronic antenna switch with four inputs, wire line converter, video capture system and Li-ion battery. Complex is equipped with built-in 12.1″ diagonal touch display.

Device uses up to four spaced antennas for searching, parameter estimation, identification and localization of emitters in the frequency range 10-3000 MHz or 25-6000 MHz.

Main competitive advantages

- Spectr-Express detects eavesdropping devices, including those using: digital modulation types, noise-like structure, mode of pseudo-random or specified adjustment of operating frequency, ultra short pulses, etc.
- For detection "dangerous" signals the software has unique diversity reception algorithm, with three varieties.
- High performance allows the complex to detect signals from radio (wireless) microphones operating in mode of information accumulation and short-term transferring it to broadcast.
- Detection and differentiation of signals are performed by parallel digital spectrum analyzer with resolution of 2 kHz.
- Its high resolution enables detecting and distinguishing narrowband signals from microphones, operating close to legal radio equipment.
- There is ability to remote control the device via local network and Internet.
- The complex displays detected image from hidden wireless cameras.
- Detected signal can be saved in PC's memory for later analysis.

Ethernet

Audio

HDMI

USB
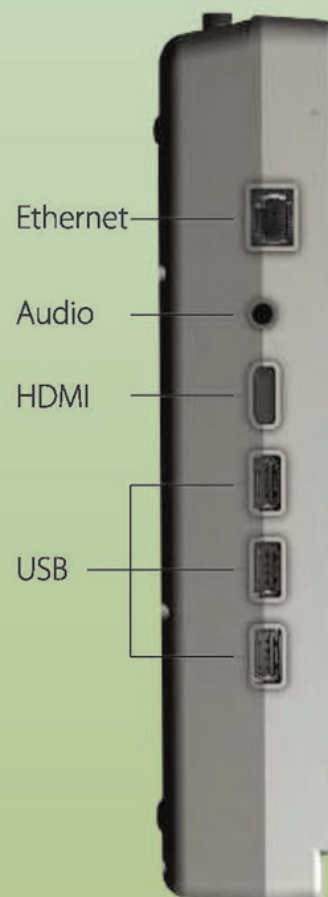
Compact dimensions, low weight, convenience and efficiency of switching the equipment allow the portable complex Spectr-Express to use as one of the main tools during search operations.

Tactical and technical characteristics:

Frequency band, MHz:	10-3000, 25-6000
Wire lines converter frequency band, MHz:	0.0006-10
IR sensor spectral range, nm:	320-1100
Panoramic view speed (resolution 2 kHz) up to, MHz/s	1150
Swath, MHz:	0.1-50
Resolution (analysis mode), kHz:	0.2
Resolution (detection mode), kHz:	2
Antenna input sensitivity at least, uV:	2
Digital demodulators:	NFM, WFM, vector
Processor type:	Intel Core i5
Operation system:	Windows 7
Memory, Gb:	64/128
Screen size, in:	12.1
Screen type:	Touch
External connectors:	USB 2.0*3, HDMI, LAN
AC power, V:	220
On-board car power, V:	12
Rechargeable battery (Li-ion), V:	12
Battery life in operation mode at least, h:	2
Dimensions, mm:	385x250x55
Weight, kg:	3.8

Delivery set includes:

- Monoblock
- Bag for accessories
- Unloading vest
- Power supply unit
- Manipulator (mouse)
- Flash drive with software
- Broadband receiving antenna AP-6000   (2 pcs.)
- Headphones
- Car cigarette adapter +12V
- High-frequency coaxial cable (2 pcs.)
- IR sensor
- Wire lines convertor probes   (2 pcs.)
- Operation manual
- Passport

Hidden Video Cameras Detectors

Voron

Video camera detector

The Voron device is designed for quick detection of hidden micro video cameras, including those with pinhole lenses. Voron detector has wide detection distance: 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 device is safe for operator, as Voron employs LED illumination of targets. Also the detector has excellent optical characteristics: high magnification, wide field of view and exceptional quality of image, and compact design. Voron is very simple to operate and does not require special skills.

Technical characteristics

Distance of ø 1 mm pinhole lens detection, m	1 ÷ 50
Magnification	5x
Angle of view, °	12
Operation on one battery, h	6
Dimensions, mm	50 x 68 x 140
Weight, g	33

OPTIC-2

Hidden video cameras detector

"Optic-2" is a professional hidden camera detector designed to detect and locate hidden or camouflaged camcorders and pinhole cameras, regardless of their status (on/off). The reverse reflection from hidden camera lenses will be seen thru Optic-2 oculars as a green or red dots.

Technical characteristics

Detection range (Depends on light conditions (ambient light))	from 0.5 to 50 meters
Angle of view	7,5 degrees
Magnification	6.5x
Power type	Li-ion battery 3.7V
Dimensions	125x85x65 mm
Weight (grams)	450

GRLED

hidden television systems detector

Compact portable device is designed for detection small-size video surveillance, camouflaged in the interior items, clothing, household goods, handbags and cases. Device allows detecting running on TV-cameras equipped with micro lenses (incl. pin-hole). It operates using LED emitters with different spectral response and has 2 channels of radiation (red and green) in modes - constant/impulse/combined.

Technical characteristics

Angle of the field of observation	10°
Zoom	3x
The working range of optical objects with an aperture of 1 mm	up to 25 m
Operating continuous time under the normal climatic conditions, no less than	8 hours

Hidden Video Cameras Detectors

Vizir

Detector of hidden video cameras with "pinhole" lenses on optical basis

When hidden camera is detected green or red spot is observed in the lens - the result of reflection, regardless of camera state (ON or OFF), as well as the transmission or recording type of video signal. The product is made in the form of binoculars in a rubberized metal case. Increase of 8,5 times allows to examine in detail the smallest and most difficult elements of the interior.

Technical characteristics

Detection range (depends on the light conditions - lightning of the room), m	from 0,5 to 70
Angle of view, degrees	
Zoom, times	6,0
Focusing range	8,5
Number of LEDs, pcs	from 50 cm to ∞
LED colour	24
Power Supply	green, red
Battery life (rechargeable battery is fully charged) up to, hours	Li-ion 3,7 V Rechargeable Battery
Weight, g	up to 3
	380

HUBBLE 2.2

portable optical hidden camera two-colored detector

The operation principle of the device is based on the re-reflection from camera optics of light source, which emanating from the device and located on the same optical axis (light source - camera being detected - operator's eye).
The angle of detection of the camera depends solely on the angle of the lens field of view of this video camera.

Technical characteristics

Zoom (optical), times	3
Viewing angle ~, °	10
Backlight	LED
Backlight color	red / green
Brightness of the backlight source, cd	2x50
Number of operating modes	7
Power source	CR123A / 3V
Battery life from power source ~, hours	10
Overall dimensions, mm	80x60x35
Weight, kg	0,11

HUBBLE 2.0

Reliable portable optical hidden camera detector

Well-priced compact optical video camera detector with LED backlight (50cd) and three-fold optical zoom with the option of sharpness adjustment. The device is assembled in an original rubberized shockproof case.

If a hidden video camera is detected, there will be a characteristic reflection from the lens of this camera in the eyepiece of the HUBBLE detector, regardless of whether it is ON or OFF.

The detection distance depends on various factors, and can be up to 10 m.

Technical characteristics

Zoom (optical), times	3
Viewing angle ~, °	10
Wavelength of the backlight source (red), nm	625
Brightness of the backlight source, cd	50
Bandwidth, MHz	10
Power source	CR123A / 3V
Battery life from power source ~, hours	20
Overall dimensions, mm	80x60x37
Weight, kg	0,13
Focusing range, m	from 1 to ∞

Technical Surveillance Countermeasures (TSCM) devices
5 professional devices for Surveillance and Control

Devices combine compact design with excellent optical characteristics: high magnification, wide field of view and exceptional quality of image.
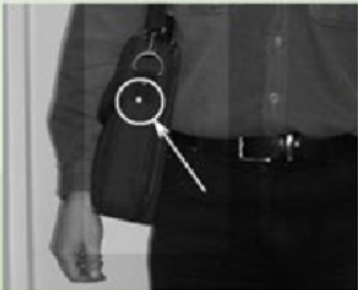
ANLAS *camera detector with laser light source*

It is designed for search and visualization the place of portable systems of secret observation, camouflaged in the interior items, working or disconnected compact cameras. It operates with an average detection range of 25m and can be used in premises. Device allows detecting electro-optical surveillance systems through the window as well as toned glass, organic glass, and semitransparent mirror.

Basic operation principle is "cat's eye" effect (light-reflecting effect) lying in ability of optical objects to reflect probing radiation in opposite direction with angle close to its incidence angle. Semi-conducting laser IR diode (transmitting channel) serves as the source of probing radiation. The reflected signal is registered by sensitive video camera on the basis of interleave transfer sensor 1/3// (reception channel). The Device is developed on non-parallax optical scheme, i.e. with optical alignment of reception and transmitting channels.

Technical characteristics

Type of receiver	1/2", CCD
Size of receiver	752x582 p
Focal distance	25 mm
Angle of the field of vision	8° x 6°
Focusing range	1 m .. ∞

SPLAS *camera detector with laser light source*

Electrooptical instrument SPLAS is designed for remote detection and visualization the place of covert electrooptical surveillance systems (ESS) including night vision devices (NVD) and sniper sights (SS) camouflaged in the various items. Device equipped with long-focus lenses (up to 1000m) and conducting counter-surveillance under conditions of both intensive light and at night.

The effect of light reflection consisting in ability of optical objects to reflect the probing radiation in the opposite direction at an angle, close to a corner of its falling is the basis of the device operation principle. Semiconductor laser IR the diode (transferring the channel) is a source of the probing radiation. Then the transferring channel forms a laser beam in the form of vertically located rectangular raster.

Technical characteristics

Type of receiver	1/2", CCD
Size of receiver	752x582 p
Focal distance	75 mm
Angle of the field of vision	4.9° x 3.56°
Focusing range	2 m .. 1000m

KONV-614 *night vision device (NVD)*

The main competitive advantage of our NVD is the progressive black and white image. Compact device is designed to maintain high-quality surveillance, reconnaissance, securing facilities. This device will be useful to private security companies' employees, police, special units of the law enforcement agencies, securing services and other organizations.

Technical characteristics

Electro optical converter type	black-and-white 2+
Photocathode luminous sensitivity, no worse	550 mA/lm
Gain of brightness	25000
Resolution	57 l/mm
Focal lens	25 mm
FOV	30°
Zoom	1x
Minimum viewing distance	1 m
Maximum range of detection	200 m

KAIR *portable uncooled searching thermal imager*

Infrared imager is intended for creation and visualization objects thermal images in long-focus infrared (IR) range with capability to store video files in the internal memory of the device. The device is effective during round-the-clock search and surveillance objects of intelligence and also under conditions of strong optical interference, such as smoke, fog.

Technical characteristics

Type of the receiver	Uncooled microbolometer
Conversion frequency of image, at least	25 Hz.
Format of the receiver	640x480 pix.
Minimum discernible temperature difference	0,06 ℃
Operating spectral range	8 – 14 mkm
Readiness time, up to	7 s
Focal length	60 mm
Viewing angle	10,4°x7,8°
Focusing range	1 m... ∞
Detection range /recognition of man	1060/350 m

KAIR-SM *wearable thermal imaging camera*

Portable thermal imaging camera is intended to observe objects or protected areas at any time of the day under bad weather conditions, as well as to tackle anti-terrorist and special tasks, conduct patrol works, search and rescue operations, including during natural disasters, while operating in moderate climate conditions both outdoors and indoors.

Technical characteristics

Radiation receiver type	aSi uncooled microbolometer
Number of sensitive detector elements (matrix)	384x288 pixels
Minimum discernible temperature difference	0,05 ℃
Operating spectral range	8 – 14 mkm
Readiness time, up to	5 s
Viewing angle	29° x 22°
Focusing range	0.5 m... ∞
Maximum detection range of human / car, at least	220/680 m
Maximum recognition range of human/ car, at least	70/220 m

ST-031M "PIRAHNA-2"
Selective detector

Multifunctional searching device ST-031M is designed for the detection and localization of technical surveillance measures and to identify the natural channels of information leakage, as well as for quality control of data protection.

ST 031M "PIRANHA" consists of three detection channels, each of which is 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.

ST-031M can detect and localize the following Special Technical Means of Obtaining Secret Information (STMOSI):

· 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.

Technical characteristics

Power supply	
Lithium-polymer battery with a voltage, V	3.7
Power consumption, W	1,2...2,5
Continuous operating time at max. power consumption, hours	>7
Time to charge a fully discharged battery, hours	7
Weight, dimensions	
Dimensions of the main unit (length, width, height), mm	175x83x36
Weight of the main unit, kg	0,430
Dimensions of the case (length, width, height), mm	390x310x170
Full weight of the set in case, kg	3,8

ST 300 SPIDER *Selective Detector*

Wired communications analyzer ST 300 SPIDER is designed to detect and locate eavesdropping devices, galvanically connected to power and low-current wire lines in the inspected object. The analyzer uses both passive and active modes of operations. This allows detecting eavesdropping devices which are in active or in stand-by mode at the time of a sweep operation.

Technical characteristics

Height	175 mm
Width	83 mm
Thickness	36 mm
Weight	375 g
Power supply	rechargeable battery
Indication of operation	light, sound
Battery life	at least 7 hours
Battery charging time	7 hours

Modes of operation:

- Electronic switch;
- Low frequency amplifier;
- Wireline receiver;
- Nonlinear junction detector for wire lines;
- Reflectometer;
- Trace locator.

ARCAM S-200 *Spy camera detector*

ARCAM S-200 is designed for remote detection and localization of powered hidden video cameras that are installed outside, indoors, concealed as objects or body-worn. ARCAM S-200 is able to detect both analogue and digital cameras regardless of concealment and video transmission methods. ARCAM S-200 detects both common wired and wireless cameras, as well as cameras that are storing data on an internal memory bank, which gives ARCAM S-200 an obvious advantage over other instruments for camera detection, such as Optical Detectors or NLJDs. ARCAM S-200 does not require the operator to thoroughly and slowly search the entire premises or a person, it takes seconds for ARCAM S-200 to tell if there are any cameras which could then be easily localized.

Technical characteristics

Receiver sensitivity	-148 dBm
Dynamic range	80 dB
Detection time (average)	3 s
Analysis time (average)	10 s
Continuous operating time	not less than 4 hrs
Battery full recharge time	not more than 3,5 hrs
Antenna type	whip, broadband
Battery	Li-Pol, 4100 mAh
Physical dimensions	85 x 140 x 30 mm
Weight (with antenna)	not more than 300 g
Operating temperatures	from - 10°C to + 40°C

Delivery set

1. ARCAM S-200 detector (SEL 102)
2. Antenna (A)
3. Power supply (PS)
4. USB – mini USB cable
5. Stylus (for touch screen calibration)
6. User's Manual (UM)
7. Hard case

Frequency and Power Meters

The devices of this series are designed for detection and localization of radio emitters, as well as for a measurement of radio transmitters' working frequencies.

MFP-8000

The device can detect any sources of radio emission within the frequency range from 100 kHz up to 8GHz featuring sensitivity of -53dBm with a typical S/N ration of 5dB. That means that a transmitting device with an output power of +7dBm (5mW) coupled to a matched 1/4 wavelength antenna can be easily detected from the distance of up to 8m.

MFP-8000 provides the following functions:

- It can determine frequency of the input signal within a frequency range from 100 kHz to 8 GHz.
- It can measure power of the input signal within a level range from -50dBm to +30dBm.
- It can identify in the input signal characteristic features of the data transfer protocol for different communication standards (GSM 900/1800/1900, DECT), e.g. for GSM it can determine "SMS" and "Talk" operating modes, as well as the frequency channel.
- It can automatically tune radio receivers and spectrum analyzers to the measured signal frequency via a built-in interface (option, ordered separately).
- It can use its built-in memory, clock and calendar functions to protocol and store measurement results.
- It can be integrated into automated systems of radio monitoring via a serial interface.
- It can utilize acoustic feedback mode during search work.
- It supports surveillance mode when it responds to signals with a power level exceeding a specified threshold.

MFP-8000 has the following features:

- 30dB input attenuator adjusted in 10dB steps.
- Count time selection.
- Input frequency range selection.
- User level correction setting.
- Battery charge/discharge control.
- Real-time clock and calendar.
- Built-in light and acoustic indication.
- RS-232 interface.

CORDON-4

Electromagnetic Field Analyzer

It is a broadband radio receiver intended for searching and locating low power sources of electromagnetic radiation in wide frequency range.

The analyzer allows not only detect radiation of secretly installed radio transmitter in the premises given, but also measure its signal frequency and assess power of electromagnetic radiation at the receiving end.

The CORDON-4 makes it possible to identify devices of WiFi (2.4 GHz) and Bluetooth standards, while the operation of the devices of the remaining wireless communication standards can be observed in the corresponding frequency bands using built-in spectrum analyzer.

Operating modes

- *Field indicator mode* identifies and locates low-power sources of electromagnetic radiation
- *Spectrum analyzer mode* analyzes spectrum of detected signals
- *Identifiers mode* detects and identifies wireless devices operating in 2.4GHz WiFi and Bluetooth standards

Technical characteristics

Operating frequency range, MHz	0,1÷12000
Sub band RF, MHz	0,1 ÷ 920
Sub band MW, MHz	300 ÷ 12000
Dynamic range, dB, at least:	
- 0,1÷920 MHz	70
- 300 ÷12000 MHz	55
Input sensitivity, mV, at least:	
- 0,1÷920 MHz	0,30
- 920 ÷ 10000 MHz	1,25
- 10000 ÷12000 MHz	5,00
Built-in attenuator, dB	0; 10; 20; 30
Supply voltage from rechargeable battery, V	7,2 – 8,4
Current consumption, W	8, up to
Dimensions without antenna, mm	165x106x43
Weight of the main block without antennas, kg	0,64
Operating temperature range, °C	+5 ÷ +40

Delivery set

- Cordon-4 field analyzer;
- Whip antenna of the range 0,1 ÷ 920 MHz;
- Whip antenna of the range 300 ÷ 12000 MHz;
- Directional antenna of the range 75÷1000 MHz;
- Directional antenna of the range 1000 ÷ 12000 MHz;
- Headphones;
- Charger;
- Operation Manual;
- Passport;
- Transport package.

* - The range of directional antennas can be changed upon customer's request.

GEWR-09 *table forensic unit*

Device is designed for inspection of documents, passports, banknotes, securities, as well as large-format sheets. The complex provides in-depth authentication of documents based on optical method in ultraviolet (UV), infrared (IR) and visible spectral range to all signs of authenticity, signs of forgeries and unauthorized changes. Spectral magnifier provides visual identification of various objects using LED of blue-green impinging light, lateral oblique incident IR radiation, impinging IR radiation in two spectral ranges.

Technical characteristics

UV wavelength	365 nm
UV emission power in the center of the working area	3.5 ± 0.5 mW / cm^2
Upper infrared wavelength	830 nm, 940 nm
Lower infrared wavelength	940 nm
Lighting in the center of the working area	3.2 ± 0.4 klx
Lighting of the working area at inside light inspection	0.9 ± 0.1 klx
Resolution of video camera	640x480
Diagonal screen size	4"

Validators are able to provide authenticity of documents through the following control methods:

Control of infrared (IR) security features of the image, picture fragments made in IR-metameric inks and / or absence of IR-metameric fragments
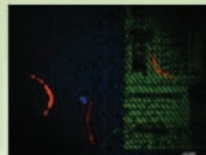
Inspecting UV protective features on the screen displaying luminescence elements made in phosphor inks; inspecting protective fiber and threads in UF365nm or 254nm. The absence of general luminescence background of paper UV365nm

Visual inspection of microprinting, image fragments, verifying printing methods in the upper white light. Identification of changes in the original content of the text through etching, erasures or additional noting using a built-in camera with a 10-fold zoom

Visual control in oblique visible light, verification of protective marks, notes and relief elements of the image

Control of optically variable inks
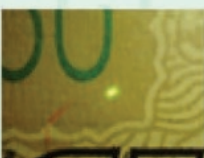
Control of image fragments, made with special paints with anti-Stokes phosphors (Special I element IK980 nm)in IR radiation (laser)

Visual control in white transmitted light (in case there is a translucent table) Verification of authenticity, shape and size of watermarks, matching images etc.

Control of security features in the blue-green area of the emission spectrum (470 nm)
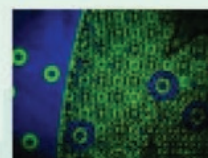
Glow in the field of Euro banknotes 365nm.

Glow in the field of Euro banknotes 254nm.

Authenticity Detectors

The devices of the series are designed for visual authenticity control of the protected printing products, detection of forged letterheads and changes in the original product.

A37 *multi-purpose currency portable detector*

Compact and easy to use. Features option of viewing in UV 254nm to effectively verify the authenticity of the new euro banknotes!

- The option to operate from a built-in battery increases the functionality of the device as an autonomous control unit.
- The option to record examination results onto the internal memory for further study and systematization of information received significantly expands the scope of application of the device (such as staff training or remote control of its work).
- Availability of basic interfaces (USB, HDMI, composite video output) make it possible to use the A37 for a variety of tasks using external devices (PCs, monitors, DVRs etc).

C6B *universal viewing detector*

The kit includes an optical magnifier with lightening (with a 10-fold zoom).

- Visual inspection of watermarks, security fibers, matching images, microperforation in the white transmitted light.
- Visualization of the presence and location of the infrared marks made in metameric inks (contrast and low-contrast areas) on the banknotes and securities of any type (850 nm).
- Special "M" element (picture fragments made by the paint with typical properties for various wavelength of IR band 850/940 nm).
- Visual inspection (UV) of security features.

C6M *currency detector*

Has the option of switching wavelength 254 nm and 365 nm, which helps it to verify banknote authenticity according to the characteristic lightening of various marks under UV light.

- Inside light inspection of IR protective characteristics.
- Visual inspection of microprinting, identification of changes in the original content of the text through etching, erasures or additional notes using a built-in camera with a 10-fold zoom.
- Verifying security marks, notes and pictures made in ferro-magnetic ink. This kind of control is applied by using a magneto-optical camcorder (MAGVideo) which is connected to the device.
- The option to output video on to an external monitor.
- Shutters to protect against UV radiation.