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.

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Zheleznodorozhny,
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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