

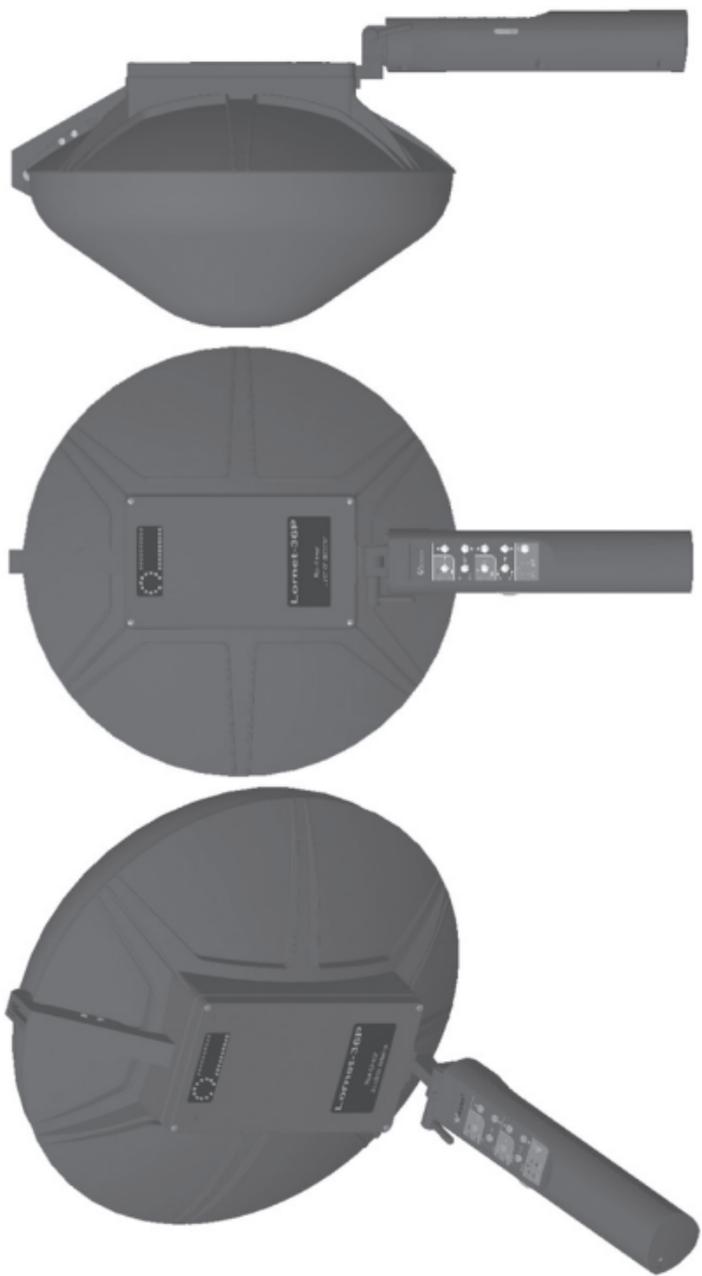
NON-LINEAR  
JUNCTION DETECTOR  
«**LORNET-36**»

***USER MANUAL***

*CERTIFICATE*

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## APPLICATION



The 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. It is very effective when it comes to identify miniaturized electronic devices (10x20mm) at a considerable distance, which is sometimes crucial when a suspicious object is to be analyzed from a safety range.

### **SPECIFICATIONS:**

Probing signal mode	Pulse (18W, 160, 112 mW)/CW (12W, 20, 600 mW)
Probing signal frequency range	3581.5-3607.5 MHz
2d harmonic receiver frequency range	7163-7215 MHz
3d harmonic receiver frequency range	10744.5-10822.5 MHz
Antenna gain at fundamental frequency	20 dB
Antenna gain at 2d harmonic	24 dB
Antenna gain at 3d harmonic	27 dB

Pulse power and duty cycle	20 W (0,6%)
EIRP (equivalent isotropic radiated power = radiated power plus antenna gain)	2000 W
2d and 3d harmonics sensitivity (antenna gain not considered)	-110 dBm
Dynamic range	> 30 dB
Antenna directional pattern width (at 1st/ 2d/ 3d harmonic)	16/ 8/ 4 degrees
Laser pinpointing of the antenna directional pattern center	
Time of continuous operation at the maximum probing power	3,0 hours
Dimensions in operational / shipping condition	477 x 303 x 227/ 303 x 303 x 230 mm
Fully equipped weight	< 1,4 kg

## MAIN COMPETITIVE ADVANTAGES:

- Building on a very high probing signal frequency and a very narrow antenna directional pattern the NLJD «LORNET-36» is dramatically superior to any competitive instrument in the industry in terms of detection range, selectivity and positioning accuracy. Some striking examples: «LORNET-36» and «ORION» were used in a comparison test to detect 2d and 3d harmonic junctions which revealed that «LORNET-36» has a three times wider detection range. Moreover, if the 2d and 3d harmonic (i.e. artificial and natural) junctions were located closer than 30cm to each other, the NLJD «ORION» could not distinguish between the 2d and 3d harmonics, whereas «LORNET-36» easily separated individual responses at each harmonic from a distance of at least 1 meter.
- The use of microwave frequency range gives «LORNET-36» some unique capabilities of detecting semiconductors hidden by different materials. It can detect semiconductors through slits and holes, un-grounded shielding, by means of reflection from a smooth surface etc. A SIM-card e.g. can be detected from a distance of 1m.

- A very narrow directional pattern of the antenna and a built-in pinpointing laser provide space selective detection of various semiconductor elements with high precision. Sometimes it is a key factor when a suspicious object has to be analyzed from a safe distance.
- The indication and controls are the same as in previous LORNET versions (e.g. radiated power change in automatic and manual modes).
- This instrument uses the innovative technology and materials and has a very ergonomic design. It is compact, lightweight and is very easy to use.
- The electromagnetic influence upon the operator is kept to the minimum level due to a very low duty cycle of probing pulses and decreased radiation to the operator side.
- The instrument uses wireless headphones

## **DELIVERY SET:**

- NLJD «LORNET-36» with a built-in lithium-ion battery
- Receiver with wireless headphones
- Battery charger working from 220V mains
- Storage / shipping case

## **IMPORTER:**

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