

# ORION<sup>®</sup> 900

## NON-LINEAR JUNCTION DETECTOR

### OVERVIEW

The ORION 900 detects and locates hidden electronics regardless whether the device is radiating, hard wired, or turned off. Types of circuitry NLJDs detect include eavesdropping devices, recording devices, cell phones and other electronic contraband.

The ORION 900 is hand held and compact when retracted and can extend to a full length of 58 inches (147cm) for investigating hard to reach areas.

The ORION 900 transmits between a 840 MHz and 960 MHz frequency range for better penetration through thicker, denser building materials and older or crudely made electronics. The ORION 900 will feature a quick disconnect that will provide an opportunity to offer a package with interchangeable antenna heads.

### TECHNICAL ADVANTAGES

- 1 INCREASED SIGNAL RESPONSE THROUGH DENSE MATERIALS** - The 900 MHz frequency band provides better penetration through dense materials such as concrete, stone, or soil.
- 2 DIGITALLY MODULATED SPREAD SPECTRUM TRANSMIT SIGNAL** - Provides increased detection range and interference rejection (Patent Pending)
- 3 WIDE TRANSMIT SIGNAL** - 1.25 MHz wide increases detection sensitivity
- 4 ADJUSTABLE DSP GAIN** - High gain provides increased detection range for the same power
- 5 -130 dBm CORRELATED RECEIVER** - 2nd & 3rd harmonic response correlated to Tx improves detection and minimizes interference (Patent Pending)
- 6 MULTIPLE ALERT METHODS** - Visible display, alert tones, and haptic (vibration) alert can be selected to alert on detection
- 7 FREQUENCY AVOIDANCE** - Tx searches for quiet frequency to avoid interference
- 8 MANUAL OR AUTOMATIC POWER CONTROL** - Not greater than 4 watts EIRP
- 9 LIGHTWEIGHT DESIGN** - Weighs 3.6 lbs (1.6 kg)
- 10 TELESCOPIC POLE** - Search ceilings and walls
- 11 SYNTHESIZED TRANSCEIVER** - Provides frequency stability and agility to automatically search for quiet operating frequencies (840 MHz to 960 MHz)

### APPLICATIONS

- Commercial security applications such as checking corporate board rooms or offices for unauthorized or hidden electronics.
- Searching secure areas for hidden or prohibited electronics.
- Searching for contraband cell phones or other electronic contraband in corrections facilities.

The ORION 900 is available in FCC and CE versions.

\* Product specifications and descriptions subject to change without notice.



The ORION 900 includes a line of sight antenna mounted display allowing the user to focus eyes on target area

U.S. PATENTS: 5,815,122; 6,057,765;  
6,163,259L U.K. PATENTS: GB2344423;  
GB2351154; GB2381077; GB2381078.  
Additional Patents Pending



# ORION<sup>®</sup> 900

## NON-LINEAR JUNCTION DETECTOR

### ORION<sup>®</sup> 900 ADVANTAGES

**UTILIZES 900 MHz FREQUENCY BAND**  
OPTIMIZING DETECTION THROUGH DENSE MATERIALS

**MINIMUM SETUP TIME**  
SETUP IS QUICK, QUIET, AND EASY - NO CABLES, POLE SECTIONS, OR BULKY TRANSCIVER TO ASSEMBLE OR CARRY

**ANTENNA MOUNTED DISPLAY**  
FOR LINE-OF-SIGHT TARGET FOCUS

**WIDE BANDWIDTH TRANSMIT SIGNAL: 1.25 MHz**  
INCREASES DETECTION SENSITIVITY

**DIGITAL MODULATION AND CORRELATION**  
PROVIDES INCREASED SENSITIVITY AND MINIMIZES INTERFERENCE



### TRAINING BY REI INSTRUCTORS

REI offers regularly scheduled technical security training courses.

On-site training also available.  
Course dates and registration online at [www.reiusa.net](http://www.reiusa.net) or email [sales@reiusa.net](mailto:sales@reiusa.net)



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### MARKETING CHARACTERISTICS

Please Note: Technical specifications are provisional and subject to change.

#### TRANSMITTER

**Frequency Bands:** 840 MHz - 960 MHz  
**Transmit Channels:** Manual or auto selection  
**Transmit Power:** Not more than 4 watts EIRP  
**Power Control:** Manual or auto control  
**Transmit Modulation:** Digital 1.25 MHz BW

#### RECEIVER

**Simultaneous 2nd & 3rd harmonic receive**  
**Digitally Correlated**  
**Frequency Bands:**  
Second Harmonic (1680 MHz - 1920 MHz);  
Third Harmonic (2520 MHz - 2880 MHz)  
**Sensitivity:** -130 dBm for both harmonics

#### DISPLAY

**Antenna-mounted Display**  
**Bar Graph Display** for transmit power level, 2nd harmonic level, 3rd harmonic level, data field display, for other information (operation mode, low battery, volume, DSP gain, etc.)

#### MECHANICAL

**Extension Lengths:** 16-51 in (40.6-129.5 cm)  
**Case Dimensions:** 6.25 x 14.9 x 18.5 in (15.9 x 37.8 x 47.0 cm)  
**ORION 900 Dim:** 24 x 4 x 3.5 in (57 x 10 x 9 cm)  
**Overall Extended Length:** 58 in (147 cm)  
**ORION 900 Weight with Battery:** 3.6 lbs (1.6 kg)  
**Case Weight Including ORION & Accessories:** 12.6 lbs (5.7 kg)

#### BATTERY

**Input AC:** 100-240 V, 50-60 Hz  
**Charge Time:** 2.5 hours per battery  
**Batteries:** Lithium Ion Rechargeable (2 included)



The USB port can be used for future software updates.



**The 900 MHz transmit frequency provides excellent detection through dense materials**