ORION™ 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)

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

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.

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

455 Security Drive • Cookeville, TN 38506 USA • TEL +1 931.537.6032
800.824.3190 (US ONLY) • FAX +1 931.537.6089 • www.reiusa.net

Research Electronics Intl®
TECHNICAL SECURITY SPECIALISTS

ORION™ 900

NON-LINEAR JUNCTION DETECTOR

ORION™ 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 TRANSCEIVER 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 or email sales@reiusa.net

RESEARCH ELECTRONICS INTERNATIONAL
455 SECURITY DRIVE
COOKEVILLE, TN 38506 USA
TEL +1 931.537.6032 • 800.824.3190 (US ONLY)
FAX +1 931.537.6089
sales@reiusa.net • www.reiusa.net

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 in x 14.9 in x 18.5 in (15.9 cm x 37.8 cm x 47.0 cm)
ORION 900 Dim: 23 in x 3.75 in x 3 in (58.4 cm x 9cm x 7.5 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