

ORION[®] 2.4 HX

NON-LINEAR JUNCTION DETECTOR

OVERVIEW

The ORION 2.4 HX Non-Linear Junction Detector (NLJD) is made to detect and locate 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 2.4 HX is available in 3.3-watt and 6.6-watt* transmit power models.

The polycarbonate body includes a touch screen display. The ORION 2.4 HX is hand-held and compact when retracted and can extend to a full length of 58 inches for investigating hard to reach areas. The line of sight LED/OLED display provides visible feedback at any length.

TECHNICAL ADVANTAGES

- 1 DIGITALLY MODULATED SPREAD SPECTRUM** - Provides increased detection range and interference rejection (Patent Pending)
- 2 WIDE BANDWIDTH TRANSMIT SIGNAL** - 1.25 MHz wide increases detection sensitivity
- 3 HISTOGRAM GRAPH** - Displays continuous history of harmonic response and power adjustment (Patent Pending)
- 4 FREQUENCY ADJUST SCREEN** - Displays the full RF spectrum for Transmit, 2nd, or 3rd frequency ranges
- 5 ADJUSTABLE DSP GAIN** - High gain provides increased detection range for the same power
- 6 -140 dBm CORRELATED RECEIVER** - 2nd & 3rd harmonic response correlated to Tx improves detection and minimizes interference (Patent Pending)
- 7 MULTIPLE ALERT METHODS** - Alert tones and Haptic (vibration) alert can be selected to alert on detection
- 8 FREQUENCY AVOIDANCE** - Tx searches for quiet frequency to avoid interference
- 9 LED HEAD LAMP** - Illuminates target area
- 10 MANUAL OR AUTOMATIC POWER CONTROL**
- 11 SMALL LIGHTWEIGHT DESIGN** - Weighs 3 lbs/1.4 kg
- 12 LINE OF SIGHT ANTENNA MOUNTED DISPLAY** - Allows user to focus eyes on target area and display
- 13 INTEGRATED POLE** - No pole or cable assembly required
- 14 SYNTHESIZED TRANSCEIVER** - Provides frequency stability and agility to automatically search for quiet operating frequencies (2.404 GHz to 2.472 GHz)
- 15 CIRCULARLY POLARIZED TRANSMIT AND RECEIVE ANTENNA** - Removes risk of missing a threat due to incorrect antenna polarization
- 16 INCREASED BATTERY LIFE** - >4 hours with typical use

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 prisons

**The ORION 2.4 HX 6.6W model is authorized for use only by agencies, persons and entities not restricted by US FCC and CE. The ORION 2.4 HX 3.3W model is compliant with FCC and IC technical standards and has been CE marked.*



The ORION 2.4 HX has a line of sight antenna head display.



Main Mode selection offers quick, easy mode selection.



Tx and Rx graph displays power, 2nd and 3rd harmonic levels and touch screen trip and power level adjustments.

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



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MARKETING CHARACTERISTICS

ORION® 2.4 HX ADVANTAGES

LIGHTWEIGHT DESIGN FOR EASE OF USE

OPERATIONAL WEIGHT LESS THAN 3lbs (1.4kg)

UTILIZES 2.4 GHZ FREQUENCY BAND

OPTIMIZING DETECTION RANGE

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.



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TRANSMITTER

Frequency Bands: 2.404 GHz - 2.472 GHz

Transmit Channels: Manual or auto selection, more than 60 available

Transmit Power: 3.3W or 6.6W 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 (4.808 GHz - 4.944 GHz);

Third Harmonic (7.212 GHz - 7.416 GHz)

Sensitivity: -140 dBm for both harmonics

DISPLAY

Handle Mounted Touch Screen Controller 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 2.4 Dim: 22.6 x 4 x 3.5 in (57 x 10 x 9 cm)

Overall Extended Length: 58 in (147 cm)

ORION 2.4 Weight w/Battery: 3 lbs (1.4kg)

Case Weight Including ORION & Accessories: 12 lbs (5.4kg)

BATTERY

Input AC: 100-240 V, 50-60 Hz

Run Time: >4 hours per battery (typical)

Charge Time: 2.5 hours per battery

Batteries: Lithium Ion Rechargeable (2 included)



The frequency adjust screen displays Transmit, 2nd, or 3rd frequency ranges.



The histogram graph displays continuous history of harmonic response and power adjustment from 10 - 60 second duration.



An antenna-mounted LED headlamp illuminates surfaces and low-lit areas, especially beneficial at extended lengths.



Custom user settings and screen captures can be saved to micro SD card. The USB port can be used for future software updates.