

# ORION™ 2.4 HX

NON-LINEAR JUNCTION DETECTOR - 3.3W and 6.6W Models

## OVERVIEW

The ORION 2.4 HX introduces a new generation of Non-Linear Junction Detectors (NLJD) 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.

A completely new polycarbonate body includes a touchscreen display. The ORION 2.4 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** - 1.25MHz 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 3lbs/1.4kg
- 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 TRANSCIEVER** - Provides frequency stability and agility to automatically search for quiet operating frequencies (2.404GHz to 2.472GHz)
- 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.

Product specifications and descriptions subject to change without notice.



The ORION 2.4 HX has the same line of sight antenna head display as the ORION 2.4.



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



# ORION™ 2.4 HX

NON-LINEAR JUNCTION DETECTOR



## MARKETING CHARACTERISTICS

### ORION™ 2.4 HX ADVANTAGES

#### LIGHTWEIGHT DESIGN FOR EASE OF USE

OPERATIONAL WEIGHT LESS THAN 3lbs (1.4kg)

#### UTILIZES 2.4GHZ FREQUENCY BAND

OPTIMIZING DETECTION RANGE

#### MINIMUM SETUP TIME

SETUP IS QUICK, QUIET, AND EASY - NO CABLES, POLE SECTIONS, OR BULKY TRANSCIEVER TO ASSEMBLE OR CARRY

#### ANTENNA MOUNTED DISPLAY

FOR LINE-OF-SIGHT TARGET FOCUS

#### WIDE BANDWIDTH TRANSMIT SIGNAL: 1.25MHz

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.

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#### TRANSMITTER

**Frequency Bands:** 2.404GHz - 2.472GHz

**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 (4.808GHz - 4.944GHz);

Third Harmonic (7.212GHz - 7.416GHz)

**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 in x 14.9 in x 18.5 in (15.9 cm x 37.8 cm x 47.0 cm)

**ORION 2.4 Dim:** 22.4 in x 3.75 in x 3 in (57 cm x 9cm x 7.5 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)



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.



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.



**Smaller, lighter, 2.4 GHz transmit frequency provides excellent detection and sensitivity for detecting modern electronics!**