REI®

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THE INDUSTRY STANDARD IN TSCM EQUIPMENT

ORION™

NON-LINEAR JUNCTION DETECTORS

www.reiusa.net

ORION HX DELUXE NLJD

The ORION HX Deluxe Non-Linear Junction Detector includes antenna heads from the ORION 2.4 HX and the ORION 900 HX. These interchangeable antennas are stored in a single, hard shell case for easy transportation to prepare technical security professionals for a variety of environments.

Changing antenna heads is done in under twenty seconds by loosening two thumb screws on the quick-disconnecting handle, removing one head and attaching the other, and then retightening the screws. The touch screen display will automatically recognize the antenna head attached and display the corresponding charts and responses.

The ORION HX Deluxe has all of the same features and accessories that come with the ORION 2.4 HX and the ORION 900 HX. All ORIONs will now come with the quick-disconnecting handle, allowing customers to add-on the alternate antenna head at any time.

Applications

- Commercial security including checking corporate board rooms or offices for unauthorized electronics.
- Searching secure areas for hidden or prohibited electronics.
- Searching for cell phones or other electronic contraband in corrections and testing facilities.
- Protecting executives, celebrities, and other VIPs from illicit surveillance.

HOW DOES AN ORION NLJD WORK?

The ORION Non-Linear Junction Detector (NLJD) is a transceiver (transmitter and receiver) that radiates a 1.25 MHz-wide digital spread spectrum signal to determine the presence of electronic components. When the energy encounters semi-conductor junctions (diodes, transistors, circuit board connections, etc.), a harmonic signal returns to the receiver. The receiver measures the strength of the harmonic signal and distinguishes between 2nd or 3rd harmonics.

When a stronger 2nd harmonic is represented on the display in red, it indicates an electronic junction has been detected. In this way, the hand-held ORION HX is used to sweep across walls, objects, containers, furniture, and most surfaces to look for hidden electronics, regardless of whether the electronic device is turned on. When a stronger 3rd harmonic is represented on the display in yellow, it indicates a corrosive junction has been detected.

ORION 2.4 HX NLJD

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The ORION 2.4 HX excels at detecting modern, surface-mounted circuitry in normal office environments. The shorter 2.4 GHz wavelength provides better detection and sensitivity of smaller electronics including SIM cards and cell phones.

MODEL INFORMATION: The transmit power of the ORION 2.4 HX is 3.3 W EIRP and automatically searches for quiet operating frequencies between 2.404 and 2.472 GHz. It is FCC and IC compliant. The **G model**, with 6.6 W EIRP transmit power, is available to entities, agencies, and persons not restricted by FCC and IC. Both models are CE marked for public safety and security.

2.4 HX model shown; features included on all HX models.

ORION 900 HX NLJD

The ORION 900 HX excels at detecting older, less refined circuitry and also penetrating building and construction materials. The longer 900 MHz wavelength provides better penetration through thicker, denser materials including brick and concrete.

MODEL INFORMATION: The transmit power of the ORION 900 HX is 1.4 W EIRP and automatically searches for quiet operating frequencies between 840 and 960 MHz. It is FCC and IC compliant. The **G model**, with 3.2 W EIRP transmit power, is available to entities, agencies, and persons not restricted by FCC and IC. Both models are CE marked for public safety and security. Commercial CE version also available.

Main screen offers quick mode selection.

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

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

Frequency adjust screen displays Transmit, 2nd, and 3rd frequency ranges.

TECHNICAL SPECIFICATIONS

TRANSMITTER

2.4 HX transmit power: 3.3 W; G model: 6.6 W
900 HX transmit power: 1.4 W; G model: 3.2 W
Power control: manual or auto control
2.4 HX frequency band: 2.404 GHz - 2.472 GHz
900 HX frequency band: 905 - 925 MHz; G model: 840 - 960 MHz
Transmit channels: manual or auto selection, more than 60 available
Transmit modulation: digital spread spectrum, 1.25 MHz bandwidth

Please note: G model authorized for use only by agencies, persons and entities not restricted by FCC & IC. Both models are CE marked for public safety and security. Commercial CE versions also available.

RECEIVER

Simultaneous 2nd & 3rd harmonic receive
Digitally correlated
2.4 HX frequency band:
Second Harmonic (4.808 GHz – 4.944 GHz)
Third Harmonic: (7.212 GHz – 7.416 GHz)
900 HX frequency band:
Second Harmonic (1810 MHz - 1850 MHz);
G model (1680 MHz - 1920 MHz)
Third Harmonic: (2715 MHz - 2775 MHz);
G model (2520 MHz - 2880 MHz)
2.4 HX sensitivity: -140 dBm for both harmonics
900 HX sensitivity: -130 dBm for both harmonics

DISPLAY

Handle mounted touch screen controller display; keypad model also available
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 HX dimensions: 22.4 in x 3.75 in x 3 in
(57 cm x 9 cm x 7.5 cm)
ORION 900 HX dimensions: 23 in x 3.75 in x 3 in
(58.4 cm x 9 cm x 7.5 cm)
Overall Extended Length: 58 in (147 cm)
ORION 2.4 HX weight w/ battery: 3 lbs (1.4 kg)
ORION 900 HX weight w/ battery: 3.6 lbs (1.6 kg)

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 supplied battery pack: RRC Power Solutions Lithium Ion Rechargeable Battery pack Model #RRC2040, rated 11.25V, 2950mAh, 33.2Wh.

THERMAL

Operating temperature: -10 to 50°C
Battery charging temperature: 5 to 37°C
Storage temperature: -20 to 60°C

Please note: extended storage at temperatures above 40°C could degrade battery & OLED display performance and life.

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