THE NEXT GENERATION NLJD
Digital Spread Spectrum versus Analog CW

In the late 80s and early 90s, the bag phone was developed as a portable communication device, but when the next generation digital cell phone came out, the bag phone and other analog variants soon became history. Digital signal processing offered so many benefits to signal delivery, there was really no comparison. Modern digital modulation can provide higher quality signal purity with much lower noise interference. Today, practically everything is digital.

A digital spread spectrum NLJD (Non-Linear Junction Detector) like the ORION 2.4 provides substantial advantage over older technology continuous wave (CW) analog systems in a similar way, because it provides a much greater detection range for the same power.

Also, using modern high speed DSP processors and wideband digital modulation, the ORION 2.4 response time is near instantaneous.

To put it into perspective, the digital processing response is achieved on the order of Microseconds. Even when increasing the DSP gain to the max, there is no discernible

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PREVENTING ESD

Remember that electro-static discharge (ESD) is much more prevalent during the winter months and can damage your equipment. Colder, drier air outside causes us to turn on central air heat indoors. Warming this air removes even more humidity, which adds to the conditions that promote static electricity.

Be sure to check the product user's manual for Cautions and Warnings relating to ESDs. For more information on TSCM and REI equipment, consider taking an REI Training Center course. Course descriptions and training dates can be found on REI’s web site (www.reiusa.net/training) or email sales@reiusa.net.
Digital versus Analog
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A decrease in response time that can be physically seen or felt.

Most analog CW based NLJDs are very narrow band (typically 1 to 6 kHz – the original ORION NJE-4000 was approximately 3 kHz). The much wider 1.25 MHz bandwidth in the ORION 2.4 is more than 400 times wider than even the 3 kHz signal of the NJE-4000.

Comparing the ORION 2.4 to an older analog CW NLJD is a bit like comparing the 20 year old analog bag phones to modern miniature smartphones. In modern smart phone technology, the transmission medium is based on spread spectrum digital RF modulation technology so that the performance, reliability, and coverage can be achieved at fractions of the power. The same is true of the ORION 2.4 which incorporates modern OFDM (Orthogonal Frequency-Division Multiplexing) modulation used in state-of-the-art wireless systems.

When it comes to audio, the Listen Mode of the ORION 2.4 is also based on modern digital technology. Audio quality is as good as, or better than any analog CW NLJD signal. This applies to both AM and FM demodulation, and if there are electronic signatures that are within the audio bandwidth, then an audio signature will be heard with the ORION 2.4.

The ORION 2.4 is perhaps the only NLJD available with both CE and FCC approval. The ORION 2.4 has also passed safety compliance testing conducted by an independent third party testing laboratory - SGS North America.

The ORION 2.4 NLJD offers better sensitivity with a better detection range over other models and ushers in a new generation of NLJDs. More details on the ORION 2.4 are available on REI’s website.

REI will present several Beyond Physical Security Seminars across the US in the next few months:

Charlotte, NC Feb 25th
Kansas City, MO Mar 27th
Las Vegas, NV Apr 14

Beyond Physical Security offers hands-on instructions demonstrating theft risks to corporate intelligence through illicit surveillance!

The seminar includes:
• Overview of Technical Surveillance threats, including modern easily accessible "bugging" devices
• Examples of illegal techniques used to steal information and modern ways to counter threats
• Telephone threat examples (how telephone systems can be compromised & how to detect vulnerabilities)
• Countermeasures used to protect intellectual assets against information theft.

Time: 8:30 a.m. to 4:30 pm

Cost: FREE, must register early, seating is limited.

Lunch and refreshments are provided. If you or a delegate from your organization are interested in attending, register at the link below.

Contact Michelle Gaw at michelle@reiusa.net or call 931-537-6032 for more information.

Click here to REGISTER ONLINE!
“Experience Makes the Difference”

Product testing is an extremely important part of the manufacturing process. Test technicians at REI are responsible for ensuring that products work the first time and every time, but RF energy can be very tricky, so it sometimes takes craftsmanship as well as science, to make everything work together.

That is where experience makes the difference, and REI has a wealth of experience in its product testing lab. Several of our test technicians came from military careers with radio and space systems installations. Together, they have decades of experience working with RF energy, many of which have been spent testing REI products.

Other technicians come from a variety of backgrounds, and together combine for almost 90 years of testing experience. This stockpile of product knowledge and testing skill enables REI to manufacture the highest quality counter-surveillance equipment.

It also means that when things do go wrong in the field, REI can provide fast help to customers, either by troubleshooting over the phone or by repairing the equipment and returning it quickly.

Adding Up Bits & Bytes

REI product software is developed by in-house software engineers with input from sales people, instructors, customer support personnel and customers themselves. Keeping product software current requires updates, and can usually be downloaded for free from REI’s web site.

Other companies sometimes view software releases and updates as a revenue stream, but REI has always viewed software enhancements as an extension of product support after the sale and should be available to the customer without charge.

For example, when the OSCOR Green Data Viewer software was developed to provide customers the ability to take collected data from the OSCOR Green and view, print and present the data on a PC; the software was added to the REI web site for customers to download free, without restrictions or fees.

REI’s software downloads for current and discontinued products include:
- TALAN Software Release 2.01 - firmware update
- TALAN Data Viewer - displays TALAN info on a PC
- OSCOR 5000E OPC Software
- OSCOR Green Data Viewer Software
- OSCOR Green Firmware Updates
- NEW - ORION 2.4 Update Program
- NEW - Custom Span Lists for the OSCOR Green (useful for configuring the OSCOR Green for viewing specific bands)

Click here for the latest software and product information on the REI web site.

*The OSCOR Blue is listed on the United States Munitions List (USML) and requires an export license. Therefore, software is not available through the website free of charge.
IN THE NEWS

CONCEALED RECORDING DEVICES DISCOVERED IN BYU CLASSROOMS
Nov 18, 2014
Source: The Blaze
Article: http://bit.ly/1FTJnrN

NO EVIDENCE OF GSOC BUGGING, COOKE REPORT FINDS
Jun 11, 2014
Source: The Irish Times
Article: http://bit.ly/1lRqMRHe

APPEALS COURT REINSTATES INTELLECTUAL PROPERTY RULING, SMITH & NEPHEW VS ARTHREX
Dec 10, 2013
Source: Bloomberg
Article: http://bloom.bg/18jFT78

ENGINEER SENTENCED TO 15 YEARS FOR CORPORATE SPYING ON DUPONT
Jul 10, 2014
Source: L.A. Times
Article: http://lat.ms/1rWMi2k

RULES FOR SPIES
Nov 2, 2013
Source: The Economist
Article: http://econ.st/1BkVsbC

CORPORATE ESPIONAGE STRIKES IOWA’S AGRICULTURAL TECHNOLOGY
Dec 13, 2013
Source: DesMoinesRegister.com
Article: http://dmreg.co/1yTUzDr

TRADESHOWS and SEMINARS

BEYOND PHYSICAL SECURITY SEMINAR
25 Feb, 2015
Charlotte, NC
Register online here

GLOBAL SECURITY ASIA 2015
3-5 March, 2015
Singapore
www.globalseasia.com

SECURITY & POLICING HOME OFFICE EVENT 2015
10-12 March, 2015
Five Farnborough, UK
www.securityandpolicing.co.uk

CLICK HERE TO REGISTER ONLINE:
www.reiusa.net/quick/coursereg

NA ASSOC OF WARDENS & SUPERINTENDENTS
23-26 March, 2015
Kansas City, MO
www.naaws.corrections.com

REI TELECOM SECURITY SEMINAR
27 March, 2015
Kansas City, MO USA
Register online here

LAAD DEFENCE & SECURITY
14-17 April, 2015
Rio de Janeiro, Brazil
www.laadexpo.com

REI TELECOM SECURITY SEMINAR
14 April, 2015
Las Vegas, NV USA
Register online here