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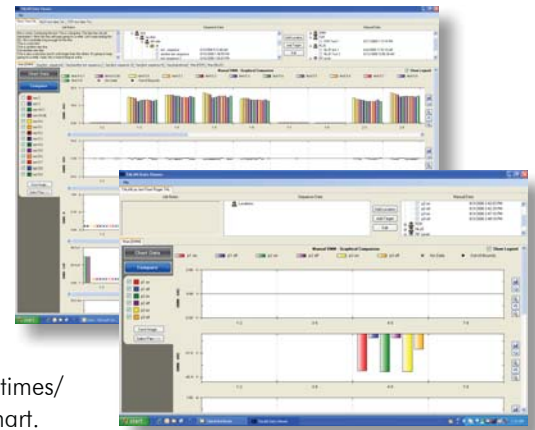
Questions, comments, suggestions, or to add someone to the REI Quarterly Newsletter mailing list, please e-mail: newsletter@reiusa.net



TALAN Data Viewer now Available

Analyze and Compare TALAN Test data from multiple phones, as well as export test data for report building.

REI is excited to announce the NEW TALAN Data Viewer Software. The TALAN Data Viewer Software is a PC application that provides the ability to organize, analyze, and export TALAN test sequence data and charts for report writing. Moreover, the software provides the ability to compare numerous phones/targets on the same chart allowing the user to quickly identify any anomalies compared to other phones tested. This function also provides the ability to compare test results taken at different times/stages (i.e. on hook/off hook, disconnected, etc.) on the same chart. Charts and tabular data can then be exported for inclusion into report documents (either by cut and paste (tabular data), or saved as graphic images).



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2008 has been a great year. Below are some highlights:

NEW PRODUCTS REI released the new OSCOR Trace Sequence Recorder for recording and displaying trace data in a waterfall view over time. REI also released the TALAN Data Viewer Software providing the ability to analyze TALAN test results from multiple targets and produce data for report generation (see article above).

TRAINING COURSES REI's training offerings have continued to grow with over 50 week-long classes taught at REI's Center for Technical Security during 2008, in addition to numerous custom courses taught at customer's sites. REI also implemented a New TALAN Certification Training Course (TEC-250), and introduced the TSE-101 and TSCM-201 courses in Spanish. REI's training facility has grown to over 10,000 square feet with over 12 project rooms where students conduct sweeps in "live" environments.

PERSONNEL EXPANSION To keep up with market demand, REI grew personnel by 20% in 2008, adding employees in every department (production, engineering, sales, marketing, training, and administration). The additional resources will not only help us to meet customer demands, but also to improve customer service.

BUILDING EXPANSION REI has completed a new building expansion which doubled the size of the previous facility. This expansion was needed due to continued steady growth including additional personnel and manufacturing equipment required to manage our growth. The new expansion provides additional space for manufacturing, engineering, training, and other administrative offices. This expansion will allow REI to continue to improve quality and design of TSCM products and ultimately provide better service for our customers.

Overall, 2008 was been a wonderful year for REI, and we thank our customers, partners and friends for their support. We look forward to serving you in 2009. **REI**



NLJD Use in Difficult Environments

Non-Linear Junction Detectors are finding more and more applications beyond just TSCM, and we thought it was a good idea to document some of these applications and address some special considerations regarding these environments.

In a normal conference room of typical construction in the USA, the ORION has little difficulty seeing through a normal layer of sheet rock (gypsum board typically 1/2" thick). However, in many government buildings, embassies, or construction environments with stone or concrete walls, the penetration depth of any NLJD will be decreased due to the thickness and density of the wall construction. Therefore, it is important to consider increasing the power and or increasing the integration gain of the ORION. The integration gain can be increased by pressing the "SET" button. This is a patented and unique feature of the REI ORION. The point is, it is very important to adjust the power level and gain to the type of searching and environment associated with the



mission. Too much power will result in many false detections while too little power does not result in an effective search. It is always recommended to test the ORION in each environment before you begin the search.

If your common searching environment is buildings constructed using high density materials, you may want to consider the High Gain ORION (HG ORION) (note: due to the increased ERP of the High Gain ORION, it is only authorized for use by entities not restricted by US FCC regulations). The High Gain ORION has a an ERP (Effective Radiated Power) of 3 watts which is approximately double that of the standard ORION. Moreover, the antenna gain of the HG ORION is approximately 4 dB greater

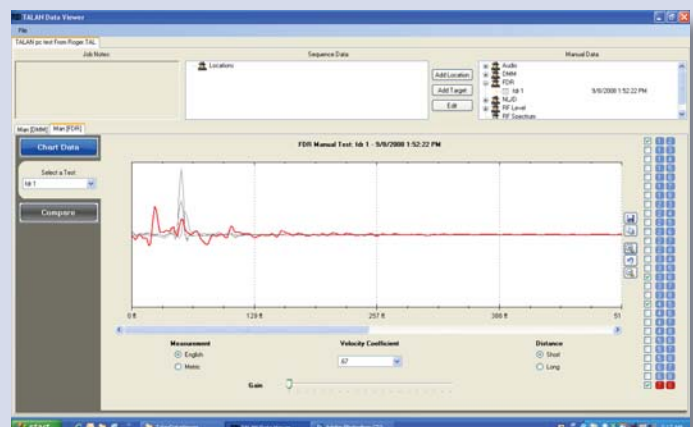
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TALAN Data Viewer

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Additionally, the TALAN Data Viewer Software gives the user the ability to set up and create test sequence targets and locations in a new or existing TALAN job file prior to actually running the tests. This can be extremely useful in preparing for a telephone sweep before actually arriving on the premises, saving time during the actual testing.

The FREE TALAN Data Viewer Software can be downloaded from the REI web site at the bottom of the TALAN page, and is compatible with Windows 2000 or later operating systems. After installing TALAN Data Viewer Software, TALAN job files (".TAL") can be saved to the Compact Flash Card (or a USB thumb drive) from the TALAN, and then transferred to a PC and accessed using the TALAN Data Viewer Software.



Contact REI for more information at sales@reiusa.net.



Custom On-Site TSCM Training

**Can't come to REI for training?
Have REI come to you...**

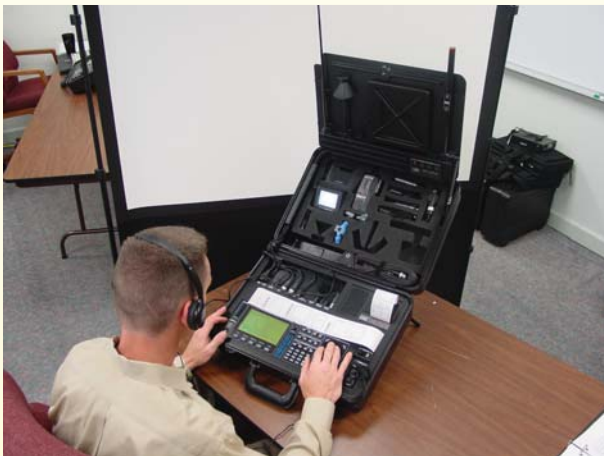
You may be aware that REI offers regularly scheduled TSCM courses in the largest commercially available TSCM Training Center in the World (over 10,000 sq feet of dedicated classrooms and project/exercise rooms), however you may not be aware that REI also delivers custom TSCM training courses at customer's sites (at least two a month). With six full-time instructors with extensive TSCM backgrounds and mobile training equipment (portable phone systems, signal generators, mobile cable sets, etc.), REI can provide complete TSCM training specifically tailored to your needs at almost any location.

Customers choose on-site training for various reasons, the most obvious being cost (in some situations). Depending on the number of trainees and the location, sometimes it is more economical to procure training on-site (i.e. if you have large numbers to be trained). Moreover, there are instances where customers require specific or unique training (i.e. specific to a certain type of telephone system, RF environment, or application) or require a custom curriculum; REI is more than willing to adjust an existing course, or create a new custom course specific to a customer's unique needs and perform the training on-site.



Additionally, there are instances where a customer requires training, but cannot be out of the field for a given length of time, or when a customer requires a private class; in both of these situations bringing tailored training course to the customer makes more sense.

The bottom line is that REI's goal is to provide the best TSCM training available, wherever it is required. If you have specific needs, or would like to explore a custom training course at your site, do not hesitate to contact REI (sales@reiusa.net) to get more information or discuss a quote. We look forward to hearing from you and meeting your TSCM training needs.



Electrostatic Discharge Precautions!

For OSCOR & CPM-700 users, remember that electrostatic discharge (ESD) is much more prevalent during the winter months and can damage your equipment.

To prevent ESD on the CPM, use caution when using the chrome, telescoping standard RF antenna (50kHz-3GHz); alternatively you may want to consider the "hardened" all black European probe which is ESD protected.

When using the OSCOR, make sure the OSCOR is plugged into a grounded outlet and touch the chassis of the OSCOR to discharge any potential static energy.

For more information on TSCM and REI equipment, consider REI's Center for Technical Security training courses. Course descriptions and training dates can be found on REI's web site (www.reiusa.net/training) or by e-mailing REI at sales@reiusa.net.

If you have TSCM sweep tips that you would like to share, please send them to support@reiusa.net.



NEW Spanish Course: Telephone Countermeasure Course (TCC-110)



Research Electronics International (REI) is pleased to offer the Telephone Countermeasure Course (TCC-110) TSCM training course in Spanish at REI's Center for Technical Security (Algood Tennessee USA). The first offering of this course will be January 27 – 30, 2009.



This four (4) day course is designed to provide the technical security specialist with a

foundational understanding of telephone systems and countermeasure tests. Students will be introduced to the basic operation of analog and digital telephone systems and the inherent vulnerabilities of each, as well as methods for the detection of attacks on both analog and digital telephone systems.

Course Topics:

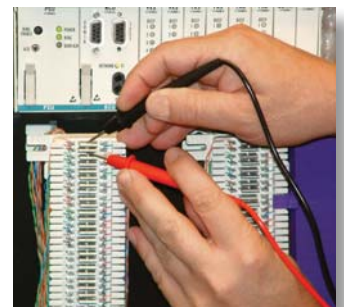
- Telephone History
- Basic Telephony
- Testing Equipment
- Basic Analog Tests
- Digital Telephone Systems
- Digital System Capabilities
- Basic Digital Tests
- Digital Telephone System Weaknesses
- Digital Telephone System Log Files

All Course concepts are reinforced with hands-on practical exercises.

To register for the new Spanish TCC-110 course click below:

http://www.reiusa.net/quick/Spanish_TCC-110/Register

Or contact REI at:
sales@reiusa.net



...NLJD use in Difficult Environments

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than the standard ORION which makes the return sensitivity much greater for the HG ORION. These 2 improvements make the HG ORION a much more sensitive tool.

One caution: while the HG ORION and standard ORION are both circularly polarized antennas, increasing the antenna gain of the HG ORION results in a slightly polarized effect in the HG ORION antenna pattern. This means that if the target has a single, definite linear polarized antenna affect such as the provided green test tag, then the sensitivity of the HG ORION will vary depending on the orientation of the ORION antenna. It is also important to understand that as you change frequency, the polarized effect in the HG ORION antenna will rotate around the antenna orientation of the HG ORION. Therefore, one option to minimize this effect when using the HG ORION in a difficult environment, is to put the HG ORION in a frequency hopping mode. In this mode, the polarization effect will rotate with each change of frequency. This improves the reliability and the sensitivity of the HG ORION, but it also creates a display that seems to dance up and down because of the rotating polarization resulting from the changing frequencies.

Another common issue in using an NLJD is when the coupling of the antenna is significantly affected by metallic reflections. For example, if an ORION is placed in a metal box, the transmit signal can actually bounce around to the back of the display and the ORION can actually detect itself. With practice, you can easily learn to read this type of reaction in the vicinity of metallic enclosures and adjust the transmit power or the proximity to surrounding objects.



One difficult environment with a lot of metallic reflections and dense materials is a Prison cell environment. The main application for the NLJD in a prison environment is looking for hidden cell phones that are typically turned off with the battery removed. While an NLJD tool is an ideal solution for looking for this type of hidden electronics, the prison cell is a challenging environment because of the

metal and naturally occurring corrosive junctions. For this environment, REI recommends the standard ORION rather than the HG ORION because hidden cell phones are typically not hidden behind a dense concrete wall, and you do not need a lot

of penetration depth. Also, the smaller and more stable antenna is much easier to use in the searching environment and does not have as much of a coupling effect (causing false hits). Also, maintaining the proper transmit power in and around metal objects (i.e. inside a metal locker) is critical inside a prison environment. REI provides an in depth training course specifically for Prison Cell applications.

In summary, using an NLJD is a very simple concept to demonstrate. But, to use this type of tool in challenging environments does take some practice and understanding of the physics in order to maximize the effectiveness of the search.

If you have questions or comments about NLJD use in specific environments, or are interested in ORION training, do not hesitate to contact REI at: sales@reiusa.net



2009 REI TRAINING CALENDAR

ATC-301

Advanced TSCM Concepts Course
Jan 12-16

Spanish TCC-110

Telephone Security Countermeasures Course
Jan 27-30

TSE-101

Technical Security Equipment Course
Feb 3-6

TCC-110

Telephone Security Countermeasures Course
Feb 3-6

TSCM-201

Technical Security Countermeasures Course
Feb 9-13

DTC-210

Digital Telephony Course
Feb 9-13

TSE-101

Technical Security Equipment Course
Feb 24-27

TCC-110

Telephone Security Countermeasures Course
Feb 24-27

DTC-210

Digital Telephony Course
Mar 2-6

TSCM-201

Technical Security Countermeasures Course
Mar 2-6

ECC-240

REI Equipment Certification Course
Mar 9-13

Spanish TSE-101

Technical Security Equipment Course
Mar 17-20

Spanish TSCM-201

Technical Security Countermeasures Course
Mar 23-27

Questions, comments, or to add someone to the REI Quarterly Newsletter mailing list, please e-mail: newsletter@reiusa.net

[Visit our online calendar](#)

IN THE NEWS

TELECOMS CLAIM ESPIONAGE

Telegraph.co.uk
Source: <http://www.telegraph.co.uk>
Article: <http://www.telegraph.co.uk/finance/newsbysector/mediatechnologyandtelecoms/telecoms/3448534/Espionage-claims-by-telecoms-company.html>

INTERNET THIEVES MAKE BIG MONEY STEALING CORP. INFO

USA Today
Source: www.usatoday.com
Article: http://www.usatoday.com/money/industries/technology/2008-11-11-thieves-cyber-corporate-data_N.htm?csp=34

COURT SHUTS SITE SELLING KEY LOGGING SPYWARE

Security Management Magazine
Source: www.securitymanagement.com
Article: <http://www.securitymanagement.com/news/court-shuts-site-selling-key-logging-spyware-004868>

ENGINEERS FACE JAIL IN ECONOMIC ESPIONAGE CASE

Yahoo Technology (AP)
Source: www.yahoo.com
Article: http://tech.yahoo.com/news/ap/20081121/ap_on_hi_te/tec-economic_espionage_1

LUBRIZOL CORP. WORKER GETS PRISON FOR SELLING TRADE SECRETS TO COMPETITOR

The Cleveland Plain Dealer
Source: <http://blog.cleveland.com/metro/>
Article: http://blog.cleveland.com/metro/2008/11/lubrizol_corp_worker_gets_pris.html

STATE TO SEEK (FCC) OK TO JAM PRISON CELL PHONES

Greenville Online
Source: <http://www.greenvilleonline.com>
Article: <http://www.greenvilleonline.com/article/20081122/NEWS01/811220304/1004/NEWS01>

Advanced TSCM Concepts Course

The Advanced TSCM Concepts Course (ATC-301) is a 5-day course that provides an advanced understanding of RF signal analysis and theory including the relevance of:

- Inverse Squares Law
- Frequency Domain
- Time Domain
- Wavelength versus Frequency
- Modulation Schemes
- RF Mapping

The course will also cover various equipment with "live" exercises including:

- RF receivers
- Oscilloscopes
- Spectrum Analyzers
- Harmonic Receivers

At the end of the course, students will have a good understanding of in depth RF analysis including carrier current analysis, sub carrier analysis, microwave analysis, and base band analysis. Due to limited class size, early registration is recommended.

Advanced TSCM Concepts Course ATC-301

Date:

January 12-16, 2009

Course Fee:

\$2,495 (5 days)

Location:

REI Training Facility in Algood, TN

Prerequisites:

TSE-101 and TSCM-201

For more info:

<http://www.reiusa.net/quick/ATC-301>

For more info contact REI at:

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