



Research Electronics
International, LLC
455 Security Drive, Algood, TN
38506 USA

May 28, 2010

**Response to National Telecommunications Information Administration
Notice of Inquiry [Docket No. 100504212-0212-01]
Requesting Information on Preventing Contraband Cell Phone Use in Prisons**

Below are responses from Research Electronics International (REI) with regards to the specific questions listed in the NOI:

1. Technologies or Approaches

The NOI defined three categories of contraband cell phone intervention as

- 1) Jamming
- 2) Managed network access, and
- 3) Detection {of RF signal from a transmitting phone}

Another category should also be considered:

Non-Linear Junction Detection (NLJD) equipment such as the ORION NLJD

The ORION NLJD is a physical search device that responds to electronic components, regardless of whether or not target components are turned on or even transmitting.

Specifically, the ORION NLJD has an antenna that is passed over objects and alerts when it is in the presence of electronics (i.e. a cell phone). The ORION NLJD will respond to a cell phone regardless of whether or not the cell phone is turned on or even has batteries installed. It is important to note that the ORION NLJD will respond to any electronics, so it will detect and locate other electronics that may or may not be considered contraband (i.e. a remote control or radio), however it is very easy to inspect a suspect device and determine whether or not it is contraband. The NLJD method for detecting cell phones has advantages in that it indicates a detection regardless if the cell phone is operating; which means it is detecting and locating the contraband (even when turned off), not just the use of the contraband (i.e. when it is transmitting).

Research Electronics International (REI) has been selling the ORION NLJD to correctional facilities for the purpose of detecting and locating contraband cell phones since 2005, with over 60 implementations including correctional facilities in Georgia, California, Tennessee, Indiana, South Dakota, Texas, Pennsylvania, Oklahoma, Kansas, Florida, Mississippi, El Salvador, and Trinidad, as well as some installations in Europe.

Information on the ORION NLJD can be found here:

http://www.reiusa.net/quick/NLJD_Cell_Phone

Phone: +1 (931) 537-6032 • Fax +1 (931) 537-6089
www.reiusa.net



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Below are links to press releases discussing ORION NLJD use in correctional facilities:

http://www.reiusa.net/quick/GA_NLJD_Prison
<http://www.reiusa.net/quick/MSNBC-Lockup>
http://www.reiusa.net/quick/GEO_NLJD_Prison
http://www.reiusa.net/quick/Europe_NLJD_Prison
http://www.reiusa.net/quick/TN_NLJD_Prison

2. Devices and Frequency Bands

The ORION NLJD's effectiveness is NOT dependent on the target devices frequency band.

The ORION NLJD responds to electronic components contained in ANY electronic device. It will even detect non-transmitting devices such as DVD players or other potential electronic contraband.

3. Interference to Other Radio Services

The ORION NLJD is FCC compliant and is designed to NOT interfere with other RF signals or other wireless devices.

4. Protecting 911 Calls and Authorized Users

The ORION NLJD does NOT interfere or prevent wireless calls, including 911 calls.

5. Cost Considerations

The ORION NLJD sells for US\$ 15,800 and training is required. A 1-day training at most US locations for up to 12 students can be conducted for approximately US\$ 1,895. This cost includes instructor fees, instructor travel expenses, and training equipment. User is to provide training location, and it is preferred to conduct training in actual correctional facilities to provide real-world hands-on training.

The ORION NLJD does not require regular maintenance; however the rechargeable batteries should be replaced periodically.

Typical users have one unit per facility. The unit can be deployed randomly as needed.



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6. Locating Contraband Phones

The ORION NLJD is a physical search device designed specifically for locating hidden electronics. The ORION NLJD is currently being used to locate contraband phones on general facility searches, as well as situations where intelligence indicates a phone is in a particular area.

The ORION NLJD is very successful on its own, but would also assist in locating a phone used in conjunction with Managed Access and Detection technologies.

7. Regulatory/Legal Issues

The ORION NLJD is FCC compliant and poses NO regulatory or legal issues.

8. Technical Issues

The ORION NLJD is a physical search device, and its effectiveness depends on the training of the user, and the user's ability to interpret the responses.

About REI

For over 26 years, Research Electronics International (REI) has specialized in the design and manufacture of technical security equipment. REI products are manufactured in Tennessee used in over 100 countries worldwide by law enforcement agencies, government agencies (GSA), and other specialized security groups. Our core market is Technical Surveillance Countermeasures (TSCM) equipment used to detect illicit surveillance devices (hidden electronics). REI is the largest manufacturer of TSCM equipment in the world, and REI operates the largest unclassified, commercially available TSCM training center in the world.

REI's core competency is designing and manufacturing equipment that detects and locates hidden electronic devices, and sometimes those devices are transmitting. This translates very well to the contraband cell phone problem in prisons or more directly: the need to detect and locate hidden electronics devices (i.e. cell phones).

For more information regarding the ORION NLJD, contact Research Electronics International info@reiusa.net.