



SUMMER 2009 DANIELS ELECTRONICS NEWSLETTER

If you are experiencing difficulty viewing this email, please go to the [Daniels Newsletters Page](#).

[Back to Top](#)

President's Desk

In This Issue:
[PRESIDENT'S DESK](#)

[UNDERCOVER
TACTICAL REPEATER](#)

[DANIELS & RF DEMAND
SOLUTIONS](#)

[PRODUCT NEWS](#)

[NEWS FROM AROUND
THE WORLD](#)

[NEW SALES CHANNEL
PARTNERS](#)

[NEW PRODUCT
LITERATURE](#)

[UPCOMING EVENTS](#)

Good Morning,

Daniels Electronics is very fortunate to enjoy a loyal repeat customer base that is appreciative of our products and staff. Your many compliments to us during IWCE and on the P25 roadshow across Canada are much appreciated. Thank you!

Despite the difficult economic times many are facing we are very fortunate to have a mix of products and skilled sales channels that have enabled us to diversify in order to overcome the challenging market conditions. Our recently announced P25 trunked radio system is currently in field trials, our new undercover tactical repeater packages has been very well received and our P25 Fixed Station Interface has been announced. They are creating new business opportunities for Daniels.

This issue of the newsletter contains a wealth of information on new products, upcoming events and some very interesting applications. You will also notice a new section that details the many international activities we are involved in as P25 digital radio deployments occur worldwide.

On behalf of all the Daniels team I want to thank you for your continued business and encouragement as we strive to meet your requirements. We look forward to seeing you at APCO in Las Vegas next month (our booth is air conditioned!).

Regards,

Robert Small, President & COO



[Back to Top](#)

Undercover Tactical Repeater takes to the Water

43 Erie Street
Victoria, BC
Canada, V8V 1P8

Ph: (250) 382-8268
Fax: (250) 382-6139

Toll Free
Canada & USA:
Ph: 1-800-664-4066
Fax: 1-877-750-0004
www.danelec.com



In last summer's issue of the newsletter we introduced you to the new ET-5 Tactical Repeater (shown below). Originally the ET-5 was designed for undercover police surveillance operations to provide a compact, lightweight P25 encrypted repeater that was easy to operate using D cell batteries. Available in the VHF, UHF or 800 MHz bands, the ET-5 provides an easy to use P25 repeater operating up to 19 hours on D cells.



Over the past year as we have introduced customers to the ET-5 a variety of other applications have been discovered that ideally suit the ET-5. One of the most unusual ones we have encountered has been for ship inspections! Both the Canadian and US Navies upon learning about the ET-5 inquired as to its suitability for use during ship inspections by their boarding teams. The rugged, compact design enables ease of transportability, ease of operation and long battery life for the duration of their inspection. True P25 encryption ensures security of communications.



The real benefit the navies discovered was the extensive coverage offered on board a vessel. During trials with the US Navy it was discovered that the UHF repeater was able to propagate the length of the ship as well as down 4 decks. This has eliminated the previous communication technology of leaky coaxial cable and also enables rapid deployment on a vessel to be inspected.



Such a rugged, lightweight and easy to use repeater can now be deployed during training exercises, rescue conditions, routine inspections as well as by customs and border patrols during inspections of container vessels or cruise ships.

To learn more about how Daniels transportable repeaters can help you with your communications problems contact sales@danelec.com.

[Back to Top](#)

Daniels Electronics & RF Demand Solutions enable Utilities to control peak power usage

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Comments on desired enhancements or additions are welcome and can be forwarded to the editor@danelec.com

Throughout North America, Electric Utilities manage peak electrical demand periods with a Load Demand program, enabling electrical equipment to be turned on/off remotely in response to peak demand usage. Using Direct Control Units (DCUs) to turn on/off electrical equipment, Utilities are able to activate these devices remotely via VHF, UHF or 900 MHz paging networks. Currently millions of DCUs are in operation in the United States.



The commercial paging industry has lost 90% of its customers since 2000 and is in a state of prolonged collapse dropping an average of 15% annually. To remain viable, Paging carriers are forced to make drastic cuts in network coverage. This is especially true for rural markets as coverage for sparsely populated areas is the first to go. Many Utilities have contracted commercially with paging carriers to provide reliable service with ubiquitous wide-area network coverage. The decline of Commercial Paging has become the largest threat to Demand Response programs

throughout the United States.

For many years Daniels Electronics has provided paging transmitters that support narrowband (12.5 kHz) and wideband (25 kHz) paging. The Daniels radio interfaces to a 3rd party paging encoder which generates the paging format for analog (tone and voice) or digital display (numeric output) pages, and then relays the radio signal to the handheld pager. A variety of transmission standards are supported including POCSAG at data transfer rates of 512, 1200, and 2400 Baud, Motorola's FLEX™ 4-level modulation Paging Protocol at data transfer rates up to 6400 bps and PURC controller systems. A typical paging transmitter is shown to the right.



RF Demand Solutions in Chicago <http://www.rfdemandsolutions.com/index.html> have developed a solution that addresses the above concerns of the Electric Utilities based on the Daniels Paging Transmitter. RF Demand Solutions builds private paging networks for utilities in support of their Load Demand programs. They offer:

- A fiscally responsible alternative to replacing or eliminating embedded DCU's that have lost network coverage.
- Use embedded company assets such as radio towers or communications centers whenever possible.
- Seamless interface with imbedded DCU's and other devices using SA206, POCSAG, or FLEX protocols broadcasting in VHF, UHF or 900 MHz frequencies.

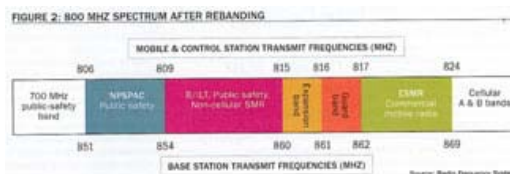
To learn more contact Daniels sales department sales@danelec.com or RF Demand Solutions info@rfdemandsolutions.com.

[Back to Top](#)

Product News

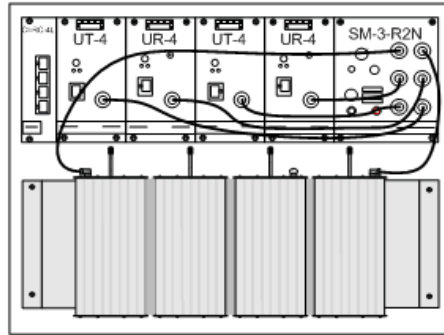
800 MHz rebanding Transition Repeater

Across the USA, various agencies are in the process of rebanding their 800 MHz spectrum in accordance with the FCC plan <http://www.800ta.org>. As shown in the two graphs below the rebanding will result in additional spectrum for public safety users.



To assist agencies that need to communicate between pre and post banded 800 MHz frequencies

(including NPSPAC channels), Daniels is offering a crossband repeater that can communicate with both sets of frequencies. This crossband repeater will provide on scene communications between subscriber units regardless of their rebanding status. The crossband repeater is available for fixed as well as transportable applications. Analog and P25 channels can be supported. To learn more about how Daniels can assist you with your rebanding contact sales@danelec.com.



New 30 Watt ET-6 Portable Repeater

The ET-6 provides a compact footprint for a 30 Watt transportable P25 repeater supporting transparent encryption in VHF or UHF bands. It operates from standard 110V AC as well as rechargeable gel-cell batteries. The Daniels Electronics ET-6 Portable Repeater is designed to meet the needs of surveillance operations where radio communications providing stealth, compact size for unobtrusiveness and rapid deployment are vital. It is also compact and flexible for use in any rapid deployment application.

The Daniels ET-6 Portable Repeater is a larger version of the Daniels ET-5 Tactical Repeater. Key Features of the ET-6 Portable Repeater include:

- Adheres to the P25 standards TIA-102 and TIA-603-C
- Available in VHF or UHF frequencies
- Transparent passing of P25 encryption (e.g. AES or DES-OFB)
- No double vocoding of the P25 signal
- True end-to-end digital integrity
- Runs on 110V AC or other rechargeable batteries
- Available with 30 Watts of RF output power
- Weighs only 30 lbs (14 kgs)
- Compact case 18" x 13" x 6" (46 x 34 x 16.5 cm)
- Available with integral 4.5 MHz duplexer – VHF or UHF



Daniels P25 Trunked Radio System

At IWCE Daniels launched its new P25 Five Channel Trunked Radio System which provides a small, compact, low power standalone system for customers requiring digital P25 communications for a large number of users from a single site. For Police, Fire, or Utility applications the Daniels Standalone P25 Five Channel Trunked Radio System is a complete radio system that can be quickly deployed on a temporary or permanent basis without necessitating complex network or console interfaces. The Standalone P25 Five Channel Trunked Radio System from Daniels builds on the existing MT-4E P25 Conventional Hardware platform and requires no changes to the RF hardware.



The Daniels Standalone P25 Five Channel Trunked Radio System is configured in 5 subracks as shown to the right with a 1U server performing the function of the trunking controller. A Universal Interface Card (UIC) in each shelf provides the IP communication path between the radios and the trunking controller. Daniels will offer its Standalone P25 Five Channel Trunked Radio System in two main configurations:



- 7' Rack for Fixed Installations – For permanent fixed site applications such as a small town police force or a nuclear power plant, the Daniels Standalone P25 Five Channel Trunked Radio System can be mounted in a standard 19" 7' equipment rack. 16U of shelf space will be required for the 5 RF subracks and the trunking controller industrial PC. Other accessories such as power supplies, duplexers and combiners can also be installed in this rack.
- 20U Transportable Cases – For temporary deployment by fire fighting agencies, police departments involved in search and rescue or security details setting up temporary communications to protect dignitaries, the Daniels Standalone P25 Five Channel Trunked Radio System can be packaged in a series of transportable cases for ease of deployment as shown to the right. A series of cases accommodates the RF racks and the industrial PC, while other cases support power supplies / batteries, power amplifiers, combiners and duplexers and other cases are filled with preconfigured handhelds.

In April Daniels Electronics and Icom America announced the successful completion of interoperability testing between their P25 encrypted trunked products. Fully tested to the P25 suite of standards (TIA/EIA TSB-102, CABC-A, Project 25 Interoperability Testing for Voice Operation in Trunked Systems) the Daniels trunked radio system is designed to interoperate with all P25 trunked handhelds and mobiles.

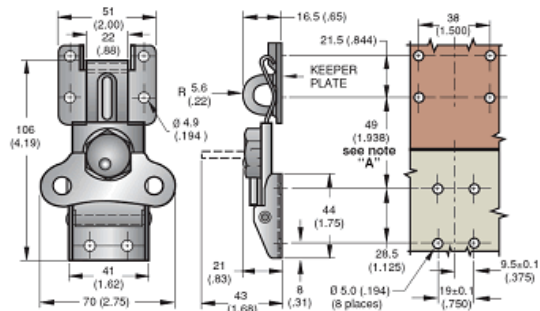
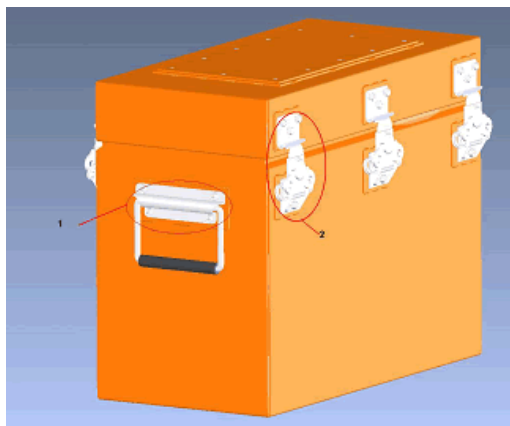


ET-3 now available with Padlock Fasteners

Daniels has recently enhanced its ET-3 weatherproof transportable case to include padlock fasteners enabling the case to be locked or chained to a fixed structure.



As shown in the drawings below all new ET-3s sold will be equipped with new fasteners that contain a latch through which a padlock or chain can be passed to secure the case from unauthorized opening or removal. Unfortunately, Daniels will be unable to provide a retrofit kit for existing ET-3s.



UIC Enhancements

During IWCE Daniels Electronics and Avtec www.avtecinc.com announced the development of a P25 standards-compliant Digital Fixed Station Interface (FSI) between their products enabling end-to-end direct P25 digital connection from the Daniels LMR radio to Avtec Scout™ dispatch consoles.



Daniels has also recently announced that its P25 standards-compliant Digital Fixed Station Interface (FSI) will interface to the Zetron ACOM Advanced Communication Console System. www.zetron.com



The Daniels digital Universal Interface card (UIC), provides the P25 DFSI connection via Ethernet from the Daniels radio system to other LMR subsystems such as dispatch consoles. The Ethernet Universal interface provides the P25 encoded (and optionally encrypted) digital audio signal directly to the console as well as a comprehensive suite of control signals. This allows the dispatch console to see and manage all information associated with a call in an IP format, including Unit and Emergency IDs.



Recently Daniels also announced the development of an enhancement to its existing pre FSI release that supports the Unit ID and Emergency Bit for non P25 FSI interfaces.

380 MHz Radios P25 Radio Modules

Daniels Electronics is now offering a new version of its MT-4E radios operating in the 380-406 MHz Band. The MT-4E radio is a high performance, low current FM radio capable of P25 digital or analog operation in 12.5 KHz channels. P25 operation is supported via a purchasable P25 firmware option and secure mode operation is available via optional encryption modules. For full details visit the Daniels website: <http://www.danelec.com/products/rfmodules>

The 380-406 MHz MT-4E modules provide:

- Software programmable
- 8 Watt RF output
- USB plug for programming and firmware upgrades
- Purchasable firmware upgrade from analog to P25 digital now or in the future
- Used for Repeater or Base Station applications
- Optional AES or DES compliant encryption modules



Special Upgrade Promotion until December 31st

Daniels Electronics is once again offering a special promotion on its MT-4E radios due to strong response. For customers desiring to upgrade their existing MT-4D or MT-4R radios to MT-4E, Daniels is offering the MT-4E Transmitter and Receiver for the special price of **\$1,750 US (\$2,100 Cdn) per module including the P25 firmware upgrade until December 31, 2009.** (Note - the existing MT-4D or MT-4R transmitters and receiver modules must be returned to Daniels prior to March 31, 2010). To take advantage of this offer or to learn more please contact the Daniels Sales department sales@danelec.com or call (800) 664-4066.

The Daniels Electronics MT-4E radio (shown below) is a high performance, low current FM radio capable of P25 digital or analog operation in 12.5 KHz (narrowband) or 25 KHz (wideband) channels. The MT-4E is available in the frequency bands: 136-174 MHz, 406-520 and 806-869 MHz. The MT-4E Receiver is available in either a Class A or Class B as per TIA 603 performance specifications. The key differences are: improved Adjacent Channel Rejection (Selectivity), Spurious Response Rejection, and Intermodulation Rejection with the Class A version. The trade-off compared with Class B is increased current consumption. For full details visit the Daniels website <http://www.danelec.com/products/rfmodules>

MT-4E Features

The MT-4E provides new product functionality compared with the MT-4R and MT-4D:

- Software programmable
- USB plug for programming and firmware upgrades
- Used for Repeater or Base Station applications
- Available in 136-174 MHz VHF, 406-520 or 806-869 MHz UHF bands
- Optional AES or DES FIPS compliant encryption modules
- Available with Class A or Class B Receivers



[Back to Top](#)

News from Around the World

Andrew Maxwell joined Daniels Electronics back in January to oversee our international market development. Andrew comes to Daniels with 15 years experience in selling 2-way radios systems, cellular and Broadband Wi-Max systems with a number of Canadian companies. His extensive international experience building partnerships and supporting international sales channels will be a great addition to the Daniels sales team to support our international sales partners. Andrew's contact details are:



Andrew J. Maxwell
Business Development Manager
Andrew_Maxwell@danelec.com

Tel: (250) 382-8268
Fax: (250) 382-6139
Tel: (mobile) 250 881-3838
Skype ID: andrewjmaxwell

[Back to Top](#)

New Sales Channel Partners

Since the last newsletter Daniels has signed agreements with a number of sales channel partners and we are pleased to welcome the following new partners:

Sales Channel Partner	Territory
I-Com America Inc.	USA and Latin America
LD Allen Communications Inc.	New York State
Inter WiFi S.A.	Columbia

[Back to Top](#)

New Product Literature

Daniels has an extensive library of marketing and technical literature available on our website:
<http://www.danelec.com/library/english>

The following new documents are available:

- 2009 Product Catalog: <http://www.danelec.com/pdfs/2009%20Catalog.pdf>
- P25 Five Channel Trunked Brochure: <http://www.danelec.com/pdfs/Trunk%20Brochure.pdf>

[Back to Top](#)

Upcoming Events

Daniels in conjunction with its regional sales representatives and authorized dealers will be participating at the upcoming industry events:

Dates	Logo	Tradeshow	Location	Web
Aug 16-20		APCO	Las Vegas	http://www.apco2009.org/
Aug 25-29		International Association of Fire Chiefs	Dallas	http://www.iafc.org/displaycommon.cfm?an=1&subarticlenbr=356
Oct 4-7		APCO Canada	Regina	http://www.apco.ca/
Oct 4-7		FCCA	Mesa, AZ	http://www.fcca-usa.org/index.shtm

2009 P25 Information & Product Seminars

Daniels Electronics is inviting you and your colleagues to a ½ day business and technology seminar on Land Mobile Radio systems. Each session is open to customers, prospective clients or anyone interested in learning more about P25. The sessions run from 8:30 – 1:00 PM (lunch included) and will cover the following topics:

An updated overview of the P25 standard adopted by the Association of Public Safety Communication Officials (APCO):

- P25 Updates on FSI and ISSI
- P25 Trunking
- and Compliance Testing as well as other hot topics
- Recent developments in frequency bands with a particular focus on the 700 & 800 MHz bands
- Transportable radio solutions
- HOT LUNCH!!

City	Date	Hotel	Address
Edmonton, Alberta	Monday Sept 14	Delta Edmonton Centre	10222-102 St. NW
Calgary, Alberta	Tuesday Sept 15	Coast Plaza Hotel	1316 33rd St. NE
Yellowknife, NWT	Wednesday Sept 16	Coast Fraser Tower	5303 52nd St.
Whitehorse, Yukon	Friday Sept 18	High country Inn	4051 4th Ave

We are very pleased to share this no cost seminar with you and hope you will confirm your attendance by replying to sales@danelec.com or by calling (800) 664-4066. If you know someone who might be interested in this seminar please feel free to pass this invitation on to them.

APCO Heads Up

Daniels in conjunction with its regional sales representatives and authorized dealers will be participating at the APCO tradeshow in Las Vegas August 17-19. <http://www.apco2009.org> This year Daniels will be exhibiting in booth 1200.

New products that Daniels will be featuring include:

- 380 MHz P25 Military Radios
- ET-5 Tactical Repeater
- ET-6 Stealth Repeater (30 Watt version of the ET-5) (see above)
- New Solar Panel package

- 5 + 1 Channel P25 Trunked System



Free Pass to Fire Rescue Show

Daniels is offering a free pass to the exhibits at Fire Rescue International in Dallas - August 28-30. Please accept with our compliments the enclosed \$50 "VIP Savings" coupon. This coupon can be used to save an additional \$50 per person on your FRI full conference registration fees. This is in addition to your early-bird registration savings.

To use this coupon, go to <https://reg.jspargo.com/iafcfri09/>, and enter **VIP CODE: FRI 232** and automatically receive your \$50 savings. The deadline is July 17, 2009, so sign up now.

We look forward to seeing you this August at FRI - Booth 808.

FRI 2009
Fire-Rescue International

VIP SAVINGS!

Save \$50 off your FRI 2009 registration fee when you sign up online at www.iafc.org/fri and use VIP Code FRI 232.

This offer is good through July 17, 2009.