



WINTER 2009 DANIELS ELECTRONICS NEWSLETTER

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President's Desk

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During this holiday season all of the staff at Daniels would like to extend to you our best wishes. 2008 has turned out to be a successful year for us and we thank you for your business and the opportunity to work with you. I trust that during the holidays you will be able to relax and enjoy time with family and friends before another exciting and challenging year begins.



We finished 2008 on a very upbeat note with several significant new contract awards as well as major contract renewals that are profiled in this newsletter. We are looking ahead to the coming year beginning with the IWCE tradeshow in Las Vegas in March. We have a number of new products that we will be launching at the show and this newsletter will give you a preview of some of them. We certainly hope you will come by and visit with us to learn more.

Regards,

Robert Small, President & COO

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Customer Profile - Taiwan National Fire Agency

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Daniels Electronics has recently completed the installation and deployment of a national radio network in Taiwan. Working in conjunction with our Taiwanese System Integrator Harvest General Trading Company <http://www.harvest-tw.com.tw/>, Daniels supplied over 40 radio repeaters for deployment across the country to create a communications backbone for the National Fire Agency <http://www.nfa.gov.tw/en/index.aspx>.



The National Fire Agency is part of the Ministry of the Interior and has national responsibility for fire prevention, fire fighting (urban and rural) as well as medical response and ambulance services. The need for a comprehensive radio network to coordinate response efforts was well understood and critically important with the increasing number of severe typhoons that Taiwan experiences annually.

Harvest General's team of engineers worked with the National Fire Agency to determine the agency's immediate requirements as well as long term communications evolution plan. Once the requirements were understood it was clear to the Managing Director of Harvest General Alan Teoh, that Daniels Electronics was an essential part of the design of the radio network. "We have worked with Daniels Electronics for a number of years on a variety of projects in Taiwan and we have always found their products to be of the highest quality, a proven reliable design and a product that is easy to install" said Mr Teoh. "For such a critical application as the backbone of the National Fire Agency's radio network we felt confident that Daniels products would meet the requirements of the NFA and ensure years of trouble free operation in all conditions."

Deployment of the radio network began in August 2007 and all 42 sites were installed, commissioned and successfully turned over to the National Fire Agency in the spring of 2008. Since that time the National Fire Agency has found the radio network has worked reliably and continuously despite a high number of severe typhoons this season. Plans are now underway for further upgrades and expansion of the network to provide greater radio coverage across the country.

Editor's Note - Daniels will also be featured in the February issue of Mission Critical magazine with a story of a recent installation in Rwanda.

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Product News

Newsletter Feedback

If you wish to unsubscribe from our newsletter, please email editor@danelec.com

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

800 MHz P25 Radio Modules

During the Fall, Daniels Electronics began shipping its new MT-4E radios operating in the 806-869 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 800 MHz MT-4E modules provide:

- Software programmable
- 3 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



Detailed product descriptions are available on the Daniels website:

<http://www.danelec.com/pdfs/MT%204E%20800%20TX%20Description%20LIT%20054%20100.pdf>

<http://www.danelec.com/pdfs/MT%204E%20800%20RX%20Description%20LIT%20055%20100.pdf>

New Compact ET-5 Tactical Repeater

The ET-5 provides the smallest footprint of any transportable P25 repeater supporting transparent encryption in VHF, UHF or 800 MHz bands. It operates with standard alkaline D-Cell batteries that are available at any retail store as well as rechargeable lead acid batteries. The Daniels Electronics ET-5 Tactical Repeater is specifically designed to meet the needs of body wire repeating for undercover operations and other surveillance operations where radio communications providing stealth, compact size for unobtrusiveness and rapid deployment are vital.

The Daniels ET-5 Tactical Repeater is a smaller version of the Daniels ET-4 Briefcase Repeater. Key Features of the ET-5 Tactical Repeater include:

- Adheres to the P25 standards TIA-102 and TIA-603-C
- Available in VHF, UHF or 800 MHz 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 Commercial Off The Shelf (COTS) D-cell alkaline batteries or other rechargeable

batteries

- Supports up to 19 Hours operation with alkaline D-Cells
- Available with 0.5 – 6 Watts of RF output power – VHF/UHF, 0.5 – 3 Watts RF output power – 800 MHz
- Weighs only 20 lbs (9 kgs)
- Compact case 14" x 11" x 6" (36 x 29 x 16.5 cm)
- Available with integral 4.5 MHz duplexer – VHF, UHF (45 MHz – 800 MHz)

<http://www.danelec.com/pdfs/ET-5%20Tactical%20Repeater%20Brochure.pdf>



New Solar Panel Kit

Daniels Electronics has updated its solar panel package. Daniels now offers a compact solar panel package for use with its transportable radio repeater family or for use in any application requiring rapidly deployable DC power that is compact and easy to carry / set up. The solar panel kit is shown in the photo to the right and consists of the following assemblies:

- 6' x 4' solar panel that folds up to 8" x 10"
- Cables for direct connection to the Daniels battery box and transportable radio repeaters
- Tent pegs to secure the solar panel to the ground
- Bungee cords to hang the solar panel in a tree
- Rubber mallet
- 50' of rope
- Compass
- Rugged (16" x 12" x 6") case for ease of storage and transport
- Total assembly weighs 12 lbs



The solar panel is made of a rugged flexible material and is rated for 60W with a 12V output. Optionally a



second solar panel can be tandemed together and stored in the same case. For a Daniels transportable repeater this provides sufficient power to charge the battery pack enabling continuous radio operation at 30 watts with a 5% duty cycle.

To learn more about this solar panel kit, Daniels transportable radio repeater solutions or other communications requirements, please contact the Daniels Electronics sales team at sales@danelec.com.



[See Daniels P25 Trunked Radio System at IWCE](#)

At IWCE Daniels will be launching its new P25 Five + One 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 + One 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 + One Channel Trunked Radio System from Daniels builds on the existing MT-4E P25 Conventional Hardware platform and requires no changes to the RF hardware.



Product Configurations

The Daniels Standalone P25 Five + One Channel Trunked Radio System is configured in 5 subracks as shown to the right with a 1U industrial PC 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 + One 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 + One Channel Trunked Radio System can be mounted in a standard 19" 7' equipment rack as shown above. 17U of shelf space will be required for the 3 RF subracks and the trunking controller industrial PC. Other accessories such as power supplies, duplexers and combiners (not shown) 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 + One Channel Trunked Radio System can be packaged in a series of transportable cases for ease of deployment. A series of cases accommodate the RF racks and the industrial PC, while other cases support power supplies / batteries, power amplifiers, combiners and duplexers and other cases can be filled with preconfigured handhelds.

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Recent Contract Awards

Canada In November, Daniels Electronics Ltd was awarded a \$1.7 Million contract with the Canadian government for the supply of mission critical coastal radio stations for use by the Canadian Coast Guard at their Marine Communications and Traffic Services (MCTS) Centres and associated remote sites in the Pacific region. The radios will be operational on a continuous 24/7 basis 365 days a year and are expected to operate for at least the next 10 years. The coastal radio stations being provided by Daniels Electronics will upgrade existing radios

(previously supplied by Daniels Electronics over 10 years ago).



Also in November Daniels Electronics Ltd was awarded a \$1.3 Million contract with the Canadian government for the assembly and test of assemblies used in the National Research Council of Canada Herzberg Institute of Astrophysics (NRC-HIA) development of 84-116 GHz heterodyne receivers for the international Atacama Large Millimeter array (ALMA) telescopes. <http://www.nrc-cnrc.gc.ca/eng/projects/hia/receivers.html>

ALMA will be located at a 5000 m elevation in the Chajnantor Plain of northern Chile. The resolution and sensitivity of the array will constitute a great leap forward compared to existing facilities, making it the world's pre-eminent radio astronomy facility for the coming decades. NRC-HIA's contribution to the project is 73 extremely sensitive 84-116 GHz receivers. The nucleus of the receiver is a superconductor-insulator-superconductor (SIS) tunnel mixer which down converts the RF signal collected by the radio telescope to an intermediate frequency (IF) signal centered at 6 GHz with a bandwidth of 4 GHz. A cryogenic high electron mobility transistor (HEMT) amplifier is used to amplify the IF signal by more than 30 dB before it is delivered to the ALMA Back-End System. The SIS detector and the HEMT IF amplifier must operate at a cryogenic temperature of 4 Kelvin. NRC-HIA has developed a cryogenic 4-8 GHz HEMT amplifier for this application.



Daniels WSCA Contract 02702 has been renewed for another year until the end of October 2009. To learn more about purchasing Daniels products off of a WSCA contract please contact your local sales representative.

<http://www.aboutwsca.org/content.cfm/id/WSCA?CFID=353068823&CFTOKEN=66371396>



Daniels Electronics Ltd.
43 Erie Street
Victoria, BC
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The Contractor's Basic GSA Schedule contract is applicable to the BPA that is awarded under this RFQ

ISSUED BY:

General Services Administration Federal Systems Integration and Management Center (FEDSIM)

2100 Crystal Drive, Suite 800
 Arlington VA 20406
 November 21, 2008

BLANKET PURCHASE AGREEMENT
 GS-TFMG-BPA-09-0002

Land Mobile Radio (LMR) Equipment

IN SUPPORT OF:

Department of Interior (DOI), United States Department of Agriculture (USDA) and the Department of Justice (DOJ) – Federal Bureau of Investigations (FBI) Training Academy

FEDSIM Project Number 27125INM

The Contractor shall support the following agencies / bureaus with LMR equipment.

- DEPARTMENT OF INTERIOR
 - BUREAU OF INDIAN AFFAIRS
 - FISH AND WILDLIFE SERVICE
 - BUREAU OF LAND MANAGEMENT
 - NATIONAL PARK SERVICE
 - U.S. GEOLOGICAL SURVEY
 - BUREAU OF RECLAMATION
- UNITED STATES DEPARTMENT OF AGRICULTURE
 - ANIMAL AND PLANT HEALTH INSPECTION SERVICE
 - FOREST SERVICE
- FBI TRAINING ACADEMY

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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:

- **Daniels 2008 Catalog**
 - <http://www.danelec.com/pdfs/LIT-001-5-0-1Catalog.pdf>
- **ET-5 Tactical Repeater**
 - <http://www.danelec.com/pdfs/ET-5%20Tactical%20Repeater%20Brochure.pdf>
- **Transportable Brochure**
 - <http://www.danelec.com/pdfs/TransportableRadios.pdf>
- **Transportable PPT**
 - <http://www.danelec.com/ppts/Transportable%20Cases%20Aug%202008.ppt>
- **800 MHz Transmitter**
 - <http://www.danelec.com/pdfs/MT%204E%20800%20TX%20Description%20LIT%20054%20100.pdf>
- **800 MHz Class A Receiver**
 - <http://www.danelec.com/pdfs/MT%204E%20800%20RX%20Description%20LIT%20055%20100.pdf>
- **Application Notes**
 - AN1600 - Transportable Repeater:
 - <http://www.danelec.com/pdfs/AN1600.pdf>



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ISO Recertification

Daniels Electronics is pleased to announce that it has been recertified in its compliance with the quality management system ISO 9001:2000.


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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
Alster Communications, LLC P.O. Box 12428 Mill Creek, WA 98082 TEL: 1-425-379-7574 FAX: 1-425-379-2574 E-MAIL: steve@alster.com WEB: www.alster.com	Alaska Hawaii Northern Idaho Oregon Washington West Montana
Argosy Communication Products 1121 Balwin Place Victoria, BC Canada V8X 4G9 TEL: 250-479-9662 FAX: 250-704-0562 E-MAIL: dbigrigg@acpltd.ca WEB: www.acpltd.ca	Canada

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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
Feb 15-17		Canadian Police Chiefs	Victoria	http://www.cacp.ca/index/eventsconferences
March 18-20		IWCE	Las Vegas	http://www.iwceexpo.com/iwce2009/public/enter.aspx
June 20-24		National Sheriff's Association	Ft Lauderdale	www.sheriffs.org
July 11-17		NATIA	Memphis	http://www.natia.org
August 16-20	APCO	APCO	Las Vegas	http://www.apco2009.org/

August 25-29	International Association of Fire Chiefs	International Association of Fire Chiefs	Dallas	http://www.iafc.org/displaycommon.cfm?an=1&subarticlenbr=356
October		APCO Canada	Regina	http://www.apco.ca/
Oct 4-7		FCCA	Mesa, AZ	http://www.fcca-usa.org/index.shtm

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IWCE Heads Up

Daniels in conjunction with its regional sales representatives and authorized dealers will be participating at the IWCE tradeshow in Las Vegas March 18-20: <http://www.iwceexpo.com/iwce2009/public/enter.aspx> .

This year Daniels will be exhibiting in booth 119.

New products that Daniels will be featuring include:

- 380 MHz P25 Military Radios
- 800 MHz Radios (see above) - Conventional and Trunked
- ET-5 Tactical Repeater (see above)
- ET-6 Stealth Repeater (30 Watt version of the ET-5)
- New Solar Panel package
- 5 + 1 Channel P25 Trunked System (see above)
- P25 Fixed Station Interface



Free Pass to IWCE Exhibits

Daniels is offering a free pass to the exhibits at IWCE. To access the pass register online at the following IWCE URL:

<http://www.iwceexpo.com/iwce2009/Public/Content.aspx?ID=3138&sortMenu=105000&exp=1%2f13%2f2009+6%3a02%3a15+AM>

Then enter in Customer Code V2. This will provide a free pass into the exhibits. (\$50 value)

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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
 - Phase 2 developments
 - 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
Victoria, BC	Monday February 2	Coast Harbourside	146 Kingston St
Vancouver, BC	Tuesday February 3	Holiday Inn Express Metrotown	4405 Central Boulevard - Burnaby
Winnipeg, Manitoba	Monday May 11		
Toronto, Ontario	Tuesday May 12		
Ottawa, Ontario	Wednesday May 13		
Montreal, QC	Thursday May 14		
Quebec City, QC	Friday May 15		
St. John's Nfld	Monday June 1		
Halifax, Nova Scotia	Tuesday June 2		
Saint John, NB	Wednesday June 3		
Regina, Sask.	Friday June 5		
Calgary, Alberta	Monday Sept 14		
Edmonton, Alberta	Tuesday Sept 15		
Yellowknife, NT	Wednesday Sept 16		
Whitehorse, Yukon	Friday Sept 18		

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.

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Upcoming Technical Training Courses

The Daniels training department has scheduled a 1-day Radio Basics and RF Fundamentals training course for technicians new to the Radio Communications field and a 2-day MT-4E Analog and P25 Digital Radio Systems technical training course. The courses will be held:

Radio Basics and RF Fundamentals

Tuesday May 19
Hampton Inn & Suites
3279 Caroga Dr
Toronto Airport, Ontario

MT-4E Analog and P25 Digital Radio Systems

Wednesday & Thursday May 20 & 21
Hampton Inn & Suites
3279 Caroga Dr
Toronto Airport, Ontario

The courses will run from 8:00 AM until 5:00 PM on each day.

MT-4E Analog and P25 Digital Radio Systems Course

The course will consist of:

- Introduction to P25 Radio System Technology.
- Discussion of Interface Standards.
- Practical uses of P25 and definitions of P25 terms.
- Overview of the new P25 Conventional Fixed Station Interface Standard.
- Introduction to the New MT-4E Product Line (analog and P25 digital versions).
- Theory of Operation for all Daniels MT-4 radio systems.
- Demonstrations and tuning using Daniels MT-4E digital radio product line.

Radio Systems Basics Course

The course will consist of:

- Introduction to Radio System Operation and Terminology.
- Frequencies, Modulation and RF Propagation.
- Radio System Equipment and Configurations.
- Basics of Testing and Maintaining Radio Systems.

Any and all students are welcome to attend (Federal, Provincial or Local government employees,

Dealers, or any others interested in Daniels radio products).

Students can enroll in the 2-day class for \$750.00 (per student), and the one day class for \$375.00 (per student) plus applicable taxes.

Course Enrollment also includes a set of Daniels Instruction manuals, Training Guide, training tool kit and some other goodies. Feel free to bring your laptop computer to have the RSS software loaded into it.

Customers may also bring their own Communications Analyzer (IFR 2975 or other), Daniels Radio System and test equipment if it is convenient. It is not necessary, but could allow for more hands-on with your own equipment.

Please contact Daniels Training Section at training@danelec.com or 1-800-664-4066 for more information or to reserve your seat. If you know someone who might be interested in this course please pass this invitation on to them.

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Narrowbanding Deadlines

The table below summarizes the FCC deadlines for Narrowbanding.

Milestone	Deadline
No new wideband (25 KHz) applications of major modifications to existing systems to increase coverage will be accepted	January 1, 2011
End of manufacturing or import of wideband equipment	January 1, 2011
Mandatory certification of equipment capable of 6.25 KHz operation	January 1, 2011
Mandatory 12.5 KHz conversion	January 1, 2013