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Thales Communications, Inc. Customer Newsletter

CUSTOMER Commitment

Volume 2/Issue 1

Summer 2007

Clarksburg, Maryland

Have You **UPGRADED** Your AN/PRC-148 MBITR To The **LATEST** Version??
Please Use Tactical Communications Technical Resource Access To Accomplish This.

JEM Selected for U.S. Military Service




AN/PRC-148 System Solution

Thales Communications has been awarded a firm, fixed price, indefinite-delivery/indefinite-quantity (IDIQ) contract to provide its AN/PRC-148 Joint Tactical Radio System (JTRS) Enhanced Multiband Inter/Intra Team Radio, or JEM, system to all services of the U.S. Military. The Consolidated, Interim, Single-Channel, Handheld Radio (CISCHR) award was the result of a competitive procurement. The JTRS Joint Program Executive Office (JPEO) will be consolidating handheld radio purchases for the U.S. Department of Defense, significantly reducing unit costs and allowing all participating agencies to purchase JTRS equipment. Under this IDIQ contract, Thales will compete for future awards of formal delivery orders, which will ultimately determine contract

value. CISCHR has a one-year contract period with four additional one-year options.

The JEM was designed, developed, and manufactured under a U.S. Department of Defense program of record. Its powerful Software Communications Architecture is capable of hosting future waveforms, making it both an interim and long-term solution in the battlefield. [For more information, see page 5.]

Thales will also be supplying its dual radio AN/VRC-111 Vehicle Adapter Amplifier (VAA) and its Base Station. The VAA consists of two Thales Vehicle Adapters, two JEM handheld radios, and a SINCGARS interface tray. The VAA provides multiband, multimode capability beyond basic SINCGARS and offers unique, one-second, cable-free radio dismount that enables a seamless transition from mounted to dismounted operations. The Base Station, designed for fixed command center operations, supports and maintains all functionality of the JEM and Vehicle Adapter. The JEM, VAA, Vehicle Adapter, and Base Station are part of a complete system solution for the warfighter that also includes a self-contained Tactical Repeater for range extension; compact, rugged Man Portable System for dismounted operations requiring higher power output; and a complete line of accessories. 

Overview of the Joint Tactical Radio System

By Walt Hepker
Vice President of Program Management



The Department of Defense (DoD) Joint Tactical Radio System (JTRS) program will develop, produce, integrate, and field a family of interoperable, digital, modular, software-defined radios

that ensure secure wireless communications and networking services for mobile and fixed forces. The major programs (formerly called “Clusters”) comprising JTRS are Ground Mobile Radio (GMR), addressing ground vehicular requirements; Airborne, Maritime, and Fixed Site (AMF) supporting requirements for airborne (including rotary wing), maritime, and fixed station platforms for all services; Handheld, Manpack, and Small Form Factor (HMS), addressing dismounted and Future Combat System (FCS) applications; Multifunctional Information Distribution System (MIDS-J), addressing Link-16 and airborne networking waveform applications; and Special Radios, which consist of Thales’ AN/PRC-148 JTRS Enhanced

(Continued on page 2, column 1)

Overview of the Joint Tactical Radio System continued...

MBITR (JEM). DoD is planning to spend \$4 billion on development and \$33 billion on fielding. JTRS is critical to connecting the warfighter on the ground, sea, and air into the networking capabilities that are delivered through the DoD's information infrastructure (the Global Information Grid). JTRS will provide the mobile, ad-hoc networking capability that is essential to realizing DoD's transformational goals for the warfighter.

In January, the Joint Program Executive Officer (JPEO) JTRS announced a business model for certifying JTRS products. The news release explained that JTRS certification is based upon products achieving Software Communications Architecture (SCA) certification and meeting certain criteria. Although no radios meet all of the criteria, the AN/PRC-148 JEM is one of two radios that do meet some of the basic criteria. The announcement further indicated that the JEM "as a JPEO-developed product, has been operationally tested in a formal setting and found to be effective and suitable."

A pioneer of software-defined radio, Thales has led the industry in meeting size, weight, and power-constrained challenges, even

before JTRS. As the first company to reduce the SINCGARS waveform to software, we leveraged our core expertise into the JTRS world as an integral player in early JTRS initiatives including SCA definition, development, and validation. We have the distinction of participating in many of the JTRS programs:

Special Radios - JEM (formerly Cluster 2): The prime contractor under this program, we currently have almost 10,000 AN/PRC-148 JEMs on order and/or deployed. The AN/PRC-148 JEM is based on the AN/PRC-148 MBITR (almost 100,000 have been fielded) and provides a powerful SCA-compliant platform that allows inclusion of new JTRS waveforms, such as high-capacity data, networking, and new encryption algorithms.

AMF (formerly Clusters 3 and 4): Jointly managed by the U.S. Air Force and U.S. Navy, AMF JTRS will provide seamless, real-time communications, voice, data and video among warfighters and commanders. The systems will be integrated onto air, maritime, and fixed stations worldwide. As part of the Lockheed Martin team, Thales is supporting Raytheon in the HF area.

HMS (formerly Cluster 5): We participate on this team along with General Dynamics

(prime), Rockwell Collins, and BAE Systems. Our role is lead for the Handheld and Soldier System applications as well as assisting General Dynamics in development of various core modules and waveform porting.

MIDS (Multi-functional Information Distribution System): TCI is a subcontractor to the Data Link Solutions team.

The JTRS Program will provide warfighters with a flexible new approach to meet their diverse communications needs. Thales is providing the foundation for total interoperability for U.S. military services, coalition forces, and allies. ☐

NEW RELEASES

Thales Communications recognizes that end-users of our equipment require the latest technical information to ensure mission readiness. With the appropriate credentials, users are able to log-in to Customer Support on our website and quickly download the latest technical information and operational software at any time and at any location worldwide. If you have not already taken advantage of these useful resources, please log into Customer Support at www.thalescomminc.com.

VERSION 2.36 FIRMWARE UPGRADE FOR THE AN/PRC-148 MBITR

In the Tactical Communications Technical Resource area on our website Version 2.36 will be available soon. To meet our customers' requests, this release will enable SINCGARS Frequency Hopping Retransmission and provide the firmware in the radio for the Remote Control Unit with GPS SKU MA6795.

IMPROVED HOLSTER FOR THE AN/PRC-148 MBITR

New MBITR and JEM radio deliveries are being made with an improved Holster SKU 1600494-1.

The old style, black nylon holster is replaced by an improved version offering greater protection for the radio. The Holster is supplied with an adjustable flap that can protect the keypad and the display, or just the display. Supplied in ACU digital camouflage.



COMPUTER BASED TRAINING [CBT] FOR THE AN/PRC-148[V]2[C] AND [V]4[C] JTRS ENHANCED MBITR [JEM]



Comprehensive JEM CBT is now accessible in the Tactical Communications Technical Resources area of our website www.thalescomminc.com. To access the CBT you must register for a Customer Care account and be approved.

CBT for the AN/PRC-148[V]1[C] and [V]2[C] MBITR will be available in the near future. ☐

CONTACT INFORMATION

CUSTOMER SERVICE

1-800-914-0303

Technical Support—Option 1
technical.support@thalescomminc.com

Product Support—Option 2
product.support@thalescomminc.com

Aftermarket Sales and Support—Option 3
aftermarket.support@thalescomminc.com

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Lithium-Ion Rechargeable Batteries For Handheld Radios

Our Lithium-Ion rechargeable batteries have an internal microcontroller which, when the battery is connected to a radio, drives the radio's fuel gauge to indicate remaining battery capacity. When a battery is placed in a battery charger, the battery's microcontroller communicates with another microcontroller in the charger to regulate the charge current to prevent the battery overheating and becoming dangerous. This communication link also ensures the battery is charged to its full capacity in the minimum time. However, the battery's microcontroller will slowly discharge the battery; hence the user must have a battery charging policy which ensures that each battery is charged every twelve weeks, as indicated on the sticker attached to each battery. The date on the sticker is when Thales Communications charged the battery before shipment. ☐

Welcome Sophie Users

With this edition, we welcome US-based Sophie Thermal Imaging Camera operators into our readership. Since 2000, Thales has helped customers world-wide meet their exacting cooled thermal camera requirements through its family of Sophie products. Recent Sophie enhancements significantly extend MTBF and range performance. Also, our new Sophie Multifunction incorporates laser range finding, laser pointing, color camera, Digital Magnetic Compass, and GPS.

We recently evaluated product service and support for US Sophie customers and determined that our turnaround times were too long. To help maintain acceptable operational readiness rates, Thales is bridging the geographical gap between the factory and the operator. We now maintain Sophie inventory and are adding warranty, non-warranty, and spares support into our Customer Support Department.

Our Customer Support Department is world-class and includes a staffed 24/7 hot-line (1-800-914-0303). A web-portal allows customers to submit questions, submit RMA requests, track repair status, receive non-warranty repair quotes, and



Sophie Mounted on a Laser Target Designator

purchase spare items.

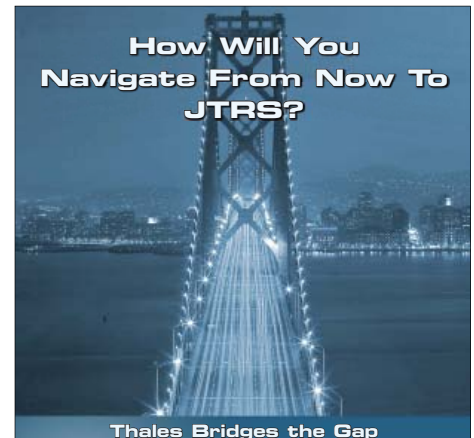
Future editions of this Newsletter will include general discussions on common themes experienced by Sophie operators, such as battery conditioning and maintenance concepts. Again, we welcome our US-based Sophie customers and look forward to satisfying your service and support requirements. For more information on Thales' Optronics offerings, including the Sophie product portfolio, please visit us on-line at www.thalescomminc.com or e-mail us at optronics@thalescomminc.com. ☐

Naval and Maritime Systems— Bridging the Gap to JTRS

Thales' leadership in communication solutions that meet size, weight, and power challenges extends to our naval/maritime capabilities and a robust portfolio of integrated, automated naval communication systems and solutions. We understand unique platform requirements, our solutions respond to critical weight and space issues, and we can fit more HF performance into tight radio-room space.

Thales' state-of-the-art Series 8000 product line offers an integrated system solution that provides a dramatic reduction in space and weight from legacy HF systems. The equipment supports the latest HF waveforms, and, utilizing software-defined radio technology, supports emerging and future HF waveform standards as simple software uploads:

- Software Defined Radio, latest technologies, suited to both fixed and naval applications
- Supporting full complement of



MIL-STD and STANAG waveforms as software loads

- Multi-mode, multi-channel

Our solutions support SPAWAR and the US Navy's and US Coast Guard's current HF requirements. And, by incorporating the newest technologies, the HF systems we deliver today address tomorrow's JTRS requirements. Thales is bridging the gap to AMF JTRS—making it a reality today. ☐

PRODUCT LAUNCH

VA/VAA REMOVEABLE CONTROL HEAD (RCH) CABLE OPTIONS


Each Thales Vehicle Adapter is equipped with a Removable Control Head (RCH) for remote operation. The RCH includes a microphone and a PTT switch, the display and keyboard replicate those on the radio which are not accessible with the radio inserted into the VA. The RCH has a small 6-pin connector to connect audio accessories. A 10ft long cable is provided, with the MA7036 and MA6943 configurations, for use when the RCH is removed from the VA chassis; 35ft and 50ft long cables are also available. Please contact Customer Support at 1-800-914-0303, option 3 or aftermarket.support@thalescomminc.com for pricing and availability.

P/N	DESCRIPTION
3600215-1	10ft RCH cable
3600215-2	35ft RCH cable
3600215-3	50ft RCH cable

TACTICAL CHARGER, MA6751 FOR THE AN/PRC-148 MBITR



We produce a number of chargers for our Lithium-Ion rechargeable batteries (PN 1600515-x). For vehicular use we have a two-slot dc powered Tactical Charger that can be mounted to a vertical surface. The batteries are securely held in place, even if a radio is connected. The radio can be switched on with an antenna fitted when it is in the charger and the radio is operational ready to be rapidly removed for a dismount operation. If the radio and charger are inside a metal box/vehicle, an external antenna would be required.

The dc voltage input range is 10 to 32V and the maximum power draw is 100W; a 15A in-line fuse is provided to protect the wiring. Two discharged batteries can be fully charged in about three hours. LEDs provide the charge status for each slot. *Not to be used for non-Thales approved batteries.* 


AES Certification for the Thales 25

The Thales 25 portable digital radio has received US Government Federal Information Processing Standard (FIPS) 140-2 Level 1 certification for its Advanced Encryption Standard (AES). AES protects the confidentiality of voice and data in communication systems conforming to the Association of Public Safety Communications Officials (APCO) Project 25 standard and provides significant improvements in communication security over the OFB DES (Output Feedback Data Encryption Standard) encryption currently offered on legacy land mobile radio systems. Project 25 is a suite of standards established to meet the need for communications interoperability for first responders. The Thales 25 is certified at the AES 256 bit level, which has been identified by the National Institute of Standards and Technology (NIST) as the strongest Type III encryption available.

The Thales 25, the most rugged Project 25 compliant hand held, robust digital radio available today, is machined from a solid block of aircraft grade aluminum providing a sealed case submersible to six feet (2m).

It is recognized industry-wide as a valuable communication solution that effectively responds to the needs of homeland security, public safety, law enforcement, and land management. When used with a GPS, position information is transmitted so that the location of radio users can be displayed on PCs with mapping software.

As with all other Thales 25 software options, the software for the AES upgrade is downloadable directly from the Thales Communications website; therefore, field upgrades do not require the return of the radio to the factory.

This encryption upgrade demonstrates Thales' continuing commitment to its customers by providing advanced feature upgrades and enhancements to its well-established Thales 25 line of products. 



Showcase: Remote Control Unit with GPS

The Remote Control Unit with GPS (RCU), MA6795 is a remote control device designed to be an active extension of the front panel controls of Thales' AN/PRC-148 radios with the addition of an embedded commercial GPS receiver with an integrated GPS antenna. The GPS receiver facilitates the introduction of Force Tracking capabilities to the radio, key to network-centric operations.


The knob operation and menu structure of the RCU replicate the front panel of the radio, increasing ease of use and reducing training requirements. Volume and channel control are provided by the use of knobs. As with the radio, the front panel display provides access to all the radio menus. GPS position information is sent automatically to the radio over the asynchronous serial port via the rugged break-away interconnect cable attached to the radio's side connector.



The RCU is powered from the radio through the side connector, thus eliminating the need to carry additional batteries. The RCU is designed to conserve power to maintain the operational mission life of the radio.

The unit is intended as a body-mounted device and is designed such that it is easy to hold and operate with or without extreme conditions apparel such as cold weather gloves. The

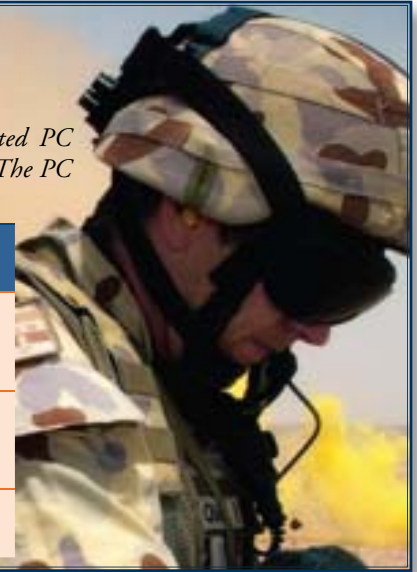
RCU allows the soldier to mount the radio in non-obstructive locations such as on the user's back while maintaining full control of the radio. The versatile RCU mounting features allow for various configurations to support different field deployments.

The RCU supports both the MBITR and the JEM configurations of the AN/PRC-148. 

Current Firmware Versions AN/PRC-148 MBITR Family and Thales 25

Current firmware versions for the AN/PRC-148 MBITR family, the Thales 25 and the associated PC Programmers. The radio firmware version is displayed as part of the boot-up and built-in test cycle. The PC Programmer version is displayed from the Help menu.

RADIO	RECEIVER/TRANSMITTER 'BRICK' PART NUMBER	REVISION VERSION	PC PROGRAMMER	REVISION VERSION
Type 1 AN/PRC-148(V11C) and (V12C) MBITR	4101104-501 Maritime 4101195-501 Urban	Revision Y Version 2.35	MA6941F	Revision G Version 1.07 Note 1
Clear MBITR	4101422-504 Maritime 4101349-502 Urban	Revision E Version 1.16	MA6941L	Revision C Version 1.05 Note 2
Thales 25	4101256-50x	8.3 for -503 and up 5.13 for -501	MA6941C	Version 5.0



Note 1: If the radio firmware version is 2.27, 2.27A or earlier, Version 1.07 of the PC Programmer will not reflash the radio to Version 2.35. Version 1.04 of the PC Programmer must be used, this is available for download from the Tactical Communications Technical Resources area of our website.

Note 2: New version released to resolve issues with missing Borland files on certain PCs.

Thales Aboard HMS Ocean



In mid-April as the Virginia Tidewater area was gearing up to celebrate the 400th anniversary of the founding of the Jamestown Colony, the Royal Navy amphibious warship HMS Ocean made a scheduled port call to Norfolk Naval base on April 16th to join the celebration. In addition to participating in the regional festivities and allowing the crew an opportunity to go ashore, HMS Ocean was also visiting the US as part of a UK Ministry of Defense – Defense Industry Day (DID). The MoD hosts DID events in order to showcase British military technologies and innovative weapon systems to potential foreign customers (in this case the US military). Scores of British defense and aerospace companies (including Thales



divisions in the UK) were invited to set up booths and exhibits on the helicopter hangar deck of HMS Ocean in front of hundreds of US military and industrial VIP's. Key US Department of Defense dignitaries included Dr. Dolores Etter (Asst. Sec. Navy – Research, Development & Acquisitions) and Vice Admiral Chanik (Commander Second Fleet). As with other recent foreign ship visits to the US, Thales Communications appreciated the opportunity to invite key Norfolk-based customers onboard to learn more about Thales as a global company and tour communications spaces that showcased proven shipborne communications solutions provided by Thales. ☐

AN/PRC-148 Product Family

The AN/PRC-148 is a rugged, lightweight, multiband handheld radio weighing less than two pounds. It operates in the 30 to 512 MHz frequency range and provides inter/intra team communications ground-to-ground, ground-to-air, and over satellite. The JEM configuration, which is an evolution of the battle-proven MBITR, affords improved security, is capable of hosting future waveforms, and offers access to higher data throughput and networking capabilities. The AN/PRC-148 is the cornerstone of a complete system solution for the warfighter which includes a Vehicle Adapter with a unique, cable-free, rapid radio dismount capability; dual radio AN/VRC-111 Vehicle Adapter Amplifier; Base Station for fixed applications; Tactical Repeater for range extension; and compact, rugged Man Portable System for dismounted operations requiring higher power output. ☐



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 Visit our website www.thalescomminc.com
 Go to **Careers**, Click on **Careers Opportunities**
 and Select **View All Open Job Positions**



Q&As

Q: When checking warranty status of a radio, is there a shortcut entry for the model number?

A: For the Urban AN/PRC-148[V]2[C] configuration, enter 2m

For the Maritime AN/PRC-148[V]1[C] configuration, enter 20m

Q: Can I enter a SINGARS Net ID using the PC Programmer for the MBITR?

A: No! The National Security Agency [NSA] considers the Net ID part of the transmission security [TRANSEC] communication security [COMSEC] fill and will not allow it to be entered using the PC Programmer.

Q: How do I download the AN/PRC-148 MBITR enabler database?

A: To accomplish a satisfactory flash download of radio firmware using the PC Programmer, it is important to have the current enabler database on the PC. This

database contains the serial numbers of the radios and the features that each serial number is entitled to. The database is stored on our secure ftp server. To download it, internet access is required for the PC in use. The download is accomplished from the Tools menu of the PC Programmer.

Q: Why is an ITAR letter required for the repair of an AN/PRC-148 MBITR from overseas?

A: The United States Government's Department of State requires that all exports of military hardware be authorized by the Government, including shipments to US Armed Forces supporting Operation Iraqi Freedom and Operation Enduring Freedom.

There are two methods in the International Traffic in Arms Regulations (ITAR) to accomplish this. The preferred method is for Thales Communications, Inc. to obtain prior approval on an Export License (DSP-5) from the Department of State.

The second method is for the Government to handle all aspects of the export, including arranging transport, physically shipping the items and paying all associated costs; this method is frequently referred to as a Government Bill of Lading (GBL) with items being transported through US Military Cargo Facilities such as Dover Air Force Base, or via the Defense Courier Service.

The ITAR also contains provisions for emergency requests to export items overseas; however the export must be authorized with an ITAR letter written on US Government letterhead directing us to make a shipment under ITAR Exemption 126.4(C). Contact us for a proforma ITAR letter.

Q: What is the international phone number for Customer Service??


A: From locations that cannot use [800] 914-0303, please dial +1 [240] 864-7643. ☐

TRADESHOWS

DATE	EVENT	LOCATION
July 30 – August 1	IDGA Night Vision System O7	Arlington, VA
August 6-8	APCO (Association of Public-Safety Communications Officials International) [Booth 2301]	Baltimore, MD
August 6-9	Association for Unmanned Vehicle Systems International	Washington, DC
August 14-16	Force Protection Equipment Demonstration–FPED VI	Stafford, VA
August 14-15	AFCEA Fort Bragg [Booth 36/37]	Fayetteville, NC
August 21-23	AFCEA LandWarNet [Booth 1019]	Fort Lauderdale, FL
August 21-23	TREXPO	Chantilly, VA
September 11-14	DSEI (Defence Systems and Equipment International)	London, England
September 18-20	C4ISR	Atlantic City, NJ

U.S. Army Fields AN/PRC-148 JEM

The U.S. Army recently ordered more than 5,000 units of Thales’ AN/PRC-148 Joint Tactical Radio System (JTRS) Enhanced Multiband Inter/Intra Team Radios (MBITR), or JEM. The AN/PRC-148 JEMs are being acquired through a contract with the U.S. Army Research, Development, and Engineering Command, Aberdeen Proving Ground, Maryland. This procurement will allow the Army to complete fielding against Modular Force requirements. Fielding is being managed by PEO-Soldier (PM-Soldier Warrior) in accordance with guidance provided by Headquarters-Department of the Army.

With the JEM, Army warfighters will receive the same level of reliable performance they have trusted for years with the Thales MBITR. The JEM’s user interface and operation are consistent with the MBITR; thus, additional training is minimized, and the equipment can be fielded immediately. The JEM also enables the Army to be consistent with the National Security Agency’s crypto modernization program, getting away from hardware-based equipment and moving forward with a true software-defined radio. 



CONTACTING CUSTOMER SUPPORT

The Customer Support Department has fully implemented a 24/7 Call Support Center. Customers who call the Customer Support 1-800 number are given three options to properly route their requests: **Technical Assistance**, **Product Support** and **Aftermarket Support**. Incoming calls are routed to the appropriate Customer Support Specialist to ensure all inquiries are addressed as quickly as possible.

To contact **Customer Support**, please call us at:
1-800-914-0303

(For International Customers: +1 [240] 864-7643)

Option 1.
TECHNICAL assistance and general inquiries
technical.support@thalescomminc.com

Option 2.
REPAIRS Return Material Authorizations (RMAs), and other product support assistance
product.support@thalescomminc.com

Option 3.
SALES for spares and ancillary items, to request quotes and make purchases, website/ shopping cart assistance
aftermarket.support@thalescomminc.com

ABOUT

THALES COMMUNICATIONS

Thales Communications is a global leader in the development of battle-proven, software-defined, radio equipment and solutions. We provide critical communication capabilities in the Tactical, Naval/Maritime, and Homeland Security/Public Safety domains throughout the globe where size, weight, and power (SWAP) are key factors. Serving the US Department of Defense, US civilian agencies, and defense, allied, and coalition forces globally, Thales plays a direct role in the Global War on Terror.

Thales Communications' headquarters campus in Clarksburg, Maryland, and second location in Germantown, Maryland, house two state-of-the-art manufacturing plants as well as our 24/7 Customer Support Department. We also provide in-theater support to US and Coalition Forces in Kuwait, Iraq, and Afghanistan.

Facilities



HEADQUARTERS
Clarksburg, Maryland



Clarksburg, Maryland



Clarksburg, Maryland



Germantown, Maryland

