November 2, 2012

Division of Central Purchasing
Lexington-Fayette Urban County Government
Room 338, Government Center
200 East Main Street
Lexington, KY 40507

RE: Invitation For Bid #151-2012
Public Safety Radio System Subscriber Units

Thank you for the opportunity to respond to Lexington-Fayette Urban County Government (LFUCG) Invitation for Bid for the provision of Public Safety radio system subscriber units. Tait has prepared its response based on the requirements of the Invitation for Bid #151-2012 and our response accompanies this letter. We also acknowledge receipt of Addendum #1.

Our offering is uniquely focused on the needs of Public Safety state and local agencies who demand dependable and cost effective products and services. We understand that procuring P25 radios that are tough and reliable and will easily integrate with your new Cassidian network is important for LFUCG. Please note that the radios offered have been designed and manufactured by the same Tait engineering teams as your base system components ensuring out of the box smooth operation and life-long compatibility.

Tait is committed to work in good faith with LFUCG to negotiate mutually agreeable Terms and Conditions to be applied to the enclosed bid. In our 40 year history in all cases where Tait has been selected as the preferred supplier, Tait has been able to reach mutually acceptable Terms and Conditions with its clients and we can do the same with LFUCG.

We look forward to participating in the electronic bidding event for Lexington-Fayette Urban County Government for your radio project. We are committed to delivering radios that will meet your needs today and for many years to come.

Sincerely,

Monica Diemert

Monica Diemert
Business Development Manager
Office: 281-944-3541
Email: monica.diemert@taitradio.com

Tait Communications
15342 Park Row Blvd.
Houston, Texas 77084

Phone: (281) 829-3300
Fax: (281) 829-3320
www.taitradio.com

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The Lexington-Fayette Urban County Government assumes no responsibility for Sealed Specification Responses that are not addressed and delivered as indicated above. Sealed Specification Responses that are not delivered to the Division of Central Purchasing by the stated time and date will be rejected.
All bids must have the company name and address, bid invitation number, and the commodity/service on the outside of the envelope.

Bids are to include all shipping costs to the point of delivery located at: See Specifications.

Bid Security Required: __Yes __X No Performance Bond Required: __Yes __X No
Cashier Check, Certified Check, Bid Bond (Personal checks and company checks will not be acceptable).

Quantity	Commodity/Service
PCT	**Public Safety Radio System Subscriber Units**
	See specifications.

Check One:	**Proposed Delivery:**
_____Bid Specifications Met _____Exceptions to Bid Specifications. *Exceptions shall be itemized and attached to bid proposal submitted.*	_____days after acceptance of bid.

Procurement Card Usage

_____Yes The Lexington-Fayette Urban County Government will be using Procurement Cards to
_____ No purchase goods and services and also to make payments. Will you accept Procurement Cards?

Submitted by:

Tait North America
Firm
15342 Park Row Blvd.
Address
Houston, TX 77084
City, State & Zip

Bid must be signed: (original signature)

Signature of Authorized Company Representative – Title
Steve Cragg, President
Representative's Name (Typed or printed)
(281) 600-8263
Area Code - Phone – Extension *Fax #*
steve.cragg@taitradio.com
E-Mail Address

The Affidavit in this bid must be completed before your firm can be considered for award of this contract.

Lexington-Fayette Urban County Government
DEPARTMENT OF FINANCE & ADMINISTRATION

Jim Gray
Mayor

Jane C. Driskell
Commissioner

ADDENDUM #1

Bid Number: **#151-2012**

Date: October 30, 2012

Subject: Public Safety Radio System Subscriber Units

Address inquiries to:
Todd Slatin
(859) 258-3320

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following clarifications to the above referenced Bid:

1. All mobile units must include non-proprietary AES encryption.

Todd Slatin, Acting Director
Division of Central Purchasing

All other terms and conditions of the Bid and specifications are unchanged.

This letter should be signed, attached to and become a part of your proposal.

PROPOSAL OF:
Tait Communications

ADDRESS:
15342 Park Row Blvd., Houston, TX 77084

SIGNATURE OF SUBMITTER:

AFFIDAVIT

Comes the Affiant, Tait North America, and after being first duly sworn under penalty of perjury as follows:

1. His/her name is Steve Cragg and he/she is the individual submitting the bid or is the authorized representative of Tait North America,

the entity submitting the bid (hereinafter referred to as "Bidder").

2. Bidder will pay all taxes and fees, which are owed to the Lexington-Fayette Urban County Government at the time the bid is submitted, prior to award of the contract and will maintain a "current" status in regard to those taxes and fees during the life of the contract.

3. Bidder will obtain a Lexington-Fayette Urban County Government business license, if applicable, prior to award of the contract.

4. Bidder has authorized the Division of Central Purchasing to verify the above-mentioned information with the Division of Revenue and to disclose to the Urban County Council that taxes and/or fees are delinquent or that a business license has not been obtained.

5. Bidder has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky within the past five (5) years and the award of a contract to the Bidder will not violate any provision of the campaign finance laws of the Commonwealth.

6. Bidder has not knowingly violated any provision of Chapter 25 of the Lexington-Fayette Urban County Government Code of Ordinances, known as "Ethics Act."

7. Bidder acknowledges that "knowingly" for purposes of this Affidavit means, with respect to conduct or to circumstances described by a statute or ordinance defining an offense, that a person is aware or should have been aware that his conduct is of that nature or that the circumstance exists.

Further, Affiant sayeth naught. Steve Cragg

STATE OF Texas

COUNTY OF Harris

The foregoing instrument was subscribed, sworn to and acknowledged before me by Steve Cragg on this the 1st day of November, 2011.

My Commission expires: 4/4/2014

EVELYN D. TAYLOR
MY COMMISSION EXPIRES
April 4, 2014

NOTARY PUBLIC, STATE AT LARGE

Please refer to Section II. Bid Conditions, Item "U" prior to completing this form.

I. GREEN PROCUREMENT

A. ENERGY

The Lexington-Fayette Urban County Government is committed to protecting our environment and being fiscally responsible to our citizens.

The Lexington-Fayette Urban County Government mandates the use of Energy Star compliant products if they are available in the marketplace (go to **www.Energystar.gov**). If these products are available, but not submitted in your pricing, your bid will be rejected as non-compliant.

ENERGY STAR is a government program that offers businesses and consumers energy-efficient solutions, making it easy to save money while protecting the environment for future generations.

Key Benefits

These products use 25 to 50% less energy
Reduced energy costs without compromising quality or performance
Reduced air pollution because fewer fossil fuels are burned
Significant return on investment
Extended product life and decreased maintenance

B. GREEN SEAL CERTIFIED PRODUCTS

The Lexington-Fayette Urban County Government is also committed to using other environmentally friendly products that do not negatively impact our environment. Green Seal is a non-profit organization devoted to environmental standard setting, product certification, and public education.

Go to **www.Greenseal.org** to find available certified products. These products will have a reduced impact on the environment and on human health. The products to be used must be pre-approved by the LFUCG prior to commencement of any work in any LFUCG facility. If a Green Seal product is not available, the LFUCG must provide a signed waiver to use an alternate product. Please provide information on the Green Seal products being used with your bid response.

C. GREEN COMMUNITY

The Lexington-Fayette Urban County Government (LFUCG) serves as a principal, along with the University of Kentucky and Fayette County Public Schools, in the Bluegrass Partnership for a Green Community. The Purchasing Team component of the Partnership collaborates on economy of scale purchasing that promotes and enhances environmental initiatives. Specifically, when applicable, each principal is interested in obtaining best value products and/or services which promote environment initiatives via solicitations and awards from the other principals.

If your company is the successful bidder on this Invitation For Bid, do you agree to extend the same product/service pricing to the other principals of the Bluegrass Partnership for a Green Community (i.e. University of Kentucky and Fayette County Schools) if requested?

Yes X **No**_____

October 30, 2012

Pursuant to Tait Communication's Equal Employment Opportunity policy, Tait does not discriminate against any person because of race, color, creed, religion, sex, national origin, handicap, disability, age, genetic information or any other characteristic protected by law.

Tait Communications complies with all Equal Employment Opportunity regulations and does not engage in discriminatory hiring practices either through disparate treatment or disparate impact. Tait's EEO policy and practices are effective at ensuring that unlawful discrimination does not take place. As such, Tait has not established or implemented an Affirmative Action Program ("AAP"). Further, Tait has not been court ordered to develop an AAP, nor does Tait meet the criteria that mandates an AAP.

Michelle Fishback

Michelle Fishback
HR Manager

Tait Communications
15342 Park Row Blvd
Houston, Texas 77084

EQUAL OPPORTUNITY AGREEMENT

The Law

- Title VII of the Civil Rights Act of 1964 (amended 1972) states that it is unlawful for an employer to discriminate in employment because of race, color, religion, sex, age (40-70 years) or national origin.

- Executive Order No. 11246 on Nondiscrimination under Federal contract prohibits employment discrimination by contractor and sub-contractor doing business with the Federal Government or recipients of Federal funds. This order was later amended by Executive Order No. 11375 to prohibit discrimination on the basis of sex.

- Section 503 of the Rehabilitation Act of 1973 states:

  The Contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap.

- Section 2012 of the Vietnam Era Veterans Readjustment Act of 1973 requires Affirmative Action on behalf of disabled veterans and veterans of the Vietnam Era by contractors having Federal contracts.

- Section 206(A) of Executive Order 12086, Consolidation of Contract Compliance Functions for Equal Employment Opportunity, states:

  The Secretary of Labor may investigate the employment practices of any Government contractor or sub-contractor to determine whether or not the contractual provisions specified in Section 202 of this order have been violated.

****

The Lexington-Fayette Urban County Government practices Equal Opportunity in recruiting, hiring and promoting. It is the Government's intent to affirmatively provide employment opportunities for those individuals who have previously not been allowed to enter into the mainstream of society. Because of its importance to the local Government, this policy carries the full endorsement of the Mayor, Commissioners, Directors and all supervisory personnel. In following this commitment to Equal Employment Opportunity and because the Government is the benefactor of the Federal funds, it is both against the Urban County Government policy and illegal for the Government to let contracts to companies which knowingly or unknowingly practice discrimination in their employment practices. Violation of the above mentioned ordinances may cause a contract to be canceled and the contractors may be declared ineligible for future consideration.

Please sign this statement in the appropriate space acknowledging that you have read and understand the provisions contained herein. Return this document as part of your application packet.

Bidders

I/We agree to comply with the Civil Rights Laws listed above that govern employment rights of minorities, women, Vietnam veterans, handicapped and aged persons.

Michelle Lisnack
Signature

Tait North America, Inc
Name of Business

WORKFORCE ANALYSIS FORM

Name of Organization: Tait North America Date: 10 / 30 / 12

Categories	Total	White		Latino		Black		Other		Total	
		M	F	M	F	M	F	M	F	M	F
Administrators	1	1	0	0	0	0	0	0	0	1	0
Professionals	62	33	8	6	3	4	3	3	2	46	16
Superintendents	0	0	0	0	0	0	0	0	0	0	0
Supervisors	22	15	5	0	0	0	0	1	1	16	6
Foremen	0	0	0	0	0	0	0	0	0	0	0
Technicians	2	1	0	0	0	1	0	0	0	2	0
Protective Service	0	0	0	0	0	0	0	0	0	0	0
Para-Professionals	0	0	0	0	0	0	0	0	0	0	0
Office/Clerical	20	3	6	1	3	3	3	0	1	7	13
Skilled Craft	0	0	0	0	0	0	0	0	0	0	0
Service/Maintenance	2	1	0	1	0	0	0	0	0	0	2
Total:	109	54	19	8	6	8	6	4	4	72	37

Prepared by: *Dawn Craig – HR Executive Assistant*
Name & Title

Lexington Fayette Urban County Government
Invitation to Bid #151-2012
Public Safety Radio System Subscriber Units
November 2, 2012

tait communications

Tait Commercial Review of Invitation to Bid

Tait is committed to agreeing mutually acceptable terms with its customers and is excited for the opportunity to work with LFUCG. Any questions or comments may be addressed directly to Tait North America's Commercial Manager at Annette.Murray@taitradio.com.

Section	Exception
Indemnification and Hold Harmless Provision	(2) Vendor shall indemnify, save, hold harmless and defend the Lexington-Fayette Urban County Government and its elected and appointed officials, employees, agents, volunteers, and successors in interest (hereinafter "LFUCG") from and against all liability, damages, and losses, including but not limited to, demands, claims, obligations, causes of action, judgments, penalties, fines, liens, costs, expenses, interest, defense costs and reasonable attorney's fees that ~~are in any way incidental to or connected with, or that arise or are alleged to have arisen,~~ directly ~~or indirectly,~~ arise from or by Vendor's performance or breach of the agreement and/or the provision of goods or services provided that: (a) it is attributable to personal injury, bodily injury, sickness, or death, or to injury to or destruction of property (~~including~~ excluding the loss of use resulting therefrom), or to or from the negligent acts, errors or omissions or willful misconduct of the Vendor; and (b) not caused ~~solely~~ by the active negligence or willful misconduct of LFUCG. The total aggregate liability of Vendor hereunder arising out of, connected with or resulting from the manufacture, sale, design, possession, use, or handling of any product or materials provided by Vendor thereof or therefore or furnishing of services, whether in contract, tort, or otherwise, shall not exceed 100% of the total Contract value.
Indemnification and Hold Harmless Provision	(3) ~~In the event LFUCG is alleged to be liable~~ For those liabilities for which Vendor has accepted liability based upon the above, Vendor shall defend such allegations and shall bear all costs, fees and expenses of such defense, including but not limited to, all reasonable attorneys' fees and expenses, court costs, and expert witness fees and expenses, using attorneys approved in writing by LFUCG, which approval shall not be unreasonably withheld.
Insurance Requirements	General Liability (Insurance Services Office Form CG 00 01) — ~~$3~~ 2 million per occurrence, ~~$5~~ 4 million aggregate or $2 million combined single limit

Insurance Requirements	b. To the extent of the liabilities assumed by Vendor herein, The General Liability Policy shall be primary to any insurance or self-insurance retained by LFUCG.
Insurance Requirements	d. ~~LFUCG shall be provided at least 30 days advance written notice via certified mail, return receipt requested, in the event any of the required policies are canceled or non-renewed.~~ Vendor underwriters do not provide this endorsement; Vendor commits to providing such notice.

To the extent not covered in the Invitation to Bid document, Tait recommends its Standard Terms and Conditions and General Software License Agreement for reference in negotiating the ensuing contract should Tait be the successful bidder.

Tait is committed to work in good faith with LFUCG to determine Terms and Conditions that are suitable to the type of supply that Tait is offering.

The Tait Group was founded in 1969 and is a world leading provider of communications systems and solutions.

The Tait Group has contracted with Blue Chip companies and a number of the world's largest Municipalities in more than 40 years of providing solutions to our customers in over 140 countries.

In all cases where Tait has been selected as the preferred supplier, Tait has agreed mutually acceptable Terms and Conditions with its customers.

Tait North America Inc.

Standard Equipment Terms & Conditions of Sale (USA)

These terms apply between Tait North America Inc. ("Tait") and the Customer ("Customer") who orders products and software ("Equipment"), from Tait but excluding Communications Systems which are supplied under a Communications Systems Agreement, and is made this ____ day of month_____, year _____.

1. WRITTEN ASSENT TO ADDITIONAL TERMS REQUIRED

TAIT OBJECTS TO ANY TERMS OR CONDITIONS CONTAINED IN CUSTOMER'S PURCHASE ORDERS OR OTHER COMMUNICATIONS FROM CUSTOMER, WHICH ARE DIFFERENT FROM OR IN ADDITION TO THE TERMS AND CONDITIONS HEREIN. ABSENT TAIT'S EXPRESS WRITTEN ASSENT, NO DIFFERENT OR ADDITIONAL TERMS OR CONDITIONS SHALL BE OF ANY FORCE OR EFFECT WHATSOEVER UNDER ANY CIRCUMSTANCES WITH RESPECT TO TRANSACTIONS BETWEEN TAIT AND CUSTOMER, NOTWITHSTANDING ANY FAILURE BY TAIT TO COMMUNICATE FURTHER OBJECTIONS THERETO. No contract shall be formed except upon the terms and conditions contained herein or assented to in writing by Tait.

2. ORDERS

No contract for sale of equipment shall result except by Tait's written acceptance of each order submitted by Customer.

3. PRICES

3.1 The prices to be paid by Customers to Tait for each order of Equipment shall be Tait's prices in effect on the date said order for Equipment is accepted by Tait. Tait may change its prices for Equipment from time to time on 30 days written notice to Customer; provided, however, no price change shall affect the prices of Equipment sold to Customer pursuant to orders placed by Customer and accepted by Tait prior to the effective date of such price change.

3.2 Prices for Equipment are exclusive of any taxes, if any. The Customer agrees to reimburse Tait where Tait pays the same or is responsible for payment of all such taxes including penalties where Customer actions resulted in incurring such penalties. The Customer shall bear the sole responsibility for the collection and payment of any

sales, user or other tax payable in connection with its resale of Equipment. Prices are inclusive of packing to full normal shipping standards.

3.3 If the Customer requires Tait to vary quantities, delivery dates or Equipment specifications from those against which prices were quoted, Tait shall have the right to adjust the quoted price.

4. PAYMENT

4.1 Unless other payment terms have been agreed, full payment of the Contract Price shall be paid within 30 days of shipping date. Tait will invoice the Customer as of the shipping date. A payment will be considered late, if paid later than 30 days from invoice date.

4.2 A late payment charge of 1.25% may be added to all past due accounts. This late payment charge is due net 30 days after it is added to the trade account. This charge is, in part, to cover the cost of recordkeeping requirements arising from failure to make timely payments.

4.3 Separate invoice(s) may be submitted in respect of any installation or labor charges. These invoices are to be paid no later than 30 days from the date of invoice.

4.4 No payment may be withheld by the Customer by way of set-off (legal, equitable or otherwise) against any sums owed to Tait.

4.5 Any charge by Tait determined to be a charge to compensate Tait for the time value of money shall not exceed the maximum amount of nonusurious charges that may be contracted for, taken, reserved, charged, or received under law; any charge in excess of the maximum amount shall be credited to the account of Customer or, if Customer has a credit balance, refunded. This provision overrides other provisions in this and all other instruments concerning a Customer's account debt.

5. DELIVERY & RETURN OF INVENTORY

5.1 Unless otherwise agreed by the parties, in writing, all sales of Equipment shall be:
- Canadian customers and shipments: EXW Markham, Ontario
- United States customers and shipments: EXW Houston, Texas.

5.2 No claim for shortage, out of box failures or damage in respect of Equipment delivered will be considered unless notice is received in writing by Tait within 7 days from the earlier of the date of receipt of the Equipment by the Customer or by a third party on the Customer's behalf.

5.3 Products or equipment purchased under condition of Sale or Return, if not sold or purchased by the Customer within the first 30 days, may be returned without penalty. Freight for products returned under this condition will be paid by Tait.

5.4 If under any other circumstances, Tait, at its sole discretion, agrees to accept the return of products for credit, a restocking fee of 20% of the invoiced value may apply.

5.5 No products or equipment will be accepted for credit after 30 days from the time of delivery of goods under any circumstances.

5.6 Quoted delivery periods are calculated from the last to occur of:

a) Tait's acceptance of the Customer's order, or
b) provision by the Customer to Tait of all engineering and configuration details and Customer supplied parts and materials necessary to enable Tait to manufacture and supply the Equipment; or
c) receipt of any necessary letter of credit, in the agreed form or a form acceptable to Tait, and other required documentation (including any confirmation or guarantee); or

5.7 In the event where Tait drop ships equipment at the customers request, the Customer shall indemnify Tait for all losses and costs incurred by Tait if United States Customs Service refuses or fails to accept delivery of the Equipment including storage charges incurred by Tait with any third party warehouse. In those circumstances, delivery to a warehouse shall be deemed to be a completed delivery by Tait.

5.8 Shipments for accounts which exceed the credit limit, as determined by Tait, or for accounts with outstanding balances more than 30 days old are subject to credit hold at the discretion of Tait.

6. DELAYS

In the event Tait's performance of work is delayed by acts of the Customer, Tait shall be entitled to an adjustment for time and expenses resulting therefrom in addition to extension of the time and of performance. Under no circumstances will either party be responsible for delays or lack of performance resulting from events beyond the reasonable control of that party ("Force Majeure").

7. SUSPENSION of WORK

In the event Customer requests a suspension of Work under this contract, Customer shall notify Tait in writing reasonably in advance of the suspension date, indicating the anticipated suspension period. Tait shall advise Customer of the price adjustment resulting from the planned suspension of work. The price adjustment will be based on Tait's ability to reasonably reassign manpower, and any materials or equipment during the suspension period.

8. CANCELLATION

Customer cancellation of any order without liability will be by written mutual agreement of the parties only. If Customer unilaterally cancels all or part of any purchase order, work on such orders shall be stopped as quickly as is practical upon receipt of written notification of cancellation. Customer will make payment to Tait in an amount equal to:

a) For work in process, a percentage of the sales price based on work completed up to the time of cancellation and work is stopped.
b) For custom work and/or work that includes unique materials that cannot be reasonably be used in normal production or sold to other Tait customers

in a reasonable period of time, then the cancellation fee may be up to 100% of the order value of the custom work and or materials.

c) For work completed at the time of cancellation and the equipment is standard Tait product and can be sold to other Tait customers in a reasonable period of time, the Tait restocking policy shall apply.

d) For custom work completed and/or work that includes unique materials that cannot be sold to other Tait customers in a reasonable period of time, than the cancellation fee may be 100%.

8.1 Tait will use commercially reasonable efforts to minimize cancellation charges by canceling orders and by using common industry components in its products when possible.

9. TITLE

Title of Equipment shall pass once Tait has received payment in full; however, title to software and the media on which it is embodied, together with copyright and other intellectual and industrial property rights in the software and in all data and information embodied in the hardware, shall at all times remain with Tait or its licensors. The rights of the Customer in software not produced by Tait but included in the Equipment may be subject to the Customer accepting conditions as a sub-licensee imposed by the owner of the software.

10. EQUIPMENT SPECIFICATION AND QUALITY

10.1 Tait reserves the right to amend details of the technical specification of the Equipment in the Contract to improve the facilities or performance of the Equipment or to substitute items of equivalent performance where items referred to in the quotation are no longer available.

10.2 All specifications, particulars and descriptions set out in catalogs, brochures and similar documents, shipping specifications and particulars of weight and dimension are approximate and being intended for general guidance and shall not be binding.

10.3 Tait reserves the right to discontinue the sale of Equipment and to change the formula, contents or packaging thereof. Tait shall not incur any liability thereby or any obligation to change or repurchase Equipment previously sold by Tait to Customer.

11. INSPECTION AND TESTING

11.1 The Equipment will be submitted to Tait's standard tests before shipment.

11.2 Any additional tests of the Equipment, which may be required by Customer, must be agreed to separately in writing and may be subject to additional charges.

12. CUSTOMER OBLIGATION

12.1 Customer shall when required, supply Tait with such information and documents that are reasonably required to enable Tait to proceed with and complete the Contract without delay or interruption and shall indemnify Tait for any additional costs or

expenses incurred by Tait as a result of a delay or interruption caused by a failure of the Customer to supply all such information and documents in a timely manner.

12.2 Subject to the terms of Tait's Support Contract (if purchased by the Customer) the Customer is responsible for the installation, operation and maintenance of the Equipment.

12.3 From and after installation the Customer agrees that it is responsible for primary power source, PABX and PSTN connections or lines, RF (Radio Frequency) Coverage performance, the provision of suitable intersite links, suitable antennae, multiplexing equipment and further installation of the Equipment at the sites it is to be used.

13. LIMITED WARRANTY

13.1. Tait makes no warranty or representation with respect to any of its products or software, except those made under its standard limited warranty. A copy of such warranty is annexed hereto as Exhibit A, and made a part hereof as though set forth at length herein. Customer shall not in any manner make any representation intended to alter or amend said warranty.

13.2 Tait reserves the right to amend such warranty from time to time. Customer shall be notified of any such changes.

13.3 Warranty repairs shall only be undertaken by an Authorized Tait Service Center unless specifically authorized in writing by Tait. In cases where Tait authorizes the customer to undertake warranty repairs, Tait will replace faulty components free of charge. No reimbursement will be made with respect to labor.

14 LIMITATION OF LIABILITY

14.1 To the maximum extent permitted by law, the parties agree that all terms implied by law including any warranty or condition as to the fitness for any particular purpose of the Equipment are hereby excluded. TAIT PROVIDES AN EXPRESS LIMITED WARRANTY TO CUSTOMERS WITH RESPECT TO THE PRODUCTS. ANY AND ALL IMPLIED WARRANTIES WITH RESPECT TO PRODUCTS OR PARTS SOLD BY TAIT INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICUALR PURPOSE OR NON-INFRINGEMENT, HEREBY ARE EXCLUDED.

14.2 The Customer acknowledges that it uses the Equipment for business purposes and therefore agrees that all consumer protection terms implied by law shall not apply.

14.3 The Customer warrants that it has not relied on any representation made by Tait or upon any catalogs or publicity material produced by Tait which has not been stated expressly in this Contract and no statement made or agreed to and no liability undertaken orally shall be binding upon Tait unless confirmed by Tait in writing.

14.4 The standard equipment is not designed or intended for use in on-line control of aircraft, air traffic, aircraft navigation or aircraft communications; intrinsically safe environments (unless intrinsically safe equipment is specifically ordered and supplied and used in accordance with the supplied instructions) or in the design, construction, operation or maintenance of any nuclear facility. Tait disclaims any express or

implied warranty of fitness for such uses. The Customer will not use or resell Products for such purposes.

14.5 The Customer acknowledges that any software supplied cannot be tested in every possible permutation and accordingly Tait does not warrant that software supplied will be free of all defects or that its use will be uninterrupted.

14.6 NEITHER PARTY SHALL BE LIABLE FOR ANY INDIRECT, PUNITIVE, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH OR ARISING OUT OF THIS CONTRACT (INCLUDING LOSS OF BUSINESS, REVENUE, PROFITS, USE, DATA OR OTHER ECONOMIC ADVANTAGE), HOWEVER IT ARISES, WHETHER FOR BREACH OF CONTRACT OR IN TORT, EQUITY OR OTHERWISE.

14.7 UNLESS OTHERWISE PROVIDED BY APPLICABLE LAW, TAIT'S LIABILITY, IF ANY, FOR ANY ALLEGEDLY DEFECTIVE PRODUCT, PART OR SOFTWARE SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF THE PRODUCT, PART OR SOFTWARE, AT TAIT'S OPTION, AND THE LIABILITY OF TAIT, IF ANY, FOR DAMAGES RELATING TO DEFECTIVE PRODUCT, PART OR SOFTWARE SHALL NOT EXCEED THE PURCHASE PRICE PAID FOR THE ITEM IN QUESTION.

15. INTELLECTUAL PROPERTY WARRANTY

15.1 Because of the complexity of manufacturing techniques for electronic components and of the intellectual property rights pertaining thereto including software, Tait is unable to declare that the Equipment does not infringe the intellectual property rights of third parties. In the event that a third party makes a claim alleging that the Equipment infringes such a third party's intellectual property rights, Tait undertakes at its option and expense to defend the claim or seek a compromise. If unfavorable judgment is rendered against Tait, Tait shall at its option take out a license from the said third party or shall modify the Equipment in such way as to avoid infringement or replace the components or software with components or software of equivalent quality, functionality and performance. If such solution shall be impractical for economic and/or technical reasons Tait shall accept the return of the Equipment and refund the Customer the Customer's net book value for the Equipment deemed to infringe.

15.2 Tait's obligations under clause 15.1 shall only apply if the Customer promptly notifies Tait, permits Tait through its counsel to defend and if appropriate settle the claim at Tait's expense, gives Tait all available information, assistance and authority to enable Tait to defend or settle the claim at Tait's expense and has not settled or compromised such claim.

15.3 Tait's obligations under clause 15.1 shall not apply if Tait has followed a design or instruction furnished or given by the Customer or the Equipment has been modified without Tait's approval or used in a manner or for a purpose or in a country not specified by or disclosed to Tait prior to the Contract Date or the Equipment has been used in association with software or equipment not supplied by Tait.

15.4 Clause 15 states the entire liability of Tait and the exclusive remedies for the Customer for claims of infringement of third party intellectual property rights.

16. COPYRIGHT, INTELLECTUAL PROPERTY AND CONFIDENTIALITY

16.1 Copyright in all Tait documents (including drawings and software) furnished to the Customer for the purposes of the Contract shall at all times remain vested in Tait or its licensors and neither the documents nor their contents shall be copied, reproduced or used for any purpose other than that for which they are furnished.

16.2 Data and information embodied in such documents, drawings and software shall be held in confidence by the Customer and shall not be disclosed to third parties nor used for any purpose other than operation and maintenance of the Equipment.

16.3 The Customer shall take reasonable measures to protect confidentiality and will not cause or permit anything which may damage or endanger Tait's goodwill, trade marks and intellectual property in the Equipment.

16.4 The Customer acknowledges that Tait's intellectual property in the Equipment is unique and extraordinary and the Customer hereby agrees that the loss thereof cannot adequately be compensated by damages and that without limiting Tait's remedies Tait shall be entitled to injunctive relief to enforce the provisions applicable to this Contract.

17. SOFTWARE

17.1 As to any software provided by Tait as a distributor or licensor to Customer, Customer agrees to be bound to the terms of the license as expressed herein regardless of whether the software is already installed on a Tait product, provided by a compact disk or downloaded from the Tait website. Use of the software constitutes your acceptance of these terms.

17.2 Tait hereby grants at no additional charge to the Customer a limited non-transferable and non-exclusive multi-site license to use the software on a single machine provided you may only :

a) use the Software (excluding source code) (whether embedded or installed in the Equipment) solely in conjunction with the Equipment during the useful life of such Equipment, as they may be repaired or modified from time to time;
b) copy the software into any machine readable or printed form for backup purposes in support of your use of the program on the single machine (subject to the fact that certain programs including third party programs may include mechanisms to prevent or limit copying), provided the copyright notice must be reproduced and included on any such copy of software or firmware; and
c) merge it into another program for your use on the single machine.

17.3 The Customer undertakes throughout the term of this Contract and after termination of this Contract to not copy, (other than for back up purposes authorized above) alter, reverse engineer, modify, enhance, compile, disassemble, license, sub-license, lease, sell, assign or reproduce any software, (whether in whole or in part) supplied under this Contract and to write or develop any derivative software or any other software programs based upon the Software.

17.4 Title and ownership of the software copyrights shall at all times remain with Tait or its Licensor and the rights granted herein are a license for use only. The Customer may not sell, assign, transfer or sublicense the programs and any attempt to do so is void.

17.5 The license terminates automatically without notice from Tait in the event Customer fails to comply with the terms and conditions of this Contract.

18. TERRITORIAL RESTRICTIONS

18.1 The Customer shall not without the express written approval of Tait (which shall not be unreasonably withheld) export or use the Equipment, or sell or hire it to a person who to his knowledge intends to export or use it, outside the country of intended use as declared to Tait. The customer undertakes to comply with United States re-export control restrictions where applicable.

18.2 If export or import restrictions are imposed or export or import licenses are cancelled, withdrawn or not renewed, then the Customer shall pay for all goods and services already delivered at the contract rate and payments already made may be used by Tait in respect of claims or demands made or losses incurred under or in connection with the Contract.

19. CONFIDENTIAL INFORMATION

Customer will safeguard and treat as confidential all price lists and quotations, technical information and particulars and other information supplied by Tait.

20. SURVIVAL

The provisions of this section and sections 11, 13, 14, 15, 16, 17, 18, 19 and 23 shall survive termination of this Contract and extend to all media in which data and information may be stored or displayed.

21. FORCE MAJEURE

Tait shall not be liable for any delay, failure or non-performance of any of its obligations under this contract resulting from war, armed conflict, civil disturbance, Act of God, fire, explosion, accident, industrial dispute or any regulation, rule or act of any Government or Governmental agency, failure of third party suppliers to deliver parts and components, or any other cause beyond Tait's reasonable control.

22 DEFAULT AND TERMINATION

22.1 If the Customer breaches any provision of this or any other contract with Tait (and such breach is not remedied within 30 days of notice of the breach by Tait to the Customer) or suffers distress or execution on the equipment, or commits an act of bankruptcy, makes arrangements with creditors or goes into liquidation or receivership (except for amalgamation or reconstruction), ceases or threatens to cease trading, Tait may (without affecting any other claim or remedy) suspend performance or terminate this or any other contract between Tait and the

Customer by written notice and shall be entitled to be paid for goods already delivered, and work-in-progress (including software generated but not supplied), at a rate reasonably based on the Contract Price.

22.2 The initial term of the agreement is for one (1) year commencing from the date that the agreement is signed by both parties. This agreement, thereafter, shall automatically renew and extend annually for a one (1) year term unless either party has given the other at least 30 days written notice of its intention not to renew the agreement prior to the end of the term.

23. MISCELLANEOUS PROVISIONS

23.1 The Laws of the State of Texas, excluding its conflicts-of- law rules which might apply the laws or refer the matter to a different jurisdiction, shall govern the validity, construction, and enforcement of this Contract and the rights and obligations of the parties hereunder. The parties designate the state and federal courts of Texas as having exclusive jurisdiction over any dispute arising under or in connection with this Contract. The exclusive venue of any litigation between the parties shall be in Harris County, Texas.

23.2 This Contract shall inure to the benefit of and be binding upon Tait and its successors and assigns and upon Customer and its legal representatives.

23.3 In the event any provision of this Contract is found to be unenforceable or invalid, such provision shall be severable from this Contract and shall not affect the enforceability or validity of any other provision contained in this Contract.

23.4 The relationship between Customer and Tait is that of buyer and seller only. Nothing stated in this Contract shall be construed as creating the relationship of employer and employee, franchisor and franchisee, master and servant, principal and agent, partnership or joint venture between the parties. CUSTOMER SHALL BE DEEMED AN INDEPENDENT PARTY AT ALL TIMES, AND SHALL HAVE NO EXPRESS OR IMPLIED RIGHT OR AUTHORITY TO ASSUME OR CREATE ANY OBLIGATION ON BEHALF OF TAIT. Customer shall be solely responsible for its acts, conduct and expenses and for the acts, conduct and expenses of its employees and agents.

23.5 This Contract supersedes and cancels all prior discussions, Contracts and understandings with respect to the subject matter hereof between the parties, written, oral or implied.

23.6 This Contract evidences the entire Contract of the parties.

23.7 Customer may not assign, transfer or sell all or any of its rights under this Contract without the advance written consent of Tait, which may be granted or withheld at Tait's sole discretion.

23.8 All notices and demands of any kind required or contemplated by this Contract shall be in writing and shall be given by (i) facsimile, (ii) electronic mail, (iii) courier , (iv) in person delivery, or (v) certified mail with return receipt requested at the addresses set forth herein or at such other addresses as may be designated by the parties in

writing. Service shall be deemed complete upon delivery, or if delivery is refused, upon such delivery.

Address for Notices:
Customer Name:
Attention:
Address:
Office Phone: Office Fax:
E-mail address:

Tait North America, Inc.
Attn: Legal Dept.
15342 Park Row
Houston, TX 77084

23.9 Failure by either party to enforce or take advantage of any provision hereof shall not constitute a waiver of the right subsequently to enforce or take advantage of such provision. This Contract or any of the terms or provisions thereof may not be changed or amended or waived, in any way whatsoever, except by written agreement executed by the parties.

23.10 The paragraph headings are for reference only and shall not be considered substantive provisions of this Contract. The use of of a singular or plural form shall include the other form and the use of the masculine, feminine or neuter gender shall include the other genders.

IN WITNESS WHEREOF, this Contract has been executed as of the day and year first above written.

CUSTOMER NAME: _____
(Signature)

By: _____
Printed Name, Title

Tait North America Inc.

TAIT: _____

By: _____

EXHIBIT A

LIMITED WARRANTY

Tait North America Inc., (Warrantor) 15342 Park Row, Houston, Texas, 77084 USA, warrants to the original owner thereof all parts of every new Tait brand equipment products or Tait brand software purchased in the Continental United States or Canada to be free from defects in materials or workmanship, as hereinafter provided, for two years from the date of purchase excluding all accessories and batteries which are covered for one year.

Warrantor will, at its option, repair or replace any equipment or software covered by this warranty, which becomes defective, malfunctions or otherwise fails to conform with this warranty under normal use and services during the term of this warranty, at no charge for parts or labor.

In order to obtain warranty service, the equipment, together with the original or a machine reproduction of the bill of sale or other dated, proof-of-purchase document describing the equipment, must be delivered, to Warrantor in the Continental United States or Canada at the owner's expense. Any evidence of alteration, erasing or forgery of proof-of-purchase documents will be cause to void the warranty.

This warranty does not cover defects, malfunctions or failures resulting from shipping or transit accidents, abuse, misuse, operation contrary to furnished instructions, operation to incorrect power supplies, operation with faulty associated equipment, modification, alteration, improper servicing, tampering and normal wear and tear. Equipment on which the serial number has been defaced or removed shall not be eligible for warranty service. Should any equipment or software submitted for warranty service be found ineligible therefor, an estimate of repair cost will be furnished and the repair will be accomplished if requested by the owner upon receipt of payment or acceptable arrangements for payment. Software operation is warranted only with the operating system for which it was designed and only on Tait brand software. At customer's cost, Warrantor will use its best efforts to enforce any software warranty provided by any third party software copyright owner. Warrantor does not warrant that the functions contained in the software will meet customer's requirements or that the operation of the software will be uninterrupted or error free.

This is the only warranty applicable to Tait brand equipment products or software; Warrantor neither assumes nor authorizes anyone to assume for it any other warranty. THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OF NON-INFRINGEMENT AND OF ANY OTHER OBLIGATIONS OR LIABILITY ON THE PART OF WARRANTOR. WARRANTOR'S LIABILITY FOR ANY AND ALL LOSSES AND DAMAGES RESULTING FROM ANY CAUSE WHATSOEVER, INCLUDING WARRANTOR'S NEGLIGENCE, ALLEGED DAMAGED OR DEFECTIVE GOODS, WHETHER SUCH DEFECTS ARE DISCOVERABLE OR LATENT, SHALL IN NO EVENT EXCEED THE PURCHASE PRICE OF THE EQUIPMENT. IN NO EVENT SHALL WARRANTOR BE LIABLE FOR LOSS OF USE, COMMERCIAL LOSS OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES WHATSOEVER.

Purpose

This is the Tait General Software Licensing Agreement for inclusion with all media containing or relating to Tait product software and firmware.

Disclaimer for Translations

The following disclaimer will precede any translated versions of the Tait General Software License Agreement:

The following is a translation of the terms and conditions of the Tait General Software License Agreement. The Tait General Software License Agreement is in English and in the case of any inconsistency between the <Language> translation and the English version, the English version shall prevail.

Tait General Software License Agreement

This Software License Agreement ("Agreement") is between you ("Licensee") and Tait Limited ("Tait").

By using any of the Software items embedded and pre-loaded in the related Tait Designated Product, included on CD, downloaded from the Tait website, or provided in any other form, you agree to be bound by the terms of this Agreement. If you do not agree to the terms of this Agreement, do not install or use any of the Software. If you install or use any of the Software, that will be deemed to be acceptance of the terms of this Agreement.

For good and valuable consideration, the parties agree as follows:

Section 1 DEFINITIONS

"Confidential Information" means all or any information supplied to or received by Licensee from Tait, whether before or after installation or use and whether directly or indirectly pertaining to the Software and Documentation supplied by Tait, including without limitation all information relating to the Designated Products, hardware, software; copyright, design registrations, trademarks; operations, processes, and related business affairs of Tait; and including any other goods or property supplied by Tait to Licensee pursuant to the terms of this Agreement.

"Designated Products" means products provided by Tait to Licensee with which or for which the Software and Documentation is licensed for use.

"Documentation" means product and software documentation that specifies technical and performance features and capabilities; user, operation, and training manuals for the Software; and all physical or electronic media upon which such information is provided.

"Executable Code" means Software in a form that can be run in a computer and typically refers to machine language, which is comprised of native instructions the computer carries out in hardware. Executable code may also refer to programs written in interpreted languages that require additional software to actually execute.

"Intellectual Property Rights" and **"Intellectual Property"** mean the following or their substantial equivalents or counterparts, recognized by or through action before any governmental authority in any jurisdiction throughout the world and including, but not limited to all rights in patents, patent applications, inventions, copyrights, trademarks, trade secrets, trade names, and other proprietary rights in or relating to the Software and Documentation; including any adaptations, corrections, de-compilations, disassemblies, emulations, enhancements fixes, modifications, translations and updates to or derivative works from, the Software or Documentation, whether made by Tait or another party, or any improvements that result from Tait processes or, provision of information services.

"Licensee" means any individual or entity that has accepted the terms of this License.

"Open Source Software" means software with freely obtainable source code and license for modification, or permission for free distribution.

"Open Source Software License" means the terms or conditions under which the Open Source Software is licensed.

"Person" means any individual, partnership, corporation, association, joint stock company, trust, joint venture, limited liability company, governmental authority, sole proprietorship, or other form of legal entity recognized by a governmental authority.

"Security Vulnerability" means any flaw or weakness in system security procedures, design, implementation, or internal controls that if exercised (accidentally triggered or intentionally exploited) could result in a security breach such that data is compromised, manipulated, or stolen, or a system is damaged.

"Software" (i) means proprietary software in executable code format, and adaptations, translations, de-compilations, disassemblies, emulations, or derivative works of such software; (ii) means any modifications, enhancements, new versions and new releases of the software provided by Tait; and (iii) may contain one or more items of software owned by a third-party supplier. The term "Software" does not include any third-party software provided under separate license or not licensable under the terms of this Agreement.

"**Source Code**" means software expressed in human readable language necessary for understanding, maintaining, modifying, correcting, and enhancing any software referred to in this Agreement and includes all states of that software prior to its compilation into an executable programme.

"Tait" means Tait Limited and includes its Affiliates.

Section 2 SCOPE

This Agreement contains the terms and conditions of the license Tait is providing to Licensee, and of Licensee's use of the Software and Documentation. Tait and Licensee enter into this Agreement in connection with Tait delivery of certain proprietary Software and/or products containing embedded or pre-loaded proprietary Software.

Section 3 GRANT OF LICENSE

3.1. Subject to the provisions of this Agreement and the payment of applicable license fees, Tait grants to Licensee a personal, limited, non-transferable (except as permitted in Section 7), and non-exclusive license to use the Software in executable code form, and the Documentation, solely in connection with Licensee's use of the Designated Products for the useful life of the Designated Products. This Agreement does not grant any rights to source code.

3.2. If the Software licensed under this Agreement contains or is derived from Open Source Software, the terms and conditions governing the use of such Open Source Software are in the Open Source Software Licenses of the copyright owner and not in this Agreement. If there is a conflict between the terms and conditions of this Agreement and the terms and conditions of the any applicable Open Source Software Licenses, the terms and conditions of the Open Source Software Licenses will take precedence. For information about Open Source Components contained in Tait products and the related Open Source licenses, see: http://support.taitradio.com/go/opensource

Section 4 LIMITATIONS ON USE

4.1. Licensee may use the Software only for Licensee's internal business purposes and only in accordance with the Documentation. Any other use of the Software is strictly prohibited. Without limiting the general nature of these restrictions, Licensee will not make the Software available for use by third parties on a "time sharing," "application service provider," "service bureau" basis, or for any other similar commercial rental or sharing arrangement.

4.2. Licensee will not, and will not directly or indirectly allow or enable any third party to: (i) reverse engineer, disassemble, extract components, decompile, reprogram, or otherwise reduce the Software or any portion thereof to a human perceptible form or otherwise attempt to recreate the source code; (ii) modify, adapt, create derivative works of, or merge the Software; (iii) copy, reproduce, distribute, lend, or lease the Software or Documentation to any third party; (iv) grant any sublicense or other rights in the Software or Documentation to any third party; (v) take any action that would cause the Software or Documentation to be placed in the public domain; (vi) remove, or in any way alter or obscure any copyright notice or other notice of Tait or third-party licensor's proprietary rights; (vii) provide, copy, transmit, disclose, divulge or make the Software or Documentation available to, or permit the use of the Software by, any third party or on any machine except as expressly authorized by this Agreement; or (viii) use, or permit the use of, the Software in a manner that would result in the production of a copy of the Software by any means whatsoever other than what is permitted in this Agreement. Licensee may make one copy of the Software to be used solely for archival, back-up, or disaster recovery purposes; *provided* that Licensee may not operate that copy of the Software at the same time as the original Software is being operated. Licensee may make as many copies of the Documentation as it may reasonably require for the internal use of the Software.

4.3. Unless otherwise authorized by Tait in writing, Licensee will not, and will not enable or allow any third party to: (i) install a copy of the Software on more than one unit of a Designated Product; or (ii) copy or transfer Software installed on one unit of a Designated Product to any other device. Licensee may temporarily transfer Software installed on a Designated Product to another device if the Designated Product is inoperable or malfunctioning. Temporary transfer of the Software to another device must be discontinued when the original Designated Product is returned to operation and the Software must be removed from the other device.

4.4. Licensee will maintain, during the term of this Agreement and for a period of two years thereafter, accurate records relating to this license grant to verify compliance with this Agreement. Tait, or a third party nominated by Tait, may inspect Licensee's premises, books and records, upon reasonable prior notice to Licensee, during Licensee's normal business hours and subject to Licensee's facility and security regulations. Tait is responsible for the payment of all expenses and costs of the inspection, provided that Licensee shall indemnify Tait for all costs (including audit costs and legal costs on a solicitor client basis) if Licensee has breached the terms of this Agreement. Any information obtained by Tait during the course of the inspection will be kept in strict confidence by Tait and used solely for the purpose of verifying Licensee's compliance with the terms of this Agreement.

Section 5 OWNERSHIP AND TITLE

Tait, its licensors, and its suppliers retain all of their Intellectual Property Rights in and to the Software and Documentation, in any form. No rights are granted to Licensee under this Agreement by implication, estoppel or otherwise, except for those rights which are expressly granted to Licensee in this Agreement. All Intellectual Property developed, originated, or prepared by Tait in connection with providing the Software, Designated Products, Documentation, or related services, remains vested exclusively in Tait, and Licensee will not have any shared development or other Intellectual Property Rights.

Section 6 LIMITED WARRANTY; DISCLAIMER OF WARRANTY

6.1. The commencement date and the term of the Software warranty will be a period of one (1) year from Tait shipment of the Software. If Licensee is not in breach of any obligations under this Agreement, Tait warrants that the unmodified Software, when used properly and in accordance with the Documentation and this Agreement, will be free from a reproducible defect that eliminates the functionality or successful operation of a feature critical to the primary functionality or successful operation of the Software. Whether a defect has occurred will be determined solely by Tait. Tait does not warrant that Licensee's use of the Software or the Designated Products will be uninterrupted, error-free, completely free of Security Vulnerabilities, or that the Software or the Designated Products will meet Licensee's particular requirements. Tait makes no representations or warranties with respect to any third-party software included in the Software.

6.2 Tait sole obligation to Licensee, and Licensee's exclusive remedy under this warranty, is to use reasonable efforts to remedy any material Software defect covered by this warranty. These efforts will involve either replacing the media or attempting to correct significant, demonstrable program or documentation errors or Security Vulnerabilities. If Tait cannot correct the defect within a reasonable time, then at Tait option, Tait will replace the defective Software with functionally equivalent Software, license to Licensee substitute Software which will accomplish the same objective, or terminate the license and refund Licensee's paid license fee. If Tait investigation of the perceived defect reveals that no such defect in fact exists, Tait may recover its costs in respect of such investigation from Licensee.

6.3. Tait disclaims any and all other warranties relating to the Software or Documentation other than the express warranties set forth in this Section 6. Warranties in Section 6 are in lieu of all other warranties whether express or implied, oral or written, and including without limitation any and all implied warranties of condition, title, non-infringement, merchantability, or fitness for a particular purpose or use by Licensee (whether Tait knows, has reason to know, has been advised of, or is otherwise aware of any such purpose or use), whether arising by law, by reason of custom or usage

of trade, or by course of dealing. In addition, Tait disclaims any warranty to any person other than Licensee with respect to the Software or Documentation.

Section 7 TRANSFERS

7.1 Licensee will not transfer the Software or Documentation to any third party without specific prior written consent from Tait. Tait may withhold such consent or at its own discretion make the consent conditional upon the transferee paying applicable license fees and agreeing to be bound by this Agreement.

7.2. In the case of a value-added reseller or distributor of Tait Designated Products, the consent referred to in Section 7.1 may be contained in a Tait Reseller or Tait Distributor Agreement.

7.3. If the Designated Products are Tait vehicle-mounted mobile products or hand-carried portable radio products and Licensee transfers ownership of the Tait mobile or portable radio products to a third party, Licensee may assign its right to use the Software which is embedded in or furnished for use with the radio products and the related Documentation; *provided* that Licensee transfers all copies of the Software and Documentation to the transferee.

7.4. For the avoidance of any doubt, Section 7.3 excludes TaitNet Infrastructure, or the products listed at any time under network products at: http://www.taitradio.com.

7.5. If Licensee, as a contractor or subcontractor (integrator), is purchasing Tait Designated Products and licensing Software not for its own internal use but for end use only by a Customer, the Licensee may transfer such Software, but only if a) Licensee transfers all copies of such Software and the related Documentation to the transferee and b) Licensee has first obtained from its Customer (and, if Licensee is acting as a subcontractor, from the interim transferee(s) and from the ultimate end user sub license) an enforceable sublicense agreement that prohibits any other transfer and that contains restrictions substantially identical to the terms set forth in this Software License Agreement. Except as stated in the foregoing, Licensee and any transferee(s) authorised by this Section may not otherwise transfer or make available any Tait Software to any third party nor permit any party to do so. Licensee will, on request, make available evidence reasonably satisfactory to Tait demonstrating compliance with all the foregoing.

Section 8 TERM AND TERMINATION

8.1 Licensee's right to use the Software and Documentation will commence when the Designated Products are supplied by Tait to Licensee and will continue for the life of the Designated Products with which or for which the Software and Documentation are supplied, unless Licensee breaches this Agreement, in which case this Agreement and Licensee's right to use the Software and Documentation may be terminated immediately upon notice by Tait.

8.2 Within thirty (30) days after termination of this Agreement, Licensee must certify in writing to Tait that all copies of the Software have been removed or deleted from the Designated Products and that all copies of the Software and Documentation have been returned to Tait or destroyed by Licensee and are no longer in use by Licensee.

8.3 Licensee acknowledges that Tait made a considerable investment of resources in the development, marketing, and distribution of the Software and Documentation and that Licensee's breach of this Agreement will result in irreparable harm to Tait for which monetary damages would

be inadequate. If Licensee breaches this Agreement, Tait may terminate this Agreement and be entitled to all available remedies at law or in equity including immediate injunctive relief and repossession of all non-embedded Software and associated Documentation. Licensee shall pay all Tait costs (on an indemnity basis) for the enforcement of the terms of this Agreement.

Section 9 CONFIDENTIALITY

Licensee acknowledges that the Software and Documentation contain proprietary and Confidential Information valuable to Tait and are Tait trade secrets, and Licensee agrees to respect the confidentiality of the information contained in the Software and Documentation.

Section 10 LIMITATION OF LIABILITY

10.1 In no circumstances shall Tait be under any liability to Licensee, or any other person whatsoever, whether in Tort (including negligence), Contract (except as expressly provided in this Agreement), Equity, under any Statute, or otherwise at law for any losses or damages whether general, special, exemplary, punitive, direct, indirect, or consequential arising out of or in connection with any use or inability of using the Software.

10.2 Licensee's sole remedy against Tait will be limited to breach of contract and Tait sole and total liability for any such claim shall be limited at the option of Tait to the repair or replacement of the Software or the refund of the purchase price of the Software.

Section 11 GENERAL

11.1. COPYRIGHT NOTICES. The existence of a copyright notice on the Software will not be construed as an admission or presumption of publication of the Software or public disclosure of any trade secrets associated with the Software.

11.2. COMPLIANCE WITH LAWS. Licensee acknowledges that the Software may be subject to the laws and regulations of the jurisdiction covering the supply of the Designated Products and will comply with all applicable laws and regulations, including export laws and regulations, of that country.

11.3. ASSIGNMENTS AND SUBCONTRACTING. Tait may assign its rights or subcontract its obligations under this Agreement, or encumber or sell its rights in any Software, without prior notice to, or consent of, Licensee.

11.4. GOVERNING LAW. This Agreement shall be subject to and construed in accordance with New Zealand law and disputes between the parties concerning the provisions hereof shall be determined by the New Zealand Courts of Law. Provided however Tait may at its election bring proceedings for breach of the terms hereof or for the enforcement of any judgment in relation to a breach of the terms hereof in any jurisdiction Tait considers fit for the purpose of ensuring compliance with the terms hereof or obtaining relief for breach of the terms hereof.

11.5. THIRD-PARTY BENEFICIARIES. This Agreement is entered into solely for the benefit of Tait and Licensee. No third party has the right to make any claim or assert any right under this Agreement, and no third party is deemed a beneficiary of this Agreement. Notwithstanding the foregoing, any licensor or supplier of third-party software included in the Software will be a direct and intended third-party beneficiary of this Agreement.

11.6. SURVIVAL. Sections 4, 5, 6.3, 7, 8, 9, 10, and 11 survive the termination of this Agreement.

11.7. ORDER OF PRECEDENCE. In the event of inconsistencies between this Agreement and any other Agreement between the parties, the parties agree that, with respect to the specific subject matter of this Agreement, this Agreement prevails.

11.8 SECURITY. Tait uses reasonable means in the design and writing of its own Software and the acquisition of third-party Software in order to limit Security Vulnerabilities. While no software can be guaranteed to be free from Security Vulnerabilities, if a Security Vulnerability is discovered, Tait will take the steps specified in Section 6 of this Agreement.

11.9 EXPORT. Licensee will not transfer, directly or indirectly, any Designated Product, Documentation or Software furnished hereunder or the direct product of such Documentation or Software to any country for which New Zealand or any other applicable country requires an export license or other governmental approval without first obtaining such license or approval.

11.10 SEVERABILITY. In the event that any part or parts of this Agreement shall be held illegal or null and void by any court or administrative body of competent jurisdiction, such determination shall not affect the remaining terms which shall remain in full force and effect as if such part or parts held to be illegal or void had not been included in this Agreement. Tait may replace the invalid or unenforceable provision with a valid and enforceable provision that achieves the original intent and economic effect of this Agreement.

11.11 CONSUMER GUARANTEES. Licensee acknowledges that the licenses supplied in terms of this agreement are supplied to Licensee in business, and that the guarantees and other provisions of prevailing consumer protection legislation shall not apply.

11.12 WHOLE AGREEMENT. Licensee acknowledges that it has read this Agreement, understands it and agrees to be bound by its terms and conditions. Licensee also agrees that, subject only to the express terms of any other agreement between Tait and Licensee to the contrary, this is the complete and exclusive statement of the Agreement between it and Tait in relation to the Software. This Agreement supersedes any proposal or prior agreement, oral or written, and any other communications between Licensee and Tait relating to the Software and the Designated Products.

END OF DOCUMENT

SmartValue

The purchase price of the radio includes the initial radio and a replacement radio, accessories, 10-year warranty and service desk telephone support and three replacement batteries automatically shipped during the program period.

The radio and batteries are replacements. The original radio and batteries are required to be sent back to Tait at the customers cost.

Tait Communications will automatically ship a new battery for each radio purchased under the SmartValue plan at the three, six and nine year anniversaries of the original ship date. Upon receipt of each new battery, it is the customer's responsibility to return the used battery to Tait at their cost within 30 days. The new batteries are provided at no charge (exclusive of shipping)

To receive the replacement radio a written request is made to Tait anytime between the third and sixth anniversary of the initial radio purchase date, listing the serial number of the unit(s) to be replaced. Tait will replace the original radio and all accessories purchased under the plan with a comparable radio, accessories and feature set. Upon receipt of the new radio, the customer returns the used radio and accessories to Tait at their cost within 30 days.

The replacement radio can either be the exact same radio and same or equivalent accessories or the latest radio Tait has to offer with equivalent functionality and accessories.

If a change of configuration is required in the replacement radio a written request will be made and Tait will evaluate the request to change and advise the customer of any difference in price to be paid upon shipment of that item. The customer will not be allowed to 'downgrade' or remove an item from the configuration (i.e. remove the lapel microphone) to attempt to obtain a rebate.

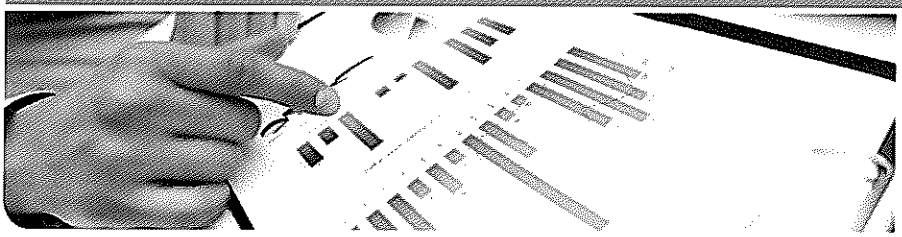
There is a (25) unit order minimum, to a single location. There is no maximum order size and the set configuration prices don't change based on volume orders.

The ten year service support agreement begins at shipment of the radio from Tait and ends on the tenth anniversary date of initial shipment. The support agreement covers the original radio, replacement radio, as well as all batteries and accessories purchased under the program.

SMARTVALUE
FOR PORTABLES

tait
communications

Exchange future risk for the flexibility to adapt.



The Tait *Smart Value* plan* provides organizations with the innovative means to avoid unforeseen communication costs created by shifts in regulations and technology.

Smartly manage performance, total cost of ownership and future adaptability over 10 years.

Program Summary

Unlike consumer electronics, Land Mobile Radio (LMR) equipment comes at a higher acquisition cost and requires a longer useful life with the ability to meet known and unknown requirements 10 or more years into the future.

With long stretches of time between significant funding events, it's imperative to make investments that bring real value to the organization, provide predictability around on-going expenses and offer viable options for managing the future more efficiently.

The Tait *Smart Value* plan* for portables is a 10 year program that brings value to each radio at time of acquisition via direct purchase and includes:

- Tait-provided service desk, hardware and software support services for 10 years,
- New batteries shipped at years three, six and nine,
- Free exchange of the radio for a new one, including full replacement of accessories.

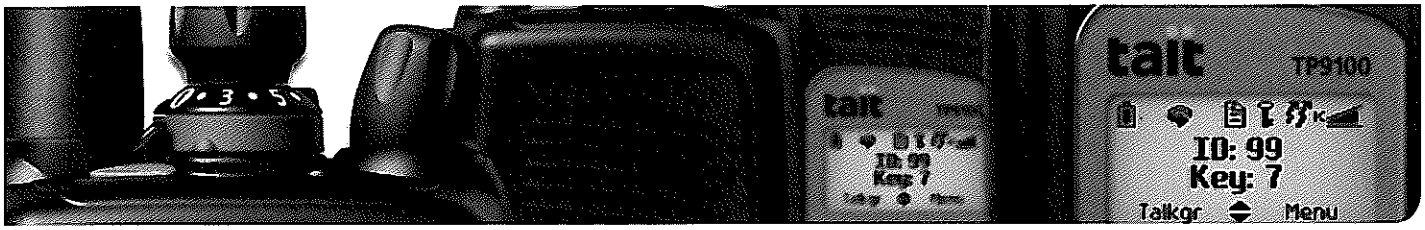
www.taitradio.com

*Offer only available in North America. Terms and conditions apply.

P25 DMR

SMART**VALUE**
FOR PORTABLES

tait communications



Known cost of ownership allows effective budgeting
Often the most visible event in radio ownership is negotiating the initial purchase; however, this is only one contributor to the total cost of ownership that extends through the entire useful life of the radio. Organizations routinely sacrifice a percentage of their annual operational budget to account for on-going expenses associated with the radio, which can add 20% or more to the initial purchase price. Additionally, during the life of the radio, organizations may also enter into at least one negotiation for extended support – often when the radio is well-aged and costs have risen.

The Tait *Smart Value* plan* helps to smartly manage ownership costs by including 10 years of Tait-provided service desk, hardware and software support for each radio in the purchase price. There's no need to reserve operational budget for 'what if' support scenarios.

Free battery replacement supports continuous performance
The component most likely to impact the performance of a radio also has the shortest useful life – the battery. As the battery's ability to hold a full charge over time decreases, the complaints from the user community increase. Both the battery and the user's performance are impacted – and at the very worst – fail to operate when most needed.

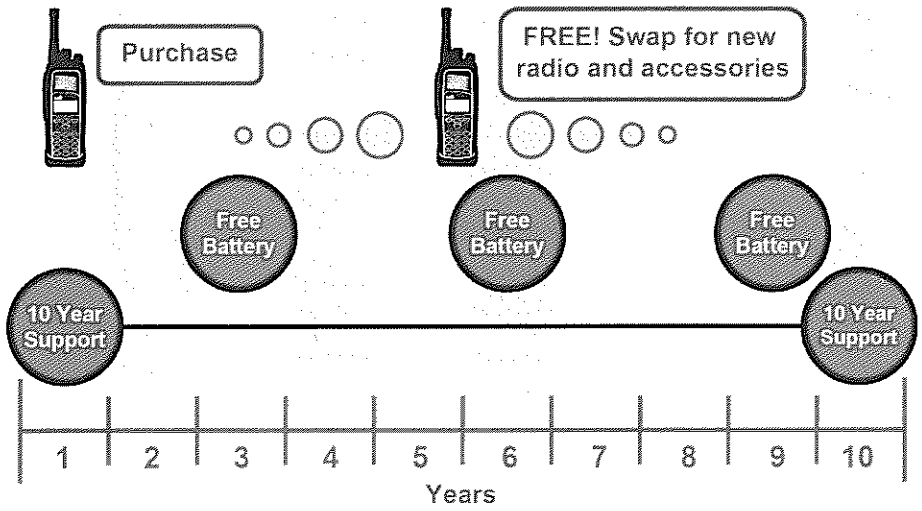
The Tait *Smart Value* plan* for portables helps to smartly manage the radio's performance by including free battery replacement during the 10 year program. A new battery is shipped for each portable during years three, six and nine.

Free radio exchange provides future flexibility to adapt
Shifts in regulations, technology and user requirements can result in the early replacement of equipment before it's reached the end of useful life. Traditionally, organizations have had no flexibility to respond and were required to initiate new requests for funding, proposals and user evaluations.

The Tait *Smart Value* plan* allows organizations to smartly manage the future with the option to exchange the originally-purchased radio for a new one, including accessories, at no additional cost.

taitradio.com/smartvalue

Tait *Smart Value* Plan



www.taitradio.com

*Offer only available in North America. Terms and conditions apply.

P25 DMR

November 1, 2012

Division of Central Purchasing
200 East Main Street, Room 338
Lexington, KY 40507

Thank you for the opportunity to present the following proposal for financing:

Lessor: Tait Communications
Lessee: Lexington-Fayette urban County Government
Purchase Option: $1.00 upon contract completion
Equipment/Project: Public Safety Radio System Subscriber Units
Financing Structure: Lease Purchase
Payment Terms: Quarterly Payments
Minimum Down Payment: 15%

36 Month Financing Option
Effective Annual Interest Rate: 4.75%

60 Month Financing Option
Effective Annual Interest Rate: 5.50%

84 Month Financing Option
Effective Annual Interest Rate: 6.50%

The above proposal is an expression of interest, subject to audit analysis and mutually acceptable documentation and is not a binding commitment. The terms outlined herein are subject to change and rates are valid for fourteen (14) days from the date of this proposal. If funding does not occur within this time period, rates will be indexed to markets at that time. Proposed funding considers the total cost of borrowing and may include rate adjust and call features along with effects of interest from escrow and/or issuance costs. I look forward to proceeding with this project and should you have any questions or wish to consider other terms, please feel free to give me a call.

Sincerely,

Kristopher Klug
Vice President of Finance

Tait Communications
15342 Park Row Blvd
Houston, Texas 77084

Phone: (281) 829-3300
Fax: (281) 829-3320
www.taitradio.com

Tait communications offers a complete range of P25 Compliant radios suitable for both Public Safety and Public Service users.

The Public Service grade radios that Tait Proposes are the TP9135 and TP9140 portables and the TM9135 mobile. These models meet all of the P25 Phase 1 mandatory requirements.

The Public Safety Grade radios that Tait Proposes are the TP9155 and TP9160 Portables and the TM9155 mobile and they meet all of the P25 Phase 1 mandatory requirements.

Tait Communications does currently not offer a Multi-Band high end radio, however the TM9160HS is available which is a Dual Body P25 Mobile radio operating from a single control head and is available in the VHF and 7/800MHz bands.

This mobile radio has the same specification as the TM9155 and has some advantages over the multi-band radios offered by other manufactures such as the ability to receive from and scan both frequency bands simultaneously , ensuring that no important calls are missed. Transmitting on both bands simultaneously is also possible on a TM9160HS allowing for incidents to be managed even with users on both frequency bands.

a. APCO P25 Phase I trunked radio

All radios with the 9100 series are P25 Phase 1 compliant and all have passed P25 CAP Testing against the Cassidian P25 Trunked Network.

b. Upgradeable to APCO P25 Phase II

The Tait 9100 Series of Radio are not software upgradeable to P25 Phase 2, however Tait Communications offer a number of Upgrade Paths to P25 Phase 2 Capable products that will be covered in this response.

c. **Minimum 32 conventional channels**

1000 Channels and 30 Zones are supported by Tait 9100 P25 Radios.

d. **Minimum 256 system/talkgroups**

1000 Talkgroups are supported by Tait 9100 P25 Radios.

e. **Programmable time–out-timer**

Supported.

f. **Digital and analog talk-around**

Talk-around is supported on both Analog and P25 Conventional Channels

g. **Individual call**

Supported

h. **Emergency operation**

Supported

i. **Group scan**

Supported

j. **PC programmable**

Supported

k. **Alphanumeric display**

All Tait 9100 P25 Radios contain a 4 Line Alphanumeric Display

l. **Back lighting of display with dimmer control**

All Tait 9100 P25 Radios are backlit with the mobiles having dimming capabilities.

m. Encryption capable, AES, minimum 15 keys

The TP9155/60 and the TM9155 P25 radios support both the P25 Standard Encryption Algorithms – DES-OFB and AES 256-bit. 16 Keys for each algorithm are supported.

n. On/off volume knob

Supported

o. 16 position rotary knob with stops

Supported

p. Dynamic regrouping capable

Supported

q. Mil Specs 810C, D, E and F

The 9100 series is tested beyond MIL-STD-810 C, D, E and F – Tait performs the MIL standard drop test and then follows with tougher drop tests (50% higher and on concrete instead of wood). The same radio is then subjected to ingress and other tests.

r. Accessories

The Tait 9100 Series supports a wide number of Accessories

i. **Black leather swivel case with radio retention capability & belt loop**

Supported

ii. **Black nylon swivel case with radio retention capability & belt loop**

Supported

iii. **Rapid rate desk charger (1 hour full recharge)**

Supported

iv. **Choice of antenna types**

The 7/800 MHz Portable is supplied with the ½ wave whip antenna

v. **Spring-loaded belt clip**

Supported – and supplies with the portable radio package

vi. **Choice of battery types**

NiMH and LiIon intelligent batteries are supported

vii. **Multi unit charger (standard charge)**

6 bay multi Charger is supported

viii. **Public Safety remote speaker-mic (no antenna)**

Supported

ix. **Public Safety grade throat mic with adaptor and PTT switch**

Available

x. **Covert surveillance earpiece to work with lapel mic**

Supported

xi. **Noise cancelling mic**

All of Tait Communications P25 Radio equipment contains Noise reduction algorithms and combined with the back ground noise reduction inherent in the IMBE vocoder they have excellent background noise cancelling performance.

However if Noise cancelling microphones are required we do provide Headsets with Noise cancelling microphones.

xii. Complete programming set – software, licenses, cables and connectors

Supported

xiii. Complete encryption management kit – software, licenses, cables and connectors

Tait offers versatile encryption options designed to improve the safety and security of first responders.

Ranging from a complete Key Management Facility to enable the operation of OTAR on the P25 Trunked network to the Tait Key Fill Device.

Running on a ruggedized IP67-rated PDA, The Tait Key Fill Device (KFD) enables agencies' encryption specialists and radio technicians to easily manage their workflow; making the process of encrypting digital radios as efficient and error-free as possible.

Tait Communications also offers an Encryption KeyFill adapter for the Motorola KVL3000+ Keyloader.

s. Options

xiv. GPS

An external GPS antenna is available for the TM9100 mobiles and a GPS Speaker mic options is available for the TP9100 Portables.

xv. UL intrinsically safe portable model

The TP9155 and TP9160 models are available as Intrinsically Safe.

Mobile Radio, 700/800 MHz

P25 TM9100 - P25 Trunked and Conventional Mobile Radios

With industry-leading digital audio clarity, superb build quality and tested in a P25 Compliance Assessment Program (P25 CAP) laboratory, the TM9100 series (TM9135 and TM9155) is a tough, dependable and sophisticated piece of radio engineering. Fully interoperable, the TM9100 gives you the flexibility of working in digital, analog or an auto-sensing dual mode.

The TM9155 is specifically designed for the needs of front-line users to ensure communications are secure and interoperable. Optional dual head, remote head and hand-held control head configuration offer space-saving communications and means the TM9155 can dynamically respond to vehicle and user needs. Tait also manufactures the TM9135 radio which provides reliable digital communications for Public Safety users who require audio clarity without the full range of possible features and configurations.

Secure, interoperable, flexible - TM9155 highlights:

- FIPS 140-2 certified encryption
- Tested in a Department of Homeland Security (DHS) recognized P25 CAP lab for interoperability and performance
- Radios can be used on analog, P25 conventional, trunked and simulcast networks
- Tait Advanced System Key prevents 'unregistered' radios from being added to the network without prior consent
- Tested beyond MIL-STD-810 C, D, E and F
- Program 1,000 channels and 30 tactical zones
- 300 scan groups with up to 50 members each, with a maximum of 2,000 members total. Comprehensive scanning features including P25 talk-group, priority, dual priority and editable scanning

Tough, reliable and interoperable - TM9135 highlights:

- Radios can be used on analog, P25 conventional, trunked and simulcast networks

- Out of the box and onto the shift - the TM9135 is a radio designed for fast integration onto a digital network (the P25 CAI is included as standard)
- Ease of operation: the user interface is identical across all the Tait P25 portables, mobiles and hand-held control heads
- Tested beyond MIL-STD-810 C, D, E and F

Communications assured – TM9160HS Dual Band Mobile highlights

- The TM9160HS provides a reliable and flexible solution for communications across multiple bands at a significantly lower cost than other dual band radios.
- The TM9160HS provides the ability to communicate on both P25 Trunking Talkgroups along with Conventional P25 or Analog networks.
- Never miss an important call again on either band. The TM9160HS has the ability receive on both Trunking Talkgroup and conventional channels simultaneous.
    - Receive on both bands simultaneously
    - Priority scan both bands at the same time
    - Transmit on both bands at the same time if necessary
- Smaller footprint than other dual band radios currently available; taking up less real-estate in your vehicle.
- Available in Standard Remote Head or Hand Held Control Head Configurations.

Genuine open P25 standard technology ensures choice, value and responsiveness during routine operations or crises.

Configure to suit with software licenses

- Software licenses allow a solution that is readily extended as needs change, removing the risk of hardware upgrades and factory returns. Trunking, MDC1200 encode/decode, two-tone decode, P25 CAI, encryption, APIs, TM9100 latitude/longitude display and conventional OTAR are just some of the software license options available.

System Compatibility:

- **Dynamic talkgroup reconfiguration**
  Supported
- **System access priority**
  Supported
- **Trunking controller failure operating mode**
  Full support for Site Trunking and Failsoft modes of operations
- **Signaling error correction**
  Supported
- **Wide area operation capability**
  Supported – the Tait P25 radios have been tested and are used on many Wide Area P25 Trunked networks
- **Selective inhibit and uninhibit**
  Supported in all Tait P25 Radios – Encrypted Inhibit and uninhibit via a KMF is also supported in the TM9155 and TM9160HS
- **Multikey Encryption (Selected Public Safety radios)**
  Supported in the TM9155 and TM9160HS – 16 DES and 16 AES Keys
- **Over-The-Air-Rekeying (OTAR) (Selected Public Safety radios) (optional)**
  Supported in the TM9155 Mobile
- **Software driven tuning and alignment capabilities**
  Supported
- **Batch cloning capability**
  Cloning is not available in the Tait P25 range of radios however the Programming application has a fleet management facility that reduces the overheads associated with programming a fleet of radios. FleetPro can be used to generate a batch of programming files and track unit IDs and serial numbers – ensuring that duplicated IDs are not programmed and that the correct radio has the correct ID.
- **Over-The-Air-Programming (OTAP) (optional)**
  Not Supported

Emergency Alarm Switch

- In the TM9100 the Emergency switch operation is programmable and can be set up to send an emergency alert when the button is depressed. All calls made after the Emergency Mode has been entered will have the Emergency bit set and will have high priority in the system. This Emergency state will remain until the emergency state is cleared in the radio.

Status Tones

- All requested Status tones are supported in the TM9100

Control Head

- All requested control head features are supported.

Service Facilities

- Tait Communications provides the TOPA-SV-024 test unit is used to test and maintain Tait portable and mobile radios by providing an interface between the radio, a test PC, and an RF communications test set.
- This is included as part of the TMAA24-00 Service Kit

Selective Signaling and Alert Decoder

- Supported

Talk-around and Conventional Operation

- Supported

TM9155
SPECIFICATIONS

tait
communications

Interoperable, flexible, configurable.

With FIPS validated encryption, certified interoperability, digital audio clarity and superb build quality, the TM9155 is a tough, dependable and sophisticated mobile radio.

KEY FEATURES

- Tested in a Department of Homeland Security-recognized P25 Compliance Assessment Program (P25 CAP) laboratory for interoperability and performance
- Radios can be used on analog, P25 conventional, trunked and simulcast networks
- FIPS 140-2 certified encryption
- Tested beyond MIL-STD-810C, D, E and F
- A range of analog signaling features - MDC1200 encode/decode* and Two Tone decode with the purchase of software licenses**
- Comprehensive scanning features including P25 talk group, priority, dual priority and editable scanning
- High temperature display option optimizes screen visibility in hot environments.

*MDC1200 decode includes calling identity display and inhibit/uninhibit functionality.
**Software license option(s) available separately.

TM9155
SPECIFICATIONS

tait communications

RECEIVER (TYPICAL FIGURES SHOWN)

	VHF/UHF	VHF 50W	VHF 110W	700/800MHz
Analog sensitivity 12dB SINAD	0.28µV (-118dBm)	0.315µV (-117dBm)	0.25µV (-119dBm)	0.28µV (-118dBm)
Digital sensitivity (TIA/EIA-102) 5%BER	0.22µV (-120dBm)	0.233µV (-120dBm)	0.18µV (-122dBm)****	0.18µV (-122dBm)
Intermodulation rejection (TIA/EIA 102)	-75dB	-75dB	-70dB	-75dB
Adjacent channel selectivity				
25/30kHz channel (TIA/EIA 603a)	-75dB	-80dB	-75dB	-75dB
12 5kHz channel (TIA/EIA 102)	-65dB	-70dB	-65dB	-65dB
Spurious response rejection	-75dB	-90dB	-70dB	-75dB
FM hum and noise				
25/30kHz channel	-43dB	-43dB	-43dB	-43dB
12 5kHz channel	-40dB	-40dB	-40dB	-40dB
Residual audio noise ratio	45dB	45dB	45dB	45dB
Audio distortion @ rated audio (3W)	3% @ 1kHz 60% modulation			
Optional external speaker output	10W (into 4 ohm)			

MILITARY STANDARDS 810 C,D,E AND F

Applicable MIL-STD	Method 25/30/35/50/110W	Procedure 25/30/35/50W	Procedure 110W
Low pressure	500.4	2	2
High temperature	501.4	1, 2	2
Low temperature	502.4	1, 2	2
Temperature shock	503.4	1	1
Solar radiation	505.4	1	–
Rain	506.4	1, 3	3
Humidity	507.4	1	–
Salt fog	509.4	1	1
Dust	510.4	1	1
Vibration	514.5	1	1
Shock	516.5	1, 6	6

REGULATORY DATA

USA	**VHF**	CFR 47 Parts 22, 74, 90, 95J, 90.210		
	UHF	CFR 47 Parts 22, 74, 90, 95A, 90.210		
	800MHz	CFR 47 Parts 22, 90		
Canada		RSS-119		
Europe		EN300 086, EN300 113, EN301 489, EN60950		
Australia/New Zealand		AS/NZ54295		
Type approval		**FCC**	**Industrie Canada**	**NTIA**
25W	VHF	CASTMAB1E	737A-TMAB1E	
	UHF	CASTMAH5E	737A-TMAH5E	
		CASTMAH6E	737A-TMAH6E	
30/35W	UHF	CASTMAK5F	737A-TMAK5F	
40W	UHF			350-400MHz*** 380-420MHz***
		CASTMAH5F	n/a	
		CASTMAH7F	n/a	
50W	VHF	CASTMAB1F	n/a	136-174MHz***
110W (ERFPA)	VHF	CASTMAB1Z	n/a	
Emission designators		10K0F1D, 10K0F1E, 10K0F7D, 10K0F7E, 11K0F3E, 12K7F1D, 16K0F3E, 6K60F2D, 7K70F1D, 8K10F1D, 8K10F1E, 8K10F7D, 8K10F7E, 9K60F2D		

Authorized Partners

Specifications are subject to change without notice and shall not form part of any contract. They are issued for guidance purposes only.

*Please note that not all frequency bands and power outputs are available in all markets. For further information please check with your nearest Tait office or authorized dealer.

***Tait confirms that this product model conforms with NTIA requirements.
****Receiver preamplifier installed.

The word "Tait" and the Tait logo are trademarks of Tait Limited. Tait is an ISO 9001: 2008 and ISO 14001: 2004 certified supplier.

ISO 9001
ISO 14001

FIPS logo is a Certification Mark of NIST, which does not imply product endorsement by NIST, the U.S. or Canadian Governments.

Portable Radio, 700/800 MHz

P25 TP9100 - P25 Trunked and Conventional Portable Radios

With industry-leading digital audio clarity, superb build quality and tested in a P25 Compliance Assessment Program (P25 CAP) recognized laboratory, the TP9100 series (TP9135/TP9140 and TP9155/TP9160) is a tough, dependable and sophisticated piece of radio engineering. Fully interoperable, the TP9100 gives you the flexibility of working in digital, analog and auto-sensing dual mode. Tait radios have a range of worker safety features and can be used on the analog, P25 conventional, trunked and simulcast networks of Tait and other manufacturers.

The TP9155/60 is specifically designed for the needs of frontline users to ensure communications are secure and interoperable. Tait also manufactures the TP9135/40 radios which provide reliable digital communications for Public Safety users who require audio clarity without all possible features and configurations.

Secure, interoperable, flexible - TP9155/60 highlights:

- FIPS 140-2 certified encryption
- Tested in a Department of Homeland Security (DHS) recognized P25 CAP lab for interoperability and performance
- Radios can be used on analog, P25 conventional, trunked and simulcast networks
- Program 1,000 channels, 300 scan groups and 30 tactical zones
- Configurable emergency options - Man Down and Lone Worker as standard
- Tait Advanced System Key prevents 'unregistered' radios from being added to the network without prior consent
- Tested beyond MIL-STD-810 C, D, E and F
- 300 scan groups with up to 50 members each, with a maximum of 2,000 members total
- Comprehensive scanning features including P25 talk-group, priority, dual priority and editable scanning

Tough, reliable, interoperable - TP9135/40 highlights:

- Radios can be used on analog, P25 conventional, trunked and simulcast networks
- Out of the box and onto the shift - the TP9135/40 is a radio designed for fast integration onto a digital network (the P25 CAI is included as standard)
- Ease of operation: the user interface is identical across all the Tait P25 portables, mobiles and hand-held control heads
- Tested beyond MIL-STD-810 C, D, E and F
- Rubber armor knobs and base, recessed lens, strong metal-hinged belt clip and a patented secure battery retention mechanism
- Angled, textured, shaped and colored controls for intuitive usability

Genuine P25 open standards ensure choice, value and responsiveness during routine operations or crises.

Configure to suit with software licenses

- Software licenses allow a solution that is readily extended as needs change, removing the risk of hardware upgrades and factory returns. Trunking, MDC1200 encode/decode, two-tone decode, P25 CAI, encryption, APIs and conventional OTAR are just some of the software license options available.

Unit Identification

- The TP9100 transmit there Unit ID when the PTT is pressed on P25 Channels. When operating in Analog mode the units' identification can be transmitted using MDC1200 or DTMF signaling.

System Compatibility:

- **Dynamic talkgroup reconfiguration**
  Supported
- **System access priority**
  Supported

- **Trunking controller failure operating mode**
  Full support for Site Trunking and Failsoft modes of operations
- **Signaling error correction**
  Supported
- **Wide area operation capability**
  Supported – the Tait P25 radios have been tested and are used on many Wide Area P25 Trunked networks
- **Selective inhibit and uninhibit**
  Supported in all Tait P25 Radios – Encrypted Inhibit and uninhibit via a KMF is also supported in the TM9155 and TM9160HS
- **Multikey Encryption (Selected Public Safety radios)**
  Supported in the TP9155 and TP9160 – 16 DES and 16 AES Keys
- **Over-The-Air-Rekeying (OTAR) (Selected Public Safety radios) (optional)**
  Supported in the TP9155 and TP9160 models
- **Software driven tuning and alignment capabilities**
  Supported
- **Batch cloning capability**
  Cloning is not available in the Tait P25 range of radios however the Programming application has a fleet management facility that reduces the overheads associated with programming a fleet of radios. FleetPro can be used to generate a batch of programming files and track unit IDs and serial numbers – ensuring that duplicated IDs are not programmed and that the correct radio has the correct ID.
- **Over-The-Air-Programming (OTAP) (optional)**
  Not Supported

Emergency Alarm Switch

- In the TP9100 the Emergency switch operation is programmable and can be set up to send an emergency alert when the button is depressed. All calls made after the Emergency Mode has been entered will have the

Emergency bit set and will have high priority in the system. This Emergency state will remain until the emergency state is cleared in the radio.

- No receive audio shall be present unless the PTT switch is first activated.
    - Currently this is not a feature that the TP9100 portable radio currently offers, however, Tait Communications does have a group whose sole purpose is to provide Customer Specific Customizations and this addition to the emergency mode functionality would be a very simple modification to do.

Status Tones

- All requested Status tones are supported in the TP9100

Selector Switches

All selector switches on the TP9100 Series are rotary selectors.

Battery Chargers

Tait Communications offers a complete range of intelligent Battery Chargers that are capable of charging both of the Battery Chemistries that Tait offers.
These chargers are:

- Single Radio Rapid Charge Desktop Charger
- 6 Bay Multi-unit Charger – Suitable for Wall or Desktop mounting
- Single Radio Rapid charging vehicle charger

All of the batteries offered by Tait for the TP9100 are intelligent batteries and are not susceptible to developing battery memories. The Batteries offered for the TP9100 are:

- TP9100 NiMH 2400 mAh
- TP9100 Li-Ion 2500 mAh

Audio Accessories

Tait Communications offers a complete range of Audio accessories

TP9155/60
SPECIFICATIONS

tait communications

Secure, dependable and flexible.

With FIPS validated encryption, certified interoperability, digital audio clarity and superb build quality the TP9155/TP9160 are tough, dependable and sophisticated portable radios.

The TP9155/TP9160 gives you the flexibility of working in digital, analog or auto-sensing dual mode.

KEY FEATURES

- Tested in a Department of Homeland Security-recognized P25 Compliance Assessment Program (P25 CAP) laboratory for interoperability and performance
- Radios can be used on analog, P25 conventional, trunked and simulcast networks
- Intrinsically safe option is available
- FIPS 140-2 certified encryption
- Tested beyond MIL-STD-810C, D, E and F – Tait performs tougher drop tests, then performs ingress and other tests on the same radio
- Configurable emergency features - Man Down and Lone Worker as standard
- A range of analog signaling features - MDC1200 encode/decode* and Two Tone decode with the purchase of software licenses**
- Comprehensive scanning features including P25 talk group
- User interface is common with the Tait P25 mobiles for ease of use.

*MDC1200 decode includes calling identity display and inhibit/uninhibit functionality.
**Software license option(s) available separately.

TP9155/60
SPECIFICATIONS

RECEIVER (TYPICAL FIGURES SHOWN)

	VHF/UHF	700/800MHz
Analog sensitivity 12dB SINAD	0.28µV (-118dBm)	0.28µV (-118dBm)
Digital sensitivity (TIA/EIA-102) 5%BER	0.22µV (-120dBm)	0.22µV (-120dBm)
Intermodulation rejection (TIA/EIA 102)	-78dB	-78dB
Adjacent channel selectivity 25/30kHz channel (TIA/EIA 603) 12.5kHz channel (TIA/EIA 102)	 -73dB -63dB	 -70dB -60dB
Spurious response rejection	-75dB	-70dB
Residual audio noise ratio (TIA/EIA 102)	45dB	45dB
Audio distortion @ rated audio	<3%	<3%

MILITARY STANDARDS 810C, D, E AND F

Applicable MIL-STD	Method	Procedure
Low pressure	500.4	2
High temperature	501.4	1, 2
Low temperature	502.4	1, 2
Temperature shock	503.4	1
Solar radiation	505.4	1
Rain	506.4	1, 3
Humidity	507.4	1
Salt fog	509.4	1
Dust	510.4	1
Vibration	514.5	1
Shock	516.5	1, 4

BATTERY

Intelligent battery options	NiMH, Standard and Intrinsically Safe (IS) 2400mAh Li-Ion, Standard and Intrinsically Safe (IS)**** 2500mAh
Battery shift life (NiMH/Li-Ion)	>12 hours 5/5/90

CHARGER

Charger options (NiMH, Li-Ion)	Fast desktop smart charger 6-way multi charger Vehicle charger

REGULATORY DATA

USA	**VHF**	CFR 47 Parts 22, 74, 90, 90.210		
	UHF	CFR 47 Parts 22, 74, 90, 95A, 90.210		
	800MHz	CFR 47 Parts 22, 90		
Canada		RSS-119		
Europe		EN300 086, EN300 113, EN301 489, EN60950-01		
Australia/New Zealand		A3/NZS4295		
Type approval		**FCC**	**Industrie Canada**	**NTIA**
	VHF	CASTPAB1A	737A-TPAB1A	136-174MHz***
	UHF			380-420MHz***
		CASTPAH5A	737A-TPAH5A	400-470MHz***
		CASTPAH6A	737A-TPAH6A	
	800MHz	CASTPAK5A	737A-TPAK5A	
Emission designators		10K0F1D, 10K0F1E, 10K0F7D, 10K0F7E, 11K0F3E, 12K7F1D, 16K0F3E, 6K60FZD, 7K70F1D, 8K10F1D, 8K10F1E, 8K10F7D, 8K10F7E, 9K60F2D		
ESD Standard		IEC 61000-4-2		

Authorized Partners

Specifications are subject to change without notice and shall not form part of any contract. They are issued for guidance purposes only.

*Please note that not all frequency bands and power outputs are available in all markets. For further information please check with your nearest Tait office or authorized dealer.

***Tait confirms that this product model conforms with NTIA requirements.

****For Li-ion IS battery availability, please contact your local Tait representative for more information.

The word "Tait" and the Tait logo are trademarks of Tait Limited.
Tait is an ISO 9001: 2008 and ISO 14001: 2004 certified supplier.

ISO 9001
ISO 14001

FIPS logo is a Certification Mark of NIST, which does not imply product endorsement by NIST, the U.S. or Canadian Governments.

P25 Compliance

All Tait P25 Subscriber units have passed P25 Compliance testing on a number of different P25 Trunked Networks, including the Cassidian P25 Trunked Network.

The following pages are the P25 CAP SDOC and STR for both the TM9100 P25 Mobile and the TP9100 P25 Portable.

These documents have been downloaded from rkb.us

Project 25 Compliance Assessment Program
Recognized Laboratory

The DHS Office for Interoperability and Compatibility recognizes

Tait Electronics Ltd Teltest Laboratories

Christchurch, New Zealand & Houston, Texas, United States

for technical competence in the field of

Project 25 Compliance Testing

This laboratory is recognized in accordance with the *National Institute of Standards and Technology Handbook 153: Laboratory Recognition Process for Project 25 Compliance Assessment*. This recognition demonstrates technical competence for a defined scope and the operation of a laboratory quality management system. For the types of tests to which this recognition applies, please refer to the laboratory's P25 Compliance Testing Scope of Recognition.

Presented August 4th, 2009

Homeland Security

Bradley J. Buswell
Under Secretary (Acting)
Science and Technology Directorate
U.S. Department of Homeland Security
Certificate Number P25CAP081015-09
Valid until May 4th, 2012

Project 25 Compliance Assessment Program
SUPPLIER'S DECLARATION OF COMPLIANCE (SDOC)
SDOC-TAI-TM9100-20110818

Tait Radio Communications
15342 Park Row
Houston, Texas 77084
United States of America
Customer Contact: Scott Quintavelle
Phone: +1 281 829 3300
Fax: +1 281 829 3320
Toll Free: 800 320 4037
http://www.taitworld.com
info@taitmobile.com

Product Name: TM9100 series Mobile Radio
Installed Options: Hardware options TMAB1E, TMAB1F, TMAB1Z, (136-174 MHz) TMAH5E, TMAH5F (400-470 MHz), TMAH6E (450-530 MHz), TMAH7F (450-520 MHz), TMAG2F (350-400 MHz) and TMAK5F (762-870 MHz); Firmware version 6.09
Installed Vocoder: Baseline with System Improvements

Other devices tested with Tait Radio Communications TM9100			
Manufacturer	**Product Name, Definition, and unique ID**	**Installed Options**	
Harris Corporation	P25 Trunked Infrastructure Base Station/Repeater -	Release 6.4.2	
Motorola Inc	Astro P25 PSC 9600 CLN1725B Base Station/Repeater SN CAF030LLFY	Release 7.7, 7.8 and 7.9	
Tait Radio Communications	Taitnet P25 Infrastructure Base Station/Repeater SNs: 18083365, 18075574, 18024395.	Hardware: TBAH0	Software: 3.35
	EADS COR P25	-	v11_03E18
EF Johnson	3800 Trunking Repeater Base Station Base Station/Repeater S/N 242-3831-000	Trunking Release 3.1-RC1	
PowerTrunk Inc.	PowerTrunk25 S/N B800014	Ver. 9.4.52	
Raytheon JPS	Raytheon P25net™ Phase 1 Infrastructure	**Hardware:** **Software:**	TBAK2 (762-870 MHz) 3.25
		Hardware: **Software:**	P25netCC™ Channel Controller 2.10.0000d

Project 25 Compliance Assessment Program
SUPPLIER'S DECLARATION OF COMPLIANCE (SDOC)
SDOC-TAI-TM9100-20110818

Tait Radio Communications hereby declares that TM9100 Mobile Radio product(s) pass(es) the test cases listed in the following Project 25 Compliance Assessment Bulletin sections in their entirety with exclusions as noted:

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 and 2.1.1.2 – Project 25 Phase 1 Common Air Interface Conventional and Trunked Subscriber Unit Performance, DTR-P25CAP081015-2990, DTR-P25CAP081015-2991, DTR-P25CAP081015-2992, DTR-P25CAP081015-2993, DTR-P25CAP081015-2994, DTR-P25CAP081015-2997, DTR-P25CAP081015-2999, DTR-P25CAP081015-3001 and DTR-P25CAP081015-3002. LSM and WCQPSK simulcast modulation is not supported by Tait Radio Communications TM9100.

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.3.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Interoperability DTR P25CAP081017-1090623T01, DTR - P25CAP081015 – 3081, DTR-P25CAP081010-09102801, DTR-TIMCO081016-TP/TM9100, DTR-MOT-40245-M3 and DTR-P25CAP081015 – 3185. Passed with the exception of Inter-WACN and Inter-System roaming which are not supported by Tait Radio Communications TM9100 and Taitnet/EADS COR P25 Infrastructure, and test case(s) 2.2.3.4.3 when tested with Taitnet/EADS COR P25 Infrastructure, PowerTrunk25 and Raytheon P25net™ Phase 1, 2.2.3.4.4 when tested with Harris P25 Trunked Infrastructure System, EF Johnson 3800 Trunking Repeater Base Station and Motorola Astro P25, and 2.2.3.4.5 and 2.2.3.4.6 when tested with Taitnet/EADS COR P25 Infrastructure, Harris P25 Trunked Infrastructure System, EF Johnson 3800 Trunking Repeater Base Station, PowerTrunk25, Motorola Astro P25 and Raytheon P25net™ Phase 1 Infrastructure. Tait Radio Communications TM9100, Taitnet/EADS COR P25 Infrastructure, EF Johnson 3800 Trunking Repeater Base Station, PowerTrunk25, Motorola Astro P25 and Raytheon P25net™ Phase 1 Infrastructure did not support the test case(s).

The summary report of tests performed at Project 25 Compliance Assessment Program Recognized Laboratory(s) P25CAP081015, P25CAP081017, P25CAP081012, P25CAP081016-09, and P25CAP081010 is identified as follows: Summary Test Report Identification: STR-TAI-TM9100-20110818 issued on August 18 2011.

18th August 2011

Issue Date

Supplier's Authorized Representative Signature

Brian Emmett

Supplier's Authorized Representative Printed Name

Project 25 Compliance Assessment Program
SUPPLIER'S DECLARATION OF COMPLIANCE (SDOC)
SDOC-TAI-TM9100-20110818

OMB NO: 1640-0015
EXPIRATION DATE: 04/30/2012
Burden Statement
An agency may not conduct or sponsor information collection and a person is not required to respond to this information collection unless it displays a current valid Office of Management and Budget control number and an expiration date. The control number for this collection is 1640-0015 and this form will expire on 04/30/2012. The estimated average time to complete this form is 60 minutes per respondent. If you have any comments regarding the burden estimate you can write to Department of Homeland Security, Science and Technology Directorate, Washington, DC 20528.
DHS FORM 10044 – June 2009

Project 25 Compliance Assessment Program

Summary Test Report

TM9100 Series Mobile Radio

STR-TAI-TM9100-20110818

Test Item Description	
Manufacturer	Tait Radio Communications
Manufacturer Contact	Scott Quintavalle – (281) 829- 3300
Product Name	Tait Radio Communications TM9100 series Mobile Radio
Installed Options	Hardware options TMAB1E , TMAB1F , TMAB1Z (136-174 MHz), TMAH5E, TMAH5F (400-470 MHz), TMAH6E (450-530 MHz), TMAH7F (450-520 MHz), TMAG2F (350-400MHz) and TMAK5F (762-870 MHz); Firmware version 6.09
Installed Vocoder	Baseline with System Improvements

Test Description
P25-CAB-CAI_TEST-REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Performance and Section 2.1.3.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Interoperability.

Laboratory Information	
P25 CAP Laboratory Code	P25CAP081015, Tait Electronics Ltd Teltest Laboratories.
Date(s) of Test	5 May 2009 to 18 December 2009, 31 August 2010.
Date of Issue	18 December 2009, 9 September 2010.

Laboratory Information	
P25 CAP Laboratory Code	P25CAP081017, Harris Corporation.
Date(s) of Test	23 June 2009
Date of Issue	23 June 2009

Laboratory Information	
P25 CAP Laboratory Code	P25CAP081012, Motorola Astro System Integration and Test Lab.
Date(s) of Test	8-9 March 2010
Date of Issue	12 March 2010

Laboratory Information	
P25 CAP Laboratory Code	P25CAP081010, E F Johnson Technologies.
Date(s) of Test	20 October 2009
Date of Issue	28 October 2009

Laboratory Information	
P25 CAP Laboratory Code	P25CAP081016-09, Timco Engineering Incorporated.
Date(s) of Test	15 June 2010
Date of Issue	15 June 2010

Informative References	
Date	**Title**
March 2010	P25-CAB-CAI_TEST_REQ

Other Devices Tested with Tait Radio Communications TM9100			
Manufacturer and Point of Contact	**Product Name and Definition**	**Installed Options**	
Tait Radio Communications Scott Quintavalle – (281) 829- 3300	Taitnet P25 Infrastructure	**Hardware:** TBAH0 **Software:** 3.35	
	EADS COR P25	**Software** v11_03E18	
Harris Corporation Greg Fowler – (434) 455-9294	P25 Trunked Infrastructure System	Release 6.4.2	
Motorola Inc Julie Jagoda – (847) 576-2022	Astro P25	Release 7.7, 7.8 and 7.9.	
EFJohnson Technologies John Oblak – (507) 837-5116	3800 Trunking Repeater Base Station	Trunking Release 3.1-RC1	
PowerTrunk Inc. Lorena Martin – (212) 222 4971	PowerTrunk25	Ver. 9.4.52	
Raytheon JPS Janet Holt – 919.606.4748 (office & Mobile)	TB8100K-PCC	**Hardware:** **Software:**	TBAK2 (762-870 MHz) 3.25
		Hardware: **Software:**	P25netCC Channel Controller 2.10.0000d

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance	DTR-P25CAP081015-2990 DTR-P25CAP081015-2991 DTR-P25CAP081015-2992 DTR-P25CAP081015-2993 DTR-P25CAP081015-2994 DTR-P25CAP081015-2997 DTR-P25CAP081015-2999 DTR-P25CAP081015-3001 DTR-P25CAP081015-3002

RECEIVER TESTS 136-174 MHz, 350-400 MHz, 450-520 MHz, 450-530 MHz, 762-870 MHz.			
Test Case	**Description**	**Requirement**	**Results**
2.1.4	Reference Sensitivity C4FM Modulation	≤ -116 dBm (Class A)	P1
2.1.5	Faded Reference Sensitivity	≤ -108 dBm (Class A)	P1
2.1.6	Signal Delay Spread Capability	≥ 50 µs	P1
2.1.7	Adjacent Channel Rejection	≥ 60 dB (Class A)	P1
2.1.8	Co-Channel Rejection	≤ 9 dB	P
2.1.9	Spurious Response Rejection	≥ 80 dB (Class A)	P
2.1.10	Intermodulation Rejection	≥ 75 dB (Class A), ≥ 70 dB (Class B)	P2
2.1.11	Signal Displacement Bandwidth	≥ 1000 Hz	P
2.1.17	Late Entry Unsquelch Delay		
	No Talk Group or Encryption	≤ 125 ms	P
	Talk Group Only	≤ 370 ms	P
	Encryption Only	≤ 370 ms	P
	Both (on clear or encrypted channel)	≤ 460 ms	P
2.1.18	Receiver Throughput Delay	≤ 125 ms	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance		DTR-P25CAP081015-2990 DTR-P25CAP081015-2991 DTR-P25CAP081015-2992	
TRANSMITTER TESTS 136-174 MHz			
Test Case	**Description**	**Requirement**	**Results**
2.2.8	**Unwanted Emissions: Adjacent Channel Power Ratio**	**≥67dB**	P
2.2.12	**Transmitter Power and Encoder Attack Time**		
	Transmitter Attack Time	**≤ 50 ms**	P
	Encoder Attack Time	**≤ 100 ms**	P
2.2.14	**Transmitter Throughput Delay**	**≤ 125 ms**	P
2.2.15	**Frequency Deviation for C4FM**		
	High-Level Signal Deviation	**2544 ≤ f_{dev} ≤ 3111 Hz**	P
	Low-Level Signal Deviation	**848 ≤ f_{dev} ≤ 1037 Hz**	P
2.2.16	**Modulation Fidelity**	**≤ 5% (Class A)**	P
2.2.18	**Transient Frequency Behavior**		
	Time Interval t_1 = 5 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P
	Time Interval t_2 = 20 ms	**$\|\Delta f\|$ ≤ 6.25 kHz**	P
	Time Interval t_3 = 5 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance		DTR-P25CAP081015-2993 DTR-P25CAP081015-2994 DTR-P25CAP081015-2999 DTR-P25CAP081015-3001 DTR-P25CAP081015-3002	
TRANSMITTER TESTS 350-400 MHz, 400-470 MHz, 450-520 MHz, 450-530 MHz.			
Test Case	**Description**	**Requirement**	**Results**
2.2.8	**Unwanted Emissions: Adjacent Channel Power Ratio**	**≥67dB**	P
2.2.12	**Transmitter Power and Encoder Attack Time**		
	Transmitter Attack Time	**≤ 50 ms**	P
	Encoder Attack Time	**≤ 100 ms**	P
2.2.14	**Transmitter Throughput Delay**	**≤ 125 ms**	P
2.2.15	**Frequency Deviation for C4FM**		
	High-Level Signal Deviation	**2544 ≤ f_{dev} ≤ 3111 Hz**	P
	Low-Level Signal Deviation	**848 ≤ f_{dev} ≤ 1037 Hz**	P
2.2.16	**Modulation Fidelity**	**≤ 5% (Class A)**	P
2.2.18	**Transient Frequency Behavior**		
	Time Interval t_1 = 10 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P
	Time Interval t_2 = 25 ms	**$\|\Delta f\|$ ≤ 6.25 kHz**	P
	Time Interval t_3 = 10 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance		DTR-P25CAP081015-2997	
TRANSMITTER TESTS 762-870 MHz – 700 MHz band			
Test Case	**Description**	**Requirement**	**Results**
2.2.8.	**Unwanted Emissions: Non-Spurious Adjacent Channel Power Ratio**		
	Offset from centre frequency (kHz)	**ACPR (dB)**	
	9.375	**40**	P
	15.625, 21.875, 37.5	**60**	P
	62.5, 87.5, 150, 250, 350	**65**	P
	>400 kHz to 12 MHz, 12 MHz to paired RX Band	**75**	P
	In the paired RX Band	**100**	P
2.2.12	**Transmitter Power and Encoder Attack Time**		
	Transmitter Attack Time	**≤ 50 ms**	P
	Encoder Attack Time	**≤ 100 ms**	P
2.2.14	**Transmitter Throughput Delay**	**≤ 125 ms**	P
2.2.15	**Frequency Deviation for C4FM**		
	High-Level Signal Deviation	**2544 ≤ f_{dev} ≤ 3111 Hz**	P
	Low-Level Signal Deviation	**848 ≤ f_{dev} ≤ 1037 Hz**	P
2.2.16	**Modulation Fidelity**	**≤ 5% (Class A)**	P
2.2.18	**Transient Frequency Behavior**		
	Time Interval t_1 = 20 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P
	Time Interval t_2 = 50 ms	**$\|\Delta f\|$ ≤ 6.25 kHz**	P
	Time Interval t_3 = 10 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance		DTR-P25CAP081015-2997	
TRANSMITTER TESTS 762-870 MHz – 800 MHz band			
Test Case	**Description**	**Requirement**	**Results**
2.2.8	**Unwanted Emissions: Adjacent Channel Power Ratio**	**≥67dB**	P
2.2.12	**Transmitter Power and Encoder Attack Time**		
	Transmitter Attack Time	**≤ 50 ms**	P
	Encoder Attack Time	**≤ 100 ms**	P
2.2.14	**Transmitter Throughput Delay**	**≤ 125 ms**	P
2.2.15	**Frequency Deviation for C4FM**		
	High-Level Signal Deviation	**2544 ≤ f_{dev} ≤ 3111 Hz**	P
	Low-Level Signal Deviation	**848 ≤ f_{dev} ≤ 1037 Hz**	P
2.2.16	**Modulation Fidelity**	**≤ 5% (Class A)**	P
2.2.18	**Transient Frequency Behavior**		
	Time Interval t_1 = 20 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P
	Time Interval t_2 = 50 ms	**$\|\Delta f\|$ ≤ 6.25 kHz**	P
	Time Interval t_3 = 10 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunking Mode Subscriber Unit Performance	DTR-P25CAP081015-2990 DTR-P25CAP081015-2991 DTR-P25CAP081015-2992 DTR-P25CAP081015-2993 DTR-P25CAP081015-2994 DTR-P25CAP081015-2997 DTR-P25CAP081015-2999 DTR-P25CAP081015-3001 DTR-P25CAP081015-3002

RECEIVER TESTS 136-174 MHz, 350-400 MHz, 450-520 MHz, 450-530 MHz, 762-870 MHz.			
Test Case	**Description**	**Requirement**	**Results**
2.1.4	Reference Sensitivity C4FM Modulation	≤ -116 dBm (Class A)	P1
2.1.5	Faded Reference Sensitivity	≤ -108 dBm (Class A)	P1
2.1.6	Signal Delay Spread Capability	≥ 50 µs	P1
2.1.7	Adjacent Channel Rejection	≥ 60 dB (Class A)	P1
2.1.8	Co-Channel Rejection	≤ 9 dB	P
2.1.9	Spurious Response Rejection	≥ 80 dB (Class A)	P
2.1.10	Intermodulation Rejection	≥ 75 dB (Class A), ≥ 70 dB (Class B)	P2
2.1.11	Signal Displacement Bandwidth	≥ 1000 Hz	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunking Mode Subscriber Unit Performance		DTR-P25CAP081015-2990 DTR-P25CAP081015-2991 DTR-P25CAP081015-2992	
TRANSMITTER TESTS 136-174 MHz			
Test Case	**Description**	**Requirement**	**Results**
2.2.8	**Unwanted Emissions: Adjacent Channel Power Ratio**	**≥67dB**	P
2.2.12	**Transmitter Power and Encoder Attack Time**		
	Transmitter Attack Time	**≤ 50 ms**	P
	Encoder Attack Time	**≤ 100 ms**	P
2.2.14	**Transmitter Throughput Delay**	**≤ 125 ms**	P
2.2.15	**Frequency Deviation for C4FM**		
	High-Level Signal Deviation	**2544 ≤ f_{dev} ≤ 3111 Hz**	P
	Low-Level Signal Deviation	**848 ≤ f_{dev} ≤ 1037 Hz**	P
2.2.16	**Modulation Fidelity**	**≤ 5% (Class A)**	P
2.2.18	**Transient Frequency Behavior**		
	Time Interval t_1 = 5 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P
	Time Interval t_2 = 20 ms	**$\|\Delta f\|$ ≤ 6.25 kHz**	P
	Time Interval t_3 = 5 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunking Mode Subscriber Unit Performance		DTR-P25CAP081015-2993 DTR-P25CAP081015-2994 DTR-P25CAP081015-2999 DTR-P25CAP081015-3001 DTR-P25CAP081015-3002	
TRANSMITTER TESTS 350-400 MHz, 400-470 MHz, 450-520 MHz, 450-530 MHz.			
Test Case	**Description**	**Requirement**	**Results**
2.2.8	**Unwanted Emissions: Adjacent Channel Power Ratio**	**≥67dB**	P
2.2.12	**Transmitter Power and Encoder Attack Time**		
	Transmitter Attack Time	**≤ 50 ms**	P
	Encoder Attack Time	**≤ 100 ms**	P
2.2.14	**Transmitter Throughput Delay**	**≤ 125 ms**	P
2.2.15	**Frequency Deviation for C4FM**		
	High-Level Signal Deviation	**2544 ≤ f_{dev} ≤ 3111 Hz**	P
	Low-Level Signal Deviation	**848 ≤ f_{dev} ≤ 1037 Hz**	P
2.2.16	**Modulation Fidelity**	**≤ 5% (Class A)**	P
2.2.18	**Transient Frequency Behavior**		
	Time Interval t_1 = 10 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P
	Time Interval t_2 = 25 ms	**$\|\Delta f\|$ ≤ 6.25 kHz**	P
	Time Interval t_3 = 10 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunking Mode Subscriber Unit Performance		DTR-P25CAP081015-2997	
TRANSMITTER TESTS 762-870 MHz – 700 MHz band			
Test Case	**Description**	**Requirement**	**Results**
2.2.8	**Unwanted Emissions: Non-Spurious Adjacent Channel Power Ratio**		
	Offset from centre frequency (kHz)	**ACPR (dB)**	
	9.375	**40**	P
	15.625, 21.875, 37.5	**60**	P
	62.5, 87.5, 150, 250, 350	**65**	P
	>400 kHz to 12 MHz, 12 MHz to paired RX Band	**75**	P
	In the paired RX Band	**100**	P
2.2.12	**Transmitter Power and Encoder Attack Time**		
	Transmitter Attack Time	**≤ 50 ms**	P
	Encoder Attack Time	**≤ 100 ms**	P
2.2.14	**Transmitter Throughput Delay**	**≤ 125 ms**	P
2.2.15	**Frequency Deviation for C4FM**		
	High-Level Signal Deviation	**2544 ≤ f_{dev} ≤ 3111 Hz**	P
	Low-Level Signal Deviation	**848 ≤ f_{dev} ≤ 1037 Hz**	P
2.2.16	**Modulation Fidelity**	**≤ 5% (Class A)**	P
2.2.18	**Transient Frequency Behavior**		
	Time Interval t_1 = 20 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P
	Time Interval t_2 = 50 ms	**$\|\Delta f\|$ ≤ 6.25 kHz**	P
	Time Interval t_3 = 10 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunking Mode Subscriber Unit Performance		DTR-P25CAP081015-2997	
TRANSMITTER TESTS 762-870 MHz – 800 MHz band			
Test Case	**Description**	**Requirement**	**Results**
2.2.8	**Unwanted Emissions: Adjacent Channel Power Ratio**	**≥67dB**	P
2.2.12	**Transmitter Power and Encoder Attack Time**		
	Transmitter Attack Time	**≤ 50 ms**	P
	Encoder Attack Time	**≤ 100 ms**	P
2.2.14	**Transmitter Throughput Delay**	**≤ 125 ms**	P
2.2.15	**Frequency Deviation for C4FM**		
	High-Level Signal Deviation	**2544 ≤ f_{dev} ≤ 3111 Hz**	P
	Low-Level Signal Deviation	**848 ≤ f_{dev} ≤ 1037 Hz**	P
2.2.16	**Modulation Fidelity**	**≤ 5% (Class A)**	P
2.2.18	**Transient Frequency Behavior**		
	Time Interval t_1 = 20 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P
	Time Interval t_2 = 50 ms	**$\|\Delta f\|$ ≤ 6.25 kHz**	P
	Time Interval t_3 = 10 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunking Mode Subscriber Unit Performance	**DTR-P25CAP081015-2990** **DTR-P25CAP081015-2991** **DTR-P25CAP081015-2992** **DTR-P25CAP081015-2993** **DTR-P25CAP081015-2994** **DTR-P25CAP081015-2997** **DTR-P25CAP081015-2999** **DTR-P25CAP081015-3001** **DTR-P25CAP081015-3002**

SUBSCRIBER UNIT TESTS 136-174 MHz, 350-400 MHz, 450-520 MHz, 450-530 MHz, 762-870 MHz.

Test Case	Description	Requirement	Results
2.3.1	**Trunking Control Channel Slot Times, 45 ms Slot**		
	Encode Attack Time	**≤11.65 ms**	P
		≥2.00 ms	P
	RF Power Attack Time	**≤11.65 ms**	P
		≥0.00 ms	P
	RF Power Turn Off Time	**≤1.57 ms**	P
2.3.2	**Trunking Request Time 45 ms Slot**	**≤167.5 ms**	P
2.3.3	**Trunking Voice Access Time**	**450 ms**	P
2.3.5	**Transmitter Time to Key on a Traffic Channel**		
	Transmitter Time to Key on a Traffic Channel	**Short Channel Form ≤150 ms**	P
		Explicit Channel Form ≤171.1 ms	P
	Encoder Transmit Time	**Short Channel Form ≤150 ms**	P
		Explicit Channel Form ≤171.1 ms	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.3.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Interoperability		**DTR-P25CAP081017-1090623T01**	**DTR-MOT-40245-M3-MC1**	**DTR-P25CAP081010-09102801**	**DTR-P25CAP081015-3081**	**DTR-TIMCO081016-TP/TM9100**	**DTR-P25CAP081015-3185**
Tait Radio Communications TM9100 **136-174 MHz, 350-400 MHz, 450-520 MHz, 450-530 MHz, 762-870 MHz.**		Harris P25 Trunked Infrastructure System	Motorola Astro P25	EFJohnson 3800 Trunking Repeater Base Station	Taitnet/EADS COR P25 Infrastructure	PowerTrunk25	Raytheon P25net™ Phase 1 Infrastructure
Test Case	**Description**	Results					
2.2.1	Full Registration						
2.2.1.4.1	Test Case 1 – Valid Registration						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.1.4.2	Test Case 2 – Denied or Refused Registration						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.1.4.3	Test Case 3 – Unverified Registration						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.2	Group Voice Call						
2.2.2.4.1	Test Case 1 – Unit-to-Unit Call Queued without Target Availability Check						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.2.4.2	Test Case 2 – Unit-to-Unit Call Denied						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.3.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Interoperability		DTR-P25CAP081017-1090623T01	DTR-MOT-40245-M3-MC1	DTR-P25CAP081010-09102801	DTR-P25CAP081015-3081	DTR-TIMCO081016-TP/TM9100	DTR-P25CAP081015-3185
Tait Radio Communications TM9100 **136-174 MHz, 350-400 MHz, 450-520 MHz, 450-530 MHz, 762-870 MHz.**		Harris P25 Trunked Infrastructure System	Motorola Astro P25	EFJohnson 3800 Trunking Repeater Base Station	Taitnet/EADS COR P25 Infrastructure	PowerTrunk25	Raytheon P25net™ Phase 1 Infrastructure
Test Case	**Description**	Results					
2.2.2.4.3	Test Case 3 – Group Call Request Queued						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.3	Unit-to-Unit Voice Call						
2.2.3.4.1	Test Case 1 – Unit-to-Unit Call with Target Availability Check						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.3.4.2	Test Case 2 – Unit-to-Unit Call with Target Availability Check Denied by Target						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.3.4.3	Test Case 3 – Unit-to-Unit Call Queued with Target Availability Check - traffic channel assignment after target availability check						
	Home	P	P	P	N/A2	N/A3	N/A4
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.3.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Interoperability		**DTR-P25CAP081017-1090623T01**	**DTR-MOT-40245-M3-MC1**	**DTR-P25CAP081010-091102801**	**DTR-P25CAP081015-3081**	**DTR-TIMCO081016-TP/TM9100**	**DTR-P25CAP081015-3185**
Tait Radio Communications TM9100 **136-174 MHz, 350-400 MHz, 450-520 MHz, 450-530 MHz, 762-870 MHz.**		Harris P25 Trunked Infrastructure System	Motorola Astro P25	EFJohnson 3800 Trunking Repeater Base Station	Taitnet/EADS COR P25 Infrastructure	PowerTrunk25	Raytheon P25net™ Phase 1 Infrastructure
Test Case	**Description**	Results					
2.2.3.4.4	Test Case 4 – Unit-to-Unit Call Queued with Target Availability Check - traffic channel assignment before target availability check						
	Home	N/A1	N/A1	N/A1	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.3.4.5	Test Case 5 – Unit-to-Unit Call without Target Availability Check						
	Home	N2	N3	N4	N5	N6	N7
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.3.4.6	Test Case 6 – Unit-to-Unit Call queued without target availability check						
	Home	N2	N3	N4	N5	N6	N7
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.3.4.7	Test Case 7 – Unit to Unit call denied						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.4	Broadcast Voice Call						
2.2.4.4.1	Test Case 1 – Broadcast Voice Call						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.3.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Interoperability		**DTR-P25CAP081017-1090623T01**	**DTR-MOT-40245-M3-MC1**	**DTR-P25CAP081010-09102801**	**DTR-P25CAP081015-3081**	**DTR-TIMCO081016-TP/TM9100**	**DTR-P25CAP081015-3185**
Tait Radio Communications TM9100 **136-174 MHz, 350-400 MHz, 450-520 MHz, 450-530 MHz, 762-870 MHz.**		Harris P25 Trunked Infrastructure System	Motorola Astro P25	EFJohnson 3800 Trunking Repeater Base Station	Taitnet/EADS COR P25 Infrastructure	PowerTrunk25	Raytheon P25net™ Phase 1 Infrastructure
Test Case	**Description**	Results					
2.2.5	Affiliation						
2.2.5.4.1	Test Case 1 – Radio Permitted To Affiliate With New Group						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.5.4.2	Test Case 2 – Radio Denied Affiliation To New Group						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.6	Announcement Group Call						
2.2.6.4.1	Test Case 1 – Collection Of Talk Groups Receive Call						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.7	Emergency Alarm						
2.2.7.4.1	Test Case 1 – Emergency Alarm						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.3.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Interoperability		**DTR-P25CAP081017-1090623T01**	**DTR-MOT-40245-M3-MC1**	**DTR-P25CAP081010-091102801**	**DTR-P25CAP081015-3081**	**DTR-TIMCO081016-TP/TM9100**	**DTR-P25CAP081015-3185**
Tait Radio Communications TM9100 **136-174 MHz, 350-400 MHz, 450-520 MHz, 450-530 MHz, 762-870 MHz.**		Harris P25 Trunked Infrastructure System	Motorola Astro P25	EFJohnson 3800 Trunking Repeater Base Station	Taitnet/EADS COR P25 Infrastructure	PowerTrunk25	Raytheon P25net™ Phase 1 Infrastructure
Test Case	**Description**	Results					
2.2.8	Emergency Group Call						
2.2.8.4.1	Test Case 1 – Emergency Call						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.10	Encryption						
2.2.10.4.1	Test Case 1 – Call Privacy for Encrypted Call						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.11	Intra-Location Registration Area Roaming						
2.2.11.4.1	Test Case 1 – Idle Radio						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1

Base Station/Repeater Units Tested			
Manufacturer and Point of Contact	**Product Name and Definition**	**Installed Options**	
Tait Radio Communications Scott Quintavelle – (281) 829- 3300	Taitnet P25 Infrastructure	**Hardware:** **Software:**	TBAH0 3.35
	EADS COR P25	**Software**	v11_03E18
Harris Corporation Greg Fowler – (434) 455-9294	P25 Trunked Infrastructure System	Release 6.4.2	
Motorola Inc Julie Jagoda - (847) 576-2022	Astro P25	Release 7.7, 7.8 and 7.9.	
EFJohnson Technologies John Oblak - (507) 837-5116	3800 Trunking Repeater Base Station	Trunking Release 3.1-RC1	
PowerTrunk Inc. Lorena Martin - +1 212 222 4971	PowerTrunk25	Ver. 9.4.52	
Raytheon JPS Janet Holt – 919.606.4748 (office & mobile)	Raytheon P25net™ Phase 1 Infrastructure	**Hardware:** **Software:**	TBAK2 (762-870 MHz) 3.25
		Hardware: **Software:**	P25netCC™ Channel Controller 2.10.0000d

Model Class Definition	**Applied to:** P25-CAB-CAI_TEST-REQ – March 2010, Section 2,1.1.1, 2.1.1.2 and Section 2.1.3.2.	
Model Class Name	**Product Name, Definition, Unique ID**	**Installed Options**
Tait Model Class TM9100	TMAB1E Mobile SN 19516010	**Hardware:** TMAB1E 136-174 MHz **Software:** 6.09
	TMAB1F Mobile SN 19553673	**Hardware:** TMAB1F 136-174 MHz **Software:** 6.09
	TMAB1Z Mobile SN 13158042, 19559191	**Hardware:** TMAB1Z 136-174 MHz **Software:** 6.09
	TMAH5E Mobile SN 19540891	**Hardware:** TMAH5E 400-470 MHz **Software:** 6.09
	TMAH5F Mobile SN 19556091	**Hardware:** TMAH5F 400-470 MHz **Software:** 6.09
	TMAH6E Mobile SN 19556099	**Hardware:** TMAH6E 450-530 MHz **Software:** 6.09
	TMAH7F Mobile SN 19556183	**Hardware:** TMAH7F 450-520 MHz **Software:** 6.09
	TMAG2F Mobile SN 19556184	**Hardware:** TMAG2F 350-400 MHz **Software:** 6.09
	TMAK5F Mobile SN 19540143	**Hardware:** TMAK5F 762-870 MHz **Software:** 6.09

Test Case Result Definitions	
No Test Performed	-
Test Does Not Apply to the Test Object	N/A
Test Object Meets Requirements	P (Pass)
Test Object Does Not Meet Requirements	F (Fail)
Test Object is Inconclusive	I (Inconclusive)

Comments
P1: Standard Modulation only. LSM and WCQPSK simulcast modulation is not supported by Tait Radio Communications TM9100.
P2: All products have Class A passes except for Product Name TMAB1Z (refer to Model Class Table above), which has a Class B pass.
N1: Inter-System Roaming configuration and Inter-WACN Roaming configuration are not supported by Tait Radio Communications TM9100.
N2: Test cases 2.2.3.4.5 and 2.2.3.4.6 are not supported by Tait Radio Communications TM9100.
N3: Test cases 2.2.3.4.5 and 2.2.3.4.6 are not supported by Tait Radio Communications TM9100 and Motorola Astro P25.
N4: Test cases 2.2.3.4.5 and 2.2.3.4.6 are not supported by Tait Radio Communications TM9100 and EF Johnson 3800 Trunking Repeater Base Station.
N5: Test cases 2.2.3.4.5 and 2.2.3.4.6 are not supported by Tait Radio Communications TM9100 and Taitnet/EADS CORP25 Infrastructure.
N6: Test cases 2.2.3.4.5 and 2.2.3.4.6 are not supported by Tait Radio Communications TM9100 and PowerTrunk25 Infrastructure.
N7: Test cases 2.2.3.4.5 and 2.2.3.4.6 are not supported by Tait Radio Communications TM9100 and Raytheon P25net™ Phase 1 Infrastructure.
N/A1: Test case 2.2.3.4.4 is not applicable for Motorola Astro P25, EF Johnson 3800 Trunking Repeater Base Station, and Harris P25 Trunked Infrastructure System; see results of test case 2.2.3.4.3.
N/A2: Test case 2.2.3.4.3 is not applicable for Taitnet/EADS COR P25 Infrastructure; see results of test case 2.2.3.4.4.
N/A3: Test case 2.2.3.4.3 is not applicable for PowerTrunk25 Infrastructure; see results of test case 2.2.3.4.4.
N/A4: Test case 2.2.3.4.3 is not applicable for Raytheon P25net™ Phase 1 Infrastructure; see results of test case 2.2.3.4.4.

OMB NO: 1640-0015

EXPIRATION DATE: 04/30/2012
Burden Statement
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DHS FORM 10056 – June 2009

Project 25 Compliance Assessment Program
SUPPLIER'S DECLARATION OF COMPLIANCE (SDOC)
SDOC-TAI-TP9100-20110818

Tait Radio Communications
15342 Park Row
Houston, Texas 77084
United States of America
Customer Contact: Scott Quintavelle
Phone: +1 281 829 3300
Fax: +1 281 829 3320
Toll Free: 800 320 4037
http://www.taitworld.com
info@taitmobile.com

Product Name: Tait Radio Communications TP9100 series Portable Radio
Installed Options: Hardware options TPAB1 136-174 MHz, TPAH4 380-420 MHz, TPAH5 400-470 MHz, TPAH6 450-530 MHz, TPAK5 762-870 MHz; Firmware version 6.09
Installed Vocoder: Baseline with System Improvements

Other devices tested with Tait Radio Communications TP9100			
Manufacturer	**Product Name, Definition, and unique ID**	**Installed Options**	
Harris Corporation	P25 Trunked Infrastructure Base Station/Repeater -	Release 6.4.2	
Motorola Inc	Astro P25 PSC 9600 CLN1725B Base Station/Repeater SN CAF030LLFY	Release 7.7, 7.8 and 7.9	
Tait Radio Communications	Taitnet P25 Infrastructure Base Station/Repeater SNs: 18083365, 18075574, 18024395.	Hardware: TBAH0	Software: 3.35
	EADS COR P25	-	v11_03E18
EF Johnson	3800 Trunking Repeater Base Station Base Station/Repeater S/N 242-3831-000	Trunking Release 3.1-RC1	
PowerTrunk Inc.	PowerTrunk25 S/N B800014	Ver. 9.4.52	
Raytheon JPS	Raytheon P25net™ Phase 1 Infrastructure	**Hardware:** **Software:**	TBAK2 (762-870 MHz) 3.25
		Hardware: **Software:**	P25netCC™ Channel Controller 2.10.0000d

Project 25 Compliance Assessment Program
SUPPLIER'S DECLARATION OF COMPLIANCE (SDOC)
SDOC-TAI-TP9100-20110818

Tait Radio Communications hereby declares that TP9100 Portable Radio product(s) pass(es) the test cases listed in the following Project 25 Compliance Assessment Bulletin sections in their entirety with exclusions as noted:

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 and 2.1.1.2 – Project 25 Phase 1 Common Air Interface Conventional and Trunked Subscriber Unit Performance, DTR-P25CAP081015-2986, DTR-P25CAP081015-2988, DTR-P25CAP081015-2995, DTR-P25CAP081015-2998 and DTR-P25CAP081015-3000, standard Modulation only. LSM and WCQPSK simulcast modulation is not supported by Tait Radio Communications TP9100.

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.3.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Interoperability DTR P25CAP081017-1090623T01, DTR - P25CAP081015 – 3081, DTR-P25CAP081010-09102801, DTR-TIMCO081016-TP/TP9100, DTR-MOT-40245-M3 and DTR-P25CAP081015 – 3185. Passed with the exception of Inter-WACN and Inter-System roaming which are not supported by Tait Radio Communications TP9100 and Taitnet/EADS COR P25 Infrastructure, and test case(s) 2.2.3.4.3 when tested with Taitnet/EADS COR P25 Infrastructure, PowerTrunk25 and Raytheon P25net™ Phase 1, 2.2.3.4.4 when tested with Harris P25 Trunked Infrastructure System, EF Johnson 3800 Trunking Repeater Base Station and Motorola Astro P25, and 2.2.3.4.5 and 2.2.3.4.6 when tested with Taitnet/EADS COR P25 Infrastructure, Harris P25 Trunked Infrastructure System, EF Johnson 3800 Trunking Repeater Base Station, PowerTrunk25, Motorola Astro P25 and Raytheon P25net™ Phase 1 Infrastructure. Tait Radio Communications TP9100, Taitnet/EADS COR P25 Infrastructure, EF Johnson 3800 Trunking Repeater Base Station, PowerTrunk25, Motorola Astro P25 and Raytheon P25net™ Phase 1 Infrastructure did not support the test case(s).

The summary report of tests performed at Project 25 Compliance Assessment Program Recognized Laboratory(s) P25CAP081015, P25CAP081017, P25CAP081012, P25CAP081016-09, and P25CAP081010 is identified as follows: Summary Test Report Identification: STR-TAI-TP9100-20110818 issued on 18th August 2011.

18th August 2011

Issue Date

Supplier's Authorized Representative Signature

Brian Emmett

Supplier's Authorized Representative Printed Name

Project 25 Compliance Assessment Program
SUPPLIER'S DECLARATION OF COMPLIANCE (SDOC)
SDOC-TAI-TP9100-20110818

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OMB NO: 1640-0015
EXPIRATION DATE: 04/30/2012
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DHS FORM 10044 – June 2009

Project 25 Compliance Assessment Program

Summary Test Report

TP9100 series Portable Radio

STR-TAI-TP9100-20110818

Test Item Description	
Manufacturer	Tait Radio Communications
Manufacturer Contact	Scott Quintavalle – (281) 829- 3300
Product Name	Tait Radio Communications TP9100 Series Portable Radio
Installed Options	Hardware options TPAB1 136-174 MHz, TPAH4 380-420 MHz, TPAH5 400-470MHz, TPAH6 450-530 MHz, TPAK5 762-870 MHz ; Firmware version 6.09
Installed Vocoder	Baseline with System Improvements

Test Description
P25-CAB-CAI_TEST-REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Performance and Section 2.1.3.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Interoperability.

Laboratory Information	
P25 CAP Laboratory Code	P25CAP081015, Tait Electronics Ltd Teltest Laboratories.
Date(s) of Test	5 May 2009 to 18 December 2009, 31 August 2010.
Date of Issue	18 December 2009, 9 September 2010.

Laboratory Information	
P25 CAP Laboratory Code	P25CAP081017, Harris Corporation.
Date(s) of Test	23 June 2009
Date of Issue	23 June 2009

Laboratory Information	
P25 CAP Laboratory Code	P25CAP081012, Motorola Astro System Integration and Test Lab.
Date(s) of Test	8-9 March 2010
Date of Issue	12 March 2010

Laboratory Information	
P25 CAP Laboratory Code	P25CAP081010, E F Johnson Technologies.
Date(s) of Test	20 October 2009
Date of Issue	28 October 2009

Laboratory Information	
P25 CAP Laboratory Code	P25CAP081016-09, Timco Engineering Incorporated.
Date(s) of Test	15 June 2010
Date of Issue	15 June 2010

Informative References	
Date	**Title**
March 2010	P25-CAB-CAI_TEST_REQ

Other Devices Tested with Tait Radio Communications TPAB1			
Manufacturer and Point of Contact	**Product Name and Definition**	**Installed Options**	
Tait Radio Communications Scott Quintavalle – (281) 829- 3300	Taitnet P25 Infrastructure	**Hardware:** TBAH0 **Software:** 3.35	
	EADS COR P25	**Software** v11_03E18	
Harris Corporation Greg Fowler – (434) 455-9294	P25 Trunked Infrastructure System	Release 6.4.2	
Motorola Inc Julie Jagoda - (847) 576-2022	Astro P25	Release 7.7 7.8 and 7.9	
EFJohnson Technologies John Oblak - (507) 837-5116	3800 Trunking Repeater Base Station	Trunking Release 3.1-RC1	
PowerTrunk Inc. Lorena Martin – (212) 222 4971	PowerTrunk25	Ver. 9.4.52	
Raytheon JPS Janet Holt – 919.606.4748 (office & mobile)	Raytheon P25net™ Phase 1 Infrastructure	**Hardware:** **Software:**	TBAK2 (762-870 MHz) 3.25
		Hardware: **Software:**	P25netCC™ Channel Controller 2.10.0000d

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance		DTR-P25CAP081015-2986 DTR-P25CAP081015-2988 DTR-P25CAP081015-2995 DTR-P25CAP081015-2998 DTR-P25CAP081015-3000	
RECEIVER TESTS 136-174 MHz, 380-420 MHz, 400-470 MHz, 450-530 MHz, 762-870 MHz.			
Test Case	**Description**	**Requirement**	**Results**
2.1.4	**Reference Sensitivity**	**≤ -116 dBm (Class A)**	P1
2.1.5	**Faded Reference Sensitivity**	**≤ -108 dBm (Class A)**	P1
2.1.6	**Signal Delay Spread Capability**	**≥ 50 μs**	P1
2.1.7	**Adjacent Channel Rejection**	**≥ 60 dB (Class A)**	P1
2.1.8	**Co-Channel Rejection**	**≤ 9 dB**	P
2.1.9	**Spurious Response Rejection**	**≥ 70 dB (Class A)**	P
2.1.10	**Intermodulation Rejection**	**≥ 70 dB (Class A)**	P
2.1.11	**Signal Displacement Bandwidth**	**≥ 1000 Hz**	P
2.1.17	**Late Entry Unsquelch Delay**		
	No Talk Group or Encryption	**≤ 125 ms**	P
	Talk Group Only	**≤ 370 ms**	P
	Encryption Only	**≤ 370 ms**	P
	Both (on clear or encrypted channel)	**≤ 460 ms**	P
2.1.18	**Receiver Throughput Delay**	**≤ 125 ms**	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance		DTR-P25CAP081015-2986	
TRANSMITTER TESTS 136-174 MHz			
Test Case	**Description**	**Requirement**	**Results**
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio	≥67dB	P
2.2.12	Transmitter Power and Encoder Attack Time		
	Transmitter Attack Time	≤ 50 ms	P
	Encoder Attack Time	≤ 100 ms	P
2.2.14	Transmitter Throughput Delay	≤ 125 ms	P
2.2.15	Frequency Deviation for C4FM		
	High-Level Signal Deviation	$2544 \le f_{dev} \le 3111$ Hz	P
	Low-Level Signal Deviation	$848 \le f_{dev} \le 1037$ Hz	P
2.2.16	Modulation Fidelity	≤ 5% (Class A)	P
2.2.18	Transient Frequency Behavior		
	Time Interval t_1 = 5 ms	$\lvert\Delta f\rvert \le 12.5$ kHz	P
	Time Interval t_2 = 20 ms	$\lvert\Delta f\rvert \le 6.25$ kHz	P
	Time Interval t_3 = 5 ms	$\lvert\Delta f\rvert \le 12.5$ kHz	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance		DTR-P25CAP081015-2988 DTR-P25CAP081015-2998 DTR-P25CAP081015-3000	
TRANSMITTER TESTS 380-420 MHz, 400-470 MHz, 450-530 MHz.			
Test Case	**Description**	**Requirement**	**Results**
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio	≥67dB	P
2.2.12	Transmitter Power and Encoder Attack Time		
	Transmitter Attack Time	≤ 50 ms	P
	Encoder Attack Time	≤ 100 ms	P
2.2.14	Transmitter Throughput Delay	≤ 125 ms	P
2.2.15	Frequency Deviation for C4FM		
	High-Level Signal Deviation	$2544 \le f_{dev} \le 3111$ Hz	P
	Low-Level Signal Deviation	$848 \le f_{dev} \le 1037$ Hz	P
2.2.16	Modulation Fidelity	≤ 5% (Class A)	P
2.2.18	Transient Frequency Behavior		
	Time Interval t_1 = 10 ms	$\lvert\Delta f\rvert \le 12.5$ kHz	P
	Time Interval t_2 = 25 ms	$\lvert\Delta f\rvert \le 6.25$ kHz	P
	Time Interval t_3 = 10 ms	$\lvert\Delta f\rvert \le 12.5$ kHz	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance		DTR-P25CAP081015-2995	
TRANSMITTER TESTS 762-870 MHz – 700 MHz band			
Test Case	**Description**	**Requirement**	**Results**
2.2.8	**Unwanted Emissions: Non-Spurious Adjacent Channel Power Ratio**		
	Offset from centre frequency (kHz)	**ACPR (dB)**	
	9.375	**40**	P
	15.625, 21.875, 37.5	**60**	P
	62.5, 87.5, 150, 250, 350	**65**	P
	>400 kHz to 12 MHz, 12 MHz to paired RX Band	**75**	P
	In the paired RX Band	**100**	P
2.2.12	**Transmitter Power and Encoder Attack Time**		
	Transmitter Attack Time	**≤ 50 ms**	P
	Encoder Attack Time	**≤ 100 ms**	P
2.2.14	**Transmitter Throughput Delay**	**≤ 125 ms**	P
2.2.15	**Frequency Deviation for C4FM**		
	High-Level Signal Deviation	**2544 ≤ f_{dev} ≤ 3111 Hz**	P
	Low-Level Signal Deviation	**848 ≤ f_{dev} ≤ 1037 Hz**	P
2.2.16	**Modulation Fidelity**	**≤ 5% (Class A)**	P
2.2.18	**Transient Frequency Behavior**		
	Time Interval t_1 = 20 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P
	Time Interval t_2 = 50 ms	**$\|\Delta f\|$ ≤ 6.25 kHz**	P
	Time Interval t_3 = 10 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance		DTR-P25CAP081015-2995	
TRANSMITTER TESTS 762-870 MHz – 800 MHz band			
Test Case	**Description**	**Requirement**	**Results**
2.2.8	**Unwanted Emissions: Adjacent Channel Power Ratio**	**≥67dB**	P
2.2.12	**Transmitter Power and Encoder Attack Time**		
	Transmitter Attack Time	**≤ 50 ms**	P
	Encoder Attack Time	**≤ 100 ms**	P
2.2.14	**Transmitter Throughput Delay**	**≤ 125 ms**	P
2.2.15	**Frequency Deviation for C4FM**		
	High-Level Signal Deviation	**2544 ≤ f_{dev} ≤ 3111 Hz**	P
	Low-Level Signal Deviation	**848 ≤ f_{dev} ≤ 1037 Hz**	P
2.2.16	**Modulation Fidelity**	**≤ 5% (Class A)**	P
2.2.18	**Transient Frequency Behavior**		
	Time Interval t_1 = 20 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P
	Time Interval t_2 = 50 ms	**$\|\Delta f\|$ ≤ 6.25 kHz**	P
	Time Interval t_3 = 10 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunking Mode Subscriber Unit Performance		DTR-P25CAP081015-2986 DTR-P25CAP081015-2988 DTR-P25CAP081015-2995 DTR-P25CAP081015-2998 DTR-P25CAP081015-3000	
RECEIVER TESTS 136-174 MHz, 380-420 MHz, 400-470 MHz, 450-530 MHz, 762-870 MHz.			
Test Case	Description	Requirement	Results
2.1.4	Reference Sensitivity	≤ -116 dBm (Class A)	P1
2.1.5	Faded Reference Sensitivity	≤ -108 dBm (Class A)	P1
2.1.6	Signal Delay Spread Capability	≥ 50 µs	P1
2.1.7	Adjacent Channel Rejection	≥ 60 dB (Class A)	P1
2.1.8	Co-Channel Rejection	≤ 9 dB	P
2.1.9	Spurious Response Rejection	≥ 70 dB (Class A)	P
2.1.10	Intermodulation Rejection	≥ 70 dB (Class A)	P
2.1.11	Signal Displacement Bandwidth	≥ 1000 Hz	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunking Mode Subscriber Unit Performance		DTR-P25CAP081015-2986	
TRANSMITTER TESTS 136-174 MHz			
Test Case	**Description**	**Requirement**	**Results**
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio	≥67dB	P
2.2.12	Transmitter Power and Encoder Attack Time		
	Transmitter Attack Time	≤ 50 ms	P
	Encoder Attack Time	≤ 100 ms	P
2.2.14	Transmitter Throughput Delay	≤ 125 ms	P
2.2.15	Frequency Deviation for C4FM		
	High-Level Signal Deviation	$2544 \le f_{dev} \le 3111$ Hz	P
	Low-Level Signal Deviation	$848 \le f_{dev} \le 1037$ Hz	P
2.2.16	Modulation Fidelity	≤ 5% (Class A)	P
2.2.18	Transient Frequency Behavior		
	Time Interval t_1 = 5 ms	$\lvert\Delta f\rvert \le 12.5$ kHz	P
	Time Interval t_2 = 20 ms	$\lvert\Delta f\rvert \le 6.25$ kHz	P
	Time Interval t_3 = 5 ms	$\lvert\Delta f\rvert \le 12.5$ kHz	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunking Mode Subscriber Unit Performance		DTR-P25CAP081015-2988 DTR-P25CAP081015-2998 DTR-P25CAP081015-3000	
TRANSMITTER TESTS 380-420 MHz, 400-470 MHz, 450-530 MHz.			
Test Case	**Description**	**Requirement**	**Results**
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio	≥67dB	P
2.2.12	Transmitter Power and Encoder Attack Time		
	Transmitter Attack Time	≤ 50 ms	P
	Encoder Attack Time	≤ 100 ms	P
2.2.14	Transmitter Throughput Delay	≤ 125 ms	P
2.2.15	Frequency Deviation for C4FM		
	High-Level Signal Deviation	$2544 \le f_{dev} \le 3111$ Hz	P
	Low-Level Signal Deviation	$848 \le f_{dev} \le 1037$ Hz	P
2.2.16	Modulation Fidelity	≤ 5% (Class A)	P
2.2.18	Transient Frequency Behavior		
	Time Interval t_1 = 10 ms	$\lvert\Delta f\rvert \le 12.5$ kHz	P
	Time Interval t_2 = 25 ms	$\lvert\Delta f\rvert \le 6.25$ kHz	P
	Time Interval t_3 = 10 ms	$\lvert\Delta f\rvert \le 12.5$ kHz	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunking Mode Subscriber Unit Performance		DTR-P25CAP081015-2995	
TRANSMITTER TESTS 762-870 MHz – 700 MHz band			
Test Case	**Description**	**Requirement**	**Results**
2.2.8	**Unwanted Emissions: Non-Spurious Adjacent Channel Power Ratio**		
	Offset from centre frequency (kHz)	**ACPR (dB)**	
	9.375	**40**	P
	15.625, 21.875, 37.5	**60**	P
	62.5, 87.5, 150, 250, 350	**65**	P
	>400 kHz to 12 MHz, 12 MHz to paired RX Band	**75**	P
	In the paired RX Band	**100**	P
2.2.12	**Transmitter Power and Encoder Attack Time**		
	Transmitter Attack Time	**≤ 50 ms**	P
	Encoder Attack Time	**≤ 100 ms**	P
2.2.14	**Transmitter Throughput Delay**	**≤ 125 ms**	P
2.2.15	**Frequency Deviation for C4FM**		
	High-Level Signal Deviation	**2544 ≤ f_{dev} ≤ 3111 Hz**	P
	Low-Level Signal Deviation	**848 ≤ f_{dev} ≤ 1037 Hz**	P
2.2.16	**Modulation Fidelity**	**≤ 5% (Class A)**	P
2.2.18	**Transient Frequency Behavior**		
	Time Interval t_1 = 20 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P
	Time Interval t_2 = 50 ms	**$\|\Delta f\|$ ≤ 6.25 kHz**	P
	Time Interval t_3 = 10 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunking Mode Subscriber Unit Performance		DTR-P25CAP081015-2995	
TRANSMITTER TESTS 762-870 MHz – 800 MHz band			
Test Case	**Description**	**Requirement**	**Results**
2.2.8	**Unwanted Emissions: Adjacent Channel Power Ratio**	**≥67dB**	P
2.2.12	**Transmitter Power and Encoder Attack Time**		
	Transmitter Attack Time	**≤ 50 ms**	P
	Encoder Attack Time	**≤ 100 ms**	P
2.2.14	**Transmitter Throughput Delay**	**≤ 125 ms**	P
2.2.15	**Frequency Deviation for C4FM**		
	High-Level Signal Deviation	**2544 ≤ f_{dev} ≤ 3111 Hz**	P
	Low-Level Signal Deviation	**848 ≤ f_{dev} ≤ 1037 Hz**	P
2.2.16	**Modulation Fidelity**	**≤ 5% (Class A)**	P
2.2.18	**Transient Frequency Behavior**		
	Time Interval t_1 = 20 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P
	Time Interval t_2 = 50 ms	**$\|\Delta f\|$ ≤ 6.25 kHz**	P
	Time Interval t_3 = 10 ms	**$\|\Delta f\|$ ≤ 12.5 kHz**	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunking Mode Subscriber Unit Performance		DTR-P25CAP081015-2986 DTR-P25CAP081015-2988 DTR-P25CAP081015-2995 DTR-P25CAP081015-2998 DTR-P25CAP081015-3000	
SUBSCRIBER UNIT TESTS 136-174 MHz, 380-420 MHz, 400-470 MHz, 450-530 MHz, 762-870 MHz.			
Test Case	**Description**	**Requirement**	**Results**
2.3.1	**Trunking Control Channel Slot Times, 45 ms Slot**		
	Encode Attack Time	**≤11.65 ms**	P
		≥2.00 ms	P
	RF Power Attack Time	**≤11.65 ms**	P
		≥0.00 ms	P
	RF Power Turn Off Time	**≤1.57 ms**	P
2.3.2	**Trunking Request Time 45 ms Slot**	**≤167.5 ms**	P
2.3.3	**Trunking Voice Access Time**	**450 ms**	P
2.3.5	**Transmitter Time to Key on a Traffic Channel**		
	Transmitter Time to Key on a Traffic Channel	**Short Channel Form ≤150 ms**	P
		Explicit Channel Form ≤171.1 ms	P
	Encoder Transmit Time	**Short Channel Form ≤150 ms**	P
		Explicit Channel Form ≤171.1 ms	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.3.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Interoperability		DTR-P25CAP081017-1090623T01	DTR-MOT-40245-M3-MC1	DTR-P25CAP081010-09102801	DTR-P25CAP081015-3081	DTR-TIMCO081016-TP/TM9100	DTR-P25CAP081015-3185
Tait Radio Communications TP9100 136-174 MHz, 380-420 MHz, 400-470 MHz, 450-530 MHz, 762-870 MHz.		Harris P25 Trunked Infrastructure System	Motorola Astro P25	EFJohnson 3800 Trunking Repeater Base Station	Taitnet/EADS COR P25 Infrastructure	PowerTrunk25	Raytheon P25net™ Phase 1 Infrastructure
Test Case	**Description**	Results					
2.2.1	Full Registration						
2.2.1.4.1	Test Case 1 – Valid Registration						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.1.4.2	Test Case 2 – Denied or Refused Registration						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.1.4.3	Test Case 3 – Unverified Registration						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.2	Group Voice Call						
2.2.2.4.1	Test Case 1 – Unit-to-Unit Call Queued without Target Availability Check						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.2.4.2	Test Case 2 – Unit-to-Unit Call Denied						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.3.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Interoperability		DTR-P25CAP081017-1090623T01	DTR-MOT-40245-M3-MC1	DTR-P25CAP081010-09102801	DTR-P25CAP081015-3081	DTR-TIMCO081016-TP/TM9100	DTR-P25CAP081015-3185
Tait Radio Communications TP9100 136-174 MHz, 380-420 MHz, 400-470 MHz, 450-530 MHz, 762-870 MHz.		Harris P25 Trunked Infrastructure System	Motorola Astro P25	EFJohnson 3800 Trunking Repeater Base Station	Taitnet/EADS COR P25 Infrastructure	PowerTrunk25	Raytheon P25net™ Phase 1 Infrastructure
Test Case	**Description**	Results					
2.2.2.4.3	Test Case 3 – Group Call Request Queued						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.3	Unit-to-Unit Voice Call						
2.2.3.4.1	Test Case 1 – Unit-to-Unit Call with Target Availability Check						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.3.4.2	Test Case 2 – Unit-to-Unit Call with Target Availability Check Denied by Target						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.3.4.3	Test Case 3 – Unit-to-Unit Call Queued with Target Availability Check - traffic channel assignment after target availability check						
	Home	P	P	P	N/A2	N/A3	N/A4
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.3.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Interoperability		DTR-P25CAP081017-1090623T01	DTR-MOT-40245-M3-MC1	DTR-P25CAP081010 - 09102801	DTR-P25CAP081015-3081	DTR-TIMCO081016-TP/TM9100	DTR-P25CAP081015-3185
Tait Radio Communications TP9100 136-174 MHz, 380-420 MHz, 400-470 MHz, 450-530 MHz, 762-870 MHz.		Harris P25 Trunked Infrastructure System	Motorola Astro P25	EFJohnson 3800 Trunking Repeater Base Station	Taitnet/EADS COR P25 Infrastructure	PowerTrunk25	Raytheon P25net™ Phase 1 Infrastructure
Test Case	**Description**	Results					
2.2.3.4.4	Test Case 4 – Unit-to-Unit Call Queued with Target Availability Check - traffic channel assignment before target availability check						
	Home	N/A1	N/A1	N/A1	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.3.4.5	Test Case 5 – Unit-to-Unit Call without Target Availability Check						
	Home	N2	N3	N4	N5	N6	N7
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.3.4.6	Test Case 6 – Unit-to-Unit Call queued without target availability check						
	Home	N2	N3	N4	N5	N6	N7
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.3.4.7	Test Case 7 – Unit to Unit call denied						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.4	Broadcast Voice Call						
2.2.4.4.1	Test Case 1 – Broadcast Voice Call						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.3.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Interoperability		**DTR-P25CAP081017-1090623T01**	**DTR-MOT-40245-M3-MC1**	**DTR-P25CAP081010-09102801**	**DTR-P25CAP081015-3081**	**DTR-TIMCO081016-TP/TM9100**	**DTR-P25CAP081015-3185**
Tait Radio Communications TP9100 136-174 MHz, 380-420 MHz, 400-470 MHz, 450-530 MHz, 762-870 MHz.		Harris P25 Trunked Infrastructure System	Motorola Astro P25	EFJohnson 3800 Trunking Repeater Base Station	Taitnet/EADS COR P25 Infrastructure	PowerTrunk25	Raytheon P25net™ Phase 1 Infrastructure
Test Case	**Description**	Results					
2.2.5	Affiliation						
2.2.5.4.1	Test Case 1 – Radio Permitted To Affiliate With New Group						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.5.4.2	Test Case 2 – Radio Denied Affiliation To New Group						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.6	Announcement Group Call						
2.2.6.4.1	Test Case 1 – Collection Of Talk Groups Receive Call						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.7	Emergency Alarm						
2.2.7.4.1	Test Case 1 – Emergency Alarm						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.3.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Interoperability		**DTR-P25CAP081017-1090623T01**	**DTR-MOT-40245-M3-MC1**	**DTR-P25CAP081010-09102801**	**DTR-P25CAP081015-3081**	**DTR-TIMCO081016-TP/TM9100**	**DTR-P25CAP081015-3185**
Tait Radio Communications TP9100 136-174 MHz, 380-420 MHz, 400-470 MHz, 450-530 MHz, 762-870 MHz.		Harris P25 Trunked Infrastructure System	Motorola Astro P25	EFJohnson 3800 Trunking Repeater Base Station	Taitnet/EADS COR P25 Infrastructure	PowerTrunk25	Raytheon P25net™ Phase 1 Infrastructure
Test Case	**Description**	Results					
2.2.8	Emergency Group Call						
2.2.8.4.1	Test Case 1 – Emergency Call						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.10	Encryption						
2.2.10.4.1	Test Case 1 – Call Privacy for Encrypted Call						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1
2.2.11	Intra-Location Registration Area Roaming						
2.2.11.4.1	Test Case 1 – Idle Radio						
	Home	P	P	P	P	P	P
	Inter-System Roaming configuration	N1	N1	N1	N1	N1	N1
	Inter-WACN Roaming configuration	N1	N1	N1	N1	N1	N1

Base Station/Repeater Units Tested			
Manufacturer and Point of Contact	**Product Name and Definition**	**Installed Options**	
Tait Radio Communications Scott Quintavelle – (281) 829- 3300	Taitnet P25 Infrastructure	**Hardware:** **Software:**	TBAH0 3.35
	EADS COR P25	**Software**	v11_03E18
Harris Corporation Greg Fowler – (434) 455-9294	P25 Trunked Infrastructure System	Release 6.4.2	
Motorola Inc Julie Jagoda - (847) 576-2022	Astro P25	Release 7.7, 7.8 and 7.9	
EFJohnson Technologies John Oblak - (507) 837-5116	3800 Trunking Repeater Base Station	Trunking Release 3.1-RC1	
PowerTrunk Inc. Lorena Martin - +1 212 222 4971	PowerTrunk25	Ver. 9.4.52	
Raytheon JPS Janet Holt – 919.606.4748 (office & mobile)	Raytheon P25net™ Phase 1 Infrastructure	**Hardware:** **Software:**	TBAK2 (762-870 MHz) 3.25
		Hardware: **Software:**	P25netCC™ Channel Controller 2.10.0000d

Model Class Definition	**Applied to: P25-CAB-CAI_TEST_REQ March 2010 Section 2.1.1.1, 2.1.1.2 and 2.1.3.2.**	
Model Class Name	**Product Name, Definition, Unique ID**	**Installed Options**
Tait Model Class TP9100	TPAB1 Portable SN 21056419	**Hardware:** TPAB1 136-174 MHz **Software:** 6.09
	TPAH4 Portable SN 21056443	**Hardware:** TPAH0 380-420 MHz **Software:** 6.09
	TPAH5 Portable SN 21054476	**Hardware:** TPAH0 400-470 MHz **Software:** 6.09
	TPAH6 Portable SN 21033433	**Hardware:** TPAH0 450-530 MHz **Software:** 6.09
	TPAK5 Portable SN 21056441	**Hardware:** TPAK5 762-870 MHz **Software:** 6.09

Test Case Result Definitions	
No Test Performed	-
Test Does Not Apply to the Test Object	**N/A**
Test Object Meets Requirements	P (Pass)
Test Object Does Not Meet Requirements	F (Fail)
Test Object is Inconclusive	I (Inconclusive)

Comments
P1: Standard Modulation only. LSM and WCQPSK simulcast modulation is not supported by Tait Radio Communications TP9100.
N1: Inter-System Roaming configuration and Inter-WACN Roaming configuration are not supported by Tait Radio Communications TP9100
N2: Test cases 2.2.3.4.5 and 2.2.3.4.6 are not supported by Tait Radio Communications TP9100.
N3: Test cases 2.2.3.4.5 and 2.2.3.4.6 are not supported by Tait Radio Communications TP9100 and Motorola Astro P25.
N4: Test cases 2.2.3.4.5 and 2.2.3.4.6 are not supported by Tait Radio Communications TP9100 and EF Johnson 3800 Trunking Repeater Base Station.
N5: Test cases 2.2.3.4.5 and 2.2.3.4.6 are not supported by Tait Radio Communications TP9100 and Taitnet/EADS CORP25 Infrastructure.
N6: Test cases 2.2.3.4.5 and 2.2.3.4.6 are not supported by Tait Radio Communications TP9100 and PowerTrunk25 Infrastructure.
N7: Test cases 2.2.3.4.5 and 2.2.3.4.6 are not supported by Tait Radio Communications TP9100 and Raytheon P25net™ Phase 1 Infrastructure.
N/A1: Test case 2.2.3.4.4 is not applicable for Motorola Astro P25, EF Johnson 3800 Trunking Repeater Base Station, and Harris P25 Trunked Infrastructure System; see results of test case 2.2.3.4.3.
N/A2: Test case 2.2.3.4.3 is not applicable for Taitnet/EADS COR P25 Infrastructure; see results of test case 2.2.3.4.4.
N/A3: Test case 2.2.3.4.3 is not applicable for PowerTrunk25 Infrastructure; see results of test case 2.2.3.4.4.
N/A4: Test case 2.2.3.4.3 is not applicable for Raytheon P25net™ Phase 1 Infrastructure; see results of test case 2.2.3.4.4.

The information contained herein has been provided by the manufacturer of the product with permission to make the information publically available. The Department of Homeland Security (DHS) is making this information available as a public service; however, DHS IS PROVIDING THE INFORMATION "AS IS". DHS MAKES NO EXPRESS OR IMPLIED WARRANTIES AND SPECIFICALLY, DHS MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, REGARDINGTHE ACCURACY OR USE OF THIS INFORMATION. Reference to any specific commercial products, processes, or services by trade name, trademark, manufacturer, or otherwise does not constitute an endorsement by or a recommendation from DHS.

OMB NO: 1640-0015

EXPIRATION DATE: 04/30/2012
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DHS FORM 10056 – June 2009

Cassidian Interoperability

Lexington Fayette Urban County Government can rely on Tait as a partner with the ability to provide ultimately compatible subscriber radios which best complement the existing investment LFUCG has made with its Cassidian infrastructure.

The Cassidian network sits atop the market leading P25 base stations from Tait Communications. These base stations have been developed in tandem with Tait's portables and mobiles as a complete mission critical radio solution, designed and manufactured hand-in-hand to provide ultimate interoperability for public safety first responders and public service professionals.

Tait Communications has partnered with Cassidian to design, develop, test and deliver the Cassidian P25 Trunked Core network.

The included P25 CAP STR and SDOCS indicate that the TM9100 and TP9100 have passed P25 CAP testing with the EADS (Cassidian) P25 Trunked infrastructure.

In addition to the P25 Compliance testing, the TP9100 and TM9100 Subscriber units are currently in globally on Cassidian P25 Trunked networks by national police, fire and ambulance agencies and urban transportation companies.

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TRAINING SERVICES

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Tait Training Center

Philosophy

Tait Electronics Ltd has been producing quality radio equipment since 1969. It is our belief that training is an integral part of that quality. Our philosophy is to produce customer focused training that allows our customers to operate, maintain and repair our equipment to ensure it is utilised at its highest potential.

Range of Courses

We offer a full range of training courses from product introduction, through to comprehensive system maintenance courses. There are specific courses covering radio operation and programming as well as network planning and administration.

Customisation

Because you have different systems, local conditions and different skill bases, we customise the standard training Courses to satisfy individual needs. That means training is structured around the skills base and responsibilities of your people and the defined jobs they are doing.

Training Expertise

The company employs many technical trainers throughout the world, each with their area of expertise. Each trainer keeps their skills up to date and relevant through regular contact with product developers, field engineers, and end users.

Training Presentation

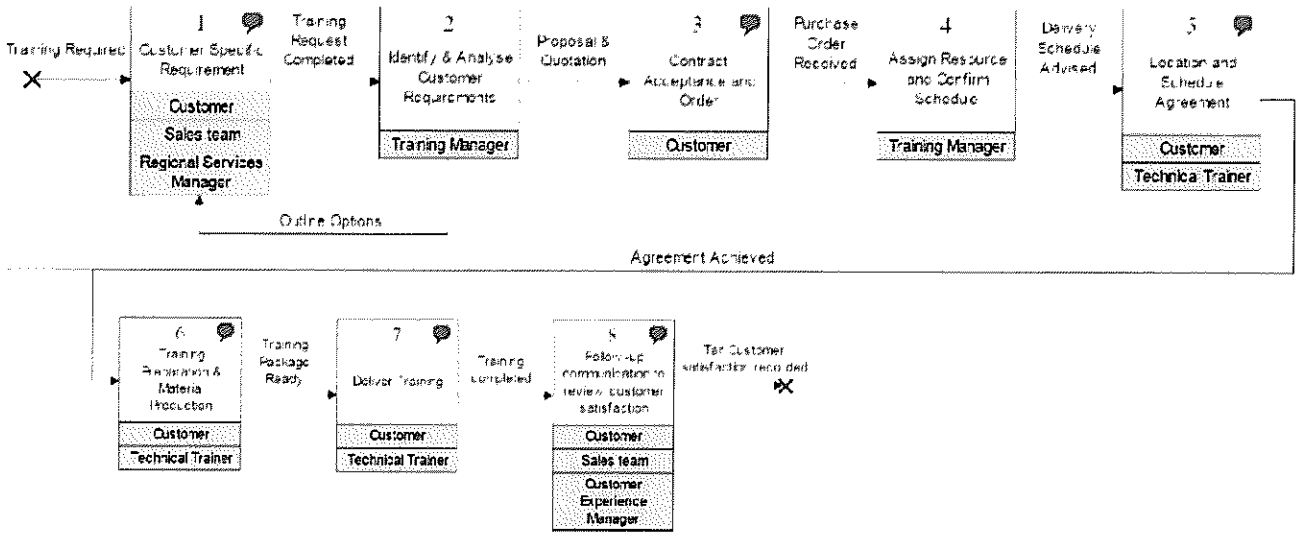
Transfer of knowledge is one of the most important aspects of training and to do that it is important that classroom time is balanced with a high level of practical exercises to enhance learning, build confidence and test attendee skills. Latest training techniques and methodologies are used to facilitate learning.

Training Facilities and Resources

We have our own fully equipped training rooms complete with demonstration systems for practical exercises in a number of locations around the world. Most of the courses can be conducted on-site. Courses are customised to meet specific end user requirements.

For further information please contact your Tait Radio Representative or email training@taitradio.com.

Service Delivery Process — Training Services



User Groups

End Users:

The people on the front line who use the radio network.

Customised courses on how to efficiently operate the Tait equipment.

Note: Tait also offer train the trainer courses.

Management and Sales:

The team responsible for choosing the best solution.
Courses teach the Features and Benefits of the Tait equipment to enable you to identify the best solution.

Network Design and Engineering:

You are the team responsible for developing the technical requirements of the solution.

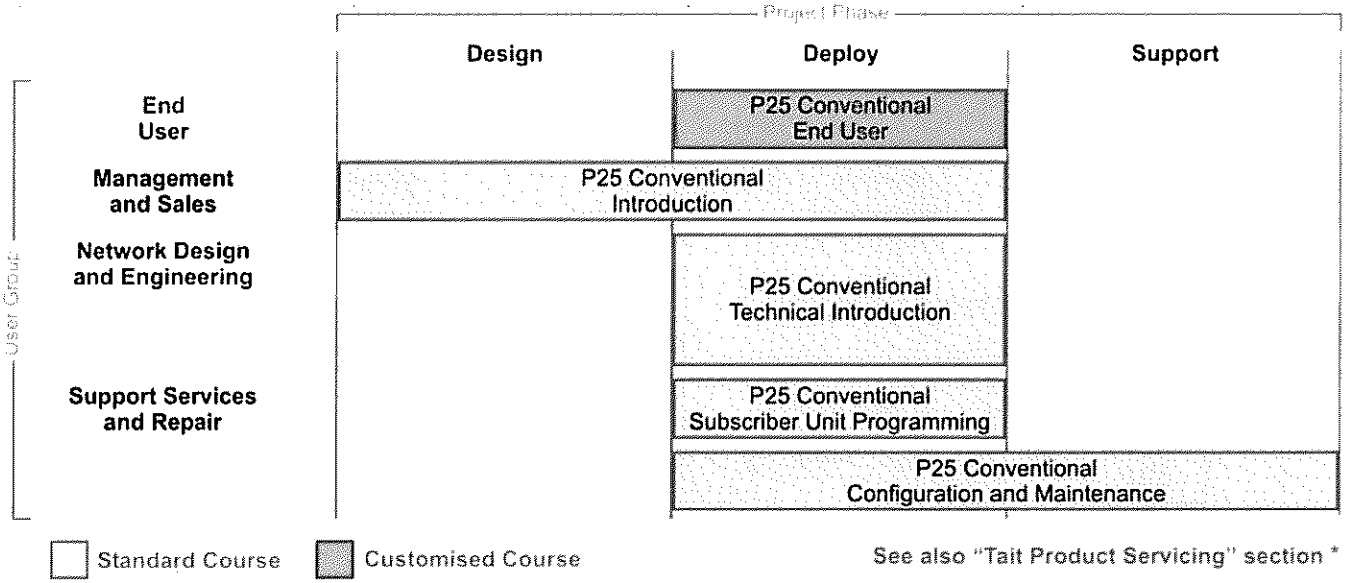
Courses teach the detail of the Tait solution to allow you to make the right technical decisions for your system.

Support, Service and Repair:

The team responsible for the ongoing maintenance and support of the system.

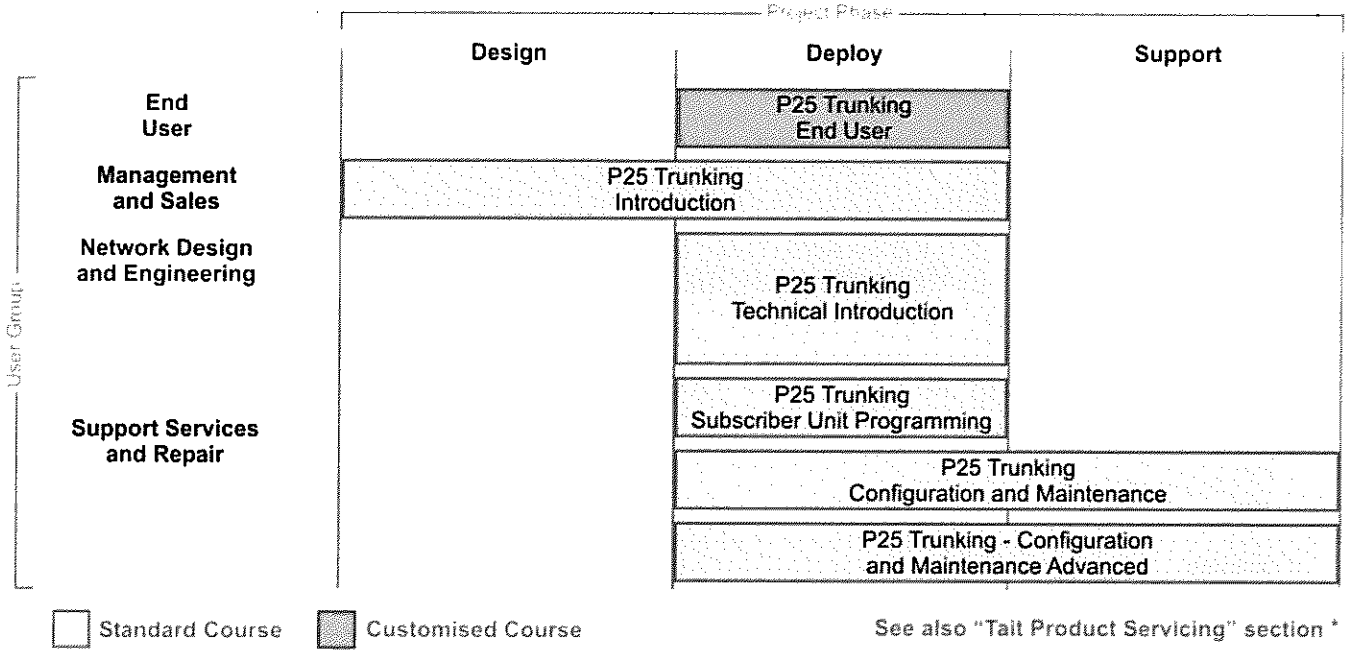
Courses teach how to monitor, diagnose and repair the Tait solution.

P25 Conventional Training Courses



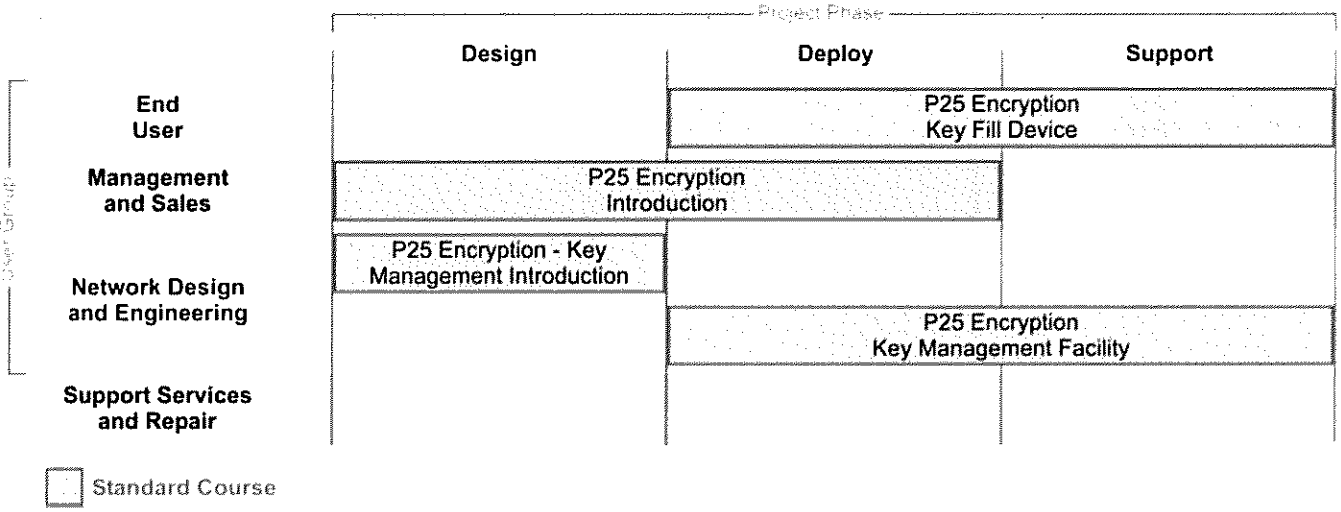
Product	Course Title	Page
P25C-EU	P25 Conventional - End User	22
P25C-I NT	P25 Conventional — Introduction — 1 Day	23
P25C-TI	P25 Conventional - Technical Introduction — 3-5 Days	24
P25C-P	P25 Conventional - Subscriber Unit Programming — 2 Days	25
P25C-CM	P25 Conventional - Configuration and Maintenance — 5 Days	26

P25 Trunked Training Courses



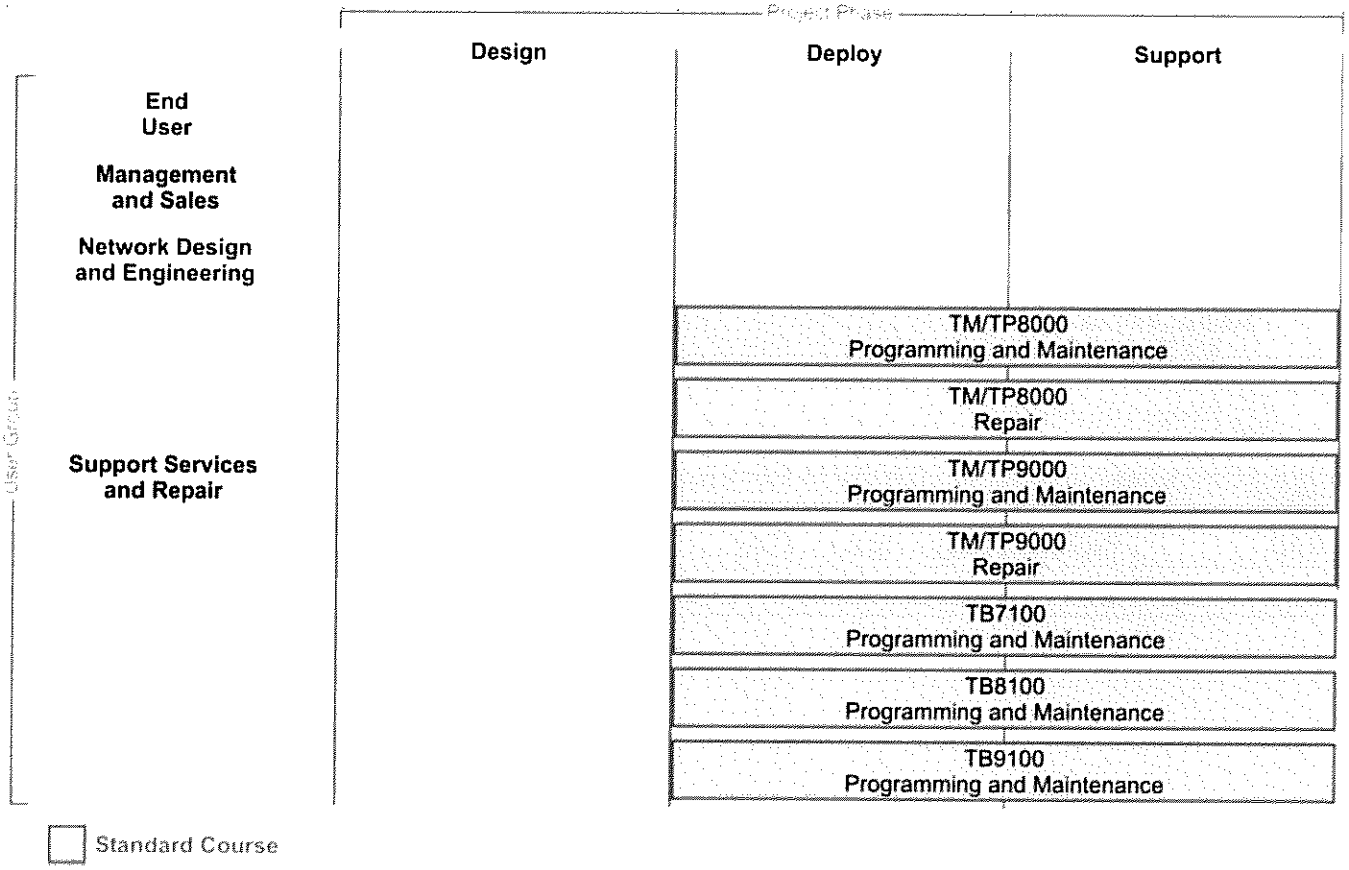
Product	Course Title	Page
P25T-EU	P25 Trunking - End User	27
P25T-I NT	P25 Trunking — Introduction — 1 Day	28
P25T-TI	P25 Trunking - Technical Introduction — 3-5 Days	29
P25T-P	P25 Trunking - Subscriber Unit Programming — 2 Days	30
P25T-CM	P25 Trunking - Configuration and Maintenance - 5 Days	31
5T-CMA	P25 Trunking - Configuration and Maintenance Advanced — 5 Days	32

P25 Encryption Training Courses



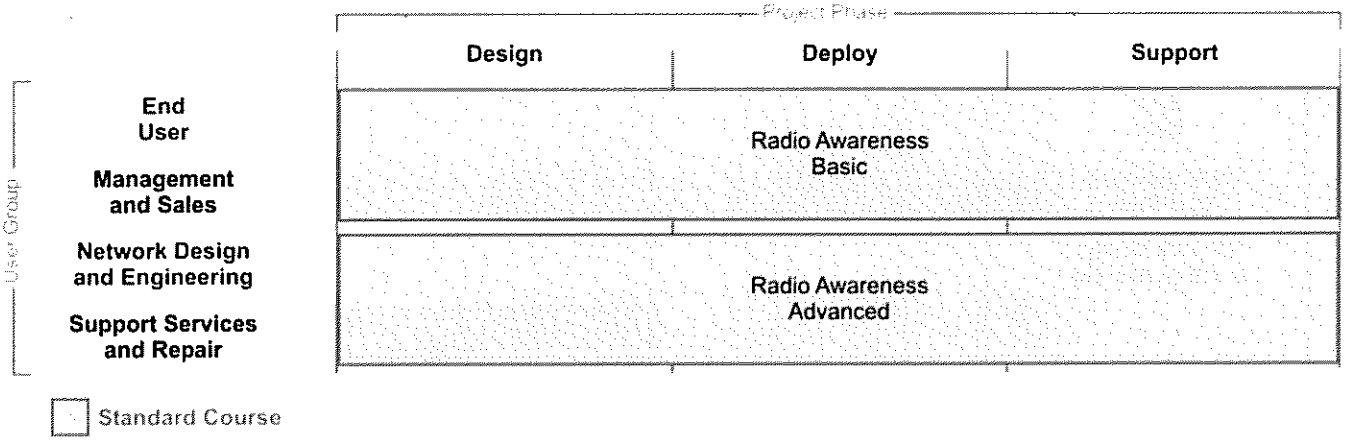
Product	Course Title	Page
P25E-INT	P25 Encryption — Introduction — 1/2 Day	33
P25E-KFD	P25 Encryption - Key Fill Device — 1/2 Day	34
P25E-KMI	P25 Encryption - Key Management Introduction — 2 Days	35
P25E-KMF	P25 Encryption - Key Management Facility — 3 Days	36

Product Servicing Training Courses



Product	Course Title	Page
PS-TMP8PM	TM/TP8000 - Programming and Maintenance — 1 Day	37
PS-TMP8R	TM/TP8000 — Repair — 1 Day	38
PS-TMP9PM	TM/TP9000 - Programming and Maintenance — 1 Day	39
PS-TMP9R	TM/TP9000 — Repair — 1 Day	40
PS-TB7PM	TB7100 - Programming and Maintenance — 2 Days	41
PS-TB8PM	TB8100 - Programming and Maintenance — 2 Days	42
PS-TB9PM	TB9100 - Programming and Maintenance — 2 Days	43

Other Training Courses



Product	Course Title	Page
O-RAB	Radio Awareness — Basic — 1 Day	44
O-RAA	Radio Awareness — Advanced — 2 Days	45

P25 Conventional - End User

The successful implementation of your P25 Radio System depends on users that are confident in their use of the system.

Tait offer two customized training services designed to provide a solution to educating the front line staff who are actually using the Tait TM9100 and TP9100 Subscriber Units.

End User Training.

This training service is for staff that use the mobile and portable radio. It teaches the basics of radio communications and the features and operation of the radios. The course is customized to suit customer requirements and requires the final radio configuration to be known in advance of training. These classes are typically done on site using your equipment.

Note:

Course customisation can also include Dispatch operator training and Network Administrators training.

Train the Trainer.

The End User Training Service can be structured for customers who have their own internal training personnel. This module is designed to train staff that will then train the end users how to use the radio. It teaches the same information as the End User Training, along with some additional knowledge of the network operation.

Training resources are supplied to the training staff and their correct delivery of the material is verified.

The time allocation in this module includes working with the customer's trainer to develop the course material, time for them to learn the material and an assessment of their delivery of the material.

End User Course objectives:

After completing this course, the student will be able to:

- Identify the key parts of a Tait Subscriber Unit.
- Explain the basic care and maintenance procedures.
- List the safe operating procedures.
- Use the radio unit controls for individual, group and data communication.
- Explain the meaning of the icons and messages on the radio unit display.
- Demonstrate making and receiving P25 voice calls
- Demonstrate sending and receiving P25 services.

Train the Trainer Course objectives:

After completing this course, the student will be able to:

- Discuss common tasks associated with the operation of the radios.
- Recall the course material accurately.
- Deliver the material clearly.
- Demonstrate correct equipment operation.

Audience:

- Personnel who will use a Tait Mobile or portable on a TaitNet P25 Radio System.

This would include but is not limited to:

- Radio Users.
- Dispatchers
- Management

P25 Conventional — Introduction —1 Day

Course overview:

The P25 Conventional - Introduction training course provides a foundation knowledge APCO P25 and introduces the theory of operation, key components and the architecture of the TaitNet P25 Conventional Radio System.

The course includes an introduction to Tait Subscriber Units highlighting the standard features and operation.

Practical exercises and demonstrations in class apply to the Tait TP9000 and the TM9000 Subscriber Units.

The P25 Conventional - Introduction training course is also part of the curriculum for Technical Support Personnel and Service Technicians. This course is typically covered as an introductory module to bridge any knowledge gaps for more technical courses, that are required.

Course objectives:

After completing this course, the student will be able to:

- Define terms relating to the P25 standard.
- Define terms relating to the P25 Common Air Interface.
- Explain the benefits that digital radio offers over analog radio.
- Describe the architecture and features of the Tait P25 Conventional Radio System Architecture.
- Explain the meaning of the icons and messages on the radio unit display.
- Demonstrate how to operate a Tait P25 subscriber unit for sending and receiving P25 voice calls, and other P25 services.

Audience:

Anyone who will sell, design, implement, program or maintain a TaitNet P25 Conventional System.

This would include but is not limited to:

- Technical and non technical sales staff.
- Network Management or communication System Engineers.

P25 Conventional - Technical Introduction — 3-5 Days

Course overview:

The P25 Conventional - Technical Introduction course provides a level of knowledge that allows students to understand key aspects of the TaitNet P25 Conventional Radio System functionality.

The architecture and features of the TaitNet P25 Conventional System are introduced and lead the student into the significant practical sessions that cover operation of the Subscriber Units and TB9100 Base Station Customer Service Software.

Simulcast Option:

If P25 Conventional Simulcast training is required the course duration will be extended to include additional information.

NOTE:

This course can be run prior to a Factory Acceptance Test (FAT). An additional day can be spent reviewing the customer specific FAT document and the customers specific system architecture. Additional course subjects include:-

- Customized system description
- FAT Test Procedure

Course objectives:

After completing this course, the student will be able to:

- Describe the architecture and features of the TaitNet P25 Conventional System.
- Demonstrate how to operate a Tait P25 Subscriber Unit for sending and receiving P25 voice calls, and other P25 services.
- Identify the modules and interfaces of the TB9100
- Demonstrate how to operate the TB9100 Customer Service Software to view Alarms and key Radio performance parameters.
- Identify the tests carried out during the FAT
- State the purpose of each test.
- Identify pass and fail criteria.
- Perform test procedure where appropriate.

Audience:

Anyone who will sell, design, implement, program or maintain a TaitNet P25 Conventional Radio System.

This would include but is not limited to:

- Network Management or communication System Engineers.
- Technical Support Personnel.
- Service Technicians.

P25 Conventional - Subscriber Unit Programming — 2 Days

Course overview:

The P25 Conventional - Subscriber Unit Programming training course provides the knowledge and tools needed to program Tait P25 Subscriber Units to meet a range of customer and system requirements. This is primarily a practical class.

Practical exercises and demonstrations in class apply to the Tait TP9100 and the TM9100 Subscriber Units.

Course objectives:

After completing this course, the student will be able to:

- Recognise and identify key features, functions and parameters of the Tait Subscriber Programming Application.
- Understand how to configure Tait P25 Subscriber Unit for various network types.
- Understand how to configure Tait P25 Subscriber Unit for various user requirements.
- Successfully carry out the programming and configuration of a Tait P25 Subscriber Unit using the Programming Application.

Audience:

Personnel who will implement, program or maintain a TaitNet P25 Radio System.

This would include but is not limited to:

- Technical Support Personnel.
- Service Technicians.

P25 Conventional - Configuration and Maintenance — 5 Days

Course overview:

Typically delivered immediately following system commissioning the TaitNet Systems Configuration and Maintenance training course provides an advanced working knowledge of the TaitNet P25 Conventional system.

The course will help students become familiar with the key features of their new system. Topics include call types, basic Network Architecture, TB9100 configuration and Network Monitoring.

Simulcast Option:

If P25 Conventional Simulcast training is required the course duration will be extended to include additional information.

NOTE:

This course does not include subscriber unit programming. This is covered in the P25 Conventional - Subscriber Unit Programming course.

Course objectives:

After completing this course, the student will be able to:

- Define terms relating to the P25 standard and Common Air Interface.
- Describe Digital Radio Propagation.
- Describe the architecture and features of the TaitNet P25 Conventional System.
- Identify the modules and interfaces of the TB9100
- Demonstrate how to operate the TB9100 Customer Service Software to view Alarms and key Radio performance parameters
- Network configuration using the TB9100 Customer Service Software.
- Perform network monitoring using Kiwi Syslog.

Audience:

Anyone who will sell, design, implement, program or maintain a TaitNet P25 Conventional system.

This would include but is not limited to:

- Network Design and Engineering staff
- Network Management Engineers
- Communication System Engineers.
- Support Services and Repair staff

P25 Trunking - End User

The successful implementation of your P25 Radio System depends on users that are confident in their use of the system. Tait offer two customized training services designed to provide a solution to educating the front line staff who are actually using the Tait TM9100 and TP8100 Subscriber Units.

End User Training.

This training service is for staff that use the mobile and portable radio. It teaches the basics of radio communications and the features and operation of the radios. The course is customized to suit customer requirements and requires the final radio configuration to be known in advance of training. These classes are typically done on site using your equipment.

Train the Trainer.

The End User Training Service can be structured for customers who have their own internal training personnel. This module is designed to train staff that will then train the end users how to use the radio. It teaches the same information as the End User Training, along with some additional knowledge of the network operation.

Training resources are supplied to the training staff and their correct delivery of the material is verified.

The time allocation in this module includes working with the customer's trainer to develop the course material, time for them to learn the material and an assessment of their delivery of the material.

End User Course objectives:

After completing this course, the student will be able to:

- Identify the key parts of a Tait Subscriber Unit.
- Explain the basic care and maintenance procedures.
- List the safe operating procedures.
- Use the radio unit controls for individual, group and data communication.
- Explain the meaning of the icons and messages on the radio unit display.
- Demonstrate making and receiving P25 voice calls
- Demonstrate sending and receiving P25 services.

Train the Trainer Course objectives:

After completing this course, the student will be able to:

- Discuss common tasks associated with the operation of the radios.
- Recall the course material accurately.
- Deliver the material clearly.
- Demonstrate correct equipment operation.

Audience:

Personnel who will use a Tait Mobile or portable on a TaitNet P25 Radio System.

This would include but is not limited to:

- Radio Users.
- Dispatchers
- Management

P25 Trunking — Introduction —1 Day

Course overview:

The P25 Trunking - Introduction training course provides a foundation knowledge of trunking, APCO P25 and introduces the theory of operation, key components and the architecture of the TaitNet P25 Trunked Radio System. This includes an introduction to the Technical and Tactical Management software and its key role in managing the TaitNet P25 Trunked Radio System.

The course also includes an introduction to Tait Subscriber Units highlighting the standard features and operation.

Practical exercises and demonstrations in class apply to the Tait TP9000 and the TM9000 Subscriber Units.

The P25 Trunking - Introduction training course is also part of the curriculum for Technical Support Personnel and Service Technicians. This course is typically covered as an introductory module to bridge any knowledge gaps for more technical courses, that are required.

Course objectives:

After completing this course, the student will be able to:

- Explain the operation of trunking and how it improves the efficiency of a multi channel radio system.
- Define terms relating to the P25 standard.
- Define terms relating to the P25 Common Air Interface.
- Explain the benefits that digital radio offers over analog radio.
- Describe the architecture and features of the Tait P25 Trunked Radio System Architecture.
- Explain the meaning of the icons and messages on the radio unit display.
- Demonstrate how to operate a Tait P25 subscriber unit for sending and receiving P25 voice calls, and other P25 services.
- Describe the key features of the Technical and Tactical Management software.

Audience:

Anyone who will sell, design, implement, program or maintain a TaitNet P25 Trunked Radio System.

This would include but is not limited to:

- Technical and non technical sales staff.
- Network Management or communication System Engineers.

P25 Trunking - Technical Introduction — 3-5 Days

Course overview:

The P25 Trunking - Technical Introduction course provides a level of knowledge that allows students to understand all aspects of the TaitNet P25 Trunked Radio System functionality.

The architecture and features of the TaitNet P25 Trunking System are introduced and lead the student into the significant practical sessions that cover operation of the Subscriber Units, Technical and Tactical Management software and TB9100 Base Station Customer Service Software.

Simulcast Option:

If P25 Conventional Simulcast training is required the course duration will be extended to include additional information.

NOTE:

This course can be run prior to a Factory Acceptance Test (FAT). An additional day can be spent reviewing the customer specific FAT document and the customers specific system architecture. Additional course subjects include:-

- Customized system description
- FAT Test Procedure

Course objectives:

After completing this course, the student will be able to:

- Describe the architecture and features of the Tait P25 Trunked Radio System.
- Demonstrate how to operate a Tait P25 Subscriber Unit for sending and receiving P25 voice calls, and other P25 services.
- Identify the modules and interfaces of the TB9100
- Demonstrate how to operate the TB9100 Customer Service Software to view Alarms and key Radio performance parameters.
- Demonstrate how to perform basic Tactical Management tasks using the Technical and Tactical Management software.
- Identify the tests carried out during the FAT
- State the purpose of each test.
- Identify pass and fail criteria.
- Perform test procedure where appropriate.

Audience:

Anyone who will sell, design, implement, program or maintain a TaitNet P25 Conventional Radio System.

This would include but is not limited to:

- Network Management or communication System Engineers.
- Technical Support Personnel.
- Service Technicians.

P25 Trunking - Subscriber Unit Programming — 2 Days

Course overview:

The P25 Trunking - Subscriber Unit Programming training course provides the knowledge and tools needed to program Tait P25 Subscriber Units to meet a range of customer and system requirements. This is primarily a practical class.

Practical exercises and demonstrations in class apply to the Tait TP9100 and the TM9100 Subscriber Units.

Course objectives:

After completing this course, the student will be able to:

- Recognise and identify key features, functions and parameters of the Tait Subscriber Programming Application.
- Understand how to configure Tait P25 Subscriber Unit for various network types.
- Understand how to configure Tait P25 Subscriber Unit for various user requirements.
- Successfully carry out the programming and configuration of a Tait P25 Subscriber Unit using the Programming Application.

Audience:

Personnel who will implement, program or maintain a TaitNet P25 Radio System.

This would include but is not limited to:

- Technical Support Personnel.
- Service Technicians.

P25 Trunking - Configuration and Maintenance — 5 Days

Course overview:

Typically delivered immediately following system commissioning the TaitNet Systems Configuration and Maintenance training course provides an advanced working knowledge of the TaitNet P25 Trunked system.

The course will help students become familiar with the key features of their new system. Topics include call types, basic Network Architecture, TB9100 configuration and Network Monitoring.

Simulcast Option:

If P25 Conventional Simulcast training is required the course duration will be extended to include additional informantion.

NOTE:

This couse does not include subscriber unit programming. This is covered in the P25 Conventional - Subscriber Unit Programming course.

Course objectives:

After completing this course, the student will be able to:

- Define terms relating to the P25 standard and Common Air Interface.
- Describe Digital Radio Propagation.
- Describe the architecture and features of the Tait P25 Trunked Radio System.
- Demonstrate how to operate a Tait P25 Subscriber Unit for sending and receiving P25 voice calls, and other P25 services.
- Identify the modules and interfaces of the TB9100
- Demonstrate how to operate the TB9100 Customer Service Software to view Alarms and key Radio performance parameters.
- Network configuration using the TB9100 Customer Service Software and Technical and Tactical Management software.
- Perform network monitoring using TB9100 Customer Service Software and Whats up Gold.

Audience:

Anyone who will sell, design, implement, program or maintain a TaitNet P25 Trunked system.

This would include but is not limited to:

- Network Design and Engineering staff
- Network Management Engineers
- Communication System Engineers.
- Support Services and Repair staff

P25 Trunking - Configuration and Maintenance Advanced — 5 Days

Course overview:

The TaitNet Systems Configuration and Maintenance Advanced training course is designed to be delivered either immediately followingthe P25-Trunking Configuration and Maintenance course or as a follow-up course later that same year.

Topics include using maintenance tools and debug commands to carry out complex diagnostic tasks and the configuration of replacement parts for the network.

Course objectives:

After completing this course, the student will be able to:

- Perform advanced network monitoring using TB9100 Customer Service Software, Whats up Gold and other diagnostic tools.
- Collecting diagnostic logs.
- Capturing network traffic.
- Configuration of a universal controller.
- Replacement of system components.

Audience:

Support Services and Repair staff who maintain a TaitNet P25 Trunked system.

P25 Encryption — Introduction —1/2 Day

Course overview:

The P25 Encryption - Introduction training course provides a foundation knowledge of P25 Encryption. The course includes levels of encryption, key filling methods, the encryption process and operatinga subscriber unit with encryption.

Practical exercises and demonstrations in class apply to the Tait TP9000 and the TM9000 Subscriber Units.

The P25 Encryption - Introduction training course is also part of the curriculum for Technical Support Personnel and Service Technicians who work with the Key Fill Device. This course is typically covered as an introductory module to bridge any knowledge gaps for more technical courses, that are required.

Course objectives:

After completing this course, the student will be able to:

- Define terms relating to P25 encryption.
- Explain the different levels of encryption.
- Explain the importance of asset management and encryption policy.
- Describe the different key filling methods.
- Explain the encryption process including how keys are stored and referenced in subscriber units.
- Explain the encryption features of the subscriber units.

Audience:

Anyone who will sell, design, implement, program or maintain a encrypted P25 system.

- This would include but is not limited to:
- Security Officers or Crypto Officers.
- Technical and non technical sales staff.
- Network Management or communication System Engineers.

P25 Encryption - Key Fill Device -1/2 Day

Course overview:

The P25 Encryption — Key Fill Device training course provides the knowledge needed to operate the Key Fill Device (KFD). This is primarily a practical class.

Practical exercises and demonstrations in class apply to the Tait TP9100 and the TM9100 Subscriber Units.

Course objectives:

After completing this course, the student will be able to:

- Configure the Key Fill Device user interface and passwords.
- Generate keys and CKRs in the Key Fill Device.
- Load keys into radios and gateways.
- Backup the key store and export keys.
- View the audit log

Audience:

Personnel who will configure and operate the Key Fill Device.

This would include but is not limited to:

- Crypto Officers
- Technical Support Personnel.
- Service Technicians.

P25 Encryption - Key Management Introduction — 2 Days

Course overview:

The P25 Encryption — Key Management Introduction course looks at the basic design conciderations that must be considered when implementing an encrypted radio system. The course also includes the information from the P25 Encryption — Introduction course and an introduction to the Tait Key Management Facility. Important information about the Key Management Facility commissioning procedure is also covered.

Course objectives:

After completing this course, the student will be able to:

- Describe the basic design considerations for an encrypted radio network.
- Explain the importance of asset management and encryption policy.
- Define terms relating to P25 encryption.
- Explain the different levels of encryption.
- Describe the different key filling methods.
- Explain the encryption process including how keys are stored and referenced in subscriber units.
- Explain the encryption features of the subscriber units.
- Describe the key features of the Tait Key Management Facility.
- Explain the process of developing a Key Management Plan.
- Explain the commissioning procedure for the Tait Key Management Facility and who must be present.

Audience:

Anyone who will sell, design, implement, program or maintain a encrypted P25 system.

This would include but is not limited to:

- Security Officers or Crypto Officers.
- Technical and non technical sales staff.
- Network Management or communication System Engineers.

P25 Encryption - Key Management Facility — 3 Days

Course overview:

Typically delivered immediately following system commissioning the P25 Encryption — Key Management Facility training course provides an advanced working knowledge of the Tait Key Management Facility (KMF).

The course will help students become familiar with the key features of their new KMF. Significant practical sessions cover the initial tasks carried out by the Security Officer and Crypto Officer to set up the KMF, performing key management using the KMF and diagnosing and correcting problem radios.

NOTE:

P25 Encryption — Key Management Introduction must have been completed before this course is run. If this course is run using the customers equipment a number of key people must be identified who can define and enter passwords.

Course objectives:

After completing this course, the student will be able to:

- Describe the KMF commissioning procedure.
- Back up the master key.
- Create user accounts.
- Explain the effect of changing the system security settings.
- Carry out the initial tasks required to make the KMF operational.
- Create provisioning keys and provision radios.
- Create and monitor key update tasks.
- Manage lost or stolen radios.
- Carry out diagnostics and mange problem radios.
- Manage the KMF Database.

Audience:

- Security Officers and Crypto Officers who operate the Key Management Facility.
- System Administrators who maintain the KMF Hardware.

TM/TP9000 - Programming and Maintenance —1 Day

Course overview:

The TM/TP9000 Programming and Maintenance course covers the operational features of TM9100 and TP9100 radios and how program and test the radio. It does not include optimizing the configuration for a particualar system type.

Course objectives:

After completing this course, the student will be ableto:

- Demonstrate the operational features of the portable radio
- Demonstrate connecting the radio to the programming software
- Demonstrate how to use the programming software
- Verify RF performance

Audience:

Personnel who will program and maintain a TM9100 and TP9100 radio.

This would include but is not limited to:

- Technical Support Personnel.
- Service Technicians

Required skills and knowledge:

It is preferable for attendees to have experience with Mobile Radio.

TM/TP9000 — Repair —1 Day

Course overview:

The TM/TP9000 Repair course covers the technical aspects of the Tait P25 subscriber units and how to repair them to component level.

Note:

The course can be run for either the TP9100 or TM9100. The course outline is the same for each product. However the hardware is different and to cover both products the course duration must doubled.

Course objectives:

After completing this course, the student will be able to:

- Describe Signal flow overviews within the radio
- Perform Circuit analysis at the block diagram level
- Describe functional descriptions of activity within circuit blocks
- Perform programming of radios
- Perform alignment of radios
- Perform circuit analysis to component level
- Perform fault finding rationales using flow diagrams
- Describe techniques for fault finding

Audience:

Personnel who will repair a conventional TM9100 and TP9100 radio.

This would include but is not limited to:

- Technical Support Personnel.
- Service Technicians

Required skills and knowledge:

- It is essential that attendees have experience repairing RF radios.
- Sound SMD and leaded soldering experience is preferable.

TB9100 - Programming and Maintenance — 2 Days

Course overview:

The TB9000 Programming and Maintenance course covers the technical aspects of the TB9000 Base Station/Repeater and details how program and maintain them.

Course objectives:

After completing this course, the student will be able to:

- Identify the components and functionality of the rack shelf
- Perform module programming and channel selection
- Perform run-up procedures for the Reciter
- Use the TB9100 Customer Service Software to configure and monitor
- Configure channel profiles and signalling profiles
- Perform calibration procedure
- Perform basic Task Manager operations
- Perform rack functionality testing
- Perform trouble shooting

Audience:

Technical staff who are responsible for Programming TB9000

This would include but is not limited to:

- Technical Support Personnel.
- Service Technicians

Radio Awareness — Basic —1 Day

Course overview:

The Radio Awareness — Basic course covers the fundamentals of wireless communication and describes how radios operate.

The course will help students become familiar with the key features and terminology used in the Radio Industry.

Course objectives:

After completing this course, the student will be able to:

- Describe the process of communication
- Describe the principle of Frequency and radio frequencies
- Explain the use of Repeaters
- Explain radio propagation (simplified)
- Describe Modulation
- Describe channel spacing
- Illustrate the FM Transmitter and Receiver process
- Describe radio range and power
- Explain call screening methods
- Describe Trunking

Audience:

Those staff newly exposed to radio principles, terms and theory.

This would include but is not limited to:

- Technical and non technical sales staff.
- Network Management or communication System Engineers.
- Technical Support Personnel.
- Service Technicians.

Radio Awareness — Advanced — 2 Days

Course overview:

The Radio Awareness — Advanced course covers the key principles of wireless communication and describes in some detail how radios operate. Reference is made to Tait mobiles, portables and base station equipment throughout the course

This course emphasizes the concepts behind RF Systems theory and operation and will help students compare radio system communication concepts using representative block diagrams of the respective systems

Course objectives:

After completing this course, the student will be ableto

- Describe FM Transmitter principles
- Describe FM Receiver principles
- Explain the TRF and Superheterodyne receiver
- Compare single, double and triple conversion
- Squelch and CTCSS decoding
- Describe VCO and Synthesizer principles
- Explain Dual and Triple-point modulation
- Describe radio propagation.
- Compare Antennas and radiation patterns.
- Describe Repeaters and repeater systems.
- Describe Quasi Sync, CTCSS and Selcall principles.
- Describe the meaning and features of Trunking.

Audience:

Those staff newly exposed to radio principles, terms and theory.

This would include but is not limited to:

- Technical and non technical sales staff.
- Network Management or communication System Engineers.
- Technical Support Personnel.
- Service Technicians.

ADDITIONAL INFORMATION

Tait Service Portfolios

Tait offers Services within three portfolios — Design, Deploy and Support.

Design

Planning is an essential element for the success of any project. Our design services include on-site measurements and analysis enabling us to design your system utilising advanced diagnostic mapping and prediction tools - giving you the confidence that you can reach your staff when you need to. We carry out preliminary analysis and investigate all the options with our Customers to ensure they get the right solution. Where needed, solutions will be customised to ensure they are the right fit. We ensure all technical, functional and operational requirements for your Tait communications solution are identified and fully documented. Tait provides all the information you need to choose the solution best suited to your organisation, ensuring you can proceed with confidence.

Deploy

Complex systems can represent a significant investment for our customers and they need a solution that brings the components together quickly and seamlessly into operation. Our deployment services comprise the work we perform managing, testing and rolling out the solution to our customers. With our global technical and logistics capabilities, Tait can prepare and deliver a unique radio communications solution that suits your specific requirements and needs. Based on your specifications and our experience, Tait can design and deploy a radio solution into most countries throughout the world. We can build complete solutions - including the integration of third party or legacy equipment, full system testing and on-site commissioning to ensure the quality of your deployment. If you already have preferred equipment and service providers, we can work in partnership with them.

Support

Radio communication solutions are an important business tool for many organisations, in some cases providing mission critical communications. Tait can assist your organisation in supporting your own solution, or we can provide a support package to suit your specific requirements. Tait can assist customers by providing help desk and 24/7 support services to ensure their radio solution functions efficiently and provides the best possible return for their organisation. Tait also offers a team of professional technical trainers to provide on-site or factory based training.

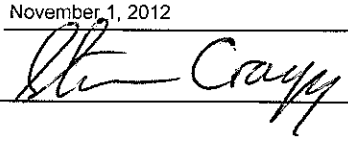
DISCLAIMER

Submittal Form

The LFUCG is interested in financing all or part of the purchase through the first quarter of Fiscal Year 2014 (i.e., July – September 2014). Financing will be considered in this purchase. All proposals must include financing terms at least through the first quarter of FY14. All submitters must provide information describing the various finance and/or leasing options available for the purchase of the equipment listed on the bid schedule.
Items to include in your sealed specifications due Friday, November 2, 2012:

1. **Bid Cover page signed by authorized company representative – page 4 of this document.**
2. **Affidavit page signed by authorized company representative – page 5 of this document.**
3. **Equal Opportunity agreement signed by authorized company representative – page 12 of this document.**
4. **Workforce analysis form – page 13 of this document.**
5. **Information detailing the terms and conditions of your proposed 10 year and standard warranty for all units.**
6. **Finance and/or leasing information for the equipment requested on the bid schedule.**
7. **Compliance Acceptance Program(CAP) certificate proving that all your radio models listed in the bid schedule have been certified to work with a Cassidian P25 system.**
8. **Proof of successful completion of the Cassidian Interoperability Test or the schedule/timeline to complete the Cassidian Interoperability Test.**
9. **Submittal Form signed by authorized company representative – page 40 of this document.**

NOTE: The LFUCG reserves the right to award a contract to one or multiple bidders. The LFUCG reserves the right to select units providing a standard warranty and/or a 10 year warranty.
Estimated Initial Quantities are not guaranteed and final quantities will be dependent upon budgetary constraints.
All submitted pricing must be honored for 1 year after online auction event.

Respectfully Submitted,
BY: Tait North America
(NAME OF FIRM)
DATE: November 1, 2012
BY: 
TITLE: President

OFFICIAL ADDRESS, PHONE AND E-MAIL:

15342 Park Row Blvd., Houston, TX 77084
(281) 600-8263
steve.cragg@taitradio.com

(Seal if Bid is by Corporation)

by signing this form you agree to all of the terms and associated forms.