



**RETURN BIDS TO:  
RETOURNER LES SOUMISSIONS À:**

**Bid Receiving - PWGSC / Réception des  
soumissions - TPSGC**

**11 Laurier St. / 11, rue Laurier**

**Place du Portage , Phase III**

**Core 0B2 / Noyau 0B2**

**Gatineau**

**Québec**

**K1A 0S5**

**Bid Fax: (819) 997-9776**

**REQUEST FOR PROPOSAL  
DEMANDE DE PROPOSITION**

**Proposal To: Public Works and Government  
Services Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services  
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

**Comments - Commentaires**

**Vendor/Firm Name and Address**

**Raison sociale et adresse du**

**fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**

Security and Information Operations Division/Division de la sécurité et des opérations d'information

11 Laurier St. / 11, rue Laurier

8C2, Place du Portage

Gatineau

Québec

K1A 0S5

<b>Title - Sujet</b> Tactical Repeater/Comm Systems	
<b>Solicitation No. - N° de l'invitation</b> W6399-160318/A	<b>Date</b> 2016-07-07
<b>Client Reference No. - N° de référence du client</b> W6399-160318	
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$\$QE-450-25900	
<b>File No. - N° de dossier</b> 450qe.W6399-160318	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2016-08-02</b>	<b>Time Zone</b> <b>Fuseau horaire</b> Eastern Daylight Saving Time EDT
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Guilderson, Greg	<b>Buyer Id - Id de l'acheteur</b> 450qe
<b>Telephone No. - N° de téléphone</b> (819) 956-0564 ( )	<b>FAX No. - N° de FAX</b> (819) 956-0740
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> CANSOFCOM 8355 Franktown Rd. Richmond, ON K0A 2Z0 Canada	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

<b>Delivery Required - Livraison exigée</b> See Herein	<b>Delivery Offered - Livraison proposée</b>
<b>Vendor/Firm Name and Address</b> <b>Raison sociale et adresse du fournisseur/de l'entrepreneur</b>	
<b>Telephone No. - N° de téléphone</b> <b>Facsimile No. - N° de télécopieur</b>	
<b>Name and title of person authorized to sign on behalf of Vendor/Firm</b> <b>(type or print)</b> <b>Nom et titre de la personne autorisée à signer au nom du fournisseur/</b> <b>de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

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**Annex A – Statement of Work**

**Annex B – Mandatory Evaluation Criteria**

**Annex C – Mandatory Deliverables**

*Please note: In the event of a postal services interruption, bidders are reminded that it is their responsibility to ensure bids are received on time. Section 07 (2012-03-02) Delayed bids of the Standard Instructions - Goods or Services - Competitive Requirements of the Standard Acquisition Clauses and Conditions (SACC) Manual, item 2 states: "Misrouting, traffic volume, weather disturbances, labour disputes or any other causes for the late delivery of bids are not acceptable reasons for the bid to be accepted by PWGSC." Bidders are instructed to use alternative means such as courier services (e.g. UPS, Fedex, Purolator, DHL) to ensure their bids are received by the time stated by Canada.*

*Bidders are reminded that it is their responsibility to ensure bids are received on time. You are encouraged to read the notice on alternative measures for submitting bids on BuyandSell.gc.ca. Visit BuyandSell.gc.ca regularly for updates.*

## **PART 1 - GENERAL INFORMATION**

### **1.1 Requirement**

This requirement is to procure four (4) Tactical Radio Repeater Communication Systems as per Annex A.

### **1.2 Debriefings**

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within ten (10) working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

### **1.3 Trade Agreements**

The requirement is subject to the provisions of the Agreement on Internal Trade (AIT).

## **PART 2 - BIDDER INSTRUCTIONS**

### **2.1 Standard Instructions, Clauses and Conditions**

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The 2003 (2016-04-04) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

### **2.2 Submission of Bids**

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation.

### **2.3 Enquiries - Bid Solicitation**

All enquiries must be submitted in writing to the Contracting Authority no later than seven (7) working days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by Bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such

except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all Bidders. Enquiries not submitted in a form that can be distributed to all Bidders may not be answered by Canada.

## **2.4 Applicable Laws**

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Bidders.

## **PART 3 - BID PREPARATION INSTRUCTIONS**

### **3.1 Bid Preparation Instructions**

Canada requests that Bidders provide their bid in separately bound sections as follows:

Section I: Technical Bid (1 hard copy)

Section II: Financial Bid (1 hard copy)

Section III: Certifications (1 hard copy)

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Canada requests that Bidders follow the format instructions described below in the preparation of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process [Policy on Green Procurement](http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). To assist Canada in reaching its objectives, Bidders should:

- 1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and
- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

#### **Section I: Technical Bid**

In their technical bid, Bidders should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work. Additional product or technical specifications/documentation of the proposed product shall be submitted with the bid.

#### **Section II: Financial Bid**

Bidders must submit their financial bid in accordance with the Basis of Payment – Annex C. The total amount of Applicable Taxes must be shown separately.

#### **Section III: Certifications**

Bidders must submit the certifications required under Part 5.

### **3.2 Exchange Rate**

The requirement does not offer exchange rate fluctuation risk mitigation. Requests for exchange rate fluctuation risk mitigation will not be considered. All bids including such provision will render the bid non-responsive.

## **PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION**

### **4.1 Evaluation Procedures**

#### **4.1.1 Technical Evaluation**

Bid must meet or exceed all mandatory technical evaluation criteria as per Annex B to be declared technically responsive.

#### **4.1.2 Financial Evaluation**

1. The price of the bid will be evaluated as follows:
  - a. Canadian-based bidders must submit firm prices, Canadian customs duties and excise taxes included, and Applicable Taxes excluded.
  - b. Foreign-based bidders must submit firm prices, Canadian customs duties, excise taxes and any export licenses/fees included. Applicable Taxes excluded and payable by Canada for evaluation purposes only, to the prices submitted by foreign-based bidders.
2. Unless the bid solicitation specifically requires bids to be submitted in Canadian currency, bids submitted in foreign currency will be converted to Canadian currency for evaluation purposes. The rate given by the Bank of Canada in effect on the bid solicitation closing date, or on another date specified in the bid solicitation, will be applied as a conversion factor to the bids submitted in foreign currency.
3. Although Canada reserves the right to award the Contract either on an FOB plant or FOB destination, Canada requests that bidders provide prices FOB their plant or shipping point and FOB destination. Bids will be assessed on an FOB destination basis.
4. For the purpose of the bid solicitation, bidders with an address in Canada are considered Canadian-based bidders and bidders with an address outside of Canada are considered foreign-based bidders

The price of the bid will be evaluated in Canadian dollars, Applicable Taxes excluded, DDP destination, Canadian customs duties and excise taxes included

### **4.2 Basis of Selection**

A bid must comply with all requirements of the bid solicitation and meet all mandatory technical criteria to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

## **PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION**

Bidders must provide the required certifications and additional information to be awarded a contract.

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

### **5.1 Certifications Required with the Bid**

Bidders must submit the following duly completed certifications as part of their bid.

### 5.1.1 Integrity Provisions - Declaration of Convicted Offences

In accordance with the *Ineligibility and Suspension Policy* (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide with its bid the required documentation, as applicable, to be given further consideration in the procurement process.

### 5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the bid, but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame provided will render the bid non-responsive.

#### 5.2.1 Integrity Provisions – Required Documentation

In accordance with the *Ineligibility and Suspension Policy* (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

#### 5.2.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list available at the bottom of the page of the *Employment and Social Development Canada (ESDC) - Labour's website* ([http://www.esdc.gc.ca/en/jobs/workplace/human\\_rights/employment\\_equity/federal\\_contractor\\_program.page?&\\_ga=1.229006812.1158694905.1413548969](http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969)).

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list at the time of contract award.

## PART 6 - RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

### 6.1 Security Requirements

6.1.1 There is no security requirement applicable to this Contract.

### 6.2 Requirement

The Contractor must provide the items detailed under Annex C

#### 6.2.1 Optional procurements – Standing Offer

A follow on Request for Standing Offer (RFSO) solicitation will be issued to the successful contractor of the mandatory deliverables herein until 31 March 2020. The pending Standing Offer shall allow for the ordering on an as and when required basis of:

- (a) up to 50 additional Tactical Radio Repeater Communication Systems units; and
- (b) Recommended spare parts for the Tactical Radio Repeater Communication Systems.

For more information on Standing Offers, see link:  
<https://buyandsell.gc.ca/standingoffers>

### **6.3 Standard Clauses and Conditions**

All clauses and conditions identified in the Contract by number, date and title are set out in the *Standard Acquisition Clauses and Conditions Manual* (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

#### **6.3.1 General Conditions**

2010A (2016-04-04), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

### **6.4 Term of Contract**

#### **6.4.1 Delivery Date**

All Annex C mandatory deliverables must be delivered NLT 90 days ARO;  
(Includes any required time for export licenses where applicable).

Or

Best delivery offered \_\_\_\_\_ (Includes any required time for export licenses where applicable).

### **6.5 Authorities**

#### **6.5.1 Contracting Authority**

The Contracting Authority for the Contract is:

Name: Greg Guilderson  
Title: Supply Team Leader  
Public Works and Government Services Canada  
Acquisitions Branch  
Directorate: LAEPSS  
Address: 11 Laurier St.,  
Gatineau, QC K1A 0S2  
Telephone: 819-956-0564  
E-mail address: greg.guilderson@pwgsc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

#### **6.5.2 Technical Authority**

The Technical Authority for the Contract is:

TBD

The Technical Authority named above is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Technical Authority, however the Technical Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.



## **6.6 Payment**

### **6.6.1 Basis of Payment**

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid firm unit price(s) as per Annex C, DDP. Applicable Taxes are extra.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

### **6.6.2 Multiple payments**

H1001C (2008-05-12) Multiple payments

## **6.7 Invoicing Instructions**

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.

Invoices must be distributed as follows:

- a. the original and one (1) copy must be forwarded to the following address for certification and payment; and

Department of National Defence  
CANSOFCOM  
101 Colonel By Dr.  
Ottawa, ON  
K1A 0K2  
W6399 attn: Tami Hunton 6-1-1

## **6.8 Certifications**

### **6.8.1 Compliance**

The continuous compliance with the certifications provided by the Contractor in its bid and the ongoing cooperation in providing additional information are conditions of the Contract. Certifications are subject to verification by Canada during the entire period of the Contract. If the Contractor does not comply with any certification, fails to provide the additional information, or if it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

## **6.9 Applicable Laws**

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

## **6.10 Priority of Documents**

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- (a) the Articles of Agreement;
- (b) the general conditions 2010A (2016-04-04);
- (c) Annex A – Statement of Work;
- (d) Annex C – Mandatory Deliverables
- (e) the Contractor's bid dated \_\_\_\_\_

#### **6.11 Defence Contract**

*SACC Manual* clause A9006C (2012-07-16) Defence Contract

#### **6.12 Insurance**

The Contractor is responsible for deciding if insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any insurance acquired or maintained by the Contractor is at its own expense and for its own benefit and protection. It does not release the Contractor from or reduce its liability under the Contract.

#### **6.13 Condition of Material**

Unless provided otherwise in the Contract, material supplied must be new and conform to the latest issue of the applicable drawing, specifications and part number that is in effect on the bid closing date or, if there was no bid solicitation, the date of the Contract.

#### **6.14 Shipping Instructions - DDP**

All equipment are to be delivered by appointment only between the hours of 8:00 am and 4:00 pm Monday through Friday, except Canadian Federal holidays. Any attempt by the carrier to deliver the equipment without an appointment may be refused unless arrangements have been made for authorized qualified personnel to be available to perform inspections and to accept the delivery. When the carrier is required to return due to its failure to make an appointment for delivery, Canada will not be liable, to pay for any additional costs.

Destination Address:

CANSOFCOM  
8355 Franktown Rd.  
Richmond, ON  
K0A 2Z0  
Canada

POC: TBD at contract award

## **ANNEX A STATEMENT OF WORK FOR THE TACTICAL RADIO REPEATER COMMUNICATION SYSTEM**

### **SCOPE**

#### Purpose

The purpose of this statement of work is to define the scope and requirements for provision of Tactical Radio Repeater Communication Systems to the Department of National Defence.

#### Background

DND has a requirement for compact, lightweight tactical radio repeater communication systems that are compatible with two (2) Harris AN/PRC-152A and or two (2) Thales AN/PRC-148 family of radios simultaneously, and is sized to permit transport as carry-on luggage on commercial aircraft. This equipment will be referred to as the Tactical Radio Repeater Communication System.

#### Applicable Documents

The following documents form part of this statement of work to the extent specified and are supportive of this statement of work when referenced; any other documents are to be considered supplemental information only. In the event of a conflict between the documents and the contents of this statement of work, then the contents of this statement of work shall take precedence.

- MIL-HDBK-61A (SE) Configuration Management Guidance (everyspec.com)

### **DELIVERABLES**

The Contractor must deliver the following:

- (a) Quantity four (4) Tactical Radio Repeater Communication Systems in accordance with the Operational Performance and Technical Specifications at Annex B; and
- (b) A Manufacturer's Recommended Spare Parts List (MRSPL) to include the following information for each item (MS Word or PDF format):
  - i. Item Name and Description;
  - ii. NCAGE;
  - iii. Manufacturer Part Number (MPN);
  - iv. NATO Stock Number (if available);
  - v. Price;
  - vi. Size/Weight; and
  - vii. Shelf life (if applicable).

### **REQUIREMENTS**

#### Quality Assurance

The Contractor must:

- (a) Establish, implement, document and maintain a quality system that ensures conformance to contractual requirements and meets the requirements of the ISO 9001 or equivalent quality system model during performance of this contract; and
- (b) Conduct Quality Conformance Inspections and Tests during manufacture in accordance with the Contractor's standard acceptance test plan. Details of the test plan, and documentation of all inspections/tests, are to be provided to DND upon request. DND reserves the right to send a representative(s) to witness production acceptance testing for all systems (mandatory and optional deliveries). DND will provide a minimum of two (2) weeks' notice of a Quality Assurance visit.

#### Configuration Control

The Contractor shall have an established, DND verifiable, Configuration Management (CM) Program with control systems in place in accordance with MIL-HDBK-61A, and shall provide configuration identification, control and status accounting of all new and/or modified hardware, firmware, software and documentation. All Tactical Radio Repeater Communication System components delivered shall have the same product baseline and support interchangeability/interoperability of parts.

#### Warranty

The Contractor shall provide warranty on the Tactical Radio Repeater Communication System components against material defects and workmanship, including parts and labor, at no additional cost to DND in accordance with the Contractor's standard warranty provisions for a minimum of one (1) year. During the warranty period, the Contractor shall provide a new Tactical Radio Repeater Communication System component if a failed component cannot be repaired and returned to DND.

**ANNEX A – APPENDIX 1  
OPERATIONAL PERFORMANCE AND TECHNICAL SPECIFICATIONS  
FOR THE  
TACTICAL RADIO REPEATER COMMUNICATION SYSTEM**

**1.0 GENERAL**

**1.1. Scope**

This specification outlines the Operational Performance and Technical requirements for the Tactical Radio Repeater Communication System. All requirements are mandatory.

**2.0 REQUIREMENTS**

**2.1 Operational Performance Requirements**

The Operational Performance requirements for the Tactical Radio Repeater Communication System are given in the following sections.

Climatic Conditions

The Tactical Radio Repeater Communication System must operate within the temperature range of -20°C to +60°C.

Operating Parameters

The Tactical Radio Repeater Communication System must:

Provide continuous operation of two (2) Harris AN/PRC-152A transceivers and or two (2) Thales AN/PRC-148 family of radios including voice and data transmission when on external power;

Have a SATCOM mode as follows:

- i. Frequency Range as follows:
  - a. Receive: 242-268 MHz; and
  - b. Transmit: 292-318 MHz;
- ii. Modulation: FM or Phase;
- iii. Switching Speed: DAMA J1TC and IW compatible;
- iv. RF Power Input: 2-10 Watts (minimum);

Have a Line Of Sight (LOS) mode as follows:

- v. Frequency Range: 30-512 MHz;
- vi. Modulation: AM, FM or Phase; and
- vii. RF Power Input: 2-10 Watts (minimum);

Have a repeater mode (LOS) by connecting the transmit/receive function of the two radios together and attaching the appropriate transmit/receive antennas.

Amplifier

The Tactical Radio Repeater Communication System must have minimum one (1) amplifier that is compatible with standard SATCOM and Broadband antennas with output power as follows:

(a) Internal Battery(s) (12-15 VDC): Minimum 20 Watts;

External Battery (24-30 VDC): Minimum 50 Watts (peak); and

External Mains (115/230 VAC): Minimum 50 Watts (peak);

External Power Sources

The Tactical Radio Repeater Communication System must:

(a) Be capable of being powered by external AC sources as follows:

- i. 115 VAC;
- ii. 230 VAC; and
- iii. 50/60 Hertz;

Be capable of being powered by external DC sources as follows:

- iv. Twelve (12) to thirty (30) Volts;

#### Uninterruptable Power Supply (UPS)

The Tactical Radio Repeater Communication System must:

- (a) Provide continuous operation of the system for a minimum of twenty (20) minutes with a duty factor of 100% (100% Transmit) on the internal batteries after loss of external power;

Instantaneously switch over to the battery backup in case of the loss of the external AC and/or DC power sources;

Be fully operational when batteries are removed when on external power; and

Charge the batteries when on external power.

#### Technical Requirements

The Technical Requirements for the Tactical Radio Repeater Communication System are given in the following sections.

#### Physical Features

The Tactical Radio Repeater Communication System must integrate all support sub-systems into a single case as follows:

- (a) A ruggedized composite resin (such as polypropylene) outer shell that:
  - i. Is black in color;
  - ii. Provides shock and impact protection;
  - iii. Water and corrosion resistant; and
  - iv. Not be larger than the following (exterior):
    - a. 55 cm (22 in) long;
    - b. 37.5 cm (15 inches) wide; and
    - c. 25 cm (10 inches) thickness;

Has separators/padding/etc. to keep internal components in place and protect from impact damage during transport;

- Is man portable by a single individual;
- Has integral wheels and a retractable handle;
- Is water/air tight and dust-proof to protect the interior contents;
- Is securable to include quick open/close latches and padlock hasps (minimum of two);

Has adequate internal space for the following:

- v. Two (2) AN/PRC-152A transceivers or two (2) AN/PRC-148 family transceivers (to be supplied by DND);
- vi. Amplifier(s);
- vii. UPS system;
- viii. Battery(s); and
- ix. Accessories;

External connections as follows:

- x. Radio Handsets;
- xi. LOS Antenna;
- xii. SATCOM Antenna;
- xiii. AC Input;
- xiv. DC Input; and
- xv. USB.

Power

The Tactical Radio Repeater Communication System must:

- (a) Display battery status including charging and capacity indication; and
- (b) Display power source (internal/external).

Weight

The Tactical Radio Repeater Communication System alone, minus the transceivers, but including the internal components, batteries and accessories, must weigh no more than 10 kg (23 lb).

Accessories

Each Tactical Radio Repeater Communication System must include the following accessories:

- (a) Cables, adapters, to connect internal components and transceivers;
- (b) Cable(s) required to connect transceivers for repeater mode;
- (c) Cables, adapters, to permit connection to external power and antenna(s);
- (d) Spare fuses, necessary for local repair/maintenance; and
- (e) One (1) paper/hard copy of the Operator/Maintenance manual.

**ANNEX B**  
**MANDATORY EVALUATION**

<u>Climatic Conditions</u>		Met	Not Met
The Tactical Radio Repeater Communication System must operate within the temperature range of -20°C to +60°C.			
<u>Operating Parameters</u>			
The Tactical Radio Repeater Communication System must:	Provide continuous operation of two (2) Harris AN/PRC-152A transceivers and or two (2) Thales AN/PRC-148 family of radios including voice and data transmission when on external power;		
Have a SATCOM mode as follows:	Frequency Range as follows:		
	Receive: 242-268 MHz; and		
	Transmit: 292-318 MHz;		
	Modulation: FM or Phase;		
	Switching Speed: DAMA J1TC and IW compatible;		
Have a Line Of Sight (LOS) mode as follows:	RF Power Input: 2-10 Watts (minimum);		
	Frequency Range: 30-512 MHz;		
	Modulation: AM, FM or Phase; and		
	RF Power Input: 2-10 Watts (minimum);		
	Have a repeater mode (LOS) by connecting the transmit/receive function of the two radios together and attaching the appropriate transmit/receive antennas.		
<u>Amplifier</u>			
The Tactical Radio Repeater Communication System must have minimum one (1) amplifier that is compatible with standard SATCOM and Broadband antennas with output power as follows:	Internal Battery(s) (12-15 VDC): Minimum 20 Watts;		
	External Battery (24-30 VDC): Minimum 50 Watts (peak); and		
	Internal Battery(s) (12-15 VDC): Minimum 20 Watts;		
	External Mains (115/230 VAC): Minimum 50 Watts (peak);		
<u>External Power Sources</u>			
The Tactical Radio Repeater Communication System must:	ILB		
Be capable of being powered by external AC sources as follows:	115 VAC;		
	230 VAC; and		
	50/60 Hertz;		
Be capable of being powered by external DC sources as follows:	Twelve (12) to thirty (30) Volts;		



**Uninterruptable Power Supply (UPS)**

The Tactical Radio Repeater Communication System must:	Provide continuous operation of the system for a minimum of twenty (20) minutes with a duty factor of 100% (100% Transmit) on the internal batteries after loss of external power;		
	Instantaneously switch over to the battery backup in case of the loss of the external AC and/or DC power sources;		
	Be fully operational when batteries are removed when on external power; and		
	Charge the batteries when on external power.		
<b><u>Physical Features</u></b>			
The Tactical Radio Repeater Communication System must integrate all support sub-systems into a single case as follows:	ILB		
	Is black in color;		
	Provides shock and impact protection;		
	Water and corrosion resistant;		
	Not larger than (exterior) 55 cm (22 in) long; 37.5 cm (15 inches) wide; and 25 cm (10 inches) thickness;		
A ruggedized composite resin (such as polypropylene) outer shell that:	Has separators/padding/etc. to keep internal components in place and protect from impact damage during transport;		
	Is man portable by a single individual;		
	Has integral wheels and a retractable handle;		
	Is water/air tight and dust-proof to protect the interior contents;		
	Is securable to include quick open/close latches and padlock hasps (minimum of two);		
Has adequate internal space for the following:	Two (2) AN/PRC-152A transceivers or two (2) AN/PRC-148 family transceivers (to be supplied by DND);		
	Amplifier(s);		
	UPS system;		
	Battery(s); and		
	Accessories;		
External connections as follows:	Radio Handsets;		
	LOS Antenna;		
	SATCOM Antenna;		
	AC Input;		

	DC Input; and		
	USB.		
<b>Power</b>			
The Tactical Radio Repeater Communication System must:	Display battery status including charging and capacity indication; and		
	Display power source (internal/external).		
<b>Weight</b>			
The Tactical Radio Repeater Communication System alone, minus the transceivers, but including the internal components, batteries and accessories, must:	Weigh no more than 10 kg (23 lb).		

**ANNEX C**  
**BASIS OF PAYMENT**  
**MANDATORY DELIVERABLES - DDP**

Description	Part No.	Unit cost	Quantity	Extended Price
Tactical Radio Repeater Communication System		\$	4	\$ (A)
*Optional: extended warranty Year 2		\$	Per unit	\$
*Optional extended warranty: Year 3		\$	Per unit	\$
*Recommended Spare Parts List		N/A	LoT	N/A

**\*Not evaluated**

**\*\* HST/GST/PST extra**

**Total Bid Price (A): \$** \_\_\_\_\_

**The currency of this bid is:** \_\_\_\_\_