



**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 a Standing Offer  
Demande d'offre à commandes**

National Individual Standing Offer (NISO)  
Offre à commandes individuelle nationale (OCIN)

Canada, as represented by the Minister of Public Works and  
Government Services Canada, hereby requests a Standing Offer  
on behalf of the Identified Users herein.

Le Canada, représenté par le ministre des Travaux Publics et  
Services Gouvernementaux Canada, autorise par la présente,  
une offre à commandes au nom des utilisateurs identifiés  
énumérés ci-après.

**Comments - Commentaires**

**Vendor/Firm Name and Address  
Raison sociale et adresse du  
fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**  
Defence Communications Division. (QD)  
11 Laurier St./11, rue Laurier  
Place du Portage, Phase III, 8C2  
Gatineau, Québec K1A 0S5

<b>Title - Sujet</b> VHF/UHF AM/FM Radios	
<b>Solicitation No. - N° de l'invitation</b> W8474-167196/D	<b>Date</b> 2017-06-30
<b>Client Reference No. - N° de référence du client</b> W8474-167196	<b>GETS Ref. No. - N° de réf. de SEAG</b> PW-\$\$QD-038-26366
<b>File No. - N° de dossier</b> 038qd.W8474-167196	<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 2017-07-19</b>	
<b>Time Zone</b> <b>Fuseau horaire</b> Eastern Daylight Saving Time EDT	
<b>Delivery Required - Livraison exigée</b> See Herein	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Hussain, Danish	<b>Buyer Id - Id de l'acheteur</b> 038qd
<b>Telephone No. - N° de téléphone</b> (819)420-4093 ( )	<b>FAX No. - N° de FAX</b> (819)934-0610
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> DEPARTMENT OF NATIONAL DEFENCE 101 COLONEL BY DRIVE K1A 0K2	
<b>Security - Sécurité</b> This request for a Standing Offer does not include provisions for security. Cette Demande d'offre à commandes ne comprend pas des dispositions en matière de sécurité.	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

<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/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>



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**This request for standing offers (RFSO) cancels and supersedes previous RFSO number W8474-167196/C dated April 6, 2017 with a closing date of April 12, 2017 at 2:00 PM (EDT).**

## **PART 1 - GENERAL INFORMATION**

### **1 Security Requirement**

There is no security requirement associated with this Request for Standing Offer (RFSO). Contractor personnel MAY NOT ENTER sites where (protected/classified) information or assets are kept without an escort provided by the Client Department for which the work is being performed.

### **2 Introduction**

The Request for Standing Offers (RFSO) is divided into six parts plus attachments and annexes, as follows:

- Part 1            General Information: provides a general description of the requirement;
- Part 2            Offeror Instructions: provides the instructions applicable to the clauses and conditions of the RFSO;
- Part 3            Offer Preparation Instructions: provides Offerors with instructions on how to prepare their offer to address the evaluation criteria specified;
- Part 4            Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria which must be addressed in the offer, and the basis of selection;
- Part 5            Certifications and Additional Information: includes the certifications and additional information to be provided;
- Part 6            6A, Standing Offer, and 6B, Resulting Contract Clauses:
  - 6A, includes the Standing Offer containing the offer from the Offeror and the applicable clauses and conditions;
  - 6B, includes the clauses and conditions which will apply to any contract resulting from a call-up made pursuant to the Standing Offer.

**Enclosure:**

- Annex A - Statement of Requirement
- Annex B - Technical Specification
- Annex C - Basis of Payment and Financial Evaluation Criteria
- Annex D - 942 Call-up form
- Annex E - Compliance Matrix
- Annex F - Electronic Payment Instructions
- Annex G - Federal Contractors Program for Employment Equity
- Annex H - Application for Spectrum Supportability – DND Form 552
- Annex I - Spectrum Supportability Form Instructions

### 3 Requirement

The Offeror agrees to provide the items listed in Annex A - Statement of Requirement on an “as and when” requested basis.

### 4 Summary

4.1 The Department of National Defence (DND) has a requirement for the supply of Very High Frequency (VHF) and Ultra High Frequency (UHF) Amplitude Modulation (AM) Frequency Modulation (FM) Handheld Radios and Ancillary Equipment as detailed in the Statement of Requirements (Annex A) and Technical Specifications (Annex B).

The Standing Offer will be for a period of three (3) years with two (2) one-year option periods. Each year may have an anticipated cash-flow of approximately \$1,000,000.

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

4.3 The Request for Standing Offers (RFSO) is to establish National Individual Standing Offers for the requirement detailed in the RFSO, to the Identified Users across Canada, **excluding** locations within Yukon, Northwest Territories, Nunavut, Quebec, and Labrador that are subject to Comprehensive Land Claims Agreements (CLCAs). Any requirement for deliveries to locations within CLCAs areas within Yukon, Northwest Territories, Nunavut, Quebec, or Labrador will have to be treated as a separate procurement, outside of the resulting standing offers.

4.4 "The Federal Contractors Program (FCP) for employment equity applies to this procurement; see Part 5 – Certifications and Additional Information, Part 7A -Standing Offer, and Part 7B - Resulting Contract Clauses and the annex titled Federal Contractors Program for Employment Equity - Certification."

### 5 Debriefings

Offerors may request a debriefing on the results of the request for standing offers process. Offerors should make the request to the Standing Offer Authority within 15 working days of receipt of the results of the request for standing offers process. The debriefing may be in writing, by telephone or in person.

### 6 Trade Agreements

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

## **PART 2 - OFFEROR INSTRUCTIONS**

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

All instructions, clauses and conditions identified in the Request for Standing Offers (RFSO) 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) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

Offerors who submit an offer agree to be bound by the instructions, clauses and conditions of the RFSO and accept the clauses and conditions of the Standing Offer and resulting contract(s).

The 2006 (2017-04-27) Standard Instructions - Request for Standing Offers - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the RFSO.

#### **1.1 SACC Manual Clauses**

**The following SACC Manual Clauses are incorporated by reference:**

[M1004T](#) (2016-01-28) Condition of Material – Offer

### **2 Submission of Offers**

Offers 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 Request for Standing Offers.

### **3 Enquiries - Request for Standing Offers**

All enquiries must be submitted in writing to the Standing Offer Authority no later than five (5) calendar days before the Request for Standing Offers (RFSO) closing date. Enquiries received after that time may not be answered.

Offerors should reference as accurately as possible the numbered item of the RFSO to which the enquiry relates. Care should be taken by Offerors 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 Offerors do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all Offerors. Enquiries not submitted in a form that can be distributed to all Offerors may not be answered by Canada.

### **4 Applicable Laws**

The Standing Offer and any contract resulting from the Standing Offer must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

Offerors may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their offer, 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 Offerors.

## **5 Improvement of Requirement during Solicitation Period**

Should Offerors consider that the specifications or Statement of Requirements contained in the offer solicitation could be improved technically or technologically, Offerors are invited to make suggestions, in writing, to the Standing Offer Authority named in the offer solicitation. Offerors must clearly outline the suggested improvement as well as the reason for the suggestion. Suggestions that do not restrict the level of competition nor favor a particular Offeror will be given consideration provided they are submitted to the Standing Offer Authority at least seven days before the standing offer closing date. Canada will have the right to accept or reject any or all suggestions.

## **6 Former Public Servant**

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPSs, offerors must provide the information required below before contract award. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of offers is completed, Canada will inform the Offeror of a time frame within which to provide the information. Failure to comply with Canada's request and meet the requirement within the prescribed time frame will render the offer non-responsive.

### **6.1 Definitions**

For the purposes of this clause, "former public servant" is any former member of a department as defined in the Financial Administration Act, R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

- a. an individual;
- b. an individual who has incorporated;
- c. a partnership made of former public servants; or
- d. a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"Lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means a pension or annual allowance paid under the Public Service Superannuation Act (PSSA), R.S., 1985, c. P-36, and any increases paid pursuant to the Supplementary Retirement Benefits Act, R.S., 1985, c. S-24 as it affects the PSSA. It does not include pensions

payable pursuant to the Canadian Forces Superannuation Act, R.S., 1985, c. C-17, the Defence Services Pension Continuation Act, 1970, c. D-3, the Royal Canadian Mounted Police Pension Continuation Act, 1970, c. R-10, and the Royal Canadian Mounted Police Superannuation Act, R.S., 1985, c. R-11, the Members of Parliament Retiring Allowances Act, R.S. 1985, c. M-5, and that portion of pension payable to the Canada Pension Plan Act, R.S., 1985, c. C-8.

## 6.2 Former Public Servant in Receipt of a Pension

As per the above definitions, is the Offeror a FPS in receipt of a pension? **Yes** ( ) **No** ( )

If so, the Offeror must provide the following information, for all FPSs in receipt of a pension, as applicable:

- a. name of former public servant; and
- b. date of termination of employment or retirement from the Public Service.

By providing this information, Offeror agree that the successful Offeror's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with Contracting Policy Notice: 2012-2 and the Guidelines on the Proactive Disclosure of Contracts.

## 6.3 Work Force Adjustment Directive

Is the Offeror a FPS who received a lump sum payment pursuant to the terms of the Work Force Adjustment Directive? **Yes** ( ) **No** ( )

If so, the Offeror must provide the following information:

- a. name of former public servant;
- b. conditions of the lump sum payment incentive;
- c. date of termination of employment;
- d. amount of lump sum payment;
- e. rate of pay on which lump sum payment is based;
- f. period of lump sum payment including start date, end date and number of weeks;
- g. number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including Applicable Taxes.



## PART 3 - OFFER PREPARATION INSTRUCTIONS

### 1 Offer Preparation Instructions

Canada requests that Offerors provide their offer in separately bound sections as follows:

Section I: Technical Offer (3 hard copies and 1 soft copy)

Section II: Financial Offer (2 hard copies and 1 soft copy)

Section III: Certifications (2 hard copies of each certification sought)

Soft copies must be submitted via CD or DVD. Soft copies submitted via USB key will not be accepted.

If there is a discrepancy between the wording of the soft copy and the hard copy, the wording of the hard copy will have priority over the wording of the soft copy.

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

Canada requests that Offerors follow the format instructions described below in the preparation of their offer.

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (b) use a numbering system that corresponds to that of the Request for Standing Offers.

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, Offerors 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.

### 2 Section I: Technical Offer

#### 2.1 Canada requests that Offerors submit the Technical Offer as per the following:

In their technical offers, Offerors should demonstrate their understanding of the requirements contained in the offer solicitation and explain how they will meet these requirements. Offerors should demonstrate their capability and describe their approach in a thorough, concise and clear manner for carrying out the work.

##### 2.1.1 Mandatory Requirements:

All requirements contained in the Annex A and Annex B are mandatory. Offerors must meet all requirements of the Annex A and B. In their technical bid, Offerors should address all the requirements of the Annex A - Statement of Work on a paragraph-by-paragraph basis and Annex B - Technical Specifications on a paragraph-by-paragraph basis.

Offerors should use Annex E – Compliance Matrix to provide their responses and provide comments as to how they will carry out the work listed in Annex A and B. Offerors must request Annex E in its native format through the Standing Offer Authority five days prior to close of the RFSO.

### **2.1.2 Compliance Demonstration:**

The technical offer should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the offer will be evaluated. Simply repeating the statement contained in the offer solicitation is not sufficient. In order to facilitate the evaluation of the offer, Canada requests that offerors address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, offerors may refer to different sections of their offers by identifying the specific paragraph and page number where the subject topic has already been addressed.

Offerors must provide proof of compliance by means of brochures, test results, any other relevant literature or provide compliance statement where other means do not apply. Offerors should provide the page number and exact location of the brochures, document or any other material submitted with the Technical Offer to substantiate compliance.

Offerors should provide their responses in their technical offer as per the following:

- i. A compliance statement ("Compliant" or "Non-compliant"). "Compliant" statement will be interpreted as meaning full agreement with the requirement, whereas a Non-compliant statement will be interpreted as meaning not in full agreement with the requirement and the proposal will be deemed non-responsive and not given any further consideration.
- ii. For mandatory requirements, statements such as "Read", "Comply with Intent", "Partial Compliance", "Noted" or the like will be considered as non-responsive; Paragraphs, elements and subparagraphs that convey information rather than a requirement must be marked with "Noted and Understood".

## **3 Section II: Financial Offer**

Offerors must submit their financial offer in accordance with the Annex C Basis of Payment. Prices submitted through Annex C must be firm unit and **kit** prices DDP (Delivery address **can be** anywhere within Canada) Incoterms 2010, and the Goods and Services Tax or the Harmonized Sales Tax excluded, if applicable.

Annex C – Basis of Payment, in its native format, can be requested through the Standing Offer Authority. Offerors should utilize Annex C to submit their pricing information.

### **3.1 Electronic Payment of Invoices - Offer**

If you are willing to accept payment of invoices by Electronic Payment Instruments, complete Annex F Electronic Payment Instruments, to identify which ones are accepted.

If Annex F Electronic Payment Instruments is not completed, it will be considered as if Electronic Payment Instruments are not being accepted for payment of invoices. Acceptance of Electronic Payment Instruments will not be considered as an evaluation criterion.

### **3.2 Exchange Rate Fluctuation**

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

## **4 Section III: Certifications**

Offerors must submit the certifications listed in Part 5 – Certifications and additional information.

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

### **1 Evaluation Procedures**

- (a) Offers will be evaluated to determine if they comply with the entire requirement of the RFSO including the technical and financial evaluation criteria. Canada will utilize a two-step evaluation process as more fully described herein.
- (b) An evaluation team composed of representatives of Canada will evaluate the offers.
- (c) The definitions of mandatory requirements are as follows:  
  
MANDATORY REQUIREMENTS: Offerors should note that all MANDATORY requirements are identified specifically with the word “shall”, “must”, “will”, “mandatory”. In the case where a MANDATORY item cannot be or is not complied with, the offer shall not receive any further consideration.
- (d) Compliance with all of the mandatory provisions of the RFSO, including, without limitation, all Annexes, and the terms and conditions applicable to any resulting Standing Offer and contracts is mandatory.

### **2 Evaluation Overview and Underlying Principles**

- (a) Canada will conduct a two-step evaluation process for this requirement.
- (b) Step 1 consists of a preliminary evaluation of the Offers for those requirements identified in paragraph 3 below, preparation of a Preliminary Evaluation Report by Canada (if required) and Canada’s review of any non-responsive Offeror’s submission in response to the Preliminary Evaluation Preliminary Evaluation Report.
- (c) At the completion of Step 1, only those Offers deemed to be responsive will continue to evaluation at Step 2. Canada will conduct a full Offer evaluation at Step 2 for all responsive Offers in accordance with the process described herein.
- (d) Notwithstanding the limited review which Canada may conduct for certain parts of the Offers during Step 1, Offerors are and will remain solely responsible for the accuracy and completeness of their Offers at all times and Canada does not undertake, by reason of this review, any obligations or responsibility for identifying errors or omissions in Offers submitted nor does Canada undertake to identify any or all such errors or omissions or represent that any or all errors or omissions will be identified. Without limiting the foregoing, Offerors are and will remain solely responsible for ensuring that any information provided in response to a Preliminary Evaluation Report is consistent with any other information originally submitted in their Offer in response to other requirements. Failure to do so may prejudice the evaluation of previously submitted information and/or render the Offer non-responsive, in which case, the Offer will received no further consideration.
- (e) This two-step Offer evaluation process shall not limit Canada’s rights under *SACC 2006 (2017-04-27) Standard Instructions - Request for Standing Offers - Goods or Services - Competitive Requirements* nor Canada’s right to request or accept any information during the RFSO solicitation period or after RFSO solicitation period closing in circumstances where the RFSO expressly provides for this right.

### **3 Preliminary Evaluation – Step 1**

#### **3.1 Offer review**

For Step 1, the evaluation team will conduct a limited Offer review to:

1. identify any instances where the Offeror has failed to submit documentation which must be submitted concurrently with the submission of the Offer; and
2. identify any instances where the Offeror has failed to meet a mandatory requirement of an administrative nature, such as failure to submit required certification or proof/evidence of compliance, or where a submitted document lacks the requisite signature(s), only for those documents which must be submitted concurrently with the Offer; and
3. For the financial offer, Canada's review will be limited to identifying whether required data is missing from the Offer or whether GST/HST amounts are not shown separately. In instances where a different price for the same item is provided in more than one location within the financial offer, Canada will identify this discrepancy and the Offeror must confirm which price applies.

Where a required line item has been left blank, only the missing information may be added to the financial offer for Step 2, except that, in those instances where the addition of such information will necessarily result in a change to other pricing or cost information previously submitted as a result of calculations required by the RFSO (for example, the calculation to determine a total price), such necessary adjustments shall be identified by the Offeror and only these adjustments shall be made. Any other changes to the Offer shall be considered to be new information and will be disregarded.

#### **3.2 Preliminary Evaluation Report and Information Submission**

1. If any Offer is determined to be non-responsive to the requirements reviewed at Step 1, the Standing Offer Authority will provide a Preliminary Evaluation Report to all Offerors. For Offerors whose Offer was determined to be non-responsive, the Preliminary Evaluation Report will identify only those areas of the Offer which were non-responsive. For Offerors whose Offers were considered to be responsive, the Preliminary evaluation Report will only identify that they are responsive for the requirements evaluated at Step 1.
2. Offerors may submit information only in response to those items specifically identified in the Preliminary Evaluation Report. Any other changes to the Offer shall be considered new information and will be disregarded.
3. Offeror's whose offers have been evaluated as non-responsive at Step 1 are not required to continue with the procurement process and may withdraw their Offers at their sole discretion.
4. For Offerors whose Offers are considered to be responsive, the Preliminary Evaluation Report will only identify that they are responsive for the requirements evaluated.
5. All Offerors are requested to provide written confirmation of receipt of the Preliminary Evaluation Report to the Standing Offer Authority. Offerors who do not confirm receipt will be deemed to have received the Preliminary Evaluation Report as of the date issued by Canada pursuant to Canada's records.
6. Only non-responsive Offerors shall submit further information in response to the Preliminary Evaluation Report.

7. An Offeror responding to a Preliminary Evaluation Report must not modify, alter or substitute any of the proposed hardware or software to correct a non-responsive issue. There will be no change permitted to the Offeror's financial offer as a result of the additional or different information submitted except as permitted above. All submitted information must otherwise comply with the requirements of this RFSO solicitation. Failure to comply with these requirements will result in the additional or different information being returned to the Offeror without further consideration.
  8. Information submitted by non-responsive Offerors in response to the Preliminary Evaluation Report and accepted by Canada will be deemed to replace, in full, only the non-responsive information or response in the Offeror's original Offer as identified in the Preliminary Evaluation Report and will be used for the remainder of the Offer evaluation process. The additional or different information submitted will only be used to determine the Offeror's responsiveness to the RFSO requirements evaluated as non-responsive.
  9. The Offeror's response to the Preliminary Evaluation Report must follow the RFSO Preparation Instructions (such as, for example, separating financial information from other information as required). Canada requests that Offerors clearly indicate, for each response, which non-responsive requirement identified in the Preliminary Evaluation Report is being responded to.
  10. Responses to the Preliminary Evaluation Report must be submitted to the Bid Receiving Unit on or before the date and time specified in the Preliminary Evaluation Report. Failure to do so will result in the Offer being deemed non-responsive and the Offer will receive no further consideration.
  11. Any adjustments to a non-responsive Offer are at the Offeror's sole discretion and will be made solely by the Offeror. Canada will not provide information about any other Offer or any information as to how an Offeror should complete its response, if any, to the Preliminary Evaluation Report.
  12. For those instances where an Offeror chooses not to submit additional or different information for a requirement identified as non-responsive, the Offeror must submit a response indicating "No Change" for such requirement and the original response for that item will continue to apply. If an Offeror does not provide a "No Change" response, the Offeror shall be deemed to have provided a "No Change" response and the original response for that item shall continue to apply.
- (b) **Proceeding to Step 2.** Offers meeting all the requirements evaluated at Step 1, will proceed to the Step 2 evaluation process described below.

If all Offers are determined to be responsive, no Preliminary Evaluation Reports will be issued and the Standing Offer Authority will proceed to Step 2 and will complete the full Offer evaluation using the original Offer documents submitted.

## 4 Technical Offer Evaluation – Step 2

Canada will conduct a final and full evaluation for all responsive Offers.

For those Offers which were non-responsive at Step 1, Canada's evaluation of such Offers will take into account the additional or different information submitted in response to the Preliminary Evaluation Report to determine if these requirements have been met as required in the RFSO. An Offer will be considered to be non-responsive and receive no further consideration if:

- a. one or more of the requirements initially evaluated as non-responsive continues to be evaluated as non-responsive; or
- b. the additional or different information submitted renders non-responsive any other mandatory requirements (even if previously evaluated as responsive).

## **4.1 Technical Evaluation**

### **4.1.1 Mandatory Technical Criteria**

An offer must comply with the requirements of the RFSO and meet all mandatory technical evaluation criteria to be declared responsive. Compliance with all mandatory provisions of the RFSO, including all Annexes and applicable terms and conditions will be verified. In the case where a mandatory item cannot be or is not complied with, the offer will receive no further consideration.

## **4.2 Financial Evaluation**

The price of the offers will be evaluated as follows:

- 4.2.1 Offerors must submit firm prices DDP Incoterms 2010, Canadian customs duties and excise taxes included, and the applicable taxes excluded.
- 4.2.2 The financial offers will be evaluated in Canadian currency. Pricing submitted in foreign currency will be converted to Canadian dollars based on the exchange rate provided by the Bank of Canada at 16:30 Eastern Time (EST) on the date of RFSO closing.
- 4.2.3 Exchange rate fluctuation protection is not offered for this requirement. Any request for exchange rate fluctuation protection will not be considered and will render the offer non-responsive.
- 4.2.4 The financial offers will be evaluated in accordance with the prices submitted in Annex C – Basis of Payment.
- 4.2.5 The total price of the offer will be determined by the sum of all units and kits prices submitted in Annex C – Basis of Payment. Failure to submit a unit price may render the offer non-responsive. Offerors may choose to offer any item/s at no-charge.
- 4.2.6 The prices submitted for the Non-essential Ancillary Equipment will not be part of the financial evaluation.

## **5 Basis of Selection**

- 5.1 To be declared responsive, an offer must:
  - a. comply with all the requirements of the bid solicitation;
  - b. meet all mandatory criteria; and bids not meeting (a) and (b) will be declared non-responsive.
  - c. The responsive offer with the Lowest Aggregated evaluated price will be recommended for issuance of a standing offer.

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

Offerors must provide the required certifications and additional information to be awarded a Standing Offer.

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

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

### **1 Certifications Required with the Offer**

Offerors must submit the following duly completed certifications as part of their offer.

#### **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 Offeror must provide with its offer the required documentation, as applicable, to be given further consideration in the procurement process.

### **2 Certifications Precedent to Contract Award and Additional Information**

The certifications and additional information listed below should be submitted with the offer, but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Standing Offer Authority will inform the Offeror 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 offer non-responsive.

#### **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 Offeror must provide the required documentation, as applicable, to be given further consideration in the procurement process.

#### **2.2 Federal Contractors Program for Employment Equity - Offer Certification**

By submitting an offer, the Offeror certifies that the Offeror, and any of the Offeror's members if the Offeror is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Offer" 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](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 an offer non-responsive if the Offeror, or any member of the Offeror if the Offeror is a Joint Venture, appears on the “FCP Limited Eligibility to Bid” list at the time of contract award.

### **2.3 Radio Equipment Certification**

All offered radio equipment must be certified by Innovation, Science and Economic Development Canada (ISED) for use.

The Offeror must submit one of the following for all radio frequency (RF) equipment offered:

- 2.3.1 A valid Technical Acceptance Certificate (TAC) issued by ISED; or
- 2.3.2 A valid DD1494 Form issued by the United States Department of Defense (DoD); or
- 2.3.3 A copy of the DND 552 Form, “Application for Spectrum Supportability”, which will be submitted to DND Frequency Spectrum Management (FSM) for evaluation/authentication.

*For the purposes of this criterion, ‘valid’ means ‘accepted by the issuing body and currently in force’.*

### **2.4 Federal Contractors Program for Employment Equity**

The Offerors must provide this certification as included at Annex “G”.

## **3 Application for Spectrum Supportability - DND 552 Form**

Offerors may submit a completed DND 552 Form in lieu of a valid TAC or DD 1494 Form.

The DND FSM unit will evaluate the DND 552 Form and, if the submission is deemed to be non-compliant with the requirements of Spectrum Supportability, the offer will be deemed non-responsive and will not receive any further consideration

See Annex H for a copy of the Spectrum Supportability, DND 552 Form, and Annex I for the associated instructions.

### **3.1 Planned/Proposed Spectrum Use**

The planned/proposed spectrum use must comply with Innovation, Science and Economic Development Canada and DND Frequency Spectrum Management requirements.

The Offeror must submit a general description of the intended RF spectrum. As a minimum, the description must include the following:

- 3.1.1 intended frequency bands;
- 3.1.2 number of channels required;
- 3.1.3 approximate transmitting power; and
- 3.1.4 approximate bandwidth requirements.

## **4 References**

### **4.1 DND Management of the Radio Spectrum**

[http://www.link16mnwg.org/eic/site/040.nsf/vwapj/dndp35.pdf/\\$file/dndp35.pdf](http://www.link16mnwg.org/eic/site/040.nsf/vwapj/dndp35.pdf/$file/dndp35.pdf)

### **4.2 Innovation, Science and Economic Development Canada**

<http://strategis.ic.gc.ca>

### **4.3 Innovation, Science and Economic Development Canada – RSP-100 Radio Equipment Certification Procedure**

[http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01130.html#s6\\_2](http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01130.html#s6_2)

## **PART 6 - RESULTING CONTRACT CLAUSES**

### **A. STANDING OFFER**

#### **1 Offer**

The Offeror offers to fulfill the requirement in accordance with the Requirement at Annex "A" and Annex "B".

#### **2 Security Requirements**

There is no security requirement applicable to the Standing Offer.

#### **3 Standard Clauses and Conditions**

All clauses and conditions identified in the Standing Offer and resulting contract(s) 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.

##### **3.1 General Conditions**

[2006 \(2017-04-27\) Standard Instructions - Request for Standing Offers - Goods or Services - Competitive Requirements](#), apply to and form part of the Standing Offer.

#### **4 Term of Standing Offer**

##### **4.1 Period of the Standing Offer**

The period for making call-ups against the Standing Offer is from \_\_\_\_\_ to \_\_\_\_\_.

##### **4.2 Option Periods of Standing Offer**

The Offeror grants to Canada the irrevocable option to extend the term of the Standing Offer by up to two additional one-year **periods** under the same conditions. The Offeror agrees that, during the extended period of the Standing Offer, it will be paid in accordance with the applicable provisions as set out in the Basis of Payment.

Canada may exercise this option at any time by sending a written notice to the Offeror at least fifteen calendar days before the expiry date of the Standing Offer, **or earlier**. The option may only be exercised by the Standing Offer Authority, and will be evidenced for administrative purposes only, through a Standing Offer revision.

### 4.3 Pricing for the Option Periods

Prices for the Option Periods will be determined using an economic price adjustment (EPA) escalation rate (positive or negative). The EPA will be determined based on the latest published Consumer Price Index (CPI) for all items, Statistics Canada Catalogue No. 62-001.

### 4.4 Comprehensive Land Claims Agreements (CLCAs)

The Standing Offer (SO) is for the delivery of the requirement detailed in the SO to the Identified Users across Canada, excluding locations within Yukon, Northwest Territories, Nunavut, Quebec, and Labrador that are subject to Comprehensive Land Claims Agreements (CLCAs). Any requirement for deliveries to locations within CLCAs areas within Yukon, Northwest Territories, Nunavut, Quebec, or Labrador will have to be treated as a separate procurement, outside of the standing offer.

### 4.5 Delivery Points

Delivery of the requirement must be made to delivery point(s) specified in the Call-up(s) against the Standing Offer.

## 5 Authorities

### 5.1 Standing Offer Authority

The Standing Offer Authority is:

**Danish Hussain**

Public Services and Procurement Canada  
Acquisitions Branch  
Electronics, Munitions and Tactical Systems Procurement Directorate  
Address: Place du Portage, Phase III, 8C2  
11 Laurier Street, Gatineau, Quebec K1A 0S5 Canada

Telephone: 819-420-4093

Facsimile: 819-934-0610

E-mail address: [Danish.Hussain@tpsgc-pwgsc.gc.ca](mailto:Danish.Hussain@tpsgc-pwgsc.gc.ca)

*The Standing Offer Authority is responsible for the establishment of the Standing Offer, its administration and its revision, if applicable. Upon the making of a call-up, as Contracting Authority, he/she is responsible for any contractual issues relating to individual call-ups made against the Standing Offer by any Identified User.*

### 5.2 Procurement Authority

The Procurement Authority for the Standing Offer is identified in the call-up against the Standing Offer.

*The Procurement Authority is the representative of the department or agency for whom the Work will be carried out pursuant to a call-up against the Standing Offer and is responsible for all the technical content of the Work under the resulting Contract.*

### 5.3 Offeror's Representative

Name:  
Title:  
Address:  
Telephone:  
Fascimile:  
E-mail address:

## 6 Identified Users

The Identified Users authorized to make call-ups against the Standing Offer is:

Department of National Defence Canada

## 7 Call-up Instrument

The Work will be authorized or confirmed by Identified User(s) using the duly completed forms or by using Canada acquisition cards (Visa or MasterCard) for low dollar value requirements.

Any of the following forms could be used which are available through PWGSC Forms Catalogue website:

- PWGSC-TPSGC 942: Call-up Against a Standing Offer
- PWGSC-TPGSC 942-2: Call-up Against a Standing Offer - Multiple Delivery

## 8 Limitation of Call-ups

Individual call-ups against the Standing Offer must not exceed \$40,000.00 (Applicable Taxes included). Call-ups over \$40,000.00 CAD must be authorized by the Standing Offer Authority.

### 8.1 Financial Limitation - Total

The total cost to Canada resulting from call ups against the Standing Offer must not exceed the sum of \$4,237,000.00 including taxes, unless otherwise authorized in writing by the Standing Offer Authority. The Offeror must not perform any work or services or supply any articles in response to call ups which would cause the total cost to Canada to exceed the said sum, unless an increase is so authorized.

The Offeror must notify the Standing Offer Authority as to the adequacy of this sum when 75 percent of this amount has been committed, or three (3) months before the expiry date of the Standing Offer, whichever comes first. However, if at any time, the Offeror considers that the said sum may be exceeded, the Offeror must promptly notify the Standing Offer Authority.

## 9 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 call up against the Standing Offer, including any annexes;
- b) the articles of the Standing Offer;
- c) the general conditions 2005 (2016-04-04), General Conditions - Standing Offers - Goods or Services;
- d) the supplemental general conditions 4001(2015-04-01) Hardware Purchase, and Maintenance excluding Lease;
- e) the supplemental general conditions 4003 (2010-08-16) Licensed Software;
- f) the supplemental general conditions 4006 (2010-08-16) Contractor to Own Intellectual Property Rights in Foreground Information;
- g) Annex A - Statement of Requirement;
- h) Annex B - Technical Specifications;
- i) Annex C - Basis of Payment; and
- j) the Offeror's offer dated \_\_\_\_\_.

## 10 Certifications and Additional Information

### 10.1 Compliance

Unless specified otherwise, the continuous compliance with the certifications provided by the Offeror with its offer or precedent to issuance of the Standing Offer (SO), and the ongoing cooperation in providing additional information are conditions of issuance of the SO and failure to comply will constitute the Offeror in default. Certifications are subject to verification by Canada during the entire period of the SO and of any resulting contract that would continue beyond the period of the SO.

### 10.2 Federal Contractors Program for Employment Equity - Setting aside

The Offeror understands and agrees that, when an Agreement to Implement Employment Equity (AIEE) exists between the Offeror and Employment and Social Development Canada (ESDC)-Labour, the AIEE must remain valid during the entire period of the Standing Offer. If the AIEE becomes invalid, the name of the Offeror will be added to the "FCP Limited Eligibility to Bid" list. The imposition of such a sanction by ESDC may result in the setting aside of the Standing Offer.

## 11 Applicable Laws

The Standing Offer and any contract resulting from the Standing Offer must be interpreted and governed, and the relations between the parties determined, by the laws in force in \_\_\_\_\_.

## 12 Substitution/Deviation - Authorization

Unless otherwise specifically provided for in the Contract, only the Standing Offer Authority is authorized to modify the specifications or the conditions under which supply is to be made.

### **13 Discontinuation of Production**

The Offeror shall offer equipment that will remain in production for the entire life of this SO. The Offeror shall notify the Department in writing, of their intention to discontinue production.

### **14 Periodic Usage Reports - Standing Offer or Reports**

The Offeror must compile and maintain records on its provision of goods, services or both to the federal government under call-ups resulting from the Standing Offer. This data must include all purchases paid for by a Government of Canada Acquisition Card.

The Offeror must report on a quarterly basis on the call-up/contract activities. Such reports may contain, but are not limited to, the following information:

- the standing offer number;
- the supplier name;
- the reporting period;
- the call-up number for each call-up, including amendments;
- the client department;
- the Standing Offer authority;
- the date of the call-up;
- the call-up period;
- the line items acquired/services provided;
- the value of the call-ups, Applicable Taxes included, as applicable.

The Offeror must provide this data in accordance with the reporting requirements. If some data is not available, the reason must be indicated. If no goods or services are provided during a given period, the Offeror must still provide a "NIL" report.

The data must be submitted on a quarterly basis to the Standing Offer Authority.

**Quarterly periods are defined as follows:**

1st quarter: April 1 To June 30

2nd quarter: July 1 to September 30

3rd quarter: October 1 to December 31

4th quarter: January 1 to March 31

The data must be submitted to the Standing Offer Authority no later than 15 calendar days after the end of the reporting period.

## **B. RESULTING CONTRACT CLAUSES**

The following clauses and conditions apply to and form part of any contract resulting from a call-up against the Standing Offer.

### **1 Statement of Requirement**

The Contractor must provide the items detailed in the call-ups against the Standing Offer.

### **2 Standard Clauses and Conditions**

#### **2.1 General Conditions**

2030 (2016-04-04), General Conditions - Higher Complexity - Goods apply to and form part of the Contract.

#### **2.2 Supplemental General Conditions**

4001 (2015-04-01) Hardware Purchase, and Maintenance excluding Lease

4003 (2010-08-16) Licensed Software

4006 (2010-08-16) Contractor to Own Intellectual Property Rights in Foreground Information

### **3 Term of Contract**

#### **3.1 Period of the Contract**

The period of the Contract/s will be determined by the delivery details of each agreed upon call-up.

#### **3.2 Delivery Date**

All deliveries must be completed in accordance with specified date/s in the call-ups.

### **4 Payment**

#### **4.1 Basis of Payment**

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid firm unit prices, as specified in Annex C - Basis of Payment. Customs duties are included and 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.



## 4.2 Multiple Payments

H1001C (2008-05-12), Multiple Payments applies to and forms part of the Contract.

## 4.3 Electronic Payment of Invoices – Call-up

The Contractor accepts to be paid using any of the following Electronic Payment Instrument(s):

- a. Visa Acquisition Card;
- b. MasterCard Acquisition Card;
- c. Direct Deposit (Domestic and International);
- d. Electronic Data Interchange (EDI);
- e. Wire Transfer (International Only);
- f. Large Value Transfer System (LVTS) (Over \$25M).

*Note: The correct Electronic Payment Instruments will be captured before the Standing Offer is awarded.*

## 5 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.

Each invoice must be supported by:

a copy of the release document and any other documents as specified in the Contract;

2. Invoices must be distributed as follows:
  - a. The original and one (1) copy must be forwarded to the Procurement Authority as identified in each call-up.
  - b. One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.
  - c. one (1) copy must be forwarded to the consignee.

## 6 Insurance

SACC Manual clause G1005C (2016-01-28) Insurance

## 7 SACC Manual Clauses

**The following SACC Manual Clauses are incorporated by reference:**

A9006C (2012-07-16) Defence Contract

A9117C (2007-11-30) Direct Request by Customer Department  
[B1501C](#) (2006-06-16) Electrical Equipment  
[B7500C](#) (2006-06-16) Excess Goods  
[C2000C](#) (2007-11-30) Taxes – Foreign-based Contractor  
C2608C (2015-02-25) Canadian Customs Documentation  
[D3015C](#) (2014-09-25) Dangerous Goods / Hazardous Products – Labelling and Packaging Compliance

## **8 Shipping Instructions - Delivered Duty Paid**

Goods must be consigned and delivered to the destination specified in the Call-up: Incoterms 2010 "DDP Delivered Duty Paid".

## **9 Packaging**

The Contractor must package item in quantities of one (1) by package.

## **10 Consignee and Shipping Address**

Consignee and shipping information shall be included in the call-ups at the time of issuance.

## **11 Condition of Materiel – Contract**

The Contractor must provide material that is new production of current manufacture supplied by the principal manufacturer or its accredited agent. The material must conform to the latest issue of the applicable drawing, specification and part number, as applicable, that was in effect on the solicitation closing date.

## **12 Federal Contractors Program for Employment Equity - Default by the Contractor**

The Contractor understands and agrees that, when an Agreement to Implement Employment Equity (AIEE) exists between the Contractor and Employment and Social Development Canada (ESDC)-Labour, the AIEE must remain valid during the entire period of the Contract. If the AIEE becomes invalid, the name of the Contractor will be added to the "[FCP Limited Eligibility to Bid](#)" list. The imposition of such a sanction by ESDC will constitute the Contractor in default as per the terms of the Contract.

## **13 Translation of documentation**

The Contractor agrees that Canada may translate in the other official language any documentation delivered to Canada by the Contractor that does not belong to Canada. The Contractor acknowledges that Canada owns the translation and that it is under no obligation to provide any translation to the Contractor. Canada agrees that any translation must include any copyright notice and any proprietary right notice that was part of the original. Canada acknowledges that the Contractor is not responsible for any technical errors or other problems that may arise as a result of the translation.



## **ANNEX A**

# **STATEMENT OF REQUIREMENT**

## **VHF/UHF AM/FM HANDHELD RADIOS**

### **AND**

## **ANCILLARY EQUIPMENT**

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## **1 GENERAL**

This document is the Statement of Requirement (SOR) for a Standing Offer (SO) being put forward by the Department of National Defence (DND) for Very High Frequency (VHF) and Ultra High Frequency (UHF) Amplitude Modulation (AM) Frequency Modulation (FM) handheld radio systems to be used for command and control of air and ground assets.

### **1.1 Scope**

The Offeror must satisfy the DND requirements for the supply of VHF/UHF AM/FM handheld transceiver capable of operating in the 30 – 512 MHz band.

### **1.2 General Description**

The primary purpose of this requirement is to provide DND with a handheld transceiver that will provide line-of-sight two-way voice and data communications between personnel on the ground and aircraft, vehicles, fixed sites and other personnel equipped with VHF/UHF AM/FM 30 – 512 MHz radio equipment. P25 protocol is not a requirement of this RFSO but if provided, it will be accepted.

### **1.3 ITAR/CTAT**

For all items listed under this SO, the Offeror must provide in its Offer a list that includes items pertaining to ITAR/CTAT with their applicable codes. Where the code refers to either a Hazardous Material or special disposal requirements, the Offeror must identify both the hazardous material and the disposal code in its offer.

### **1.4 Hazardous Material**

All hazardous material must be clearly marked in all technical publications and bulletins by hazardous material and part number. Disposal instructions must be provided as an Annex to either the technical publication or the bulletin.

### **1.5 Discontinuation of Production**

The Offeror must identify, to the Technical Authority (TA) and Standing Offer Authority, any item that is scheduled for discontinuation, throughout the life of the SO. Within one month of a decision to discontinue an item, the Offeror must identify to the TA, new components that are form, fit and functional replacements. This would allow the TA to procure extra units prior to production termination. The technical data, of the replacement items, must be forwarded to the TA for verification of acceptability.

## 2 REQUIREMENTS

### 2.1 Transceiver Package Requirements

The Offeror must deliver radio package/s on “as and when requested” basis. Each radio package must consist of:

<u>Item</u>	<u>Quantity</u>	<u>Description</u>
1	1	VHF/UHF AM/FM Handheld Transceiver;
2	1	Rechargeable Battery;
3	1	Antenna;
4	1	Carrying Case with belt clip or loop; and
5	1	Operating manual (English and/or French in electronic format.)

### 2.2 Ancillary Equipment Requirements

The Offeror must provide the following Ancillary equipment on “as and when requested” basis. These items may be purchased individually as supplemental ancillary equipment, as needed.

Item	Description	Specification
1	Battery Charger	Single Port
2	Battery Charger	Multi-Port
3	Microphone Set	Lapel Microphone
4	Microphone Set	Speaker Microphone
5	Microphone Set	Headset Microphone
6	Spare Batteries	Identical to battery that comes with the radio kit.
7	Radio	Transceiver only
8	Programming Kit	Containing software, cables, and all other accessories needed to make the kit complete and provide tools to fully program a transceiver with software.
9	Programming Software	For programming and control of the transceiver or other major components. Must be compatible with Microsoft Windows 7.

10	Carrying Case	Identical to accommodate radio unit issued with offered package.
11	Antenna	Identical to antenna issued with offered package.
12	Standard Cable	As per the radio design requirements.
13	Standard Connector	As per the radio design requirements.

### 2.3 Non-Essential Ancillary Equipment Requirements

With its offer, the Offeror must submit price and availability for the equipment shown in the below table. These items may be incorporated in the standing offer by the Standing Offer Authority.

Item	Description	Specification
1	Spare Batteries	Alternative sized and/or high power batteries
2	Carrying Case	All applicable varieties
3	Antennas	Omni -band or band specific
4	Special Tools	Identify and provide information with regards to any special tools that will be required for maintenance of the equipment as applicable.
5	Operational Waveforms	Should be capable of utilizing operational waveforms.
6	Encryption	Must have the ability to operate in encrypted mode using AES 256 built in. It must not be a CCI (Controlled Crypto Device). Software loaded.
7	Spare Parts Kit	Manufacturer's Recommended Spare Parts Kit for Field Level Repairs.

### 3 INFORMATION AND PUBLICATIONS

#### 3.1 Technical Bulletins

The Offeror must provide Technical bulletins relating to modifications, repairs and operation of the equipment to the TA throughout the life of the SO. Bulletins are to be forwarded to the TA in MS-Word or PDF format and should be within 3 months of bulletin release.

#### 3.2 Maintenance Manuals

The Offeror must provide Maintenance Manuals for all major equipment, such as transceivers, power supply and vehicle adapters. The manuals must provide as a minimum the following;

- a) Operation and Testing Detail: This manual must contain all applicable cautions and warnings, theory of operation and maintenance instruction, both preventative and corrective. It must be an all-inclusive and detailed concept of operation, testing and repair procedures.
- b) Block Diagram: An all-inclusive and detailed Block Diagram of the equipment, together with an accurate technical description, including that of any varying configurations with the appropriate connections must be included.
- c) Schematics: An all-inclusive Schematic Diagram of the equipment with all of the components and test points clearly indicated must be included.
- d) Sketches: Sketches or photographs showing the general configuration, dimensions, weight and layout must be included.
- e) Parts List: An all-inclusive Parts List, including electrical or mechanical description of each part, OEM part numbers, circuit references and associated costs must be included.
- f) Media: The manuals are to be in English or French and can be in either MS-Word 2003 or compatible or Adobe portable documents format (PDF) files.

### 4 EXTENDED WARRANTY

The Offeror must provide extended warranty. All extended warranty periods must contain the same conditions as the initial manufacturer's warranty. Offerors must provide warranty for 5 and 10 year periods. The extended warranty must be available for purchase at the time of equipment purchase, or any time after initial purchase until the expiry of the manufacturer's warranty.

### 5 GLOSSARY

AES 256      Advanced Encryption Standard 256 bit



AGA	Air Ground Air
AM	Amplitude Modulation
C	Celsius
CCI	Controlled Crypto Device
CTAT	Canadian Technology Access and Transfer
db	Decibel
DC	Direct Current
DES Proc	Directorate of Electronics Procurement
DND	Department of National Defence
FM	Frequency Modulation
ITAR	International Traffic in Arms Regulations
ISED	Innovation, Science and Economic Development Canada
JSCSS	Joint Strategic Communications Support Services
kHz	Kilohertz
MHz	Megahertz
OEM	Original Equipment Manufacturer
PC	Personal Computer
PDF	Portable Document Format
PPM	Parts Per Million
RF	Radio Frequency
SINAD	Signal-to-noise and distortion ratio
SOA	Standing Offer Authority
SOR	Statement of Requirements
TA	Technical Authority
UHF	Ultra High Frequency
VHF	Very High Frequency



**ANNEX B**

**TECHNICAL SPECIFICATIONS**

**VHF/UHF AM/FM HANDHELD RADIOS**

**AND**

**ANCILLARY EQUIPMENT**

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## **1 General**

Department of National Defence (DND) has a requirement for Handheld Very High Frequency (VHF) and Ultra High Frequency (UHF) Amplitude Modulation (AM) Frequency Modulation (FM) radios. This document will define DND's technical and physical requirements.

### **1.1 Scope**

This Statement of Technical Specification identifies the performance and construction specifications of the Handheld VHF/UHF AM/FM Radios required by DND. The primary use of these radios will be Air to Ground and Ground communications in both VHF and UHF bands.

## **2 Mechanical Requirements**

### **2.1 Transceiver Package**

The transceiver package is listed at Annex A para 2.1.

### **2.2 Mounting and Configuration**

- 2.2.1 The transceiver must come complete with a mounting harness/carrying case that is either strapped or buckled to a belt or webbing.
- 2.2.2 This equipment must be in low visibility non-reflective colours such as black or green.

### **2.3 Chassis Construction**

The complete transceiver and power supply must be contained within an enclosed and hardened case that is ruggedly constructed so as to withstand shock and vibration (ref para 2.7 listed below).

### **2.4 Panel Arrangement**

The following indicators, controls and switches, must be provided as a minimum on the transceiver:

- a) On/Off Power Switch;
- b) Volume Control;
- c) Transmit Indicator;
- d) Squelch Control;
- e) Channel Selector;
- f) Low battery Indicator;
- g) Backlit Keypad;
- h) Display Screen;

- i) Antenna Connector;
- j) PC Connector; and
- k) Push-To-Talk Switch.

## 2.5 Environmental Conditions

The transceiver and attachments must be capable of withstanding the following conditions;

- a) Temperature: Operating -30° to 60° C  
Storage -20° to 60° C
- b) Humidity: 90%
- c) Altitude: 30,000 feet
- d) Immersion: 2 meters of water

## 2.6 Environmental Factors

All switches, knobs and keypads must be capable of being operated during extreme cold weather where the operator could be wearing heavy gloves.

## 2.7 Environmental Specifications

The Transceiver must adhere to EIA-603-1992 or MIL-STD-810G or MIL-STD-810F (Annex B, Section 4 – References).

# 3 Technical Requirements

## 3.1 Radio Characteristics

The Transceiver must be capable of operating in the VHF Civilian and UHF Military Bands. The Offeror must provide Proof of Compliance to substantiate that they meet these requirements.

Table I – Radio Requirements

Item	Description	Specification
1	Band	Selectable Range: 30 to 512 MHz
2	Mode	AM and FM
3	Channels	Minimum of 25 programmable pre-set channels
4	Transmit Power	Output must be adjustable between 0.1 and 5.0 watts
5	Transmit Audio Distortion	Must be < 12%

6	Receive Sensitivity	-116 dBm 12 dB SINAD or better
7	Frequency Stability	Must be $> \pm 5$ PPM
8	Adjacent Channel Rejection	Must be $\geq 45$ dB at $\pm 25$ kHz at minimum
9	Receive Audio Distortion	Must be $< 12\%$ at rated audio power
10	Battery Indication	Must have an indication of battery charge level
11	Power Source	Must be powered by rechargeable battery Duty cycle must last a minimum of 8 hours based on 5/5/90 (transmit/receive/standby) usage
12	Connectors	Must be immersion sealed, connectors must be capable of being submersed in up to 2 meters of water.

### 3.2 Radio Support

The Transceiver must be software driven with the flexibility to not only be capable of clear voice communications but also be adaptable to alternate modes through encryption or operational software. The Offeror must provide Proof of Compliance (OEM literature, brochure...etc.) to substantiate that they meet the requirements.

**Table II – Radio Administration**

Item	Description	Specification
1	Software	All software used for programming/control must be identified in the technical offer.
2	Software Installed	Radios must come equipped with all the required software
3	Software Compatibility	All software supplied must be compatible with Microsoft Windows 7.
4	Reliability	Must have a proven Mean Time Between Failures of a minimum of 25,000 hours. Mean Time to Repair, for Level 1 corrective maintenance must be less than 10 minutes.

### **3.3 Ancillary Equipment**

Please refer to Section 2.2 of Annex A – Statement of Work for a full description of the Ancillary equipment.

### **3.4 Non-Essential Ancillary Equipment**

The offered Non-essential ancillary equipment must be compatible with the offered radios.

Please refer to Section 2.3 of Annex A – Statement of Requirement for the list of Non-Essential Ancillary Equipment.

## **4 References**

- a) Electronic Industries Alliance - <https://www.ihs.com/products/eia-standards.html>
- b) United States Military Standard MIL-STD-810G or MIL-STD-810F (Environmental Engineering Considerations and Laboratory Tests)

**Transceiver Package and Ancillary Equipment Requirement**

Item No.	Description	Unit of issue	SOR Reference	Year-1 Price			Year-2 Price			Year-3 Price			Option Period-1 Price	Option Period-2 Price
				Offered Price for Qty. 1 to 9	Offered Price for Qty. 10 to 25	Offered Price for Qty. 26 and up	Offered Price for Qty. 1 to 9	Offered Price for Qty. 10 to 25	Offered Price for Qty. 26 and up	Offered Price for Qty. 1 to 9	Offered Price for Qty. 10 to 25	Offered Prices for Qty. 26 and up		
<b>1</b>	<b>General Equipment</b>													
1.1	Transceiver Package	Kit	Annex A										TBD	TBD
<b>2</b>	<b>Warranty</b>													
2.1	Extended Warranty for 5 years	Each	Annex A											TBD
2.2	Extended Warranty for 10 years	Each	Annex A											TBD
<b>3</b>	<b>Ancillary Equipment</b>													
3.1	Single Port Battery Charger	Each	Annex A											TBD
3.2	Multi-Port Battery Charger	Each	Annex A											TBD
3.3	Lapel Microphone	Each	Annex A											TBD
3.4	Speaker Microphone	Each	Annex A											TBD
3.5	Headset Microphone	Each	Annex A											TBD
3.6	Spare Battery	Each	Annex A											TBD
3.7	Radio	Each	Annex A											TBD
3.8	Programming Kit	Each	Annex A											TBD
3.9	Programming Software	Each	Annex A											TBD
3.10	Carrying Case	Each	Annex A											TBD
3.11	Antenna	Each	Annex A											TBD
3.12	Standard Cable	Each	Annex A											TBD
3.13	Standard Connector	Each	Annex A											TBD
<b>Total of Year 1, 2 and 3 Prices Excluding Option Years</b>														
<b>Total Offer Price (Aggregated total of all offered unit and kit prices for all items)</b>														

\*Should any Offeror wish to supply an item at no charge, they must indicate this by inserting "N/C" (no charge) in the appropriate cell.



**Non-Essential Ancillary Equipment**

Prices from the Non-Essential Ancillary Equipment will not form part of the Financial Evaluation

Item No.	Description	Unit of issue	SOR Reference	Year-1 Price			Year-2 Price			Year-3 Price			Option Period-1 Price	Option Period-2 Price
				Offered Price for Qty. 1 to 9	Offered Price for Qty. 10 to 25	Offered Price for Qty. 26 and up	Offered Price for Qty. 1 to 9	Offered Price for Qty. 10 to 25	Offered Price for Qty. 26 and up	Offered Price for Qty. 1 to 9	Offered Price for Qty. 10 to 25	Offered Prices for Qty. 26 and up		
<b>1</b>	<b>Non-Essential Ancillary Equipment</b>													
1.1	Spare Batteries	Each	Annex A										TBD	TBD
1.2	Carrying Case	Each	Annex A										TBD	TBD
1.3	Antennas	Each	Annex A										TBD	TBD
1.4	Special Tools	Each	Annex A										TBD	TBD
1.5	Operational Waveforms	Each	Annex A										TBD	TBD
1.6	Encryption	Each	Annex A										TBD	TBD
1.7	Spare Parts Kit	Kit	Annex A										TBD	TBD

\*Should any Offeror wish to supply an item at no charge, they must indicate this by inserting "N/C" (no charge) in the appropriate cell.



## Call-up Against a Standing Offer Commande subséquente à une offre à commandes

Ship to - Expédier à

**To the supplier:** The standing offer identified below is accepted as follows: You are required to supply the goods or services, or both, shown below at the prices or on the pricing basis stated and in accordance with the other conditions stated in the standing offer. Only goods or services, or both, included in the standing offer will be supplied in the call-up against the standing offer.

Supplier - Fournisseur

**Au fournisseur:** L'offre à commandes indiquée ci-dessous est acceptée selon les modalités suivantes : Vous devez fournir les biens ou les services, ou les deux, indiqués ci-dessous selon les prix ou la base de tarification établie, et conformément avec les autres conditions stipulées dans l'offre à commandes. Seuls les biens ou les services, ou les deux, inclus dans l'offre à commandes seront fournis dans la commande subséquente à l'offre à commandes.

**Security: The call-up includes security provisions.**

**Sécurité : La demande comprend des exigences en matière de sécurité.**

NO  
NON

YES  
OUI

If YES, attach a SRCL to the call-up  
Si OUI, joindre une LVERS à la demande

Invoices must be sent in accordance with - Les factures doivent être envoyées selon :

The detailed instructions in the standing offer  
Les instructions détaillées dans l'offre à commandes

The address shown in the "Ship to" block  
L'adresse indiquée dans la case « Expédier à »

Special instructions below  
Les instructions particulières ci-dessous

Each shipment must be accompanied by a packing or delivery slip. All invoices, bills of lading and packing slips must show the following reference numbers.

Chaque expédition doit être accompagnée d'un bordereau d'emballage ou de livraison. Les factures, connaissements et bordereaux d'emballage doivent tous porter les numéros de référence suivants.

Standing Offer No. - N° de l'offre à commandes

Requisition No. - N° de demande  
Order. Off. - Bur. dem. YY - AA Serial No. - N° de série

Client Reference No. (optional)  
N° de référence du client (facultatif)

**The representative of the Identified User signing the call-up form must indicate his or her physical address. This address will constitute the address most connected with the supply and will determine, where applicable, the place of supply for this procurement.**  
**Le représentant de l'utilisateur désigné qui signe le formulaire de commande subséquente doit indiquer son adresse municipale, qui constituera l'adresse la plus associée à l'approvisionnement et qui déterminera, le cas échéant, le lieu d'approvisionnement pour cette commande.**

Amendment No.  
N° de modification

Previous Value (\$)  
Valeur précédente (\$)

Value of increase or decrease (\$)  
Valeur de l'augmentation ou diminution (\$)

Total estimated expenditures or revised  
Total des dépenses estimatives ou révisées

Item No. N° de l'article	NATO Stock No. / Item Description N° de nomenclature de l'OTAN / Description de l'article	U. of l. U. de d.	Quantity Quantité	Unit Price Prix unitaire (\$)	Extended Price Prix calculé (\$)

Special Instructions - Instructions particulières

Total

**For further information, call - Pour renseignements supplémentaires, contacter**

Name - Nom

Telephone No. - N° de téléphone

Delivery required by - Livraison requise le  
(YYYY-MM-DD) (AAAA-MM-JJ)

**For internal purposes only - Pour usage interne seulement**

Approved for the Minister - Approuvé pour le Ministre

Pursuant to subsection 32(1) of the *Financial Administration Act*, funds are available.  
En vertu du paragraphe 32(1) de la *Loi sur la gestion des finances publiques*, des fonds sont disponibles.

Signature (Mandatory - Obligatoire)

Date (YYYY-MM-DD - AAAA-MM-JJ)

Signature (Mandatory - Obligatoire)

Date (YYYY-MM-DD - AAAA-MM-JJ)

Requisition No. - N° de demande			Client Reference No. (optional) N° de référence du client (facultatif)
Order. Off. Bur. dem.	YY - AA	Serial No. - N° de série	

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of
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Item No. N° de l'article	NATO Stock No. / Item Description N° de nomenclature de l'OTAN / Description de l'article	U. of I. U. de d.	Quantity Quantité	Unit Price Prix unitaire (\$)	Extended Price Prix calculé (\$)

Requisition No. - N° de demande			Client Reference No. (optional) N° de référence du client (facultatif)	
Order. Off.	Bur. dem.	YY - AA	Serial No. - N° de série	

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of
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Item No. N° de l'article	NATO Stock No. / Item Description N° de nomenclature de l'OTAN / Description de l'article	U. of l. U. de d.	Quantity Quantité	Unit Price Prix unitaire (\$)	Extended Price Prix calculé (\$)

Requisition No. - N° de demande			Client Reference No. (optional)	
Order. Off.	Bur. dem.	YY - AA	Serial No. - N° de série	
			N° de référence du client (facultatif)	

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of
de

Item No. N° de l'article	NATO Stock No. / Item Description N° de nomenclature de l'OTAN / Description de l'article	U. of l. U. de d.	Quantity Quantité	Unit Price Prix unitaire (\$)	Extended Price Prix calculé (\$)

<b>ANNEX E - COMPLIANCE MATRIX</b>						
<b>COMPLIANCE WITH ANNEX A - STATEMENT OF REQUIREMENT</b>						
<b>Item No.</b>	<b>Description</b>	<b>Proposed Part No./s</b>	<b>Compliant or Non-Compliant</b>	<b>Proof of Compliance</b>	<b>Reference in Proposal (Document, Page No. Etc.)</b>	<b>Bidder's Comments</b>
<b>Reference Annex A</b>						
1	Vendor must provide ITAR/CTAT codes to TA					
2	Hazardous material must be clearly marked in all technical publications and bulletins by part number and material					
3	Manufacturer must identify, to the TA and Contracting Authority (CA), any item that is scheduled for discontinuation, throughout the life of the Standing Offer					
4	Manufacturer must offer extended warranty periods					
5	Technical bulletins relating to modifications, repairs and operation of the equipment must be provided to the TA throughout the mandatory lifetime support of the equipment					
6	Maintenance Manuals must be provided for all major equipment, such as transceivers, power supply and vehicle adapters					
7	Maintenance Manuals must provide operation and testing details, block diagrams, schematics, sketches and parts lists					

8	Each radio package must consist of an UHF AM Handheld Transceiver, rechargeable battery, antenna, carrying case and operating manual							
9	Transceiver must not be a CCI device							
10	The Offeror must provide Ancillary equipment as per Annex A - SOR.							
11	The Offeror must provide price & availability for the Non-essential Ancillary equipment with its offer.							

ANNEX E - COMPLIANCE MATRIX COMPLIANCE WITH ANNEX B - TECHNICAL SPECIFICATIONS						
Item No.	Description	Proposed Part No./s	Compliant or Non-Compliant	Proof of Compliance	Reference in Proposal (Document, Page No, Etc.)	Bidder's Comments
<b>Reference Annex B</b>						
1	Transceiver must come complete with a mounting harness/carrying case that is either strapped or buckled to a belt or webbing					
2	Equipment must be in low visibility non-reflective colours such as black or green					
3	Transceiver and power supply must be contained within an enclosed and hardened case that is ruggedly constructed so as to withstand shock and vibration					
4	On/Off Power Switch, Volume Control, Transmit Indicator, Squelch Control, Channel Selector, Low Battery Indicator, Backlit Keypad, Display Screen, Antenna Connector, PC Connector, and Push-To-Talk Switch must be on the Transceiver					
5	Transceiver must meet environmental conditions listed					
6	Transceiver must be capable of being operated with gloves					
7	Transceiver must adhere to EIA-603-1992 or MIL-STD-810G or MIL-STD-810F					
8	Transceiver must be capable of operating in the VHF Civilian and UHF Military Bands (30 to 512 MHz)					
9	Transceiver must be capable of working in AM and FM Mode					
10	Transceiver must have a minimum of 25 programmable pre-set channels					
11	Transmit power must be adjustable between 0.1 and 5.0 watts					
12	Transmit Audio Distortion must be < 12%					
13	Receive Sensitivity must be -116 dBm 12 dB SINAD or better					
14	Frequency stability must be $\pm 5$ PPM					
15	Adjacent Channel Rejection must be $\geq 45$ dB at $\pm 25$ kHz at a minimum					
16	Receive Audio Distortion must be < 12% at rated audio power					



17	Must have an indication of battery charge level								
18	Must be powered by rechargeable battery								
19	Duty cycle must last a minimum of 8 hours based on 5/5/90 (transmit/receive/standby) usage								
20	Connectors must be immersion sealed to 2 meters								
21	Transceiver must be software driven with the flexibility to not only be capable of clear voice communications but also be adaptable to alternate modes through encryption or operational software								
22	All software used for programming/control must be identified in proposal.								
23	Radios must come equipped with all required software and DND must be granted functional use of the software.								
24	All software supplied must be compatible with Windows 7								
25	Must have a proven Mean Time Between Failures of a minimum of 25,000 hours								
26	Mean Time to Repair for level 1 corrective maintenance must be less than 10 minutes								
27	Ancillary equipment must be listed as separate items and must be available as part of the standing offer								

**ANNEX “F” to PART 3 – ELECTRONIC PAYMENT INSTRUMENTS**

The Offeror accepts to be paid by any of the following Electronic Payment Instrument(s):

- ( ) VISA Acquisition Card;
- ( ) MasterCard Acquisition Card;
- ( ) Direct Deposit (Domestic and International);
- ( ) Electronic Data Interchange (EDI);
- ( ) Wire Transfer (International Only);
- ( ) Large Value Transfer System (LVTS) (Over \$25M)

*Note: Offerors should select the payment instrument/s and submit with their offers.*

**ANNEX G****FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY – CERTIFICATION**

I, the Offeror, by submitting the present information to the Standing Offer Authority, certify that the information provided is true as of the date indicated below. The certifications provided to Canada are subject to verification at all times. I understand that Canada will declare an offer non-responsive, or may set-aside a Standing Offer, or will declare a contractor in default, if a certification is found to be untrue, whether during the offer evaluation period, during the Standing Offer period, or during the contract period. Canada will have the right to ask for additional information to verify the Offeror's certifications. Failure to comply with any request or requirement imposed by Canada may render the Offer non-responsive, may result in the Standing Offer set-aside or constitute a default under the Contract.

For further information on the Federal Contractors Program for Employment Equity visit [Employment and Social Development Canada \(ESDC\) – Labour's](#) website.

Date: \_\_\_\_\_(YYYY/MM/DD) (If left blank, the date will be deemed to be the RFSO closing date.)

Complete both A and B.

A. Check only one of the following:

- A1. The Offeror certifies having no work force in Canada.
- A2. The Offeror certifies being a public sector employer.
- A3. The Offeror certifies being a [federally regulated employer](#) being subject to the [Employment Equity Act](#).
- A4. The Offeror certifies having a combined work force in Canada of less than 100 employees (combined work force includes: permanent full-time, permanent part-time and temporary employees [temporary employees only includes those who have worked 12 weeks or more during a calendar year and who are not full-time students]).
- A5. The Offeror has a combined workforce in Canada of 100 or more employees; and
- A5.1. The Offeror certifies already having a valid and current [Agreement to Implement Employment Equity](#) (AIEE) in place with ESDC-Labour.
- OR**
- A5.2. The Offeror certifies having submitted the [Agreement to Implement Employment Equity](#) (LAB1168) to ESDC-Labour. As this is a condition to issuance of a standing offer, proceed to completing the form Agreement to Implement Employment Equity (LAB1168), duly signing it, and transmit it to ESDC-Labour.

B. Check only one of the following:

- B1. The Offeror is not a Joint Venture.

**OR**

- B2. The Offeror is a Joint venture and each member of the Joint Venture must provide the Standing Offer Authority with a completed annex Federal Contractors Program for Employment Equity - Certification. (Refer to the Joint Venture section of the Standard Instructions)

Classification: \_\_\_\_\_

Application for Spectrum Supportability Demande d'octroi de Fréquences		Date	Page
To: À:	From (Office making request): De (Bureau qui présente la demande):		
1. Equipment nomenclature and/or model number Désignation du matériel et numéro de modèle			
2. Status of supportability request (check one) Centre de demande d'octroi (cochez une seule case)			
<input type="checkbox"/> Experimental research or exploratory development Recherche expérimentale ou développement préliminaire			
<input type="checkbox"/> Advanced or engineering development Développement avancé ou ingénierie			
<input type="checkbox"/> Operational Utilisation opérationnelle			
<b>1. Equipment Usage – Utilisation du matériel</b>			
3. Functional and purpose Fonction et but			
4. Method of operation Mode de fonctionnement			
5. Extent of use Étendue de l'utilisation			
6. Operational environment Milieu d'utilisation			
7. Geographical area of experimental research, or developmental evaluation Région géographique de la recherche expérimentale ou de l'évaluation du développement			
8. Geographical area of operational use Région géographique de l'utilisation opérationnelle			
9. Number of equipments in initial phase Nombre d'appareils pendant la phase initiale			
10. Number of equipments planned for operational use Nombre d'appareils prévu pour l'utilisation opérationnelle			
11. Number of these equipments operating simultaneously in the same electromagnetic environment Nombre d'appareils fonctionnant simultanément dans le même milieu électromagnétique			
12. Target date for the start and end of experimental or developmental evaluation Date prévue pour le commencement et la fin de l'évaluation expérimentale ou de l'évaluation ou développement			
13. Target date for operational use Date prévue d'utilisation opérationnelle			
14. Compliance with requirements of the DND/CF Radio Frequency Safety Program (RFSP) Conformité aux exigences du MDN/FC Programme de sécurité des radiofréquences (PSRF)			
In accordance with DAOD 3026-1 (Radio Frequency Safety Program) LCMMs, Procurement Officers and Project Managers are responsible for ensuring all radiofrequency (RF) devices under their control have been evaluated to establish the extent and type of RF hazards that may be associated with the devices.			
Conformément au DOAD 3026-1 (Programme de sécurité des radiofréquences) les GCVM, les agents d'approvisionnement et les gestionnaires de projet sont chargés de veiller à ce que tous les dispositifs radiofréquences (RF) relevant d'eux aient fait l'objet d'une évaluation visant à déterminer l'étendue et la nature des risques pouvant être liés aux rayonnement RF produit par les dispositifs.			
<input type="checkbox"/> I confirm that a formal request to the RFSP TA at QETE has been made in accordance with DAOD 3026-0, DAOD 3026-1 and CFTO C-55-040-001/TS-001 to conduct an RF safety assessment for the relevant HERP, HERF and HERO requirements under QETE project no _____.			
<input type="checkbox"/> Je confirme qu'une demande formelle a été faite à l'autorité technique (AT) du Programme de sécurité des radiofréquences du CETQ conformément aux DOAD 3026-0, DOAD 3026-1 et ITFC C-55-040-001/TS-001, pour exécuter l'évaluation de la sécurité des radiofréquences, conformément aux exigences qui relèvent des besoins en HERP, HERF et HERO, sous le numéro de projet du CETQ _____.			
Name/Nom: _____			
Signature: _____ Date: _____			

DND 552 (2-2012)

Classification: \_\_\_\_\_

Classification: \_\_\_\_\_

<b>2. Transmitter Equipment Characteristics - Caractéristiques du matériel émetteur</b>	
1. Nomenclature, Manufacturer's Model No.: Désignation, n° de modèle du fabricant:	2. Manufacturer's Name: Nom du fabricant:
3. Transmitter Installation: Installation émettrice:	4. Transmitter Type: Type d'émetteur:
5. Tuning Range: <b>Gamme d'accord:</b>	6. Method of Tuning: Méthode d'accord:
7. RF Channelling Capability: Répartition des voles RF:	8. Emission Designator(s): Identificateur(s) d'émission:
9. Frequency Tolerance: Tolérance de fréquence:	
10. Filter Employed Filtre utilisé: Yes <input type="checkbox"/> No <input type="checkbox"/> Oui <input type="checkbox"/> Non <input type="checkbox"/>	12. Emission Bandwidth Largeur de bande de l'émission: <input type="checkbox"/> Calculated <input type="checkbox"/> Measured Calculée Mesurée  (a) -3 dB _____ (b) -20 dB _____ (c) -40 dB _____ (d) -60 dB _____ (e) OCCBW _____ Largeur de bande occupée
11. Spread Spectrum: Spectre étalé: Yes <input type="checkbox"/> No <input type="checkbox"/> Oui <input type="checkbox"/> Non <input type="checkbox"/>	
13. Maximum Bit Rate: Débit binaire maximal:	15. Maximum Modulation Frequency: Fréquence de modulation et de codage:
14. Modulation Techniques and Coding: Techniques de modulation et de codage:	
16. Pre-emphasis: Préaccentuation: Yes <input type="checkbox"/> No <input type="checkbox"/> Oui <input type="checkbox"/> Non <input type="checkbox"/>	17. Deviation Ratio: Rapport de déviation:
18. Pulse Characteristics: Caractéristiques des impulsions: (a) Rate – Fréq. de récurrence _____ (b) Width – Durée _____ (c) Rise Time – Temps de montée _____ (d) Fall Time – Temps de descente _____ (e) Comp Ratio – Rapport de comp. _____ Largeur de bande occupée	19. Power – Puissance: (a) Mean – Moyenne _____ (b) PEP – En crête _____
	20. Output Device: Dispositif de sortie:
21. Harmonic Level: Niveau des harmoniques: (a) 2nd – 2 <sup>e</sup> _____ (b) 3rd – 3 <sup>e</sup> _____ (c) Other – Autres _____	22. Spurious Level: Niveau du rayonnement non essentiel:
	23. Industry Canada Type Approval No.: N° d'homologation de l'industrie Canada:
24. Equipment Frequency Plan: Plan de fréquences de l'équipement :	

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Classification: \_\_\_\_\_

Classification: \_\_\_\_\_.

3. Receiver Equipment Characteristics – Caractéristiques du matériel récepteur					
1. Nomenclature, Manufacturer's Model No.: Désignation, n° de modèle du fabricant:		2. Manufacturer's Name: Nom du fabricant:			
3. Receiver Installation: Installation réceptrice:		4. Receiver Type: Type de récepteur:			
5. Tuning Range: Gamme d'accord:		6. Method of Tuning: Méthode d'accord:			
7. RF Channelling Capability: Répartition des voles RF:		8. Emission Designator(s): Identificateur(s) d'émission:			
9. Frequency Tolerance: Tolérance de fréquence:					
10. IF Selectivity: Sélectivité FI: (a) -3 dB _____ (b) -20 dB _____ (c) -60 dB _____		1st	2nd	3rd	12. RF Selectivity: Sélectivité RF: Calculated <input type="checkbox"/> Measured <input type="checkbox"/> Calculée _____ Mesurée _____ (a) -3 dB _____ (b) -20 dB _____ (c) -40 dB _____
12. IF Frequency: Fréquence intermédiaire: (a) 1st - 1 <sup>ère</sup> _____ (b) 2nd - 2 <sup>e</sup> _____ (c) 3rd - 3 <sup>e</sup> _____		1 <sup>ère</sup>	2 <sup>e</sup>	3 <sup>e</sup>	
15. Oscillator Tuned: Oscillateur accordé: (a) Above Tuned Frequency Au-dessus de la fréq. d'accord (b) Below Tuned Frequency Au-dessous de la fréq. d'accord (c) Either Above or Below the Frequency Ou au-dessus ou au-dessous de la fréq.		1st	2nd	3rd	16. Maximum Bit Rate: Débit binaire maximal:
18. De-emphasis: Désaccentuation:		Yes <input type="checkbox"/>	No <input type="checkbox"/>	17. Sensitivity: Sensibilité: (a) Sensitivity - Sensibilité _____ dBm (b) Criteria - Critère _____ (c) Noise Fig - Facteur de bruit dB (d) Noise Temp - Temp. de bruit _____ Kelvin	
19. Image Rejection: Rejet de fréquence image:		20. Spurious Rejection: Rejet des fréquences parasites:			
21. Remarks: Remarques:					
22. Industry Canada Type Approval No.: N° d'homologation de l'industrie Canada:					

Classification: \_\_\_\_\_.

Classification: \_\_\_\_\_.

4. Antenna Equipment Characteristics – Caractéristiques du matériel d’antenne			
1.	Transmitting Émission <input type="checkbox"/>	Receiving Réception <input type="checkbox"/>	Transmitting and Receiving Émission et réception <input type="checkbox"/>
2. Nomenclature, Manufacturer’s Model No.: Désignation, n° de modèle du fabricant:		3. Manufacturer’s Name: Nom du fabricant:	
4. Frequency Range: Gamme de fréquences:		5. Type:	
6. Polarization – Polarisation:		7. Scan Characteristics: Caractéristiques de balayage:	
8. Gain: (a) Main Beam Faisceau principal _____ (b) 1st Major Side Lobe 1 <sup>er</sup> lobe latéral important _____		(a) Type _____ (b) Vertical Scan: Balayage vertical: _____ (1) Max Elev Angle de site max. _____ (2) Min Elev Angle de site min. _____ (3) Scan Rate Vitesse de balayage _____	
9. Beamwidth : Largeur du faisceau: (a) Horizontal _____ (b) Vertical _____		(c) Horizontal Scan: Balayage horizontal: _____ (1) Sector Scanned Secteur balayé _____ (2) Scan Rate Vitesse de balayage _____ (d) Sector Blanking      Yes      No Effacement de secteur    Oui <input type="checkbox"/> Non <input type="checkbox"/>	
10. Remarks: Remarques:			
Originator: Rédacteur:	Position:	Telephone Number: Numéro de téléphone:	Date:

Classification: \_\_\_\_\_.

## APPENDIX 1

### INSTRUCTIONS FOR COMPLETING DND FORM 552

#### ANNEX B

1. **Classification.** Enter classification and downgrading stamp. Indicate by check mark whether for Experimental Research or Exploratory Development, Advanced or Engineering Development, or Operational Utilization. The classification of the title should be appropriately indicated (e.g. (U), (C) or (S)). Classified information contained in the completed form should be indicated:

as a general statement in a Remarks block, such as, "The purpose, functions, operational use, frequency band, emission bandwidths, and power are classified X";

by an enumeration of the applicable paragraphs and subparagraphs with their classifications; or

the classification may be marked alongside each entry on the form.

#### PART 1: EQUIPMENT USAGE

##### Part 1, Block 1: Nomenclature and Model Number

2. Provide nomenclature and equipment type (e.g. AN/FPS-16 Instrumentation Radar).

##### Part 1, Block 2: Status of Supportability Request

3. The supportability request will be for one of these purposes:

- a. Experimental research or exploratory development:

to test the feasibility of new techniques or concepts of natural phenomena and environment, and efforts towards solution of problems in the physical,

## APPENDICE 1

### INSTRUCTIONS POUR REMPLIR LE FORMULAIRE DND 552

#### ANNEXE B

1. **Classification.** Entrer la classification et le déclassement. Indiquer par un crochet s'il s'agit d'une recherche expérimentale ou d'un développement préliminaire, d'un développement avancé ou d'ingénierie ou d'une utilisation opérationnelle. La classification du titre doit être indiquée convenablement (par exemple, (U), (C) ou (S)). L'information classifiée du formulaire rempli doit être signalée :

- a. en tant qu'énoncé général dans le bloc Remarques tel que : « L'objet, les fonctions, l'utilisation opérationnelle, la bande de fréquences, les largeurs de bandes d'émission et la puissance sont classifiés X »;

- b. par une énumération des paragraphes et des sous-paragraphes applicables accompagnés de leur classification; ou

- c. la classification peut être indiquée à côté de chaque entrée du formulaire.

#### PARTIE 1 : UTILISATION DE L'ÉQUIPEMENT

##### Partie 1, Bloc 1 : Désignation et numéro de modèle

2. Inscrire la nomenclature et le type d'équipement (par exemple, radar d'instrumentation AN/FPS-16).

##### Partie 1, Bloc 2 : Statut de la demande de soutenabilité

3. La demande de soutenabilité de fréquences est faite pour l'un de ces buts :

- a. Recherche expérimentale ou développement préliminaire :

pour vérifier la faisabilité de techniques ou de concepts nouveaux des phénomènes ou de l'environnement naturel et pour consacrer des efforts



behavioural and social sciences that have no direct military application; and

to test the feasibility of adapting conventional techniques to new purposes prior to projection into development planning. Includes all effort directed toward solution of specific military problems, short of major development projects.

Advanced or engineering development:

to develop equipment which have moved into the development of hardware for experimental or operational test;

to modify existing operational equipment for improved performance;

to develop programs being engineered for service use, but have not yet been approved for production and service deployment; and

to continue development of equipment/systems that have been approved for production and service use.

To operate and test equipment which have passed the development phase and are planned for operational use for:

tactical and training purposes; or

non-tactical purposes, such as for test range instrumentation.

### **Part 1, Block 3: Function and Purpose**

4. Describe as specifically as possible the function and purpose to be performed. For example: guided missile control radar; troposcatter communications equipment; provides acquisition and tracking information; short range communications; telemetering for quality control.

en vue de trouver une solution à des problèmes liés aux sciences physiques, comportementales et sociales qui n'ont aucune application militaire directe; et

pour vérifier la faisabilité de l'adaptation de techniques conventionnelles aux nouveaux objectifs avant la projection dans la planification de développement. Cette démarche comprend tous les efforts consacrés à trouver la solution de problèmes militaires spécifiques, à l'exception des projets majeurs de développement.

b. Développement avancé ou d'ingénierie :

(1) pour développer de l'équipement qui s'est introduit dans le développement du matériel pour les essais expérimentaux ou opérationnels;

(2) pour modifier l'équipement opérationnel existant afin d'améliorer la performance;

(3) pour développer des programmes préparés pour l'usage militaire mais qui n'ont pas encore été approuvés pour la production et le déploiement militaire; et

pour continuer le développement de systèmes et d'équipement qui ont été approuvés pour la production et l'usage militaire.

c. Pour exploiter et vérifier l'équipement qui a passé la phase du développement et dont l'utilisation opérationnelle est prévue pour :

(4) fins tactiques et de formation; ou

(5) fins non tactiques telle que l'instrumentation d'un champ de tir d'essai.

### **Partie 1, Bloc 3 : Fonction et but**

4. Décrire aussi précisément que possible la fonction à exécuter et le but à atteindre. Par exemple : radar de contrôle de missile guidé; équipement de communication de diffusion troposphérique; fournit de l'information d'acquisition et de poursuite; communications à courte portée; télémétrie pour le contrôle de la qualité.

#### **Part 1, Block 4: Method of Operation**

5. Describe the method of operation. For example: radar activates beacon transponder in missile with coded pulses; beacon provides missile track; radar also transmits coded pulse command signals to missile beacon receiver for guidance.

#### **Part 1, Block 5: Extent of Use**

6. Describe operational extent of usage. For example: continuous or intermittent; expected duty cycle during mission; expected number of hours of operation per day or other appropriate time period. Indicate any conditions governing intermittent use. If appropriate, describe mission phase during which system operates.

#### **Part 1, Block 6: Operational Environment**

7. Give brief description of ultimate operational environment. For example: amphibious landing operations; defence of strategic target area; sea areas; field army. Provide any additional environmental factors pertinent to a meaningful assessment of electromagnetic compatibility, such as specific vehicle/platform types, expected mobility or other factors affecting the environment variability.

#### **Part 1, Block 7: Geographical Area of Experimental Research or Developmental Evaluation**

8. State the geographical area used for the experimental research or development.

#### **Part 1, Block 8: Geographical Area of Operational Use**

9. State the geographical area for potential use. Provide latitude and longitude of centre of operational area and radius of operation in kilometres.

#### **Part 1, Block 9: Number of Equipment in Initial Phase**

10. List number of equipment planned for

#### **Partie 1, Bloc 4 : Mode de fonctionnement**

5. Décrire le mode de fonctionnement. Par exemple : le radar actionne le transpondeur de la radiobalise dans le missile par des impulsions codées; la radiobalise détermine la piste de poursuite du missile; les radars transmettent aussi des signaux de commande codés au récepteur de la radiobalise du missile pour le guidage.

#### **Partie 1, Bloc 5 : Étendue de l'utilisation**

6. Décrire l'étendue opérationnelle de l'utilisation. Par exemple : continue ou intermittente; facteur d'utilisation prévu au cours de la mission; nombre d'heures d'exploitation prévues par jour ou autre période appropriée. Indiquer toute condition gouvernant l'utilisation intermittente. Décrire au besoin la phase de la mission durant laquelle le système fonctionne.

#### **Partie 1, Bloc 6 : Milieu opérationnel**

7. Donner une brève description du milieu opérationnel ultime. Par exemple : opérations amphibies de débarquement; défense d'une zone cible stratégique; zones maritimes; armée de campagne. Fournir tous les facteurs environnementaux supplémentaires pertinents à l'évaluation significative de la compatibilité électromagnétique, tels que les types particuliers de véhicules ou de plates-formes, la mobilité prévue ou les autres facteurs ayant un effet sur la variabilité de l'environnement.

#### **Partie 1, Bloc 7 : Région géographique de la recherche expérimentale ou de l'évaluation du développement**

8. Indiquer la région géographique qui sert à la recherche expérimentale ou au développement.

#### **Partie 1, Bloc 8 : Région géographique de l'utilisation opérationnelle**

9. Indiquer la région géographique de l'utilisation potentielle. Donner la latitude et la longitude du centre de la zone opérationnelle et le rayon d'opération en kilomètres.

#### **Partie 1, Bloc 9 : Nombre d'appareils pendant la phase initiale**

10. Indiquer le nombre d'appareils prévus pour la

experimental or developmental phase.

**Part 1, Block 10: Number of Equipment Planned for Operational Use**

11. List number of equipment planned for operational use.

**Part 1, Block 11: Number of These Equipment Operating Simultaneously in the Same Electromagnetic Environment**

12. Indicate maximum number of these systems that will be operating simultaneously in the same environment. For example: three (3) missiles will be flown simultaneously in an operating area.

**Part 1, Block 12: Target Date for the Start and End of Experimental or Developmental Evaluation**

13. Indicate the dates on which it is expected that the experimental or developmental phase will start and finish.

**Part 1, Block 13: Target Date for Operational Use**

14. Indicate target date for operational use.

**Part 1, Block 14: Compliance with requirements of the DND/CF Radio Frequency Safety Program (RFSP)**

15. In accordance with DAOD 3026-1 (Radio Frequency Safety Program) LCMMs, Procurement Officers and Project Managers are responsible for ensuring all radiofrequency (RF) devices under their control have been evaluated to establish the extent and type of RF hazards that may be associated with the devices, which is to be done by:

- tasking QETE to provide the Radio Frequency Safety Technical Authority (RFS TA) compliance assessment and conduct a survey for the relevant HERP, HERF and HERO requirements as part of the First Article Testing for new, modified or upgraded RF devices; OR

phase expérimentale ou de développement.

**Partie 1, Bloc 10 : Nombre d'appareils prévus pour l'utilisation opérationnelle**

11. Indiquer le nombre d'appareils prévus pour l'utilisation opérationnelle.

**Partie 1, Bloc 11 : Nombre d'appareils fonctionnant simultanément dans le même milieu électromagnétique**

12. Indiquer le nombre maximal d'appareils fonctionnant simultanément dans le même environnement. Par exemple : trois (3) missiles voleront simultanément dans la zone opérationnelle.

**Partie 1, Bloc 12 : Date prévue pour le commencement et la fin de l'évaluation expérimentale ou de l'évaluation du développement**

13. Indiquer les dates auxquelles il est prévu que la phase expérimentale ou de développement débutera et se terminera.

**Partie 1, Bloc 13 : Date prévue d'utilisation opérationnelle**

14. Indiquer la date prévue pour l'utilisation opérationnelle.

**Partie 1, Bloc 14 : Conformité aux exigences du MDN/FC Programme de sécurité des radiofréquences (PSRF)**

15. Conformément au DOAD 3026-1 (Programme de sécurité des radiofréquences) les GCVM, les agents d'approvisionnement et les gestionnaires de projet sont chargés de veiller à ce que tous les dispositifs radiofréquences (RF) relevant d'eux aient fait l'objet d'une évaluation visant à déterminer l'étendue et la nature des risques pouvant être liés aux rayonnements RF produit par les dispositifs, ce qui doit être fait:

- en mandatant le CETQ afin de fournir l'évaluation de la conformité de l'autorité technique de la sécurité des radiofréquences (l'AT de la SRF) et d'exécuter l'évaluation / l'enquête sur la sécurité RF pour les exigences pertinentes qui relèvent des besoins en HERP, HERF et HERO, dans le cadre d'essais du premier article pour les dispositifs RF nouveaux, modifiés ou améliorés; OU

- using contractors to provide the RF Safety Survey for the relevant HERP, HERF and HERO requirements (the RFS TA must provide the Safety Compliance Assessment) under the following conditions:

- (a) a detailed test plan is submitted to the RFS TA at least 60 days prior to the survey;
- (b) RFS TA approved test protocols are used, and
- (c) RFS TA maintains oversight, approves the test plan, and validates all results.

Details of the requirements for using contractors are found in CFTO C-55-040-001/TS-001.

## **PART 2: TRANSMITTER EQUIPMENT CHARACTERISTICS**

### **Part 2, Block 1: Nomenclature, Manufacturer's Model No.**

16. Enter the Government assigned alphanumeric equipment designation. If not available, enter the manufacturer's model number (e.g. MIT 502), and indicate Manufacturer's Name (Part 2, block 2). If this too is not available, enter a short descriptive title (e.g. ATS-6 Telemetry Transmitter).

### **Part 2, Block 2: Manufacturer's Name**

17. Enter the manufacturer's name, if available. If a manufacturer's model number is listed in Nomenclature (Part 2, block 1), this block must be completed.

### **Part 2, Block 3: Transmitter Installation**

18. List specific types of vehicles, ships, planes or buildings, etc., where the transmitters will be installed.

### **Part 2, Block 4: Transmitter Type**

19. Enter the generic name of the transmitter (e.g. Frequency Scan, Scan While Track Radar, Monopulse Tracker, AM or PM Communications). In addition, for radar enter the radar type (e.g. Non-FM Pulse, FM Pulse, Frequency Hopping, CW or FM-

- par l'entremise d'entrepreneurs afin de fournir l'évaluation / l'enquête sur la sécurité RF pour les exigences pertinentes qui relèvent des besoins en HERP, HERF et HERO (l'AT de la SRF doit fournir l'évaluation de la conformité de sécurité) dans les conditions suivantes:

- (a) le plan d'essai détaillé est soumis à l'AT de la SRF au moins 60 jours avant;
- (b) les protocoles d'essai approuvés par l'AT de la SRF sont utilisés;
- (c) l'autorité technique de la SRF assure la surveillance, approuve les plans d'essais et valide tous les résultats.

Les détails des exigences requises pour l'utilisation d'entrepreneurs sont trouvés dans le ITFC C-55-040-001/TS-001.

## **PARTIE 2 : CARACTÉRISTIQUES DE L'ÉQUIPEMENT ÉMETTEUR**

### **Partie 2, Bloc 1 : Désignation, n° de modèle du fabricant**

16. Indiquer la désignation alphanumérique de l'équipement désigné par le gouvernement. S'il n'est pas disponible, indiquer le numéro du modèle du fabricant (par exemple, MIT 502) et indiquer le nom du fabricant (partie 2, bloc 2). Si ces renseignements ne sont également pas disponibles, indiquer un court titre descriptif (par exemple, émetteur de télémétrie ATS-6).

### **Partie 2, Bloc 2 : Nom du fabricant**

17. Indiquer le nom du fabricant s'il est disponible. Si le numéro du modèle du fabricant est indiqué à la partie 2, bloc 1, ce bloc doit être rempli.

### **Partie 2, Bloc 3 : Installation émettrice**

18. Indiquer les types spécifiques de véhicules, de navires, d'aéronefs ou de bâtiments, etc., où les émetteurs seront installés.

### **Partie 2, Bloc 4 : Type d'émetteur**

19. Indiquer le nom générique de l'émetteur (par exemple, balayage de fréquences, radar de poursuite sur informations discontinues, traqueur monopulse, communications AM ou PM). De plus, pour les radars, indiquer le type du radar (par exemple, à

CW).

### **Part 2, Block 5: Tuning Range**

20. Enter the frequency range through which the transmitter is capable of being tuned (e.g. 225 to 400 MHz). For equipment designed to operate only at a single frequency, enter that frequency. Include units (e.g. kHz, MHz or GHz).

### **Part 2, Block 6: Method of Tuning**

21. Enter the method of tuning (e.g. crystal, synthesizer or cavity). If the equipment is not readily tuneable in the field, indicate in Remarks (Part 2, block 24) the complexity of tuning. Include complexity factors such as skill levels involved, major assemblies involved, time required, and location (factory or depot) where equipment is to be tuned.

### **Part 2, Block 7: RF Channelling Capability**

22. Describe the RF channelling capability:
- b. for uniformly spaced channels, enter the centre frequency of the first channel and channel spacing (e.g. first channel 406 MHz, 100 kHz increments);
  - c. for continuous tuning, enter the lowest frequency and the word "continuous"; and
  - d. for others, such as SSB or cases where channel selection is under software control, enter a detailed description in Remarks (Part 2 block 24, e.g. degraded channels, internal hardwiring limitations or lockout capability for frequency hopping systems).

### **Part 2, Block 8: Emission Designators**

23. Enter the emission designators, including the necessary bandwidth, for each designator, in accordance with Appendix D3 (e.g. 16K0F3E). For systems with a frequency hopping mode as well as a non-hopping mode, enter the emission designators for each mode. Identify each mode as hopping or non-hopping.

impulsions autres que FM, à impulsions FM, à sauts de fréquence, à ondes continues ou à FM-CW).

### **Partie 2, Bloc 5 : Gamme d'accord**

20. Indiquer la gamme de fréquences sur laquelle l'émetteur peut être accordé (par exemple, de 225 à 400 MHz). Indiquer la fréquence dans le cas de l'équipement conçu pour fonctionner seulement à une seule fréquence. Indiquer les unités (par exemple, kHz, MHz ou GHz).

### **Partie 2, Bloc 6 : Méthode d'accord**

21. Indiquer la méthode d'accord (par exemple, quartz, synthétiseur ou cavité). Si l'équipement ne peut être accordé facilement sur le terrain, indiquer dans le bloc Remarques (partie 2, bloc 24) la complexité de l'accord. Inclure les facteurs de complexité tels que les niveaux de compétence nécessaires, les ensembles principaux nécessaires, le temps nécessaire et l'emplacement (usine ou dépôt) où l'équipement doit être accordé.

### **Partie 2, Bloc 7 : Répartition des canaux RF**

22. Décrire la répartition des canaux RF :
- d. pour indiquer la fréquence centrale du premier canal et l'espacement des canaux (par exemple, premier canal à 406 MHz avec incréments de 100 kHz) dans le cas des canaux uniformément espacés;
  - e. pour indiquer la plus basse fréquence et le mot « continu » dans le cas de l'accord continu; et
  - f. pour les autres, tels que BLU ou les cas où la sélection du canal est commandée par logiciel, entrer une description détaillée (par exemple, canaux dégradés, limitations internes de câblage ou capacité de verrouillage pour les systèmes à sauts de fréquence) dans le bloc Remarques (partie 2, bloc 24).

### **Partie 2, Bloc 8 : Identificateur(s) d'émission**

23. Indiquer le ou les identificateurs d'émission, y compris la largeur de bande nécessaire pour chaque identificateur conformément au contenu de l'appendice D3 (par exemple, 16K0F3E). Entrer les identificateurs d'émission de chaque mode dans le cas des systèmes avec un mode à sauts de fréquence ainsi que ceux avec un mode sans sauts de fréquence. Identifier chaque mode comme étant à

sauts ou sans sauts.

### **Part 2, Block 9: Frequency Tolerance**

24. Enter the frequency tolerance (i.e. the maximum departure of a transmitter from its assigned frequency after normal warm-up time). Indicate the units in parts per million (ppm) for all emission types except single sideband, which shall be indicated in Hertz (Hz).

### **Part 2, Block 10: Filter Employed**

25. Check the appropriate box.

### **Part 2, Block 11: Spread Spectrum**

26. Check the appropriate box. If "Yes", refer to instructions for Modulation (Part 2, block 14).

### **Part 2, Block 12: Emission Bandwidth**

27. Enter the emission bandwidths for which the transmitter is designed at the -3, -20 and -60 dB levels and the occupied bandwidth. For pulse radar transmitters the bandwidth at -40 dB shall also be entered. The emission bandwidth is defined as the bandwidth appearing at the antenna terminals and includes any significant attenuation contributed by filtering in the output circuit or transmission lines. Values of emission bandwidth specified should be indicated as calculated or measured, by checking the appropriate box. If calculated, the methods used shall be in accordance with Industry Canada TRC 43, which is available on the Internet. Indicate units used (e.g. Hz, kHz or MHz). Note that the occupied bandwidth (block 12[e]) is defined as the width of the frequency bandwidth such that, below its lower and above its upper limits, the mean power radiated is each equal to 0.5% of the total mean power radiated.

### **Part 2, Block 13: Maximum Bit Rate**

28. Enter the maximum information bit rate for digital equipment, in bits per second (bps). If spread spectrum is used, enter the bit rate after encoding.

### **Partie 2, Bloc 9 : Tolérance de fréquence**

24. Indiquer la tolérance de fréquence (c'est-à-dire, l'écart maximal d'un émetteur de sa fréquence assignée après le temps de réchauffement normal). Indiquer les unités en parties par million (ppm) pour tous les types d'émissions sauf la bande latérale unique, qui doit être indiquée en hertz (Hz).

### **Partie 2, Bloc 10 : Filtre utilisé**

25. Cocher la case appropriée.

### **Partie 2, Bloc 11 : Spectre étalé**

26. Cocher la case appropriée. Se reporter aux instructions pour remplir le bloc Modulation (partie 2, bloc 14) si la case « Oui » est cochée.

### **Partie 2, Bloc 12 : Largeur de bande de l'émission**

27. Indiquer les largeurs de bandes d'émissions pour lesquelles l'émetteur est conçu aux niveaux de -3, -20 et -60 dB et la largeur de bande occupée. Pour les émetteurs radars à impulsions, la largeur de bande de -40 dB doit aussi être indiquée. La largeur de bande d'émission est définie comme étant la largeur de bande apparaissant aux bornes de l'antenne et comprend toute atténuation concrète contributive par le filtrage des circuits de sortie ou des lignes de transmission. Les valeurs des largeurs de bandes d'émission spécifiées doivent être indiquées telles qu'elles sont calculées ou mesurées en cochant la case appropriée. Si les valeurs sont calculées, les méthodes utilisées doivent être conformes aux indications de la Circulaire de la réglementation des télécommunications 43 (CRT 43) d'Industrie Canada disponibles sur l'Internet. Indiquer les unités utilisées (par exemple, Hz, kHz ou MHz). Remarque que la largeur de bande occupée (bloc 12[e]) est définie comme étant la largeur de la bande de fréquence telle que, sous sa limite inférieure et au-dessus de sa limite supérieure, la puissance moyenne rayonnée de chacune est égale à 0.5 % de la puissance moyenne rayonnée totale.

### **Partie 2, Bloc 13 : Débit binaire maximal**

28. Indiquer le débit binaire maximal en bits par seconde (bps) pour l'équipement numérique. Indiquer le débit binaire après le codage si l'étalement du spectre est utilisé.

## Part 2, Block 14: Modulation Techniques and Coding

29. Describe in detail the modulation and coding techniques employed. For complex modulation schemes, such as direct sequence spread spectrum, frequency hopping or frequency agile, provide information relating to the hop rate, processing gain, clock rate, pre-defined hop sets and frequencies, minimum required number of frequencies per hop set, notching capability, etc. If too lengthy, use Remarks (Part 2, block 24).

## Part 2, Block 15: Maximum Modulation Frequency

30. Enter the maximum modulation or baseband frequency for a frequency or phase-modulated transmitter. This is assumed to be the frequency at the -3 dB point on the high frequency side of the modulator response curve. Indicate the units (e.g. Hz, kHz or MHz).

## Part 2, Block 16: Pre-emphasis

31. For frequency or phase-modulated transmitters, check the appropriate box to indicate whether pre-emphasis is available.

## Part 2, Block 17: Deviation Ratio

32. For frequency or phase modulated transmitters, enter the deviation ratio, computed as follows:

$$\text{Deviation Ratio} = \frac{\text{Maximum Frequency Deviation}}{\text{Maximum Modulation Frequency}}$$

## Part 2, Block 18: Pulse Characteristics

33. For pulse modulated transmitters:
- e. enter the pulse repetition rate, in pulses per second (pps);
  - f. enter the pulse width at the half voltage levels, in microseconds ( $\mu\text{sec}$ );

## Partie 2, Bloc 14 : Techniques de modulation et de codage

29. Décrire en détail les techniques de modulation et de codage utilisées. Dans le cas des formules complexes de modulation, telles que l'étalement du spectre en ordre direct, à sauts de fréquence ou à agilité de fréquence, fournir de l'information se rapportant aux taux de sauts, aux gains de traitement, à la fréquence d'horloge, aux ensembles de sauts et de fréquences prédéfinis, au nombre minimal nécessaire de fréquences par ensemble de sauts, à la capacité d'absorption, etc. Utiliser le bloc Remarques (partie 2, bloc 24) si le contenu est trop long.

## Partie 2, Bloc 15 : Fréquence maximale de modulation

30. Indiquer la fréquence maximale de modulation ou de bande de base pour un émetteur modulé en fréquence ou en phase. Il est tenu pour acquis qu'il s'agit de la fréquence au point de -3 dB du côté haute fréquence de la courbe de réponse du modulateur. Indiquer les unités (par exemple, Hz, kHz ou MHz).

## Partie 2, Bloc 16 : Préaccentuation

31. Cocher la case appropriée pour indiquer si la préaccentuation est disponible dans le cas des émetteurs modulés en fréquence ou en phase.

## Partie 2, Bloc 17 : Rapport de déviation

32. Indiquer le rapport de déviation calculé de la façon suivante dans le cas des émetteurs modulés en fréquence ou en phase :

$$\text{Rapport de déviation} = \frac{\text{Déviation maximale de la fréquence}}{\text{Fréquence maximale de modulation}}$$

## Partie 2, Bloc 18 : Caractéristiques des impulsions

33. Pour les émetteurs modulés par impulsions :
- g. indiquer la fréquence de récurrence d'impulsions en impulsions par seconde (pps);
  - h. indiquer la largeur d'impulsions aux niveaux de demi-tension en microseconds ( $\mu\text{sec}$ );

- g. enter the pulse rise time, in microseconds ( $\mu\text{sec}$ ). This is the time required for the leading edge of the voltage pulse to rise from 10% to 90% of its peak amplitude;
- h. enter the pulse fall time, in microseconds ( $\mu\text{sec}$ ). This is the time required for the trailing edge of the voltage pulse to fall from 90% to 10% of its peak amplitude; and
- i. enter the maximum pulse compression ratio, if applicable.

34. For coded pulse waveforms refer to instructions for Modulation (Part 2, block 14).

### Part 2, Block 19: Power

35. Enter the mean power delivered to the antenna terminals for all AM and FM emissions, or the peak envelope power (PEP) for all other classes of emissions. If there are any unique situations, such as interrupted CW, provide details in Remarks (Part 2, block 24). Indicate the units (e.g. W or kW).

### Part 2, Block 20: Output Device

36. Enter a description of the device used in the transmitter output stage (e.g. ceramic diode, reflex klystron, transistor or TWT).

### Part 2, Block 21: Harmonic Level

37. Enter the harmonic level of the second and third harmonics, in dB, relative to the fundamental. Enter in "other" (block 21[c]) the relative level, in dB, of the highest power harmonic above the third.

### Part 2, Block 22: Spurious Level

38. Enter the maximum value of spurious emission, in dB, relative to the fundamental, which occurs outside the -60 dB point on the transmitter fundamental emission spectrum (Part 2, block 12) and does not occur on a harmonic of the fundamental frequency. Indicate, in kHz or MHz, the location of the

- i. indiquer le temps de montée de l'impulsion en microsecondes ( $\mu\text{sec}$ ); C'est le temps nécessaire au flanc avant de l'impulsion de tension pour monter de 10 % à 90 % de son amplitude de crête;
- j. indiquer le temps de descente de l'impulsion en microsecondes ( $\mu\text{sec}$ ); C'est le temps nécessaire au flanc arrière de l'impulsion de tension pour descendre de 90% à 10% de son amplitude de crête; et
- k. indiquer le rapport maximal de compression de l'impulsion s'il s'applique.

34. Se reporter aux instructions pour remplir le bloc Modulation (partie 2, bloc 14) s'il s'agit de formes d'ondes d'impulsions codées.

### Partie 2, Bloc 19 : Puissance

35. Indiquer la puissance moyenne alimentée aux bornes de l'antenne pour toutes les émissions AM et FM, ou la puissance en crête de modulation pour toutes les autres classes d'émissions. Donner les détails dans le bloc Remarques (partie 2, bloc 24) s'il y a des situations uniques telles que des CW interrompues. Indiquer les unités (par exemple, W ou kW).

### Partie 2, Bloc 20 : Dispositif de sortie

36. Entrer une description du dispositif utilisé à l'étage de sortie de l'émetteur (par exemple, diode céramique, klystron réflex, transistor ou TOP).

### Partie 2, Bloc 21 : Niveau des harmoniques

37. Indiquer, en dB, le niveau des harmoniques de la deuxième et de la troisième harmonique par rapport à la fréquence fondamentale. Indiquer sous « Autre » (bloc 21[c]) le niveau de puissance relatif, en dB, des plus hautes harmoniques au-dessus de la troisième.

### Partie 2, Bloc 22 : Niveau du rayonnement non essentiel

38. Indiquer la valeur maximale du rayonnement non essentiel, en dB, relativement à la fréquence fondamentale, qui se produit à l'extérieur du point de -60 dB sur le spectre d'émission fondamentale de l'émetteur (partie 2, bloc 12) et qui ne se produit pas sur une harmonique de la fréquence fondamentale.



spurious emission from the fundamental frequency.

**Part 2, Block 23: Industry Canada Type Approval No.**

39. Enter the Industry Canada type approval number, if applicable.

**Part 2, Block 24: Frequency Plan**

40. Enter the transmitter desired frequency plan. The plan can be limited by the manufacturer, provider, or operational requirements. Enter frequencies in Megahertz (MHz).

**PART 3: RECEIVER  
EQUIPMENT CHARACTERISTICS**

**Part 3, Block 1: Nomenclature, Manufacturer's Model No.**

41. Enter the Government assigned alphanumeric equipment designation. If not available, enter the manufacturer's model number (e.g. MIT 502) and complete Manufacturer's Name (Part 3, block 2). If this too is not available, enter a short descriptive title (e.g. GPS Receiver). A separate receiver submission is required for each receiver in a complex system (e.g. radar ECCM receivers).

**Part 3, Block 2: Manufacturer's Name**

42. Enter the manufacturer's name, if available. If a manufacturer's model number is listed in Nomenclature (Part 3, block 1), this block must be completed.

**Part 3, Block 3: Receiver Installation**

43. List specific types of vehicles, ships, planes or buildings, etc., where the receivers will be installed.

**Part 3, Block 4: Receiver Type**

44. Enter the generic class (e.g. Dual Conversion Superheterodyne or Homodyne).

**Part 3, Block 5: Tuning Range**

Indiquer, en kHz ou en MHz, l'emplacement du rayonnement non essentiel de la fréquence fondamentale.

**Partie 2, Bloc 23 : N° du type approuvé d'Industrie Canada**

39. Indiquer, s'il y a lieu, le numéro du type approuvé d'Industrie Canada.

**Partie 2, Bloc 24 : Plan de fréquences**

40. Indiquer le plan de fréquences de l'émetteur. Ce plan peut être limité par le manufacturier, le fournisseur de service, ou des raisons opérationnelles. Indiquer les fréquences en mégahertz (MHz).

**PARTIE 3 : CARACTÉRISTIQUES  
DE L'ÉQUIPEMENT RÉCEPTEUR**

**Partie 3, Bloc 1 : Désignation, n° de modèle du fabricant**

41. Indiquer la désignation alphanumérique de l'équipement désigné par le gouvernement. S'il n'est pas disponible, indiquer le numéro du modèle du fabricant (par exemple, MIT 502) et indiquer le nom du fabricant (partie 3, bloc 2). Si ces renseignements ne sont également pas disponibles, indiquer un court titre descriptif (par exemple, récepteur GPS). Une soumission de récepteur distincte est nécessaire pour chaque récepteur d'un système complexe (par exemple, récepteurs radars de CCME).

**Partie 3, Bloc 2 : Nom du fabricant**

42. Indiquer le nom du fabricant s'il est disponible. Si le numéro du modèle du fabricant est indiqué à la partie 3, bloc 1, ce bloc doit être rempli.

**Partie 3, Bloc 3 : Installation réceptrice**

43. Indiquer les types spécifiques de véhicules, de navires, d'aéronefs ou de bâtiments, etc., où les récepteurs seront installés.

**Partie 3, Bloc 4 : Type de récepteur**

44. Indiquer la classe générique (par exemple, superhétérodyne à double changement de fréquence ou homodyne).

**Partie 3, Bloc 5 : Gamme d'accord**

45. Enter the frequency range through which the receiver is capable of being tuned (e.g. 225 to 400 MHz). For equipment designed to operate only at a single frequency, enter that frequency. Include units (e.g. kHz, MHz or GHz).

### **Part 3, Block 6: Method of Tuning**

46. Enter the method of tuning (e.g. crystal, synthesizer or cavity). If the equipment is not readily tuneable in the field, indicate in Remarks (Part 3, block 21) the complexity of tuning. Include complexity factors such as skill levels involved, major assemblies involved, time required, and location (factory or depot) where equipment is to be tuned.

### **Part 3, Block 7: RF Channelling Capability**

47. Describe the RF channelling capability:
- j. for uniformly spaced channels, enter the centre frequency of the first channel and the channel spacing (e.g. first channel 406 MHz, 100 kHz increments);
  - k. for continuous tuning, enter the lowest frequency and the word "continuous"; and
  - l. for others, including cases where channel selection is under software control, enter a detailed description in Remarks (Part 3, block 21).

### **Part 3, Block 8: Emission Designators**

48. Enter the emission designators, including the necessary bandwidth, for each designator, in accordance with Appendix D3 to this publication (e.g.

16K0F3E). For systems with a frequency hopping mode as well as a non-hopping mode, enter the emission designators for each mode. Identify each mode as hopping or non-hopping.

### **Part 3, Block 9: Frequency Tolerance**

49. Enter the frequency tolerance (i.e., the

45. Indiquer la gamme de fréquences sur laquelle le récepteur peut être accordé (par exemple, de 225 à 400 MHz). Indiquer la fréquence dans le cas de l'équipement conçu pour fonctionner seulement à une seule fréquence. Indiquer les unités (par exemple, kHz, MHz ou GHz).

### **Partie 3, Bloc 6 : Méthode d'accord**

46. Indiquer la méthode d'accord (par exemple, quartz, synthétiseur ou cavité). Si l'équipement ne peut être accordé facilement sur le terrain, indiquer dans le bloc Remarques (partie 3, bloc 21) la complexité de l'accord. Inclure les facteurs de complexité tels que les niveaux de compétence nécessaires, les ensembles principaux nécessaires, le temps nécessaire et l'emplacement (usine ou dépôt) où l'équipement doit être accordé.

### **Partie 3, Bloc 7 : Répartition des canaux RF**

47. Décrire la répartition des canaux RF :
- l. pour indiquer la fréquence centrale du premier canal et l'espacement des canaux (par exemple, premier canal à 406 MHz avec incréments de 100 kHz) dans le cas des canaux uniformément espacés;
  - m. pour indiquer la plus basse fréquence et le mot « continu » dans le cas de l'accord continu;
  - n. pour les autres, y compris les cas où la sélection du canal est commandée par logiciel, entrer une description détaillée dans le bloc Remarques (partie 3, bloc 21).

### **Partie 3, Bloc 8 : Identificateur(s) d'émission**

48. Indiquer le ou les identificateurs d'émission, y compris la largeur de bande nécessaire pour chaque identificateur conformément au contenu de

l'appendice D3 de la présente publication (par exemple, 16K0F3E). Entrer les identificateurs d'émission de chaque mode dans le cas des systèmes avec un mode à sauts de fréquence ainsi que ceux avec un mode sans sauts de fréquence. Identifier chaque mode comme étant à sauts ou sans saut.

### **Partie 3, Bloc 9 : Tolérance de fréquence**

49. Indiquer la tolérance de fréquence (c'est-à-

maximum departure of a receiver from its assigned frequency after normal warm-up). Indicate the magnitude, in ppm, for all emission types except single sideband, which shall be indicated in Hertz (Hz).

### **Part 3, Block 10: IF Selectivity**

50. Enter the bandwidth for each IF stage at the -3, -20 and -60 dB levels. Indicate units (e.g. kHz or MHz).

### **Part 3, Block 11: RF Selectivity**

51. Enter the bandwidth at the -3, -20 and -60 dB levels. The RF bandwidth includes any significant attenuation contributed by filtering in the input circuit or transmission line. Values of RF bandwidth specified should be indicated as calculated or measured by checking the appropriate box. Indicate units (e.g. kHz or MHz). Enter the preselection type (e.g. tuneable cavity).

### **Part 3, Block 12: IF Frequency**

52. Enter the tuned frequency of the first, second and third IF stages. Indicate units (e.g. kHz or MHz).

### **Part 3, Block 13: DFSM Use Only**

53. Intentionally left blank to match the US form.

### **Part 3, Block 14: DFSM Use Only**

54. Intentionally left blank to match the US form.

### **Part 3, Block 15: Oscillator Tuned**

55. Check the appropriate box to indicate the location of the first, second and third oscillator frequencies with respect to the associated mixer input signal.

### **Part 3, Block 16: Maximum Bit Rate**

56. Where applicable, enter the maximum bit rate (bps) that can be used. If spread spectrum is used, enter the bit rate after decoding. Describe any error detecting/correcting codes under Remarks

dire, l'écart maximal d'un récepteur de sa fréquence assignée après le temps de réchauffement normal). Indiquer la magnitude en ppm pour tous les types d'émissions sauf la bande latérale unique, qui doit être indiquée en hertz (Hz).

### **Partie 3, Bloc 10 : Sélectivité FI**

50. Indiquer la largeur de bande pour chaque étage FI aux niveaux de -3, -20 et -60 dB. Indiquer les unités (par exemple, kHz ou MHz).

### **Partie 3, Bloc 11 : Sélectivité RF**

51. Indiquer la largeur de bande aux niveaux de -3, -20 et -60 dB. La largeur de bande RF comprend toute atténuation concrète contribué par le filtrage dans le circuit d'entrée ou dans la ligne de transmission. Les valeurs de la largeur de bandes RF spécifiées doivent être indiquées telles qu'elles sont calculées ou mesurées en cochant la case appropriée. Indiquer les unités (par exemple, kHz ou MHz). Indiquer le type de présélection (par exemple, cavité accordable).

### **Partie 3, Bloc 12 : Fréquence FI**

52. Indiquer la fréquence accordée du premier, du deuxième et du troisième étage FI. Indiquer les unités (par exemple, kHz ou MHz).

### **Partie 3, Bloc 13 : À l'usage exclusif du GFSM**

53. Bloc laissé intentionnellement vide pour s'apparier au formulaire américain.

### **Partie 3, Bloc 14 : À l'usage exclusif du GFSM**

54. Bloc laissé intentionnellement vide pour s'apparier au formulaire américain.

### **Partie 3, Bloc 15 : Oscillateur accordé**

55. Cocher la case appropriée pour indiquer la valeur de la première, de la deuxième et de la troisième fréquence de l'oscillateur par rapport au signal d'entrée du mélangeur connexe.

### **Partie 3, Bloc 16 : Débit binaire maximal**

56. S'il y a lieu, indiquer le débit binaire maximal (bps) qui peut être utilisé. Indiquer le débit binaire après le décodage si le spectre étalé est utilisé. Décrire tout code de détection ou de correction sous

(Part 3, block 21).

### **Part 3, Block 17: Sensitivity**

57. Complete as follows:
- m. enter the sensitivity in dBm;
  - n. specify criteria used (e.g. 12 dB SINAD, where SINAD is (Signal + Noise + Distortion) / (Noise + Distortion));
  - o. if the receiver is used with terrestrial systems, enter the receiver noise figure in dB; and
  - p. if the receiver is used with space or satellite earth stations, enter the receiver noise figure in Kelvin.

### **Part 3, Block 18: De-emphasis**

58. For frequency or phase-modulated receivers, indicate whether de-emphasis is available.

### **Part 3, Block 19: Image Rejection**

59. Enter the image rejection in dB. Image rejection is the ratio of the image frequency signal level required to produce a specified output to the desired signal level required to produce the same output.

### **Part 3, Block 20: Spurious Frequency Rejection**

60. Enter the spurious frequency rejection in dB. Enter the single level of spurious frequency rejection that the receiver meets or exceeds at all frequencies outside the -60 dB IF bandwidth. Spurious frequency rejection is the ratio of a particular out-of-band frequency signal level required to produce a specified output, to the desired signal level required to produce the same output.

### **Part 3, Block 21: Remarks**

61. Self-explanatory. Use additional pages if necessary.

Remarques (partie 3, bloc 21).

### **Partie 3, Bloc 17 : Sensibilité**

57. Remplir de la façon suivante :
- o. indiquer la sensibilité en dBm;
  - p. spécifier le critère utilisé (par exemple, SINAD de 12 dB, SINAD étant (signal + bruit + distorsion)/(bruit + distorsion));
  - q. indiquer la valeur de bruit du récepteur en dB si le récepteur est utilisé avec les systèmes terrestres; et
  - r. indiquer la valeur de bruit du récepteur en degrés Kelvin si le récepteur est utilisé avec les stations satellites spatiales ou terrestres.

### **Partie 3, Bloc 18 : Désaccentuation**

58. Cocher la case appropriée pour indiquer si la désaccentuation est disponible dans le cas des récepteurs modulés en fréquence ou en phase.

### **Partie 3, Bloc 19 : Rejet de fréquence image**

59. Indiquer le rejet de fréquence image en dB. Le rejet de fréquence image est le rapport du niveau signal de fréquence image nécessaire pour produire une sortie spécifiée au niveau désiré de signal nécessaire pour produire la même sortie.

### **Partie 3, Bloc 20 : Rejet des fréquences non essentielles**

60. Indiquer le rejet des fréquences non essentielles en dB. Indiquer le niveau unique du rejet des fréquences non essentielles que le récepteur rencontre ou dépasse à toutes les fréquences à l'extérieur de la largeur de bande FI de -60 dB. Le rejet de fréquences non essentielles est le rapport d'un niveau de signal de fréquence hors bande nécessaire pour produire une sortie spécifiée au niveau de signal désiré nécessaire pour produire la même sortie.

### **Partie 3, Bloc 21 : Remarques**

61. Suffisamment explicite. Utiliser au besoin des pages supplémentaires.

**Part 3, Block 22: Industry Canada Type Approval No.**

62. Enter the Industry Canada type approval number, if applicable.

**PART 4: ANTENNA  
EQUIPMENT CHARACTERISTICS**

**Part 4, Block 1: Antenna Type**

63. Check the appropriate box to indicate the type of antenna. For multiantenna systems use a separate Part 4 form for each antenna.

**Part 4, Block 2: Nomenclature, Manufacturer's Model No.**

64. Enter the Government assigned alphanumeric equipment designation. If not available, enter the manufacturer's model number (e.g. DS6558) and indicate Manufacturer's Name (Part 4, block 3). If this too is not available, enter a short descriptive title (e.g. ATS-6 Telemetry Antenna).

**Part 4, Block 3: Manufacturer's Name**

65. Enter the manufacturer's name, if available. If a manufacturer's model number is given in Nomenclature (Part 4, block 2), this block must be completed.

**Part 4, Block 4: Frequency Range**

66. Enter the range of frequencies for which the antenna is designed. Indicate units (e.g. kHz or MHz).

**Part 4, Block 5: Type**

67. Enter the generic name or describe the general technical features (e.g. Horizontal, Log Periodic, Cassegrain with Polarization Twisting, Whip, Phased Array or Conformal Array). To the extent possible, use the standard antenna configuration given in Appendix D1, Figure D1-1.

**Part 4, Block 6: Polarization**

**Partie 3, Bloc 22 : N° du type approuvé d'Industrie Canada**

62. Indiquer, s'il y a lieu, le numéro du type approuvé d'Industrie Canada.

**PARTIE 4 : CARACTÉRISTIQUES  
DE L'ÉQUIPEMENT D'ANTENNE**

**Partie 4, Bloc 1 : Type d'antenne**

63. Cocher la case appropriée pour indiquer le type d'antenne. Utiliser un formulaire distinct pour chaque antenne dans le cas des systèmes à plusieurs antennes.

**Partie 4, Bloc 2 : Désignation, n° de modèle du fabricant**

64. Indiquer la désignation alphanumérique de l'équipement désigné par le gouvernement. S'il n'est pas disponible, indiquer le numéro du modèle du fabricant (par exemple, DS6558) et indiquer le nom du fabricant (partie 4, bloc 3). Si ces renseignements ne sont pas non plus disponibles, indiquer un court titre descriptif (par exemple, antenne de télémétrie ATS-6).

**Partie 4, Bloc 3 : Nom du fabricant**

65. Indiquer le nom du fabricant s'il est disponible. Si le numéro du modèle du fabricant est indiqué à la partie 4, bloc 2, ce bloc doit être rempli.

**Partie 4, Bloc 4 : Gamme de fréquences**

66. Indiquer la gamme de fréquences pour laquelle l'antenne est conçue. Indiquer les unités (par exemple, kHz ou MHz).

**Partie 4, Bloc 5 : Type**

67. Indiquer le nom générique ou décrire les caractéristiques techniques générales (par exemple, horizontale, log-périodique, Cassegrain avec torsion de polarisation, fouet, réseau à commande de phase ou réseau conforme). Utiliser, dans la mesure du possible, les configurations normalisées d'antenne indiquées à l'appendice D1, figure D1-1.

**Partie 4, Bloc 6 : Polarisation**

68. Enter the polarization. If circular, indicate whether it is left or right handed.

#### Part 4, Block 7: Scan Characteristics

69. Complete as follows:

q. If the antenna scans, enter the type of scanning (e.g. vertical, horizontal, vertical and horizontal);

r. Vertical Scan:

enter the maximum elevation angle, in degrees (positive or negative, referenced to the horizontal), that the antenna can scan;

enter the minimum elevation angle, in degrees (positive or negative, referenced to the horizontal), that the antenna can scan; and

enter the vertical scanning rate, in scans per minute.

Horizontal Scan:

enter the angular scanning range, in degrees, of the horizontal sector scanned; and

enter the horizontal scan rate, in scans per minute.

Indicate if antenna is capable of being sector blanked. If "yes", enter details in Remarks (Part 4, block 10b.).

#### Part 4, Block 8: Gain

70. If frequency is between 27.5 MHz and 890 MHz, indicate gain of radiator relative to half wave dipole (dB). If frequency is below 27.5 MHz or above 890 MHz, indicate gain of radiator relative to an isotropic radiator (dBi).

s. enter the maximum gain, in dB; and

enter the nominal gain of the first major side lobe, in dB, and the angular displacement from the main beam, in degrees.

68. Indiquer la polarisation. Si elle est circulaire, indiquer si elle est orientée à gauche ou à droite.

#### Partie 4, Bloc 7 : Caractéristiques de balayage

69. Remplir de la façon suivante :

s. Indiquer le type de balayage (par exemple, vertical, horizontal, vertical et horizontal) si l'antenne balaye;

t. Balayage vertical :

(6) indiquer l'angle de site maximal en degrés (positif ou négatif, par rapport à l'horizontal) auquel l'antenne peut balayer;

(7) indiquer l'angle minimal d'élévation en degrés (positif ou négatif, par rapport à l'horizontal) auquel l'antenne peut balayer; et

(8) indiquer la cadence de balayage vertical en balayages par minute.

u. Balayage horizontal :

(9) indiquer la portée angulaire de balayage, en degrés, du secteur horizontal balayé; et

(10) indiquer la cadence de balayage horizontal en balayages par minute.

v. Indiquer si l'antenne est dotée de l'effacement de secteur. Entrer les détails sous Remarques (partie 4, bloc 10b.) si la case « Oui » est cochée.

#### Partie 4, Bloc 8 : Gain

70. Indiquer le gain de l'antenne active par rapport à l'antenne de type doublet demi-onde (en dB) si la fréquence est entre 27.5 MHz et 890 MHz. Indiquer le gain de l'antenne active par rapport à une antenne isotrope (en dB) si la fréquence est au-dessous de 27.5 MHz ou au-dessus de 890 MHz.

w. indiquer le gain maximal en dB; et

x. indiquer le gain nominal du premier lobe latéral principal en dB et le déplacement angulaire à partir du faisceau principal en

degrés.

**Part 4, Block 9: Beamwidth**

71. Enter the 3 dB beam width in degrees.

**Part 4, Block 10: Remarks**

72. Describe any unusual characteristics of the antenna, particularly as they relate to the assessment of electromagnetic compatibility and to amplify or clarify any of the information provided above. Use additional pages if necessary. In addition, enter the following information, if applicable:

- t. the front-back ratio, in dB, for directional antennas used in radio relay circuits;
- u. for phased array antennas enter:

mode of operation, single or multiple beam;

single beam parameters; and

multiple beam parameters:

- polarization of each beam;
- gain of each beam;
- beam width of each beam; and
- scan characteristics of each beam (Part 4, block 7).

**Partie 4, Bloc 9 : Largeur du faisceau**

71. Indiquer la largeur du faisceau à 3 dB en degrés.

**Partie 4, Bloc 10 : Remarques**

72. Se servir de ce bloc pour décrire toute caractéristique extraordinaire de l'antenne, particulièrement dans le contexte de l'évaluation de la compatibilité électromagnétique et pour amplifier ou clarifier toute information donnée ci-dessus. Utiliser au besoin des pages supplémentaires. De plus, entrer au besoin l'information suivante :

- y. le rapport avant-arrière, en dB, pour les antennes directionnelles utilisées dans les circuits de relais radio;
- z. indiquer, dans le cas des antennes à commande de phase :

(11) le mode de fonctionnement, à faisceau simple ou multiple;

(12) les paramètres de faisceau simple; et

(13) les paramètres de faisceau multiple :

- la polarisation de chaque faisceau;
- le gain de chaque faisceau;
- la largeur de faisceau de chaque faisceau; et
- les caractéristiques de chaque faisceau (partie 4, bloc 7 de la ci-dessus).