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Spectrum Management and Telecommunications Policy

Procedures for Conformity Assessment Bodies

## **Requirements for the Certification of Radio Apparatus to Industry Canada's Standards and Specifications**

Canada

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## **FOREWORD**

This document describes the certification requirements for radio apparatus to Industry Canada's specifications and standards.

This document will be reviewed and amended from time to time to reflect necessary changes in procedural requirements. The Department encourages comments and suggestions that will enhance the effectiveness of the document. They may be forwarded to:

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Issued under the authority of the Minister of Industry

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## 1 Purpose

- 1.1 This document specifies the requirements to be incorporated in the certification procedure of recognized Certification Bodies (CBs) for the certification of radio apparatus to the Department' standards and specifications.
- 1.2 Canadian CBs interested in applying for recognition to certify radio apparatus to the Department's standards and specifications should refer to document CB-01 "Requirements for Certification Bodies". Foreign CBs interested in obtaining a similar recognition should be first designated by the MRA Designating Authority in their country which will then follow the procedure contained in document REC-CB "Procedure for the Recognition of Foreign Certification Bodies by Industry Canada".
- 1.3 Both CB-01 and REC-CB refer to the recognition criteria and requirements contained in document CB-02 "Recognition Criteria, and Administrative and Operational Requirements applicable to Certification Bodies for the Certification of Radio Apparatus to Industry Canada's Standards and Specifications".
- 1.4 This document applies to CBs interested in certifying radio apparatus only. Telecommunications terminal equipment conformity assessment is subject to a declaration of conformity process. The use of CBs for the certification of telecommunications terminal equipment to Canadian requirements is therefore not required, and the Department will not recognize any CBs for that purpose.

## 2 Definitions

- 2.1 **Department** means Industry Canada.
- 2.2 **Bureau** means the Department's Certification and Engineering Bureau.
- 2.3 **Applicant** is the entity applying for certification.
- 2.3 **Certificate** is a document indicating compliance with applicable standards or specifications for purposes of Section 21 (1)(b) and (c) of the Radiocommunication Regulations.
- 2.4 **Certification Body (CB)** is a body that conducts certification.

## 3 Related Documents

- 3.1 The following documents pertain to the certification of radio apparatus:

- (a) CB-01 "Requirements for Certification Bodies": this document specifies the applicable requirements and the recognition procedure for Canadian CBs to be recognized by the Department to certify equipment to Canadian requirements;
- (b) CB-02 "Recognition Criteria, and Administrative and Operational Requirements Applicable to Certification Bodies for the Certification of Radio Apparatus to Industry Canada's Standards and Specifications": this document contains the requirements and conditions which will be evaluated by the Department before recognizing a CB;
- (c) REC-CB "Procedure for the Recognition of Foreign Certification Bodies by Industry Canada": this document describes the requirements and request for recognition procedure for MRA partners designated CBs;
- (d) RSSs "Radio Standards Specifications": these documents specify technical standards applicable to radio equipment; and
- (e) BETSs "Broadcasting Equipment Technical Standards": these documents specify technical standards applicable to broadcasting equipment.

#### **4 General Information**

- 4.1 The Department's documents and other information are available at the following Internet site: <http://strategis.ic.gc.ca/spectrum> or from:

Certification and Engineering Bureau  
Industry Canada  
P.O. Box 11490, Station H  
3701 Carling Avenue  
Building 94  
Ottawa, Ontario, Canada  
K2H 8S2

Telephone no. (613) 990-4389  
Facsimile no. (613) 990-4752  
E-mail address: [certification.bureau@ic.gc.ca](mailto:certification.bureau@ic.gc.ca)

#### **5 Certification Requirements**

##### 5.1 General

- 5.1.1 Certification is based on the demonstration of compliance with the applicable standards.

- 5.1.2 Certification is based on the review of a technical brief for a unit representative of the final production model.
- 5.1.3 Notwithstanding that a type of radio equipment has been certified, the Department may require corrective action when such equipment causes interference within the meaning of the *Radiocommunication Act*.
- 5.2 Radiocommunication Equipment Requirements
- 5.2.1 Certification of Category I radio equipment is required and subject to compliance with the applicable *Radio Standards Specifications (RSS)* in the "Category I Equipment Standards List" at the web site given in Section 4.1.
- 5.2.2 Radio equipment imported only for demonstration or trial does not have to be certified. However, it requires an experimental radio licence. More information can be obtained from the office of the Department nearest to the demonstration or trial site. The offices of the Department are listed in the Radiocommunication Information Circular 66 (RIC-66).
- 5.3 Broadcasting Equipment Requirements
- 5.3.1 Certification of Category I broadcasting equipment is required and subject to compliance with the applicable *Broadcasting Equipment Technical Standard (BETS)* in the "Category I Equipment Standards List" at the web site given in Section 4.1.

## **6 Certification Number Format**

- 6.1 Certified equipment shall be labelled with a unique certification number, which consists of the Certificate Holder's Number (CHN), which is assigned by the Bureau, followed by the Unique Product Number (UPN), which is assigned by the certificate holder.
- 6.2 The certification number shall appear as follows:

“IC: XXXXXX-YYYYYYYY”

Where:

- “XXXXXXX-YYYYYYYY” is the certification number;
- “XXXXXXX” is the Certificate Holder Number (CHN), made of at most 6 alphanumeric characters (A-Z, 0-9), assigned by Industry Canada; and
- “YYYYYYYY” is the Unique Product Number (UPN), made of at most 8 alphanumeric characters (A-Z, 0-9) assigned by the applicant.

- 6.3 The following note shall be conspicuously placed in the equipment user manual: *The term “IC:” before the equipment certification number only signifies that the Industry Canada*

*technical specifications were met.*

- 6.4 Permitted alphanumerical characters used in the CHN and UPN are limited to capital letters (A-Z) and digits (0-9). Other characters, such as “#”, “/” or “-”, shall not be used. An example of the new format for a company having a CHN equal to “21” and wishing to use a UPN equal to “A3 ” would thus be:

IC: 21-A3.

## **7 Listing of Certifications**

- 7.1 The Bureau will record the details of all certifications in the Department’s Radio Equipment List (REL) based on the notification received from the CB acting as the certificate holder's agent. Certified equipment shall not be distributed, leased, sold, offered for sale in Canada before the details of its certification have been added to the REL.
- 7.2 A listing fee of \$45 shall be paid to the Bureau before the equipment is added to the REL. The payment of this fee may be made by the CB or the certificate holder.

## **8 Testing and Technical Brief**

### **8.1 Testing**

- 8.1.1 If the measurement requires the use of an Open Area Test Site (OATS), a testing laboratory shall have filed a description of such a test site and associated test instruments with the Bureau, in advance, and have obtained a reference number. Requirements associated with Open Area Test Sites can be found in RSS-212 “Test Facilities and Test Methods for Radio Equipment”. Detailed information on OATS filings can also be found at: [http://spectrum.ic.gc.ca/~cert/oats\\_e.html](http://spectrum.ic.gc.ca/~cert/oats_e.html).
- 8.1.2 A list of testing laboratories which have submitted their OATS filing is available at [http://spectrum.ic.gc.ca/~cert/labs/oats\\_lab\\_e.html](http://spectrum.ic.gc.ca/~cert/labs/oats_lab_e.html).

### **8.2 Technical Brief**

- 8.2.1 Certification shall be based on the assessment of a technical brief consisting, as a minimum, of:
- (a) a product description - A detailed description of the product and its application, including advertising literature, schematic diagrams of the RF circuitry and block diagrams of associated circuitry, the user and maintenance manuals and must be provided with the submission;



- (b) a test report - The test report shall contain:
- (i) the test report cover sheet shown in Appendix I appropriately filled out and signed;
  - (ii) the results of measurements conducted on the device as described in the applicable technical standard. If used, a full description of the alternative testing method and the reasons for using it shall be provided when filing for equipment certification. If an alternative method is used, it is advisable to adopt a method used by a national or international organization; and
  - (iii) emission designator - The radio frequency emission type designator should be stated in the test report. This designator should be of the type used by the ITU-R (International Telecommunications Union-Radio). Industry Canada TRC-43 *“Notes Regarding Designation of Emission (Including Necessary Bandwidth and Classification), Class of Station and Nature of Service”* provides guidance. An emission designator calculator is available at the web site given in Section 4.1;
- (c) supporting information - Photographs of the internal circuit boards and external views of the product are required to identify precisely the equipment. The photographs shall be large enough to identify the major components.

## **9 Modification of Certified Equipment**

- 9.1 Modifications to certified radio apparatus may require recertification of the equipment. The applicant shall consult a CB when certified equipment has been modified to confirm the validity of its certification.

## **10 Certification Retention and Audits**

- 10.1 Certificate holders shall ensure that all production units of certified equipment by a CB continue to meet the applicable procedural and technical requirements. The CB and the Bureau will conduct post-certification audits in order to ensure continuing compliance.
- 10.2 The adherence of subsequent production units to the technical quality and characteristics under which certification was originally issued is implicit. To this end, periodic testing shall be carried out by the certificate holder to ensure continuing compliance with the technical standards.
- 10.3 The Department may request from the certificate holder random radio apparatus samples at his (or her) expense for post-certification audit testing, or as a result of radio

interference complaints. If the samples fail the tests, the certificate holder will be required to take corrective action.

- 10.4 If a CB has its recognition withdrawn or stops operating, the Department requires certificate holders who have affected apparatus still being distributed in the Canadian market to transfer these apparatus certificates to a recognized CB or to the Bureau within three months of a notification from the Department. Otherwise, the apparatus will be removed from the Radio Equipment List. The affected certificate holders shall provide a copy of the original certification submission which includes a technical brief to the Department upon request. Certificate holders shall retain copies of their original certification submission for a period of ten years.

## **11 Withdrawal of Certification**

- 11.1 Where, as a result of post-certification audit or other information obtained by the CB or by the Department, a certified device fails to meet this procedure or the applicable technical requirements, or where there is reasonable evidence that a certified device is creating electromagnetic interference, or not operating in accordance with the parameters described on the Certificate, the CB will inform the Department and the certificate holder will be required to take remedial action.
- 11.2 If the certificate holder does not take remedial action, the certification will be withdrawn by the CB, and the Department will remove the equipment from the *Radio Equipment List*. The Department will also require that all of the offending equipment be removed from service, and no longer be made available for sale or distribution in Canada.

**Appendix I: Test Report Cover Sheet/performance Test Data**

EQUIPMENT MODEL NUMBER: \_\_\_\_\_  
MANUFACTURER : \_\_\_\_\_  
TESTED TO RADIO STANDARDS SPECIFICATION NO. : \_\_\_\_\_  
OPEN AREA TEST SITE INDUSTRY CANADA NUMBER: \_\_\_\_\_  
FREQUENCY RANGE (or fixed frequency): \_\_\_\_\_  
R.F. POWER IN WATTS: \_\_\_\_\_  
FIELD STRENGHT (at what distance): \_\_\_\_\_  
OCCUPIED BANDWIDTH (99% BW): \_\_\_\_\_  
TYPE OF MODULATION: \_\_\_\_\_  
EMISSION DESIGNATOR (TRC-43): \_\_\_\_\_  
TRANSMITTER SPURIOUS (worst case): \_\_\_\_\_  
RECEIVER SPURIOUS (worst case): \_\_\_\_\_

**ATTESTATION:**

<p><b><u>DECLARATION OF COMPLIANCE:</u></b> I declare that the testing was performed or supervised by me; that the test measurements were made in accordance with the above mentioned Industry Canada standard(s), and that the equipment identified in this application has been subject to all the applicable test conditions specified in the Industry Canada standards and all of the requirements of the standard have been met.</p> <p><b><u>Signature:</u></b> _____</p> <p><b><u>Date:</u></b> _____</p>
<p><b>NAME AND TITLE (Please print or type):</b></p>    

