RIC-3 Issue 4 December 2016

Spectrum Management and Telecommunications

Radiocommunication Information Circular

# **Information Regarding Amateur Radio Service**



#### **Preface**

Radiocommunication Information Circulars (RICs) are issued for the guidance of those engaged in radiocommunications in Canada. The information contained in these circulars is subject to change without notice. Interested parties should therefore consult the nearest Innovation, Science and Economic Development Canada (ISED) Regional and District Office for additional details. While every reasonable effort has been made to ensure the information is accurate, no warranty is expressed or implied. It is important to note that these circulars have no status in law.

Comments and suggestions may be directed to the following address:

Innovation, Science and Economic Development Canada Spectrum Management Operations Branch 235 Queen Street Ottawa, Ontario K1A 0H5

Email: ic.spectrumpublications-publicationsduspectre.ic@canada.ca

All spectrum publications are available on ISED's Spectrum Management and Telecommunications *Official Publications* Web page.

## **Contents**

2 3 4
2 3 4
2 3 4
4
5
5
8
8
9
10
10
10
10
10
10
10
11
11
11
s11
13
13

#### 1. Introduction

The <u>Radiocommunication Regulations</u> describe the <u>amateur radio service</u> as a "radiocommunication service in which radio apparatus are used for the purpose of self-training, intercommunication or technical investigation by individuals who are interested in radio technique solely with a personal aim and without pecuniary interest."

Innovation, Science and Economic Development Canada (ISED) believes that amateur radio should be readily accessible to Canadians. As such, those who are interested in the science and art of radiocommunication may avail themselves of every reasonable opportunity to learn, enjoy, contribute or participate in this service. The requirement for operators to have some technical and operating knowledge before being granted access to amateur radio bands is a well-established and internationally-recognized principle.

To learn more about amateur radio in Canada, contact local amateur radio clubs or one of the following organizations:

Radio Amateurs of/du Canada Radio Amateur du Québec Inc. 720 Belfast Road, Suite 217 4545 Pierre-de-Coubertin Avenue

Ottawa, Ontario Montréal, Québec

K1G 0Z5 H1V 0B2

 Telephone:
 (613) 244-4367
 Telephone:
 (514) 252-3012

 Fax:
 (613) 244-4369
 Fax:
 (514) 254-9971

 E-mail:
 rachq@rac.ca
 E-mail:
 admin@raqi.ca

ISED's Amateur Radio Service Centre is responsible nationally for all amateur licensing, certification, call signs and examiner accreditation. The processing centre should be the first point of contact for all matters pertaining to amateur radio. Correspondence and enquiries should be directed to the following address:

Innovation, Science and Economic Development Canada Amateur Radio Service Centre 2 Queen Street East Sault Ste. Marie, Ontario P6A 1Y3

Telephone: 1-888-780-3333 (Toll free)

Fax: 705-941-4607

E-mail: ic.spectrumamateur-spectreamateur.ic@canada.ca

### 2. Purpose

This circular describes, in general terms, procedures, policies and general information concerning the amateur radio service. It also includes syllabuses for Amateur Radio Operator Certificate qualification examinations.

#### 3. Related Documents

The following publications pertain to amateur radio:

- RIC-1 <u>Guide for Examiners Accredited to Conduct Examinations for Amateur Radio Operator</u> Certificates
- RIC-9 Call Sign Policy and Special Event Prefixes
- RBR-4 Standards for the Operation of Radio Stations in the Amateur Radio Service

RIC - Radiocom Information Circular

RBR - Regulation by Reference

#### 4. Qualifications

#### 4.1 Certification

Authority to operate radio apparatus in the amateur radio service is issued to holders of an Amateur Radio Operator Certificate with Basic Qualification.

Other qualifications available with the Amateur Radio Operator Certificate are Morse code and Advanced Qualification.

Operating privileges are granted according to the level of achievement. Attaining honours scores (i.e. 80% or above) on the Basic examination, or attaining qualifications in addition to the Basic Amateur Certificate will grant the amateur certificate holder additional operating privileges as specified in RBR-4, including full access to the amateur frequency bands below 30 MHz (i.e. high frequency (HF)).

#### 4.2 Certificate Equivalency

The holder of an Amateur Radio Operator Certificate or the Amateur Radio Operator Advanced Certificate issued under the repealed *Radio Operator Certificate Regulations* has the same operating privileges as the holder of an Amateur Radio Operator Certificate with Basic, Morse code and Advanced Qualifications.

The holder of an Amateur Digital Radio Operator Certificate issued under the repealed *Radio Operator Certificate Regulations* has the same operating privileges as the holder of an Amateur Radio Operator Certificate with Basic and Advanced Qualifications.

Persons holding any of the following Canadian certificates may be issued an authorization to operate in the amateur radio service with the same operating privileges as the holder of an Amateur Radio Operator Certificate with Basic, Morse code and Advanced Qualifications:

- Radiocommunication Operator General Certificate (Maritime)
- Radio Operator First Class Certificate
- Radio Operator Second Class Certificate

Persons holding any of the following Canadian certificates may be issued an authorization to operate in the amateur radio service with the same operating privileges as the holder of an Amateur Radio Operator Certificate with Basic Qualification:

- Radiotelephone Operator General Certificate (Aeronautical)
- Radiotelephone Operator General Certificate (Maritime)
- Radiotelephone Operator General Certificate (Land)
- First-Class Radioelectronic Certificate

Persons holding an Amateur Radio Operator Certificate with Basic Qualification issued prior to April 1, 2002 will be granted the same operating privileges as the holder of an Amateur Radio Operator Certificate with Basic Honours Qualification.

Persons holding an Amateur Radio Operator Certificate with Basic Qualification issued on or after April 1, 2002 will be granted the same operating privileges as the holder of an Amateur Radio Operator Certificate with Basic Honours Qualifications if they can demonstrate that they have attained a mark of 80% or higher on their Basic examination.

#### 4.3 General Criteria for Operation on HF Bands

Privileges granted to amateurs with an existing authorization will be based on the following criteria:

- (a) All amateurs holding Basic Qualification and Advanced Qualification will be allowed to operate on the HF bands below 30 MHz.
- (b) Amateurs certified prior to April 2, 2002 will be allowed to operate on the HF bands below 30 MHz based on the experience and knowledge they will have acquired over this period of time.
- (c) Amateurs certified after April 1, 2002 who have demonstrated a superior knowledge of operational, technical and regulatory requirements by achieving a mark of 80% or above on the Basic Examination will be allowed to operate on the HF bands below 30 MHz.

#### 4.4 **Privileges and Restrictions**

Privileges and restrictions can be found in the *Radiocommunication Regulations* and in RBR-4. A brief summary follows.

#### **Basic Qualification** 4.4.1

The following privileges and restrictions are applicable to the Basic Qualification:

- access to all amateur bands above 30 MHz
- use a maximum of 250 watts DC transmitter input power
- build and operate all station equipment, except for "home-made" transmitters
- re-programming of radio equipment to operate in the Amateur Bands if this can be done by a computer program

**Note:** No physical modifications to the circuitry of the radio are permitted.

- operation of cross band repeaters
- operation through a repeater established by an amateur with advanced qualifications
- no remote control<sup>2</sup> of fixed stations permitted regardless of medium used for control

In addition to the above mentioned privileges and restricitions, Basic Honnours Qualification (i.e. score of 80% or above) also allows access to all amateur bands below 30 MHz

#### 4.4.2 **Advanced Qualification**

The following privileges and restrictions are applicable to the Advanced Qualification:

- access to all amateur bands below 30 MHz
- use of maximum transmitter power of 1000 watts DC input
- build and operate transmitting equipment
- modify radio apparatus by computer program or physical modifications to the circuitry
- establishment of repeaters and club stations
- remote control of fixed stations, including the use of radio links

<sup>1 &</sup>quot;Build" in the context of the Basic Certificate is limited to the assembly of commercially available transmitter kits of professional design. 2 Remote control is the ability to indirectly manipulate the technical parameters (i.e. bandwidth, emission type, output power, etc.) of a radio by means of some intermediate medium. Operation through a repeater is not considered to be remote control.

#### 4.4.3 Morse Code (With Either Basic or Basic Qualification and Advanced Qualification)

The following privilege is applicable to Morse code (with either Basic Qualification or both Basic Qualification and Advanced Qualification):

access to all amateur bands

#### 4.4.4 Non-Qualified Persons

Non-qualified persons may use an amateur radio station, provided a qualified operator is present to perform the control functions.

#### 5. Examinations

#### **5.1** Basic Qualification Examination

An examination of 100 questions is administered by drawing one question from a series of questions applicable to the following 100 topic areas. The pass mark is 70%. A score of 80% or above will grant the individual additional privileges commensurate with a Basic with Honours Qualification.

#### 5.1.1 Regulations and Policies - 001

- 1-1 radio licences, applicability, eligibility of licence holder
- 1-2 licence fee, term, posting requirements, change of address
- 1-3 licence suspension or revocation, powers of radio inspectors, offences and punishments
- 1-4 operator certificates, applicability, eligibility, equivalents, reciprocal recognition
- 1-5 operation, repair and maintenance of radio apparatus on behalf of other persons
- 1-6 operation of radio apparatus, terms of licence, applicable standards, exempt apparatus
- 1-7 content restrictions non-superfluous, profanity, secret code, music, non-commercial
- 1-8 installation and operating restrictions number of stations, repeaters, home-built, club stations
- 1-9 participation in communications by visitors, use of station by others
- 1-10 interference, determination, protection from interference
- 1-11 emergency communications (real or simulated), communication with non-amateur stations
- 1-12 non-remuneration, privacy of communications
- 1-13 station identification, call signs, prefixes
- 1-14 foreign amateur operation in Canada, banned countries, third-party messages
- 1-15 frequency bands and qualification requirements
- 1-16 maximum bandwidth by frequency bands
- 1-17 restrictions on capacity and power output by qualifications
- 1-18 unmodulated carriers, retransmission
- 1-19 amplitude modulation, frequency stability, measurements
- 1-20 International Telecommunication Union (ITU) Radio Regulations, applicability
- 1-21 operation outside Canada, ITU regions, reciprocal privileges, international licences
- 1-22 examinations Department's fees, delegated examinations, fees, disabled accommodation
- 1-23 antenna structure approval, neighbour and land-use authority consultation

1-24 1-25	radio frequency electromagnetic field limits criteria for resolution of radio frequency interference complaints
5.1.2	Operating and Procedures - 002
2-1 2-2 2-3 2-4 2-5 2-6 2-7 2-8 2-9	voice operating procedures - channelized VHF/UHF repeater phonetic alphabet voice operating procedures - simplex VHF/UHF and HF tuneups and testing, use of dummy load, courteous operation Morse (CW) operating procedures, procedural signs RST system of signal reporting, use of S meter Q signals emergency operating procedures record keeping, confirmation practices, maps/charts, antenna orientation
5.1.3	Station Assembly, Practice and Safety - 003
3-1 3-2 3-3 3-4 3-5 3-6 3-7 3-8 3-9 3-10 3-11 3-12 3-13 3-14 3-15 3-16 3-17 3-18 3-19 3-20 3-21	functional layout of FM transmitters functional layout of FM receivers functional layout of CW transmitters functional layout of SSB)/CW receivers functional layout of SSB transmitters functional layout of digital systems functional layout of regulated power supplies functional layout of Yagi-Uda antennas receiver fundamentals transmitter, carrier, keying, and amplitude modulation fundamentals carrier suppression, SSB fundamentals frequency and phase modulation fundamentals station accessories for telegraphy, radiotelephony, digital modes digital mode fundamentals RTTY, ASCII, AMTOR, packet cells and batteries, types, ratings, charging power supply fundamentals electrical hazards, electrical safety, security electrical safety ground, capacitor discharge, fuse replacement antenna and tower safety, lightning protection exposure of human body to RF, safety precautions
5.1.4	Circuit Components - 004
4-1 4-2 4-3 4-4 4-5 4-6	amplifier fundamentals diode fundamentals bipolar transistor fundamentals field-effect transistor fundamentals triode vacuum tube fundamentals resistor colour codes, tolerances, temperature coefficient

#### 5.1.5 Basic Electronics and Theory - 005

- 5-1 metric prefixes pico, micro, milli, centi, kilo, mega, giga
- 5-2 concepts of current, voltage, conductor, insulator, resistance
- 5-3 concepts of energy and power, open and short circuits
- 5-4 Ohm's law single resistors
- 5-5 series and parallel resistors
- 5-6 power law, resistor power dissipation
- 5-7 AC, sinewave, frequency, frequency units
- 5-8 ratios, logarithms, decibels
- 5-9 introduction to inductance, capacitance
- 5-10 introduction to reactance, impedance
- 5-11 introduction to magnetics, transformers
- 5-12 introduction to resonance, tuned circuits
- 5-13 introduction to meters and measurements

#### 5.1.6 Feedlines and Antenna Systems - 006

- 6-1 feed line characteristics, characteristic impedance
- 6-2 balanced and unbalanced feed lines, baluns
- 6-3 popular antenna feed line and coaxial connector types
- 6-4 line losses by line type, length and frequency
- 6-5 standing waves, standing wave ratio, SWR) meter
- 6-6 concept of impedance matching
- 6-7 isotropic source, polarization via element orientation
- 6-8 wavelength vs physical length
- 6-9 gain, directivity, radiation pattern, antenna bandwidth
- 6-10 vertical antennas types, dimensions, characteristics
- 6-11 Yagi antennas types, dimensions, characteristics
- 6-12 wire antennas types, dimensions, characteristics
- 6-13 quad/loop antennas types, dimensions, characteristics

#### 5.1.7 Radio Wave Propagation - 007

- 7-1 line of sight, ground wave, ionospheric wave (sky wave)
- 7-2 ionosphere, ionospheric regions (layers)
- 7-3 propagation hops, skip zone, skip distance
- 7-4 ionospheric absorption, causes and variation, fading, phase shift, Faraday rotation
- 7-5 solar activity, sunspots, sunspot cycle
- 7-6 MF and HF, critical and maximum useable frequencies, solar flux
- 7-7 VHF and UHF, sporadic-E, aurora, ducting
- 7-8 scatter HF, VHF, UHF

#### **5.1.8** Interference and Suppression - 008

- 8-1 front-end overload, cross-modulation
- 8-2 audio rectification, bypass capacitors, ferrites
- 8-3 intermodulation, spurious, key-clicks
- 8-4 harmonics, splatter, transmitter adjustments
- 8-5 use of filters: low-pass, high-pass, band-pass, band-reject

#### **5.2** Morse Code Qualification Examination

The examination for this qualification consists of sending and receiving Morse code at a speed of not less than 5 words per minute (w.p.m.) for three consecutive minutes.

The Morse code examination is in plain language and may include the twenty-six letters, the ten numbers, comma, period, question mark, dash, fraction bar, Q-signals and emergency signals. In both the sending and receiving examinations, each character omitted or incorrectly sent or received is counted as one error. A mark of 100% is awarded for five errors or less, 99% for six errors, 98% for seven errors, 97% for eight errors, etc. The examiner will allow candidates two minutes to review and correct their copy before it is graded. The pass mark is 100%.

#### 5.3 Advanced Qualification Examination

An examination of 50 questions is prepared by drawing one question from a series of questions applicable to the following 50 topic areas. The pass mark is 70%.

#### 5.3.1 Advanced Theory - 001

- 1-1 time constant capacitive and inductive
- 1-2 electrostatic and electromagnetic fields, skin effect
- 1-3 series-resonance
- 1-4 parallel resonance
- 1-5 quality factor (Q)

#### 5.3.2 Advanced Components and Circuits - 002

- 2-1 germanium, silicon, gallium arsenide, doping, P-type, N-type
- 2-2 diodes point-contact, junction, hot-carrier, Zener, etc.
- 2-3 transistors NPN/PNP
- 2-4 field effect transistor (FET), JFET, MOSFET
- 2-5 silicon controlled rectifier (SCR)
- 2-6 amplifiers classes A. AB, B and C
- 2-7 amplifier circuits discrete and IC
- 2-8 operational amplifiers, properties and applications
- 2-9 mixers, frequency multipliers
- 2-10 digital logic elements
- 2-11 quartz crystal properties and applications
- 2-12 advanced filter circuits AF, RF

#### **5.3.3 Measurements - 003**

- 3-1 AC peak, peak-to-peak, average, root mean square (RMS)
- 3-2 PEP, PEP relative to average power, PEP relative to voltage across load
- 3-3 dip meter, signal generator
- 3-4 crystal calibrator, marking generator, frequency counter
- 3-5 oscilloscope
- 3-6 meters, multimeter, power meter

#### **5.3.4 Power Supplies - 004**

- 4-1 transformer and rectifier circuits, voltage doubler circuit, PIP
- 4-2 filter circuits, bleeder resistor function
- 4-3 linear and switching voltage regulator circuits
- 4-4 regulated power supplies

#### 5.3.5 Transmitters, Modulation and Processing - 005

- 5-1 oscillator circuits, phase locked loop (PLL)
- 5-2 RF power amplifiers
- 5-3 transmitters, neutralisation
- 5-4 AM, single sideband, linearity, two-tone test
- 5-5 FM deviation, modulation index, deviation ratio, deviation meter
- 5-6 FM transmitter, repeater circuits
- 5-7 signal processing AF, IF, and RF
- 5-8 codes and protocols, Baudot, ASCII, parity, CRC), X.25, ISO layers
- 5-9 spread spectrum frequency hopping, direct sequence

#### **5.3.6** Receivers - 006

- 6-1 single, double conversion superheterodyne architecture
- 6-2 oscillators, mixers, tuning
- 6-3 RF, IF amplifiers, selectivity
- 6-4 detection, audio, automatic gain control
- 6-5 performance limitations instability, image, spurious, etc.

#### 5.3.7 Feedlines - Matching and Antenna Systems - 007

- 7-1 antenna tuner/transmatch, impedance matching circuits
- 7-2 velocity factor, effect of line terminated in non-characteristic impedance
- 7-3 antenna feed arrangements tee, gamma, stub
- 7-4 current and voltage distribution on antenna
- 7-5 polarization, helical beam, parabolic antennas
- 7-6 losses in real antenna systems, effective radiated power
- 7-7 ground and elevation effects, vertical radiation (take off) angle
- 7-8 radiation resistance, antenna efficiency, beamwidth
- 7-9 waveguide, microstrip line

#### **5.4** Examination Procedures

Examinations are closed book. Reference material must not be made available during the examination. Use of calculators or any other similar device that are capable of storing information in memory is prohibited during the examination.

There is no time limit specified for examinations. Most examinations are completed within one hour and would normally not take more than two hours to complete. Examiners will use their discretion to ensure reasonable time is made available for candidates to complete the examination.

#### 5.5 Re-Examination

A candidate who fails a written test may retake the test as often as necessary, at the convenience of both the examiner and candidate. The examiner is required to provide a different examination for each re-examination.

#### 6. Examiners

#### 6.1 Accredited Examiners

ISED has accredited examiners throughout Canada. To find out who conducts examinations for the Amateur Radio Operator Certificate in your respective area candidates are encouraged to contact local amateur operators, amateur clubs, technical schools or ISED's Amateur Radio Operator Certificate Services website.

Accredited examiners are free to negotiate an examination fee with candidates in order to recover the cost of administering an examination. There is no remittance to ISED and the Department will not arbitrate any disputes between candidates and examiners.

#### **6.2** ISED Examiners

Most examinations are conducted by accredited examiners. In circumstances where this is not possible, ISED personnel may be able to conduct the examination. Please contact the <u>Amateur Radio Service Centre</u> to determine your options.

The <u>Radiocommunication Regulations</u> prescribes a fee of \$20 for each examination conducted by ISED personnel. This fee is charged for each qualification being examined. Morse code sending and receiving are considered to be one examination.

#### 7. Candidates

#### 7.1 Age and Nationality

There are no age or nationality restrictions for candidates who wish to take the examinations. Candidates must provide adequate photo identification to examiners prior to the examination.

#### 7.2 Physical Disabilities

No candidates may be exempted from being tested for any of the qualifications of the Amateur Radio Operator Certificate.

Candidates who have physical disabilities which prevent them from completing examinations in the normal manner should discuss their situation with their examiner to determine whether an accommodated testing procedure may be considered. The examiner may require medical evidence from a practicing medical physician.

#### 7.3 Language

When a candidate fails a written examination because their normal language of use is neither English nor French, or because academic limitations restrict the ability to read the questions properly, the examiner may administer an oral examination.

#### 8. Reciprocal Operating Agreements and Arrangements

#### 8.1 Convention Between Canada and the United States of America

The operation of amateur radio service equipment and stations in the territory of the other country is covered in Treaty Series 1952 No. 7, *Operation of Certain Radio Equipment or Stations: Convention between Canada and the United States of America*.

Visiting amateurs are not required to register or receive a permit prior to operating amateur radio stations.

Each amateur station shall indicate its geographical location as nearly as possible by city and state or city and province at least once during each contact with another station.

The amateur station shall be operated in accordance with the laws and regulations of the country in which the station is temporarily located.

Canadian amateurs operating in the U.S. have the same privileges as they have in Canada, and are limited by U.S. band edges and mode restrictions, in accordance with the Code of Federal Regulations (CFR), Title 47, Chapter I – Federal Communications Commission, Part 97, *Amateur Radio Service*.

U.S. amateurs must be U.S. citizens and must abide by the <u>Radiocommunication Regulations</u> and <u>RBR-4</u> while operating in Canada.

#### 8.2 Temporarily Operating Canadian Amateur Stations in Other Countries

Canada has negotiated participation in the following multilateral operating agreements which allow Canadians to operate their amateur radio stations while temporarily visiting certain countries.

#### 8.2.1 CEPT Recommendation T/R 61-01

CEPT is the acronym for Conférence européenne des administrations des postes et des télécommunications, translated as the European Conference of Postal and Telecommunications Administrations. CEPT's Recommendation T/R 61-01 is a licensing system that allows licenced amateurs from member and recognized non-member countries to operate in the other countries. A list of participating CEPT countries can be found on the following web site: http://www.erodocdb.dk/Docs/doc98/official/pdf/TR6101.PDF

A Canadian-issued CEPT permit has no legal status in Canada.

In order to qualify for a CEPT licence according to T/R 61-01, a Canadian needs to hold an Amateur Radio Operator Certificate with Basic and Advanced Qualifications and have their call sign on their certificate.

Amateurs who qualify for a CEPT T/R 61-01 licence must abide by the provisions stipulated by the administration of the country in which the station is to be operated.

A foreign amateur with a CEPT T/R 61-01 licence who is visiting Canada will have operating privileges equivalent to a Canadian with an Amateur Radio Operator Certificate with both Basic Qualifications and Advanced Qualifications.

The Minister of ISED has delegated Radio Amateurs of Canada (RAC) to issue CEPT permits. The application for a CEPT permit requires the following information from the applicant:

- name
- address
- call sign
- class of certificate
- photocopies of the station licence and operator certificate

RAC has set a fee of \$10 for this permit to cover the cost of administration and handling. More details about how to apply for a CEPT permit can be found on the RAC's <u>website</u>.

#### **8.2.2** International Amateur Radio Permit

The International Amateur Radio Permit (IARP) is a document issued pursuant to the terms of the *Inter-American Convention on an International Amateur Radio Permit*. Canada is a signatory to this Convention. Other participating countries are listed on the Department of International Law's Organization of American States (OAS) website:

The IARP is issued in two classes: Class 1 and Class 2. Class 1 permits are issued to those who hold an Amateur Radio Operator Certificate with Basic Qualification and Morse code (12 w.p.m.), while Class 2 permits are issued to those amateurs who hold only the Basic Qualification. The Advanced Qualification and Morse code (5 w.p.m.) are not considered when determining the class of the IARP.

Those who hold a Class 1 permit are authorized to use all frequencies and emissions allocated in the amateur radio service, while those who hold the Class 2 permit are limited to all the amateur allocations above 30 MHz, subject to the provisions of the visited country for the amateur radio service.

A Canadian-issued IARP has no legal status in Canada.

Foreign amateurs who are licensed by other administrations participating in the IARP programs must apply for the appropriate permit in accordance with the provisions stipulated by their home administration.

The Minister of ISED has delegated to Radio Amateurs of Canada the authority to issue IARP's to Canadians. The application for an IARP requires the following information from the applicant:

- name
- address
- call sign

- class of certificate of the applicant
- photocopies of the operator certificate
- a recent passport-sized photo of the applicant

Radio Amateurs of/du Canada has set a fee of \$25 to cover the cost of administration and handling. More details about how to apply for an IARP can be found on the Radio Amateurs of/du Canada's website.

#### 8.2.3 Other Foreign Operating Arrangements or Agreements

Any foreign administration may determine whether or not a Canadian amateur is permitted to operate an amateur station while temporarily in its territory, subject to such conditions or restrictions it may impose.

Information regarding operation in other countries can be found on the Radio Amateurs of Canada's <u>website</u>. Canadians are urged to contact the responsible administrations well in advance in order to obtain the necessary documentation and permission, where required.

## 8.3 Third-Party Agreements and Arrangements

International third-party communication in case of emergencies or disaster relief is expressly permitted unless specifically prohibited by a foreign administration.

Any foreign administration may permit its amateur stations to communicate on behalf of third parties without having to enter into any special arrangements with Canada.

Canada does not prohibit international communications on behalf of third parties.

## 9. Radiocommunication Regulations and Regulations by Reference

The Radiocommunication Regulations can be found on the Justice Laws website.

The Standards for the Operation of Radio Stations in the Amateur Radio Service, *Regulation by Reference* RBR-4 can be found on Spectrum Management and Telecommunications <u>Official Publications</u> page.