



# Halifax Amateur Radio Club

Basic Amateur Radio Licensing  
Course – 2013

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*Regulations*

# Objectives

- **Students should be familiar with:**  
**Rules and regulations affecting the Amateur Radio Service in Canada - found in:**
  - *Industry Canada - RBR-4 (RIC-2)*
    - Standards for the operation of Radio Stations in the Amateur Radio Service
  - *Industry Canada - RIC-3*
    - Information on the Amateur Radio Service (Exams & International Agreements)
  - *Industry Canada - RBR-3 (RIC-4)*
    - Technical Requirements Respecting Identification of Radio Stations
  - *RAC - Summary of the IC Regulations*
    - provides an EXCELLENT simplified overview of the rules.

# Industry Canada

## Amateur Radio Service

[http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/h\\_sf01709.html](http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/h_sf01709.html)

Telecommunications - Amateur Radio Service - Mozilla Firefox

Tools Help

http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/h\_sf01709.html

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Antenna Structures  
Broadband Radio Service

**Spectrum Management and Telecommunications**

### Amateur Radio Service

[Introduction](#)  
[Certification](#)

- [Introduction](#)
- [How to Obtain an Amateur Radio Operator Certificate](#)
- [Certificate Examinations](#)
- [Accredited Examiners](#)
- [How to Obtain a Call Sign](#)
- [Fees](#)
- [How to Operate your Amateur Radio Station](#)
- [International Agreements](#)
- [Amateur Radio Service Centre Co-ordinates](#)

[Exam Generator Software](#)  
[Regulatory Changes and Background Documents](#)  
[Related Links](#)  
[Related Official Publications](#)

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# Amateur Radio Service

[Introduction to Amateur Radio Service](#)

[Certification](#)

- [Introduction](#)
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# Industry Canada Amateur Radio Service

[http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/h\\_sf01709.html](http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/h_sf01709.html)

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## Related Official Publications

- [RIC-1: Guide for Examiners Accredited to Conduct Examinations for Amateur Radio Operator Certificates](#)  
Issue 6, February 2009
- [RIC-3: Information on the Amateur Radio Service](#)  
Issue 3, July 2005
- [RIC-7: Basic Qualification Question Bank for Amateur Radio Operator Certificate Examinations](#)  
Issue 3, April 2007
- [RIC-8: Advanced Qualification Question Bank for Amateur Radio Operator Certificate Examinations](#)  
Issue 3, April 2007
- [RIC-9: Call Sign Policy and Special Event Prefixes](#)  
Issue 2 (Provisional), October 2005
- [IC-2381: Application and Report for Amateur Radio Operator Certificate and Call Sign](#)
- [RBR-3: Technical Requirements Respecting Identification of Radio Stations \(formerly RIC-4\)](#)  
Issue 1, September 2007
- [RBR-4, Standards for the Operation of Radio Stations in the Amateur Radio Service \(formerly RIC-2\)](#)  
Issue 1, September 2007

Services

Wireless Services

**Radio Service**

Structures

Radio Service

Wireless Access

Services

Telecom

Radio Service

Mobile Radio Service

Point Communications

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29/10/2012



# What's on the EXAM???

- **REGULATIONS !!!**
  - **25% of Exam will be on REGULATIONS!**
    - one question from each of the 25 topics
      - see RIC-3 pg. 7 (Sctn 2.1)
  - **SO.....you must know them...this is the Law governing the Amateur Radio Service.**



# What's on the EXAM???

- **IC – RIC-3 (Sctn. 2.1)**
  - **Basic Qualification Examination**
    - **Regulations & Policies (1-1 to 1-25)**
    - **Operating & Procedures (2-1 to 2-9)**
    - **Station Assembly, Practice & Safety (3-1 to 21)**
    - **Circuit Components (4-1 to 4-6)**
    - **Basic Electronics & Theory (5-1 to 5-13)**
    - **Feedlines & Antenna Systems (6-1 to 6-13)**
    - **Radio Wave Propagation (7-1 to 7-8)**
    - **Interference & Suppression (8-1 to 8-5)**

**There will be one question from each of the  
above 100 sections on the exam!**

## RIC-3 pg. 7 (Sctn 2.1)

### 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, offenses 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, re-transmission
- 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 radiofrequency electromagnetic field limits
- 1-25 criteria for resolution of radio frequency interference complaints



# **RAC Summary of the IC Regulations**

- **Summary of the IC Regulations**  
- 1 to 70
- **Exceptions to the Regulations**  
- 1 to 11
- **Charges & Fees - 1 to 2**
- **Examinations - 1 to 5**
- **Station Identification - 1 to 4**
- **Third Party Communication**  
>> See RIC-3 (5.3)
- **Antenna/Tower Installations**  
- 1 to 4

# Changes in 2005

- In July of 2005, Industry Canada modified the requirements for operating within the HF bands in Canada by basically eliminating the Morse code requirement.
- Other countries world-wide are beginning to follow this trend, **BUT not all have done so at this time.**
- Therefore, reciprocal operating agreements in some jurisdictions are some-what uncertain.

# **New Criteria for Operation in the HF Bands**

1. Morse code will no longer be the sole additional requirement by which Canadian radio amateurs will gain access to the HF bands, but together with a passing grade on the basic exam will remain as one valid criterion; likewise a passing grade on the basic exam together with a passing grade on the advanced exam gives you HF band access.
2. Amateurs showing superior knowledge of operational, technical and regulatory requirements by attaining an 80% score on the basic exam or passing the advanced exam, will also be granted access to the HF bands.
3. “Grandfathering” of existing amateurs will be based on the following criteria:
  - A. Amateurs certified after April 1, 2002, who achieved a mark on the basic examination of 80% or above will be allowed to operate in the HF bands below 30 MHz.
  - B. All Amateurs certified prior to April 2, 2002 will be allowed to operate in the HF bands below 30 MHz
  - C. Amateurs holding both basic and advanced or basic and 5wpm Morse Code qualifications will be allowed to operate in the HF bands below 30 MHz.

# Important Topics

- **Communications on behalf of Third Parties**
- **Operation Outside of Canada**

# Communicating on Behalf of Third Parties

- **What does it mean to communicate on behalf of third parties?**
  - **It means to pass a message to another ham radio operator from a non-ham.**
  - **It means to allow a non-ham to communicate through your station with another ham by way of a phone patch into your radio station.**
  - **It means to allow a non-ham to operate your radio under your supervision.**

# Communication on behalf of Third Parties

- **Canada does NOT prohibit international communications on behalf of third parties, regardless of the country; in other words, there is no longer a “*Forbidden Country List*”.**
- **International third-party communication in the 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.**



# Operation Outside of Canada

- An amateur radio station that is operating on board a ship in *international waters*, or on board an aircraft in *international air space*, may operate on *any frequency within the frequency bands and corresponding bandwidths AS SET OUT* in Schedule I, II, III (RBR-4), as the case may be (i.e. your physical location at the time) and **subject to the requirements for operator qualifications.**

# IARU Regions



Region I (Europe & Africa)



Region II (North & South America)



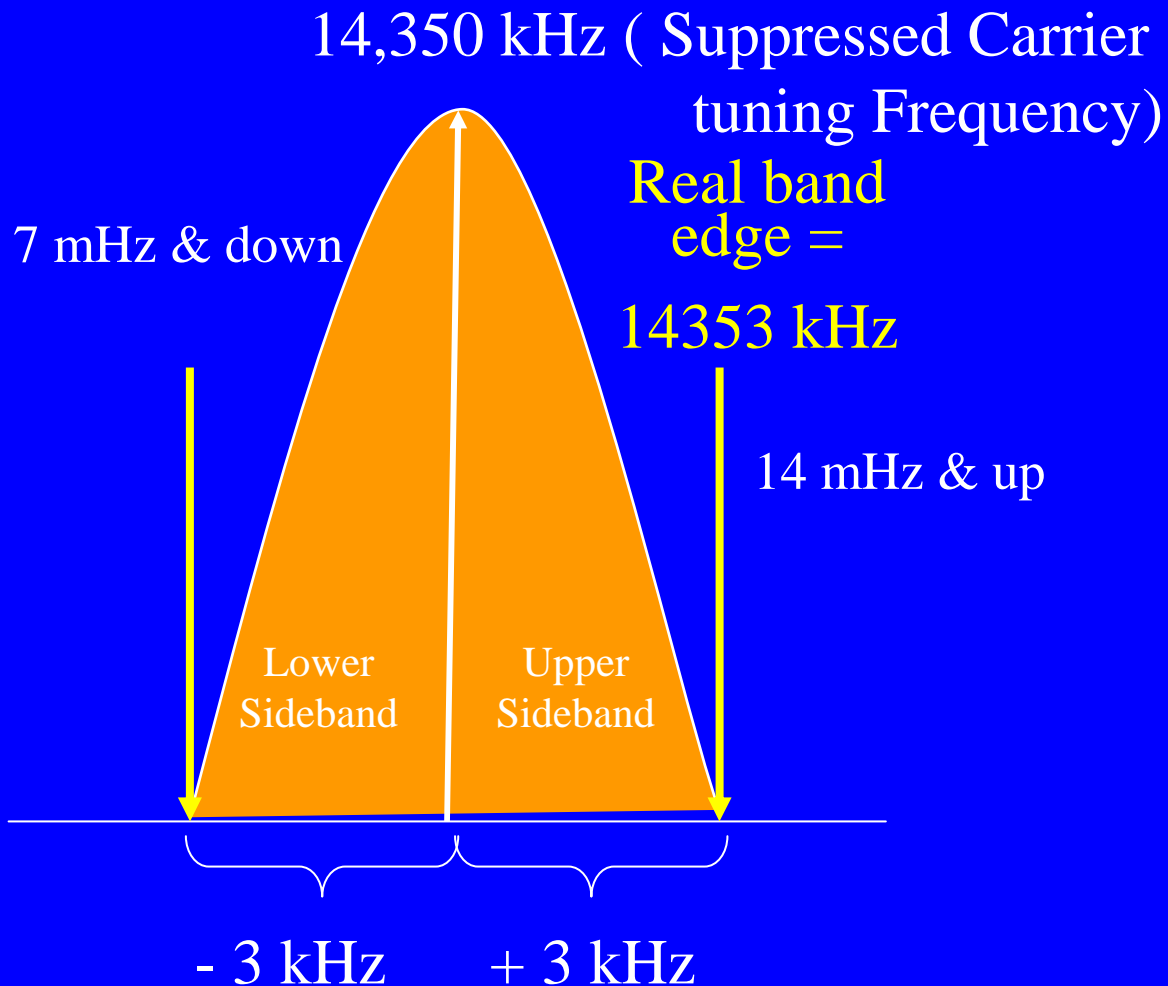
Region III (Austral Asia)

# Schedules I & IV

## RBR-4

- **Frequency, Bands & Bandwidths**
  - For Canada and all of Region 2 (North & South America)
  - Maximum bandwidth\*\*
  - Operator qualifications
- **Amateur Callsign Province Prefixes**
  - know these - they will be on the exam!

# Band Width & Band Edge



If you operate exactly at 14350 kHz  
you will be 3 kHz outside the  
allowable band for Radio Amateurs!!

Radio Amateurs operating in “suppressed carrier” single side-band mode would be using either the upper or lower sidebands, NOT both as shown here for illustrative purposes.

# Schedule I - Frequency Bands and Bandwidths for Use by Amateur Canada and all of Region 2

Frequency	Bandwidth	Provisions	Qualifications
1.800 - 2.000 MHz	6 kHz		B and 5, B/H, B&A
3.500 - 4.000 MHz	6 kHz		B and 5, B/H, B&A
7.000 - 7.300 MHz	6 kHz		B and 5, B/H, B&A
10.100 - 10.150 MHz	1 kHz		B and 5, B/H, B&A
14.000 - 14.350 MHz	6 kHz		B and 5, B/H, B&A
18.068 - 18.168 MHz	6 kHz		B and 5, B/H, B&A
21.000 - 21.450 MHz	6 kHz		B and 5, B/H, B&A
24.890 - 24.990 MHz	6 kHz		B and 5, B/H, B&A
28.000 - 29.700 MHz	20 kHz		B and 5, B/H, B&A
50.000 - 54.000 MHz	30 kHz		B
144.000 - 148.000 MHz	30 kHz		B
220.000 - 225.000 MHz	100 kHz		B
430.000 - 450.000 MHz	12 MHz	1	B
902.000 - 928.000 MHz	12 MHz	1	B
1.240 - 1.300 GHz	NA	1	B
2.300 - 2.450 GHz	NA	1	B
3.300 - 3.500 GHz	NA	1	B
5.650 - 5.925 GHz	NA	1	B
10.000 - 10.500 GHz	NA	1	B
24.000 - 24.050 GHz	NA		B
24.050 - 24.250 GHz	NA	1	B
47.000 - 47.200 GHz	NA		B
75.500 - 76.000 GHz	NA		B
76.000 - 81.000 GHz	NA	1	B
142.000 - 144.000 GHz	NA		B
144.000 - 149.000 GHz	NA	1	B
241.000 - 248.000 GHz	NA	1	B
248.000 - 250.000 GHz	NA		B

Regulations

19

In Column III, "1" means that transmissions may not cause interference nor be protected from interference from stations licensed in other services operating in that band

# Operation Outside of Canada

- **An amateur radio station that is operating on board a ship in *international waters*, or on board an aircraft in *international air space*, may operate on any frequency within the frequency bands and corresponding bandwidths AS set out in Schedule I, II, III (RIC-2 – now RBR-4), as the case may be (i.e. your physical location at the time) and subject to the requirements for operator qualifications.**



# International Agreements

- **CEPT** - European Conference of Postal and Telecommunications Administrations
  - Inter-European agreement of ~ 30 countries - see list RIC-3 (5.2.1)
  - Canada not a member - works through RAC to issue permit
    - CEPT Class 1 = Basic + 5 wpm
    - CEPT Class 2 = Basic only
- **IARP** (International Amateur Radio Permit - North & South America)
  - Argentina / Brazil / Peru / USA / Uruguay / Venezuela
    - IARP Class 1 = Basic + 5 wpm
    - IARP Class 2 = Basic only
- **USA** - No permit or registration required - BUT must follow US Regulations.
- **Other countries** - see RAC web site for details

## **Prefix                  Province/Territory**

VE1 / VA1	Nova Scotia
VE2 / VA2	Quebec
VE3 / VA3	Ontario
VE4 / VA4	Manitoba
VE5 / VA5	Saskatchewan
VE6 / VA6	Alberta
VE7 / VA7	British Columbia
VE8	Northwest Territories
VE9	New Brunswick
VE0	* International Waters
VO1	Newfoundland
VO2	Labrador
VY0	Nunavut Territory
VY1	Yukon Territory
VY2	Prince Edward Island

\*VE0 call signs are only intended for use when the amateur radio station is operated from vessels in international waters.

