

***Welcome to the 2018 Amateur Radio Course
Sponsored by the Ottawa Valley Mobile Radio Club***



Course Coordinator
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Main Objective of this Course is to
Obtain a “Certificate of Proficiency in
Amateur Radio” Issued by:
Innovation, Science and Economic
Development Canada
(formally called Industry Canada)

Certificate of VE3LC



Industry
Canada

Industrie
Canada

Certificate of Proficiency in Amateur Radio

This is to certify that

Norman Rhodes Rashleigh

has obtained the following qualifications:

Basic

12 W.P.M. Morse Code

Advanced

The certificate holder is authorized to operate amateur radio apparatus in accordance with the regulations made pursuant to the *Radiocommunication Act*, and to use the following call signs:

VE3DVF VE3LC

Certificate Number: 1963 [REDACTED]

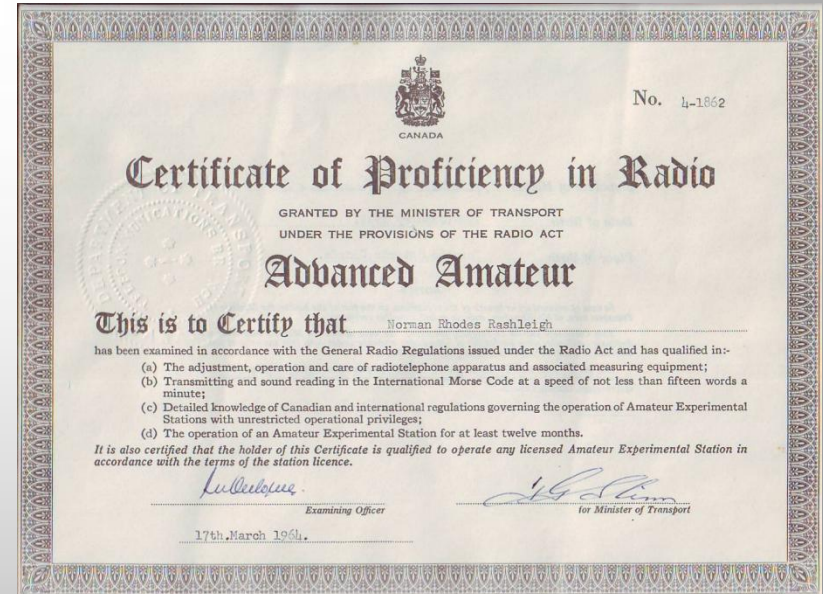
Issue date: 27 November 2000

A handwritten signature in black ink, appearing to read "H. P. Pambour".

Issued by

Canada

Original Certificates Issued by: Transport Canada in 1960's

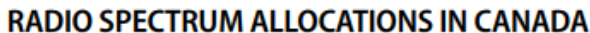
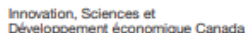


Amateur Radio

Definition:

Amateur Radio is the use of designated radio frequency spectrum for the purposes of private recreation, non-commercial exchange of messages, wireless experimentation, self training, and emergency communications.

[http://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapj/2018_Canadian_Radio_Spectrum_Chart.PDF/\\$FILE/2018_Canadian_Radio_Spectrum_Chart.PDF](http://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapj/2018_Canadian_Radio_Spectrum_Chart.PDF/$FILE/2018_Canadian_Radio_Spectrum_Chart.PDF)



ATTRIBUTION DES FRÉQUENCES RADIOÉLECTRIQUES AU CANADA

Pour de plus amples enseignements sur les politiques d'utilisation du spectre ou des systèmes radio, veuillez communiquer avec la Direction générale du génie, de la planification et des normes, d'Industrie Canada à Ottawa (courriel: ic.spectrumengineering-genieduspectre@canada.ca ou avec l'un des bureaux identifiés dans le Circulaire d'information sur les radiocanons QR-66).



➤ **135.7-137.8 kHz**

2200 m

LF

➤ **472-479 kHz**

630 m

MF

➤ **1.800-2.000 MHz**

160 m

➤ **3.500-4.000 MHz**

80 m

➤ **5.332 MHz**

➤ **5.348 MHz**

➤ **5.3585 MHz**

➤ **5.373 MHz**

➤ **5.405 MHz**

60 m

Popular HF Bands

➤ **7.000-7.300 MHz**

40 m

HF

➤ **10.100-10.150 MHz**

30 m

➤ **14.000-14.350 MHz**

20 m

➤ **18.068-18.168 MHz**

17 m

➤ **21.000-21.450 MHz**

15 m

➤ **24.890-24.990 MHz**

12 m

➤ **28.000-29.700 MHz**

10 m

➤ 50.000-54.000 MHz	6 m	Popular 2 & 6 M	VHF
➤ 144.000-148.000 MHz	2 m		
➤ 219.000-220.000 MHz	1.25 m		
➤ 222.000-225.000 MHz			
➤ 430.000 - 450.000 MHz	70 cm		UHF
➤ 902.000 - 928.000 MHz (ISM)	33 cm		
➤ 1.240 -1.300 GHz	23 cm		
➤ 2.300 - 2.450 GHz (part ISM)	13 cm		
➤ 3.300 - 3.500 GHz	9 cm	Exotic Stuff	SHF
➤ 5.650 - 5.925 GHz (ISM)	5 cm		
➤ 10.000 -10.500 GHz (ISM)	3 cm		
➤ 24.000 -24.250 GHz	1.25 cm		

- 47.000 - 47.200 GHz
- 24.000 - 24.250 GHz
- 47.000 - 47.200 GHz
- 76.000 - 77.500 GHz
- 77.500 - 78.000 GHz
- 78.000 - 81.000 GHz
- 81.000 - 81.500 GHz
- 122.250 - 123.000 GHz
- 134.000 - 141.000 GHz
- 136.000 - 141.000 GHz
- 241.000 - 248.000 GHz
- 248.000 - 250.000 GHz

*Very Exotic
Stuff*

EHF

Amateur Radio Activities Include:

- Voice and CW “rag chewing”
- Net operations
- Experimentation & Technical Exploration
- Antennas building
- Propagation and “Dx ing”, Certificate hunting
- Contesting and Radio Sport, QRP ops and clubs
- Digital Communications, eg: APRS, PSK 31, WSJT, RTTY
- Repeaters and Internet Networking
- Satellite communications
- Earth Moon Earth (EME)
- Microwave mountain topping
- Disaster Relief , SAR and Public Service
- DF’ing and Hidden Transmitter hunting

Innovation, Science & Economic Development (ISED) Regulates the Radio Spectrum in Canada including Amateur Radio

**ISED was formally known as
Industry Canada (IC)**

Basic Qualification

- 1) Basic Exam of 100 multiple choice questions from the Basic Q&A Bank.**
- 2) 70% pass mark required to provide operating privileges on bands restricted to 50 MHz and above.**
- 3) 80% pass mark is known as Basic with Honours and provides operating privileges on all amateur allocations.**
- 4) Basic qualification, Honours or otherwise, allows holder a maximum of 250 watts (DC input) transmit power based on commercial design.**
- 5) Basic certificate holders cannot be trustees and holders of club call signs or system operators of repeaters or remote stations.**

Advanced Qualification

- 1) Is a supplemental level to Basic Qualification (Honours or not)**
- 2) 50 question multi choice exam based on advanced technical knowledge and practices of electronics and radio.**
- 3) 70% pass mark.**
- 4) Allows holder privileges on all amateur allocations if candidate was holder of Basic without Honours.**
- 5) Allows holder to design, build and use own transmitting equipment and transmit High Power.**
- 6) Allows holder to apply and hold extra station call sign certificate as trustee of a club or repeater station.**

Morse Code Qualification

- 1) Optional extra exam and qualification.**
- 2) 5 WPM receiving and manual sending proficiency test.**
- 3) Not needed domestically for amateur privileges but may still be needed for operating privileges when travelling in other countries.**
- 4) Allows holder privileges on all amateur allocations if candidate was holder of Basic without Honours.**

Syllabus of Study According to RIC 3 Basic

- 1.Regulations and Policy**
- 2.Operating and Procedures**
- 3.Station Assembly , Practice and Safety**
- 4.Circuit Components**
- 5.Basic Electronics and Theory**
- 6.Feedlines and Antenna Systems**
- 7.Radio Wave Propagation**
- 8.Interference and Suppression**

Syllabus of Study Basic Advanced

- 1) Advanced Theory**
- 2) Advanced Components and Circuits**
- 3) Measurements**
- 4) Power Supplies**
- 5) Transmitters, Modulation and Processing**
- 6) Receivers**
- 7) Feedlines-Matching and Antenna Systems**

Innovation, Science and Economic Development (ISED) Documents that Pertain to the Amateur Radio Service

- **RBR-4 Standards for the Operation of Radio Stations in the Amateur Radio Service**

<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01226.html>

- **RIC 3 Information on the Amateur Radio Service**

<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01008.html>

- **RIC 9 Call Sign Policy and Special Event Prefixes**

<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf02102.html>

- **RIC 1 Guide for Examiners Accredited to Conduct Examination for Amateur Radio Operator Certificates**

<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01007.html>

- **Radiocommunications Act of Canada**

<http://laws-lois.justice.gc.ca/eng/acts/r-2/>

- **Radiocommunications Regulations**

<http://laws-lois.justice.gc.ca/eng/regulations/sor-96-484/page-2.html#h-6>

And...

- **CPC-2-0-03** Radiocommunications and Broadcasting Antenna Systems

<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08777.html>

- **EMCAB 2** Criteria for Resolution of Immunity Complaints Involving Fundamental Emissions of Radiocommunications Transmitters

<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01005.html>

- Canadian Table of Frequency Allocations

<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10759.html>

And from Health Canada

- **Safety Code 6**, Limits of Human Exposure to Radiofrequency Electromagnetic Energy in the Frequency Range 3 kHz to 300 GHz

<http://www.radiationsafety.ca/wp-content/uploads/2012/06/Safety-Code-6.pdf>