

# Explore the Magic of Radio!

Earn your Amateur  
Radio license!

Make friends around the world!



Emergency Communications



Build equipment



Public Service



Storm Reporting



Exotic Locations

For more information  
contact  
Al Penney at (902) 847-0554  
or at  
[alphonsepenney@gmail.com](mailto:alphonsepenney@gmail.com)

# Basic Course 2025-2



Annapolis Valley Amateur Radio Club

# Basic Course 2025-2

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- Course starts Thursday 18 September.
- Course ends Thursday 27 November.
- Classes held Thursday evenings and Sunday afternoons.
- Thursday and Sunday classes are different – you need to watch both!
- Classes are recorded – **link will be sent next day.**

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# Course Timings

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- Thursday classes
  - 1930 – 2200 Newfoundland
  - 1900 – 2130 Atlantic
  - 1800 – 2030 Eastern
  - 1700 – 1930 Central
  - 1600 – 1830 Mountain
  - 1500 – 1730 Pacific

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# Course Timings

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- Sunday classes
  - 1430 – 1700 Newfoundland
  - 1400 – 1630 Atlantic
  - 1300 – 1530 Eastern
  - 1200 – 1430 Central
  - 1100 – 1330 Mountain
  - 1000 – 1230 Pacific

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# Instructor

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AI VO1NO



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# Course Schedule

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Sep 18	Ch 1 Introduction
Sep 21 (S)	Ch 2 Basic Electricity
Sep 25	Ch 3 Ohms Law
Sep 28 (S)	Ch 4 Part 1 Inductance, Capacitance
Oct 02	Ch 4 Part 2 Resonance
Oct 05 (S)	NO CLASS (IARU Meeting)
Oct 09	NO CLASS (IARU Meeting)
Oct 12 (S)	Ch 5 Waves
Oct 16	Ch 6 Propagation
Oct 19 (S)	Ch 7 Transmission Lines
Oct 23	Ch 8 Antennas Part 1
Oct 26 (S)	Ch 8 Antennas Part 2
Oct 30	Ch 9 Active Devices
Nov 02 (S)	Ch 10 Power Supplies
Nov 06	Ch 11 Establishing a Station
Nov 09 (S)	Ch 12 Operating a Station
Nov 13	Ch 13 Modulation and Transmitters
Nov 16 (S)	Ch 14 Receivers
Nov 20	Ch 15 Radio Frequency Interference
Nov 23 (S)	Ch 16 Safety
Nov 27	Ch 17 Regulations

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# Class Format

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- Log on no sooner than 20 minutes before start time.
- Classes may run late!
- Leave mic off during class.
- I will ask questions – no class answers please!
- 5 minute break halfway through class.
- Use the Chat box for questions – I will monitor.
- Technical issues, Zoom problems – check e-mail.
- Try to attend classes, though occasional absence is okay.

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# Lesson Plans

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- PowerPoint presentations will be available (in PDF) from <https://avarc.ca/index.php/online-basic-course/>
- Lots of other educational material on the AVARC website.
- **Classes will be recorded. Link will be sent after each class.**

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# Discord Server

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- Previous courses have had a Discord server to allow students to discuss topics of interest outside of class.
- A previous course has established one for all follow-on courses:  
<https://discord.gg/xuXcUmTE>
- Link to Anki question bank there:  
<https://ankiweb.net/shared/info/617183868>

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# E-Mail

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- A suggestion about the e-mails I send....

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# E-Mail

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- A suggestion about the e-mails I send....

# READ THEM!!

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# Course Philosophy!

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- This is **not** a “memorize the answer to the question” type of course!
- We will learn more than is required to pass the exam!
- There will be lots of supplemental material to enrich your knowledge.
- When the course is over however, you will be ready to **assemble a station** and **get on the air!**

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# Exams

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- Exams are not included in the course.
- When you are ready, you schedule an in-person exam with an Accredited Examiner.
- Contact an examiner in your area and work out a date/time/location to write the exam.
- Procedures explained later this lesson.

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# Updated Question Bank

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- The Question Bank for the Basic Qualification was carefully reviewed by RAC in 2023/2024, and recommended changes were submitted to ISED for Consideration.
- There are **984 multiple choice questions** in the database. We recommended changes to almost 900 of those.
- All our recommendations were accepted by ISED, and the new Question Bank became effective on 15 July 2025.
- A big change is that candidates will be allowed to have a **“cheat sheet”** for the exam, with all necessary formulas, and all of the block diagrams used on the course.

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## **Updated Question Bank**

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**This course has been updated to reflect  
any and all changes made necessary by  
the updates to the Question Bank!**

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# Questions?

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# Ham Radio is...

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- A form of communication...



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# Ham Radio is...

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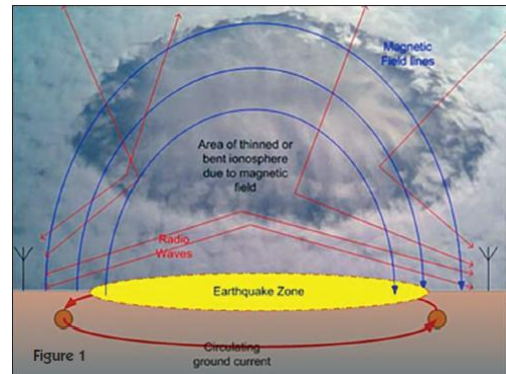
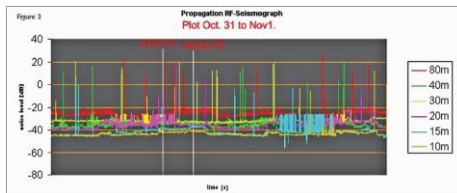
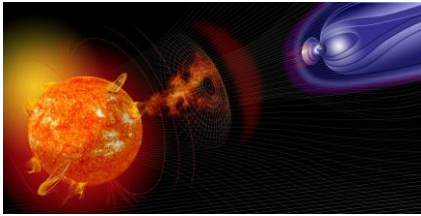
- A Public Service...



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# Ham Radio is...

- A chance to explore science...



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# Ham Radio is...

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- A stepping stone to a lifelong career!



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Dr. Joe Taylor K1JT – Nobel Prize in physics 1993 - discovered the first pulsar in a binary system.

Astronaut Chris Hadfield VA3OOG

# What do Hams do?

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- Use Morse Code...



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# What do Hams do?

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- Use voice transmissions...

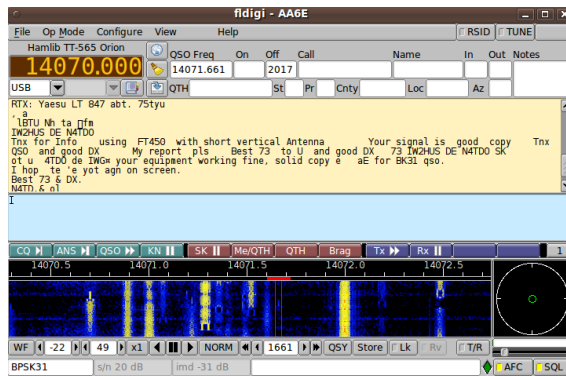


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# What do Hams do?

- Use digital modes...

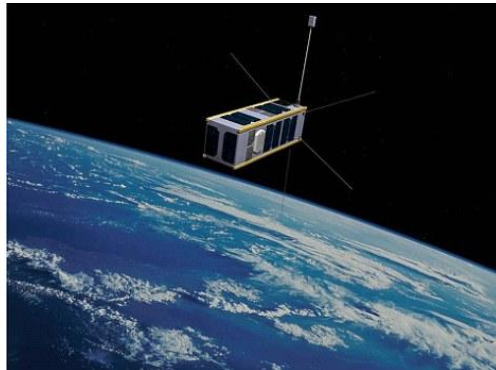


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# What do Hams do?

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- Build and use their own satellites...



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**Sputnik 1** was the first [artificial Earth satellite](#). It was launched into an elliptical [low Earth orbit](#) by the [USSR](#) on 4 October 1957 as part of the [Soviet space program](#). It orbited for three weeks before its batteries died and then orbited silently for two months before it fell back into [the atmosphere](#) on 4 January 1958.

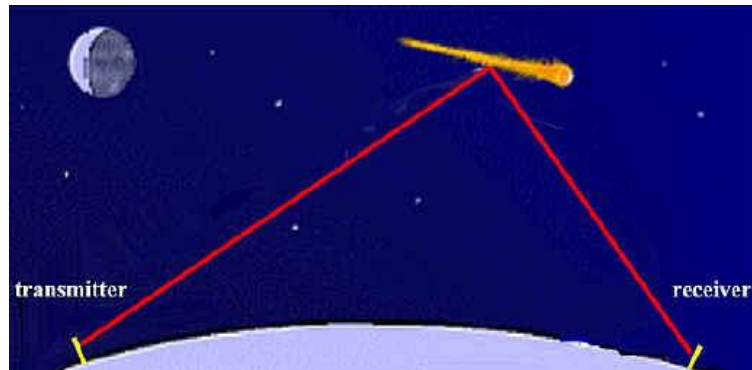
**OSCAR I** (aka [OSCAR 1](#)) is the first [amateur radio satellite](#) launched by Project OSCAR into [low Earth orbit](#). OSCAR I was launched December 12, 1961, by a [Thor-DM21 Agena B](#) launcher from Vandenberg Air Force Base, Lompoc, California. The satellite, a rectangular box (30 x 25 x 12 cm) weighing 10 kg., was launched as a secondary payload (ballast) for [Corona 9029](#), also known as [Discoverer 36](#), the eighth and final launch of a KH-3 satellite.

More than 150 Amateur satellites have been launched since then.

# What do Hams do?

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- Bounce signals off meteor trails...



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An estimated 25 million meteoroids, micrometeoroids and other [space debris](#) enter Earth's atmosphere each day, which results in an estimated 15,000 tonnes of that material entering the atmosphere each year.

# What do Hams do?

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- Bounce signals off the Moon...



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Project Diana Feb 1946. First Amateur RX of moonbounce in 1953. First Amateur QSO 1960.

# What do Hams do?

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- Build their own equipment...



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# What do Hams do?

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- Talk to Astronauts...



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For most amateur radio operators, it is the thrill of a lifetime to receive a "CQ", or general call, from an astronaut in space. But for some, like former astronaut Dr. Owen K. Garriott, call sign W5LFL, the thrill comes from receiving a response from "hams" down on Earth.

Garriott, who has been an amateur radio operator for over 40 years, was the first astronaut to take a ham radio into space, pioneering the way for an increasingly well developed amateur radio space program.

"It was my good fortune to take the first amateur radio into space on STS-9 in November 1983," Garriott said. "In my spare time only, I managed to hold up an antenna to the window and to talk to amateurs on Earth."

# What do Hams do?

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- Experiment with cutting edge technology...



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# What do Hams do?

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- Find hidden transmitters...



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# What do Hams do?

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- Operate from parks and lighthouses...



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**YL Marija**

POTA CZ-0120

My first POTA activation outside of Serbia. I was QRV as OK/YU3AWA. And, it was ATNO!

# What do Hams do?

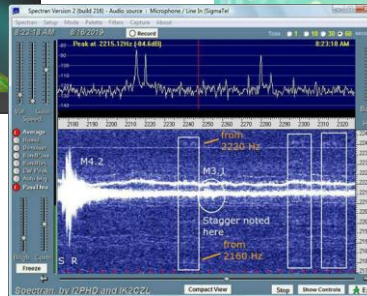
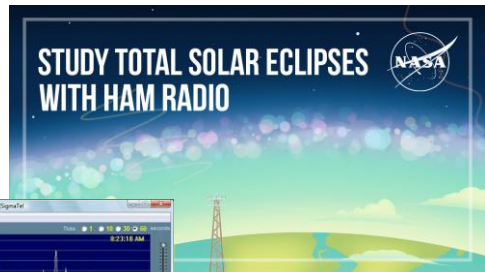
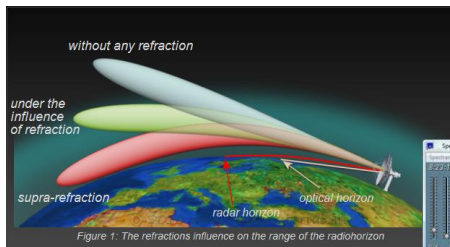
- Help in time of disaster...



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# What do Hams do?

- Advance scientific knowledge...



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# What do Hams do?

- Make friends around the world...



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Father Moran, Nepal

# Annapolis Valley Amateur Radio Club

[www.avarc.ca](http://www.avarc.ca)

Make friends around the world!



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## Kings County Amateur Radio Club

<https://kcarc.ca>



# Perks of being a Ham Radio Operator



*Extra Money*



*Free Time*



*Meet Girls*



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