



# Halifax Amateur Radio Club

Basic Amateur Radio Licensing Course -  
2013

Saturday, November 3, 2012

*Routine Operation of an  
Amateur Station*



# Objectives

- **Students should be familiar with:**
  - **basic operating procedures for different modes**
  - **Q-codes**
  - **phonetic alphabet**
  - **number pronunciation**



# Lesson Plan

- **VHF/UHF Operation**
  - Simplex
  - Repeater
- **Review Phonetic Alphabet**
- **HF Operation (voice only)**



# VHF/UHF Operation

- **Bulk of your operation will be FM**
  - **Simplex** - direct station to station on single fixed frequency - **146.520** (simplex calling frequency)
  - **Duplex**
    - boaters will be familiar with Marine VHF channels 24, 25, 26 where boaters broadcast on one frequency and the Coast Guard on another – Ch 24 – Ship TX 157.2 MHz/Coast TX 161.8 MHz – in the Amateur Radio environment there is NO such system!
  - **Repeater**
    - **large local audience (scanners) SO watch what you say – bad guys listen too!**
      - Input / Output / Offset (+ or - 600 kHz)\*
      - Courtesy tone / Squelch tail
      - Time-out Timer
      - Autopatch
    - **\*Above 147MHz “+” offset / Below 147MHz “-” offset**



# VHF/UHF Voice Procedures

- **Announcing yourself**
  - “VE1XXX listening”
- **Calling a specific station**
  - “VE1yyy this is VE1xxx”
- **Breaking into a conversation**
  - “VE1xxx” (give callsign at a break if you wish to speak)
  - “BREAK VE1xxx” (if you have an urgent need to access the repeater)
  - **“BREAK BREAK VE1xxx”** (ONLY in case of true emergency or distress)



# HF Phone Operation

- **HF Amateur Radio bands**  
(160/80/40/20/17/15/12/10 meters)
- **Maintain spacing** between adjacent stations  
(3 kHz spacing minimum – do you remember **WHY?**)
- **DX Windows**
- **Unlike** the clarity of FM VHF/UHF there will often be noise and adjacent frequency interference to contend with, so:
- **Use phonetic alphabet for your call**
- **RAC Operating Manual \*\*\***



Contest



# HF Phone Operation

- **Calling any station**
  - “CQ CQ CQ this is VE1xxx VE1xxx VE1xxx calling and standing by for a call Over”
- **Calling a specific station**
  - “VE1yyy VE1yyy VE1yyy this is VE1xxx VE1xxx VE1xxx calling Over”
- **Time Zones**
  - reference is UTC (Universal Time Coordinated) or Z(Zulu)
  - in Halifax we are -4hrs (-3hrs on DST) from GMT
  - Perth Australia is +12hrs from GMT (next day)



# Regulations

- **You MUST** use your callsign at the start and end of a conversation, and every 30 minutes during a conversation (more often is better) – **WHY?** It gives other listeners an idea of who they are monitoring.





# HF Voice Signal Reporting (RS)

## Readability

- 1 Unreadable**
- 2 Barely Readable**
- 3 Difficult to Read**
- 4 Minor Difficulty**
- 5 Easy Readability**

## Strength

- 1 Faint**
- 2 Very Weak**
- 3 Weak**
- 4 Fair**
- 5 Fairly good**
- 6 Good**
- 7 Fairly Strong**
- 8 Strong**
- 9 Very Strong**



# Station Management

- **Logging** - NOT required by Industry Canada BUT it is an excellent idea for your HF station
  - Paper or Electronic Logging
  - Date / Time Z/ Frequency / Mode / Power Level / Signal Report (received & sent) / Callsign of station contacted / Name & Location of Station
- **QSLing** -
  - Bureau - Outgoing (must be a RAC members)
  - Bureau - Incoming (free to all Amateurs, BUT....)
  - eQSLing - *ARRL Logbook of the World*



# Emergency Communication

- **Distress Call - MAYDAY MAYDAY MAYDAY**
  - takes precedence over ALL other calls
  - used ONLY when danger to life
  - ACTION > cease operating & LISTEN first and then and only then acknowledge station / determine location and nature of distress; take notes and contact an appropriate authority
- **Urgency Call - Pan-Pan Pan-Pan Pan-Pan**
  - used when safety of person or property is threatened
- **Security Call - Securitay Securitay Securitay**
  - used mainly in marine situations related to weather or information on aids to navigation



## Q-codes

- **Short-form used by CW ops – sort of the 2012 Texting Short Forms – “LOL”**
- **Still used by phone ops but not necessary**
  - **HOWEVER** – some are common and you will hear them and should know what they mean



# Q-codes

- QRM – man-made interference
  - QRN – atmospheric noise
  - QRP – low power
  - QRT – I am stopping transmitting
  - QRU – I have nothing for you
  - QRX – call at specific time
  - QRZ – who is calling
- QSL – I acknowledge
  - QTC – I have a message for you
  - QTH – my location
  - QTR – time in hours



# Phonetic Alphabet Practice

- **Each member of class to spell their name phonetically**
- **Each member of class to write their home QTH and read back phonetically**



# VHF On-air Practice Session

- **Portable Station - *VE1???*/portable** - half of class
- **Base Station - *VE1FO*** – half of class
- **Simplex Frequency - 146.550 MHz**
- **Portable to make call and contact with Base**
  - **determine & record name, age and occupation of each operator**



*The  
End*