The Halifax Amateur Radio Club

# REFLECTOR

2050 Hammonds Plains Road
Hammonds PlainsNS
B4B 1P3

September 2020, Volume 81 Number 9

club web site is www.halifax-arc.org

**Due to the fact that we cannot pick up mail or hold an in person meeting all members of 2019 and 2020 will receive the Reflector**

All phone numbers must be preceded by area code 902 when dialling, unless otherwise indicated

HARC Club Station phone number - 902-490-6421

**Executive**

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2nd V.P. - VACANT
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Member-at-Large: -John Bignell johnmbignell@gmail.com
Station Manager: - Don Trotter, VE1DTR don_trotter@hotmail.com
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Director Emeritus - Bill Elliott, VE1MR 865-8567 bowser.elliott@ns.sympatico.ca

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Honorary Legal Counsel – Paul Radford, VE1ARH

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RAC Atlantic Director - Dave Goodwin, VE9CB ve9cb@rac.ca
RAC Section Manager – Dave Hull, VE1HUL d.hull@ns.sympatico.ca
RAC Assistant Director for HRM Scott Wood, VE1QD, 823-2191 ve1qd@rac.ca

The **September, 2020 General Meeting** of the Halifax Amateur Radio Club will be held Wednesday, September 16 – the method (**virtual**) and time will be sent in an e-mail. Check your e-mail for details as the date approaches. Also check the web site for any other updates. **Currently there is no access to Station 50.**

**Due to the global pandemic most if not all events have been cancelled. See page 2 for coming events. You can also read about possible alternatives for some events in the following pages.**

*Proof-reading is a dying art, wouldn't you say?*

Local High School Dropouts Cut in Half

*Chainsaw Massacre all over again!*

**Take-15 Net Controllers**

This will be the rotation. **We need more net controllers. If you want to join,** let Bill Elliott, VE1MR, know.

| | | | |
|---|---|---|---|
| Sept. | 13 | Peter | VE1WIN |
| Sept. | 20 | Gary | VA1GGM |
| Sept. | 27 | Bill | VA1ALW |
| Oct. | 4 | Cam | VE1BIT |
| Oct. | 11 | Peter | VE1WIN |
| Oct. | 18 | Gary | VA1GGM |

Please send any issues (broken links, missing information, etc.) found on the H.A.R.C. Website to our Website Manager, Brandon Fowler, VE1BMF, at bmfowler95@gmail.com

**Deadline for submissions to the October 2020 Reflector is Saturday Oct. 10, 2020**

*Politics is a blood sport.*

**GENERAL INFORMATION**

Sunday evenings:
TAKE-15 NET at 8:30 PM

CLUB REPEATERS:
VE1PSR - 147.270 MHz + TX=82.5
VE1PSR/UHF - 444.350 MHz +
VE1PSR/6M - 53.550 MHz - access and TX tone 151.4 Hz
VE1HNS - 146.940 MHz - TX=82.5

PACKET: VE1NSD 145.050 MHz LAN NODE

From The Atlantic Amateur

**Maritime Women's Amateur Radio Net**

Jim Langille • August 17, 2020

The first Maritime Women's Amateur Radio Net which took place on Sunday, August 16th at 3pm local time was a great success.

Thirteen women checked in and shared a little bit about themselves and 23 men checked in giving us their support and encouragement.

To spearhead this endeavour, seven Maritime women radio operators collaborated to form a core group in order to begin planning for this Net.

On the day, Janet VE1JNT did all the linking of the MAVCOM repeaters and maintained the technical side of the Net. She used VE1LUN Lunenburg as the main repeater and from there she linked VE1AEH Kentville, VE1WN Greenwood, VE1HR New Glasgow, VE1WRC Amherst & VE1VL Bridgewater.

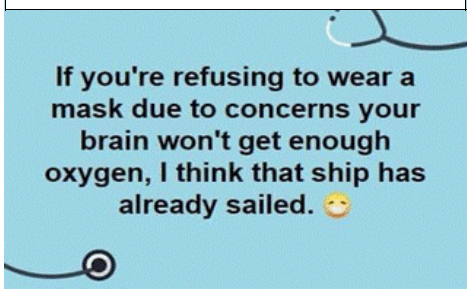
Therese VY2TAM was the Net Control station and fielded all the many welcome callers. The Net lasted for approximately one hour.

The core group of seven women operators were extremely pleased with the resulting large number of check-ins. Our future Nets will take place on the third Sunday of each month at 3pm local time.

The Maritime Women's Net welcomes all women with access to VHF equipment to join them and check in to our next Net on September 20 at 3pm.

"So ladies, take a break, grab a cuppa, have a seat and check-in!"

Therese Mair, VY2TAM




**New NASA video highlights ARISS contact with Airdrie Space Science Club in Alberta | UK Daily Mail Picks up Canadian ARISS Story**

https://www.rac.ca/new-nasa-video-highlights-ariss-contact-in-alberta/

A new @NASA video https://twitter.com/NASA provides a different perspective from the typical Amateur Radio on the International Space Station (ARISS) Program school contact.

The @NASA Twitter feed announcing the video states: "Students Use Ham Radio to Call an Astronaut in Space. Canadian students participating from home used ham radio to talk with astronaut Chris Cassidy (@Astro_Seal) aboard the station on May 15, 2020."

The tweet spread quickly in cyberspace and was featured in an article in the Friday, August 28, 2020 issue of the United Kingdom's online newspaper, The Daily Mail as shown in the photo below.

The headline reads: "NASA astronaut Chris Cassidy aboard the ISS receives a call from Canadian students using a ham radio who ask him about life in space, foods he misses & what happens when someone vomits on the ship…" The May 15 contact was no ordinary ISS contact and it was featured on the


On May 15, young members of the Airdrie Space Science Club in Alberta used a ham radio to connect with NASA astronaut Chris Cassidy (pictured), who was conducting experiments aboard the ISS

front cover of the July-August 2020 issue of The Canadian Amateur magazine and prominently displayed on the RAC website. In addition, the magazine also included the article "Successful ARISS contact with the Airdrie Space Science Club in Alberta using new Multipoint Telebridge Contact via Amateur Radio".

Youth members of the Airdrie Space Science Club (ASSC) in Airdrie, Alberta were able to engage in a Q&A session with US astronaut Chris Cassidy, KF5KDR, onboard the International Space Station (ISS). This was the second test of the new-style radio contact called Multipoint Telebridge Contact via Amateur Radio. The concept was developed for distance learning when schools closed world-wide due to COVID-19. The virus eliminated all opportunities for ARISS radio contacts at education organisations.

The previous news post included a video of the ISS contact with the Airdrie

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**PRESIDENT'S MESSAGE for September, 2020**

September is here and so goes the weather changes from the heat to fall temperatures, sunny days & cooler nights. What a great time of the year to work outside getting antenna work completed. As a club we have that task to perform as well up at Cowie Hill. We have antennas that need to be changed out, checked out & tested before it becomes too cold for our climbers to be up there. If you can help please watch for special notices asking for help when we have gotten everything together. Part of the work includes writing a Covid 19 plan, a safety plan & a work plan to present to HRM before we can do anything.

We are in need of a SAFETY OFFICER and a Membership chair for the up coming year. We need to appoint an auditor to go over our books. We also need a chair person to look after nominations to the executive. All these positions are very important to the operation of our club on your behalf.

The club has been very successful in selling off used equipment which adds funds to the good side of our books. Jason has been the driving force behind this effort but as he describes it "There sure is a lot of work to get something sold", this includes the online advertising, the sale & funds transfer, boxing up the item and getting it to a shipper (the post office, Fedex, etc.). Jason needs help. I know there are people in our club who can give Jason the help he needs to continue this very valuable work. Please call Jason and let him know that you are there to help. Jason can assign portions of the work to several people distributing the work over many people.

I know it seems as though we are the only ones who are affected by this virus however as a member of a pool league, we have been told that most likely there will not be a league this year. This is the story of so many other organizations from the legion clubs etc., these are trying & troubled times in our world which require patience & co-operation. And so it is with our club. Thank goodness we have the technology, virtual meetings as so many others have had to do and this will have changes in the work force and everyone else who belongs to any organization. The executive appreciates your patience in this strange world of Covid19 and its effects on all of us. Thankfully I have not heard of any of us who has had to personally deal with this illness. This could be our new normal for the next year or two.

Since there is very little going on and you are up to date as I am, please keep in mind our need for support for the positions listed above. Any one of the positions above will allow you to put in time of which many seems to have a bit more these days and help your club in some small way. The auditor job is a one time event requiring, typically, about 4-6 hours. Please look deep into your schedules and see if you can spare some time for the club.

Everyone please stay safe and continue to abide by the health rules of mask, social distance, hand washing and above all "common sense" when it comes to large group gatherings.

Dx has been a nightmare these past several weeks with propagation being almost non existent. They say we have started cycle 25 but personally I have not been part of anything exciting yet.

As always, if there is any breaking news on our situation I will get the info out ASAP. Thank you all for your patience.

73 - Respectfully, Brian Allen- VA1CC, PRESIDENT- HARC

**RAC Online Beginner's CW Course: October 2020**

https://www.rac.ca/rac-online-beginners-cw-course/

In response to the global pandemic, Radio Amateurs of Canada is continuing to offer Amateur Radio online courses so that individuals can obtain their Amateur Radio certification or can upgrade their qualifications while practising social/physical distancing.

We are pleased to offer a Beginner's CW Course which will be provided by Tony Pattinson, VE2KM, to teach Morse Code to Amateurs and help them get on the air with CW.

As described in the bio provided below, CW has always been a passion for Tony and he is a CW Academy Advisor and a lifetime member of the CW Operator's Club. He is giving freely of his time and experience as a Morse Instructor with CW Academy and his professional experience in training. Thank you Tony!

Course Information:

The primary language of instruction will be in English, mais je peux répondre à vos questions en français.

Objective: To enable any Canadian Radio Amateur of any level to send and receive CW at a speed of at least 5 wpm and to be able to pass the In-

*(Continued on page 4)*

***New NASA video highlights ARISS contact with Airdrie Space Science Club in Alberta*** *(Continued from page 2)*

Space Science Club. Unlike previous videos which show excited students, teachers, parents & media all gathered together in a school gymnasium, this video shows students & parents making contacts from the safety of their homes during a global pandemic.

The Airdrie Space Science Club was formed by a group of space enthusiasts interested in advancing students' interest in model rocketry and who wanted to offer ways to help them enjoy the wonders of space science. One of those leaders - teacher Brian Jackson, VE6JBJ, is the Western Canada ARISS Mentor and the Chair of the RAC Youth Education Program. Brian described the new ARISS concept in this way:
"During this pandemic, our opportunities to develop kids' interest in space has been interrupted. This ARISS contact gets them looking back up, towards the sky, imagining themselves as an astronaut one day."

The new NASA video that was just released provides a completely different perspective: that of the astronauts onboard the International Space Station.

RAC President Glenn MacDonell, VE3XRA, describes it this way:
"The recently released video is based on both the questions & answers from the ARISS contact and also video from inside the International Space Station (ISS).
It highlights Amateur Radio as the means of students speaking with astronauts, picks out some of the most interesting questions & answers and shows what is happening inside the ISS.

The new video is shorter and more gripping than the original and it includes the most important and interesting segments of the contact.

ARISS has chosen it to highlight how contacts are done today during the global pandemic. I think the high quality of the questions was one of the reasons for choosing this session. It has been liked and retweeted thousands of times in the first days since its release.

I'd like to publicize it because it's something we & the Airdrie group should be proud of. It is what you'd want to show someone who wondered what these contacts are about."
Stay tuned to the following websites for more info on the ARISS Program

RAC ARISS page: https://wp.rac.ca/ariss/

Main ARISS page: https://www.ariss.org

RAC Online Beginner's CW Course: Oct. 2020
(Continued from page 3)

novation, Science & Economic Development Canada's 5 wpm Morse Code test.

Start Date: The target date for the start of the course is October 2020. A survey will be sent to applicants to determine the best schedule.

Duration: The course will consist of two, 1-hour, group sessions via Zoom per week for eight weeks.

Class Size: Each class will be limited to a maximum of 5 students. Multiple classes may be organized if necessary to accommodate different time zones.

Cost: The course will be offered free of charge to RAC members. Non-members may participate by donating $150 to the RAC Youth Education Program which "provides youth and their leaders with an innovative way of learning by introducing them to the wonderful world of Amateur Radio".

Course Instruction: As indicated earlier, the course instructor is Tony Pattinson, VE2KM and he provided the following bio. You can find additional information on his QRZ page at:
https://www.qrz.com/db/VE2KM
"I was originally licensed as G3YAQ in 1968. On arrival in Canada in 1980, I immediately qualified at the Advanced level and was issued call sign VE2FUP. After a short wait I was pleased to be issued VE2KM. I was inactive for over 30 years but have recently (2018) decided to start up again. I have three other call signs – VA2XDX, VA2KCC and VE0XDX. The latter was obtained so I could operate from a 60-foot schooner that I was helping deliver to the Bahamas in December 2019.

CW has always been a passion with me and I was able to regain my previous operating speed helped in great part by the CW Academy advisors John, AJ1DM, Ted, WA3AER, & Joe, KK5NA. I graduated from Level 2 in May 2019 & from Level 3 in Nov. 2019. I was accepted as a life member of CWOps in January 2020 with #2424.

I am delighted to be teaching CW again (2020) as an Advisor for the CW Academy and also on behalf of RAC and the Straight Key Century Club (SKCC). I am a member of FIST and SKCC. I obtained SKCC Centurion and Tribune status in February 2020 and am gradually (but slowly) building towards Senator status. Since being accepted as a CWA Advisor I have taught, and am currently teaching, classes to Amateurs in both the United Kingdom & North America."

Course Requirements: Participants in the RAC Beginner's CW Course will need to meet all of the following requirements.

Note: If you cannot meet the following requirements please do not apply. You will be wasting your time and potentially denying a place to someone who can.

Commitment to 1-hour (4 x 15 or 5 x 12 minute sessions) of

*(Continued on page 10)*

*How come Lipstick doesn't do what it says?*

This is what meteors sound like.. and what I hear... and an old PDF written by William Lonc in 1999...
**basics of radio meteors..**

Michael Boschat

https://www.bing.com/videos/search?q=radio+meteor+sounds&&view=detail&mid=33CE044856D45937099133CE044856D459370991&&FORM=VDRVSR

**Meteors by Radio: Getting Started by William Lonc,** Astronomy and Physics Department, Saint Mary's University, Halifax, NS, B3H 3C3;

The information given here will enable a student to do a science fair or other special project that will lead to some measure of success—not to disappointment. By sharing my own experience, I think any teacher or student interested in detecting meteors will be able to assemble a "meteor-by-radio" observatory with a minimum of grief. Further, such a project could become a relatively long-term hobby.

**A Little Theory**

What causes meteor sounds in a radio? Imagine the meteor trail of ionized gas as a momentary reflecting surface. A distant radio transmitter's emission—preferably from beyond the horizon—briefly "sees" a reflecting surface. Suddenly, for a second or so, the signal strength at the receiver increases.

Now imagine a situation in which a listener can just barely hear a distant radio (or TV) station. Then, if a meteor is traveling at exactly right angles to the great circle line joining the receiver to the transmitter (see Fig. 1), the frequency of the reflected signal will be the same as the transmitted signal because the distance between the reflecting surface and the receiver is not changing noticeably. In other words, there is no Doppler shift, but simply a constant time delay (phase shift) between the directly received and the reflected signals. The listener might hear a kind of echo effect. However, if the meteor is traveling in such a way that a velocity component of its trajectory exists along the line joining the receiver to the transmitter, then the wave reflected from the meteor tail is moving relative to the listener—there is a Doppler shift! If this relative velocity is constant, the Doppler shift will be constant,

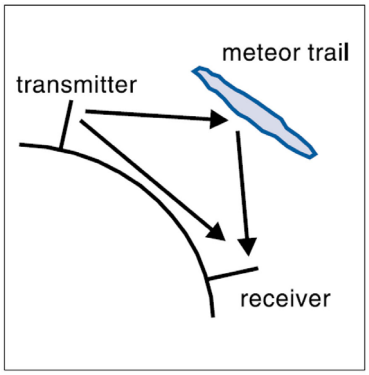


Fig. 1. Idealized diagram of a meteor event detectable by radio.

and the listener will hear a steady tone for the duration of the event. In other words, the beat frequency is constant. If the relative velocity is changing, the listener will hear something that can be described as a "ping," a sound similar to that given by a tuning fork[1]. In other words, the beat frequency is changing.

**Hearing the Meteors**

Of the several techniques[2] available for "observing" meteors by radio, using an AM (Amplitude Modulated) radio to detect a TV video carrier is the way to go for the entry-level observer. The strategy is to have the radio tuned to some distant TV station's video carrier, even though the video carrier (which produces a slight buzzing sound, the 60-Hz vertical synchronization pulse) changes somewhat in intensity due to changes in the average level of the video signal. Once we hear that buzz, we expect the following: whenever some of that video carrier is reflected from a meteor's ionized trail moving toward or away from us, we will hear a ping. Since many TV stations are on 24 hours a day, it is possible to "observe" meteors at random times.

**Equipment Needed**

First, there must be at least one unused TV channel within your area, [3] preferably in the low VHF range (channels 2 to 6)[4] because reflection efficiency falls off as channel frequency increases. Then, the radio must be capable of AM detection and tune accurately to the low VHF channels. The popular radio "scanner" is the most cost effective.[5] You don't need a big antenna. I have a dipole[6] antenna hanging inside my bedroom. This is a viable solution in a situation where the building is of nonmetallic construction. What else will you need? My interest in meteors began when an acquaintance here in Halifax contacted me because he was trying to detect meteors by radio but was getting nowhere. It became apparent that his radio was being "overloaded" by several local FM stations (his residence is in full view of the FM transmitter antennas just a couple of miles away). The selectivity[7] of his radio was simply not good enough. He had tried some filters between antenna and radio, but the solution was a band-pass filter with a Q (quality factor)[8] of at least 300 tuned to the TV channel of interest (channel 6).

Success was immediate. The background noise level in his receiver dropped and he could begin hearing those elusive pings. Now I was hooked. I began to monitor meteors, learning the problems associated with getting started in the activity and becoming familiar with the kind of data that could be collected. Every once in a while there would be a day

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**Halifax Amateur Radio Club Minutes of the Virtual General Meeting of 19 August 2020**

1. Welcome to the HARC virtual monthly meeting for August 19, 2020. The virtual meeting was called to order by President VA1CC Brian at approximately 1910.

2. Acceptance of the Agenda: A request was made to accept the agenda as presented by VA1CC Brian, 14 out of 20 approved the agenda with the rest abstaining, Zoom polling yielded 78% acceptance.

3. Roll Call: Approximately 20 members and visitors via Zoom were visible on screen. Hello to Jim Flowers in Vancouver BC VE1JIM, and Don Mosher, VE1DRM HRM EMO.

4. Report of any Silent Keys: The following amateurs have passed since the last club meeting, VE9DB Dennis, VE1ANL Bert, VA1VO Shawn, VE9ORR Gene, VE1IP Clay, and VE1XS George. Additional information can be viewed at https://www.westcumb.ca/maritime-silent-keys-2020

5. Approval of Minutes of July 15, 2020 as printed in the Reflector: Corrections were provided, a motion was made by VE1MR Bill to approve the minutes, seconded by Tim VE1TIM, no errors or omissions noted, Zoom polling yielded 14 of 19, the motion carried.

6. Correspondence: Brian VA1CC gained access to Station 50, no correspondence had been received.

7. President's Report: VA1CC Brian reported that the club could have met at Station 50 but due to Covid concerns went virtual via Zoom instead. Brian reported that Murray has been cleaning house at the QSL Bureau. Please get hold of Murray VE1BB to check your balance and provide funds for him to be able to mail you your cards. Brian reported that a Zoom boom will be provided for the club's use to replace antennas at Cowie Hill. A work party will be assembled. .The Club is looking for two club positions to be filled. They are Membership Chair, and Safety Officer, VE1PPA Jim Calvesbert and VE1PK Pat Kavanaugh are stepping down, Thank you for your service! Please contact Brian if you are interested in either position. Both fellows will help you with the transition.

8. Treasurer's Report: Bill, VA1ALW, reported the income from the period of July 1 to July 31 was in the amount of $60.00. Expenses for the same period came to $0. Opening balance for July was $11,939.60 with a closing balance of $11,999.60. A motion was made by VA1AWL Bill to accept the report. VE1MR Bill seconded the motion, Zoom polling yielded 17 of 21, the motion carried. Please get any receipts for reimbursement into Bill as the end of the fiscal year is approaching.

9. Committee, Event and Special Projects Reports:

1. Station Manager Report - Don, VE1DTR reported that he, Greg VE1GFX, and Fraser VE1WO need to get together on site to go over the RigPi enrollment procedure for operation of the remote station by qualified members of HARC. Don Mosher, HRM EMO director asked that Don VE1DTR submit a request to Brian so he (Don Mosher) can get the Station 50 access approved. Bill VE1MR reported the Cowie Hill repeater site antennas and feed lines are in need of attention. This includes checking and replacing some of the feedlines, making sure the feed lines are properly identified, replacing antennas as required for VHF/UHF frequencies, opening up connectors to verify feedline integrity and antenna performance. An antenna, if defective, would be replaced with a new duo band Sinclair to improve reliability. Don Mosher suggested a tower loading needs to be carried out if there are additional antennas and feed lines being added to the existing tower. This should include both dead load & wind loading increases. The existing tower is 70 feet in height. A work plan needs to be submitted for approval addressing safety, Covid Plan, work steps & estimated task duration.

2. RAC affiliation renewal: VA1CC Brian requested that HARC rejoin RAC at $27.95 plus HST, Bill VE1MR moved to do so, Roger VA1RST seconded, there were no objections, the motion carried.

3. Club Site Access at Station 50: The club is a 3rd tier response group and will be allowed access at a group size of 10. Don Mosher said this is the current status of opening up public facilities. It is quite a paper work process to get this set up. This is for protection of First Responders and operational readiness. Don Mosher will let Brian VA1CC know when approval is given.

10. Round Table - Don Mosher reported that the Dartmouth site main tower antenna was damaged and hanging speared through the tower. A temporary antenna is mounted off the building until a replacement antenna can be installed. It has been ordered. The Station 50 tower for the satellite antennas needs to be installed at Sheet Harbour to resolve a communication problem. A replacement tower for Station 50 will be ordered for HARC next year. Fraser VE1WO discussed antenna alignment issues as there are com problems during Operation Handshake between Station 45 and Dartmouth. This is a private line on 900mHz to allow the EMO's to communicate and not tie up the main comm channel. The 900mHz antenna on the Spicer building needs to be checked for alignment. A replacement building for Cowie Hill repeater will not be under consideration this year. There is space for a Zoom Boom at Cowie Hill by setting up in the parking lot adjacent to the tower. The tower is 5 feet from the fence. The north side of the tower may be challenging to reach, Though the antennas are

*(Continued from page 6)*

located on the west and south sides, a good look will be had of the tower and antenna locations. Don Mosher reported on getting agreements for space, cable runs, antennas installed for EMO in the three rural hospitals in HRM, Twin Oaks Memorial in Musquodoboit Harbour, Eastern Shore Memorial Hospital in Sheet Harbour, and Musquodoboit Valley Memorial Hospital in Middle Musquodoboit. The operation kits and then setup in those locations when needed. Don also recommended to not self deploy during an event. Wait for the request. There will be EOC training 101 made available for new volunteers and a refresher for existing EMO volunteers.

11. The EOC is available again for training and limited to 10 people including the instructor. Don reported that there is a desperate need for radio operators in the Sheet Harbor, Eastern Shore and Musquodoboit Valley areas. Please have your equipment serviced and fuel on hand to operate your station in an emergency fashion as we enter the September-October hurricane season. Be aware of proper vocabulary protocol & proper use of assigned call signs, not your RAC call. Don reported that Barry is in improving health and busy with projects. VE1MR, Bill reminded that not everyone is a member of HARC or HATS and should not be self activating. The amateurs need to self police when an emergency situation arises. VA1ALW Bill asked about Windows 10 updates causing serial port issues after an update. There was discussion about Zombie ports in Windows via a Google search and or taking the PC into Brilliance PC service on Kempt Road. There was a question regarding the Winlink operation. It was noted that the system had been down but is now back up.

12. Search and Rescue: Dave George VE1AJP reported they were in the Gaspereau Valley mountain area searching for a lost dementia person. There were com issues on TMR due to terrain even with a mobile TMR repeater station brought in. Cell phone coverage in the area is spotty as well depending on the common carrier. Other folks with keen eyes shared information and the person was found. A dementia patient outfitted with tracking lifesaver bracelet was lost in Bedford. The tracking people were on site in 10 minutes and the bracelet found in 12 minutes using the tracking equipment. A call came in for a lost blueberry picker in a rugged area around Lake Echo. The picker came out on his own and was picked up by one of the search team's transport vehicle. Dave shared additional stories regarding hornets.

13. Education: Jason VE1PYE reported that RAC extended the sign up time for the Basic course.

14. Motion for Adjournment: VE1MR, Bill was recorded as motioning to adjourn, meeting adjourned approx 2040 hours.

Respectfully submitted by Roger Stein, VA1RST, HARC Secretary

## Backup Power Generators: Maintaining a Reliable Backup

My QTH is in Fort Ellis – farm country on the opposite side of Highway 102 from Stewiacke. In 2003, Hurricane Juan ripped a swath through the Province, leaving us without power for 8 days. Following the event, my wife Kim and I decided we should have a portable power generator, in case we had another serious power outage. We bought a 3000W Homelite generator from Home Depot on sale for $300. We knew it wouldn't run everything, but we figured we could run the necessities and not lose a load of food from our fridge and freezer as we did during Juan. We've used it occasionally and it's been a great rig. Five or six years ago, we were able to purchase an 8000 watt generator and we had an electrician wire six circuits into a generator panel, leaving us feel well-protected. Like the little Homelite, it was tested perhaps once a year.

Fast forward to a year ago, Hurricane Dorian was headed for Nova Scotia and on a rainy Saturday afternoon, I decided I should give the big generator a try, in case we lost power. After retrieving it from the garage, I started it and thought there was a lot of rain pouring off the engine, except it wasn't rain: it was gas. The carburettor was spewing gas like crazy. I shut it off and emailed Briggs & Stratton on a Saturday afternoon, wondering if there was anything I could do – any easy, driveway repair. Remarkably, B&S wrote me back and suggested my gas was probably bad, resulting in a fouled carb and the subsequent leak. Due to the storm, all stores were now closed, so I resigned myself to being without a generator, if we lost power. Later that day, we lost power.

We made it through the night and fired up the old Homelite the next morning to keep the fridge and freezer happy, and while I was cooking breakfast on the propane range, power was restored. Happy ending, but I was mad at myself for having 4 or 5 year old gas in a generator that only had 4 hours on the clock. I decided to start a preventive maintenance program so our generators would be ready to go, at a moment's notice. Everyone has their own method of dealing with things, but here's what I do:

Every other month (the 1st Saturday and it's in my phone's calendar), I take both generators out and run them until heated up, then I shut off the fuel to the carb and run them dry. I keep a minimal amount of fuel in the tank and any fuel has stabilizer added (at twice the recommended amount).

Every year, I do an on-generator

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***Meteors by Radio: Getting Started***
*(Continued from page 5)*

or more during which the background noise was higher than usual, thereby no doubt masking some meteor "hits." But even then, over a ten-minute period there would usually be at least one fairly definite hit.

**Data to Gather**

A student might be interested in doing a survey experiment, making observations (preferably on a daily basis) at some relatively fixed time(s) of the day. In my case, I found the early morning (around 8 AM local time, 12:00 UTC) convenient and I listened for exactly 10 minutes. For comparison purposes I did the same thing around 5 PM local time (21:00 UTC). My data are plotted in Fig. 2. Another student may prefer to concentrate on the way the pings vary in frequency. This is of interest because the student can calculate the velocity component of the meteor along the line joining his site to the meteor. The calculation is done by estimating the frequency or pitch of the ping and then applying the relationship:

$$\frac{\text{ping frequency}}{\text{video carrier frequency}} = \frac{\text{radial velocity component}}{\text{speed of light}}$$

For example, a nominal ping frequency of 500 Hz and a video carrier frequency of 83.25 MHz gives a nominal radial velocity component calculated from

$$\frac{500\text{Hz}}{83.25 \times 10^6\ \text{Hz}} \quad 3 \times 10^8\ \text{m/s} =$$

1800 m/s = 6500 km/h.

The student could then produce a plot showing the distribution of the number of pings per unit time as a function of radial velocity component. There is an obvious challenge in estimating the ping frequency easily; perhaps a piano might be handy.[9] Much additional information on meteors is available on the Web.[10]

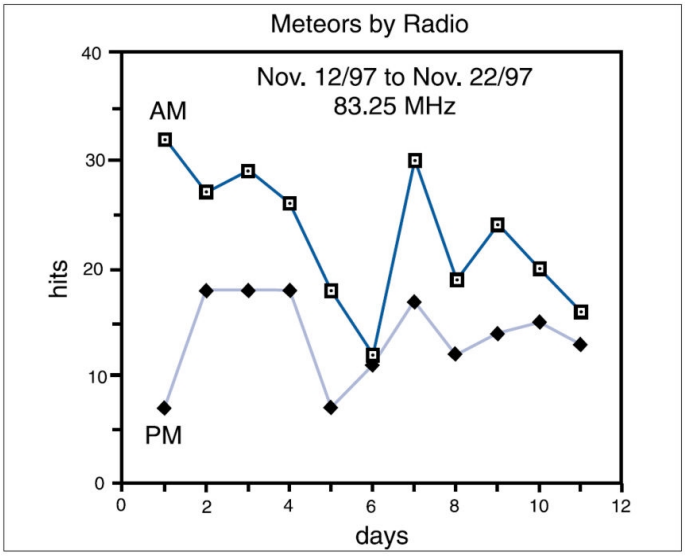


Fig. 2. Plot of number of "hits" as a function of day and time of day. The number of hits does not take into account differences in kinds of hits. A few minutes one way or another should not introduce any major surprises.

**Acknowledgment**

Many thanks to my colleague of many years, Robert Schultz, VE1IF, for helpful discussions and for providing a high-Q band-pass filter.

**References**

1. Sometimes there will be relatively long "pings," perhaps several seconds; other times there might be tones that "flutter," perhaps due to the motion of aircraft producing constructive and destructive interference effects. The listener will hear a number of different sounds. After a week or so of daily listening, the short-lived pings are readily recognized.

2. For more information, try searching the Web under "meteors."

3. "Your area" is defined approximately as the circular horizon centered on your receiving site.

4. The video-carrier frequencies are 55.25, 61.25, 67.25, 77.25, 83.25 MHz for channels 2 to 6, respectively. In my situation, channel 6 is the most appropriate.

5. A deluxe scanner such as the ICOM R-7000 is expensive (over $1000). A perfectly suitable alternative is Radio Shack's PRO-60 (around $300).

6. Radio Shack's antenna #42- 2385 or "rabbit ears" type #15- 1827, along with a balun #15- 1140 and adapter (from F to BNC type), is all that is needed. 7. Equivalent to the band-pass characteristics.

8. Construction details for a suitable filter can be found in any recent issue of *The Amateur Radio Handbook.* We used a modified surplus VHF "can" filter such as telephone companies have in their mobile radio installations. (The filter is in the form of a metal can long enough to contain a quarterwave resonant line.) Students living where there are simply no usable "blank" TV channels could try a combination of high-Q band-pass and band-reject filters. Contact local amateur radio stores for suggestions on sources of filters.

9. The frequency or pitch of he ping could be obtained electronically with a frequency-to voltage converter or by computer-controlled frequency-counting software. Although a ping is usually not just one well-defined frequency (because the velocity component of the meteor trail is not likely to be traveling at a constant radial velocity relative to the observer), most pings do exhibit some "dominant" or "average" frequency.

10. See, for instance, American Meteor Society (meisel@uno.cc.geneseo.edu; www.serve.com/meteors/faq1.html);
also steyaert@vvs.innet.be for the Radio Meteor Observation bulletins, and 72632.1427@compuserve.com.

Advice from A Wise Old Man.
"Don't interfere with somethin' that ain't bothering you none."

**RAC Canada 2020 Conference** & **Annual General Meeting, Sunday, September 20**

https://www.rac.ca/rac-canada-2020-conference/

Radio Amateurs of Canada is pleased to present the "Canada 2020 Conference" to give Amateurs an opportunity to get together and see what's happening in Amateur Radio – now and in the future.
The RAC Canada 2020 Conference is an interactive mini-conference that will feature interesting presentations on a wide range of topics as shown below.

There will be parallel sessions in two blocks so that participants can choose those presentations that are of most interest to them. In addition, all sessions will be recorded for viewing later so you won't miss out if two of your favourites take place at the same time.
The Conference and the AGM will both be held on Sunday, September 20.

RAC members are invited to attend this virtual conference before the RAC Annual General Meeting which will be held the same day. Non-members will also be able to view the event online and we will provide more information as soon as preparations have been finalized.

The event is tentatively scheduled to begin at 12 noon EST. Stay tuned for further information.

**Presentations:** The following is a list of tentative presentations. Stay tuned for additional info

"A Fireside Chat": "Amateur Radio in the Global Pandemic and other topics"
RAC President Glenn MacDonell, VE3XRA, will act as Moderator of a "fireside chat" with the following distinguished guests:
Tim Ellam, VE6SH: President, International Amateur Radio Union (IARU)
Rick Roderick, K5UR: President, American Radio Relay League (ARRL)
Steve Thomas, M1ACB: Gen. Mngr, Radio Society of Great Britain (RSGB)

Amateur Radio: Yesterday, Today and Tomorrow
Allen Wootton, VY1KX

VO2AC: Contest DXpedition to Labrador (CQ Zone 2)
Chris Allingham, VE3FU/VO2AC

Amateur Radio Hotspots: A Quick Overview
Allan Boyd, VE3AJB

La proposition d'une classe d'entrée pour les radioamateurs (en français)
Guy Richard, VE2QG/VE2XTD

CY9C St. Paul Island Dxpedition
Phil A. McBride, VA3QR

Amateur Radio and Youth
Brian Jackson, VE6JBJ

High Altitude Balloons: The Elevation Education
Kelly Shulman, VE3KLX

6m FT8 Dxing Ron Scwhartz, VE3VN

Amateur Radio Challenges in Canada's North
Ron Thompson, VE8RT & Angela Gerbrandt, VY0YL

Getting Started with Amateur Radio Satellites
Tom Schuessler, N5HYP

Contesting: Remote Operating
Cary Rubenfeld, VE4EA and Tom Haavisto, VE3CX

Our volunteers are hard at work finalizing the details of the presentation including the schedule and registration information. We hope to have the information available here in the next few days.
Please stay tuned to the RAC Canada 2020 Conference webpage for more information.

Jason Tremblay, VE3JXT, Conference Organizer
RAC Community Services Officer
community@rac.ca

Alan Griffin, RAC MarCom Director, TCA Editor
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***Backup Power Generators: Maintaining a Reliable Backup****(Continued from page 7)*

carb cleaning (spray carb cleaner inside the carb, removing the fuel bowl and making sure everything moves freely.

Every year (assuming the generator hasn't seen any real action), I change the oil with synthetic 5W30 (as recommended). Neither of my generators have oil filters, so any contaminants keep getting recirculated. They say if your generator is running continuously, you should be prepared to change the oil every few days. I haven't had to do it, but I'm prepared.

Every few months, I make sure the unit is clean (I wipe off dust and give an occasional coat of wax). This is more about me being anal and being able to spot leaks easily.

While I've got a dedicated cable to connect the big generator to the house, I dedicated a heavy duty extension cord to the small generator, so I don't have to look for one when I need it.

When a significant storm is predicted, I fill 3 25 litre gas cans, adding fuel stabilizer… at double the rate. I also fill up the cars! If I don't need it, they get dumped into the cars after the storm.

I've recently started buying Trufuel to keep a minimal amount of fuel in the generators. Trufuel doesn't have the gunk-causing additives that pump gas has and is stable indefinitely. It isn't cheap: about $25 for a gallon can, but your carb won't get scummed up and leave you in the dark! You can get it at Home Depot.

*(Continued on page 10)*

*(Continued from page 4)*
practice every day, for the full duration of the course.

Commitment to record at least one Character Recognition exercise each week and send it to VE2KM for analysis.

A computer with a hard-wired internet connection (no Wi-Fi) and with Zoom installed (the free version is fine).

A webcam and microphone.

A method of generating CW; either from a rig sidetone or a code practice oscillator using a straight key or paddles with sufficient volume to be picked up by the webcam microphone. Preference will be given to straight key operators.

The capability to record CW using the computer then export the file in MP3 format. There's free software such as Audacity available to do this.

If you are sufficiently motivated, willing and able to meet the above requirements, Tony, VE2KM, will be happy to work with you to achieve your goals.

Course Registration: Unlike previous Amateur Radio courses provided by Radio Amateurs of Canada, the registration for the Beginner's CW Course will be handled by the instructor Tony Pattinson, VE2KM.

To apply for the course please send an email directly to Tony at VE2KM@YnotSailing.com with "RAC CW Course" as the subject line.

If you need any assistance from Radio Amateurs of Canada please contact the RAC Office at racgm@rac.ca.

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***Backup Power Generators: Maintaining a Reliable Backup****(Continued from page 9)*
Finally, I'm in the midst of building a portable shelter for my generator, to keep the weather off it, during a storm. It'll muffle or redirect the noise as a bonus!

We rely on generators to run various household conveniences, including our amateur radio stations, and everyone has their own way of doing things. This is just my way of ensuring my generating capability is reliable and I hope there's something helpful in it for you!

Tim Delaney, VA1TIM

**Needed**

The H.A.R.C. needs to fill the following two positions.

Membership Chair - as incumbent Jim Calvesbert, VE1PPA, wants to step down.

Safety Officer - as incumbent Pat Kavanaugh, VE1PK, is having health issues and needs to step down.

Please contact President Brian if you are interested in either position.
Both Jim & Pat will help you with the transition.

*Why is it called tourist season if we can't shoot at them?*

At the HARC Annual General Meeting in November we plan, as usual, to elect our executive officers to serve in those positions for the next 12 months.
But first we need *SOMEONE* to be the Nominating Committee Chair.
Please ask the person you see in the mirror each morning "is that someone me?" If the answer is "Yes" please tell a member of the HARC Executive.

*Police were called to the daycare centre. A 3-year old was resisting a rest.*

New Manager of the VO Incoming QSL Bureau
https://www.rac.ca/new-manager-of-vo-incoming-qsl-bureau/
Dave Goodwin, VE9CB, Director of RAC Atlantic

Rick Burke, VO1SA/VO2CW, has retired from his position as the VO Incoming QSL Bureau Manager. Bill Kirby, VO1BB, has taken over as the new Manager effective immediately.

The VO SQL Bureau began in 1936 with Eric Holden, VO1H, as its first Manager. Rick Burke, VO1SA/VO2CW, took over the operation of the Bureau in late 1996.
In recognition of his 24 years of service, Radio Amateurs of Canada presented Rick with a Certificate of Appreciation "For Extraordinary Service to Amateur Radio in Newfoundland & Labrador as VO Incoming QSL Bureau Manager".

Frank Davis, VO1HP, Deputy Director for the Atlantic Region, & Bill Kirby, VO1BB, new VO QSL Bureau Manager, made the presentation to Rick on Friday, August 21 at his QSL Bureau office in his home.

"Rick was a natural for the job of QSL Manager due to his avid DXing and personal interest in collecting QSL cards. His call sign is widely known in world-wide DX circles.

Radio Amateurs of Canada extends its sincere thanks & appreciation to Rick Burke, VO1SA/VO2CW, for 24 years of dedicated service to the Radio Amateurs in Newfoundland and Labrador."

Welcome Aboard Bill!