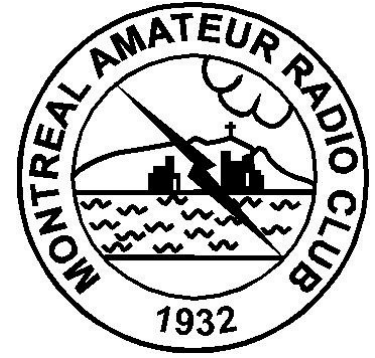


# marcOgram

Official Publication of The Montreal Amateur Radio Club Inc.  
Box 53047 - RPO Dorval, Dorval Quebec H9S 5W4



Volume 68, Number 2

October 2021

## NEXT MEETING

**Tuesday 26 October 2021 at 20:00 via ZOOM.**

### **THIS MONTH: ANNUAL GENERAL MEETING.**

**Wherein we conduct all manner of things fit and proper  
to conduct to keep the club alive. Join in!**

General meetings are being held via the Zoom platform. Below are the details you need to join the meeting. A rag-chew session starts at 19:30 with the formal meeting starting at 20:00.

Join Zoom Meeting: <https://zoom.us/j/99313399988?pwd=YXcwMGJQdStkYVBwa3Fkc2hxa21oZz09>

Meeting ID: 993 1339 9988      Passcode: 898003      Or by phone 438-809-7799 using the above meeting ID and passcode.

Important: Please use a headset or headphones and make sure to test your mic/camera ahead of the meeting.

We hope to see you there.

## FROM THE EDITOR'S DESK

This month's meeting is important - it's the AGM where we deal with the paperwork and the people needed to keep the Club up and running. Sharp-eyed readers may have noticed that we have a new Director on the Board, Martin Charbonneau, VA2HKR. He has experience, having been on other amateur radio club's governing bodies, and holds a Bronze Maple Leaf Operator membership in RAC. We hope he will find the Club friendly and, as it says in the Hitchhiker's Guide to the Galaxy, "mostly harmless."

We still need to find another venue to hold another potential hamfest once indoor groups are permitted. Anyone with an idea please contact any one of the Directors.

73 de Nora, VA2NH

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## Membership Time!

It's that time of the year again! September 1st was the start of the new membership year. We'd like to see you back. Join before the AGM and get to vote!

You can either complete the form online at <https://www.marc.ca/memform/> and pay with Square or Interac e-Transfer, or you can print the membership form and post it with your cheque.

You'll find the pdf form here:

<https://www.marc.ca/membership/marcform2022.pdf>

**We hope to see you soon.**

Marc-Andre Gingras, VE2EVN

President - Montreal Amateur Radio Club

The MARCogram is published nine times per year on the second to last Wednesday of September through June, excepting December by the Montreal Amateur Radio Club. Advertising and copy deadline is one week prior to publication.

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General Members ... \$30.00  
Family Members (per family) ... \$35.00  
Postal delivery of MARCogram ... \$ 5.00

The membership year runs from September 1 to August 31. Memberships received on or after June 1 commence immediately and extend through the subsequent membership year - covering a period of up to fifteen months.

Articles published in the MARCogram may be reproduced providing credit is given to the original author and the Montreal Amateur Radio Club as the source.

The opinions expressed herein are, unless otherwise stated, solely those of the authors concerned, and not those of the Club, the Directors or members and do not represent the policy of the Club.

### Directors

President: Marc-André Gingras, VE2EVN .... [ve2evn@marc.ca](mailto:ve2evn@marc.ca)  
Vice-Pres: Leo Nikinen, VE2SI ..... [ve2si@marc.ca](mailto:ve2si@marc.ca)  
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Martin Charbonneau, VA2HKR..... [ve2hkr@marc.ca](mailto:ve2hkr@marc.ca)

Club Call Sign: VE2ARC

Club Website: <http://www.marc.ca>

### Repeaters

**VE2BG** 147.06 MHz (+) 103.5

Owned and operated by the Montreal Amateur Radio Club. Back on the air but still looking for a new location..

**VE2RED** 147.27 MHz (+) 103.5

On the air from Ridgewood Ave. in Montreal; CTCSS tone of 103.5 Hz for access. Thanks to Claude Everton, the VE2RMP group and Metrocom for making this possible.

The repeaters are open to all amateurs.

### Meetings of the Board of Directors

Meetings of the Board of Directors are held on the first Tuesday of the month (Aug to June) at 19:30 on-line using the Zoom platform. The club no longer holds in-person board meetings. If you have questions, concerns or suggestions for the Board to discuss, please send an email to [ve2arc@marc.ca](mailto:ve2arc@marc.ca) for inclusion in the meeting agenda.

## Club Activities

### *Monthly Meetings are by ZOOM*

(last Tuesday of the month)

October 26 - **ANNUAL GENERAL MEETING.**

November - Marc-André, VA2EI, Summits On The Air.

December - Annual Christmas Party (hopefully)

Every Wednesday, @ 20:00 (00:00Z), go to the net on VE2RED.

See page 3.

### *Radio Classes*

A Basic level Course is held starting in January of each year. If you know of anyone interested in taking the course, please direct them to <https://marc.ca/course/> for more information. Online registration is now closed until the next session.

### *MARC Hamfest*

**The 2021 MARC flea market was cancelled.**

It will be back but we still need a good location. Any ideas? Please contact any of the board members.

**Ideas are welcome!**

Go to <http://marc.ca/fest/> for more information as it happens.

### *Incoming QSL card service*

As has been mentioned in previous MARCograms, we are resuming the club's service of having incoming QSL cards sent to the club for members to pick up at meetings. This is a service which we are offering to our members which both saves the individual members money as well as makes more efficient use of our collective resources.

If you would like to avail yourself of this service please send an e-mail to [qsl@marc.ca](mailto:qsl@marc.ca) and we will add you to the list of cards that the incoming bureau sends to the club and bring them to the monthly meetings.

## *SolderSpot*

Group build Power Supply Project - By Leo VE2SI

If you're interested and even if you've spoken with me before, please send an email to [VE2ARC@marc.ca](mailto:VE2ARC@marc.ca) and indicate your level of interest.

Participation is open to everyone and MARC membership is not a requirement. Due to COVID-19, SolderSpot is temporarily on hold. Other options are being considered.

**This project is standing by due to COVID-19.**



## UPCOMING FLEAS/EVENTS

### 2022

**What:** Iroquois ARC Fleamarket

**Who:** Iroquois Amateur Radio Club

**When:** Saturday, 2 Apr 2022

**Where:** Iroquois ON

**What:** NEAR-Fest XXX

**Who:** New England Amateur Festival, Inc.

**When:** Fri & Sat, 29 & 30 Apr, 2022

**Where:** Deerfield Fairgrounds  
Deerfield, NH

**What:** London Vintage Radio Club Flea Market

**Who:** London Vintage Radio Club

**When:** Saturday, 11 Jun, 2022

**Where:** Guelph, ON

**What:** Carp 24th Annual Hamfest

**Who:** Ottawa Amateur Radio Club, Inc.

**When:** Saturday, 10 Sep, 2022

**Where:** Carp Agricultural Fair Grounds,  
Carp, ON

Note from the editor.

Due to COVID -19, the list of hamfests and events is severely limited. Please check with the organizing authority before planning to attend as some may be cancelled.

## VE2RED TUESDAY NET REPORT

Any discrepancies, please inform Leo, VE2SI

Please join us every **Wednesday** evening at 20:00 local on VE2RED on 2m output frequency of 147.270 MHz (+600 kHz input offset) CTCSS tone of 103.5 Hz. Everyone is welcome. If you have something to sell, or are looking to buy, feel free to mention it.

We have a few Net operators hosting it, but we're always interested in adding to this team if you're interested. Send me an email if you would like to try out Net Operations for an evening.

Leo, VE2SI

[leo49@videotron.ca](mailto:leo49@videotron.ca)

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**2021-09-22 Net commenced 20:00 local, 00:00Z**

Net control Leo, VE2ARC (VE2SI)

Net closed: 21:19

Check-ins: 9

Discussion: How's your knowledge of battery technology, battery IQ?

**2021-09-29 Net commenced 20:00 local, 00:01Z**

Net control Leo, VE2ARC (VE2SI)

Net closed: 20:57

Check-ins: 12

Discussion: What's your next amateur radio project or far-off goal in amateur radio?

**2021-10-01 Net commenced 20:00 local, 00:00Z**

Net control Leo VE2ARC (VE2SI)

Net closed: 21:28

Check-ins: 12

Discussion: Are government regulators pandering to public ignorance?

**2021-10-08 Net commenced 20:00 local, 00:00Z**

Net control Leo VE2ARC (VE2SI)

Net closed: 21:33

Check-ins: 12

Discussion: Should transceivers include Bluetooth for accessories like microphones and speakers?

**2021-10-15 Net commenced 20:00 local, 00:00Z**

Net control Leo VE2ARC (VE2SI)

21:04 Net closed

8 check-ins

Discussion: What was your greatest challenge while working towards your amateur radio license?

**2021-10-13 Net commenced 20:00 local, 00:00Z**

Net control: Leo VE2ARC (VE2SI)

Net closed: 21:06

Check-ins: 7

Discussion: Installing RF connectors, do you use manufacturer's instructions or do you wing it?

## ALL ABOUT TONES

From the “Back to Basics” column by John, VE7TI,  
Published in “The Communicator” 19 Sep 2021 issue by the Surrey Amateur Radio Club, Surrey, BC.

Tones ... we all know what they are in non-radio terms, but they pose questioning glances from many Basic course students when we explain tones during the course. Referring to our hobby, tones may be:

- ♦ PL, CTCSS or sub-audible tones;
- ♦ A report of CW signal quality; or
- ♦ A tone used by repeaters to mark the end of a transmission.

### PL, CTCSS and sub-audible tones.

Let's look at a typical question:

B-2-1-5 What is a CTCSS tone?

- A. A special signal used for radio control of model craft.
- B. A sub-audible tone that activates a receiver audio output when present.
- C. A tone used by repeaters to mark the end of a transmission.
- D. A special signal used for telemetry between amateur space stations and Earth stations.

In telecommunications, Continuous Tone-Coded Squelch System or CTCSS is one type of in-band signaling that is used to reduce the annoyance of listening to other users on a shared two-way radio communications channel. It is sometimes referred to as tone squelch. It does this by adding a low frequency audio tone to the voice. Where more than one group of users is on the same radio frequency, CTCSS circuitry mutes those users who are using a different CTCSS tone or no CTCSS.

All users with different CTCSS tones on the same channel are still transmitting on the identical radio frequency, and their transmissions interfere with each other; however the interference is masked under most (but not all) conditions. The CTCSS feature also does not offer any security.

A receiver with just a carrier or noise squelch does not suppress any sufficiently strong signal; in CTCSS mode

it unmutes only when the signal also carries the correct sub-audible audio tone. The tones are not actually below the range of human hearing, but are poorly reproduced by most communications-grade speakers and in any event are usually filtered out before being sent to the speaker or headphone.

A receiver equipped with a CTCSS decoder will not reproduce a signal unless it carries a given sub-audible tone in the background, for example a continuous 100 Hz tone. To work with such receivers, a transmitter must be equipped with a CTCSS encoder. Standard tones are in the range of 67 to 254 Hz, below the normal speech frequencies of 300 to 3000 Hz.

One example of the purpose for repeater tones is here in the Greater Vancouver area of SW Canada. We operate VE7RSC in Surrey on a repeater frequency of 147.36 MHz. About 65 miles south, on Camano Island in Washington State, W7PIG operates on the same repeater frequency pair. Without tones, under ideal propagation, we hear their repeater and they hear ours, in most instances it is poor copy and distorted, so it is classed as interference. By using a different tone on each repeater, only stations on our frequency with our sub-audible tone programmed will open up our repeater. The repeater will not respond if no tone, or the incorrect tone is detected. The same situation occurs on Camano Island and that repeater uses a different tone as its “key”.

Bear in mind that if both repeaters are in use there is still activity on one frequency by both users. Therefore the disadvantage of using CTCSS in shared frequencies is that users cannot hear transmissions from other groups. They may erroneously assume that the frequency is idle and then transmit at the same time as another user, thus interfering with the other group's transmissions. In our example, the distance is sufficient that there is little objectionable co-use and it is much more tolerable than not using tones.

Tones are not only used on repeaters. Many newer transceivers allow the user to program in a sub-audible tone when you wish to only hear simplex transmissions from other users in your group. Such use may be during an event or an outdoors recreational activity.

CTCSS is an analog system. A later Digital-Coded Squelch (DCS) system was developed by Motorola un-

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der the trademarked name Digital Private Line (PL).

Many radios also have a feature typically labelled “Tone Squelch”. That is similar to a repeater CTCSS tone but you can program it into your transceiver receive. When enabled, and the transmitting radio sends that sub-audible tone with the audio, your receive is unmuted only when that tone is received with an incoming signal. This feature may be handy if you are with a group of Amateurs and only wish to hear the conversation when one of the group is transmitting.

Therefore, the correct answer to the question in B-2-1-5 What is a CTCSS tone? is:

- B. A sub-audible tone that activates a receiver audio output when present.

### **Next... DTMF Tones.**

Dual-tone multi-frequency signaling (DTMF) is a telecommunication signaling system using the voice-frequency band over telephone lines between telephone equipment and other communications devices and switching centers. DTMF was first developed in the Bell System in the United States, and became known under the trademark Touch-Tone for use in push-button telephones supplied to telephone customers, starting in 1963. DTMF is standardized as ITU-T Recommendation Q.23.

In Amateur Radio, DTMF is enabled with a keypad on the transceiver or microphone. DTMF uses a mixture of two pure tone (pure sine wave) sounds, a set of eight audio frequencies transmitted in pairs to represent 16 signals, represented by the ten digits, the letters A to D, and the symbols # and \*. As the signals are audible tones in the voice frequency range, they can be transmitted and heard through repeaters and amplifiers, and over radio and microwave links.

DTMF is commonly used to turn on a link via radio, such as may be needed to contact a station on IRLP or EchoLink. It was also heavily used before cellular phones became common, as hams could dial telephone calls via their radio using a “phone patch” on a repeater. Some repeaters and clubs still offer this service.

## **Tones and signal reports.**

B-2-6-2 What does “RST” mean in a signal report?

- A. Readability, signal speed, tempo.
- B. Readability, signal strength, tone.
- C. Recovery, signal strength, tempo.
- D. Recovery, signal speed, tone.

“RST”, a short way to describe signal reception

- ♦ Readability: 1 to 5,
- ♦ Signal Strength: 1 to 9,
- ♦ Tone Quality (for Morse): 1 to 9.

For example, “11” unreadable, barely perceptible. “33” difficult to read, weak signal. “45” readable, fairly good. “57” perfectly readable, moderately strong.

The “T” in RST is only used for CW (Morse code) reports and is an indication by the receiver of the quality of the received tone.

Therefore, the correct answer to the question in B-2-6-2 What does “RST” mean in a signal report? is:

- B. Readability, signal strength, tone.

### **And finally... Repeater courtesy tone.**

There are no questions in the Canadian Basic Amateur Radio exam question bank about courtesy tones but the term is listed as an incorrect answer. Regardless, you should be aware of its meaning.

Most repeaters have a courtesy tone just before the transmitter stops transmitting. This is typically a “bee-boop” sound. The ones that do not will have a squelch tail that will transmit for a second or so after the input carrier or tone drops. After the courtesy tone or carrier drops, if there is no courtesy tone, you should wait a second or two before keying up the mic. This provides space for others to break in if needed. The courtesy tone is merely an audible indication that the repeater has finished transmitting and another station may start.

### **Kerchunking.**

While we’re on the subject, let’s also mention “kerchunking”.

This is one of the most annoying things for a repeater operator and people that listen to the repeater a lot. Just

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in case you do not what kerchunking is... kerchunking occurs when you press the PTT and then release it without speaking.

Some people will kerchunk the repeater but never talk. If you kerchunk the repeater to get it to wake up and ID before starting a new net or QSO that is fine because you follow up the kerchunk with your call sign and start a net or QSO.

Some people think that kerchunking the repeater is a way to test your radio but it really is not a valid test, as you have passed no audio.

In Canada, the rules state that you must ID at the beginning and end of a conversation and at least every 30 minutes (10 minutes in the United States) if your conversation lasts that long. Just a kerchunk (or many) does not meet the regulations.

Bottom line, do not kerchunk the repeater and not ID.

### The "Alligator"

"The alligator bit you" is a term you may hear when on the air. This is a slang term for the timer function of a repeater controller that limits the length of time the transmitter will remain keyed without a pause. Typically the timer is set between 3 and 5 minutes.

It is a protection device to prevent the repeater from overheating when transmitting. Aside from so-called "Long-winded operators", I have seen instances where repeater users have accidentally sat on their mics and transmitted for some time without realizing it (when you are transmitting you do not hear other users or the repeater because your receiver is muted). If the time-out timer did not exist, the repeater power amplifier would overheat causing an expensive repair. Such times are not unique to repeaters. There is a very good chance that the transceiver you own also has protective circuitry to limit transmitting time.

~ John VE7TI

Editor's note.

Personally I have never heard of the term "The alligator bit you". In the Montreal area, if one timed out the repeater, one was on the hook to buy everyone affected a beer.

The advertisement for Cosmos Electric Company displays several electronic devices for sale. On the left is a large vertical unit, No. 1086, a receiving outfit for 300 miles with a 1000 Ohm receiver and headband, priced at \$4.25. To its right are three smaller units: No. 1053, a rotary cup spring needle with four blind posts for \$2.00; No. 1054, a unit with two cups for \$3.00; and No. 1051, a unit with a ball joint for \$2.00. At the bottom right is No. 1052, another unit for \$2.00. The company's address is 136 M. Liberty St., New York. A note mentions storage batteries, wireless receivers up to 3200 Ohms, arc lamps, motors, and magnet wire. Literature is free with orders, and stamps are credited on the first order.

No. 1086, Receiving Outfit —300 miles. 1000 Ohm Receiver with Headband. Complete by mail, this month only, \$4.25

No. 1053, with four Blind Posts, Rotary Cup, Spring Needle, by mail \$2.00

No. 1054, with 2 cups, by mail \$3.00

No. 1051 with Ball Joint, by mail \$2.00

No. 1052, by mail \$2.00

Storage Batteries, Wireless Receivers up to 3200 Ohms, and other Instruments, Arc Lamps, Motors, Magnet Wire.  
All literature free with every order, otherwise 5 cts.  
Stamps requested and credited on first order.

**COSMOS ELECTRIC COMPANY**  
136 M. Liberty St. NEW YORK

When writing, please mention "Modern Electrics and Mechanics."

From: Modern Electrics and Mechanics, April, 1914.

## **Notice of Annual General Meeting**

Notice is hereby given that the annual general meeting of the Montreal Amateur Radio Club Inc., will be held on Tuesday, October 26, 2021 at 20:00 via the Zoom platform due to COVID-19 restrictions in place.

Meeting link:

<https://zoom.us/j/99313399988?pwd=YXcwMGJQdStkYVBwa3Fkc2hxa21oZz09>

Meeting ID: 993 1339 9988, Passcode: 898003, or by phone 438-809-7799 using the above meeting ID and passcode.

The meeting is called to:

- ◆ Receive and if thought fit, approve the reports of the officers;
- ◆ Receive and if thought fit, approve the report of the auditor;
- ◆ Elect directors and officers to hold office for the coming year;
- ◆ To consider and if thought fit, approve the amendments to By-Law Number 1;
- ◆ To transact such other business as may properly come before the meeting.

Given in St. Lazare this 22<sup>nd</sup> day of September, 2021.

(Sgd.) Nora Hague

Nora Hague. VA2NH,  
Secretary,  
Montreal Amateur Radio Club, Inc.

## **By-Law Number 1**

By-Law Number 1, as amended 27 October 1999 and 30 October 2018,

is hereby further amended as follows:

**Section 3.4** is repealed and replaced with the following:

“3.4 No notice need be given of regular General Meetings held at times fixed by resolution of the Members. Written notice of General Meetings (both Annual and Special) shall indicate the time and place of the Meeting and shall be mailed **or e-mailed** to each Member at least ten (10) days before the date of the Meeting to the address shown on the books of the Club.”

**Section 5.1** is repealed and replaced with the following:

“5.1 The management of the Club shall be vested in a Board of Directors consisting of not less than **five (5)** nor more than ten (10) Members.”