

## **Necessity .... the Mother of Invention**

Phil Moorey VE3AXL

Trying to find the right knob for my magnetic loop tuning box prove difficult so I decided to make my own. A small knob makes it difficult to find the sweet spot. I found a small knob that used allen screws to secure it to the shaft. My junk box had a large phenolic style wing nut used to secure an industrial part.

I cut it down to size and kept the outer knob. I filed it smooth and epoxied it to the smaller knob.

Now I had a knob that was the size and shape I wanted and it fastened to the capacitor shaft of my tuning box.

For those who don't have something in their junk box, or prefer something lighter, a disc cut from plastic, plexiglass or hardwood can be used for the larger knob.

A hole saw and a file can do the job nicely.

It takes a little work but you get something that suits you and sure saves I great deal of time trying to find a suitable item



## **What's Happening at LARC**

**Meetings? ... Bill VE3XT**



For the May meeting we had an interesting show and tell from our president Randy, VA3OJ on an ultra portable 440 MHZ. Not only was it very portable but

could be deployed quickly for use in an ARES situation. All that was required to be QRV was power and antennas, which at UHF can be simple but still have lots of gain.

The June meeting will be a two fer event. Since its June and Field Day happens on the 24th and goes to the 25th of the month we will be planning our attack for the weekend. If it's been a while since you played in FD now would be a good time to give it a whirl again. Also at the meeting Brad, 'MXJ and Bill, 'XT will give a short travelogue on their recent pilgrimage to Dayton and their thoughts on the new location at Xenia. As an added bonus we will show some photos of W0AIH's superstation known as The Farm. We counted at least 40 towers and then lost track and that's not including telephone poles!

We are always looking for speakers so if you're puttering with something, have a new toy or a better way to do something let one of the executive know and we will slot you in. There's lots of time before next September, 2017.

The Executive has made a concerted effort the last few years to make the meetings interesting and with a variety of topics. We hope you can come out and support your fellow LARC'ers and guests.

**LARC SENATE**

Robert Hansen VE3RVA  
Dave Kimpton VE3AVS  
Laurie Bridgett VE3BCD  
Terry Stewardson VA3LU  
Ed Baumann VE3SNW

**LARC EXECUTIVE**

President: Randy Gottfred VA3OJ  
Vice-President: Bob Hansen VE3RVA  
Treasurer: Bill Unger VE3XT  
Secretary: Karl Hamilton VE3RRP  
Board Member: Mike Skillen VE3EDX  
Board Member: Cory Vickruck VE3ZCV  
Board Member: Brad Harris VE3MXJ  
Board Member: Axel Rehfuhs VE3OPF

**ABOUT US**

The Lakehead Amateur Radio Club (LARC) is an incorporated not for profit group of amateur radio operators in the Thunder Bay area that meet for self education, community service and fellowship. Our meetings are the second Thursday of the month at room 191 McIntyre Building, Confederation College, 7:30 PM. Our postal address is 1100C Memorial Ave. Suite 184, Thunder Bay, Ontario P7B 4A3. This newsletter is published monthly except for July and August by Ed Baumann VE3SNW and questions and submissions may be emailed to [hiqnewsletter@gmail.com](mailto:hiqnewsletter@gmail.com)

**Nets in the Thunder Bay Area**

Last Monday of every Month - ARES net on VE3YQT - 7 pm (you do not have to be an ARES member to check in)

Cook County ARES Response Team ( CARRT) net at 0100Z (8 pm) on the BWARC repeater, Grand Portage repeater - 146.655 with CTCSS

Any questions on these or other nets please feel free to contact me at my e-mail: [ve3mxj@rac.ca](mailto:ve3mxj@rac.ca)

**LARC Emergency Coordinator**

Brad Harris VE3MXJ 767-0628

**ARES District Emergency Coordinator**

vacant

**CANWARN**

VA3JMS John 767-3631  
VE3MXJ Brad 767-0628

**Public Service Events**

VA3JMS John 767-3631

**Accredited Examiners**

VE3FAL Fred Lesnick 577-0789  
[flesnick@tbaytel.net](mailto:flesnick@tbaytel.net)  
VE3VAI Lori Bedford 622 – 6386  
[ve3vai@tbaytel.net](mailto:ve3vai@tbaytel.net)

**LARC OPEN ACCESS REPEATERS**

VE3YQT(Mount Baldy)147.060 (-600) (currently has antenna problems)

VE3TBR (St. Joseph's) 146.820 pl 107.2

442.075 (+5 MHz) **pl 100**  
144.390 APRS

**June**

## **An Epic Journey to Celebrate Canada and Connect Canadians**

A Canada 150 Signature project, Canada, C3 is a 150-day expedition from Toronto to Victoria via the Northwest Passage. It will inspire a deeper understanding of our land, our peoples and our country.

The Canada C3 organizers have kindly permitted a group of enthusiasts under the leadership of Barrie Crampton, VE3BSB, to install a WSPR (pronounced "whisper") beacon on the Canada C3 vessel. This provides a unique opportunity to track the vessel on its 150-day sailing voyage around the Canadian coast - the longest coastline in the world.

Stopping at a different location every day, Canada C3 will visit 50 coastal communities, 36 Indigenous communities, 13 National Parks and 20 Migratory Bird sanctuaries. Canadians are encouraged to join the adventure as a virtual expeditioner, tracking the voyage online via website updates and museum hubs.

The WSPR project will be part of science experiments and research to be carried out on the voyage. The location and frequencies for the WSPR, CG3EXP, may be viewed at: <http://wspnnet.org/drupal/wspnnet/map>

<http://rac.us10.list-manage.com/track/click?u=1cc2ce962688ad6bb6db0d414&id=c8373222e3&e=794d384c05>

Many of the locations to be visited by Canada C3 lie in areas where radio communication is difficult. Phenomena such as "arctic flutter" and disturbances from the aurora have traditionally been a problem in the north. Very few, if any, of these locations will have a WSPR beacon and are thus, until now, outside the worldwide WSPR network. The gathering of information on radio propagation simultaneously by several receiving stations will be of scientific interest - and it will also be fun. The WSPR network of stations meets this need comprising, as it does, a series of receiving sites and stations capable of reporting, in real time, the reception of, and location, of the beacons.

The community of people tracking the Canada C3 WSPR beacon are expected to come up with new and innovative ideas for its use.

Some ideas already suggested are:

**2017**

\* An "awards" program offering certificates for people copying the beacon at Canada C3's various stopping points along the way.

\* Special maps to complement the maps of WSPR activity being generated continuously on <http://wspnnet.org> <<http://rac.us10.list-manage1.com/track/click?u=1cc2ce962688ad6bb6db0d414&id=a2c5436ecb&e=794d384c05>>. At the conclusion of the voyage it might be possible to produce a map showing the course of the voyage with a summary at each stop of the numbers and locations of listeners who logged the Canada C3 beacon.

\* A software defined radio building project relating specifically to the Canada C3 WSPR.

\* Publications, articles and reports such as an article on the propagation of WSPR signals during the voyage.

While this project is associated with the Canada C3 Expedition, results might provide "proof of concept" more generally for remote telemetry applications from Arctic regions. With the impending increase in non-commercial adventurers traversing the Northwest Passage, this low-cost technology might fill a need. Researchers following the Canada C3 "whisper" might wish to compare the experience to other ship-borne uses of WSPR as reported on several Internet sites.

For more information visit: <https://canadac3.ca> <<http://rac.us10.list-manage1.com/track/click?u=1cc2ce962688ad6bb6db0d414&id=b86b35e48f&e=794d384c05>> and <http://wp.rac.ca/a-whisper-for-canada-c3/> <<http://rac.us10.list-manage.com/track/click?u=1cc2ce962688ad6bb6db0d414&id=3bfe20836b&e=794d384c05>>

A couple of hams were having coffee at Boston. Over the years they had shared many cups of coffee. One looked at the other and said, "Now don't get mad at me.....I know we've been friends for a long time.....but I just can't think of your name and your call.! I've thought and thought, but I can't remember them. Please tell me what they are." His friend glared at him. For at least three minutes he just stared and glared at the old man.. Finally he said, "How soon do you need to know?"

## Stuff

William Unger VE3XT

Since our move a few years ago Rita and I are very conscious of “stuff” that we collect. We’ve tried to eliminate the “stuff” that we don’t need and get rid of “stuff” we haven’t used in a while to de-clutter our lives. I’m starting to wonder if you ever really eliminate all the unnecessary “stuff” you have? But that’s probably another article for a future issue.

Recently while Rita was doing some sorting she stumbled on a business card from long ago and far away. It was from Thunder Bay Color Television run by Emil Morin. His shop was located on East Victoria Avenue, in what we would have then called downtown Fort William.

While I never bought a TV from Emil I certainly spent time shopping for parts at his place. He carried the RCA “SK” replacement parts line. As a much younger man I remember climbing the old wooden stairs up to his second floor shop. It was littered with old TV’s in various states of repair. Rumor had it that the third floor was for TV’s that couldn’t be repaired but were kept for parts. Unfortunately I never made it past the second floor to the inner sanctum.

When I was trying to build something there was always one transistor that seemed elusive to me. You could go to Emil and he would cross reference it using the big red RCA SK parts book and you could be fairly certain it would work in the circuit. After you got the part you would take it to his wife who was the book-keeper and she would tell you how much it cost and carefully hand write out a receipt in her book for you and then make change. It was probably more than J and J Electronics out of Winnipeg but there was no minimum order, postage or money orders to deal with. As a young ham with limited funds that was important. Later when I was working I still made the odd trip to see Emil and get a part I needed to get one of the transmitters back on the air in a hurry. This was long before Digi Key and next day deliveries.

The other line of replacement parts was the ECG line carried by Intercom on the other end of Victoria. It was a big thick yellow book with very small print. I finally obtained a copy and it was quickly dog eared as I used it to compare transistor specifications in order to maximize a circuit’s performance, but still never more than 5 Watts output! I’m not sure I could even read it now. I still remember that an ECG123 is a replacement

for a 2N2222. I wonder if those companies still produce those books and parts.

Oh, and the card, I kept it. It went into the pile of other business cards from people and companies who no longer are here but always elicit a fond memory. It’s only a small bit of clutter.

‘XT



## RAC Canada Day Contest 2017

Each year on July 1, the anniversary of Canada’s Confederation, Radio Amateurs of Canada sponsors the RAC Canada Day Contest. Amateurs all over the world are invited to Canada’s Birthday Party on the air and this year is very special as Canada is celebrating its 150th Birthday. In recognition of this milestone, the RAC Canada Day Contest certificates and the RAC Winter Contest certificates will feature the Canada 150 logo in recognition of this special moment in Canada’s history.



more info at <http://wp.rac.ca/rac-canada-day-contest-rules/>

# Lakehead Amateur Radio Club

## May 2017 Treasurers Report

**Balance May 1, 2017** **\$694.28**

**Income**

May 15, April, May 50/50 Draw \$17.05  
**Total Income** **\$17.05**

**Expenses**

May 4, Axel, VE3OPF Door Prize Purchase for LARC AGM \$33.09  
 May 15, Randy, VA3OJ, Dinner for AGM Guest Speaker \$20.47  
 May 15, Registration for Hymers Fall Fair \$92.00  
 May 31, Service Charge \$0.50  
**Total Expenses** **\$146.06**

**Balance May 31, 2017** **\$565.27**

<u>Trailer Account</u>	
<b>Previous Balance</b>	<b>\$138.77</b>
<b><u>Income</u></b>	
Interest	\$0.01
Total	<b>\$138.78</b>
<b><u>Expenses</u></b>	
Total Expenses:	<b>\$0.00</b>
<b>Balance in Trailer Account</b>	<b><u>\$138.78</u></b>

**Term Account**

**May 01 Balance** **\$2,057.65**  
**May 18, Interest** **\$0.25**

**May 30, Balance** **\$2,057.90**

**Bill Unger CG3XT**  
**Treasurer**

**Minutes for the  
Lakehead Amateur Radio Club  
Date: May 11, 2017**

**President, Randy Gottfred VA3OJ Presiding.**

**Guest Speaker:**

Randy Gottfred VA3OJ brought in a portable UHF repeater

**Treasurer's Report: Bill Unger VE3XT**

Bill Unger VE3XT moves to accept the report as printed in Hi-Q. Seconded by Terry Stewardson VA3LU. Passed Unanimously.

**Minutes of Previous Meeting:**

Karl Hamilton VE3RRP moves to accept the previous meeting's minutes as printed in Hi-Q. Seconded by Brad Harris VE3MXJ. Passed.

**Old Business:**

**Public Service (John Sacek VA3JMS public events coordinator)**

**Past Events:**

Reminder to all Coordinators: Please email John VA3JMS with a list of your checkpoint volunteers so that the list can be submitted to RAC.

**Upcoming Events**

10 Mile Road Race Monday May 22<sup>nd</sup>. Norm Bell VE3XRC Coordinator

Conquer the Dog Saturday August 19<sup>th</sup>

Xterra Saturday August 26<sup>th</sup>

**CANWARN John Sacek VA3JMS**

Training Day: Monday June 12, 7 PM, Lakehead Region Conservation Authority, 100 Conservation Road, Thunder Bay

**ARES Brad Harris VE3MXJ Thunder Bay EC**

Monthly Net

Net: NW ON HF 3750 no longer happening.

**Repeater News**

**Randy Gottfred VA3OJ,**

**Terry Stewardson VA3LU**

Ice damage at VE3YQT: heliax is connected to antenna but not tied to tower.

**Motion By Axel Rehfuhs VE3OPF:**

To set up a committee to find funding sources, and apply for funding to upgrade our communication systems. Seconded by Bill Unger VE3XT. Passed.

Volunteers: Bill, Laurie, Cody, Randy, Terry

**Club Trailer:**

**Bob Hansen VE3RVA**

no news

**YouTube Channel**

**Cory Vickruck VE3ZCV**

1500 views on the last video.

**New Business**

**Hymers' Fair Expenditure.**

\$92 approved by membership.

**VE3SAO News:**

none

RAC Bulletin Highlights by VE3RRP

**50/50 Draw:** Brad Harris VE3MXJ

**Adjournment** moved by: Terry Stewardson VA3LU.

**Next Executive Meeting: June 1, 2017, 7:30 PM, RM 213**

**Next LARC Meeting: June 8, 2017, 7:30 PM, RM 214**



**Like us on  
Facebook**

**FOR SALE**

HAM receiver

The following items for sale were received via our website. Please contact the seller directly if you are interested.

Name:

Alain Nabarra amnabarra@tbaytel.net

I have a Yaesu FRG 8800, plus a Yaesu booster.

If someone is interested to acquire it, please contact me.

Thanks

## Countdown to World Radiocommunication Conference 2019

Bryan Rawlings, VE3QN, RAC Special Advisor, is in Geneva, Switzerland attending Preparatory Meetings for the World Radiocommunication Conference (WRC).

The current meetings are the third of a series of meetings which will continue until just before WRC-19 now scheduled to be held in Geneva from October 28 to November 22, 2019.

Preparatory Meetings are almost always two weeks in duration and are held at the International Telecommunication Union (ITU) headquarters in Geneva. This time Bryan is attending as a member of the Canadian Delegation and also as an Expert Consultant for the International Amateur Radio Union (IARU).

Preparatory Meetings primarily prepare documents on the agenda items identified for the upcoming WRC. They are in turn preceded by meetings and the submission of documents from the participating administrations, for example, Canada through its authorized government agency, the Department of Innovation, Science and Economic Development (ISED; formerly Industry Canada). Canada is represented by ISED. The RAC representative is made a member of the delegation by invitation and Bryan's role is to advise on Amateur issues.

The principal Amateur Radio issue is an international authorization of the 50 to 54 MHz band in ITU Region 1 (Europe, Africa and the Middle East) – not a critical issue for Canadian Amateurs.

Also under consideration are:

1) an expansion of Radio Local Area Networks (RLANs) into the 5 GHz band. Amateurs have a secondary allocation here in 5650 to 5925 MHz which we already share with the Primary Users and with ISM (Wi-Fi, etc.).

2) proposals to study frequencies for wireless power transfer, e.g., charging cellphones and bigger devices. Depending upon the frequencies planned and the technical characteristics there may be a significant potential for interference to Amateurs.

3) studying the possible frequency range for International Mobile Telephony (IMT) in a range between 24.25 and 81.5 GHz. Radio Amateurs will be carefully watching our Primary allocation in 47 to 47.2 GHz.

As was the case during the WRC-15 conference, Bryan will be tweeting comments on Amateur Radio issues

from the meeting using the hashtag #RACatITU. You can also follow him via @ractweets.

Bryan will also be including a report in the next issue of The Canadian Amateur magazine at the conclusion of the meetings.

### Jan's VA3JRS Weblinks

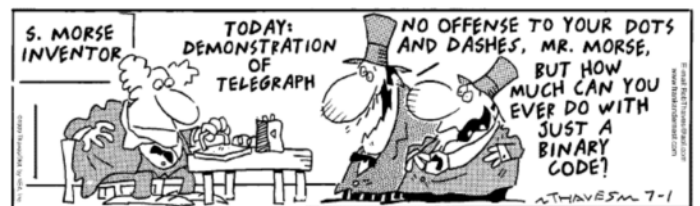
<http://www.nevadaappeal.com/news/opinion/sue-cauhape-how-ham-radio-operators-are-your-friends/>

<http://ve3cnu.blogspot.ca/>

<http://www.ok2kkw.com/kh6ku/ok1vr58eng.htm>

<https://www.youtube.com/watch?v=cFYoYUBGw4s>

<https://phys.org/news/2017-05-space-weather-events-linked-human.html>



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Have a Safe  
and Happy Summer!

See you in September

## Buildout of Nationwide First Responder Broadband Network Could Drive Amateur Radio Emergency Service (ARES) Changes

The First Responder Network Authority (FirstNet) -- a nationwide wireless broadband network for first responders -- could change the complexion of how the Amateur Radio Emergency Service® (ARES®) functions to support communication for responders during disasters and emergencies. As an independent authority within the US Department of Commerce's National Telecommunication and Information Administration (NTIA), FirstNet's mission is to build out, deploy, and operate an interoperable nationwide broadband network dedicated to first responders. Ralph Haller, N4RH, the chairman of the National Public Safety Telecommunications Council (NPSTC), told ARRL that the advent of FirstNet "will likely be as significant as when public safety first began using radio."

"The nationwide network will be hardened, so that it will be more likely that many of today's public safety systems remain operational in emergencies," Haller said, pointing out that Amateur Radio should not expect to have access to FirstNet. He cautioned, "The endurance of Amateur Radio systems in disasters has been a big selling point in the past for incorporating amateur operators in emergency plans, but perhaps not so much in the future."

NPSTC is a federation of organizations that work toward improving public safety communication and interoperability, and ARRL has a seat on NPSTC's Governing Board. Haller predicted that Amateur Radio's role in emergencies will not disappear. "There is no substitute for eyes and ears on the ground in an emergency," he said, adding that radio amateurs "can and should continue to play an important part" in supporting emergency communication.

"Amateur operators can continue to provide valuable information to emergency operations centers in the recovery phase of disasters," he said. "Whether that intelligence gathering is reporting on storm clouds, power outages, or road closures, amateurs can help provide critical, real-time information about conditions over a vast area. While first responders are treating the injured or protecting life and property, the amateur community can concentrate on assessing the overall picture."

Ralph Haller, N4RH, the chairman of the National Public Safety Telecommunications Council.

On March 30, FirstNet and the Commerce Department announced a 25-year partnership with AT&T as the primary contractor to make FirstNet a reality. "The ability to communicate seamlessly across jurisdictions is critical for law en-

forcement, fire, and emergency medical services (EMS) when securing large events or responding to emergencies and disasters," a Commerce Department news release said. "In those instances, networks can become overloaded and inaccessible, limiting responders' use of vital communication technologies, such as smartphones and applications dedicated to public safety services."

Public safety agencies already use commercial wireless networks, such as AT&T and Verizon, to supplement their own radio systems and networks, although such communication is not point to point. FirstNet is initially targeted primarily to provide video and data, with mission-critical voice communication at least a decade away. EMS is likely to become a heavy user of the network, which will employ voice command functions a la Siri or Alexa.

"Be sure the public safety organizations never forget how valuable the amateurs are!" -- NPSTC Chairman Ralph Haller, N4RH

Inevitably there will be coverage gaps, and the development of "deployables" is critical. These devices can expand the network to areas it doesn't cover but where it may be needed for a specific incident. Deployables could include satellites -- Inmarsat is a member of the AT&T team. Network security and encryption is a high priority. The Military Auxiliary Radio System (MARS) now uses encryption on its data nets. While images in the form of digital Amateur Radio television (DATV) and a plethora of digital modes are available to ARES, FirstNet could nudge ARES to more quickly adopt a similar approach. A new generation of radio amateurs steeped in data, image, and video technology is likely to drive ARES to think beyond analog.

Haller advised that the Amateur Radio community should continue to work closely with public safety organizations at all levels to assure that they remain a part of emergency plans. "The hype about broadband should not result in amateurs inadvertently being swept under the rug," Haller stressed. "Be sure the public safety organizations never forget how valuable the amateurs are!"

FirstNet will use spectrum at 700 MHz -- no immediate threat to Amateur Radio allocations, although there is no guarantee that this won't change as the network approaches the shift to 5th generation (5G) technology. Amateur Radio has access to significant spectrum above 700 MHz.

The expectation is that within a couple of years, a nationwide "core" network will be ready to roll out, and the first public safety users will be on board. Some regional networks have been set up for proof-of-concept purposes and to work out wrinkles. -- Thanks to Mike Corey, KI1U, and Ralph Haller, N4RH

Submitted by **LARC Emergency Coordinator**  
**Brad Harris VE3MXJ**



June 2017

Mon	Tue	Wed	Thu	Fri	Sat	Sun
			1	2	3	4
5	6	7	8 LARC Meeting at Con College 7:30pm McIntyre Bldg	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		