



**What's Happening at LARC Meetings?**

The LARC finished up 2016 meeting talks with an exceptional one by Leo, VE3ATC on all things Arduino. These little single board controllers in various flavours have been revolutionizing Amateur Radio. Want to send WSPR, use an Arduino, want to receive CW, use an Arduino, want to turn your antenna, use an Arduino. Well you get the picture. Leo has extensive



experience with the Arduino platform and it showed in the depth of his presentation. Thanks Leo.

For the January meeting we are going to change it up a little. Rather than having a scheduled speaker we are asking individual members to bring in a show and tell for display at the meeting. Hope that you can make the meeting this Thursday, January 12th at 7:30 PM in the Mac building.

While we have not finalized any plans as of yet, February 4th is the annual Freeze Your Buns Off (FYBO) contest. For the past many years a group of us has been operating from VE3SAO at the 55+ Centre. We typically start at approximately 10 AM and operate until we get cold or the smell of a homemade chilli, soup or stew brings us in for a hot meal. Please feel free to join us and see some outdoor op's or try out the equipment at 'SAO. 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 June, 2017. The Executive has made a concerted effort this year 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.

**Former RAC President William James "Bill" Gillis, VE1WG SK**



Radio Amateurs of Canada has received the sad news that former RAC President, Bill Gillis, VE1WG, became a Silent Key on Monday, December 26, 2016 at age 87.

His lifetime career was in the technical and management fields of the telecommunications industry with postings to various Maritime centres as well as St. John's, Montreal, Toronto, and internationally for 15 years in Tanzania, East Africa. Throughout his life he was active in the Amateur Radio Service, holding station licence VE1WG since 1946, VE3WG in Ontario and 5H3WG in Tanzania.

Bill served as RAC President (2002-2003) and as Director for the Maritimes Region. He served two terms as President of the Moncton Area Amateur Radio Club where he also conducted licence qualifying instruction and edited the club's monthly newsletter. He was a member of the Montreal Amateur Radio Club and the Oakville Radio Club. He had been an active member of the Beausejour Curling Club and the Beaver Curling Club.

**NEXT MEETING  
1930 HRS  
THURSDAY 12 JANUARY 2017  
CONFEDERATION COLLEGE  
McINTYRE BLDG - RM 214**

**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**

Robert Hansen VE3RVA

**Treasurer**

Bill Unger VE3XT

**Secretary**

Karl Hamilton VE3RRP

**Board Members**

Mike Skillen VE3EDX

Andy Malcom VE3INI

Terry Stewardson VA3LU

Mark Vaillant VA3MVR

**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

VE3VAI Lori Bedford 622 – 6386

ve3vai@tbaytel.net

**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

**Nets in the Thunder Bay Area**

**Sunday** AMETHYST ARES VHF NET, on VE3TBR 146.820- pl 107.2 IRLP Ref. # 9031 @ 0045Z (7:45 pm), also Cook County ARES Response Team ( CARRT) net at 0100Z (8 pm) on the BWARC repeater, Grand Portage repeater - 146.655 with CTCSS 151.4

**Monday** SATERN NET on VE3TBR 146.820- pl 107.2 IRLP Ref. # 9032

SATERN DIGITAL NETS on **Monday & Wednesday** nights

8 pm- 14.065

9 pm- 7.065

10 pm- 3.5835

Mode :Olivia 8/500 1000Hz waterfall centre

**Every Day** The NORTHWESTERN ONTARIO ARES NET , every evening at 8:15PM (local) on 80m 3.750Mhz (note the time does not change with daylight savings time.)

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

**LARC OPEN ACCESS REPEATERS**

VE3YQT(Mount Baldy)147.060 (-600) Phone Patch

VE3TBR (St. Joseph's) 146.820 pl 107.2

442.075 (+5 MHz)pl 100

144.390 APRS

VE3UPP Upsala 145.470 (-600)

**History of the IARU**

submitted by

Brad Harris VE3MXJ CEC ARES E.C.

To exist, Amateur Radio must have access to the radio frequency spectrum. Without it, our radio equipment is like an automobile without a road or a boat without water -- interesting to look at, perhaps, but utterly useless.

Amateur Radio exists for the purpose of self-training, intercommunication and technical investigations. To accomplish these broad objectives, amateurs must be afforded reasonable access to the spectrum from the lowest frequencies to the highest. Yet, spectrum access is an increasingly valuable commodity. Commercial interests willingly pay billions of dollars for access to the frequencies they require in order to be able to sell telecommunications services. The radio spectrum is so valuable that even government and military users are under great pressure to relinquish frequencies for commercial exploitation.

In such an environment, how can we radio amateurs defend and expand our spectrum access? By definition, our interest in radio is not financial. We can hardly afford to compete, dollar for dollar, with commercial interests. Nor can we compete with them for attention; our individual voices are too weak to be heard over their extravagant claims and frenzied bidding.

The future may look bleak, but let us remember this: It has happened before, and Amateur Radio survived and prospered.

In the early 1920s it was generally assumed that radio-communication could only take place over long distances using very long waves -- the lower the frequency, the better. Very large antennas and very high power were the rule at commercial and government stations. Then, radio amateurs found that short-wave signals could be heard all over the world. The rush soon began to exploit this newly discovered phenomenon. Radio amateurs, the very people whose experiments had revealed the value of the short waves in the first place, were in grave danger of being pushed aside.

At the time there were very few countries in which radio amateurs had been able to organize themselves into national associations. In many countries, Amateur Radio operation was actively discouraged or even illegal. Fortunately, there were far-sighted individuals who understood the problem and were able to find a solution. In 1925 they met in Paris and formally created the International Amateur Radio Union, or IARU.

Initially the IARU had individual members. Once there were enough members in a given country to do so, a section of the IARU would be formed. Soon there were enough sections of the IARU that it became a federation of national associations.

The first major challenge for the IARU occurred in 1927 at the Washington International Radiotelegraph Conference. Radio amateurs easily could have been forced into bands that would have been too narrow to support future growth. Instead, allocations were won that we still know today as 160, 80, 40, 20, and 10 meters, with a 5-meter band that was moved to 6 meters after World War II. The other amateur bands we now enjoy were the result of decades of patient effort through the IARU. From less than 30,000 radio amateurs who were licensed as of 1927, the Amateur Radio movement has grown to three million. From the representatives of 25 countries who formed the IARU in 1925, the IARU has grown to include 150 national associations representing virtually every country with enough amateurs to form an organization.

Individual radio amateurs support the work of the IARU through their membership in their own national IARU member-society. That support is vital to the future of Amateur Radio. The IARU is recognized by the International Telecommunication Union (ITU) as the representative of the interests of radio amateurs throughout the world. It is our voice in the offices and meeting rooms of the ITU and regional telecommunications organizations, where the decisions affecting our future access to the radio spectrum are made.

Most representatives of the IARU are volunteers. The combined budgets of the IARU and its regional organizations amount to just pennies per month per licensed radio amateur. Unfortunately, not all radio amateurs are members of IARU member-societies so the burden falls onto those who are.

All licensed radio amateurs benefit from the work of the IARU, whether or not they are members of their national IARU member-society. But every licensed radio amateur should be a member. Only by combining our efforts in this way can we ensure the future health of Amateur Radio, for ourselves and for future generations.

## New Revised RIC-3 Now Available



Innovation, Science and Economic Development Canada (ISED), formerly Industry Canada, has issued a revised version of RIC-3, Information on the Amateur Radio Service. It replaces RIC-3 Version 3 that was released in July 2005. Radio Amateurs of Canada welcomes the change as it addresses several long-standing issues pointed out by RAC in the past where the document required updating to address changes in technologies and practices, notably the decision by many administrations to remove the requirement for Morse code qualification for new Radio Amateurs. The new version of RIC-3 can be found online at: <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01008.html>

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### Special Call Sign Prefixes Available to Celebrate Canada's Sesquicentennial

Radio Amateurs of Canada (RAC) has secured permission for all Canadian radio amateurs to use special call sign prefixes to celebrate the 150th anniversary of Canada's Confederation during 2017.

Starting on January 1, radio amateurs and clubs with VA-prefix call signs may use CF instead, and those with VE-prefix call signs may use CG instead. Amateurs and clubs with VO-prefix call signs may substitute CH instead, while those holding VY-prefix call signs may substitute CI. Use of the special prefixes is optional, and Canadian radio amateurs may choose if and when to use the special prefix at any time during the year.

VY1AAA, the Yukon Canam Contest Club, will mark the sesquicentennial with special call sign XK150YUKON from January 1 until March 1. The rest of 2017, VY1AAA will operate using either C11AAA or VY1AAA.



## Minutes for the Lakehead Amateur Radio Club

**Date: December 8, 2016**

**President, Randy Gottfred VA3OJ Presiding.**

**Guest Speaker:**

Leo Wehrstedt VE3ATC spoke about arduino boards.

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

Bill Unger VE3XT moved 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:**

Santa Claus Parade November 19<sup>th</sup> Norm Bell VE3XRC Coordinator

Santa Shuffle December 3<sup>rd</sup> Bob Hansen VE3RVA Coordinator

**Upcoming Events**

Sleeping Giant Loppet in March

**CANWARN John Sacek VA3JMS**

no news

**ARES Brad Harris VE3MXJ Thunder Bay EC**

Monthly Net is on the last Monday evening at 7PM on VE3YQT.

Net: Daily NW ON HF 3750 Khz, 8:15 ET if an operator is available

**Repeater News**

**Randy Gottfred VA3OJ,**

**Terry Stewardson VA3LU**

Annual YQT inspection has been completed, TBR battery swap done, and IRLP levels will be adjusted.

**Club Trailer:**

**Bob Hansen VE3RVA**

Trailer is put away for winter. Money for the sponsorship signage is on it's way.

**YouTube Channel**

**Cory Vickruck VE3ZCV**

Cory was absent, but to find the videos, search in youtube for LARC Thunder Bay.

**Police Cadet Meeting Presentation**

**Axel Rehfuhs VE3OPF**

Axel, Bill, Cory in Terrace Bay, Lori Bedford, Randy participated in demonstrating voice

and digital modes to a group of about 20 cadets (teens). They expect that as a result of the presentation, a few cadets will be interested enough to get their ham license.

### **April Dinner Meeting**

The dinner meeting is booked for Thursday April 13, which is the day before Good Friday. Chicago Joe's is asking for a dinner bill for the room to be \$300, or there will be a \$50 surcharge.

### **New Business**

The RAC winter contest starts Friday night and runs through Saturday.

RAC Bulletin Highlights by VE3RRP were postponed until next meeting due to the meeting running a little late.

The club received some QSL Cards and these were passed around.

**Adjournment** moved by: Terry Stewardson VA3LU

**Next Executive Meeting: January 5, 2016, 7:30 PM, RM 213**

**Next LARC Meeting: January 12, 2016, 7:30 PM, RM 214**

### **New Satellites on the Horizon**

Posted on December 8, 2016 by Satellite News and submitted by Jan VA3JRS

Recent International Amateur Radio Union satellite coordination requests provide new details on several satellites expected to launch before the end of the first quarter of 2017.

The first satellite expected to launch is UBAKUSAT. UBAKUSAT, developed by Istanbul Technical University along with TAMSAT, GUMUSH, and ERTEK Ltd. is a 3U CubeSat with a Mode V/u inverting linear transponder, CW beacon, and a digital telemetry downlink. The transponder downlink frequencies will be 435.200 MHz – 435.250 MHz with an uplink of 145.940 MHz – 145.990 MHz. The CW beacon frequency will be 437.225 MHz and the digital telemetry downlink will be 437.325 MHz. UBAKUSAT will be delivered to the International Space Station aboard the JAXA HTV-6 resupply mission, scheduled for launch on December 9, 2016, for future deployment. The mission is expected to last 6-12 months.

On December 26, 2016, the China Center for Aerospace Science and Technology's BY70-1 satellite is expected to launch from Jiuquan Satellite Launch Center into a 530 km sun-synchronous orbit. The satellite, a 3-axis stabilized 2U CubeSat with deployable solar panels, will carry a Mode V/u FM transponder with an uplink frequency of 145.920 MHz and a downlink frequency of 436.200 MHz.

On March 31, 2017, two satellites from the Chinese Amateur Satellite Group (CAMSAT) are expected to launch from Taiyuan Satellite Launch Center into a 524 km orbit with an inclination of 42 degrees. The two satellites, CAS-4A and CAS-4B, will be 50 kg mass with 3-axis stabilization carrying optical remote sensing missions. The amateur radio payloads will be similar to the XW-2 series of satellites with Mode U/v linear transponders with power output of 100 mW, 100 mW AX.25 4800 baud GMSK telemetry, and 50 mW CW beacons. Frequencies for these two satellites have not yet been coordinated.

In addition to these satellites, AMSAT's Fox-1Cliff, Fox-1D, and RadFxSat (Fox-1B) satellites carrying Mode U/v FM transponders are all expected to launch in the first half of 2017. Nayif-1, from the Emirates Institution for Advanced Science and Technology (EI-AST) and American University of Sharjah (AUS) carrying a FUNcube Mode U/v linear transponder and telemetry downlink, as well as the U. S. Naval Academy Satellite Lab's QIKcom-2, PSAT-2, and BRICSAT-2 satellites carrying two-way amateur radio payloads are all expected to launch in the first half of 2017. Es'Hail-2, a geostationary satellite carrying AMSAT-DL's Phase 4A payload is scheduled to launch in the third quarter of 2017. AMSAT's RadFxSat-2 (Fox-1E) satellite carrying a Mode V/u linear transponder may also launch in late 2017.

*Ham Weight Loss Program.....AUTOMATIC  
GAIN CONTROL!*

*"BANDWIDTH"  
A HAM'S WAIST SIZE!*

# Lakehead Amateur Radio Club

## December 2016 Treasurers Report

Balance December 1, 2016 \$935.46

**Income**

December 13, Membership \$35.00

**Total Income** \$35.00

**Expenses**

December 13, B. Unger 10 Domestic Stamps \$9.61

**Total Expenses** \$9.61

Balance December 31, 2016 \$960.85

<u>Trailer Account</u>	
<b>Previous Balance</b>	<b>\$138.46</b>
<b><u>Income</u></b>	
December 21, Dividends	\$0.26
December 31, Interest	\$0.01
<b>Total</b>	<b>\$138.73</b>
<b><u>Expenses</u></b>	
Total Expenses:	<b>\$0.00</b>
<b>Balance in Trailer Account</b>	<b>\$138.73</b>

**Term Account**

December 01 2016 Balance \$2,055.97

December 19, Interest \$0.68

December 31, 2016 Balance \$2,056.65

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

# January 2017

Mon	Tue	Wed	Thu	Fri	Sat	Sun
						1 New Year's Day
2	3	4	5	6	7	8
9	10	11 QRP Fox Hunt	12 LARC Meeting Rm 214 McIntyre Bldg Con College 1930hrs	13	14 NA QSO Par- ty, CW	15
16	17	18 Phone Fray	19	20 NA QSO Par- ty, SSB	21 ARRL Janu- ary VHF Con- test	22
23	24	25 QRP Fox Hunt	26	27	28 Montana QSO Party	29
30	31		coffee meet Boston Pizza Arthur St. 2100 Thursdays		<b>4 February Freeze Your B*%* Off at VE3SAO</b>	