

# Message from the London Amateur Radio Club



Promoting Amateur Radio in London  
And surrounding area since 1920

June 3, 2013

## L.A.R.C. Executive June L.A.R.C. Meeting

### President

David Lambert, VE3KGK

### Vice-President, Membership

John Visser, VA3MSV

### Past President

Doug Elliott, VA3DAE

### Treasurer

Brian Bouckley, VA3ATB

### Secretary, Flea Market

Ruth Dahl, VE3RBO

### Director, Flea Market

Ann Rundle, VA3EOR

### Director, Repeaters

Mike Watts, VE3ACW

### Director, Field Day

Pat Ross, VE3CNX

### Non-Voting

### Director, ARES & CANWARN

Brett Gilbank, VE3ZBG

### Appointments

### Repeater Coordinator

Brad Seward, VE3NRJ

### Repeater

### Operator/Programmer

Vacant

### Field Day Coordinator

Pat Ross, VE3CNX

### Webmaster

Doug Elliott, VA3DAE

### Newsletter Editor

John Visser, VA3MSV

### Auditor

Rob Hockin, VA3HO

Our **June 13** meeting will include our **Annual General Meeting (AGM)** and a presentation by **Mark Bramwell, VE3PZR**, entitled "**Software Defined Radio - Part 2**". SDR continues to grow in leaps and bounds in both functionality and affordability. Mark will give us the latest scoop - if you've been waiting to try this out, it might be time.

Our **Annual General Meeting** is a procedure we go through every year as part of being incorporated. We're going to be a little more formal this year, because the executive is proposing some minor changes to our bylaws. The full constitution and bylaws with the changes highlighted will be emailed to the members with this newsletter.

## A Friendly Reminder Of What's On The Horizon... 2013 Hurricane Season Starts June 1st

May 11, 2013

If there's any reason to be involved in Ham Radio greater than the sheer enjoyment of the hobby, it'd be in Disaster Preparedness. As we all know, when disaster strikes, Ham Radio works! So keeping in mind that with the US Hurricane season soon to start June 1st, now's the time to get prepared, sooner, rather than later. This article from one of the national Preppers groups Ham Radio Blog, offers some advice on how to start getting ready, [Trying to Reason with Hurricane Season...](#)

Robert D. Hawkins, KI4HEE

## Next Meeting is Where and When?

**Reminder: The next monthly L.A.R.C. meeting on June 13, 2013 at 7:30 pm**

All meetings are normally located at St. Judes Anglican Church, 1537 Adelaide Street North at Fanshawe Park Road East in London, Ontario.

The meetings are **normally** held on the second Thursday of the month at 7:30 pm EST during the months of September to June.

Next Meeting will be September 12, 2013. This meeting will be a presentation by Kevin Stumpf.

## Area Repeaters

### LARC Repeaters

#### London

VA3LON 147.060 + 114.8Hz

VA3MGI 145.390 - 114.8Hz

### SORT Repeaters

#### London

VE3TTT 147.180 + 114.8Hz  
Echolink Node 10741

VE3SUE 444.400 + 114.8 Hz  
IRLP Node 2400

VE3TTT 442.200 + D-Star

#### Ipperwash

VE3TCB 146.940 - 114.8 Hz  
Linked to VE3SUE

#### Grand Bend

VE3SRT 442.050 + 114.8 Hz  
Linked to VE3SUE

### Other Area Repeaters

#### London

VA3SIX 53.470 - 114.8 Hz

VE3OME 145.450 - 114.8 Hz  
CANWARN

VA3FEZ 444.100 + 114.8 Hz

#### Grand Bend

VE3RGB 146.760 + 173.8 Hz

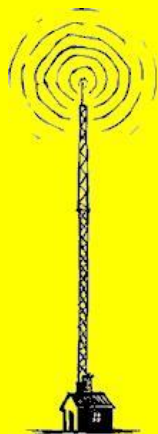
#### Stratfordville

VE3DPL 146.655 - 131.8 Hz

#### St. Thomas

VE3STR 147.330 + 114.8 Hz  
Echolink Node: 72886

VE3STR 443.825 + 114.8 Hz  
IRLP Node: 2482



If you have a repeater that should be listed here, please forward the information to John Visser, VA3MSV at [va3msv@hotmail.com](mailto:va3msv@hotmail.com) and I'll add it to the list.

## Membership Certificates

The Club has created membership certificates for its current members. You can see your own certificate at the following link. <http://www.larc.ca/member-list.htm>

Simply click on your surname and it will bring up a PDF of your certificate suitable for printing.

## Flaunt Your Face – Show Your Shack

In our hobby it's not always easy to put a face to all the fellow hams you talk to on the air. To help us all figure who's who, LARC invites its members to submit digital photos of yourself and/or your shack to be published on the membership page of our website. Purely voluntary of course, and if you prefer you can submit just one (depending on whether you think your face or your shack is more presentable).

How will it work? On the membership page, we'll attach your own picture where your first name appears, and the picture of your shack to your callsign. See the entry for Doug Elliott, VA3DAE for an example.

How do you submit your pictures?

Just email them to the LARC site webmaster address, which is: [webmaster@larc.ca](mailto:webmaster@larc.ca)

## Mutual Aid

Would you be willing to answer some questions if a fellow ham needed some advice? Got a problem you can't figure out? Want to try something new but need someone to show you the ropes? Check out our new **Mutual AID page** (<http://www.larc.ca/mutual-aid.html>), a new way to get people who are looking for assistance together with the folks who can help supply the answers. **Let us know** what you think of this new facility.

## Membership Report

Currently the membership for the London Amateur Radio Club stand at 99. Of the 16 Honorary Members brought in from the L.S.R.C., 4 have paid for the current 2013/2014 year. For the 2013/2014 year, we so far have 20 new members.

I would like to welcome the following new members for 2012/2013

Gary Burton, VE3JEA  
Geoffrey Clark, SWL  
Corbin Lippert, VE3NIS  
Maryann Mosley, VA3FMV  
Sarah Nethercott, VA3AKV  
Jason Pollock, VA3QIX  
Joshua Sandor, VA3EFT  
Zachary Seguin, VA3ZTS  
Alan Zhang, VA3ZHN  
Jay Gall, SWL  
Martin Southcott, VA3MRS

Don Cameron, VA3AKT  
Tim Clark, VE3WGH  
Rob Luzius-Vanin, VA3LTZ  
Todd Mosley, VE3FMV  
Mac Goodyear, VA3MGA  
Jim Rivers, VA3DVT  
Don Stefanik, VA3KBC  
Darrell Smiley, VE3DLY  
Gary Wabersich, VE3XDM  
Simon Wilton, G7HCD/VA3SII

# Nets



## Daily

### ONTARS Net

3.755 MHz 7:00 am – 6:00 pm

### Trans Provincial Net

7.055 MHz 7:00 am – 5:00 pm

### London Senior's Net

146.400 MHz 7:00 pm – 7:30 pm

## Sunday

### ARES Ontario Net

7.153 MHz 1:00 pm

7.055 MHz 3:00 pm

3.742 MHz 7:15 pm

IRLP Reflector 9005 8:00 pm

## Monday

### LARC 2m Net

147.060 + VA3LON 8:00 pm

### SATERN Net

147.180 + VE3TTT 9:00 pm

444.400 + VE3SUE 9:00 pm

## Tuesday

### ELMER Net

147.060 + VA3LON 9:00 pm

## Wednesday

### ARES Net

145.450 + VE3OME 7:30 pm

### ARES Ontario Net

IRLP Reflector 9005 8:00 pm

## Thursday

### PROCOMM Net

147.180 + VE3TTT 8:00 pm

444.400 + VE3SUE 8:00 pm

## Friday

### Tech Net

147.180 + VE3TTT 8:00 pm

444.400 + VE3SUE 8:00 pm

## Saturday

### VE3TTT 2m Net

147.180 + VE3TTT 7:30 pm

444.400 + VE3SUE 7:30 pm

146.940 - VE3TCB 7:30 pm

442.050 + VE3SRT 7:30 pm

# RAC Bulletin 2013-019E - Radio Amateur of Canada Foundation Grants

May 16, 2013

Radio Amateurs of Canada (RAC) is pleased to announce that we are seeking applications for grants from Amateurs across Canada in the following categories:

- \* Scholastic Grants for deserving Amateur Radio Operators
- \* Research Grants for research and development related to Amateur Radio
- \* Community Grants for charitable institutions, senior homes, and youth centres
- \* Emergency Grants for radio equipment for emergency service groups

The Board of Directors is especially interested in awarding grants to deserving young Amateur Radio operators who are furthering their education at the College or University level in an Electrical Engineering course. If you are enrolled in a Science, Technology, Engineering or Mathematics (STEM) program we also encourage you to submit a request. Send your College / University name, recent transcript, Amateur Radio Certificate and a brief biography to RAC.

Further details and application forms are available at the RAC web site:  
<http://www.rac.ca/en/rac/donations/foundation/grant-info.php>.

If you have a child or grandchild in college or university this would be a great way to assist them furthering their education in the technology fields. Using the knowledge obtained from their Amateur Radio skills to further their engineering ability.

The Board of Directors is pleased to thank all the Amateurs across Canada who have generously donated to this program. If you wish to contribute please contact RAC HQ for further details.

I will be the contact person for this round (2013) of grant applications.

Bill Unger, VE3XT <[ve3xt@rac.ca](mailto:ve3xt@rac.ca)>  
RAC Director - Ontario North East  
\*\*-----\*\*

Vernon Ikeda - VE2MBS/VE2QQ  
Pointe-Claire, Québec

RAC Blog Editor/RAC E-News/Web News Bulletin Editor

## Upcoming Events

Sat., Jun. 22, 2013 to  
Sun., Jun. 23, 2013

[ARRL Field Day](#) – London

**Amateur Radio Club**

Reservoir Park, London, Ontario. More details to follow later.

Sat., Jul. 13, 2013

[Ontario Hamfest](#) – Burlington

**Amateur Radio Club**

Milton Agricultural Fairgrounds, Milton, Ontario

Sat., Oct. 5, 2013

[HARC Hamfest 2013](#) -

**Hamilton Amateur Radio Club**

Concession Building at the Ancaster Fair Grounds, 630 Trinity Road, Ancaster, ON

Sun., Sep. 22, 2013

**London Amateur Radio Club**

**Hamfest – London ARC**

**NEW LOCATION** - Hellenic

Community Centre, 133 Southdale Road, London, Ontario

### Every Saturday Morning

starting at 8:30 am.

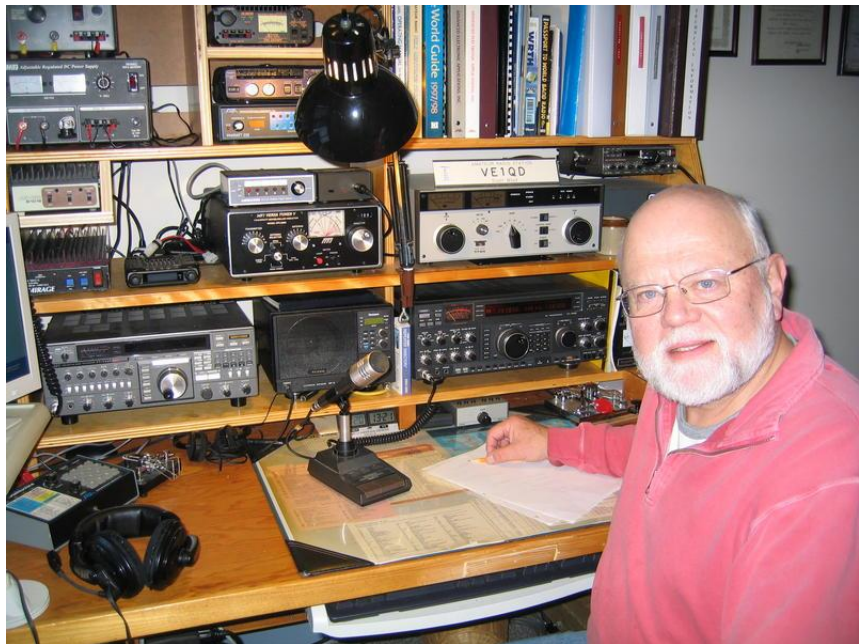
Breakfast at the Cottage Restaurant. Located across the street from the London Police Station on Dundas St.

If you have an upcoming event that you would like to have listed here, please forward the information to John Visser, VA3MSV at

[va3msv@hotmail.com](mailto:va3msv@hotmail.com) and I'll add it to the list.

# RAC Bulletin 2013-017E - Radio Amateur of the Year for 2012

May 4, 2013



The RAC Board of Directors takes great pleasure in announcing the selection of Scott Wood, VE1QD of Halifax, Nova Scotia, as the Canadian Radio Amateur of the Year for 2012.

Scott celebrated sixty years in Amateur Radio in 2012. Over these years he has contributed enormously, and in many and varied ways both to our hobby and to radio in general. In his youth as a net controller in the Oregon State Fire Service, later as a radio operator in the US Naval Reserve, as a member of the Board of Directors for Radio for Peace International, in contesting and DXing, and in Elmering aspiring new hams, both young and old. However, it is the leadership in Amateur Radio that Scott has demonstrated locally, regionally, and internationally that is being recognized with this award. Scott has demonstrated vision, enthusiasm, dogged determination, and commitment to excellence in the area of Amateur Radio DXing through the establishment and management of the Maritime DX Forum for eight consecutive years. Scott envisioned the forum to be a venue where DXers in the region could come together annually to hear world-class, as well as local DX experts speak about important and current DX topics, and to provide a forum in which to share ideas with some of the best operators and leaders within the Amateur Radio community.

A presentation will be made to Scott by the RAC President at the RAC booth at the Dayton Ham Fest this month. A more detailed article will appear in an upcoming TCA/RAC Report

Geoff Bawden, VE4BAW

President and Chair RAC

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Vernon Ikeda - VE2MBS/VE2QQ

Pointe-Claire, Québec

RAC Blog Editor/RAC E-News/Web News Bulletin Editor

## HF Corner for June 2013

**Editor Note:** You can hear Dave make an HF contact on YouTube at the following link.

<http://www.youtube.com/watch?v=KQky1tug-MY>

May 25 to Jun 07	Aland Is	OH0	SSB CW RTTY
Jun 01 to Jun 07	Fiji	3D2WN	Holiday style
Jun 02 to Jun 05	Market Reef	OJ0VM	HF
Jun 03 to Jun 10	St Barthelemy #	FJ	Some SSB
Jun 03 to Jun 20	Cape Verde Is	D44TWO	CW SSB
Jun 08 to Jun 15	Bahamas	C6ATT	CW SSB PSK 31
Jun 11 to Jun 28	St Martin	FS	80 to 6m
Jun 14 to Jun 28	British Virgins	VP2V	6m SSB
Jun 16 to Jun 30	Svalbard	JW9JKA	CW SSB
Jun 17 to Jun 20	Luxembourg	LX	30m CW/PSK
Jun 22 to Jun 29	Guantanamo**	KG4	HF CW
Jul 24 to Jul 29	Ustica Island	IE9/IK6JRI	
Jun 28 to Jul 07	Curacao	PJ2	6m +15/12/10
Jun 30 to Jul 05	Luxembourg	LX	HF SSB RTTY PSK 31 & 63
Jul 01 to Jul 06	Market Reef	OJ0V	CW SSB
Jul 01 to Jul 16	Senegal	6V7S	HF
Jul 05 to Jul 09	St Maarten #	PJ7	HF multimode
Jul 06 to Jul 16	St Pierre/Miquelon	FP	SSB CW RTTY PSK31
Jul 06 to Jul 25	Haiti	HH5	CW
Jul 07 to Jul 13	Marquesas Is	FO	CW SSB RTTY
Jul 07 to Jul 13	Hiva Oa Island	UT6UD/FO	30-10m CW/SSB/RTTY
Jul 09 to Aug 10	St Kitts/Nevis	V47JA	160-6m SSB/RTTY/Digital Modes
Jul 10 to Jul 14	St Martin	FS	Multimode
Jul 14 to Jul 23	Austral Is	FO	CW SSB RTTY
Jul 14 to Jul 22	Austral Islands	UT6UD/FO	30-10m CW/SSB/RTTY
Aug 02 to Aug 09	Jersey	GJ	SSB CW RTTY PSK
Aug 03 to Aug 04	Reunion Is	TO1PF	HF
Aug 16 to Aug 20	Greenland	OX5YL	160-6m
Aug 21 to Aug 26	Malta	9H3	40-10 HF holiday style.
Sep 28 to Oct 11	Congo	TN5MS	HF
Oct 2013	Viti Levu Island	3D2AR	160-10m CW/SSB/RTTY

# St. Barthelemy and Sint Maarten used to be one entity. They are now separate entities for DXCC purposes

\*\* Rumor has it that there is a new push on to close Guantanamo as a US prison for enemy combatants. Work this one when you can in case it becomes unavailable in the future.

The RAC Canada Day Contest will run from 0000Z to 2359:59Z on July 1, 2013.

I have included what I have so far for July/August since there will be no meetings in those two months.

Good luck and good DX. There are a couple of new ones in there I need. I'm hoping not to have to fire up the Drake L 4B to work 'em!! I do not want to dim the lights around London! I'll try with my QRP station (100 watts to a Cushcraft A4 at 55'.) It flies under the "height radar", having been erected some 25 years ago!

73,

David ,VE3KKG

## Three Decade Old TI9CCC Dates Finally Approved

May 24, 2013

Bill Moore, NC1L, at the ARRL DXCC Desk reports that an almost three decade old operation from Cocos Island has been approved for DXCC credit. According to Moore, over the years some applicants have had the TI9CCC operation rejected in their DXCC application mostly due to an "Incorrect Date Period." Now, the issue with the dates for this

operation has been resolved. If you had this operation rejected, and your confirmation falls between February 15 through February 28, 1984, you are invited to send an e-mail to [bmoore@arrl.org](mailto:bmoore@arrl.org) to be placed on the list for an update to your record. (ARRL DXCC)

## E51WL Was The Previous ZK1WL And Good For DXCC

May 31, 2013

If you are DXCC hunting and have a card for E51WL for North Cook Island rejected, here's some good news. According to Bill Moore at the ARRL DXCC Desk, it turns out that the operator is a native of the island and that his previous ZK1WL

had previously been approved. The bottom line is that this is just a callsign change, so if you had E51WL rejected in a recent submission send an e-mail to [bmoore@arrl.org](mailto:bmoore@arrl.org) for an update to your record. (NC1L)

## Morse Code @ Symbol Turned 9 Years Old May 3, 2013

May 26, 2013

The Morse code may be about 160 years old now, but the newest symbol was made official as of May 3, 2004. I have had an MP3 of the @ symbol, **di-DAH-DAH-di-DAH-dit**, posted since 2004 on [http://wb7tjd.org/wiki/Morse\\_code\\_@\\_Symbol](http://wb7tjd.org/wiki/Morse_code_@_Symbol). A bit surprising there hasn't been much in the search engines about it from other than commercial sites, nothing much to my knowledge in amateur circles.

On one of the sites I noticed reference to the way it sounds using dot-dash terminology, which is

something I strongly discourage of anyone wishing to learn Morse code. It will set one back for an eternity if one converts the sound to dot-dash and then converts dot-dash to printed characters.

In the article I cite I sought out help from ARRL to get some documentation for my article, and do have some quotes from The ARRL Letter.

73

Larry M. Kuck, WB7C

## New 24 GHz EME World Record Of 16383km

May 10, 2013

Rex Moncur, VK7MO, has completed an Earth-Moon-Earth QSO with the OK1KIR EME Team in the Czech Republic with some 10,180 miles between. This, to claim the new world EME record on 24 GHz.

To accomplish this feat VK7MO used just a 1.14 meter dish and 10 watts which he has designed for portable operation. On the other end of the path OK1KIR used a 4.5 meter dish and 22 watts.

According to the VK7 News, this has been a 12 month project for VK7MO during which he

collaborated with famed Digital low noise mode developer Joe Taylor, K1JT. The two worked to produce improved decoders that could cope with the very wide spreading of signals on the 24 GHz EME path.

Word is that VK7MO and K1JT will be publishing this work in the next edition of DUBUS magazine. This is a publication which is devoted to VHF and Microwave amateur radio communications. More information is at [www.dubus.org](http://www.dubus.org). (vk7news)

# Grow, Thrive and Influence: The future of RAC and Amateur Radio

May 8, 2013

In October of 2010 Radio Amateurs of Canada (RAC) Directors and Executives met in Ottawa to establish RAC's strategic goals for 2010 to 2012.

This established Planning Cycle 1 and was the "Financial Recovery" period. By midway in 2012 we met the objectives of that planning cycle: RAC is now solvent and membership numbers were stabilized and increasing.

In February of this year, RAC Directors and Executives met in Ottawa to establish our 2013 to 2018 goals. We are now in Planning Cycle 2 which can be labeled "Grow, Thrive, and Influence". This phrase applies to both the future of RAC and the future of Amateur Radio in Canada.

On May 1st, RAC held the first in a series of webinars with club presidents and Field Organization volunteers to discuss the activities of RAC from January 2010 to date and RAC's goals and 2013/14 plans. Over the next couple of months we will have webinars with each Region. Our first was in the Atlantic Region.

Presentations were made by the President and Chair, Geoff Bawden, VE4BAW, Atlantic Director Everett Price, VO1DK, and Chief Field Services Officer Doug Mercer VO1DTM/VO1DM. Other RAC officials present were Northern and Eastern Ontario Director Bill Unger, VE3XT, Atlantic Deputy Director Len Morgan, VE9MY, Vice President and Regulatory Affairs Officer Ian MacFarquhar, VE9IM and Chief Information and Technology Officer, Paul Burggraaf, VO1PRB.

Our five year vision and goals were outlined:

- Continue growth of amateur radio and RAC
- Increase public support for amateur radio
- Increase political support for amateur radio
- Increase RAC influence on regulatory agencies (local, provincial, national and international)

Actions for 2013/14 include:

- Develop publication and communication supports to clubs, amateurs, public, to grow new Amateurs, increase RAC membership and influence public and political opinion

- End "hidden subsidies" for RAC to stand as an organization,
- Increase RAC resource base (grow resources)
- Be prepared to pay for mission critical functions (to ensure increased accountability and outcomes)

Two major issues were raised by the participants, New Brunswick's ban on amateur mobile operation (the only Canadian province with such a ban) and foul language on the airways and the perceived lack of language enforcement by Industry Canada.

RAC and Amateurs in New Brunswick fought the legislation banning Amateur Radio mobile operation when it was introduced and for RAC represents the only (temporary) defeat on this issue. All other provinces responded to RAC and Amateur lobbying and now permit amateur mobile radio operation. Provinces changed their draft legislation due to our collective action. The New Brunswick file is still open and we will continue to work with our members to have the legislation changed to enhance safety in that province. Eventually the politicians will see the light.

Good practice requires that operators use language that is inoffensive. I can recall that I would tell employees that if you couldn't tell your mother a certain joke or show her a certain cartoon and if you wouldn't proudly tape it to the outside of your office door then you shouldn't have the joke or cartoon in the workplace.

The same guideline should apply to the use of Amateur frequencies. RAC is not a regulatory agency but we will reinforce good practice and raise issues raised by our members to Industry Canada.

Foul language is not good practice.

I am looking forward to our next webinar for Northern and Eastern Ontario with Director Bill Unger, VE3XT. Invitations will be going out shortly.

Geoff Bawden, VE4BAW  
President and Chair RAC

## AmateurLogic.TV 54: Remote Control

May 13, 2013

[AmateurLogic.TV Episode 54 is now available for download.](#)

We explore three different Remote Control options to control a station from anywhere in the world. George and Tommy prepare for Dayton Hamvention. And some really funny stuff...

1:10:00 of interesting and entertaining ALTV. View in web browser: [YouTube](#)

George Thomas, W5JDJX  
*Spreading Amateur Radio fun through video...*  
[AmateurLogic.TV](#)  
**HAM NATION**

## Transparent Aluminum - YES, But A Ceramic

May 20, 2013

Remember the 1986 movie scene in Star Trek IV: The Voyage Home, where Scotty (James Doohan) discloses the formula for transparent Aluminum?

Well, Surmet Corporation in Burlington, MA has developed ALON® Optical Ceramic, a transparent Aluminum based ceramic for armor, that is as strong as sapphire.



<http://t.co/yqN0BsWhy6>

ALON® is an amazing new advanced ceramic that is based on a composition of

aluminum oxy nitride with a cubic spinel crystal structure. It is hard, durable, and transparent in the near ultra violet, visible and near infrared wavelength of light.

<http://www.surmet.com/technology/alo...mics/index.php>

Surmet is a supplier of ALON® optical windows, domes, plates, rods and tubes for advanced applications. Fabricated ALON® products combine superior mechanical and optical properties matching those of sapphire with the added

advantages of an isotropic cubic crystal structure. ALON® is an ideal material for applications requiring high strength light-weight durability and transparency in the face of world's most demanding environments.

### ALON® Optical Ceramic

Optically transparent from the near ultraviolet to the near infrared wavelength (0.25 to 4.6 microns)

- Excellent clarity
- Total absence of birefringence
- Outstanding hardness and high strength
- Low internal stress
- Available in a wide variety of sizes, shapes and thicknesses
- Produced using proven ceramic forming processes
- Readily scaled up to high volumes
- Cost effective advanced material solution
- Applicable to a wide variety of industries including aerospace, security, defense and Semiconductor, Energy and consumer products.

*Gregory J. Beat, W9GB*

## Heathkit Launches New Survey

May 31, 2013

After the apparent final demise of the Heathkit Company last year hams on several websites are reporting that they were surprised to learn of a new consumer survey from whomever now owns the company name.

The fairly lengthy on-line survey asks responders to relate what is important to them, their kit-building interests, their thoughts about the many vintage Heathkits and their interest if any in amateur radio. It also requests thoughts and ideas about Heathkit

while offering the opportunity to sign up to join a mailing list.

The opening page instructions note that Customer privacy is very important to them. As such that they do not release personally-identifying customer information outside our company as explained in its Privacy Policy. As such, those responding to the survey can choose which questions that they wish to answer.

You can find more on-line at [tinyurl.com/new-heathkit-survey](http://tinyurl.com/new-heathkit-survey). (*G3ZOD, others*)

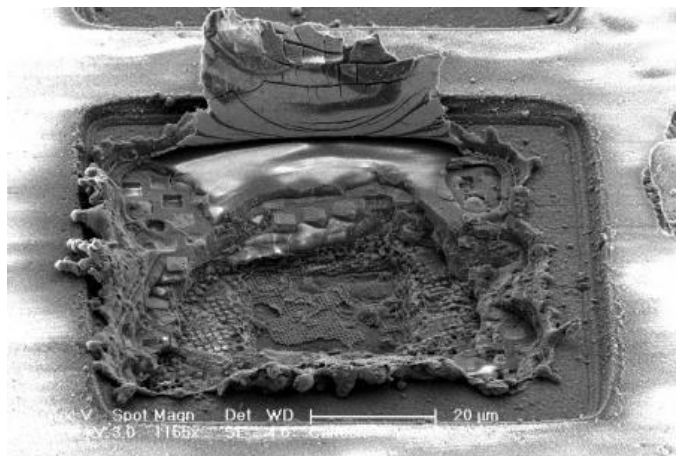


## Self-Healing Chips Are A Reality

May 17, 2013

And finally this week, indestructible electronics are a step closer to reality thanks to engineers at the California Institute of Technology who have developed what they are calling self-healing integrated chips.

The team from the High-Speed Integrated Circuits laboratory in Caltech's Division of Engineering and Applied Science repeatedly blasted tiny power amplifiers with a high-power laser, vaporizing many of their components. They then watched the chips develop their own work-arounds in less than a second.



Some of the damage Caltech engineers intentionally inflicted on their self-healing power amplifier using a high-power laser. The chip was able to recover from complete transistor destruction. This image was captured with a scanning electron microscope. Credit: Jeff Chang and Kaushik Dasgupta

The new integrated circuits are so small that 76 of them, including the amplifier and everything needed to heal it, can fit on one penny. The amplifiers developed by the team use on-chip sensors that monitor temperature, current, voltage, and power. These sensors send the information to a custom application-specific integrated circuit or ASIC which is a central processor on the same chip

that functions as the system's brain. The ASIC evaluates the information it receives from the sensors about the amplifier's performance, decides what adjustments need to be made to the system's actuators, and makes those changes. The unit was designed to get to the optimum state for all actuators in any situation without outside intervention.

The benefits of this approach go beyond overcoming severe damage. Because of the self-sensing, these amplifiers used about half as much power as those without the self-healing capability, and performance was more predictable and reproducible.

In addition to working around damage to parts of the circuits, the amplifier's self-healing can repair static variation due to differences across components and long-term aging problems that arise over time as use changes the internal properties of the system. It can also handle short-term variations caused by changes in load, temperature, and differences in supply voltage.

Since chips such as these are useful for next-generation communications, imaging, sensing, and radar applications, showing successful self-healing here should mean that it also can be done in less cutting-edge electronic systems such as cellphones and maybe someday even in ham radio gear.

Research on this project was funded by the Defense Advanced Research Projects Agency and the Air Force Research Laboratory. More on this story is on-line at [tinyurl.com/self-healing-chips](http://tinyurl.com/self-healing-chips).  
(CalTech, WIA)

## VO-52 Satellite Completes Eight Years On Orbit

May 10, 2013



VU2WMY reports that AMSAT-India's VO-52 hamsat completed 8 years on-orbit on Sunday, May 5th. He notes that the overall health of the satellites parameters are

excellent and that AMSAT-India hopes that transponders on-board VO-52 will continue to render services for many more years to come. He also notes that during the time it has been in space that VO-52 has proven to be a valuable communications resource for the amateur radio community. (VU2WMY, Southgate)

## M Class Solar Event Captured On May 3rd

May 10, 2013

An intense solar storm erupted from the Sun on Friday, May 3rd in what astronomers have described as a dazzling solar display. The solar flare discharged from the left limb of the Sun peaked at 17:32 GMT, registering as a medium-strength M 5.7-class event that launched hot solar plasma about 200,000 kilometers above the surface of the Solar Disc. Photos of the event were captured by NASA's Solar Dynamics Observatory and sent back to Earth by radio.

The May 3rd solar storm was the second major space weather event in three days, but was not aimed at Earth. The Solar Disc fired off an eruption on Wednesday, May 1st from the same region, which at the time was at the very leftmost limb of the Sun as seen by the Solar Dynamics Observatory. Astronomers predict that this active region will be rotating to face Earth fairly soon.

So far the strongest solar flare of the year occurred on April 11 and registered as an M 6.5 class storm. M-class solar flares are medium-strength events and are the weakest type of storm that can still have an impact on Earth. When aimed directly at our planet they can cause aurora displays and some short term radio communications outages. The stronger X class flares are the ones that can interfere with communications satellites and cause major radio blackouts on Earth.

The Solar Dynamics Observatory is a NASA mission in launched in February of 2010 to study the Sun for over five years. It is one of several spacecraft constantly monitoring the our star to track these solar weather events as we approach what's believed to be near the peak of Solar Cycle 24.

*(Space.com, Spacenews, Wikipedia)*

## VA300G Internet Sensation

May 14, 2013



Canadian astronaut Chris Hadfield (VA300G) along with flight engineers

American Tom Marshburn and

Russian Roman Romanenko returned to Earth on Tuesday from a five-month stint on board the International Space Station landing in Kazakhstan at 3.31am BST. Since docking with the ISS in a Soyuz craft in December, the 53-year-old station commander has kept hundreds of thousands of followers back on Earth informed and entertained from orbit.

He has tweeted from the space station at least 1,500 times, capturing remarkable images of many corners of the world.

[https://twitter.com/Cmdr\\_Hadfield](https://twitter.com/Cmdr_Hadfield)

Hadfield was born in Sarnia, Ontario, in 1959. A mechanical engineer by training, he joined the military and graduated top of his class in 1988, from a US air force test pilot school. In 1991, the US Navy voted him test pilot of the year. He has flown more than 70 different aircraft, among them the supersonic dogfighter, the F/A-18 Hornet.

The Canadian Astronaut Corps recruited Hadfield in 1992, from more than 5,000 applicants. He worked on space shuttle safety, and went on to become NASA's Chief CapCom, the voice of mission control for astronauts in orbit, on 25 space shuttle missions.

This was Hadfield's third trip into space. He flew aboard the shuttle Atlantis to the Mir space station in 1995, and to the ISS to install Canada's robotic arm in 2001. The installation took two space walks, which made Hadfield the first Canadian to float freely in space. The Royal Canadian Mint commemorated the feat with gold and silver coins.

The Canadian astronaut posted a cover version of the David Bowie's song space oddity recorded 230 miles above the earth on Sunday night. <http://www.youtube.com/watch?v=lc8BcBZ0tAI>

Although I don't have a 2m transceiver, Commander Hadfield was active on ham radio as reported on the ISS Fan Club website. <http://www.issfanclub.com/>

**Welcome back home expedition 35.**

*Robert Duncan, MOODV*

# CQ Announces 2013 Hall of Fame Inductees

May 17, 2013

*CQ magazine* today announced its **2013 Hall of Fame inductees**, adding two members each to the CQ DX and Contest Halls of Fame along with eight new members of the CQ Amateur Radio Hall of Fame.

The **CQ Amateur Radio Hall of Fame** honors those individuals, whether licensed hams or not, who have made significant contributions to amateur radio; and those amateurs who have made significant contributions either to amateur radio, to their professional careers or to some other aspect of life on our planet.

The 2013 inductees (listed alphabetically) are:



Evelyn Garrison, WS7A (SK) - amateur radio industry leader

Joel Kleinman, N1BKE (SK) - former Managing Editor of QST magazine



Laurie Margolis, G3UML/GPC3L - Longtime BBC correspondent and contributor to amateur radio magazines

Michael Owen, VK3KI (SK) - Longtime president of the

Wireless Institute of Australia and chairman of IARU Region 3



Harry Rubinstein (ex-9EEV) (SK) - Inventor of the printed circuit, the slider potentiometer and the combination potentiometer/on-off switch

Walker Tompkins, K6ATX - Journalist, author and historian, his three dozen books included several well-known ham radio-related novels



Joe Walsh, WB6ACU - Rock music performer and Rock & Roll Hall of Fame inductee

William G. (Bill) Welsh, W6DDB (SK) - CQ Novice Editor for 20 years; responsible for helping thousands to get their ham licenses



## CQ DX and Contest and DX Halls of Fame

The CQ DX and Contest Halls of Fame honor those amateurs who not only excel in personal performance in these major areas of amateur radio but who also "give back" to the hobby in outstanding ways.

The 2013 inductees to the **CQ DX Hall of Fame** are:



Vladimir Bykov, UA4WHX/AC4LN, has visited and operated from over 100 DX entities in the past ten years and operated from all six continents in 2012 alone. Has provided over 700,000 DX contacts for hams around the world (and QSLed them all).

Robert "Gary" Dixon, K4MQG, is a founding member of the Carolina DX Association and as Founding President of INDEXA, the International DX Association, which has helped support over 200 DXpeditions in the past 30 years.

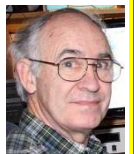


The 2013 inductees to the **CQ Contest Hall of Fame** are:



Dale Green, VE7SV, is a world-class contester who has been hosting teams of new and experienced contesters at his superstation for the past 20 years, and recently helped start a contest group in Chile.

Charles "Chas" Fulp, K3WW, also a multi-award winning contester and past president of the Frankford Radio Club (FRC), which says Chas "is our role model and sets the standard for other FRC members to strive to achieve."



Formal inductions to the CQ Contest and DX Halls of Fame were scheduled for the Dayton Hamvention. More detailed descriptions of inductees will appear in the official announcement in the July 2013 issue of *CQ magazine*.

*(Southgate, RL Brunton, G4TUT)*

## Invite a Kid to Field Day

By Dan Romanchik, KB6NU

If you've been around ham radio for any length of time, you'll notice that ham radio operators like to complain. One of the most frequently heard complaints is, "Kids aren't interested in amateur radio

anymore." While I'm not so sure that's true, I do know that now is the time for you to do something about it.

How? Invite a kid to Field Day.

Invite them to help you set up antennas.

Show them how you power the rigs with a generator, or even cooler, by charging a battery with a solar panel.

Let them sit in front of the rig, show them how to make contacts, and log for them. To make it easier for them, make up a cheat sheet with the callsign spelled out phonetically and the exchange, also spelled out phonetically.

Let them operate for as long as they're interested. When they're done, thank them on contributing to your club's total score.

Answer every single one of their questions.

This may not win them over immediately, but I can assure you that it will make an impression on them.

To increase your chances of success, find a kid that's already technically inclined. Invite a bunch of them from the high school's robotics team, for example.

If you don't have any plans for Field Day, then make some. Then, go find that kid. If you don't, then you don't have any right to complain that there are no kids in ham radio.

When he's not trying to get kids interested in amateur radio, Dan, KB6NU enjoys working CW on the HF bands and teaching ham radio classes. For more information about his operating activities and his "No-Nonsense" series of amateur radio license study guides, go to [KB6NU.Com](http://KB6NU.Com) or e-mail [cwgeek@kb6nu.com](mailto:cwgeek@kb6nu.com).



## HamRadioNow: The Last BIG Field Day (documentary video)

May 29, 2013

[HAMRADIOWEB.tv](http://HAMRADIOWEB.tv)

Episode 79:

The Last **BIG** Field Day

### The **Last BIG** Field Day? What's up with that?

Here's the deal. The call sign W3AO has appeared in almost every Field Day log since 1999, when the group began an unbroken run at the top of the QST Top 10 box. Members of the **Potomac Valley Radio Club** and **Columbia (MD) Amateur Radio Association** assemble an awesome operation, with phone, cw and digital in all bands, satellite, VHF/UHF and all the bonus points a group can rack up. Their entry class is usually in the low to mid 20's. With top contest operators behind the controls, year after year their score is head and shoulders above everyone else.

In 2003 and 2004, though, they were listed in **51A** and **50A**. Stations they worked had a hard time believing the report they were receiving. Was it real? Was it made up? How does a Field Day operation accomplish 50 or more transmitters? And why has it never been done after 2004?

The **Last BIG Field Day** documents the **W3AO 2004** operation from their site just outside



Baltimore, MD. We cover it all, and show you just how this huge station was assembled and operated. In true Field Day style,

not everything went according to plan. But once again W3AO triumphed!

And yes, we'll show how they reached the 50+ transmitter total, and why nobody's done it since, and probably no one will.

This program was originally released on DVD from **HAMRADIOWEB's** parent production company, **ARVN**. The DVD is still available, and includes the bonus feature **1971 Pacific Palisades ARC Field Day Movie**, as well as **news coverage of KN4AQ's local club Field Day**.

On our web page, we are including a **bonus feature** with additional interviews from the W3AO operation.

And you might also enjoy a couple of earlier **HAMRADIOWEB** episodes and other **KN4AQ video** featuring Field Day:

- **Episode 13: Get Up and GOTA**
- **Episode 14: A Simple Field Day Station / Field Day Antenna Launcher Contest**
- **An All YL Field Day Station**
- **Hanging a Dipole for Field Day**
- **Field Day News Coverage**
- **Pre-Field Day News Interview**
- **Field Day/All Night Long**

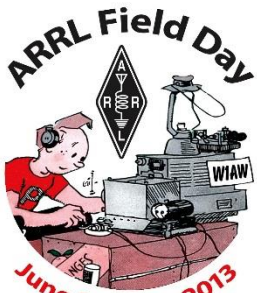
Watch this episode on our web site, [www.HamRadioNow.tv](http://www.HamRadioNow.tv)

Gary Pearce, KN4AQ

## Field Day 2013



## ARRL Field Day Overview



[www.arrl.org](http://www.arrl.org)

ARRL Field Day is the single most popular on-the-air event held annually in the US and Canada. Each year over 35,000 amateurs gather with their clubs, friends or simply by themselves to operate.

ARRL Field Day is not a fully adjudicated contest, which explains much of its popularity. It is a time where many aspects of Amateur Radio come together to highlight our many roles. While some will treat it as a contest, most groups use the opportunity to practice their emergency response capabilities. It is an excellent opportunity to demonstrate Amateur Radio to local elected community leaders, key individuals with the organizations that Amateur Radio might serve in an emergency, as well as the general public. For many clubs, ARRL Field Day is one of the highlights of their annual calendar.

- **Objective**

To work as many stations as possible on any and all amateur bands (excluding the

60, 30, 17, and 12-meter bands) and to learn to operate in abnormal situations in less than optimal conditions. Field Day is open to all amateurs in the areas covered by the ARRL/RAC Field Organizations and countries within IARU Region 2. DX stations residing in other regions may be contacted for credit, but are not eligible to submit entries.

- **Dates**

Field Day is always the fourth full weekend of June, beginning at 1800 UTC Saturday and running through 2059 UTC Sunday. Field Day 2013 will be held June 22-23, 2013.

- **Bands**

Any Amateur Radio band except 12, 17, 30 and 60 Meters.

- **Awards**

Field Day is not a contest; no certificates are awarded

## L.A.R.C. Field Day

**Location** - Reservoir Park. Address of the park is 869 Commissioners Road West. Setup usually begins around 12:00pm on Saturday.

Most of us will meet at the Cottage Restaurant on Dundas Street at Adelaide Street around 9:00am for breakfast before heading to the park. The address for the Cottage Restaurant is 600 Dundas St. Parking is available directly behind the restaurant and in front of the Blacksmith Shop. Municipal Parking Lot available behind Banting House as well.

### Current Band Captains (Subject to change)

**80m Phone** - Doug Elliott, VA3DAE

**40m Phone** - Don Tod, VE3MGD

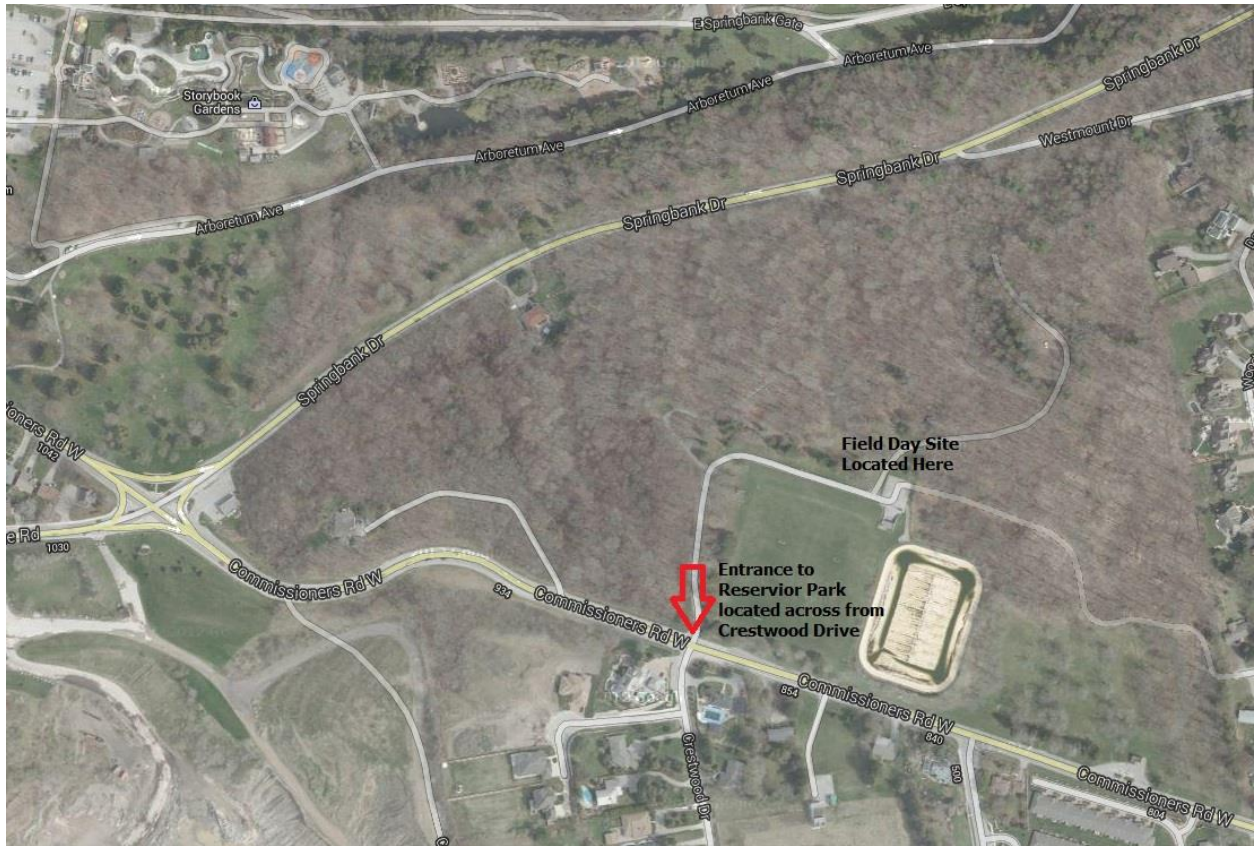
**20m Phone** - Mike Watts, VE3ACW

**15m Phone** - Ian MacLeod, VE3IRM

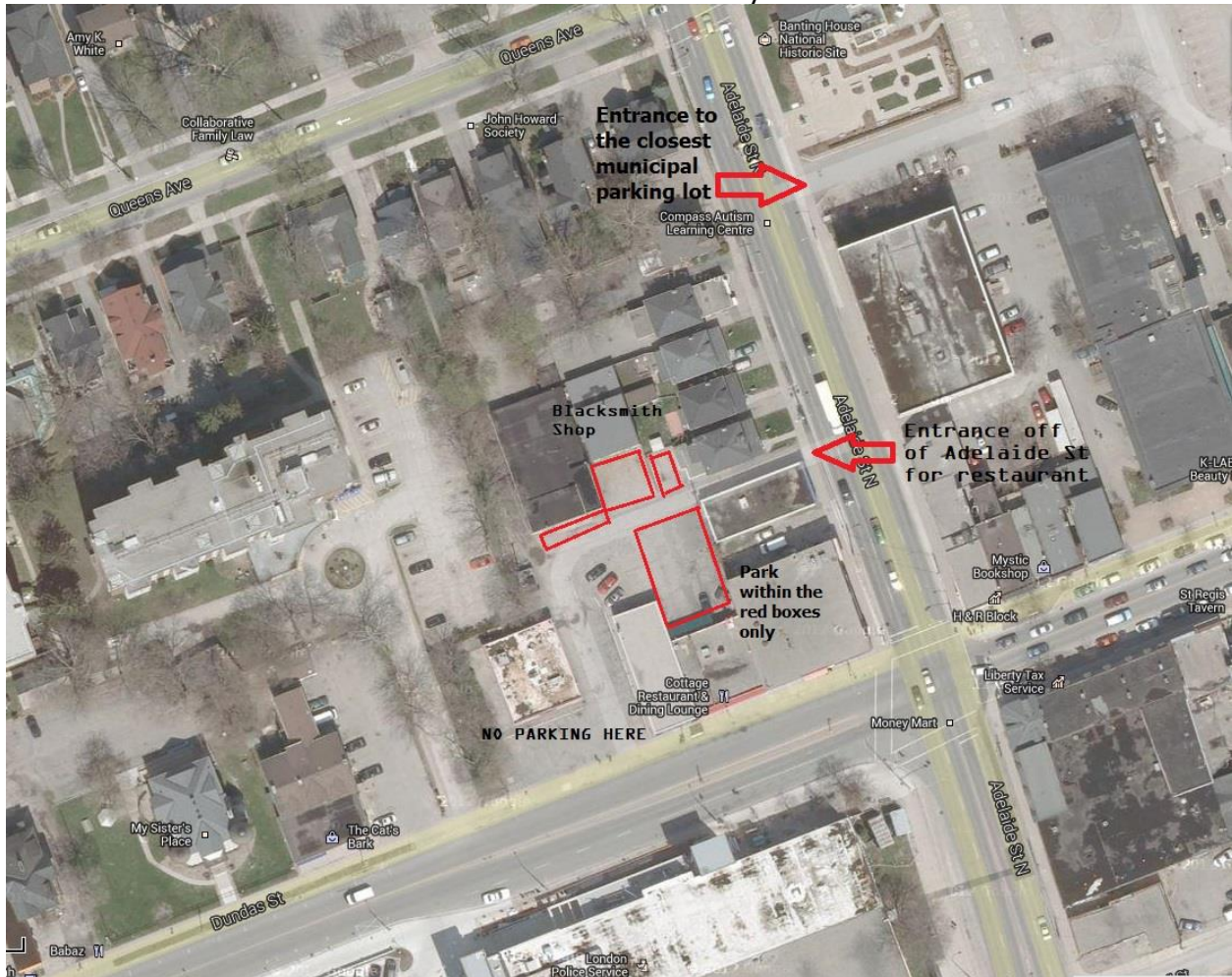
**10m Phone** - Dave Lambert, VE3KGK

**CW** - Gary Wabersich, VE3XDM

**Wi-Fi** - John Visser, VA3MSV and Mike Argyle, VE3XMA



Location of the L.A.R.C. Field Day site above



Map showing location of the Cottage Restaurant and available parking.

Anyone wishing to volunteer as Band Captains for any other band please contact Pat Ross, VE3CNX. Anyone wishing to volunteer as an operator please contact the band captain for the band you wish to operate on. (We could always use night time operators)

**Note to Band Captains.** We will be using a wireless network with 3 Wi-Fi repeaters to extend the wireless network range if needed and N3FJP's Network Field Day logging software which will be

available on site from Mike Argyle, VE3XMA and John Visser, VA3MSV. Mike and John will also have a limited number of notebook computers available if you do not have your own to use for logging. If you are going to require the use of a notebook computer, please email John Visser, VA3MSV to insure that there will be one reserved for you.

If you have any further questions about what L.A.R.C. is doing for Field Day, feel free to contact any member of the L.A.R.C. Executive.

## **L.A.R.C. Field Day Schedule**

On Saturday, June 22, 2013

Between 11:00am to 12:00pm – Meet up at Reservoir Park and start to get organized for setting up the site.

12:00pm – Start setting up the site. Start setting up antennas, tents and radios.

2:00pm – Start transmitting and making contacts.

6:00pm – Potluck dinner. Hotdogs and hamburgers will be provided by L.A.R.C. Bring a dish to share. Bring your spouse and children. Enjoy socializing with fellow local amateurs and their families. Come early or stay late and get on a radio.



## **Field Day Introduction**

**Wikipedia** defines **Field Day** as an annual amateur radio exercise sponsored by various amateur radio IARU regions and member organizations, in order to encourage emergency communications preparedness. In the United States, it is typically the largest single emergency preparedness exercise in the country with over 30,000 ham radio operators participating each year.

Since the first ARRL Field Day in 1933, Amateur radio operators throughout the United States have practiced the rapid deployment of radio communications equipment in environments ranging from operations under tents in remote areas to operations inside Emergency

Operations Centers (EOCs). Operations using emergency and alternative power sources are highly encouraged, since electricity and other public infrastructures are often among the first to fail during a natural disaster or severe weather.

To determine the effectiveness of the exercise and each participant's operations, there is an integrated contesting component and many clubs also have camping out and cookouts for the participants. Operations are typically for a continuous 24 hours, requiring the scheduling of relief operators to keep the stations going through the night. Additional contest points are awarded for such things as experimenting with

unusual modes, making contacts through space satellites and involving youth in the activity.





By way of history, the London Amateur Radio Club (LARC) was formed in 1920 and incorporated in 1978 as a not-for-profit association.

Regrettably, records as to when LARC first participated in Field Day activities are not readily available to the writer. However, in speaking to a now Silent Key member John Watson, VE3EZF, who joined LARC circa 1960, he recalled LARC Field Day exercises taking place as far back as 1961 on a farm situated at the Southwest corner of Fanshawe Park Road and Wonderland Road, which was owned by a fellow-member Joe Jefferies (SK) whose call, VE3GB, was reassigned to Gord Baker, a close friend of the family. Apparently there were about twelve (12) attendees, operating two stations on HF and one on VHF/UHF, which John co-worked. He recalls freezing temperatures in the middle of the night, while trying vigorously to make 2M CW/AM contacts!!



In subsequent years, LARC used the Parkwood Hospital (baseball diamonds), Byron Hill, and since 2003, the Byron Reservoir Park on Commissioners Road west of Wonderland Road. A campsite consisting of tents,

tables and a large trailer was setup for 24 hours of radio fun. St John's Ambulance provided a mobile generator equipped with area lighting to illuminate the area, making for a very pleasant weekend of fun.

Anyone interested in ham radio as well as the general public are invited to attend and all are encouraged to participate on the air (under supervision, of course). Children are especially

welcome as they represent the future of the hobby and are most impressed with the campout atmosphere and they rarely decline the opportunity to key the mike and be heard on the airwaves.



The highlight of the weekend is the pot luck barbecue dinner on Saturday evening, when family and friends join with the group in sharing good food, fond memories and quality time.

Thank you to all volunteering to participate in the 2013 Field Day exercise. Once again the event will take place at Byron Reservoir Park, west of Wonderland Road on Commissioners Road. **Set up will commence at 12:00 noon Saturday, June 22nd and operations extend through to 2:00 pm Sunday, June 23rd.** We anticipate putting

at least six (6) stations on the air and operating continuously throughout the 24 hour period. And please, bring your family and friends. There will never be a better opportunity to show them the advantages/capabilities of amateur radio in an emergency situation. Don't forget to bring some food and lawn chairs and join us for the barbecue pot luck starting around 6:00pm on Saturday.



If you wish further information and/or wish to participate/operate one of the stations, please contact one of the LARC Executive or one of the Band Captains. See you there!

73 and Good DX



# **MEMBERSHIP INVITATION**

-- Membership application and dues are currently requested.

Our term of membership runs from November 1 to October 31 of the following year. Each and every year it is increasingly more difficult to get Amateurs to commit to membership in their local club due to the alternate functions we are asked to fund.

The **London Amateur Radio Club** has a long history of providing technical support, social support and repeater facilities. Public service efforts are currently provided by a club affiliation with Amateur Radio Emergency Services (**ARES**) and **Radio Amateurs of Canada (RAC)**.

Your Directors work tirelessly to provide meeting topics that are informative and entertaining, events that are timely (Christmas meeting, field day, bus trip) and participate in events that display and promote Amateur Radio in the community.

To be effective in its pursuits, the Club needs the support of the local Amateur fraternity through membership.

While we obtain financial support from our Annual Flea Market, we require membership support to fund such things as meeting hall rent, repeater sites rent and maintenance, web site fees, membership cards and liability insurance. For what it's worth, none of these things are getting any cheaper.

The cost of membership has not changed for a number of years and even in the face of increased cost, we would like to keep it that way.

With more than 1000 'hams' in the London area, it's inconceivable that less than 10% support a pastime about which most of us are passionate.

**PLEASE**, make a choice and do your part to keep the **London Amateur Radio Club** alive and well by purchasing your membership at our next meeting (or by mail – details on our web site). The cost is still only \$25.00 (single) or \$30.00 (family residing at the same address).



Office Use Only	
<input type="checkbox"/> Paid	_____
<input type="checkbox"/> Cash	<input type="checkbox"/> Chq
Membership Card	
<input type="checkbox"/> Needed	<input type="checkbox"/> Rec'd
Sticker	
<input type="checkbox"/> Needed	<input type="checkbox"/> Rec'd

**LONDON AMATEUR RADIO CLUB INC.  
MEMBERSHIP APPLICATION**

PLEASE PRINT

SINGLE MEMBERSHIP: \$25.00       RENEWAL  
 FAMILY MEMBERSHIP: \$30.00       NEW MEMBER

Member # 1	Last Name	_____	First Name	_____	Call Sign	_____
	RAC Member?	RAC Member #	ARES Volunteer?	Email Address	_____	_____
	<input type="checkbox"/> No <input type="checkbox"/> Yes	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____		

Member # 2	Last Name	_____	First Name	_____	Call Sign	_____
	RAC Member?	RAC Member #	ARES Volunteer?	Email Address	_____	_____
	<input type="checkbox"/> No <input type="checkbox"/> Yes	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____		

Member # 3	Last Name	_____	First Name	_____	Call Sign	_____
	RAC Member?	RAC Member #	ARES Volunteer?	Email Address	_____	_____
	<input type="checkbox"/> No <input type="checkbox"/> Yes	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____		

Member # 4	Last Name	_____	First Name	_____	Call Sign	_____
	RAC Member?	RAC Member #	ARES Volunteer?	Email Address	_____	_____
	<input type="checkbox"/> No <input type="checkbox"/> Yes	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____		

Address: \_\_\_\_\_

Street/P.O. Box

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\_\_\_\_\_

City/Town                                  Province                                  Postal Code

---

\_\_\_\_\_

Phone Number

Date: \_\_\_\_\_

*All information requested should be completed - this will be used for the club's membership database only.  
All LARC membership information is held in strict confidence.*

Please make cheque payable to: **London Amateur Radio Club Inc.**

Mailing Address: London Amateur Radio Club  
 c/o Membership Director, VA3MSV  
 P.O. Box 82, Station B  
 London, Ontario, N6A 4V3

# LONDON AMATEUR RADIO CLUB 36TH ANNUAL HAMFEST

**SUNDAY, SEPT. 22, 2013**

9.00 AM TO 12.00 PM

**VENDOR SETUP: 8AM**

ADMISSION: \$8.00, (Age 10 and up)

TABLES : \$20.00

**NEW LOCATION**

## HELLENIC

## COMMUNITY CENTRE

**133 Southdale Rd. W.**

**London, ON**



Free Parking ~ Air Conditioned

Commercial Dealers

Wheelchair Accessible with Handicap Washrooms

Bring & Buy: Let LARC sell your item(s) at our club table.

{2 items max} INFO: <http://www.larc.ca/larctable.html>

**Inquiries: Email**

**[LARChamfest@gmail.com](mailto:LARChamfest@gmail.com)**

**Note: All email answered within 72 hrs**

**Phone: (519) 455-9465 (Ruth)**

**Make Cheque or Money Order Payable to**

**"London Amateur Radio Club Inc"**

**(not to Ruth Dahl) and mail to:**

**Ruth Dahl VE3RBO**

**Apt #805 700 Wonderland Rd N**

**London ON N6H 4V3**

## ATTENTION HAMFEST VENDORS

*Book early, tables are booked on first come first served basis. We do not reserve unpaid tables. No separate hydro for tables BUT there will be a test table with power for seller demonstrations. **Only two vendors passes allowed per vendor prior to doors opening on the day of the flea market.** Vendor passes will not be sold without table sales. Table information and site Map will be sent to you in your vendor's conformation package.*

Talk in VA3LON, 147.060 PL 114.8

Name: \_\_\_\_\_ Admission: \_\_\_\_\_ x \$8.00 = \_\_\_\_\_  
 Maximum of 2 admissions only

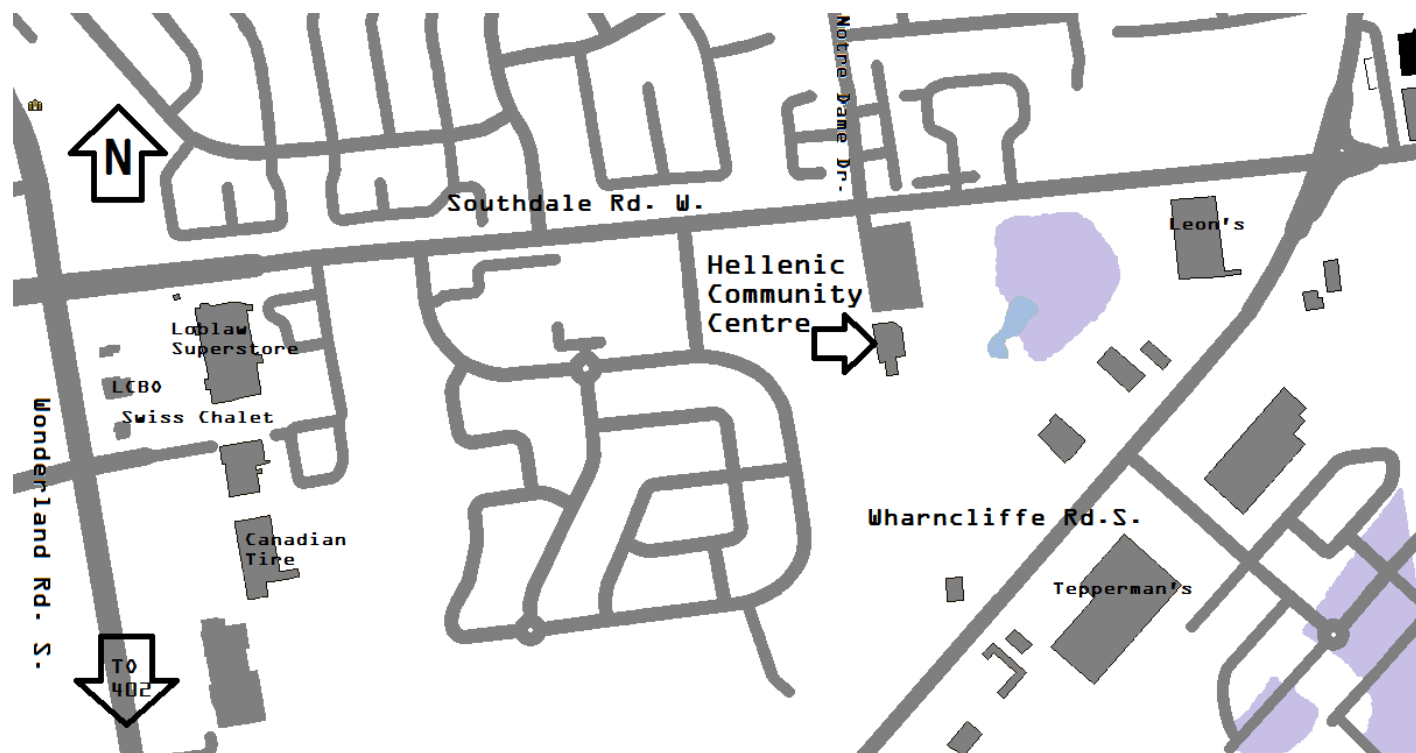
Callsign: \_\_\_\_\_ Tables: \_\_\_\_\_ x \$20.00 = \_\_\_\_\_

Email Address: \_\_\_\_\_ Total: = \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ Postal Code: \_\_\_\_\_

Phone: (\_\_\_\_) \_\_\_\_\_



**Coming from Hwy 402**, exit on to Wonderland Road (Exit 100) and go North to Southdale Road and turn Right. Go East until Notre Dame Drive and entrance of Hellenic Centre on the right.

**Coming from the West on Hwy 401**, exit onto Colonel Talbot Road and go North until Main Street in Lambeth. Turn Right and go East until Wonderland Road South. Turn Left and follow directions above.

**Coming from the East on Hwy 401**, exit on to Wellington Road and go North until Southdale Road. Turn Left and head West until Notre Dame Drive and entrance to the Hellenic Centre on the Left.