

marcOgram

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



Volume 61, Number 6

May 2016

“SHOW AND TELL”

Wednesday 25 May 2016

Ragchew and Fleamarket: 19:30

Club meeting: 20:00

St. Ignatius of Loyola Parish Church

4455 West Broadway (corner of Terrebonne) in N.D.G. - Montreal

Bring in your projects, ideas, partial or completed home-brew devices; the sky's the limit.

FROM THE NOOBIE EDITOR'S DESK

OK folks, here we go. This is my first attempt at two things, editing MarcOgram and using MS Publisher. There may be a transitional phase rife with errors, omissions etc. As Jim, VE2VE, said last issue, there might even be “an improvement in the MarcOgram.” We will see.

Last month Normand Labossière, VE2VAX, spoke about his home brew 1 kilowatt linear amplifier project. It was an impressive device and an absorbing presentation; thank you Normand.

Thanks to Marc-André, VE2EVN, and Jim, editor and interim editor respectively, bridging the gap between MarcOgram volunteers, there was no hiatus in issues. As every editor has pointed out, MarcOgram is only as good as its contributors, so start writing, folks.

73 de Nora, VA2NH

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CONCORDIA UNIVERSITY HIGH ALTITUDE BALLOON PROJECT

As mentioned in the last issue, Kathleen McGarvey Lechable, a graduate student pursuing a doctorate in physics at Concordia University, and chief instigator of the Concordia University High Altitude Project, and her group of undergraduate and graduate students are still looking for any club members, or other amateurs, who might be interested in mentoring their group and joining them on their first launch at the end of May. They are interested in high altitude ballooning, and their unmanned first launch is planned for this summer. They intend to use an APRS transmitter to track the GPS coordinates of the balloon.

Ms. McGarvey-Lechable can be contacted at 514-578-2673 or by e-mail at k_mcgarv@live.concordia.ca.

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Annual fees are:

General Members	\$25.00
Associate Members	\$25.00
White Cane Members...	\$15.00
Family Members (per family)	\$30.00
Postal delivery of MarcOgram	\$ 5.00

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

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Club Call Sign: VE2ARC

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

Repeaters

VE2BG 147.06 MHz (+)

Owned and operated by the Montreal Amateur Radio Club. Located on the Pointe Claire water tower.

VE2RED 147.27 MHz (+)

Owned and operated by the Montreal Amateur Radio Club. Located on Covey Hill in Franklin, QC.

The repeaters are open to all amateurs.

Meetings of the Board of Directors

Meetings of the Board of Directors are open to any member to attend. Board meetings are held the first Wednesday of the month (Sept. to June) at 19:30 in the Wardens' Room, St. Ignatius of Loyola Parish, 4455 West Broadway. Should you wish to attend one of the meetings you are welcome; just speak to one of the directors before-hand to make certain that the meeting has neither been cancelled, nor the location changed.

Club Activities

Monthly Meetings

25 May 2016 — Show & Tell
 Summer break. Next meeting in September.

Radio Classes

A basic level course is held starting in January of each year. If you know of anyone interested in taking the course they should send a message to classes@marc.ca.

MARC Hamfest

We are planning to hold the flea market in April 2017 at the LaSalle Legion. Please watch this space or go to <https://www.facebook.com/ve2arc> for more information.

Incoming QSL card service

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

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

IN CASE OF EMERGENCY

Montreal 911 Centre	514-280-2121
Laval 911 Centre	450-662-4240
Longueuil 911 Centre	450-646-8570
Sûreté du Québec	310-4141
Kahnawake Peace Keepers	450-632-6505

These numbers are for emergencies ONLY

NEAR-FEST WILL PROVIDE

Leo Nikkinen, VE2SI

Nora VA2NH and I had been looking for a way to charge our cell phones, handheld radio batteries and other battery powered equipment when utility power is unavailable. We encountered this problem while camping at the Sun 'n Fun Fly-In at Lakeland FL. The campsite has no power available and batteries could not be charged overnight. Our only option was to charge the batteries over breakfast at a restaurant and then carry the chargers with us for the rest of the day. Clearly, there was room for improvement. We needed 5-volt power to charge the cell phones and nominal 12-volt power for the Yaesu FT-60R handheld radios.

While a pedal-type generator can provide significant power, well above 100 watts, it would require endurance and enthusiasm for pedaling that is likely to be absent at the end of a long day spent walking around in the hot sun at an airport. For those with the will and strength, one should note that military surplus pedal-type generators do occasionally turn up at amateur radio flea markets. Wind power is another option, but the generator is heavy and it will require a sturdy and complex mechanical arrangement. That left solar panels as the most attractive source of power, particularly appropriate for use in sunny Florida. We couldn't leave the cell phones charging over the day, so rechargeable (secondary) batteries and solar panels seemed a good avenue to explore.

Nickel-cadmium batteries have essentially disappeared from new equipment and nickel-metal-hydride batteries are on their way out. Sealed lead-acid batteries (gel cells) can provide lots of power, but they're quite heavy. All of those battery types have a specific energy storage capability or energy density (Watt-hour/kg) that is lower than that of lithium-based batteries. While modern lithium-based rechargeable batteries have a large specific energy and can power equipment far longer than older battery technologies, they do eventually need to be charged. Lithium battery technology has branched out in a few directions: lithium nickel manganese, lithium iron phosphate, and lithium manganese oxide, each with its own chemistry and advantages.

A quick search yielded several promising lithium back-up battery packs. These packs usually charge through a mini-USB connection and can have up to 3 regular USB 2.0 type A jacks, each capable of providing up to 2 amps and more., but we also needed a solar panel to

charge the pack.

What type of battery pack and solar panel are required? It would be nice to be able to charge two fully depleted cell phone batteries from the pack at least twice. Using my 2600mAh cell phone battery as a model, that meant that we needed a battery pack with a capacity of at least 10,400mAh. Fortunately, one of the local big-box electronics store carries 10,400mAh and 15,600mAh packs for reasonable prices. The 15,600mAh would provide a good safety factor above the minimum requirement. The 15.6Ah pack can be charged at up to 2 amps, which set the desired minimum output for the solar panel. A panel with a 2.5 or 3 amp full-sun output would provide a safety factor for partly cloudy days and the varying sun angle throughout the day. Two sunny days with a 2 or 3 amp maximum output solar panel should just about fully charge the 15.6Ah battery pack.

Regular attendees at our monthly MARC meetings might have heard me mention occasionally the variety of equipment and parts that can be found at flea markets such as the NEAR-Fest. One can purchase solar panels through Amazon and eBay, but with the spring NEAR-Fest not far away, I wondered what might we find.

The drive to Deerfield NH was pleasant and the weather for the flea market promised to be just perfect. After looking around I found some rolled-up ICP Solar "Powerflex 5" solar panels using amorphous solar cells and with a rated output of 16.5 volts at 300mA. There was also a higher efficiency "Gear IT" 14-watt fold-up panel made from single-crystal cells. The 14W panel had USB connectors and could provide up to 2.2 amps at 5 volts. It was just what we needed. The 16.5-volt panels included the connectors required to hook them up in parallel and handy cigarette lighter style output connectors; they will be used to charge a spare FT-60R battery during daylight hours.

The 14-watt panel hooks up directly to the Insignia battery pack and the whole arrangement can be left charging unattended. The amorphous panels will require a bit of electronics to drop their voltage down to an acceptable 12 or 13 volts for the Yaesu's 1400mAh 7.2-volt Ni-MH battery charger. The amorphous panels can also be used to charge a gel cell for field day operation of an FT-817 or similar multiband radio.

All together, a very successful NEAR-Fest.



Insignia battery pack charging from a Gear IT foldable solar panel.

CANADIAN RADIO AMATEURS AND THE WILDFIRE IN FORT McMURRAY, AB.

As the world has seen so graphically in the news services, a wildfire in Alberta grew to disastrous proportions, and caused a mass evacuation of the majority of the population of Fort McMurray. The fire caused extensive property damage to thousands of buildings, the extent of which is still being assessed.

Although the emergency did not trigger a wide-spread response, amateur radio operators were active, assisting the Red Cross and other organizations. The Alberta ARES, the Provincial Emergency Radio Communications (PERCS), and the local Fort McMurray amateur radio club were all on standby to provide services such as VHF/UHF linking and provincial coordination of resources if called upon. There was no HF activity as the majority of the population of Fort McMurray, some 88,000 people, were safely evacuated.

At least twenty-seven air tankers and fifteen helicopters were deployed to fight the fire, and the Canadian armed forces deployed four CH-146 Griffons and one C-130J Hercules, as well as one of their new heavy-lift battlefield helicopters, a CH-147F Chinook, to transport loads of food, medicine and emergency supplies.

By 11 May, the wildfire had shifted direction and had diminished somewhat, and favourable weather conditions eased the firefighters' task. Alberta's premier Rachel Notley kept the nation updated on the situation. Prime Minister Justin Trudeau visited Fort McMurray 13 May, once the situation had calmed somewhat, and such a visit would not interfere with the firefighting priorities.

(Sources: webpages by RAC, ARRL, Toronto Globe and Mail and Montreal Gazette.)

UPCOMING FLEAS

What: Rochester Hamfest
Who: Rochester Amateur Radio Association (RARA)
When: Saturday, 28 May 2016
Where: Eastman Business Park,
200 West Ridge Road,
Rochester, NY
Details: <http://www.RochesterHamfest.org>

What: Central Ontario Hamfest & Fleamarket
Who: Guelph Amateur Radio Club & Kitchener-Waterloo
Amateur Radio Club
When: Sunday, 5 Jun 2016
Where: Waterloo Regional Police Association Recreation
Park, off the 401, Exit 268 (Cedar Creek Rd)
Cambridge, ON
Details: <http://www.hamfest.on.ca/>

What: CVRS Antique Radio Swapmeet
Who: CVRS
When: Sunday, 5 Jun 2016
Where: Charles Rummel Park,
Lozells Avenue and Government Rd.
Burnaby, BC
Details: <http://canadianvintageradio.com/contact/>

What: London Vintage Radio Club Flea Market
Who: London Vintage Radio Club
When: Saturday, 11 Jun 2016
Where: Hammond Mfg.
394 Edinburgh Rd. North,
Guelph, ON
Details: <http://lvrc.homestead.com/fleamarket.html>

What: 46th Annual Red Deer Picnic and Hamfest
Who: Central Alberta Amateur Radio Club
When: Friday, 17-19 Jun 2016
Where: Shady Nook Hall,
Township Road 380, Red Deer, AB
Details: <http://www.caarc.ca/40th-annual-red-deer-picnic-and-hamfest>

What: Ontario Hamfest
Who: Burlington Amateur Radio Club
When: Saturday, 9 Jul 2016
Where: Milton Agricultural Fairgrounds
136 Robert Street
Milton, ON
Details: <http://www.barc.ca>

What: 53rd International Ham Fest
Who: International Ham Fest Committee
When: Saturday, 9 Jul 2016
Where: US Lodge in the International Peace Garden,
South of Brandon on the Canadian USA border
Near Boissevain, MB
Details: <http://www.mts.net/~holderr/ihf.htm>

What: Parry Sound Hamfest **NEW!**
Who: Parry Sound ARC
When: Saturday, 13 Aug 2016
Where: McDougall Recreation Centre
148 Hammel Avenue, Nobel, ON
Details: <http://ontarioswapshop.com>

What: SPARC-fest IV
Who: Sun Parlour Amateur Radio Club
When: Sunday, 14 Aug 2016
Where: VE3UCY Q'TH,
1002 Mersea Road 4, Leamington, ON
Details: (email) ve3es@arri.net

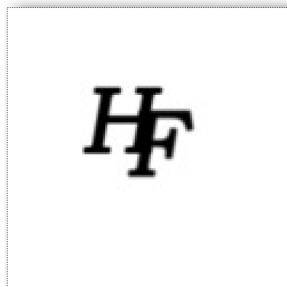
What: 8th Annual Junk in the Trunk Hamfest
Who: Ontario Swap Shop
When: Saturday, 27 Aug 2016
Where: Newmarket Theatre parking lot
505 Pickering Crescent,
Newmarket, ON
Details: <http://ontarioswapshop.com>

What: Hearts Content Cable station 150th anniversary and
RAC AGM
Who: SONRA BARK UTARC
When: Saturday, 10 Sep 2016
Where: Heart's Content Cable Station Provincial Historic
Site, Highway 80, Hearts Content, NL
Details: <http://wp.rac.ca/annual-general-meeting/>

What: Ottawa (Carp) 18th Annual Hamfest
Who: Ottawa Amateur Radio Club, Inc.
When: Saturday, 10 Sep 2016
Where: W. Erskine Johnston Arena
Carp Agricultural Fairgrounds
3832 Carp Road, Ottawa (Carp), ON
Details: <http://www.oarc.net/fleamarket>

What: Victoria Haliburton A. R. Association Swap Meet
Who: VHARA
When: Saturday, 17 Sep 2016
Where: Masonic Temple, 10 Ridout Street,
Lindsay, ON
Details: <http://www.vhara.ca>

RADIO H.F.



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CITIZENS BAND (CB) / BANDE PUBLIQUE (CB)

ASTATIC, COBRA, GALAXY, K40, MACO, PARADYNAMICS, RANGER, ROAD NOISE, SHAKE-SPEARE, SOLARCON/ANTRON, UNIDEN, VALOR/PRO-AM, WILSON, WORKMAN

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ANTENNAS / ANTENNES

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PUBLICATIONS / PUBLICATIONS

AMERICAN RADIO RELAY LEAGUE (ARRL), ARTSCI, BAYLIN PUBLICATIONS, BILLBOARD (WRTH), CQ, CRB, HIGHTEXT, IBS (PASSPORT), KLINGENFUSS, KRAUSE, LOOMPANICS, NATIONAL RADIO CLUB, RADIO SOCIETY OF GREAT BRITAIN, RADIO AMATEUR CALLBOOK, RADIO AMATEURS DU QUEBEC, SCHIFFER BOOKS, SONORAN, TAB, TIARE

NATURE BOOKS / LIVRES DE LA NATURE

SIBLEY GUIDES, PETERSON FIELD GUIDES, NATIONAL AUDUBON SOCIETY