

Message from the London Amateur Radio Club



Promoting Amateur Radio in London
And surrounding area since 1920

November 4, 2011

L.A.R.C. Executive

President

Doug Elliott, VA3DAE

Vice-President

David Lambert, VE3K GK

Past President

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Secretary

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Director, Membership

John Visser, VA3MSV

Director

Mike Watts, VE3ACW

Non-Voting

Director, ARES & CANWARN

Brett Gilbank, VE3ZBG

Appointments

LARC Repeater Coordinator

Brad Seward, VE3NRJ

Repeater

Operator/Programmer

David Young, VE3EAY

Field Day Coordinator

Dave Lambert, VE3K GK

Webmaster

Doug Elliott, VA3DAE

Newsletter Editor

John Visser, VA3MSV

Auditors

Rob Hockin, VA3HO
William Clothier, VE3BCU

Next Meeting Topic

The next **LARC meeting** will be on **Thursday, November 10, 2011** at 7:30 PM. We're going to try something a bit different, and have an evening of **audience discussion groups**, in response to a suggestion from a club member. Bring your ideas, and be ready to chat about your favourite parts of Ham Radio, projects you'd like to get involved in, and ways the club can make your involvement in Ham Radio more enjoyable and exciting.

New 10 Meter All Digital Net Announced

October 28, 2011

A new digital mode net to encourage use of these modes on 10 metres will be held every Saturday and Sunday at 1800 UTC. This according to Andrew O'Brien, K3UK, who says via the Digital Radio Yahoo that he is creating such a weekly gathering after noting that the band is open to distant communications more and more these days.

The net will gather on 28.125 MHz Upper Sideband, plus or minus for QRM, at 1800 UTC. R S ID and Call ID will be used to help people pick out the net and modes used. The Olivia 500/8 mode will be used to call up the net but it may switch modes as needed.

K3UK says that the gathering will usually run 30 minutes and will try to include some brief announcements relative to digital modes on HF. It will also use the K3UK sked page at www.obriensweb.com/sked for on-line coordination during each session. (K3UK)

Next Meeting is Where and When?

Reminder: The next monthly L.A.R.C. meeting on November 10, 2011 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 December 8, 2011. This meeting will be the annual Christmas Potluck Dinner.

Area Repeaters

LARC Repeaters

London

VA3LON 147.060 + 114.8Hz

VE3MGI 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

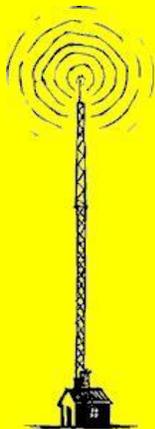
VE3STR 443.825 + 114.8 Hz
IRLP Node: 2482

Goderich

VE3OBC 146.910 - 123.0 Hz

Whitechurch

VE3WWD 443.075 + 123.0 Hz



If you have a repeater that should be listed here, please forward the information to John Visser, VA3MSV at 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

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 is at 122. As of the beginning of the 2010/2011 year we have gotten 20 new members to the club. Of the 17 Honorary Members brought in from the L.S.R.C., 3 have paid for the current 2010/2011 year. Unfortunately 3 past members of the club became a Silent Key this year.

Nets



Daily

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

Swap Net

7.055 MHz LSB 12:00 pm

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 MHz + 8:00 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 2011-034E - RAC Distracted Driving Committee meets with MTO Officials

October 27, 2011

On October 20th the same day that the Honourable Bob Chiarelli was sworn in as the new Minister of Transportation, Steve Pengelly, VE3STV former RAC HLC, Jeff Stewart, VA3WXM Southern Ontario Director and Bill Unger, VE3XT North East Ontario Director met with the Assistant Deputy Minister Road User Safety Division and the Director Safety Policy and Education Branch.

One of the questions we were asked is why Amateurs believe we deserve an exemption to operate while mobile. We explained that in order to be proficient in the use of our radio systems including mobiles and repeaters, in order to ensure they are always in working order and in order to ensure we know where they work best and where they don't work well at all, we must continually test them. This is done by daily usage and by providing community service to many diverse groups across the Province. They were told that many communities rely on the Amateur Radio Operators in their areas as part of their emergency preparedness plans. They were also advised that Amateurs have installed, at no expense to the taxpayer, a communications infrastructure that provides a backup to existing telecommunications systems in which authorities can have confidence.

We demonstrated a 2 Metre radio to them and illustrated the difference between Simplex using PTT and Duplex with cell phones. We emphasized that to use our radios and communicate we did not have to remove our eyes from the road.

It was also brought to their attention that we are a relatively small group of private individuals and for us to continue our public service while having to comply with the new legislation, could be a financial hardship on some Amateurs.

The Ministry Officials raised several other questions as to why we cannot comply with the legislation. They were answered with solid technical and operational explanations as to the difficulties we would encounter in order to do this.

A reasoned set of arguments was presented to allay their concerns regarding safety and to explain why Amateurs should be treated differently than others and exempted on a permanent basis.

Ontario has committed to consult with RAC early in the New Year on this matter so a permanent solution can be found prior to January 2013.

Bill Unger VE3XT - North/East Ontario Regional Director
Chair - RAC Distracted Driving Committee
Radio Amateurs of Canada

If you have a Net that should be listed here, please forward the information to John Visser, VA3MSV at va3msv@hotmail.com and I'll add it to the list.

Upcoming Events

Sat., Nov. 5, 2011

York Region ARC Hamfest 2011 - 35th Edition - York Region ARC

Markham Fairgrounds are located at 10801 McGowan Road
Open to Public at 9:00 am

Sat., Nov 12, 2011

KARC Hamfest and Breakfast - Kingston Amateur Radio Club, Inc. and the Military Communications and Electronics Museum

Museum is located at 95 Craftsman Blvd, Kingston, ON K7K 1A1. The Garrison Golf and Curling Club (the breakfast site) is located on Red Patch Ave.
07:30 for breakfast, 09:00 for the hamfest

Sun., Jun. 3, 2011

Central Ontario Hamfest & Fleamarket - Guelph ARC & Kitchener-Waterloo ARC

Waterloo Regional Police Association Recreation Centre
R.R. 2, 1128 Rife Rd. North Dumfries Township

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 and I'll add it to the list.

RAC Bulletin 2011-033E – Notice to All Amateur Radio Operators in Ontario

October 26, 2011

Greetings All;

As many of you know RAC is presently undergoing new changes within the organization and Field Services for Ontario is no exception. As Section Manager for Ontario and your only elected official for field services one of the major concerns that I brought forward to the RAC executive is that for one person to act on behalf of all of Ontario is not a proper voice on two levels. One is that due to many factors like the sheer size of the province it is impossible for all the amateurs in Ontario to see and have a personal contact with the Section Manager. You need someone close to where you reside that you can have personal contact with.

Since taking this position in October 2005 and being re-elected I have tried to do this job to the best of my ability. As many of you know I have had some contact with you through personal telephone calls and e-mails and maybe the odd club meeting or hamfest. However I don't have the luxury or funds to visit all clubs or ARES groups in the province. This is not fair to you and to me. You need personal contact with someone that can take your concerns and comments good or bad to the next level. If RAC is going to be our national voice you need to know who your RAC rep is. Our present government has local MPP's that represent your voice to government RAC needs a similar restructure.

RAC President Geoff Bawden VE4BAW through the direction of VPFS Doug Mercer V01DTM has tasked Bill Unger VE3XT Ontario North Director to oversee a committee of experienced amateurs to come up with a restructure of Field Services for Ontario. Attached you will find a document and a new restructure chart with the proposal of having four Section Managers representing you instead of one.

I ask you all to read the following document carefully and send your comments directly to address below http://www.rac.ca/en/news/bulletins/2011/Field_Services_Review_v8_3.pdf

As your elected official for RAC I need and want your input about this proposed restructure before we can move ahead and your voice is very important to me and RAC. I ask your respond back to this address: restructont@gmail.com by the 27th November 2011. Once all comments are collected a final report will be drafted.

Have a look and this is your chance to let your voice be heard.

73,
Allan Boyd VE3AJB
Section Manager – Ontario
Radio Amateurs of Canada

Upcoming Events - November, 2011

October 30, 2011

Special Event Station VA3AAR: 150th Birth Anniversary of Dr. James Naismith, Almonte Native, Inventor of Basketball

Sponsored by the Almonte Amateur Radio Club Inc. with the Dr. James Naismith Basketball Foundation and the Mississippi Valley Conservation Authority

Date: Sunday, November 6, 2011, 24 hour operation 0000-2359 UTC (8:00 p.m. Eastern November 5 to 8:00 p.m. Eastern November 6)

Place: Mill of Kintail, Almonte, Ontario, Canada, Latitude 45.244339 N, Longitude 76.258062 W, FN15VF, ITU 4, CQ 4

Description: Special Event: VA3AAR celebrating the 150th anniversary of the birth of Dr. James Naismith, Almonte native, to honour the inventor of basketball at the Mill of Kintail near his birthplace. Frequencies: 20 m 14150 kHz \pm 5 kHz, 40 m 7250 kHz \pm 5 kHz, 80 m near 3755 kHz. (Frequencies subject to adjustment if already in use by other stations).

Special Commemorative QSL: For our public display in the new year, please QSL direct to VE3NCE, P.O. Box 1644, Almonte, Ontario, KOA 1A0, Canada.

For more information regarding VHF and D-STAR contact channels go to: AARC Inc. website: <http://www.almontearclub.ca>.

Email contact Rob Webb VE3UIX, AARC Inc. President: ve3uix@almontearclub.ca

Subject: GlobalSET November 2011

Hi

We are sending to you the information about GlobalSET November 2011.

HQ-Stations of all IARU R2 Member Societies and stations of Emergency Communications Groups are invited by IARU R1 to participate in the next Global Simulated Emergency Test. It is scheduled on Saturday, November 12th, 2011, from 11:00 to 15:00 Local Time.

YV5RNE will be HQ-Region 2 Station on the IARU R2 CoA's frequencies.

See http://www.iaru-r1.org/index.php?option=com_content&view=article&id=873&globalset-rules-12-november-2011&catid=57&globalset&Itemid=165

73

Cesar Pio Santos, HR2P
EMCOR IARU R2

Thai Amateurs Respond to Floods, Ask That 7.060-7.063 MHz Be Kept Clear

October 17, 2011

Authorities in Thailand continue to battle the country's worst floods in decades, with the death toll rising to almost 300. While Thai hams are mostly using 2 meters to communicate, IARU Region 3 Disaster Communications Committee Chairman Jim Linton, VK3PC, is asking all radio amateurs to keep 7.060-7.063MHz clear from unnecessary traffic, as Thai hams are also using 40 meters during the flooding that is affecting millions of people in North and Central Thailand.

"Amateur Radio has been assisting with flood relief communications, helping victims in the affected areas, said Tony Waltham, HS0ZDX, the Radio

Amateur Society of Thailand's (RAST) International Liaison Officer. "Operators are using RAST's club station call sign HS0AC, and a special flood relief center with the call sign HS0AB has been established at Bangkok's Don Mueang Airport. Please be formally advised that Thai radio amateurs are standing by on 144.900 MHz, 145.000 MHz and 144.9375 MHz, as well as on frequencies of 7.060-7.063 MHz in the 40 meter HF band." Waltham noted that RAST has posted a video (in Thai) to YouTube, showing the activities at the special flood relief Amateur Radio station at the airport.

Despite sandbags, Bangkok -- the country's capital -- is under threat of flooding. In outlying areas, the floods have destroyed crops, inundated factories and damaged the homes or livelihoods of millions of people. About 110,000 people have sought refuge in shelters. It is expected for the flooding to continue for a week. The high tide will prevent the floodwater's escaping to the sea for a day or two, while the recovery efforts may take a year.

According to Linton, nearly three million people are affected by the floods, and the disaster has caused

serious damage to the country's agriculture and other industries, with Japan's Toyota, Sony and Honda, along with USA's Western Digital -- and many other factories to the north of Bangkok -- suspending production until the situation improves. Damage so far has been assessed at more than 20 billion baht (\$65,295,400 USD). Waltham said that 26 out of the country's 77 provinces are affected, and Bangkok is bracing for a large amount of run-off water that will coincide with the seasonal high tides, making it harder for the flood waters to flow out to sea.

The Latest From Flooded Thailand

October 29, 2011

The severe flooding that has claimed the lives of over 370 lives in less than three months, is now closing in on the capital Bangkok, as the authorities struggle to divert as much water as possible around the city and reinforce barriers to keep remaining areas dry.

But according to Tony Waltham, HS0ZDX, for many areas to the north of the capital it is too late and hundreds of communities there are uninhabitable with flood water more than two or three metres deep in some areas.

Under water is agricultural land reducing the crop yield, factories causing suspensions or disruptions, and housing. The economic cost is put at \$3 billion. The heavy monsoon rain hit Cambodia, Vietnam, Laos and the Philippines earlier.

Amateur radio has been playing an ongoing role in this disaster with operators helping to co-ordinate relief and rescue work using VHF two-way communications and repeaters, HF communications in the 40 metre band (7060-7063 KHz).

As well there are several Echolink conference rooms, including the "Bangkok", "Thailand" and "HS0AC" conferences. (A list of VHF frequencies and repeaters can be found at the RAST website <http://www.qsl.net/rast>).

Tony HS0ZDX reports a special centre for amateur radio communications has been established by Thailand's regulator, the National Broadcasting and Telecommunications Commission (NBTC) using the callsign HS0AB at Bangkok's second airport, Don Mueang, which is now besieged by flooding itself.

Among the areas inundated by more than a metre of water is the campus of the Asian Institute of

Technology, where the Radio Amateur Society of Thailand's HF club and contest station HS0AC is located.

Sadly, all the transceivers and equipment at desktop level or higher, are now submerged under flood water.

Another victim of the flooding was a RAST-sponsored FCC Volunteer Examiner Coordinator (VEC) exam session that had been scheduled for October 22 and had to be cancelled, despite 35 candidates having registered.

The amount of rainfall in Thailand since July has been unprecedented.

Based on government figures the total runoff from a series of tropical storms is now estimated to comprise around 20,000 million cubic metres of water.

More than half this volume still to make its way through rivers, canals and pumping stations past Bangkok to reach the Gulf of Thailand.

It has been estimated that between 400 and 500 million cubic metres can be drained each day, which means that the ongoing crisis is likely to last at least another 20 days, if there is no more heavy rainfall -- however, the rainy season has not yet ended.

Adding to the threat level for the remaining dry areas in the capital city over the next few days are a series of peak sea tides forecast for October 30 and October 31 that should cause river levels to rise even higher than their record levels at present.

More than 10 million people have been directly affected by flooding so far, while the Thai

Government has been encouraging residents of Bangkok, which has a population of some 12 million, to evacuate if possible and to move their valuables upstairs as a precaution, while a public holiday has been declared for 21 provinces from October 27-31.

Many industrial parks north of Bangkok have been inundated despite all attempts to keep flood water at bay and this has seriously disrupted Thailand's manufacturing sector and has also caused supply chain shortages for in several industries.

Most of Bangkok is low-lying, being just one metre or less above sea level, while Thailand's Prime Minister Yingluck Shinawatra has predicted that the floods will take from four to six weeks to recede.

People are also being asked to boil tap water as flood water briefly breached the canal that provides the city with its drinking water and bottled water is now in short supply in shops and department stores around Bangkok.

Tony HS0ZDX describes it as a time of uncertainty for most residents of Bangkok, although he remains protected for the moment.

Jim Linton VK3PC,
Chairman
IARU Region 3 Disaster Communications
Committee, and

Tony Waltham, HS0ZDX
RAST International and IARU Liaison

World's Youngest Nation Accepted Into The ITU

October 14, 2011



The International Telecommunication Union has announced that the world's newest country, the South Sudan, has

joined that world telecommunications governing body. It became the I-T-U's 193rd member state, effective from this past October 3rd. (*IRTS*)

The LightSquared vs. GPS Saga – Round 5 Or 6

October 14, 2011



It's the Washington saga that never seems to end. Of course we are talking about LightSquared vs. the Global Positioning Industry over concerns over interference between LightSquared's proposed national system and users of the Global Positioning System in spectrum adjacent to it. And now there's word that LightSquared may take legal action if it is denied permission by the FCC to build out its planned network.

Jeffrey Carlisle is LightSquared's Vice President of Regulatory Affairs and Public Policy. In a teleconference with reporters on Monday, October 3rd Carlisle said that if it is impossible to get a decision on this that allows his company to move forward that LightSquared will then have to insist on our legal rights.

The FCC has said it that it will not permit LightSquared to operate the proposed network unless it can prove the interference problems to GPS users have been solved. Many vendors and users of Global Positioning System equipment have

lobbied the FCC to keep LightSquared from running its network in assigned spectrum adjacent to that used by GPS devices. Global Positioning System users claim that the LightSquared network would degrade service to them because signal levels would be far greater than the satellite transmissions used for GPS.

For its part, LightSquared claims that any problem would be the result of the GPS product suppliers that knew as far back as 2001 that there would be a terrestrial mobile network operating in frequencies adjacent to their devices. The company believes that the problem exists only because of the lack of adjacent channel filtering in current GPS reception equipment and that it's the GPS industry's responsibility to find a cure.

LightSquared's Carlisle did not elaborate on what action the company might take, however he believes that the FCC's basic rules on interference cannot be used to protect the GPS receivers in this particular instance. He also noted that his company is trying to work with the GPS industry to solve the problem by allowing the FCC to approve the network.

Meantime some legal analysts are wondering whom it is that LightSquared might file its litigation against. No matter if it's the GPS industry, the FCC or both, any law suit could wind up going on for years with appeals and counter appeals being filed.

By then, it's possible that newer technology could have come along making any current day proposal obsolete.

(Technology Today, BroadbandReports, various other published news reports)

VK100RAV Celebrates 100 Years of Ham Radio in Australia's Victoria State

October 14 2011

On the air, listen out for the special Australian VK100ARV during the month of November. This will likely be a well sought after call and qualifies toward the Australian Amateur Radio Centenary Award.

By way of background, 2011 is the 100th anniversary of the Amateur Wireless Society of Victoria, that was formed in 1911. It quickly changed its name to the Wireless Institute of Victoria, and today is known as Amateur Radio Victoria. VK100ARV will be operational to commemorate that founding event. *(VK3PC)*

VK Hams Assist In Hunt For Aircraft Missing 30 Years

October 21, 2011

A group of amateur radio operators from Sydney, Australia, recently took part in a multi-agency search and rescue exercise in a remote area of New South Wales. This, to help in the continuing search for a small plane that is believed to have crashed some 30 years ago with its pilot and four passengers on board.

The single engine Cessna aircraft had the tail identification of VH-MDX. It had had taken off from Queensland for a flight to Sydney's Bankstown airport when its pilot identified as Michael Hutchins radioed that he was experiencing severe turbulence. Also that the plane had been hit by lightning and he could no longer determine its orientation. To make matters worse, the wings were icing up and despite his best efforts, the Cessna was losing altitude. The aircraft then disappeared from radar and all communications ceased a few minutes later.

For thirty years since the accident, teams of volunteers have returned to the area to walk and climb their way through every piece of unsearched landscape in the hope that somebody will discover a piece of wreckage or spot something that helps to end the riddle of VH-MDX. The regions that have been searched are marked off on a large map, so further unsearched areas can be checked the following year.

For the safety of the volunteer searchers, each of the six teams carried one vhf or uhf handheld radio and a portable 2-way High Frequency transceiver. Packed in a rainproof canvas box, the HF sets included a short wire antenna that would work using skywave or NVIS propagation. This, to contact any of several radio command posts set up and manned by WICEN of New South Wales. WICEN is a volunteer organization of licensed Australian amateur radio operators who donate some of their time and expertise to emergency communications to benefit the community much the same way that ARES members do here in the United States. Other groups helping with the search this year included the Bushwalkers Wilderness Rescue Squad, the New South Wales Police Rescue Squad, the New South Wales Volunteer Rescue Association and several others.

At the time of its disappearance the Cessna's four passengers were New South Wales Police Inspector Ken Price, who was traveling with Noel Wildash, Phillip Pembroke and Rhett Bosler. Search aircraft sent to the general area could find no sign of wreckage, and there was no smoke or fire to guide them. Several intensive land searches were also lunched but to date, no wreckage of the plane and the remains of its five occupants have been found. At airtime, the search is expected to resume sometime next year.

(Adapted from walkietalkietwowayradios.com)

FCC Orders Detroit FM Translator Off The Air

October 21, 2011



The FCC has ordered Radio Power, Inc. to take translator W284BQ in Detroit off the air. This due to unresolved interference to co-channel WIOT (FM), in Toledo, Ohio.

WIOT licensee Citicasters identified nearly 30 complaints from listeners within the station's protected contour describing difficulties in receiving the station in their cars and homes. In July, the FCC gave Radio Power 30 days to resolve all the interference complaints or suspend operation. Radio Power did try to resolve the interference, including modifying the antenna to suppress radiation to the south.

Nevada-based Radio Power, Inc. offered those listeners a smartphone with an iHeartRadio application installed, enabling the listeners to receive WIOT programming over the Internet.

However the phones require a paid data plan to run iHeartRadio which WIOT considered to make this an unworkable solution and did not solve the interference.

For its part Radio Power disagreed. It argued that the use of a smartphone improves the reception of WIOT and eliminates the interference.

But it was the FCC that had the final word. In its order released on October 17th, the regulatory agency said that providing a smartphone to complaining listeners does not solve over the air interference. Also that Radio Power's attempted remedy does not fulfill its obligation to suspend operations until the interference has been eliminated.

The FCC's order to take W284BQ off the air is effective immediately. More is on-line at tinyurl.com/translator-interference-fcc. (RW, FCC)

NASA Kepler Space Probe Discovers Invisible Planet

October 21, 2011

An invisible planet, which has not yet been seen by eye, has been discovered by scientists using NASA's Kepler spacecraft. The discovery was possible thanks to a companion of the unseen planet.

According to astronomers, the planet named Kepler-19c really cannot be seen, but it makes itself known by the way it influences other planets through its gravitational force.

The invisible planet has tugged at its partner the visible Kepler-19b planet, slowing it down and then speeding it up in its transition.

The Kepler space probe locates planets by looking for a star that dims slightly as a planet transits the star, passing across the star's face from the space probes point of view. Transits give one crucial piece of information regarding the planet's physical size. The greater the dip in light, the larger the planet relative to its star. However, the planet and star must line up exactly for Kepler to see a transit.

The visible Kepler-19b has a diameter of 18,000 miles, making it slightly more than twice the size of Earth. It reportedly transits its star every 9 days

and 7 hours. It orbits the star at a distance of 8.4 million miles, where it is heated to a temperature of about 900 degrees Fahrenheit.

The invisible planet named Kepler-19c has multiple personalities that are consistent with the data found according to Daniel Fabrycky of the University of California at Santa Cruz. Fabrycky says that it could be a rocky planet on a circular 5 day orbit, or a gas-giant planet on an oblong 100 day orbit.

Currently the astronomers know very little about the new planets. The Kepler spacecraft will continue to monitor and radio information back to Earth regarding the twin Kepler-19's throughout its mission. This in hope of gathering more information about the invisible Kepler-19c.

It should be noted that years ago astronomers discovered the planet Neptune in the same way. While tracking Uranus they noticed that its orbit didn't match predictions. That led to the later proven theory that a more distant planet might be nudging Uranus and calculated its expected location. (IB Times, Space.com)

FCC Turns It Back To Ham Radio Concerns In Approving Modified BPL Rules

October 28, 2011



The Federal Communications Commission has affirmed its rules for Broadband over Power Lines or Access BPL with only minor modifications that do little to protect the Amateur Radio service and other High Frequency users

from severe to intolerable interference.

According to the Second Report and Order issued by the FCC on October 25th, the rules it has created to govern Access BPL provide what it calls an appropriate balance between the dual objectives of providing for Access BPL technology that has potential applications for broadband and Smart Grid while protecting incumbent radio services against harmful interference.

Those incumbent radio services primarily comprise amateur radio operators and other users of the High Frequency spectrum. Hams started arguing against Access BPL when the commission first adopted rules for it in 2004, saying that in geographic areas where it was in trial that it severely interfered with their operations.

The American Radio and Relay League filed a lawsuit against the FCC in federal court, seeking full access to unredacted versions of staff technical studies upon which the rules were predicated. The ARRL was victorious. The FCC was ordered to supply the studies, allow public comment, and explain its method for measuring radiated emissions from Access BPL systems.

Now in its Second Report and Order, the commission said the resulting cycle of comments did not warrant any changes to the emissions

standards but said that they were making several refinements none-the-less. And minor they are.

The Second Report & Order modifies the rules to increase the required notch filtering capability for systems operating below 30 MHz from 20 to 25 dB. It also establishes a new alternative procedure for determining site specific extrapolation factors and adopts a definition for the slant-range distance used in the BPL measurement guidelines to further clarify its application. Slant-range refers to the diagonal distance of a measurement device to an Access BPL transmitter mounted at the top of a power pole.

Access BPL is said to support data rates of more than 500 Mbps and first and last mile ranges of up to 1,500 meters. The commission said that while it endeavored to minimize interference to ham radio operations that it remains a possibility.

In the end the Commission concluded that some cases of harmful interference may be possible from Access BPL emissions at levels at or below the Part 15 limits. However the regulatory agency feels that the potential benefits of Access BPL service warrant acceptance of what they call a negligible risk of harmful interference that can be managed and corrected as needed on a case-by-case basis.

The commission noted that Access BPL provides yet another way to get broadband to the masses. This is one of the key objectives of the Obama Administration, and more recently, the International Telecommunications Union.

The big question now is what action the ARRL might take to stop the poorer forms of Access BPL technology from being deployed. We will all likely learn that in coming weeks. *(FCC, RW, Others)*

FCC-FEMA-NOAA To Hold National EAS Test November 9

October 28, 2011

The first ever national test of the Emergency Activation System, or EAS, will soon take place. This as the FCC, in cooperation with the Federal Emergency Management Agency and the National Oceanic and Atmospheric Administration announce that they will conduct a nationwide activation of the

system at 2 pm Eastern, 11 am Pacific time on Wednesday, November 9th.

According to FEMA, all EAS participants are required to take part. This includes over the air radio and television broadcasters, other television

providers, satellite and digital radio along with cable and wire-line video providers.

During the approximate three minute test, radio listeners will hear a message indicating that "This is a test." Although the EAS test may resemble the Routine Monthly EAS Tests or R-M-T's that most of us are already familiar with, there will be some differences in what viewers will see and hear.

While the audio message will be the same for all EAS participants, the video may differ. This is because of certain limitations within the Emergency Activation System itself. As a result, the video test message scroll may not be the same or indicate that "This is a test." According to FEMA's website, this is due to the use of the live E.A.N. code which is the same cipher that would be used in an actual emergency callout.

Although local and state aspects of the Emergency Activation System holds routine weekly and

monthly basis, there has never been an end-to-end nationwide test of the system. That will change on November 9th.

The FCC says that it chose that date order to minimize disruption and confusion during the test. This is because it is near the end of hurricane season and before the severe winter weather season begins. Also the 2 p.m. Eastern time broadcast will minimize disruption during rush hours while ensuring that the test occurs during working hours across the nation.

And while personal radio emergency communications groups like ARES, RACES, REACT and the like are not required to take part in this first ever national EAS test, there is the off chance that some may activate as part of local or regional training exercises in response to a national EAS alert. (*FEMA, FCC, others*)

HAM TECH

Volume 1, Number 2

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Line of Sight (LOS) Propagation

Last month HAM TECH introduced LOS propagation in terms of coverage as a function of antenna heights and cited a few applications where LOS is in common use by hams. This month we explore the various signal gains and losses in a typical 2 meter LOS system. We also get comfortable in doing the math in one of the simplest form possible, the logarithmic form, better known as the dB. We are all familiar with expressing amplifier and antenna gains and transmission line and other losses in dB. We can calculate propagation losses in dB and put absolute signal levels like transmitter power and receive sensitivity in units of +/- dBw or dB above or below a watt. Then we just add up all the dB terms to solve our equations and get the desired answer. In the example that follows we are looking for the S/N margin above 12 dB.

Let's start with the two 50 ft. towers spaced 20 miles apart from the last issue. We will put 6 element yagi antennas on top of each with horizontal polarization. The gain of each will be 17.4 dBi and the elevation angle of the first lobe is 2 degrees. The units are dB above isotropic, that

mathematically convenient but unbuildable antenna. But don't worry because we are going to calculate the free space path loss between isotropic antennas so it all comes out correct in the end. We will feed the two antennas with 100 feet each of 9913 coax which has about 1.4 dB of attenuation at 2 meters. For rigs we will use two Yaesu FT7800 FM units. These have transmitter power outputs of 50 watts and receiver sensitivities of 0.2 microvolts for 12 dB S/N ratio. This is 2 S Units above noise and allows speech to be copied but it is not fully quieted. So let's build the equations of our two station model.

1. Transmitter Power = 50 watts
 $P_T(\text{dBw}) = 10\log(50) = +17 \text{ dBw}$
2. Antenna gains = 17.4 dBi each
 $G_A = G_t + G_r = 17.4 + 17.4 = 34.8 \text{ dBi}$
3. Transmission Line Loss = 1.4 dB each.
 $L_T = L_t + L_r = 1.4 + 1.4 = 2.8 \text{ dB.}$
4. Free Space Propagation Loss
 $L_p = 36.9 + 20\log(F_{\text{MHz}}) + 20\log(D_{\text{mi}})$
 $L_p = 36.9 + 20\log(144) + 20 \log(20) = 106.1 \text{ dB}$
5. Receiver Sensitivity $E = 0.2(10^{-6})$ volts.
 $S(\text{watts}) = E^2/R = (0.2(10^{-6}))^2/50 = 8(10^{-16})$
 $S(\text{dBw}) = 10 \log(8(10^{-16})) = -151.0 \text{ dBw}$
6. SM = Excess Signal to Noise Margin in dB over receiver input to yield 12 dB S/N output. This must be positive.

So let's put it all together in free space and see if we have enough signal at the receiver, a positive margin.

$$7. \text{ SM} = P_T + G_A - L_T - L_p - S = 17 + 34.8 - 2.8 - 106.1 - (-151.0) = 94.0 \text{ dB}$$

The 94.0 dB margin is not valid for a true free space condition, such as amateur satellite where the signal path is totally free of earth effects. The antenna gains used above include the effect of earth. For free space conditions we must reduce the gain of each by approximately 6 dB. This gives us a margin of about $94.0 - 12 \text{ dB}$ or 82.0 dB . This is a huge margin but we are not finished.

Let's go back to the on earth case. We still need to correct for two effects. First is the fact that the signal is grazing the earth at the horizon point. If we wanted no added loss here the signal would have to clear the earth by a distance equal or greater than the radius of the first Fresnel Zone. This is a term from the diffraction theory of light. The first zone radius is:

$$R_{1st} = 1140(d/F)^{1/2}$$

This is for our antenna and earth geometry. At $d = 20 \text{ mi}$ and $F = 144 \text{ MHz}$ $R_{1st} = 425 \text{ ft}$. We just have to increase both tower heights by 425 ft to 475 ft. It's not very practical for ham use. Even at microwave frequencies like 2304 MHz it adds 106 ft. Let's look at the added loss at the horizon point if we just leave the signal on the ground. The added loss is between 10 and 20 dB. (Ref.1.) Let's use up 20 dB of our 94.0 dB margin and save a bundle on tower cost.

The second loss we must account for is that due to the antenna beams being elevated due to the ground reflections. With horizontal polarization the ground reflection coefficient is out of phase and is approximately between 0.9 and 1.0 depending on the conductivity of the earth. For sea water it is nearly 1.0 and produces a near cancellation of the signal right on the horizon. Over land a value of 0.9 is more likely, resulting in a field strength of $1.0 - 0.9 = 0.1$. The signal is reduced on the horizon by $20 \log(0.1) = -20 \text{ dB}$ at each antenna. So here goes another 40 dB of our margin. We still have $94 - 20 - 40 = 34 \text{ dB}$. Our 12 dB S/N will now be $12 + 34 = 46 \text{ dB}$, a good strong signal. We could reduce our transmitter power by 30 dB to 50 mw and still have a good system.

Next month we stretch the radio signal further around a curved earth, possibly to 300 to 400 miles and enter the world of Tropospheric Scattering. Remember discussion and Q&A on this article is on Monday Dec. 13th at 8:45 PM on the SJRA repeater, 145.29 PL 91.5.

Ref.1. K. Bullington, "Radio Propagation Fundamentals" Bell System Technical Journal, vol. 36, No 3, Fig. 8. 1957.

MEMBERSHIP INVITATION

-- Membership application and dues are currently requested.

Our term of membership runs from October 1 to September 30 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).



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<input type="checkbox"/> Paid _____	
<input type="checkbox"/> Cash <input type="checkbox"/> Chq	
Membership Card	
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**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? <input type="checkbox"/> No <input type="checkbox"/> Yes	RAC Member # _____	ARES Volunteer? <input type="checkbox"/> Yes <input type="checkbox"/> No
		Email Address _____	

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

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

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

Address: _____

_____ Street/P.O. Box

_____ 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