

# Message from the London Amateur Radio Club

Promoting Amateur Radio in London  
And surrounding area since 1920



December 3, 2011

## L.A.R.C. Executive

### President

Doug Elliott, VA3DAE

### Vice-President

David Lambert, VE3KKG

### Past President

Doug Tompkins, VE3IDT

### Treasurer

Brian Bouckley, VA3ATB

### Secretary

Ruth Dahl, VE3RBO

### Director, Flea Market

Ann Rundle, VA3EOR

### 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, VE3KKG

### Webmaster

Doug Elliott, VA3DAE

### Newsletter Editor

John Visser, VA3MSV

### Auditors

Rob Hockin, VA3HO

## December's L.A.R.C. Meeting

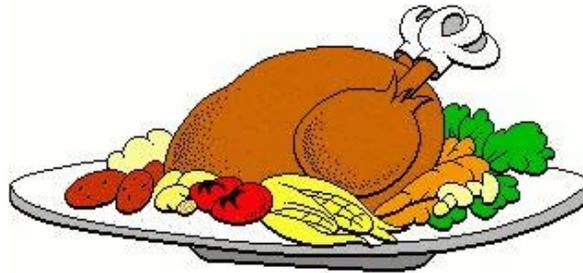


## Annual Christmas Potluck Dinner

Our next meeting will be on **Thursday, December 8**.  
An evening of culinary creations and conversations -  
come on out to our annual Christmas Pot-Luck Supper

**Earlier start of 6:30 PM** so supper's not too late.

This meeting will still be located at St. Judes Anglican Church, 1537  
Adelaide Street North at Fanshawe Park Road East in London, Ontario.



Members and Guest are Welcome



## Next Meeting is Where and When?

**Reminder: The next monthly L.A.R.C. meeting on December 8,  
2011 at 6:30 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 January 12, 2012. This meeting will be a presentation by  
Deputy Chief Dan Oldridge from the London Fire Department Communications  
and Operations.

## 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

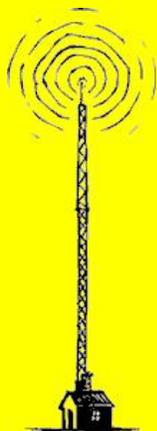
VE3STR 443.825 + 114.8 Hz  
IRLP Node: 2482

#### 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](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 call sign. 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 is at 92. As of the beginning of the 2011/2012 year we have gotten 6 new members to the club. Of the 17 Honorary Members brought in from the L.S.R.C., 4 have paid for the current 2011/2012 year. Unfortunately 3 past members of the club became a Silent Key last 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

If you have a Net 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.

## Hams In Italy Respond To Tuscany Floods

November 11, 2011

Ham radio is in emergency response mode in Italy. This following flash flooding in the Liguria and Tuscany regions of which have already accounted for the deaths of ten people in that region.

The Amateur Radio Voluntary communications group RNRE has been asked by the government to provide additional radio communications in the affected areas that began on Friday November 4th. Frequencies which may be used in Italy are 3.643 and 3.760 MHz on 80 meters and 7.045 to 7.060 MHz on 40. Amateurs world-wide not directly involved in flood related communications are asked to listen carefully before using these frequencies to avoid causing QRM to emergency nets.

Further heavy rain is striking the region as we go to air and additional casualties are expected due to increased flooding. (IARU Region 1)  
*Amateur Radio Newslite™*

## Thai Hams Have Already Saved 1000 Lives

November 11, 2011

Some breaking news from the Far-East. That's where Radio Amateur Society of Thailand Secretary Paul Wacharaphol, HS4DDQ, reports his team helped to save almost 1,000 lives by coordinating rescue communications in cases of medical emergencies during the severe flooding.

The team has been organizing the emergency medical communications at Public Health Ministry using the callsign HS0AC. Speaking at a small society gathering on Sunday November 6, HS4DDQ said that the National Broadcasting and Telecommunications Commission has praised the role that radio amateurs have been playing to help people cope with the disaster by providing communications support. This has been especially helpful in flooded areas where cellular sites have failed.

According to HS4DDQ Thai government agencies have been able to take advantage of the amateur radio communications as their own networks failed. Using the skills and experience of the radio amateurs, the government agencies kept communicating with one another under adverse conditions. HS4DDQ says that this volunteer spirit that has carried radio amateurs to the "front-line" has also helped many victims of Thailand's worst flooding in over 60 years. (IARU R3 Disaster Communications Committee and RAST.)

*Amateur Radio Newslite™*

## Upcoming Events

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

## FCC Commission Nominees May Be Put On Hold Due To Congressional LightSquared Information Demand

November 11, 2011

Senator Chuck Grassley of Iowa says that he will hold up the approval process of two nominees to the Federal Communications Commission. This over the agency's refusal to turn over documents related to wireless company LightSquared.

Addressing his concerns with the way the FCC has handled the LightSquared matter Grassley says that he will object to proceeding to the nomination because the FCC continues to stonewall a document request that he submitted to the agency over six months ago regarding their actions related to the LightSquared and the Harbinger Capital matters. Grassley says that it not only sets a dangerous precedent for a federal agency to unilaterally set the rules on how it engages with Congress but that it also prevents any meaningful ability for the vast majority of Congress to inform themselves of how an agency works.

President Obama has nominated Ajit Pai and Jessica Rosenworcel to serve as commissioners on the FCC. Rosenworcel has worked for Democrats previously, while Pai has worked for Republicans.

A spokeswoman for Grassley said the senator will place a hold on the nominees that will take effect once the nominations reach the Senate floor. Before Grassley announced his intent to place a hold, observers widely expected the nominees to easily receive confirmation. More is on-line at [www.tinyurl.com/nominees-objected](http://www.tinyurl.com/nominees-objected). (TVBC)

*Amateur Radio Newslines™*

## VE2CV To Be Inducted Into The Canadian Amateur Radio Hall Of Fame

November 11, 2011

John S. Belrose of Ottawa, Ontario Canada who holds the call signs VE2CV and VE3CVV will be inducted into the Canadian Amateur Radio Hall of Fame. Jack as he is better known in the world of amateur radio will be presented with this award at a meeting to be arranged in Ottawa in early 2012. At that time a detailed summary of his contributions to the hobby will be published in The Canadian Amateur magazine. Induction into the Canadian Amateur Radio Hall of Fame is made in recognition of a radio amateur's outstanding achievement for sustained service to ham radio in Canada, or amateur radio at large. (VE7EF)

*Amateur Radio Newslines™*

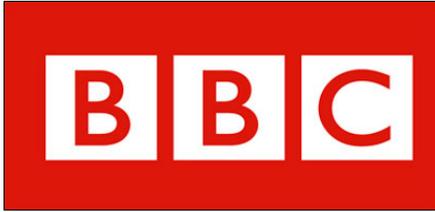
### Every Saturday Morning

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.

## BBC Plans To Put Its Archives On Line

November 11 2011



The BBC will soon introduce a new radio website that will contain almost its entire archive of radio programs going back to the 1940's. Code named Audiopedia the service is being developed for launch within the next 12 months.

Tim Davie who is the Director of BBC Audio and Music at the BBC. He says that the organization is

working on how best to present Audiopedia. At the moment the BBC believes that most people will probably access the new on demand content via other pieces of related media that they are already listening to across the BBC website.

The new Audiopedia website will represent the biggest release of BBC programming on demand since the iPlayer was introduced in 2007. (*Media Network, London Telegraph*)

*Amateur Radio Newsline™*

## A Dream Comes True At The 36th NYC Marathon

November 11 2011

And finally this week, the amazing story about last weekends New York City Marathon and its ham radio communications director that was published in the Saturday November 5th issue of New York Daily News. Titled "Cancer Won't Keep This Radio Volunteer Down," the story details the fight being waged by Steve Mendelsohn, W2ML, against Pancreatic Cancer while at the same time organizing the vast ham radio communications network for this years running of the worlds largest on-foot marathon event.



Steve Mendelsohn has never missed a NYC Marathon, volunteering his communication skills in all 35 previous races, and despite pancreatic cancer diagnosis, he worked Sunday, November 6th's race.

In the article writer Wayne Coffey calls Mendelsohn's volunteer work for the New York City Marathon as being indispensable. He notes that this was to be the 36th running of the five-borough

event adding that W2ML is the only person who has been on the course for every mile of every one of them.

For his part, W2ML says that that it's simple what keeps him fighting the disease. He notes that physicists say that energy can neither be created nor destroyed, but that the energy of the marathon is what keeps him going and this year has quite literally kept him alive. And speaking a few weeks ago at the Pacificon convention in Santa Clara, California, he put it all into perspective in a way that only W2ML could:

W2ML: "The doctor that is treating my cancer always wanted to run in the marathon. I was given three to five months to live in January and I said to him that it's simple. You keep me alive until the marathon and Ill get you into the marathon. Only a ham could make that kind of a deal with the devil."

The entire story about Steve Mendelsohn, W2ML, and his fight against cancer to once again lead the communications network for the New York City Marathon is in-line at [www.tinyurl.com/w2ml-marathon-2011](http://www.tinyurl.com/w2ml-marathon-2011). And less we forget, the New York City Marathon was held last weekend and for the 36th consecutive year Steve Mendelsohn, W2ML, was there with his crew of 400 or so ham radio volunteers to keep it all running smoothly.

*Amateur Radio Newsline™*

# Hams Lauded In The Wake Of Early Season Alaska Storm

November 18, 2011

Ham radio has been highlighted in the November 12th issue of the Alaska Dispatch. This after an early season storm hit the most-Northern state.

According to the news article, when it became clear the Bering Sea storm was going to be a major severe weather incident the National Weather Service got word out to Alaska's amateur radio network that it wanted help. And as crashing waves pounded beaches, the people who live in the remote, isolated villages along the storm's path stayed connected via a web created by Alaska's ham radio community.

When other communications failed, ham radio operators came to the rescue. Throughout the storm, they were the eyes for scientists and weather forecasters in Fairbanks and Anchorage who otherwise would have been isolated from the severe weather conditions they could predict but not see.

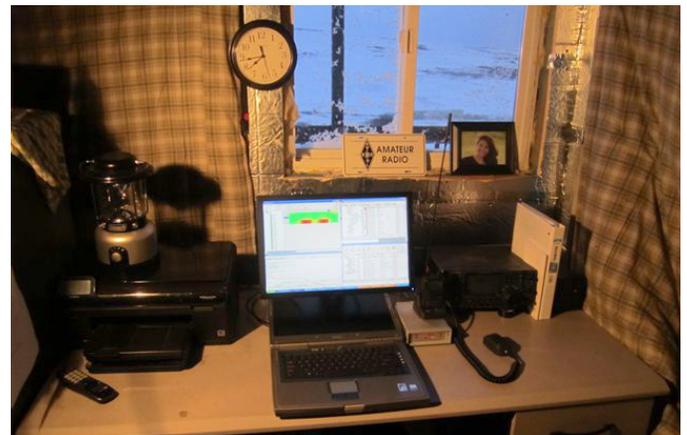
Carven Scott, is a forecaster with the National Weather Service in Anchorage. He told the newspaper that it was hams that were providing critical observations as the storm blew past. Scott noted that the NWS does not have much in the way of meteorological observation equipment in the western part of the state but hams kept his agency alerted to the latest conditions in remote areas. This included such data as how fast the wind was blowing and from what direction; wave height; whether it was snowing or raining; and the temperature. Scott says that these seemingly small details from various villages made a big difference for the weather service in its predictions.

Scott credits Richard Courtney, NL9H, as the ham radio operator who came up with the idea of an alliance between Alaska's ham community and the weather forecasters. Scott said that he had for some time thought that amateur radio would be a good communications supplement. With the Bering

Sea storm approaching the Alaska coast, Scott said that they decided to give it a shot.

Scott told the newspaper that through the ham radio network he and his colleagues learned that river ice in Koyuk was backing up and spilling onto the banks. Also that roofs had blown off and water was surging in Nome, and rain and snow were falling in several other villages.

The story also highlights the work of Martin Ruud, WL7MR, in the city of Nome. From Tuesday night as the storm approached through the following Thursday morning, WL7MR forwarded messages from islands and other coastal communities. The newspaper says that Ruud had draped sleeping bags over his windows to protect himself and his equipment in case a wind gust shattered the glass. Outside, a 160-meter loop antenna stood ready atop four telephone poles the city of Nome gave to him for free, knowing he could put people in contact with the outside world when other methods failed.



Martin Ruud's ham radio setup at his home in Nome. He draped sleeping bags over his windows at the height of the storm to protect his gear

The entire story of ham radios role in this major Alaskan winter severe weather outburst can be read on-line at [www.tinyurl.com/alaska-storm](http://www.tinyurl.com/alaska-storm)

*Amateur Radio Newsline™*

## ARRL AD HOC Committee On Microwave Bands

November 18, 2011



[WWW.ARRL.ORG](http://WWW.ARRL.ORG)

between 902 MHz and 3.5 GHz. If you are now

And this for hams who like to operate in the microwave spectrum. An ARRL Ad Hoc Committee has been tasked by the League's Board of Directors with recommending updates to the ARRL band plans for the amateur bands

active on any of these bands or are developing plans to do so, the committee would like to hear from you. The band plans for these bands may be found at [www.arrl.org/band-plan-1](http://www.arrl.org/band-plan-1). Comments go via the ARRL website at [www.arrl.org/microwave-band-plan-input-form](http://www.arrl.org/microwave-band-plan-input-form). You have till December 15th to respond.

*(WA6ILQ, W9QZB, others)*

*Amateur Radio Newslines™*

## The First National EAS Test – A Partial Success And A Partial Failure

November 18, 2011

In a November 11th letter to the CGC Communicator broadcast industry newsletter, Richard Rudman, W6TIA, who is the California State Emergency Communications Committee EAS Vice Chairman writes that FEMA, the Federal Emergency Management Agency, will hopefully release the details soon. That said, from some post-test recordings that he has listened to he believes that there is a very strong likelihood that the audio loop-back that many heard occurred at the FEMA warning origination point. Rudman says that there are other theories being advanced, but that we will have to wait for FEMA to issue its official post-test report to know with 100% certainty exactly what happened and what will be done to prevent this from happening in the future.

Rudman who is one of the architects of emergency public alert systems going back several decades says that while a large number of people and media outlets still represent the test as a "failure" it wasn't that at all. Rudman says that he wants to strongly restate his feeling that we need to look beyond the audio shortcomings and concentrate on the many things that went right with the EAS relay system, and on the distribution infrastructure and equipment issues that will require EAS public and private stakeholder cooperation to fix.

Rudman adds that at some point in the near future we will find out if our government is serious about warnings or not. This he says includes dollars for training from origination point on through; dollars for redundant and resilient warning distribution infrastructure and now the will on the part of FEMA and the FCC for as rapid a transition from SAME EAS

to CAP EAS as possible, with wired and wireless paths for CAP distribution that back up Internet distribution.

But back in the nation's capitol, FEMA Integrated Public Alert and Warning System Program Director Manny Centeno has a different view. In an interview with Radio World magazine, Centeno claims that the test went off on time, and was delivered across the country. He says that the quality of the originating message was clear for the first four seconds; however a technical malfunction occurred at a national primary level that introduced dual header tones and subsequently decreased the original audio quality of the message for downstream stations. Centeno says that this resulted in distorted audio.

According to Centeno, the Federal Emergency Management Agency delivered the audio to more than 60 Primary Entry Point stations that were all on a telephone conference bridge during the event. All the national primary stations were connected during the test. Asked whether a particular station introduced the bad audio, Centeno said FEMA is looking into how the audio was introduced into the system and is re-creating the anomaly in its lab.

Centeno reiterated that last the November 9th test will not be the last. He says that FEMA looks forward to approaching the community with lessons learned, hearing their observations in an open forum, and continuing to improve the Best Practices Guide as well as the EAS system on a national scale.

But there is one issue that has yet to be addressed. That's the human issue of whether FEMA is expecting too much from the public when it holds an E-A-S test. This is because the average radio listener and TV

viewer is used to great sounding audio all of the time. And what planners of the E-A-S within FEMA and other government lettered agencies have yet to realize is that even in the clear and without a loop-back problem, communications quality audio of 300 to 3000 Hz is going to sound really lousy on even the cheapest of pocket radios and that when the public hears alert tones that sound like bursts of static, many are going to simply tune out.

These agencies also seem to not realize what Richard Rudman and other E-A-S technologists do. That being in time of a real crisis situation that the Internet and much of the nation's landline communications may be down and that an alternate means of alerting the nations population is needed.

The bottom line is that the current E-A-S system may be a bit too complex for its own good. Some of us old enough to remember the days of the old Conelrad emergency alerting system tests that began in 1951 and continued until 1963. Those people also recall how well it worked because of its simplicity. It did not rely on computer routing and an immense software controlled hierarchy. Rather it placed its trust in the hands of human beings and only once in its history did that human system ever fail.

If you have never heard a Conelrad alert but would like to, then take your web browser to [www.tinyurl.com/first-conelrad-test](http://www.tinyurl.com/first-conelrad-test). And yes, things were much simpler back then. *(Adapted from the CGC Communicator, RW, others)*

*Amateur Radio Newsline™*

## Problems With P25 Security

November 18 2011

While it's not of much concern to hams who have adopted Project 25 digital audio, researchers looking at the security of this system have discovered that it's easily jammed, and almost as easily compromised. And all of this can be accomplished using a kid's toy. Amateur Radio Newsline welcomes Heather Butera-Howell, KB3TZD, to the Amateur Radio Newsline family.

During a two-year study, researchers from the University of Pennsylvania found that encryption on a police P 25 network was not only routinely switched off, but also demonstrated how a 25 dollar toy called the "GirITECH IM me" could be reprogrammed to jam transmissions and even exclude specific users or subnets. It also showed how a more-expensive option could track a specific user.

P25 is the United States equivalent to the trans-European Trunked Radio or TETRA digital audio radio system. But unlike TETRA, which is deployed in a dedicated and fairly secure radio spectrum, P 25 had to be compatible with the existing analog systems, and is thus squeezed into a fixed 12.5 kilohertz split-channel spacing. However, that is not the only thing making it vulnerable. According to

the report P 25 uses fixed-length packets, optionally encrypted using a symmetric key, distributed to handsets manually or over the air.

They say that the first problem is the key distribution doesn't always work. As such the research team found users frequently get cut out and have to ask the rest of the group to switch off encryption for the duration of the operation. Individual users can also, inadvertently, switch off their own encryption without other users being alert enough to notice.

The researcher's 16 page report does have practical advice for users of the P 25 digital audio mode. It suggests reprogramming handsets to make switching off encryption less obvious, and reminding users when it has been switched off. But the team also concludes that fundamentally the P 25 system wasn't designed with a properly layered security model, and that this will always leave it more vulnerable than it should be.

More about this issue with the P-25 system is online at [www.tinyurl.com/p25-secure](http://www.tinyurl.com/p25-secure) *(The A Register)*

*Amateur Radio Newsline™*

## Dayton Hamvention 2011 Tops 22,000 In 2011

November 18 2011

It's taken a few months to compile, but according to Dayton Hamvention on-line Moderator Bill Curtice, WA8ABP, the official attendance for the 2011 gathering has been tallied at 22,312. That appears to be up by several hundred over 2009 and 2010. It is a sign that at least the health of the ham radio economy is improving even if that of the

rest of the nation seems to be lagging behind. The information was posted to the Hamvention reflector on Sunday, November 13th.

*(Hamvention® News Group, WA8ABP)*

*Amateur Radio Newslines™*

## FCC Adopts New Rules For Us 5 Mhz Operation

November 25, 2011



The FCC adopted the use of the name 60 meter band to refer to 5 MHz amateur radio operations but United States hams are still only allowed to transmit on 5 specific channels.

The Federal Communications Commission released a Report and Order on November 18th with new rules governing the Amateur Radio Service operations in the 5MHz or 60 meter spectrum. Among its actions, the FCC changed the regulations to permit Upper Sideband, RTTY, Data, and CW but with specific limitations on the use of these modes. It also issued a new 60 meter band 5MHz Channel List.

The major change here was that the channel at 5366.5 Upper Sideband was deleted and replaced with a new channel at 5357.0 kHz Upper Sideband with its center frequency at 5358.5 kHz. Upper Sideband Phone, Data, or RTTY transmissions may use the dial indicated Upper Sideband suppressed carrier frequency at 1.5 kHz below the center of the channel.

Transmissions must not exceed the 2.8kHz bandwidth on any of the channels. RTTY modes such as PSK31 must not exceed 60Hz necessary bandwidth. Data modes must not exceed 2.8kHz

bandwidth. CW bandwidth must not exceed 150Hz and the CW frequency should be at the center of the channel. Data stations operating under section 97.221 automatically controlled digital station, are not allowed on these 5MHz channels. Operators transmitting data or RTTY must exercise care to limit the length of transmission so as to avoid causing harmful interference to US Government stations.

The 5 MHz band available to General, Advanced, or Amateur Extra Class license only. The maximum allowed effective radiated power is now 100 Watts P-E-P referenced to a dipole. If another type of antenna is used, the station licensee must maintain a record of either the antenna manufacturer's data on the antenna gain or calculations of the antenna gain.

Lastly, but most important, amateur radio is a "secondary user" in this band, and must not cause harmful interference to other services. Also, the Amateur Radio Service must accept any and all interference from other primary services and other nation's services. No complaints from hams about interference from other spectrum users will be accepted.

The new rules were released in a Report and Order on ET Docket No. 10-98. They take effect 30 days after publication in the Federal Register. (FCC)

*Amateur Radio Newslines™*

## Congressional Measure Seeks To Extend PLMRS Narrowbanding

November 25, 2011

A measure has been introduced into the United States House of Representatives aimed at directing the FCC to extend the final deadline for private land mobile radio licensees to migrate to narrowband technology by an additional 2 years.

Sponsored by Congressman Steve Rothman of New Jersey, the measure designated as H. R. 3430 would set January 1st of 2015 as the new date when users of private land mobile two-way radio

would be forced to migrate from the current 25 KHz inter-system spacing to 12.5 KHz or narrower spacing.

The new technical standard affects private land mobile operations in the 150 to 174 and 421 to 512 MHz bands only. Amateur service allocations in the 420 to 450 MHz spectrum would not be subject to the new inter-system narrowband standard. (RW)

*Amateur Radio Newslite™*

## ISS Active Again On UHF Packet

November 25, 2011



The amateur radio station located in the Columbus module of the International Space Station is currently operational on packet on 437.55 MHz.

To utilize the packet system, operators on

the ground need to set the UNPROTO path to ARISS with the identification of RS0ISS for digi relay. Alternately, they may connect to the BBS using the callsign RS0ISS-1.

The packet beacon is set for 2 minute intervals so it may not appear to be active over many parts of the world but it is. N5VHO advises to simply keep listening and keep in mind the Doppler shift of + or - 10 KHz. (N5VHO)

*Amateur Radio Newslite™*

## Radio Days Are Back: Ham Radio Licenses at an All-Time High

By Michelle Macaluso Published November 22, 2011 | FoxNews.com

Fresno, Calif. – iPhone, beware?

The newest trend in American communication isn't another smartphone from Apple or Google but one of the elder statesmen of communication: Ham radio licenses are at an all time high, with over 700,000 licenses in the United States, according to the Federal Communications Commission.

Ham radio first took the nation by storm nearly a hundred years ago. Last month the FCC logged 700,314 licenses, with nearly 40,000 new ones in the last five years. Compare that with 2005 when only 662,600 people hammed it up and you'll see why the American Radio Relay League -- the authority on all things ham -- is calling it a "golden age."



Nov. 16, 2011: Joe Carcia mans the mic at W1AW at the American Radio Relay League Headquarters in Newington, CT.

"Over the last five years we've had 20-25,000 new hams a year," Allen Pitts, a spokesman for the group, told FoxNews.com.

The unusual slang term -- a "ham" is more properly known as an amateur radio operator -- described a poor operator when the first wireless operators started out in the early 1900s. At that time, government and coastal ships would have to compete with amateurs for signal time, because stations all

battled for the same radio wavelength. Frustrated commercial operators called the amateurs "hams" and complained that they jammed up the signal.

People like John Pritchett have used the slang term ever since.

"It takes an inquisitive mind that wants the challenge to speak with the rest of the world," Pritchett told FoxNews.com. "I meet a lot of people as a result amateur radio. It's a fascinating experience to meet somebody who you've talked to for years -- when you finally meet them and go, wow, that's you."

Pritchett has been a ham for over 35 years. He sits in his ham shack slowly turning the dial on his amateur radio and listening attentively for a voice through the high radio frequency. But he's not looking for aliens: Pritchett is dialing in to make contact with someone around the world.

"W6JWK, This is John in Fresno, California," he says.

Pritchett can communicate with people around the globe or even astronauts in space by talking through his microphone or using Morse code.

With more people joining the hobby, local ham radio businesses are growing as well. [Amateur Electronics Supply](#) in Las Vegas sells everything to do with ham radios, from transceivers, amplifiers and antennas to handhelds.

"We have clientele from all walks of life," manager Luke Rohn told FoxNews.com. "We have church groups who are interested in ham radio for a viable source of communication in times of natural disaster. We have young kids that find ham radio interesting.

Maybe they've heard about it through their father and grandfather and it's a lot of fun for them."

According to the American Radio Relay League, retirees and emergency groups are among the main reasons for the nearly 30,000 new hams that pick up the hobby each year.

Ham is a boon for safety as well as a fun pastime: When normal communications methods fail and cellphone towers are jammed, ham radios will still work and can help out in disaster situations, because they don't require towers to relay the signal.

"Amateur radio came into play very much during the major earthquake in the Bay Area in 1989. The only thing I had was a little handheld radio. Nothing else worked, telephones didn't work, cellphones didn't work, amateur radio just kept right on working," Pritchett said.

Looking to ham it up a bit with some friends? Try a fox hunt -- the radio equivalent of ham-to-ham combat. In a fox hunt, local amateur radio clubs search for a transmitter (called the fox) using their homemade antennas.

"The fox hunting is really fun -- the thrill of the chase, the competition of being the first to find the transmitter," said Rob Mavis, president of the [Clovis Amateur Radio Pioneers](#) club in Clovis, Calif.

Ham radio is inexpensive fun, as well: All you need is a couple hundred bucks to get started and a FCC license -- which is free, but requires a \$10 to \$12 fee to cover expenses.

So join the latest craze -- no iPhone app required.

## Celebrating The CBC/Radio Canada 75th Anniversary

December 2nd, 2011



On the air, listen out for some special prefixes to be used by Canadian hams during the month of December. From December 1st to the 31st the prefixes . VG, VX, XJ and XK will be utilized by those Canadian radio amateurs who wish to help celebrate the 75th Anniversary of the Canadian Broadcasting Corporation and Radio Canada.

Better known as CBC/Radio-Canada, the famed broadcaster offers programming in English, French

and eight aboriginal languages on its domestic radio service. It also broadcasts in nine languages on its international radio service known as Radio Canada International. A recent addition is its Web-based eight language RCI Viva. This is described as being a service for recent and aspiring immigrants to Canada. ([Georgian Bay Amateur Radio Club](#), [Wikipedia Commons](#))

*Amateur Radio Newsline™*

## SATERN/NBEMS Digital Nets looking for check-ins.....

November 24, 2011

Greetings,

I just wanted to make an announcement for the Salvation Army Team Emergency Radio Network (SATERN) NBEMS digital HF nets. All are welcome and encouraged to check in.

The primary nets are on Wednesday evenings and training nets are on Monday evenings. Here's the details:

Wednesday evening SATERN NBEMS nets:

8pm ET, 14.065 USB, 1500 Hz Waterfall Center,  
Olivia 16/500

9pm ET, 7065 USB, 1500 Hz Waterfall Center,  
Olivia 16/500

10pm ET, 3.5835 USB, 1000 Hz Waterfall Center,  
Olivia 16/500

Same times and frequencies for the Monday evening training sessions, which are less formal and geared for first time check ins and folks with questions or who need training help.

All check-ins are welcome, regardless of software used. However, we pass bulletins and formal messages with the NBEMS FLDIGI and FLMSG

software using several standard forms with embedded checksum calculations allowing users of NBEMS/FLMSG to display authentic views of ICS, NTS/Radiogram, HICS and other forms. FLMSG also allows an unlimited number of receiving stations to independently verify 100% accurate receipt.

If you don't have the NBEMS FLDIGI/FLMSG software, you can still see the plain text in the message body, but you will see the extra coding for the form fields and the message checksum calculation.

The free NBEMS software and more info is available at:

[www.w1hkj.com](http://www.w1hkj.com) and [www.paNBMES.org](http://www.paNBMES.org)

Please spread the word and check in! If you have an active local SATERN group in your area, please let them know about the schedules and/or offer to act as a liaison station to move information to and from their local nets and the SATERN NBEMS HF nets.

Fred Lesnick, VE3FAL  
SATERN Great Lakes Division

## FCC Second BPL R&O Rules Take Effect December 21

December 2nd, 2011

Barring any last minute appeal by the American Radio Relay League or another entity, the FCC's latest order to revise rules for access Broadband over Powerline systems is set to become effective on December 21st.



The commission's second Broadband Over Powerline or BPL Report and Order was published

in the Federal Register on November 22nd making the effective implementation date December 21st. However, Petitions for Reconsideration concerning it are also due on that same date. As such there is speculation that the ARRL may ask for a reconsideration before the implementation date arrives.

As previously reported here on Amateur Radio Newslines, the ARRL had argued there should be

mandatory notching of the amateur bands to a level 35 dB below the general emission limit to reduce the likelihood of harmful interference to amateur stations. In the Second Report and Order the commission decided not to adopt mandatory notching. Instead, the agency increased the requirement for BPL systems to have the ability to notch frequency bands to at least 25 dB. This is an increase of 5 dB from the prior requirement of 20 dB.

The ARRL called the increase in notch depth a step in the right direction but said that doesn't go far enough to protect the amateur radio spectrum from harmful interference of the type known to be generated by Broadband over Powerline data transmission systems. The ARRL is on record as stating that it believes that now is the time to fix the rules by imposing mandatory notching of BPL signals in all of the Amateur Service spectrum. This is so that any new entrants will be competing on a level playing field with the existing Broadband over Powerline firms that have recognized the need for notching out of the amateur bands.

In other matters addressed in the Report and Order, the FCC also made technical adjustments to its rules for determining the distance between a power line and a measurement antenna and for determining site-specific extrapolation factors. This as part of a measurement standard modification for determining whether a BPL system is in compliance with the maximum allowable levels of radiated emissions.

While Broadband over Powerline has failed in the marketplace as a medium for delivering broadband connectivity to consumers, the technology is perceived to have some 'smart grid' power delivery and system monitoring applications.

*Amateur Radio Newsline™*

## AO-51 Goes QRT

December 2nd, 2011



The AO-51 ham radio satellite has gone QRT. AMSAT-North America Vice President of Operations, Drew Glasbrenner, KO4MA says that the bird has ceased transmission and is not responding to any commands from the ground.

Glasbrenner's announcement came on Tuesday November 29th. In making public word of the demise of AO-51, KO4MA, noted that the last telemetry data received had indicated that the third of six batteries that power AO-51 was approaching a short circuit condition. Also that further observation indicated the voltage from three remaining cells was insufficient to power the UHF transmitters. Initial tests with the S-band transmitter were also not positive either, although more attempts are expected.

Glasbrenner says that the control team tried leaving the satellite in a configuration where if voltages climb high enough, the 435.150 transmitter may possibly be heard. He says that the command team will regularly attempt communications with the satellite over the coming months noting that there is always the possibility that a cell will open from its short circuited state and make AO-51 useful once again.

And in a related item, word that Clint Bradford, K6LCS, is attempting to document the last VHF and UHF communications through AO-51. To find out more go to his special Web page for at [tinyurl.com/AO51-DCARR](http://tinyurl.com/AO51-DCARR).

The AO-51 ham radio satellite was on-orbit and serving the world-wide ham radio community for the better part of 7 years. (*ANS, K6LCS, Others*)

*Amateur Radio Newsline™*

## ARISSAT-1 Approaching Last Days On-Orbit

December 2nd, 2011



If you have been putting off trying to make contacts through the ARISSat One on-orbit repeater, the next few weeks will be your last opportunity to be a part of this satellite's history.

Since deployment in August, ARISSat One has descended about 60 km, and is currently losing more than 1 point 5 km per day. The rapid rate is partially the result of the recent solar activity on the atmosphere, significantly increasing the drag.

The predictions by several individuals and groups are all converging toward a reentry of ARISSat One

into the Earth's atmosphere in January or February of 2012. Heating will become significant before then.

The orbit period changes about 30 seconds per day, and that will steadily increase. As the descent continues, this will become even more critical to copying the telemetry beacon.

The ARISSat One team says that getting good telemetry in this period will provide it with valuable information to be used in future projects. The latest information on the orbital health of ARISSat One is on-line at [www.arissat1.org](http://www.arissat1.org). (*WA4SCA*)

*Amateur Radio Newsline™*

# ARRL To Release New Video Aimed At Maker Community On December 27

December 2nd, 2011



'The DIY Magic of Amateur Radio' is a new 8 and one half minute video from the American Radio Relay League to be released on Tuesday, December 27th. Its target audience is the world-wide maker and hacker community.

According to the ARRL, the show is directed toward the D-I-Y or Do It Yourself movement. This is a fairly new leisure time interest that is inspiring a whole new generation of techno hobbyists. It also could be a pool of future technologists who might want to become hams if they knew more about our hobby and that's the reason the new video was created.

To do this, Executive Producer Allen Pitts, W1AGP and Producer Bill Pasternak, WA6ITF brought together an all-star team consisting of several well-known film makers along with some newcomers to ham radio movie making.

Directed by Hollywood's Dave Bell, W6AQ, the video which is titled "The Do It Yourself Magic of Amateur Radio" was recorded on location in Ohio, Texas, North Carolina, California, Utah and on-orbit aboard the International Space Station.

It's script was written by Henry Feinberg, K2SSQ, of West Orange New Jersey. Feinberg is a former producer of the award-winning Watch Mr. Wizard

science television series. A winner of several Cine Golden Eagle awards, K2SSQ is also the ham radio operator who created the umbrella space communicator seen in the Steven Spielberg motion picture "ET the Extraterrestrial."

The show is hosted by famed New York City based maker community leader and fashion designer Diana Eng, KC2UHB. Mark Abramovich, NT3V, serves as the show narrator.

Original music was provided by Andrew-John Huddleston, Oh-Zed-5-E, and his Denmark-based group "The Ham Band."

Dave Booth, KC6WFS, of Santa Clarita, California was the shows principal videographer.

According to the ARRL, the new video will be simultaneously released on its Facebook, Twitter and YouTube pages, and will be also be available at [www.arrl.org](http://www.arrl.org). DVD copies for showing to large audiences in high definition 16 by 9 wide screen and standard 4 by 3 definitions will be available at a later date.

Again that's Tuesday, December 27th at about 10 a.m. Eastern U.S. time for the release of the new ARRL video titled The Do It Yourself Magic of Amateur Radio. It's a magic carpet ride into a pair of techno-hobby worlds that compliment one another very well. (ARRL, DIY Production Team)

*Amateur Radio Newslines™*

# Miracle Antenna Suspends Order Taking Due To Illness Of VA2ERY

December 2nd, 2011

If you are planning to purchase a product from Miracle Antenna, be aware that the company has temporarily stopped taking orders. According to a notice on its website, online ordering has been temporarily suspended due to medical illness and to please check back with us soon.

For those not aware, Miracle Antenna is the Montreal Canada-based company that manufactures the very popular Miracle Whip and other accessory items that are extremely popular with both the QRP and H F back-pack communities. An e-mail received by Bryan Herbert, KE6ZGP, and

forwarded to Newslines confirms that Robert Victor, VA2ERY, is quite ill and that his family has stepped in to help with running the business.

According to the e-mail to Herbert, for the moment the Victor family is only filling standing orders and answering e-mails. Anyone wishing to contact the family or to send get well wishes to Robert Victor, VA2ERY, may do so by e-mail to info (at) miracleantenna (dot) com. For information updates please keep an eye on [miracleantenna.com](http://miracleantenna.com). (KE6ZGP, others)

*Amateur Radio Newslines™*

# Ham Helps Open New Space Exhibit At American Museum Of Natural History In NYC

December 2nd, 2011

The American Museum of Natural History has raised the curtain on its brand new space exhibition with help from two seasoned space travelers one of whom is an amateur radio operator.

NASA astronauts Mike Massimino and John Grunsfeld, KC5ZTF both flew on the last space shuttle mission to service the Hubble Space Telescope. The two were on hand at the museum to introduce a new exhibition

called "Beyond Planet Earth: The Future of Space Exploration."

The American Museum of Natural History is located on Central Park West at 79th Street in New York City. The new space exhibit will run through August 12, 2012. More is on-line at [www.amnh.org/exhibitions/beyond](http://www.amnh.org/exhibitions/beyond). (Space.com)

*Amateur Radio Newslines™*

# Hams Hear Mars Science Lab As It Flies Toward Mars

December 2nd, 2011

The world's largest ever built extraterrestrial explorer is on its way to Mars. The six-wheeled, one-armed robotic rover named Curiosity known officially as the Mars Science Laboratory blasted off from Cape Canaveral at 10:02 a.m. Eastern time on Saturday, November 26th. It was carried into space on board an Atlas Five launch vehicle. The journey to Mars will take 8½ months and cover 354 million miles.

Meantime a group of radio amateurs have received signals from the Mars Science Laboratory using an AMSAT DL amateur radio facility in Germany. Barely 7 hours after launch, the X-band telemetry signal from

the lab was received using the ham radio station at the German AMSAT group's resource at Bochum.

This is believed to be the first reception of the Mars Science Laboratory outside of the NASA Deep Space Network. The signal, received by the ham operators was with the probe at a distance of 112,000 km from Earth. Telemetry said the enroute lab had a spin-modulation of +/- 3.5 Hz at 2 revolutions per minute.

The Mars Science Laboratory is expected to arrive at the red planet in August 2012 after a nine month flight. (AMSAT DL)

*Amateur Radio Newslines™*

## Ham Tech

Volume 1, Number 3

John R Fogleboch, Sr, WY2J, [wy2j@arri.net](mailto:wy2j@arri.net)

### Tropospheric Scattering

### Propagation Over the Horizon

This month we stretch VHF/UHF and Microwave radio signals around a curved earth to 200 to 400 miles, by means of Tropospheric Scattering. This method of propagation was first discovered in the late 1940's after high power television stations first lit up the airways in the US. The world quickly learned that signals above 50 MHz are not limited to line of sight distances. In the HAM radio world we often refer to this as weak signal work but that also includes other propagation like ducting and sporadic E which will not be discussed here.

This month I will focus on how tropospheric scattering works and overview the primary loss

mechanisms of this type of propagation. Next month in the concluding article, equations useful in sizing a station will be introduced.

The troposphere is the region of the earth's atmosphere located up to about 16 km above the surface. The air is not ionized like in the ionosphere but does have a varying index of refraction which causes bending of radio waves. The mechanism is extremely complex depending on density and temperature profiles as well as water vapor content and to a great extent is statistical in nature. While a great deal of theoretical work was done in the 1950's and 60's to describe the loss

mechanisms, much of it depends heavily on empirical methods and field measurements. There is nothing wrong with this method because the data is very repeatable and the communication links built exhibit very reliable communication. The wide use of communication satellites since the 1980's has made tropo links largely obsolete for commercial and military use.

We can define the total propagation loss between two isotropic antennas in a tropo link using three graphs and one equation. One graph is not needed if the antenna beam width exceeds 5 degrees, the usual case in HAM applications. Let's look at the two graphs that are most useful.

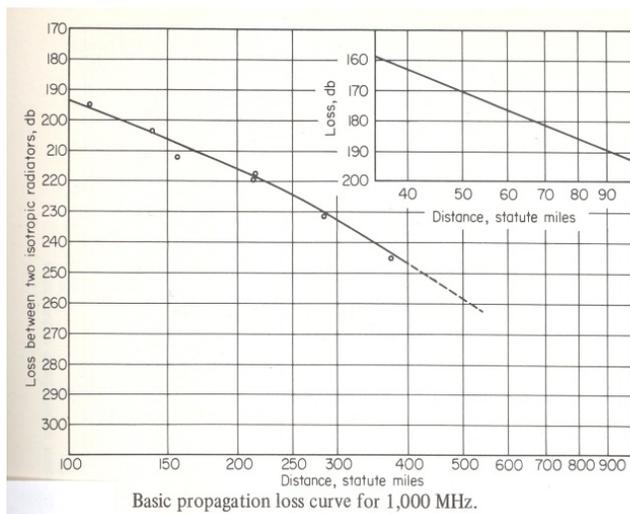


Fig.1: Tropospheric Propagation Loss between isotropic antennas at 1,000 MHz. (1)

This loss in Fig. 1 includes the line of sight loss plus excess scattering loss. It assumes operation at 1.0 GHz with the antenna beams on the horizon. Simple but it is a big loss and there is more to come. One more chart to compensate for elevated antenna beams.

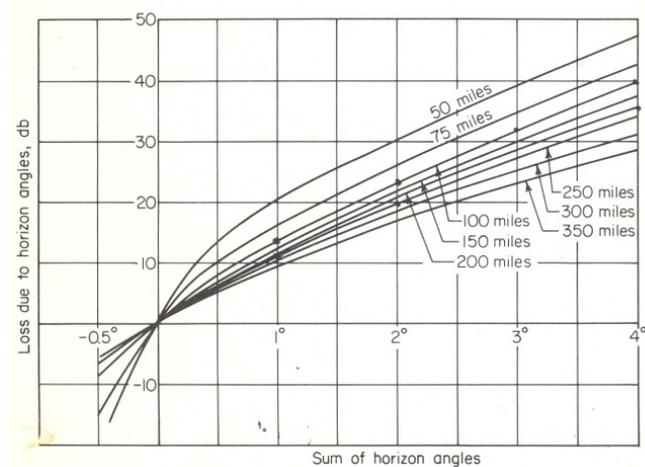


Fig. 2. Loss for elevated horizon angles. (1)

The loss in figure 1 must be corrected for use at other frequencies. The frequency correction allows its use in the range of 100 to 4000 MHz. The correction in dB which is added to the loss from the chart is equation #1.

$$Eq. \# 1 \quad L_c = 30 \log \left( \frac{f^{MHz}}{1000} \right) dB$$

As an example the loss at 200 miles and 432 MHz is 216 dB + (-10.9) dB = 205.1 dB

This implies that operation at lower frequencies will yield lower loss and be easier to achieve. But remember this is loss for antenna beams on the horizon; not possible to achieve. Let's use the 50 ft. towers from last month's LOS example, a practical value for modest stations. At 2 meters with horizontal polarization the elevation beam will be 2 degrees above the horizon. At 70 cm it will be at 0.67 degrees and 0.22 degrees at 23 cm. For two stations both with 50 ft. towers the horizon angle loss will be 36 dB, 15 dB and 4 dB respectively for these bands. The total propagation loss from all three components put together is as follows:

1. (2M)  $L_T = 216 + (-25.2) + 36 = 226.8$  dB
2. (70 CM)  $L_t = 216 + (-10.9) + 15 = 220.1$  dB
3. (23CM)  $L_t = 216 + (+3.4) + 4 = 223.4$  dB

Our lowest loss is at 70 CM, due to the non-linearity of the components with frequency. Next month we will configure a station at 432 MHz, calculate the S/N ratio for various ham modes and see if 200 mile coverage is possible, or something greater. Keep this issue of HAM TECH as you will need the charts and equation.

Reference (1): Communication System Design Chapter 13, Figures 13-19 & 13-21. By: Philip F. Panter c. 1972.

Rob Hockin VA3HO  
PO Box 13  
Komoka, ON  
N0L 1R0

2011-10-14

The Board of Directors  
London Amateur Radio Club  
London, ON

I have examined the books of receipts and disbursements of London Amateur Radio Club Inc, prepared by your treasurer for the year ended June 30, 2011.

In my opinion, the statements of cash receipts and expenditures present fairly the results of the club's operations.

The only changes made in preparing financial statements were to separate the investment income applicable to GIC's from the principal of maturing investments and to remove duplicates amounts pertaining to GIC 8 reinvestment.

Additional minor recommendations have been provided to the current treasurer.

A handwritten signature in black ink, appearing to read "Rob Hockin". The signature is written in a cursive style with a horizontal line at the end.

# **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).

