

DELAWARE LEHIGH AMATEUR RADIO CLUB Inc.

JUNE 2013



W3OK

CORRAL

**Club Meeting June 6th 7:30PM At the
Bethlehem Township Community Center**

JUNE MEETING PROGRAM

**“AMSTAT – UK's FUNcube Dongle” & Live Demo
Dennis / K3DS**



“Eli, the son of the ICEman Cometh”

Paul / N0KIA



MINUTES FROM THE MAY 2 MEETING

A general membership meeting of the Delaware-Lehigh Amateur Radio Club Inc. (the Club) was held on May 2, 2013, at the Bethlehem Township Community Center located in Bethlehem Township, Pennsylvania.

Call to Order: David Blankenship / N3EYT, Vice President, called the meeting to order at 1936 hrs.

Pledge of Allegiance: Led by Dave / N3EYT

George Hart / W1NJM (Silent Key): Bill / K3ANS provided some information on George Hart /

W1NJM. George was originally licensed as W3AMR. He and his brother Ed W3NF / W2ZVW grew up in Easton. Their father was a professor at Lafayette College. George worked at the ARRL when the League was setting up the W1AW Station. He served in the Navy during World War II. After the war, he went back to work for the ARRL and got the W1AW Station back on the air. George and Ed were highly proficient CW operators. Both were very active in the New Jersey and Pennsylvania CW traffic handling nets, the Third Area Regional Net, and the Eastern Area Net. George was involved in the development of the National Traffic System, RACES and ARES. Bill also recommended a series of articles that appeared in the *Quarter Century Wireless Journal* a few years ago of George reminiscing and reflecting on his amateur radio activity. Pete / NL7XM added that George was 99 years old when he passed and his brother Ed was a founder and president of our Club.

What Have You Been up to Lately: Dave / N3EYT opened the floor to members who wished to share any recent personal ham radio related activities, projects, or events:

Al / W3CE held a fox hunt on last Saturday. Six to seven people participated in the hunt. Pete / K2PM won it in about 35 minutes only on signal strength. Also, there was a fox hunt last night with Al's new 2 Mtr, 0.15 watt transmitter. Al would also like to have another fox hunt in June, after Dayton and before Field Day.

Doreen / K3PDL was a first time net control operator for the Wednesday night ARES/RACES Net. Dave / N3EYT added that if anyone is interested in being a net control operator, they should see Al / W3CE.

Approval of the Minutes: Dave / N3EYT asked for a motion to approve the minutes of the last meeting. Bob / NE2C had a correction; he placed first in the second call sign district in the CQ WPX Contest. It was moved by Pete / NL7XM, second by Dave / KA3IWC to approve the minutes as corrected. **Motion carried.**

Approval of the Treasurer's Report: Mike / KB3LOD presented the Treasurer's Report. It was moved by George / N3SQD, second by Doreen / K3PDL to approve the Treasurer's Report as presented. **Motion carried.**

Club Station Report: Al / W3CE held a fox hunt last night at the club station. Dave / N3EYT reminded everyone that the club station is normally open Wednesday evenings and a group of members normally go to dinner beforehand. Dave encouraged everyone to come out on a Wednesday night.

Repeater Report: Al / W3CE asked about the status of the autopatch. Pete / NL7XM reported that Barry / N3NVA had the autopatch off line due to unintended voice activation and that Barry should now have it back online.

Website Report: Brad / W3JXQ reported the site was up and running. No issues were reported by any of the members present.

Membership Report: George / N3SQD reported that last Tuesday a VE test session was held as the last class of the spring technician and general licensing classes. Fourteen people tested. One was upgrading to general and thirteen were taking the technician test. When the test session was over, twelve people passed the technician test, four people passed the general test and one passed the extra test (from no license to extra in the session). A prerequisite of taking the licensing classes is a free Club membership on passing the licensing test so the list of this month's candidates is long:

Marc Borgo / N3GRE – Previously a member of the Club and is rejoining;
Mark Ripley / KB2JHV – Upgraded to general last Tuesday night;
Barbara Wiemann / KC3AMB – Passed the technician test a two of weeks ago and is XYL of Al / W3CE.
Mary Jane Miller – Tested last Tuesday night and waiting for callsign;
Dennis Miller – Tested last Tuesday night and waiting for callsign;
John Angeleri, Jr. – Tested last Tuesday night and waiting for callsign;
John Angeleri III – (12 years old)Tested last Tuesday night and waiting for callsign;
Mark Hoffman – Tested last Tuesday night and waiting for callsign;
Eileen M Ripley – Tested last Tuesday night and waiting for callsign;
Eric Harper – Tested last Tuesday night and waiting for callsign; and
Allison Peters – Tested last Tuesday night and waiting for callsign.

George indicated that this is the first time in a long time that a technician class had virtually no attrition and took the opportunity to recognize the efforts of Al / W3CE, Dean / N3HOG and Bob / KE3AW. t was moved by George / N3SQD, second by Ed / AA3OU to accept the candidates as presented. **Motion carried.**

2013 Field Day: Dave / N3EYT reminded all to start thinking about Field Day. It is the fourth full weekend in June (June 22 and 23). The location will be the same as last year, Pavilion 5 at Louise Moore Park. Set-up activity will start at 9 AM on the 22nd.

Visitors/Guests Present: Guests and visitors in attendance included Joining the members was Rob Haitmanek / KC2FU, David Shellhammer of Slatington, Dennis Miller and Marc Borgo / N3GRE. David Shellhammer is interested in becoming licensed.

Dayton Hamvention: Pete / NL7XM asked that any members going to the Hamvention see him at the end of the meeting. Those attending should be able to contact others via the new D-STAR repeater.

MS Walk: Bob / KE3AW has been in contact with the person in charge of the MS Walk, the Walk will take place this Sunday at Coca Cola Park. Bob will coordinate with the Walk organizers to see if they would like the Club to provide communications support. He asked anyone interested to see him immediately after to the meeting so he can compile a list of operators.

Nominating Committee: Pete / NL7XM reported the Nominating committee is looking for a slate of candidates to fill vacancies on the executive board and Club officer positions.

New Business: Dave / N3EYT asked if there is any new business that should be brought to the floor. Hearing none, Dave opened the floor to questions, comments, or announcements for the good of the order. None were presented

Adjournment: There being no further business before the Club, the meeting was adjourned by Dave / N3EYT at 2004 hrs. Respectfully submitted by John / NT3P, Secretary

JUNE 2013 QUICK CHECK CALENDAR

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1
2	3 QCWA Chapter 17 NET	4 D-Star Mid – Atlantic 7:30 PM	5 DLARC RACES/ARES Net (KB3CTX)	6 DLARC MEETING	7 NO VE SESSION	8 Women's 5K Walk / Run
9	10 QCWA Chapter 17 NET	11 D-Star Mid – Atlantic 7:30 PM	12 DLARC RACES/ARES Net (K3PDL)	13	14	15
16	17 QCWA Chapter 17 NET	18 D-Star Mid – Atlantic 7:30 PM	19 DLARC RACES/ARES Net(KB3WYJ)	20	21	22 FIELD DAY
23 FIELD DAY	24 QCWA Chapter 17 NET	25 D-Star Mid – Atlantic 7:30 PM	26 DLARC RACES/ARES Net (NB3R)	27 DLARC BOARD MEETING	28	29
30						

JUNE CONTESTING AT THE OK CORRAL

JUNE 1 & 2– 10-10 International Open Season PSK
 JUNE 8 & 9– ARRL June VHF Contest
 JUNE 15 & 16– All Asian DX Contest - CW
 JUNE 22 & 23 – ARRL Field Day



VE TEST SESSION

There will not be a test session this month. The next session will be July 12th at 7:00 PM at the Northampton County 911 Center. Pretest registration is required. Contact George / N3SQD at george@bioserv.com or Al / W3CE at w3ce@arrl.net.

FIELD DAY 2013

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

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

The 2013 Field Day will be held on the week end of June 22nd and 23rd. At the Louise Moore Park in Bethlehem Township. The DLARC will be located in Pavilion #5 which is located on the east side of Country Club Road. The same location as last years picnic.

George / N3SQD is chairman of this event and will be looking for volunteers to help with all phases of the event. A sheet will be at both the May and June meeting for signing up. Help is needed with setting up, tearing down and also putting together the food and drink.

CIRCULATION MANAGER

The OK Corral will need a circulation manager effective with the November e-mail (push) issue. Pete / NL7XM who has been filling this position will be stepping down at that time. Interested members should contact Don / KC3II at editor@dlarc.org.

PROGRAM CHAIRPERSON

We need a Programs Chairperson and/or Committee for the calendar year 2014. If you are interested, please contact Charlie / W3OPA. It is desirable to have the Programs Chairperson and/or Committee in place by August or September so there is ample time to schedule programs for 2014.

NEW MEMBERS

The DLARC is continuing to grow, so be sure to greet our new members, shake their hands, and give them a warm welcome to our club. The newest members are Paul Morrison / N3YNT, Walt Speck / WB3JXI, Marc Borgo / N3GRE, Mark Ripley / KC3AOH, Barbara Wiemann / KC3AMB, Steve Faustner / KC3AOE, William Bullman / KC3AOJ, William Schwab / AB3SH, William Duell / KC3AOC, John Angeleri III / KD2EBT, Mary Jane Miller / KC3AOI, Dennis Miller / KC3AOM, John Angeleri Jr / KD2EBQ., Mark Hoffman / KC3AOG, Eileen Ripely / KC3AOD, Eric Harper / KC3AOK, and Allison Peters / KC3AOF.

MAY PROGRAM REPORT

“Eli, the son of the ICEman Cometh”

Paul began by showing alternating currents and you saw that the voltage and the current varied with time. If the AC supply is connected to a resistor, then the current and voltage will be proportional to each other. This means that the current and voltage will 'peak' at the same time. We say that the current and voltage are in phase. The voltage and current are in phase when a resistor is connected to an alternating voltage.

When a capacitor is connected to an alternating voltage, the maximum voltage is proportional to the maximum current, but the maximum voltage does not occur at the same time as the maximum current. The current has its maximum (it peaks) one quarter of a cycle before the voltage peaks. The current leads the voltage by 90° . For a circuit with a capacitor, the instantaneous value is not constant. However, the value of i is useful, and is called the capacitive reactance of the component. Because it is still a voltage divided by a current (like resistance), its unit is the ohm. The value of i capacitor depends on its capacitance and the frequency of the alternating current.



Inductors are very similar, but the current peaks 90° after the voltage. The 'current lags the voltage'. Again, the ratio of maximum voltage to maximum current is called the reactance — this time inductive reactance. The value of the reactance depends on its inductance. The ratio of the maximum voltage to the maximum current when a capacitor or inductor is connected to an alternating voltage. The unit of reactance is the ohm.

While inductive and capacitive reactances are similar, in one sense they are opposites. For an inductor, the current peaks 90° after the voltage. For a capacitor the current peaks 90° ahead of the voltage. When we work out the total reactance for an inductor and a capacitor in series

The total reactance is the sum of all of the inductive reactances minus the sum of all the capacitive reactances. The magnitude (number) in the final result gives the ratio of maximum voltage to maximum current in the circuit as a

whole. The sign of the final result tells you its phase. If it is positive, the current peaks 90° after the voltage, if it is negative, the current peaks 90° before the voltage.

If a series circuit contains resistors as well, then the situation is more complicated. The maximum current is still proportional to the maximum voltage, but the phase difference between them won't be 90° . The ratio between the maximum voltage and maximum current is called the impedance, and its unit is also the ohm. where X is the total reactance of the inductors and capacitors in the circuit, and R is the total resistance of the resistors in the circuit. It is easier to understand this formula by thinking of a right angled triangle. Resistances are drawn horizontally, reactances are drawn vertically. The hypotenuse of the triangle gives the impedance.

However when Paul went to show exactly how the circuits worked on the oscilloscope, he experienced technical difficulties when the oscilloscope failed, and he ended his presentation. But even with the technical difficulty, Paul was able to present another fine presentation.

MONTHLY BRAIN TEASER

"A special prize awaits the first Club Member to submit the correct answer to this month's Brainteaser to the Pete / NL7XM at nl7xm@arrl.net. The winner must be present at the next Meeting to receive it, or it goes unrewarded. Officers, Board members, and Brain Teaser Authors are not eligible to win."

de NL7XM



MAY BRAINTEASER ANSWER

"new door" can be rearranged into "one word"

NO WINNER



JUNE BRAINTEASER

What word in the English Language is always spelled incorrectly?

WOMAN'S 5K WALK / RUN

I have been contacted by Becky the race director for Lehigh Valley Woman's 1st Strides. It's Woman's 5K Run as a satellite of the LV Road Runners which supports breast cancer. We are asked to be at the Hanover Township 5K Walk/Run to help with communications support for the event and point the runners the directions to run. For those of you who have helped before know it's an easy event and a great community to be at. Which makes it perfect for 1st time helpers. The event is on Saturday morning, June 8th. I was requested to have 12 to 15 operators to support the event for communications. I will be at the Hanover Township Community Center around 0800, or earlier, to get things started, and will need operators with 2 meter HTs (and batteries) or mobiles. I will hold a pre-deployment meeting/briefing at the Community Center parking lot between 08:30 and 08:40 and for those coming to help, talk-in will be on the W3OI 146.94 (PL-71.9) repeater system. It is a rain or shine event and is located at 3660 Jacksonville Road, Bethlehem, Pa.. Stations should be deployed to course locations which will be determined prior to the event.

The start of the race is 09:00 with walkers at about 09:02, and expect to go to about 09:45 with the last walker crossing the finish line. This is a more serious run so we won't have many walkers but they are expecting well over 400 runners.

Frequencies will finalized the morning of the race, but expect to be using 146.940 and (147.135 - PL-167.9) repeater as a backup. I will give further updates as I know more. Be sure to bring anything you may need (water, soda, snack foods, etc.) while deployed. If you are able to lend your services, please contact me directly with any of the information below. I need to know in advance who I have available. Although this is short notice, if you are able help, please contact me regarding your intentions at your earliest convenience so I enough time to finalize plans and perform any other coordination activities.

Thank you in advance for your response and support to the event and community.

Contact me if you can help and thanks in advance. ak3m@rcn.com

Mark Miller (AK3M)

WEDNESDAY NIGHT NETS

Additional Net Controls are needed for the Wednesday Night ARES, RACES & DLARC net. If we have enough interested operators, it will only be necessary for each operator to have only one net session in each three month period. Actually 13 weeks in a period, so 13 net controls would be ideal, and maybe some extras to fill in if needed. This would give us a pool of experienced controls, for any emergency which would arise. Interested operators should contact Don / KC3II at kc3ii@arrl.net or Al / W3CE at w3ce@arrl.net The NIMS IS-700 and ICS-100 courses are not required to be a net control, but should the need arise and we do supply controls and operators for real emergencies, then the courses requirement will be in effect.

REDNERS' SUPERMARKETS SAVE-A-TAPE PROGRAM

Here's how it works:

Redner's has a terrific program to support the Club **AT NO COST TO THEM**, if our members simply sign up for a Gas Card that records their shopping points, and give their cash register receipts to, **Pete / NL7XM**, He'll do the rest.

Note: This does not affect your gas points in any way.

HELP THE ENVIRONMENT

Donate your old, empty printer ink cartridges to the Club for recycling. Any brand, model, size or shape; color or black. Please bring them to the meeting in a leak proof ziplock type baggie and give them to Pete / NL7XM. This simple act can help your Club by reducing recurring expenses, and make you feel a lot better about our environment.

NOTICE<> NOTICE<> NOTICE

We are enjoying our superior new Meeting quarters, but for that reason, it is also a very popular venue for many other groups. To reduce congestion as other scheduled activities end and folks try to exit, we have been politely asked to refrain from entering the lobby before 7:15. Your strict consideration is appreciated. With the nicer weather, a pre-meeting get together can be had in the pavilions near the parking lot area.

RADIO AMATEURS PROVIDE COMMUNICATION SUPPORT IN BOSTON MARATHON BOMBINGS

As has happened many times in years past, over 200 Amateur Radio operators participated in communications for the Boston Marathon on Monday, April 15, 2013. Unlike prior challenging situations such as very warm weather for the runners or other weather-related challenges, this year's marathon will be remembered for the bombings that took place at the finish line. Despite this heinous act, professional first responders, medical volunteers from the American Red Cross that staffed the route, and Amateur Radio operators performed magnificently in the face of adversity.

"Within minutes, cell phone systems became overloaded and making phone calls and text messages was difficult. Amateur Radio operators performed communication duties under duress and performed admirably. No Amateur Radio volunteers were injured on the course in this terrible act," said Steve Schwarm, W3EVE, who is the Amateur Radio Course Communication Coordinator and associated with a consortium of clubs and groups known as Marathon Amateur Radio Communications

"At the finish line net control, which was only 400 feet from the initial blast, we heard the explosion. I poked my head outside to confirm what I thought it was and saw the white smoke. We immediately knew what had happened and commenced a roll call of all ham operators and medical tents. State Police authorities initially ordered us to lock down and post a ham for security watch outside the net control trailer. Thankfully none of our people were hurt," said Paul Topolski, W1SEX, Amateur Radio Finish Line Coordinator.

Following the explosion and roll call, Topolski stated that they began pulling together updates and sent the information via the Massachusetts Emergency Management Agency (MEMA) Web-EOC software tool and provided updates via Amateur Radio. Shortly after sending a few updates both Boston Police and Massachusetts State Police gave the order for the tent area to be evacuated. "In my mind, the course end of things is where a lot of work needed to happen as runners eventually needed to be stopped, congregated and transported to safety and staging areas," Topolski said. "At the finish line, our job was to check on the safety of our people, provide those initial updates and evacuate per police instructions. Three of our Amateur Radio operators redeployed to the Boston Marathon Course Net Control Center."

Across the course outside of the finish line after the bombings occurred, first aid stations were consolidated to larger first aid stations to pool runners for pickup and to keep runners warm as there were enhanced tents along the route where runners could be kept warm and hydrated. At the Heartbreak Hill first aid station, amateur operators had a complete base station setup, including a computer, and were prepared to handle health and welfare traffic as required. Several shelters were set up along the route at churches and schools, and Amateur Radio operators from secured first aid stations went to those shelters, providing communications in those areas until runners were moved out of their locations.

"My role at the request of Steve, W3EVE, as event organizer before the race was to shadow the course medical tent coordinator for the Red Cross, Kandi Finch," said Rob Macedo, KD1CY, who is also the Eastern Massachusetts ARES Section Emergency Coordinator. "It was a challenging position but all organizers on both the Amateur Radio side and Red Cross side said things went well in coordinating during normal race conditions and particularly after the bombings." At course net control, which was away from the bombings, ham operators controlled their nets calmly and professionally while also expressing an appropriate level of urgency. Over a dozen amateurs at the net control center pooled together to announce messages and keep status of changes along the course route as required.

Net Control Center Coordinator, Karen Brothers, K1KEB, kept in constant contact with MEMA, where Terry Stader, KA8SCP, was stationed. Stader became the MEMA 'Ops' point person at the State Emergency Operations Center as runners were transported from the shelters to other staging locations. From his location at the EOC, Stader was able to sort out the sheltering plan and reception centers for the runners, subsequent transport of runners from shelter locations and give out information on MBTA bus and train operations.

Jim Palmer, KB1KQW -- who served as a net control at the Net Control Center -- stated that nets were doubled up on operators, to allow one person to operate the radio while the other listened and logged priority calls and ambulance requests, creating a more efficient operation. "Several ambulance requests for dehydration and exhaustion were handled due to the runners needing to be stopped," Palmer said. The specific net that Palmer ran also provided a link between the marathon course and the American Red Cross in its Cambridge facility. Lou Harris, N1UEC; Frank O'Laughlin, WQ1O, and Dan Howard, K1DYO, staffed the Red Cross in Cambridge.

Many amateur operators who volunteered along the marathon route praised Net Control's support after the bombing. "Net Control did an awesome job," said course volunteer David Wihl, KB1VEG. "The workload was busiest after seven hours on the radio, and it didn't let up for another couple hours."

Several young radio amateurs from the Clay Center Amateur Radio Club also supported Net Control Operations, both as direct net control operators and runners for the operation as they have done in the past. This provided a tremendous learning opportunity for these young operators, from both an Amateur Radio perspective and an overall learning perspective. "Despite the total lack of warning in this situation, amateurs followed a creed I've long since preached since the 9/11 terrorist attacks and the mutual aid response to those attacks: 'blessed are the flexible for they will not get bent out of shape,'" said Steve Schwarm, W3EVE. "Amateurs on the course did what they had to do to assure their own safety and runner safety working with the Red Cross medical people. They did an outstanding job and I was told so by Red Cross organizers as well." From an ARES perspective, a heightened state of awareness on the Boston Marathon event is typical, but within 15 minutes of the bombings, Eastern Massachusetts ARES Assistant Section Emergency Coordinator, Carl Aveni, N1FY, issued an ARES Stand-By and requested that amateurs give availability for the next 24 hours. Within minutes, 20 amateurs offered their availability.

The ARES sub-regional command center at the Acushnet, Massachusetts EOC (under call sign WA1EMA) was utilized as a control point to obtain critical situational awareness of the rapidly changing situation, as well as to monitor resource nets per a report filed by Acushnet Emergency Management Communications Officer Ed Caron, KA1RSY; he also serves as the South Shore Massachusetts ARES District Emergency Coordinator. A total of five Amateur Radio operators were deployed to this facility. An ARES resource net was called on the 147.18 Bridgewater repeater with Byron Piette, K1YCQ, as net control with 11 stations checking into the net.

"In terms of having amateurs within ARES who cannot get directly involved in the marathon, we have a process where we have them monitor in case of a situation like what occurred on Monday. That process paid off and facilitated a rapid response to our request for possible additional support," said Carl Aveni, N1FY.

Some radio amateurs who volunteered in the Boston Marathon have posted their stories online; read one such story is from Tim Carter, W3ATB, of Meredith, New Hampshire.

THE DLARC FORUM

A few years ago the Executive Committee established an electronic mailing list for D.L.A.R.C. Members and friends to provide an easy way to disseminate information on a timely basis. This mailing list is called the "DLARCforum" and all club members with email capability are welcome to join.

Joining the list is easy, just go to this website :<http://mailman.qth/mailman/listinfo/dlarcforum> and fill in the appropriate boxes. Instructions for the subscription process are available on the page. If you don't have internet service, but do have email service you can still subscribe by sending a subscription request directly to the list administrator, ka3jwe@arrl.net.

The DLARCforum is a "closed" list which means only subscribers can post messages, so your mailbox won't be filled with junk mail from unknown sources. The list uses a "text only" format which means, that only messages in plain text are passed. Messages received in HTML are filtered and stripped of any formatting before being sent out to list subscribers. The list will not accept or pass attachments such as files and pictures. This is done to eliminate the possibility of spreading any type of computer virus or other harmful programs. The forum is an "un-moderated" list, which means that there is no moderator screening messages before they are passed on.

Since its beginning, the volume of messages on the DLARCforum has been relatively low compared to other similar mailing lists. So don't worry your your inbox won't be overflowing with messages if you subscribe. There is also the ability to configure your preferences for the list to your personal liking.

So, please consider joining the list if you're not already subscribed. You'll be better informed about current club activities and also have the knowledge and experience of over half the membership at your disposal. Anything you want to know, all you have to do is ask!

de Don / KA3JWE List administrator

FCC AGAIN DENIES ARRL'S PETITION IN BPL PROCEEDING

On April 16, the FCC issued a *Second Memorandum Opinion and Order (MO&O)*, denying the ARRL's December 2011 *Petition for Reconsideration* that sought reconsideration of the FCC's *Second Report and Order (BPL Second Order)*, "fundamentally affirm[ing]" its rules for Access Broadband over Power Line (Access BPL) systems. In denying the ARRL's *Petition*, the FCC noted that the *Petition* "[did] not raise new arguments based on new information in the record or on the Commission's new analysis of limited points as directed by the Court, nor does it demonstrate any errors or omissions in the Commission's previous decisions," and that its previous rulings "strike an appropriate balance between the dual objectives of providing for Access BPL technology -- which has potential applications for broadband and Smart Grid uses -- while protecting incumbent radio services against harmful interference."

The ARRL made 14 principal points in its *Petition*, each of which was aimed at urging the FCC to enact additional rules that would permit BPL systems to operate without the severe interference potential inherent in BPL technology. The ARRL argued that the current rules do not address this severe interference potential, which was manifested in every deployment of BPL in which the safeguards urged by the ARRL were absent. The FCC dismissed all of the ARRL's arguments, claiming that the ARRL "did not submit any new information," made "no new argument" or that it had, in the Commission's view, failed to make its point.

Background

In 2004, the FCC adopted rules for Access BPL systems, and on reconsideration sought by the ARRL and others, it reaffirmed those rules two years later. In 2007, the ARRL challenged these same rules in the US Court of Appeals for the District of Columbia; the *Court found for the ARRL on two of its major points* and remanded the rules to the FCC for reexamination. In July 2009, the FCC issued a *Request for Further Comment and Further Notice of Proposed Rulemaking (FNPRM)* to address the issues remanded to them by the Court. In October 2011, the FCC issued a *Second Report and Order (BPL Second Order)* that "fundamentally affirmed our rules for Access Broadband over Power Line (Access BPL) systems. We also make certain minor modifications to improve and clarify the rules. These rules provide 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."

In the *BPL Second Order*, the FCC specifically further explained its rationale for retaining the 40-dB-per-decade extrapolation factor for calculating signal decay of BPL at increasing distances perpendicular to the power line at frequencies below 30 MHz, modified the rules to increase the required "notch filtering" capability for systems operating below 30 MHz from 20 dB to 25 dB, established a new alternative procedure for determining site-specific extrapolation factors and adopted a definition for the "slant-range distance" used in the BPL measurement guidelines to further clarify its application.

The FCC noted in its *MO&O* that as a part of the *BPL Second Order*, it had also rejected the “ARRL’s newly raised request for mandatory notching of all amateur bands at notch depths of at least 35 dB, and found no basis that would warrant modification of the Access BPL rules or otherwise provide additional protection for the Amateur Radio Service.”

In its December 2011 *Petition for Reconsideration*, the ARRL maintained that the FCC’s BPL rules failed to acknowledge the substantial interference potential of Access BPL systems relative to Amateur Radio HF communications, and repeated its previous request for full-time notching (frequency avoidance) of all amateur frequency allocations of at least 25 dB. If this was done, the distance extrapolation factor assumed for signal decay at distance from BPL-carrying power lines is of far less concern, though the ARRL expected the FCC to adopt a scientifically valid and supportable extrapolation factor.

The Second Memorandum Opinion and Order

The FCC claimed in its *MO&O* that the ARRL urged four major points: “The unique and substantial interference potential of Access BPL systems relative to Amateur Radio HF communications, the inapplicability and/or inadequacy of the BPL rules with respect to Amateur Radio interaction; the clear necessity of mandatory, full-time notching by Access BPL systems of Amateur Radio allocations to notch depths of at least 25 dB, and the absence of any negative effect on BPL systems of the obligation to maintain full-time notching of amateur bands.” The FCC said that the ARRL made these arguments “based on the same reasoning and facts that we considered and disposed of previously in the *BPL First Order*, the *BPL First MO&O* and the *BPL Second Order*.” The FCC was, it said, unpersuaded by those arguments and denied the ARRL’s *Petition*. In its *MO&O*, the FCC stated that “[t]hroughout this proceeding and in its judicial appeal, the ARRL has argued that more restrictive technical standards are needed to protect the Amateur Radio Service from interference caused by radio frequency (RF) emissions from Access BPL systems. We have specifically rejected as unnecessary these repeated requests by the ARRL for tighter emissions controls on Access BPL operations, more stringent interference mitigation measures, and requirements for avoidance of BPL operations in the amateur bands.”

The ARRL’s *Petition* called on the FCC to do more than what the FCC called its “minor adjustments to the rules” in the *BPL Second Order*: Modification of the rules to increase the required notch filtering capability for systems operating below 30 MHz from 20 dB to 25 dB, established a new alternative procedure for determining site-specific extrapolation factors and adopted a definition for the “slant-range distance” used in the BPL measurement guidelines to further clarify its application. “The ARRL is not specifically requesting reconsideration of these above minor modifications to the rules that were adopted in the *BPL Second Order*,” the FCC said. “Rather, the ARRL is reiterating its previous request for mandatory full-time permanent notching of all Amateur Radio allocations, which we considered and rejected in the *BPL Second Order*.”

One of the ARRL’s 14 points in its *Petition* concerned BPL systems that are operated by International Broadband Electric Communications (IBEC). The FCC noted that in December 2010, the ARRL submitted a BPL interference complaint regarding some IBEC-operated BPL systems to both the FCC’s Enforcement Bureau (EB) and the Office of Engineering and Technology (OET). In February 2011, the ARRL submitted a request to the OET to set aside IBEC’s certification grants for their BPL equipment. In January 2012, IBEC [announced](#) it was closing.

“The ARRL argues that because no action has been taken on these complaints, the rules should require permanent notching of amateur frequencies since *post hoc* enforcement of interference issues is not adequate,” the FCC stated in the *MO&O*. “We observe that over the years, the Commission has investigated and taken action on BPL complaints where it appeared that it was warranted. In the early period of BPL development, before the rules were in place and compliant equipment was in use, some of our investigations took time to complete. After the rules were established in 2004, there were fewer incidences of interference complaints and we have had cooperation from the BPL system operators to resolve them. We notice that before the Commission could take action on ARRL’s December 2010 interference complaint and February 2011 request regarding IBEC, IBEC had started the shut-down of all its BPL operations, making investigation of its operations as they related to the complaints moot. This anomalous case cannot be extrapolated to conclude that the Commission does not have the capability and/or readiness to enforce its BPL rules. To the contrary, the Commission has diligently investigated previous complaints about interference from BPL systems.”

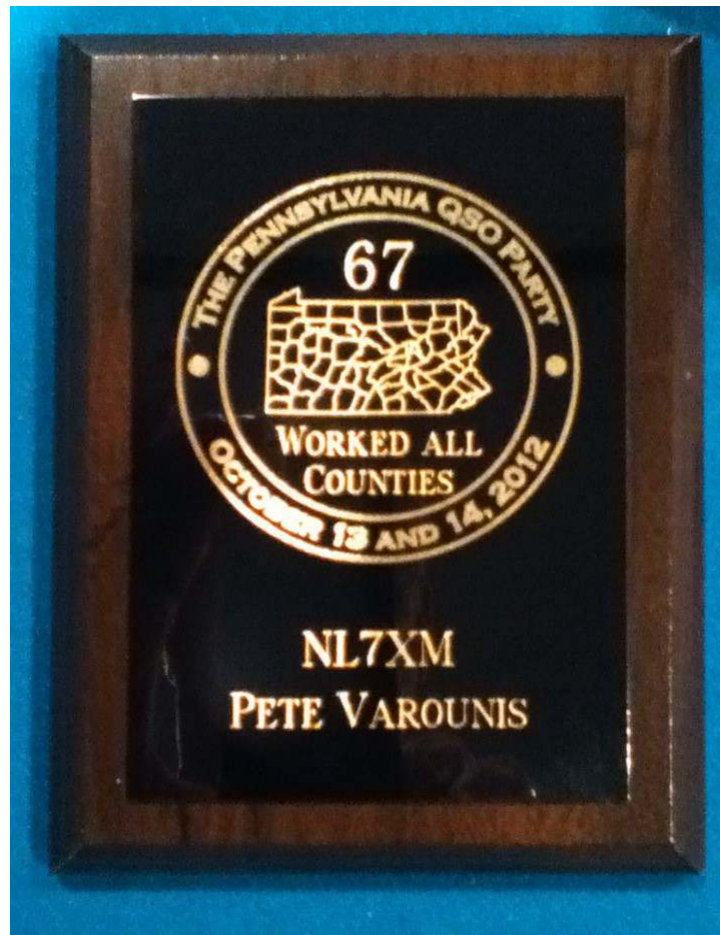
“The denial of our *Petition for Reconsideration*, some 16 months after it was filed, comes as no surprise, although some of the rhetoric the Commission resorts to in continuing to defend its wrong-headed promotion of the flawed BPL technology is disappointing,” said ARRL Chief Executive Officer David Sumner, K1ZZ. “At one point, the Commission even goes to a dictionary to debate our use of the term ‘ubiquitous’ to describe amateur operation. More disturbing is that the Commission says the shutdown of IBEC’s systems occurred ‘before the Commission could take action on ARRL’s December 2010 interference complaint,’ rendering the complaint moot -- but the shutdown did not occur until January 2012, more than a year later. Are the Commission’s licensees supposed to wait until BPL operators become victims of their own financial failings before they gain relief from interference from unlicensed emitters that are operating in clear violation of the Commission’s own rules?”

ARRL General Counsel Chris Imlay, W3KD, concurred: “For 10 years now, the ARRL has *aggressively and consistently* provided to the FCC irrefutable technical arguments, cited controlling technical sources and provided video and audio recordings of actual harmful interference as it occurred at BPL deployments. Several conclusions are unavoidable to an unbiased reader of the record in this protracted rule making proceeding: (1) BPL technology has a high interference potential to high frequency and medium frequency authorized radio services. (2) BPL interference on medium voltage overhead power lines occurs over substantial distances along power lines and at substantial distances away from power lines. (3) The interference potential of BPL at hundreds of yards from overhead power lines has been documented by NTIA and by the FCC’s own laboratory staff. (4) Each and every BPL deployment that has not effectively notched Amateur Radio bands, full time, to a reasonable notch depth, has caused interference to stations in the Amateur Radio Service. (5) The FCC has not effectively addressed or resolved any BPL interference case reported to it to date, and its resources are insufficient to remedy BPL interference after the fact. (6) The only way to protect geographically proximate radio services from BPL

interference (such as Amateur Radio stations, most of which are located very close to medium voltage overhead power lines) is by rules which prevent the interference at the outset. (7) Responsible BPL companies long ago demonstrated that it is possible to notch, at all times, all Amateur Radio bands to a reasonable notch depth between 25 and 35 dB, without any functional degradation of their systems.”

Imlay said that full time, mandatory notching of amateur bands to a notch depth not less than 25 dB was “the least that the FCC should have required in its rules, because interference prevention is possible; *post-hoc* remediation is not. In this instance, the FCC has not acted responsibly in its stewardship of the MF and HF radio spectrum. The ARRL will continue to vigilantly guard against the abuse and pollution of the radio spectrum in the use of BPL technology on a case-by-case basis as necessary, wherever necessary.”

CONGRADUATIONS PETE



DLARC CLUB STATION OPERATING GUIDELINES

1. A control operator must be present at all times the club station (W3OK) is transmitting
 2. The control operator will be responsible for following all FCC rules and regulations, with special attention to third party rules:
 - a. A third party is defined as any non licensed individual who takes part in communications.
 - b. Included are non-amateurs, Technicians operation HF, and General or Advanced hams operating in band segments reserved for higher class licenses.
 - c. When those mentioned in b. are operating communications should be limited to those countries that the United States has third party agreements with.
 3. Log of all contacts and transmissions on the high frequency bands should be kept. 2 meter Local communications need not be logged.
- Club member's personal call signs may be used and privileges must be restricted to the license class of that member.

F.Y.I.

The July Program will be "CW Receive Contest" – Jon NJ3I

The D.L.A.R.C. meets the "FIRST" Thursday of each month. Membership, friends and interested persons meet at the Bethlehem Township Community Center, 2900 Farmersville Road, Bethlehem, Pa. 18020) at 7:30 PM. Committee reports and announcements of all present and future activities will be presented at that time. Followed by that month's program.

The EASTERN PENNSYLVANIA District 2 ARES Net meets every Wednesday at 1930 hours local time. (Just after the DLARC Net) On 147.255 (pl 162.2). And linked to 449.375 on Blue Mountain, 443.350 in Allentown and 147.180 in Berks County.

QCWA Chapter 17 holds a net Monday evenings at 8:30 PM on 3960 +/- depending on conditions.

Mid-Atlantic D-Star Net meets each Tuesday at 7:30 PM. The following repeaters Dstar repeaters are available in the Lehigh Valley. W3OK -145.11000MHz -0.600 Port C – W3OI -147.16500MHz +0.600 Port C, – W3OI - 445.02500MHz -5.000 Port B All repeaters on the net are linked through **Reflector 020 port A**, so all stations checking into the net should make sure that they have *their local repeater call sign followed by the letter "G" in the eight position of the RPT2 field*. Otherwise, you will only be heard locally and not over the Reflector. Dongle users wishing to check into the net should Log On by connecting directly to Reflector 20, port A, rather than through your local repeater in order to conserve local bandwidth.

The OK Corral is an organization publication for the purpose of informing members of the D.L.A.R.C. of educational and training opportunities, club events, relevant news articles and a monthly calendar of daily activities, meetings and dates.

The Clubhouse telephone number is 484-895-7038.

EXECUTIVE COMMITTEE 2012 – 2013 OFFICERS

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PHONE NUMBERS FOR THE EXECUTIVE COMMITTEE OF THE DLARC CAN BE FOUND ON THE WEBSITE / MEMBERSHIP LISTING

CLUB MEETINGS

All regular meetings of the D.L.A.R.C. Are held on the first Thursday of each month at 7:30 PM at the Bethlehem Township Community Center
TALK IN ON 146.700 (PL 151.4)

THE W3OK TRUSTEE --- Jon Matson / NJ3I

The W3OK Corral is published monthly and is the Official Publication of the DELAWARE LEHIGH AMATEUR RADIO CLUB INC.

14 Gracedale Avenue
Nazareth, Pa. 18064-9211

ARES, RACES AND DLARC NET

All Radio Amateurs are welcome to participate in the ARES, RACES and DLARC net. This net meets Wednesday at 1900 hours local time, on the W3OK Repeater 51.76, 146.70 and 444.90 (pl 151.4). With an alternate frequency of 147.370 (167.9) W3OI Repeater.

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