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# CQ BARS

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Volume XXI Issue 07

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## President's Corner

President - MIA

### Secretary's Column

For those of you who made it Field Day, THANK YOU!! For those of you who didn't make it, #@\$%\*@#.

**Remember that the July Meeting will be held at the National Weather Service Forecast Office in Romeoville. It's located between IL 53 and Weber Rd. Turn north at the wind sock off Rt 7 (Renwick Rd) and look for the radar dome. A tour of the facility will follow the meeting.**

Now IT'S HAMFEST TIME!! The July meeting is the planning and volunteering meeting. Get ready!!

Short section again this month. Wanted to allow space for BPL related articles.

73's for this month

Don - N9VJV

### Last Months Meeting Minutes

The meeting was opened at 19:10 hours by KA9SFW (Jim), Treasurer. Introductions followed. Officers present were: NW9V (Jim), KB9JLB (Barb), and N9VJV (Don). Also present at the meeting were:

KA9ZJJ	N9OZD	WD9AYR
K9JTB	NW9V	KA9SFW
N9LJY	KA9J	KB9JLB
WA9IL	WB9PDD	W9KHX
KC9BST	KB9JWG	N9VJV

A motion to accept the minutes as published in CQ Bars was made by WD9AYR (Ed), seconded by KA9ZJJ (Marti) and carried.



The Treasurers report was presented by KB9JLB (Barb). A motion to accept as presented was made by N9LJY (Tom), seconded by WA9IL (John) and carried.

### COMMITTEE REPORTS

2 meter: KA9J (Frank) reported that it's still working. Bob Mierop has tasked with Willie.

220/440: WA9IL (John) reported that the 220 machine was still down. It needs to be sent in to the manufacturer for repairs. The 440 machine is working fine.

Net Control: No Report.

Hamfest: N9LJY (Tom) reported that f25 tables have been sold. Attendance is down for other fests.

Education: NW9V (Phil) reported that WG9L is reviewing the video course but has not made a decision yet.

VE: K9KHX (Dale) reported that 2 new Techs passes ad the last VE session.

Field Day: NW9V (Phil) reported that setup will begin Friday 6/25 after luhcn (at Family Square). The trailer has plates. Bring water as there is none at the site. Volunteer needed to pick up towers from N9NPP. Call will be N9LJY. Classification will depend on who shows up to operate. American Red Cross will send their emergency response vehicle to visit.

Public Relations: KA9ZJJ (Marti) reported that a map to the Field Day Site has been added to the web site. The Field Day notice has been sent to the paper.

Skywarn NW9V (Phil) reported that we have had this has been a busy season so far. He reported that KB9OEX (Elden) has also helped man the NWS station. He has MANY compliments on the net from individuals he has spoken with as the NWS table at area hamfests. He reminded us that the reporting protocol is set bu the NWS and is subject to change at any time by them. He reminded is that we do need to be sure to ID frequently as required by the FCC.

Misc.: The National Weather Service personnel have agreed to allow us to hold our next meeting at their facility in Romeoville. The meeting will be followed by a facility tour.

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### **OLD BUSINESS:**

None

A motion to close old business was made by KA9ZJJ (Marti), seconded by KC9BST (Lisa) and carried.

### **NEW BUSINESS:**

The July issue of QST does not contain notification of our hamfest.

A motion to close new business was made by N9LJY (Tom), seconded by KB9JLB (Barb) and seconded.

A motion to adjourn the meeting was made by KB9JLB (Barb), seconded by N9LJY (Tom) and seconded.

Respectfully submitted,  
Don, N9VJV  
Secretary

### **FCC Sets New Vanity Fee Start Date: August 6, 2004**

The FCC has announced that the new Amateur Radio vanity call sign regulatory fee of \$20.80 for the 10-year license term will go into effect August 6. Applicants for amateur vanity call signs will continue to pay the \$16.30 fee per vanity call sign application received by FCC until the new fee goes into effect. The FCC says it expects to collect close to \$162,000 from 7800 Amateur Radio vanity call sign applicants during Fiscal Year 2004. See the FCC's annual Report and Order (Docket MD 04-73) on the Web at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-04-146A1.doc](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-04-146A1.doc) for details on their assessment and collection of regulatory fees for FY2004.

### **Broadband over Power Line:**

#### Why Amateur Radio Is Concerned about Its Deployment

Radio amateurs are not opposed to broadband services. On the contrary, they tend to be early adopters of new technology. However, there are ways to deliver broadband that do not pollute the radio spectrum as Broadband over Power Line (BPL) does. These include fiber-to-the-home, cable, DSL, and wireless broadband. The ARRL--The National Association for Amateur Radio-- is supportive of broadband access for all Americans; however, it opposes the use of BPL as a solution to achieving this goal.

#### What is Broadband over Power Line?

BPL is the delivery of broadband Internet signals using electrical wiring to conduct high-speed digital signals to homes and businesses. BPL systems are designed to deliver Internet services using medium voltage power lines as the distribution medium and generally use the frequency range between 1.7 and 80 megahertz (MHz).

#### What is the status of BPL?

BPL has been deployed at several locations around the country for testing purposes. After receiving over 5100 responses to an April 2003 Notice of Inquiry in ET Docket No. 03-104 (most of which were from radio amateurs and others opposing BPL because of its potential interference to licensed radio services), the Federal Communications Commission adopted a Notice of Proposed Rule Making (NPRM) in ET Docket No. 04-37 with new requirements and measurement guidelines for BPL systems. The

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NPRM was released on February 23. The deadline for comments is May 3, 2004.

### The Concern: Broadband + Power Lines = Interference

Because power lines are not designed to prevent radiation of RF energy, BPL represents a significant potential interference source for all radio services using this frequency range, including the Amateur Radio Service. Overhead electrical power lines and residential wiring act as antennas that unintentionally radiate the broadband signals as radio signals throughout entire neighborhoods and along roadsides. Interference has been observed nearly one mile from the nearest BPL source.

### What about regulations already in place to protect Amateurs?

The FCC Rules require that unlicensed emitters such as BPL systems must protect licensed radio services from interference, and that they must accept any interference to their operation that is the result of normal operation by licensed radio services. However, in practice it is often difficult to resolve such interference problems in the field. The present FCC Part 15 limits, which BPL must comply with, are set with short-duration and narrowband emissions in mind. Such emissions, like those from a garage door opener, have a small potential to cause harmful interference. The same limits cannot be applied to long-duration, broadband emissions without greatly increasing the risk of harmful interference. At existing FCC Part 15 rules limits, BPL signals radiated from these power lines have a significant potential for interfering with nearby radio receivers. Instead of the radio signals one would normally hear, one will hear either tones or noise radiated from the BPL system.

### Has the interference potential been proven?

The ARRL laboratory has made observations of BPL radiation at a number of trial areas. The lab's findings of interference and related information are available on the Web at [www.arrrl.org/bpl](http://www.arrrl.org/bpl). There have been other observations of radio-frequency interference at BPL test sites in the US and are a matter of public record in Docket 03-104. In late 2003, the National Telecommunications and Information Administration (NTIA) performed measurements of BPL radiation at a number of test sites. ARRL has also commissioned independent measurements of BPL field strengths based on objective, international standards. The results of both of these studies are to be published soon. Although BPL proponents dispute these claims of interference to licensed services, they have provided little in the way of calculations or measurements of BPL radiation levels. Until now, BPL systems have been limited to small, little-publicized test areas. Even so, the number of complaints of actual interference is growing steadily and efforts to resolve them have had limited success. Others at risk The "short waves" - the only part of the radio spectrum that supports long-distance, intercontinental radio communication. The short waves are used for international broadcasting, aeronautical, maritime, disaster relief, and other services including the military. The "low-band VHF" frequency range that is heavily used by volunteer fire departments, police, and other first responders. Depending on their distance from a BPL system, some public safety and federal government radio systems could receive harmful interference.

### **ARLS010 AMSAT-OSCAR Echo Satellite Launched.**

The AMSAT-OSCAR Echo Amateur Radio satellite and several other payloads launched on schedule June 29 at 0630 UTC from Baikonur Cosmodrome in Kazakhstan. Ground controllers made their first contact with Echo at 1452 UTC and collected some telemetry to analyze before shutting down the 435.150 MHz

digital downlink transmitter.

' ' This achievement is due to many individuals around the world, who have helped in the design, building, integration, testing and launching of this satellite,' ' said AMSAT-NA President Robin Haighton, VE3FRH.

Earth stations should not attempt to transmit on the satellite' s uplink until checkout and commissioning are complete and AO-Echo has been made available for general use. The satellite could be available in 10 days or so. AMSAT will release a bulletin when the satellite opens.

A telemetry decoding program, TLMEcho, is available for those who would like to view and report data from Echo. It may be downloaded at [web.infoave.net/~mkmk518/echo.htm](http://web.infoave.net/~mkmk518/echo.htm). Send CSV telemetry files to Mike Kingery, KE4AZN, ke4aznamsat.org.

AO-Echo' s sun-synchronous orbit is some 800 km (nearly 500 miles) above Earth. Among other capabilities, the 10-inch-square microsat--equipped with a transmitter capable of up to 7 W output--will allow voice communication using handheld FM transceivers. Echo will feature V/U, L/S and HF/U operational configurations, with V/S, L/U and HF/S also possible. FM voice and various digital modes--including PSK31 on a 10-meter SSB uplink--also will be available.

Visit the AMSAT AO-Echo Web page, [www.amsat.org/amsat-new/echo/](http://www.amsat.org/amsat-new/echo/), for additional details.

#### **UTILITY CUTS SHORT BPL TRIAL THAT WAS TARGET OF AMATEUR COMPLAINTS**

Alliant Energy has called an early end to its broadband over power line (BPL) pilot project in Cedar Rapids, Iowa. The "evaluation system" went live March 30, and plans called for keeping it active until August or September. Alliant shut it down June 25. Ongoing, unresolved HF interference from the system to retired engineer Jim Spencer, W0SR, and other amateurs prompted the ARRL to file a complaint to the FCC on Spencer' s behalf demanding it be shut down and the utility fined.

Alliant Energy' s BPL Project Leader Dan Hinz says the ARRL complaint "certainly was a factor" in the utility' s decision to pull the plug prematurely but "not the overriding factor." The main reason, he said, was that Alliant accomplished most of its objectives ahead of schedule. The primary purpose of the Cedar Rapids evaluation was to gain an understanding of BPL technology and what issues might be involved in a real-world deployment, Hinz explained. But, he added, regulatory uncertainty and other unspecified technical issues also factored into the choice to end the pilot early.

Hinz said Alliant is "mashing the data" to compile a written evaluation of the Cedar Rapids pilot, but the company has no plans at this point to move forward with BPL. Alliant did not partner with a broadband services provider, and it has no other BPL test systems in operation. The system used Amperion BPL equipment.

According to Spencer, five fixed Amateur Radio stations within proximity of the BPL evaluation system and two mobile stations formally reported BPL interference on HF. "The radio amateurs and Alliant Energy cooperated by sharing interference information," he said. "Alliant Energy turned the BPL evaluation system off twice to allow collection of extensive BPL frequency and signal level data--with and without BPL." He said Alliant and Amperion tried various "notching" schemes to rid amateur frequencies of the BPL interference with only limited success.

The system included both overhead and underground BPL links to feed 2.4 GHz wireless "hot spots" for end user access. Hinz said the area' s topography presented some challenges, especially with the wireless links. "I think in the end, we actually over-challenged ourselves with this specific pilot location," he said. And, despite "substantial progress" in mitigating interference, Alliant decided at this point that "it wasn' t worth the extra effort" to resolve the thornier technical issues, Hinz added. As for any broader implications, Hinz says he' s always viewed BPL as a "strategic deployment technology," not one a company could roll out just anywhere and expect to be competitive with existing broadband services such as cable and DSL. "At least that' s how we were looking at it," he said. "You have to find the right areas with the right topography with the right concentration of certain types of customers," he said.

"It' s never been in my mind that BPL has to compete with the speeds of cable today," Hinz added. "It has to compete with the speeds of cable and the next best thing tomorrow as well, if it' s going to be usable well into the future." He hinted that Alliant might want to take another look at BPL once the FCC has put BPL rules and regulations into place, and the technology has further evolved.

The ARRL' s formal complaint to FCC Enforcement Bureau Chief David H. Solomon called on the Commission not only to close down Alliant' s BPL field trial system but to fine the utility \$10,000 for violating the Communications Act of 1934 and FCC Part 15 rules. Commenting on the termination of the Cedar Rapids BPL trial, ARRL CEO David Sumner, K1ZZ, pointed out that Alliant had tried for more than 12 weeks to fix the interference problem to a station 600 feet from its installation.

"In the end," Sumner said, "the interference was not eliminated except by shutting down the BPL system. Could the case against BPL deployment be any clearer?"

Spencer said he was happy with Alliant' s decision, and he was gracious in expressing appreciation to the utility for working with him. "And thanks also to the ARRL and the Cedar Rapids BPL Steering Committee for their knowledge and efforts in making a truly professional evaluation," he added.

Still outstanding are some chronic power line noise problems Spencer has experienced.

For additional information, visit the "Broadband Over Power Line (BPL) and Amateur Radio" page on the ARRL Web site <<http://www.arrl.org/bpl>>. To support the League' s efforts in this area, visit the ARRL' s secure BPL Web site <<https://www.arrl.org/forms/development/donations/bpl/>>.

Some articles in this issue courtesy of the ARRL Newsletter.