

# Feedline



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The Voice of The Cary Amateur Radio Club N4NC

May 2003

## CARC FEEDLINE

**Editor --** Keith Zeringue, W4KAZ  
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The deadline for submission to the Cary Amateur Radio Club FEEDLINE newsletter is the second Thursday of the month. Information should be forwarded by e-mail to the editor at w4kaz@arrl.net.

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### CARC Officers for 2003

**President** Clare Owens, N2RJB  
**Vice Pres.** --open--  
**Secretary** Keith Zeringue, W4KAZ  
**Treasurer** Herb Lacey, W3HL

### 2003 Volunteers

**N4NC Trustee** : Will Harper, K4IWW  
**Swapfest Czar:** Alf Johnson, KQ4FP  
**Field Day Czar:** --open--  
**Listserv admin:** Will Harper, K4IWW  
**Website admin:** Susan Jones, WA4AKB

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## Pheedline Phun Phacts

Kaz, W4KAZ

Phield Day Phellows Phew? Phield Day Phizzle?  
Phield Day Phinis?

I lead with these issues, because I hope these are not predictions of future Feedline headlines, but rather a time to soul search for the Cary Amateur Radio Club.

Field Day is rapidly approaching once again, only 35 days after the May meeting on 5/22. Field Day is the weekend of Friday June 27<sup>th</sup> thru Sunday June 29<sup>th</sup>. When Herb, W3HL broached the issue of the upcoming 2003 Field day effort.....well, the silence of the pregnant pause was deafening.

The 2002 effort was not without its problems and successes, great and small. Although we did not turn in a competitive contest-like score, we did manage to have stations on the air for the full period.

So come to the May meeting to discuss Field Day issues. What would you like to see done? What amount of participation can you expect to provide? Do you have any equipment available?

Field Day is one of the ham radio events that provokes a wide range of interest from the members of the ham community. Levels of interest range from complete dis-interest and vows of non-participation up thru the truly gung-ho. This is evident at any club, anywhere, whenever the event is discussed.

There are alternative headlines we can make happen....Phield Day Phellowship Phavorable! or ....Phield Day Phine Phinish Phorcast! or ..Phield Day Phoray Phun!

So folks, which headline will it be?

## Coming Cary ARC Events

### May 2003 CARC Program

The program for the May meeting will be a moderated open discussion on 802.11b "WIFI" networking and broadband over power line networking, with Clare, N2RJB acting as moderator. Clare is going to share with us what information he has so far unearthed in his research into the WIFI subject as well as on the issue of "Broadband over power lines". The point of the program will be to raise awareness of the issues these technologies could bring to the amateur service (good or bad), and as an open discussion, questions are encouraged...answers will be supplied only if anyone in the group actually has them!

### Other Radio-Active Events

**May 24<sup>th</sup>-25<sup>th</sup> 2003** CQ WW WPX Contest, CW

**June 1<sup>st</sup> 2003** National Hurricane Center's WX4NHC on-the-air test

**June 14<sup>th</sup>-16<sup>th</sup> 2003** June VHF QSO Party

**June 21<sup>st</sup> 2003** Kid's Day

**June 28<sup>th</sup> -29<sup>th</sup>, 2003** ARRL Field Day

### Upcoming Hamfests

**July 19<sup>th</sup>, 2003 -- Cary Midsummer Swapfest**—Almost here!

**FREE ADMISSION** for new hams ***first*** licensed after 7/19/2002-**Bring your license!**

### Cary ARC Minutes-September 26<sup>th</sup> Meeting

W4KAZ, Kaz—Scribe

The April meeting of the Cary Amateur Radio Club was held on Thursday, April 24<sup>th</sup>, at the usual meeting place in the basement of the White Plains Methodist Church. The meeting was opened right on time(one minute late), at 7:31 P.M. by Herb, W3HL, club Treasurer. Introductions were given, there were 11 members and 1 guest in attendance.

The business portion of the meeting was abbreviated, consisting of reports on ongoing business.

### Reports

Herb, W3HL, noted that the Town of Cary had been paid a portion of the rental fee for the upcoming Midsummer Swapfest on July 19<sup>th</sup>.

Al, KQ4FP, indicated that he would be unable to attend the Durham hamfest, and was seeking volunteers to pass Cary ARC Swapfest flyers out to vendors there.

The parking situation at the Cary community center was discussed, and it was generally agreed that club members should start getting word out via any available means, to the effect "The parking might be hard to find, but the Swapfest goes on!" Parking is available one block down at the train station/DMV office.

Herb, W3HL, indicated that Field Day fast approached, and the club needed a volunteer to rise to the occasion. No such individual proved worthy to the challenge issued.

### Program

Kent Hoffman, AD4WI, gave a well received overview of electrical service grounding and how it applies to amateur radio, and also made Herb's night complete when he indicated he used an open wire feeder for his lower band dipole.

## **CT Contest Software Now Available As Shareware**

Kaz, W4KAZ

Ken Wolff, K1EA, the author of the widely used logging/contesting software program CT, has made the program available for no charge as “freeware”. As of April 2<sup>nd</sup>, 2003, the program may be downloaded from Ken’s website at [www.k1ea.com](http://www.k1ea.com). Ken indicates support will now be provided via the e-mail list at [contesting.com](mailto:contesting.com). See Ken’s web site and the CT email reflector for more details.

So now the old Field Day standard can be bootlegged legally.....sorta takes the fun out of it, eh?

CT e-mail archives: [http://lists.contesting.com/\\_ct-user/](http://lists.contesting.com/_ct-user/)

CT website: <http://www.k1ea.com/>

## **FCC On Board For New Ham Bands....Well....Sorta On Board**

Kaz, W4KAZ

A little bit of something is better than a whole lot of nothing. Perhaps the ARRL will be able to widen this wedge in the future, and wheedle an entire band out of the FCC. Until then, 60 meters is going to become available, although just baely.

The FCC has allocated five specific frequencies for Amateur usage on 60 meters. These “center frequencies” are as follows “channels 5332 kHz, 5348 kHz, 5368 kHz, 5373 kHz and 5405 kHz as specified by NTIA”. Note the terminology: “channels”. Further, the allowed mode will be “Upper sideband” and power will be limited to 50 watts ERP. That’s right, “Effective radiated power” or in their own wording “power not to exceed equivalent of 50 W PEP transmitter output power into an antenna with a gain of 0 dBd, or 50 W e.r.p.”. I’d recommend not rushing out to start twisting up the wire beams just yet. Also the “upper sideband” requirement goes against the amateur convention of using LSB on 40 meters and below....but hey, why sweat the small stuff.

Those of you with a Jupiter in the closet need only get the appropriate firmware upgrade.....I suppose the rest of us could start looking for crystals....

Whichever approach you might take to the new privileges(and while I jest, they ARE new priviledges), watch for more news from the ARRL or FCC about these changes, just in case I don’t have the facts straight on this issue.

The FCC declined to grant US amateurs LF privileges at this time

<http://www.remote.arrl.org/news/stories/2003/05/14/100/?nc=1>

## **Elecraft Announces New Products Ready For Hamvention**

Kaz, W4KAZ

Elecraft, producer of the widely popular K2 transceiver kit, has announced several new products that will be ready for viewing and ordering at the Hamvention this week. Leading the lineup is a DSP notch filter and noise blanker, which will be available as an alternative to the audio filter currently shipping for the K2 kit. Also available are three 25 watt transverter kits, for 50Mc, 144 Mc, or 222Mc bands. These transverters will be able to be used with any HF transceiver, but will naturally be more tightly integrated to a K2 station.

Also being released is the KRC2, a “universal, programmable station control unit that can switch any combination of antennas, filters, amplifiers, or other equipment.” This unit will support Icom, Yaesu and Kenwood radios, as well as the Elecraft K2.

Interesting that new product introduction and innovation are taking place at a startup rather than an established player, no? Not surprising...but interesting. Perhaps others will take note.

See [www.elecraft.com](http://www.elecraft.com)

## Logbook Of The World – Beta Testing

Kaz, W4KAZ

The online logbook of the world project is up and ready for beta testing, with a demo scheduled for Saturday May 17<sup>th</sup> at the Dayton Hamvention. Because the logbook is being beta tested, any data uploaded now will be ERASED before LoTW actually “goes live”. The beta testing program will last 60 days, but no date for going live has been announced (presumably to allow time for fixing bugs found in beta).

For more info see:

<http://www.remote.arrl.org/news/stories/2003/05/15/102/?nc=1> and also

<http://www.remote.arrl.org/lotw/#top>

## Joseph Who?

Kaz, W4KAZ

I've never been really fond of the term used to denote frequency, the “Hertz”. I was just as happy to use the term “cycles”...in fact I still often use “cycles”.

But this is about Joseph Henry, not Heinrich Hertz...and maybe using these guys names is the least we can do, given the work they have done for us. (Maybe I'll look up ole Heinrich too....)

One spring day this past month I happened upon the main building of the Smithsonian Institution (the “castle”) in Washington DC, and noticed the statue of Joseph Henry that stands in front. Well, I knew the term for inductance, the “henry”, had been given in his honor, but I didn't know what else he may have done to also be given a place of honor outside the nation's museum.

As it turns out, Mr. Henry was quite a busy man. I always wonder what this sort of scientist might have been interested in had he lived in current times (a radio ham?). Its obvious that he had many interests in his own day, and besides doing a great deal of basic scientific work (some forms of which may be sitting on your desk right now!), he was also an able administrator and tireless advocate for the advancement of science.

While Samuel Morse is generally credited with the invention of the telegraph, it might well be more accurate to describe Morse as the entrepreneur who saw its practical value, rather than as its inventor. Morse based his device on the work of Henry, and in fact there were several patent battles which wound up being decided based on testimony by Henry. (Sound familiar?) Henry had in fact developed the techniques used by Morse in his telegraph in the 1830's, but it was Morse who made them commercially viable in the mid 1840's.

Joseph Henry was selected as the first secretary of the Smithsonian Institution in 1846. His selection was generally “seen by observers in the press and in the scientific community as a victory of merit over political favor.” He also later helped found, then served as president of, the national Academy of Sciences.

Amateurs involved with Skywarn might also be interested to know that Henry was an early advocate of keeping more extensive weather records, and through the Smithsonian funded a group of “weather spotters”, who were later organized into what later became the Weather Bureau (under the US Army Signal Corps), then later the National Weather Service.

For those of you who are interested in more detail, most of what information I have presented here is drawn from documents online at the Smithsonian website, by Marc Rothenberg, editor, Joseph Henry Papers Project. They also detail additional biographical information, should you be more interested in the history of science.

<http://www.si.edu/archives/ihd/jhp/joseph00.htm>

## **"Broadband Over Power Line" Poses HF Interference Threat**

The ARRL Letter, Vol. 22, No. 17, April 25, 2003

The FCC soon will invite public comment on the concept of using existing electrical power lines to deliver Internet and broadband service to homes and offices. The Commission initiated a Notice of Inquiry (NOI) in ET Docket 03-104 when it met April 23. What the FCC calls "Broadband over Power Line" (BPL) is a form of carrier-current technology typically known as power line communication (PLC). Whatever its name, the technology is raising serious interference concerns within the Amateur Radio community, since BPL would apply high-frequency RF to parts of the power grid. One aspect of the NOI is to gather information on potential interference effects on authorized spectrum users.

"Entire communities will be affected, so every amateur in that community could have part of the radiating system 'next door' on the power wiring on his or her street," cautioned ARRL Lab Supervisor Ed Hare, W1RFI. Hare chairs the PLC Work Group of the IEEE C63 Accredited Standards Committee on Electromagnetic Compatibility <<http://c63.ieee.org/>>.

The complete NOI has not yet been released, and until that happens, the FCC will not formally accept comments in the proceeding. The ARRL will be among those expected to submit detailed comments in ET 03-104.

So-called "access BPL" would use medium-voltage (1 kV to 40 kV) power lines to deliver Internet and broadband applications. Hare says access BPL is likely to be a more significant interference source than in-building PLC technology "because overhead electrical wiring is a much better antenna than the electrical wiring within a building."

ARRL CEO David Sumner, K1ZZ, editorialized on the subject of PLC in "It Seems to Us . . ." in the October issue of 2002 QST. "Is it possible to do power line communications without causing interference to over-the-air communications?" Sumner asked. "Count us among the skeptics. What may be a fine transmission line at 60 Hz looks more like an antenna at HF." Hare said his own computer analyses of interference potential from access BPL/PLC suggest "a significant increase in noise levels" from deployed systems.

The FCC appears enthusiastic about BPL, however, saying it has the potential to "provide consumers with the freedom to access broadband services from any room in the house without adding or paying for additional connections." The Commission also touted BPL as "a competitive alternative to digital subscriber line and cable modem services."

New digital power line designs use multiple carriers spread over a wide frequency range--from 2 MHz up to 80 MHz--and capable of high data rates--up to 20 MB/s, the FCC said.

In addition to viewpoints on interference potential, the FCC also has requested comments on the current state of high-speed BPL technology, test results from BPL experimental sites, appropriate measurement procedure for testing emission characteristics for all types of carrier-current systems, changes that may be needed in Part 15 technical rules, and the equipment approval process to foster the development of BPL.

Tests of BPL are under way in several states, including Alabama, Maryland, Missouri, New York, Ohio, Pennsylvania and Virginia. Hare says ARRL Lab personnel will visit some of the test cities this spring to take field measurements to quantify the potential for interference to Amateur Radio operations.

BPL/PLC technology already has been deployed in some European countries, and amateurs there have complained about interference. Japan--responding in part to concerns expressed by its amateur community--decided last year not to adopt the technology because of its interference potential.

## Hams Assist Stranded Sailboat

The ARRL Letter, Vol. 22, No. 17, April 25, 2003

Amateur Radio operators on the Intercontinental and Maritime Mobile Service nets (14.300 MHz) responded to a call from a sailboat stranded between Key West and the Dry Tortugas. Ed Petzolt, K1LNC, in Florida, reported that a power failure aboard the 42-foot sailing vessel Follie a Deux out of Toronto left the boat adrift in calm winds and seas. "They did a pan pan on 14.300 MHz," Petzolt reported April 22. He contacted the US Coast Guard in Key West, which responded. "They attempted to repair the engine without success," Petzolt said later. The sailboat, with two passengers aboard, was towed to Dry Tortugas to await a commercial repair/towing vessel.

## FCC Accepting Comments In "Broadband Over Power Line" Inquiry

The ARRL Letter, Vol. 22, No. 18, May 2, 2003

The FCC released its Notice of Inquiry (NOI) on the deployment of "Broadband over Power Line" (BPL) technology April 28 and now is accepting electronically filed comments in the proceeding, ET Docket 03-104. The technology has raised concerns of substantial interference to the Amateur Radio HF bands. BPL would couple high-frequency RF to parts of the power grid and use existing power lines as the transmission medium to deliver broadband and Internet services.

The FCC has expressed unabashed enthusiasm for BPL. ARRL CEO David Sumner, K1ZZ, says Commission members have been acting more like cheerleaders than regulators. "We were disappointed in the tenor of some commissioners' statements, but we were encouraged by the fact that in the NOI itself the FCC did point out that licensed services--including Amateur Radio--'must be protected from harmful interference' from BPL," he said.

The major interference threat to amateurs comes from so-called "access BPL," because its signals can radiate from outside power lines--possibly for great distances. The FCC also concedes that close proximity of access BPL equipment on utility poles might affect--and be affected by--cable TV and DSL service.

Current FCC Part 15 rules limit the amount of RF energy that can be injected into the power lines, but, as the FCC concedes, "the new generation of high-speed BPL devices that use wide spectrum was not contemplated" when those rules were formulated. The FCC has invited comments on possible changes to those rules.

The FCC also seeks information on a possible access BPL standards, spectrum and bandwidth, modulation techniques and data transmission speeds. Additionally, the Commission seeks the status of BPL development and anticipated deployment in the marketplace. ARRL Laboratory Manager and RFI guru Ed Hare, W1RFI, has cautioned that BPL deployment could mean "a significant increase in noise levels" on HF. "Right now with BPL/PLC, there are more questions than answers, and until those questions are answered, these systems should not be widely deployed," Hare said. "The time to raise and answer these questions is now. I truly hope that the NOI will provide a means for the FCC to do just that."

The ARRL Lab has prepared a comprehensive information page, "Power Line Communications (PLC) and Amateur Radio," on the ARRL Web site <<http://www.arrl.org/tis/info/HTML/plc/>>. ARRL Lab staff members also plan to visit sites where BPL is undergoing field-testing.

The complete NOI is available on the FCC Web site <[http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-03-100A1.doc](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-03-100A1.doc)>. The FCC now is accepting electronically filed comments via its Electronic Comment Filing System (ECFS) <<http://www.fcc.gov/cgb/ecfs/>>. Under ECFS Main Links, click on "Submit a Filing." In the "Proceeding" field, enter "03-104" and complete the required fields. Comments may be typed into a form, you may attach a file containing your comments or submit them via e-mail, per instructions on the ECFS page. The comment deadline will be 45 days after publication of the NOI in the Federal Register.