# THE CODE OF THE WEST

**UNIVERSITY AMATEUR RADIO CLUB N7UW**
**Department 3625**
**1000 East University Avenue**
**LARAMIE, WYOMING 82071**
**November 2004**
**http://picasso.uwyo.edu/uarc**

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| **PRESIDENT**: | John M. Harrison | KD7NAE | johnmh@uwyo.edu |
| **VP/SECRETARY**: | Doris L. Hutcheson | KD7RQX | dhutch@uwyo.edu |
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| **UW ADVISOR:** | Doug Wheeler | KD7W | dwheeler@uwyo.edu |

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## UARC MEETING

The regular monthly meeting of the University Amateur Radio Club will be held Tuesday 2 November 2004 in room 9 in the basement of the College of Business Building at 7:30 pm local time on the University of Wyoming campus. Talk in on the UARC repeater at 146.610 MHz 600 kHz standard negative offset. The College of Business building is west of 15th and Ivinson Streets on the north side of Ivinson Street. Entrances should be open on the Ivinson Street side and on the north side of the building adjacent to the Wyoming Union parking lot. Parking is also available at the Visitor's Center parking area on the south side of Ivinson Street.

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## MESSAGE FROM THE PRESIDENT / COTW EDITOR John KD7NAE

UARC re-elected yours truly for another term as President for the coming year. Doris KD7RQX will continue as our club secretary. New officers are Suzanne AA7AY who will keep track of UARC finances as Treasurer and Doug KD7W who has agreed to assume the role of advisor since Jerry N7JT has announced his retirement from the University effective before the New Year.

UARC extends its thanks to Jerry for his long and dedicated service to the club. We hope he will remain active in UARC and continue to provide leadership to the club as one of our most knowledgeable and experienced members. Congratulations Jerry and best wishes for an enjoyable and active retirement from UW following your many years with the Physics Department. The University will miss you.

Cheers and 73s. John KD7NAE

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# UARC CALENDAR

**2 November 2004** UARC monthly meeting at 7:30 pm College of Business room 9. Please note the location. Please pay your dues if not current.

**15 January 2005** Winter Swapfest Northern Colorado ARC Loveland, CO McMillen Building 700 South Railroad Avenue Talk-In on 145.115 (100 Hz tone), 146.520 simplex Contact Willis Whatley WA5VRL phone 970-407-6599

Upcoming ARRL Special Operating Events of note include:

**11-12 Nov 2004** **Marysville, KS:** Marshall County Amateur Radio Club, W0GCJ. 1400Z **Nov 11**-0500Z **Nov 12**. 150th anniversary of Marysville and the 1st KS Territory Post Office. 14.250 14.050 7.250 7.050. Certificate. David Crawford, 905 Pomerory, Blue Rapids, KS 66411. **www.qsl.net/w0gcj/event.htm**.

**11-12 Nov 2004** **Albuquerque, NM**: Albuquerque Amateur Radio Club, N5VA. 1500Z **Nov 11-**0300Z **Nov 12**. Commermorating Veterans Day at VA Hospital. 28.460 21.360 14.260 7.250. QSL. Thomas R. Lea, 1009 Clancy Dr NE, Albuquerque, NM 87112. **www.qsl.net/albuquerquearc/index.html**.

**13 Nov 2004** **Madison, MN:** West Central Minnesota Amateur Radio Club, K0D. 1400Z-2200Z **Nov 13**. Annual Norsefest (Lutefisk) Celebration. 28.450 21.350 14.260 7.260. Certificate. WA0KNP, 221 10th Ave, Madison, MN 56256.

**4-5 Dec 2004** **Grand Junction, CO:** Western Colorado Amateur Radio Club, N0W. 0000Z **Dec 4**-0000Z **Dec 5**. 2004 SKYWARN Recognition Day at Walker Field Airport. 28.460 21.260 14.260 7.260. QSL. Bob Vogel, W0RY, 155 Ponderosa Dr, Fruita, CO 81521. **www.wcarc.ws/status.htm**.

Refer to http://www.arrl.org/contests/spev.html for more ARRL Special Events

Upcoming ARRL contests include:

**6-8 Nov 2004** ARRL November Sweepstakes (CW)
**20-22 Nov 2004** ARRL November Sweepstakes (Phone)
**3-5 Dec 2004** ARRL 160 Meter Contest
**4-5 Dec 2004** ARRL International Earth Moon Earth Competition
**11-12 Dec 2004** ARRL 10 Meter Contest

see http://www.arrl.org/contests/calendar.html for more info including contest rules
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# HERC Net update

Interest has been expressed recently in re-establishing links in the Wyoming HERC Net that have not been working over the last year or so. Dave KY7DR was asked for UARC's mailing address. More information may be forthcoming for discussion at our next meeting. The status of the HERC Net was a topic at the State Hamfest. Efforts may be beginning to repair the net and re-establish state-wide coverage.

# FCC BPL *Report and Order* Stresses Avoidance, Resolution of Harmful Interference *reprinted from the ARRL website*

NEWINGTON, CT, Oct 28, 2004--The FCC today released the full BPL *Report and Order* (*R&O*) it adopted just two weeks ago. While extolling the purported benefits of broadband over power line technology, the 81-page document also declares the FCC's intention to "protect licensed services from harmful interference." In line with remarks made at the October 14 open meeting where the FCC adopted the *R&O*--then still in draft form--the FCC will require BPL operators to address and resolve all valid interference complaints. It declined, however, to reduce the Part 15 radiated emission limit for BPL systems, maintaining that emissions from BPL systems are very localized and at low enough levels to preclude harmful interference in the first place. And it left the door open to possibly upping the limit in the future. When interference does occur, the Commission favors "notching," frequency shifting and power reduction by BPL systems as the preferred mitigation modes.

"We recognize that some radio operations in the bands being used for Access BPL, such as those of Amateur Radio licensees, may occur at distances sufficiently close to power lines as to make harmful interference a possibility," the FCC conceded in its *R&O*. "We believe that those situations can be addressed through interference avoidance techniques by the Access BPL provider such as frequency band selection, notching, or judicious device placement."

Notches would have to be at least 20 dB below applicable Part 15 limits on HF and at least 10 dB below Part 15 limits on VHF. The FCC called the ability to alter a system's operation to notch out transmissions on specific frequencies where interference is occurring "a necessary feature for resolving interference without disrupting service to BPL subscribers."

**FCC Advises Hams to Take Steps to Avoid Interference**

The FCC said it had no evidence before it that BPL operation would significantly contribute to generally raising background noise levels. At the same time, it seemed to put some of the onus on Amateur Radio licensees to take steps to avoid power-line interference--and, by inference, BPL interference--in advance.

"In addition, because power lines inherently can radiate significant noise emissions as noted by NTIA and ARRL, good engineering practice is to locate sensitive receiver antennas as far as practicable from power lines," the FCC said. In a footnote, the FCC took pains to advise ARRL that in cases where its members experience RF noise, "such noise can often be avoided by carefully locating their antennas; in many instances an antenna relocation of only a relatively short distance can resolve noise interference."

**No Special Protections for Amateurs**

BPL operators would be required to notch certain bands, such as those used for life and safety communications by aeronautical mobile or US Coast Guard stations. The FCC *R&O* makes clear, however, that similar rules will not apply to the Amateur Service, although notching could be one mitigation tool to deal with ham radio complaints.

"We similarly do not find that Amateur Radio frequencies warrant the special protection afforded frequencies reserved for international aeronautical and maritime safety operations," the Commission said, adding that in many instances, amateur frequencies are used for routine communications and hobby activities.

"While we recognize that amateurs may on occasion assist in providing emergency communications," the FCC said, "we believe that the general Part 15 provisions and the specific provisions being adopted herein for Access BPL operations are sufficient to protect these amateur operations."

**BPL's Upside Outweighs Downside, FCC Suggests**

Although some cases of harmful interference may be possible from BPL emissions at levels up to Part 15 limits, the FCC said, "we agree with NTIA [National Telecommunications and Information Administration] that the benefits of Access BPL service warrant acceptance of a small and manageable degree of interference risk." The Commission

reiterated in the *R&O* its belief that BPL's public benefits "are sufficiently important and significant so as to outweigh the limited potential for increased harmful interference that may arise."

The FCC also said that while it agrees with the ARRL that BPL is not a "traditional point-source emitter," it doesn't buy into the notion that BPL devices "will cause the power lines to act as countless miles of transmission lines all radiating RF energy along their full length."

**Additional Provisions**

Among other specific provisions, the FCC's new rules also mandate certification of BPL equipment instead of the less-stringent verification, a requirement for a public BPL database--something the BPL industry did not want. They also require mechanisms to deal swiftly with interference complaints.

BPL systems will have to incorporate the ability to modify operation and performance "to mitigate or avoid potential harmful interference to radio services and to deactivate specific units found to actually cause harmful interference that cannot be remedied through modification of their operation," the *R&O* says.

The public BPL database would have to include the name of the BPL provider, the frequencies of BPL operation; the postal ZIP codes the BPL system serves; the manufacturer and type of BPL equipment and its associated FCC ID number; the contact information, including both telephone number and e-mail address of a person at or associated with the BPL operator to facilitate interference resolution (phones would only have to be staffed during "normal business hours," the FCC specified), and the proposed or actual date of BPL operation.

Further, the new rules spell out the locations of "small geographic exclusion zones" as well as excluded bands or frequencies--concessions made primarily at the insistence of the NTIA, which administers radio spectrum for federal government users--and "coordination areas" where BPL deployments at any frequency must be "pre-coordinated by BPL operators." They also detail techniques to measure BPL emissions from system equipment and power lines.

**No Change in Approach to Part 15 Complaint Resolution**

The FCC's *R&O* makes clear that the agency does not intend to deal with interference complaints regarding BPL systems any differently, nor any more stringently, than it does interference complaints involving other systems that fall under §15.5(c) of its rules.

"Under this rule, parties who believe they are experiencing interference from an unlicensed device are first expected to bring the matter to the attention of the operator of the unlicensed device," the FCC said. "If that action does not resolve the interference, the party may then seek intervention by the Commission."

The FCC further said it expected "good faith" on both sides in resolving any interference complaints that might arise. "Speedy resolution of interference will not result if the database information on Access BPL deployments is abused, and the BPL operators are deluged with frivolous interference complaints," the FCC said

The Commission added that it expects BPL operators to take every interference complaint seriously and to diagnose the possible cause of interference quickly. But it suggested that complainants have responsibilities as well.

"At the same time, we expect the complainant to have first taken reasonable steps to confirm that interference, rather than a receiver system malfunction, is occurring and, to the extent practicable, to determine that the interference source is located outside the complainant's premises," the Commission said.

The FCC pledged to investigate complaints that land in its lap and take action against the BPL operator if it is found to be causing harmful interference. "If, on the other hand, the Commission uses its resources to investigate an interference complaint that is found to be frivolous, the Commission will impose appropriate sanctions for abuse of its administrative process."

Shutting down a BPL system in response to a valid interference complaint "would be a last resort when all other efforts to satisfactorily reduce interference have failed," the FCC said. It did require BPL systems to incorporate a means to allow deactivation of individual components on a remote-controlled basis, but it emphasized that only the FCC may direct a BPL system to cease operation.

**ARRL Mulling Options**

ARRL officials are studying the *R&O* and considering possible responses. Meeting October 16 in Dallas, Texas, the ARRL Executive Committee (EC) authorized the filing of a *Petition for Reconsideration* in response to the BPL *R&O* in ET Docket 04-37. The EC also authorized ARRL General Counsel Chris Imlay, W3KD, to "prepare to pursue other available remedies as to procedural and substantive defects" in the BPL proceeding.

For more information on BPL, visit the "Broadband Over Power Line (BPL) and Amateur Radio" page on the ARRL Web site.

# UARC Meeting Minutes  5 October 2004

**Call to Order:**

The October meeting was called to order by President John KD7NAE at 7:40 pm in room 9 of the College of Business Building. 13 members were in attendance; two officers were present. Those attending were: Doug Wheeler KD7W, Paul Pheneger W7MO, Wayne Sutherland NQ7Q, William Wright AF7E, Suzanne Luhr AA7AY, Rick Damiani KD7TVV, Larry Dean K7UWR, David Rush KY7DR, Holly Crowell WB7I, Fred Crowell KS7Q, Jerry Tastad N7JT, John Harrison KD7NAE, and Doris Hutcheson KD7RQX.

There was a brief discussion of the new location and a possible alternative in the Union. It was agreed that the new location was easily accessible with better parking than the Engineering Building.

**Minutes of the Last Meeting:**

Bill AF7E moved to approve the minutes of the September meeting. The motion was seconded by Wayne NQ7Q, and all approved.

**Reports:**

Treasurer's Report-Doris KD7RQX gave the treasurer's report:

Income:

Dues $100.$^{00}$.

High Plains Roundup Use Fee Repayment $70.$^{00}$.

High Plains Roundup Deposit Refund $35.$^{00}$

Bills paid:

Phone $21.$^{73}$.

Regular account balance: $243.$^{64}$.

Maintenance fund balance: $876.$^{42}$.

High Plains Roundup

Income:

Raffle ticket sales and donations 259.$^{00.}$

Bills paid:

UARC Use Fee Repayment $70.$^{00.}$

Fund balance $811.$^{55.}$

Wayne NQ7Q had receipts of $9.$^{21}$ for coffee and copies, Jerry N7JT had $154.$^{00}$ for the door prize and Doris KD7RQX had $36.$^{00}$ for food High Plains Roundup.

Doris KD7RQX also had receipts for $38.$^{56}$ for food for Field day.

Bill AF7E moved and seconded with all members approving that all reimbursements be made as appropriate.

COTW-Editor John KD7NAE asked for input on the current edition of Code of the West. There were many photos of the High Plains Roundup and the removal of Rhett KD7O's tower.

**Old Business:**

There was a discussion of the disposition of the parts from Rhett KD7O's tower. Jerry N7JT has $15.00 from the sale of the rotator. Larry had an offer to purchase the tower sections for $50.00 each from himself and the Laramie Plains Antenna TV Association. Fred KS7Q pointed out that a Radio Shack mast and guy wires were still for sale. Doug KD7W offered $20.00 for the 2 meter antenna. Jerry says that the beam antenna broke when it was dropped from the tower, but he is investigating whether it can be repaired.

Dave KY7DR moved and Wayne NQ7Q seconded that the offers be accepted and all present approved.

Fred KS7Q pointed out that the club should send Rhett KD7O a letter itemizing the proceeds of the sale and thanking him for the donation.

**New Business:**

Doris KD7RQX proposed that the club mail order checks for the High Plains Roundup account.

President John KD7NAE reported that the club needs to order additional World Radio subscriptions and pay the club fee of $65.00. KD7RQX moved that the order be placed and Larry K7UWR seconded, all approved.

Holly WB7I and Bill AF7E suggested contacting ARRL for information on Club Affiliate status to see if a discount is still available for ARRL membership through the club.

**Nominating Committee Report:**

Bill AF7E reported that the committee had the following suggestions:

> Since Jerry N7JT is retiring, the committee suggests Doug KD7W be considered for the faculty advisor.
>
> The committee recommends that John KD7NAE continue for a second term as President and Doris KD7RQX serve a second term as Vice-President/Secretary.
>
> The committee nominates Suzanne AA7AY for Treasurer.

Wayne NQ7Q moved and Paul W7MO seconded that the nominating committee's recommendations be accepted, all approved.

Larry K7UWR reported that WPR has 1 or 2 five year old 8D size Gel-Cell batteries, tested at half normal capacity that they would be willing o donate to the club. They are probably good for 200 amp-hours (originally rated at 400 amp-hours).

There was a discussion of the club assisting Jerry N7JT moving the club's belongings out of storage in his lab. Most of the pieces from Rhett KD7O's tower are at Wayne NQ7Q's place and also need to be moved. Also, the club has file storage in Dick KD7FHE's office at WSGS that need to be relocated to the club space in the Union.

Dave KY7DR still has Dead Dog tee shirts for those that worked that event and haven't gotten one.

There was a discussion of BPL and other ham radio interference issues.

Bill AF7E thanked the club for help with installing his tower and congratulated the new officers.

**Drawing:** Doug KD7W won a subscription to World Radio to be awarded when the new subscriptions are received..

**Meeting Adjourned:**

The meeting was moved adjourned by Dave KY7DR with all agreeing at 8:45 pm.

Doris KD7RQX

Winter arrives near Arlington where John & Doris viewed an antenna and pipe tower donated to the club by a new property owner in the area. Arrangements need to be made to collect the items. This picture and photos of the donated items were taken Saturday 30 October 2004.

Photo by John KD7NAE

Submissions to COTW are welcome from all UARC members, area hams and persons interested in amateur radio communications and activities.

Printed copies of COTW are available from John KD7NAE.

Please contact

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