# The Illuminator

The monthly newsletter of the Carbon Amateur Radio Club

February 2004

## February Meeting

The next regular meeting of the Carbon Amateur Radio Club will be held on Thursday, February 19, at 7:30 p.m. at the EMA Center in Nesquehoning. See you there!

## Dues Due!

Yes, it's that time again! Time to send in your membership dues for calendar year 2004!

If you haven't already done so, please take the time to fill out the form on the penultimate page of this newsletter and send it, with your dues, to the Carbon Amateur Radio Club, P. O. Box 622, Lehighton, PA 18235, or bring your completed membership form and dues to any CARC meeting.

Note that, if you don't send in your dues by April 1, you will be dropped from the newsletter mailing list. You don't want that to happen, do you?

## Treasurer's Report

By John, W3MF

***As of February 5, 2004:***

| | |
|---|---|
| Previous Balance | 619.37 |
| Receipts (dues) | 60.00 |
| Subtotal | 679.37 |
| Disbursements (newsletter) | 5.55 |
| Final Total | 673.82 |

## CERT Training

(Thanks to Rob, KB3BYT)

Carbon County Emergency Management Agency will be holding CERT Training at the Carbon County EMA Office. The CERT program is designed to get County residents working together with the Emergency Service Community in the event of a major disaster. All participants will be trained in basic survival skills. The training will be provided free of charge to all Carbon County residents and could save your life or the life of your loved ones. The class will be conducted on the following dates from 6:30 p.m. - 9:30 p.m.:

March 17
March 24
March 31
April 7

Please contact the EMA Office to sign up for the class. We look forward to seeing you at the training and working together.

Tanya Light
Administrative Assistant
Carbon County EMA
1264 Emergency Lane
Nesquehoning, PA 18240
570-325-3097 - Phone
570-325-9132 - Fax

## League Files "A Plan for the Next Decade" With FCC

(From the ARRL Letter)

The ARRL has filed a Petition for Rule Making asking the FCC to amend its Part 97 rules to complete the Amateur Service restructuring the Commission left unfinished in 1999. The League wants the FCC to create a new entry-level license,

reduce the number of actual license classes to three and drop the Morse code testing requirement for all classes except for Amateur Extra (see "ARRL to Propose New Entry-Level License, Code-Free HF Access" http://www.arrl.org/news/stories/2004/01/19/1/). The ARRL says its petition follows in the footsteps of changes in Article 25 of the international Radio Regulations adopted at World Radiocommunication Conference 2003. Among those changes, WRC-03 left it up to individual countries to determine whether or not to mandate Morse testing for HF access. While several countries — including Germany, the UK and Australia — already have dropped their Morse requirements, the ARRL emphasized in its petition that Morse code is not the central issue.

"Changes in Morse telegraphy are one aspect of the proposal, and it would be insufficient for the Commission to address those issues in a vacuum," the League said, calling its licensing proposal "a plan for the next decade." The ARRL said that plan's overall intention is "to encourage newcomers to the Amateur Service and to encourage those who enter its ranks to proceed further on a course of technical self-training and exposure to all aspects of the avocation."

Last fall a total of 14 Morse-related petitions were filed with the FCC. Several called on the Commission to drop the Morse requirement altogether, while others proposed to keep and even expand the requirement or put forth various license restructuring schemes of their own. The petitions, RM-10781-10787 and RM-10805-10811, attracted thousands of comments from the amateur community.

Beyond the Morse question, the ARRL says, the time is right — now that WRC-03 has finished its work — to follow through on the restructuring process the FCC began with its 1999 restructuring Report and Order (WT 98-143) http://www.arrl.org/announce/regulatory/wt98-143ro.pdf. Among other things, that landmark Order, which became effective April 15, 2000, reduced the number of Morse code test elements from three to a single 5 WPM requirement for all license classes offering HF privileges.

Simply dropping the Element 1 (5 WPM) Morse requirement, the ARRL asserted, would fail to address the critical need for an entry-level ticket other than the Technician. Calling the Technician license "a dead end" for many people, the ARRL said its proposed entry-level license — being called "Novice" for now — would offer newcomers a much wider sampling of Amateur Radio. It would require passing a 25-question written examination — but no code test — and offer limited HF phone, image, CW and data privileges at modest power output levels.

"This structure provides a true, entry-level license with HF and other operating privileges which will both promote growth in the Amateur Service and integrate newcomers into the mainstream of Amateur Radio," the ARRL told the FCC. "It will better introduce newcomers to more seasoned licensees who will assist them."

The League proposal also would consolidate current Technician and General licensees into General class without further examination. Future General applicants would not have to pass a code test, but the written exam would remain the same. Current Advanced licensees would be merged into Amateur Extra class without further testing, and the Extra exam would remain intact. The ARRL proposal would retain the Element 1 Morse exam for Extra class applicants.

The ARRL said its overall plan dovetails with the FCC philosophy and goals stated in its 1999 Report and Order — to simplify the license structure and streamline the licensing process. The League said its plan would implement licensing requirements and privileges that are in harmony with each other and is designed to attract and retain "technically inclined persons, particularly the youth of our country" and encourage them to advance in areas "where the United States needs expertise."

"Now, the issue is not merely whether there should or should not be Morse telegraphy as an examination requirement," the ARRL said, "but rather what is the best overall approach for positioning the Amateur Service for future growth and incentive-based self-training."

A copy of the ARRL's Petition for Rule Making is available on the ARRL Web site http://www.arrl.org/news/restructuring2/restrux2-petition.pdf. The FCC has requested that individuals refrain from contacting or attempting to comment to the FCC on the ARRL's restructuring proposal before the FCC issues a Rule Making

(RM) number for the ARRL petition and invites public comments on it. Until that happens, it is premature to comment to the FCC.



## FCC Poised To Release BPL Notice of Proposed Rule Making

(From the ARRL Letter)

The FCC appears poised to release a Notice of Proposed Rule Making (NPRM) in the Broadband over Power Line (BPL) proceeding. When it meets February 12, the Commission is to consider an NPRM concerning changes to its Part 15 rules as they apply to so-called "access" BPL systems. Last April the Commission issued a Notice of Inquiry (NOI) in ET Docket 03-104 http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-03-100A1.doc seeking input on possibly amending Part 15 regarding new requirements and measurement guidelines for access BPL. Issuance of an NPRM would mark the next step in the BPL proceeding.

The BPL NOI has attracted more than 5100 comments. Many within the amateur community, including the ARRL and AMRAD http://www.amrad.org/, have expressed concerns that BPL will wreak havoc on the HF amateur bands, since the technology would apply high-frequency RF to parts of the power grid. One aspect of the NOI was to gather information on potential interference effects on authorized spectrum users.

FCC Chairman Michael Powell recently acknowledged interference concerns raised by the amateur community and by at least two federal agencies: the Federal Emergency Management Agency — now part of the Department of Homeland Security — and the National Telecommunications and Information Administration (NTIA), which manages spectrum allocated to government users. "We will continue to explore ways to support this technology while protecting services from interference," the FCC chairman pledged in a January 14 address to the National Press Club.

Last month, US Representative Greg Walden, WB7OCE, called on Powell to put off further FCC action in the BPL proceeding until the NTIA had released the results of its BPL study and the public has had a chance to comment. "I feel that it is important to give the NTIA study thorough consideration before proceeding further with BPL technology, in view of the importance of avoiding interference to federal government HF communications," Walden said January 15 in a letter to Powell. An Oregon Republican, Walden is one of two Amateur Radio licensees in the US House.

The NTIA has expressed "broad concerns" about BPL's potential to interfere with government HF users. Its BPL field work was scheduled to wrap up in January, and its observations and conclusions are expected to be released sometime during the first quarter of this year. The ARRL's own BPL field engineering study is still under way. It will explore how BPL might affect HF and low-VHF amateur operation as well as how Amateur Radio operation could affect BPL systems.

Additional information about BPL and Amateur Radio is on the ARRL Web site http://www.arrl.org/tis/info/HTML/plc/. 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/.



## DXCC Rule Change Adopted

(From the ARRL Letter)

At its January meeting, the ARRL Board of Directors removed paragraph 1.c) "The entity has a separate IARU member-society" from the criteria for determining a DXCC entity. This provision, implemented in 1998 as part of the DXCC 2000 Program, had provided that "An entity will be added to the DXCC List as a political entity if it. . . has a separate IARU member-society." Since then, the rule has allowed for the addition of four new DXCC entities and the retention of one existing entity. Unfortunately, the provision also had the unintended consequence of stimulating applications for IARU membership that do not further the objectives of the IARU, creating an unfortunate and unnecessary administrative burden. The rule change will have no effect on

entities created by or as the result of the rule. According to DXCC Rule II, 5. C), "A change in the DXCC criteria shall not affect the status of any entity on the DXCC List at the time of the change." The other two criteria for the determination of a political entity for DXCC continue in effect.

### ARRL Propagation Forecast Bulletin

Propagation Forecast Bulletin 6 ARLP006
From Tad Cook, K7RA
Seattle, WA February 6, 2004
To all radio amateurs

Sunspots are back in view. Last week's Propagation Forecast Bulletin ARLP005 reported two days with a sunspot number of 0, but this week the average daily sunspot number rose 28 points to 66.7. This is nice for short term HF propagation, but now that January has passed, a look at monthly averages shows a clear decline in the sunspot cycle.

The monthly average of daily sunspot numbers in January 2003 through January 2004 were 150.0, 87.9, 119.7, 114.3, 89.6, 118.4, 132.8, 114.3, 82.6, 118.9, 103, 75.7 and 62.3. Average daily solar flux values over the same months were 144, 124.5, 133.5, 126.8, 116.6, 129.4, 127.7, 122.1, 112.2, 155.5, 140.8, 116.1 and 114.1.

You can see that over the past 13 months average daily sunspot numbers dipped below 100 several times, but were never below 82.6 until December and January when they dropped to 75.7 and 62.3. Look for declining solar activity over the next few years, with the predicted bottom of the solar cycle still three years off.

Right now sunspot 551 is moving into the center of the visible solar disk, the place where sunspots have the most effect on earth. Geomagnetic conditions at mid-day today (Friday, February 6) were unsettled, but unless the active region around sunspot 551 spews forth, conditions should be normal over the next few days. The predicted solar flux over this weekend (February 6-9) is 105-110. Solar flux values should peak around 130 toward the middle of the month.

This week let's look at paths to Brazil, where it is currently late summer. We will look at 20 meters and above only.

From Dallas Texas, check 20 meters 1230-1400z and 1800-0730z. Signals may be strongest around 2230-0200z. 17 meters looks good at most times from 1300-0100z, best from 2000-0100z. 15 meters looks great from 1330-0000z, and 12 meters 1400-2330z. Check 10 meters from 1430-2230z.

From Cleveland Ohio, check 20 meters around 0700-0800z 1230-1400z and 1800-0200z. Best conditions should be around 2130-0030z. Check 17 meters from 1230-0000z, best around 1230-1300z and 1930-2300z. 15 meters is promising 1300-2300z, 12 meters 1330-2130z and 10 meters 1430-2030z.

From Boston Massachusetts, check 20 meters 0630-0730z and 1100-0200z, best around 2100-0000z. 17 meters should work from 1200-2330z, best around 1200-1300z and 1900-2230z. Check 15 meters 1230-2230z, 12 meters 1300-2100z and 10 meters 1400-2000z.

From Atlanta Georgia, check 20 meters 1230-1400z and 2000-0200z, best from 2130-0030z. Check 17 meters 1230-0000z, best 1230-1330z and 1900-2330z. 15 meters should work from 1300-2300z, 12 meters 1330-2330z and 10 meters 1430-2130z.

From Salt Lake City Utah, check 20 meters around 1330-1400z and 2130-0230z. 17 meters should work 1430-0100z, with the weakest signals around 1600z and strongest later in the period. 15 meters looks good from 1500-0000z, 12 meters 1530-2230z and 10 meters 1630-2130z.

From California, 20 meters 2300-0800z, 17 meters 1830-0200z, 15 meters 1500-0100z, 12 meters 1530-0000z and 10 meters 1630-2300z.

From the center of the continental U.S. (in Kansas), 20 meters 2000-0130z, 17 meters 1400-0000z, 15 meters 1430-2230z, 12 meters 1530-2130z and 10 meters 1630-2000z.

For more information concerning propagation and an explanation of the numbers used in this bulletin see the Propagation page on the ARRL Web site at http://www.arrl.org/tis/info/propagation.html.

Sunspot numbers for January 29 through February 4 were 25, 42, 49, 57, 106, 103 and 85 with a mean of 66.7. 10.7 cm flux was 87.4, 92.7, 94.4, 97.3, 101.5, 99.4 and 101.4, with a mean of 96.3. Estimated planetary A indices were 10, 17, 12, 11, 21, 17 and 15, with a mean of 14.7.



## ARRL DX Bulletin

DX Bulletin 5 ARLD005
From ARRL Headquarters
Newington CT February 5, 2004
To all radio amateurs

This week's bulletin was made possible with information provided by NC1L, the OPDX Bulletin, The Daily DX, 425DXnews, DXNL, WA7BNM and Contest Corral from QST. Thanks to all.

**MALAWI, 7Q.** Harry, G0JMU will be QRV as 7Q7HB for a couple of months beginning February 8. QSL direct via G0IAS.

**MALTA, 9H.** Chris, G0WKJ is QRV as 9H3CT and is here until February 13. He will participate in the FOC Marathon. QSL to home call.

**WEST MALAYSIA, 9M2.** Rich, PA0RRS is QRV as 9M2/homecall from Kuala Lumpur until February 9. QSL to home call.

**EAST MALAYSIA, 9M6.** After his West Malaysia operation, Rich, PA0RRS will be QRV as 9M6/homecall from Keningau from February 9 to 20. QSL to home call.

**UNITED ARAB EMIRATES, A6.** Dave, K2GM is QRV as A61AJ and has been active on 160 meters around 0050 to 0300z. He has also been QRV on 80 meters around 1500z. QSL via K2UO.

**SOUTH ORKNEY ISLANDS.** Henry is QRV as AY1ZA and has been active on 15 meters around 1800z. He is also active on 40 meters around 0500z. QSL via LU4DXU.

**BAHAMAS, C6.** Ivars, KC4PX will be QRV as C6APX from February 7 to 13. Activity will be on 40, 20, 17, 15 and 6 meters. QSL to home call.

**AZORES, CU.** Nigel, G3TXF is QRV as CU4/G3TXF using only CW from Graciosa Island, IOTA EU-175, until February 10. This includes an entry in the FOC Marathon. QSL to home call.

**CAPE VERDE, D4.** Simon, IZ7ATN will be QRV as D44/IZ7ATN from February 7 to 13. Activity will be during his local daytime on 40 to 10 meters using SSB. QSL to home call.

**PERU, OA.** Look for Jorge, OA4BHY, Pablo, OA4DJW, Sergio, OA4SJ, Marcial, OA4DM, Hildebrando, OA4BHN and Manual, OA4AHW to be QRV as OC3I from Los Chimus Island, IOTA SA-074, from February 11 to 16. Activity will be on 80 to 10 meters using CW, SSB, RTTY and PSK31. QSL via OA4DJW.

**EUROPEAN RUSSIA, UA.** Yuri, UA1ONY is QRV from the South Island of the Novaya Zemlya Islands, IOTA EU-035. QSL via RZ3EC.

**IRAQ, YI.** George, K7YMA is QRV as YI9YMA and is here until April 15. Activity is on 20, 15 and 10 meters as his time permits. QSL to home call.

The following UA4WHX/AC4LN 2002/2003 operations are approved for DXCC credit:

In 2003: V63MB from May 13 to 20. T88VV, May 21 to 26. KH0/AC4LN, May 27 to 31. V63MB, June 2 to 10. V73VV, June 12 to 20. 5W0VB, June 26 to 30. ZK2VB, July 1 to 4. A35VB, July 10 to 18. ZL/UA4WHX, July 19 to 31. P29VVB, August 4 to 17. H44VV, August 18 to 23. H40VB, August 24 to 30. YJ0VB, September 5 to 18. FK/AC4LN, September 21 to October 3. 3D2VB, October 4 to 6. 3D2VB/R, October 8 to 14. 3D2VB, October 16 to 20. T30VB, October 21 to 28. T20VB, October 29 to November 5. 3D2VB, November 6 and 7. ZK1/AC4LN, November 9 to 15. ZK1/AC4LN, November 18 to 26. FO/AC4LN, December 2 to 7. FO/AC4LN, December 11 to 13 and FO/AC4LN from December 16 to 25, 2003.

In 2002: V31VB from May 25 to 30. YS1/AC4LN, June 5 to 9. HP8/AC4LN, June 26 to July 1. J6/AC4LN, July 17 to 20. HH2/AC4LN, July 23 to 27. 9Y4/AC4LN, August 2 to 7. 8R1/AC4LN, August 9 to 14. J73/AC4LN, August 20 to 23. J3/AC4LN, August 27 to 30 and FW/AC4LN from September 27 to October 3, 2002.

## 6-meter Radials

By Paul Dunphy, VE1DX

One of the Local QRPers came up the hill today and there was joy in his stride. He was the same one who we'd heard on the 2-meter repeater telling one of the big guns about this new-found success on 6 meters. He wasn't long getting to the point.

"5 new ones today!" He began, grinning from ear to ear, "That makes 13 in 4 days. I guess at this rate, using simple linear math, the time for me to get my 50-MHz DXCC is (100 X 4 / 13) = 30.8 days. That's one month."

We held up our hand in resistance: "Wait a minute. It isn't linear! It took VE1YX over 12 years to get 6 meter DXCC. And he was at it all the time, with an 8-element beam at 70 feet fed with hard-line and a big amplifier. You just hit a fluke in propagation."

The QRPer grinned wider and shook his head. "Nope, not on your life! I wouldn't do this for just anyone, but I'm going to let you in on my secret. Here's what I did. I got rid of my beam, amplifier and tower. Sold it. Then I bought a multi-band vertical with the 12/17-meter add-on kit. That part is important as it widens out your resonance point."

We tried to get a word in, but he was going full steam ahead. "I know, I know! You had your resonance point widened by a doctor a few years ago, but this is different."

We shoved back our baseball cap and finally took it right off. We scratched our forehead as the QRPer ploughed on.

"Here's the secret. 51 radials! Not 49, not 50 and not 52. 51. But there's more to it than that. The first 50 radials can be any length, and they should be a mix if you are going to use your antenna on HF too. The trick is radial 51. Make it the portion of the wavelength where you are most likely to be operating. If you plan to be around 50.100 MHz, then cut it .100 wavelength. If 50.150 MHz, cut it .150 of a wavelength, and so on. This isn't too critical as your vertical will be broad-banded to begin with, but if you want that extra edge, cut it where the DX is likely to be, and then you'll be ready to pounce!"

"You won't find this in any ARRL antenna book. And don't tell anyone, either! If everyone finds out, then we won't have the advantage. You just listen to me, and I'll teach you how to DX on 6 meters. I have a few more tricks up my sleeve. You try this antenna one first. Then we'll move on to Phase Two. There is a 6-meter DXer buried inside you somewhere. We'll get him out in the open!"

With that he was off down the hill, running and kicking up his heels in anticipation of tomorrow's 6-meter opening. Son of a Gun! Some days there are times when you can anticipate what is coming, and be prepared. Somehow, we didn't even think Lord Baden-Powell, the Hero of Mafeking, would have been prepared for this one. So we just watched him round the corner and hoped tomorrow would be another good day on 6. It kept the QRPers off the lower bands, and we still needed the 5W0VK on 17 meters.

The Great Days of DXing are upon us. The signs are everywhere. QST printed an article saying we were in the middle of a double peak cycle and the Palos Verdes Sundancers were showing no signs of letting up. Maybe the QRPer had actually come across something... like sitting too close to the amplifier with the cover off! DX IS!

## Helpful Hints

Save gasoline by pushing your car to your destination. Invariably, passers-by will think you've broken down and help.

## Shallow Thoughts

When companies ship styrofoam, what do they pack it in?

# Carbon Amateur Radio Club
# 2004 Membership Application Form

Please complete this form and send to the Carbon Amateur Radio Club, P. O. Box 622, Lehighton, PA 18235-0622, or drop it off at the monthly CARC Meeting, at the Carbon County EMA Center, Route 93. The meeting is on the third Thursday of each month at 7:30 PM.

Callsign _____ Name _____

Address _____

City _____ State ____ Zip Code _____

Phone Number _____ Check if unlisted __

Email address _____ URL _____

Check if ARRL Member___

Membership (check one): Full ($15.00)____ Associate ($10.00)____
Additional family member ($5.00, up to a maximum of $25.00 per family)____

I would like to receive the Newsletter via (check one): Postal Mail ____ Web ___

Check here if you would like to be subscribed to the CARC Email Reflector _____
(Requires email address above. Do not check if you are currently subscribed to the reflector)

What are your interests in ham radio? _____

_____

What activities would you like to see at CARC this year? _____

_____

I'm interested in (check all that apply): Newsletter Writing ___ Tee Shirts ___ Coats ____

Foxhunting ___ Special Events Station ___ RACES ___ QRP ___ DX ___ Contests ___

**Carbon Amateur Radio Club – 2003-2004 Officers**

President: Anthony "Goody" Good, K3NG, goody@fast.net
Vice President: Rob Roomberg, KB3BYT, roomberg@ptd.net
Secretary: Darryl Gibson, N2DIY, n2diy@losch.net
Treasurer: John Schreibmaier, W3MF, w3mf@ptd.net
W3HA Callsign Trustee: John Bednar, K3CT, k3ct@fast.net
W3HA Repeater Trustee: John Bednar, K3CT, k3ct@fast.net
Public Information Officer: Lisa Kelley, ldkelley@voicenet.com

**Directors**

John Bednar, K3CT, k3ct@fast.net
Bob Culp, KB3IDV
Bill, KA3UKL, ldkelley@voicenet.com

**ARES/RACES Committee**

Bruce Fritz, KB3DZN (DC), bruce56@ptd.net
Darryl Gibson, N2DIY, n2diy@losch.net
Todd Deem, KB3IKX, kb3ikx@localnet.com

**Services**

W3HA Repeater: 147.255 MHz + PL 131.8

CARC Website: http:/www.learnmorsecode.com/carc/
Webmaster: Rob, KB3BYT roomberg@ptd.net

CARC Email Reflector: see www.qth.net CarbonARC list for details

Emergency Power Equipment Trustees: Lisa and Bill Kelley, KA3UKL, ldkelley@voicenet.com

**CARC Membership Information**

Regular Membership is $15.00, which includes autopatch privileges.

*All amateur radio operators are invited to join the CARC ARES / RACES net held 21:00 local time every Wednesday on the W3HA repeater at 147.255 MHz + offset, PL 131.8. Any amateur radio operator or anyone with an interest in ham radio is welcome to attend our monthly meetings which occur the third Thursday of each month at 7:30 PM at the Carbon County EMA Center on Route 93 in Nesquehoning.*

Carbon Amateur Radio Club
c/o Bob Schreibmaier K3PH
P. O. Box 166
Kresgeville, PA 18333-0166