



The Illuminator



The monthly newsletter of the Carbon Amateur Radio Club

January 2004

January Meeting

The next regular meeting of the Carbon Amateur Radio Club will be held on Thursday, January 15, at 7:30 p.m. at the EMA Center in Nesquehoning. See you there!



Happy New Year!

Let me take this opportunity to wish everyone a prosperous, healthy, and happy 2004!

A new calendar year also means that it's time to send in your dues for 2004. 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 18235-0622, or bring your completed membership form and dues to any CARC meeting.



Treasurer's Report

By John, W3MF

As of January 2, 2004:

Previous Balance	741.51
Receipts	0.00
Subtotal	741.51
Disbursements	122.14
<hr/> Final Total	619.37

Disbursements include \$5.55 for newsletter mailing, \$106.59 for emergency-related expenses, and \$10.00 for a memorial for Andy Mihalik.



Ham Radio in Space Reaches Another Milestone

(From the ARRL Letter)

Ham radio in space has reached another milestone with the successful installation and checkout of the first Amateur Radio on the International Space Station (ARISS) Phase 2 equipment. The ISS now sports a new Kenwood TM-D700E dualband transceiver in the Zvezda Service Module — the crew's living quarters. ISS Expedition 8 Commander Mike Foale, KB5UAC, set up the new transceiver at NA1SS earlier this month. Only official approval is needed to begin operations. Activation of the new gear will mean a power boost for the NA1SS downlink signal, which could prove especially helpful in school group contacts. The additional equipment — which soon will include a slow-scan television (SSTV) system — also opens up new operational possibilities.

"Clearly, we've got multiop, multi-station capability," ARISS International Chairman Frank Bauer, KA3HDO, told ARRL. The ARISS Japan Team donated the Kenwood radio and made certain hardware and firmware modifications — including limiting its power output to a maximum of 25 W — to prepare it for flight, he said. Bauer and the ARISS US Team recently returned from Russia following successful ground testing of Phase 1 and Phase 2 equipment using a set of flight-identical ARISS antennas as well as testing of a slow-scan TV (SSTV) system.

The Phase 2 gear will use the four antennas installed on the Service Module during space walks in 2002 specifically to support Amateur Radio operations. Addition of the new antennas, which will cover from HF to microwave frequencies, opened the door to deploying the two separate ham stations aboard the orbiting outpost. Waiting

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in the wings is a Yaesu FT-100 HF/VHF/UHF transceiver that could go into space in January along with the new SSTV gear.

Bauer says the second ham station with the Kenwood transceiver is near the Service Module's dinner table and the window. "This prime location will allow the crew to more conveniently use the ISS ham radio system," he said. "They'll be able to look out the window while operating from the Service Module" Complementing the Kenwood TM-D700E will be an Ericsson 70-cm handheld.

"Our intention is to operate SSTV on 70 cm with the Ericsson equipment," Bauer said, while the crew will use the Kenwood transceiver for ARISS school group contacts as well as for casual QSOs on 2 meters. The Kenwood radio also incorporates a TNC and can support the RS0ISS packet system, not yet back in operation.

The Phase 1 "initial station" Ericsson 2-meter handheld, which has served as the only NA1SS gear for more than three years, will remain in place in the ISS Zarya Functional Cargo Block (FGB).

Details of the ARISS Phase 2 gear is available on AMSAT's ARISS Web page <http://www.amsat.org/amsat/ariss/Papers/Phase%202%20AGM03Final.pdf>.



Kid's Day is Sunday, January 4! (From the ARRL Letter)

For the first time, Kid's Day will occur on a Sunday. The first 2004 running of this popular operating event will be Sunday, January 4 (the second Kid's Day in 2004 will be Saturday, June 19). Intended to encourage young people — licensed or not — to enjoy Amateur Radio, Kid's Day offers a "mentoring opportunity" for experienced amateurs while giving youngsters some firsthand hamming experience and perhaps sparking a lifelong interest.

"Kid's Day is an opportunity to introduce your own youngsters, neighborhood kids and nieces and nephews to participate in the magic of ham radio," suggests Jean Wolfgang, WB3IOS, of ARRL Field and Educational Services. Originated by the Boring Amateur Radio Club <http://jzap.com/k7rat/>, Kid's

Day now is sponsored and administered by the ARRL with BARC's cooperation and assistance. Now entering its tenth year, each running of Kid's Day typically attracts more than 1000 participants.

Kid's Day is not a contest, and patience is the byword on both sides of each contact. The role of the licensee and control operator is to help youngsters with the basics, keep an eye on the technical aspects of the operation, observe third-party traffic restrictions

<http://www.arrl.org/FandES/field/regulations/io/3rdparty.html> when making DX QSOs and ensure station identification at proper intervals. In this event, it's quality of the contacts that counts, not quantity.

Kid's Day will run from 1800 to 2400 UTC, and there's no limit on operating time. The suggested exchange is name, age, location and favorite color. Stations may work the same station again if an operator has changed. Call "CQ Kid's Day."

Suggested frequencies are 14.270-14.300, 21.380-21.400 and 28.350-28.400 MHz plus 2 meter repeater frequencies, with permission from the repeater's sponsor). Guidelines for this event are available on the ARRL Web site <http://www.arrl.org/FandES/ead/kd-rules.html>.

All participants are eligible to receive a colorful certificate. Visit the ARRL Kid's Day Survey page <http://www.arrl.org/FandES/ead/kids-day-survey.html> to complete a short survey and post your comments. You will then have access to download the certificate page. Or you can send a 9x12 SASE to Boring Amateur Radio Club, PO Box 1357, Boring, OR 97009.

Kid's Day participants are invited to post logs and comments on the Internet <http://lists.contesting.com/pipermail/kids/>.



Project Goodwill Doubles Albania's Ham Population (From the ARRL Letter)

Once a "rare one," Albania (ZA) now will be a lot easier to work thanks to a program that incorporated Amateur Radio training into a

university curriculum. The first-of-its-kind initiative has effectively doubled the ham radio population of the Balkan nation. Project Goodwill Albania 2003 <http://www.za1a.com> also staged an international operating event that made thousands of contacts to provide the students with the chance to see Amateur Radio in action. (QSL via Project Goodwill Albania 2003, PO Box 73, 02380 Espoo, FINLAND.)

During the course, ZA1A — the station of the Albanian Amateur Radio Association — was on the air to demonstrate Amateur Radio to local telecommunications and education administrators as well as to the students. The program wrapped up with some fanfare December 12 as the Polytechnic University of Tirana students took the full license — the European Conference of Postal and Telecommunications Administrations (CEPT) <http://www.cept.org/> Class A — Amateur Radio examination under the auspices of Albania's licensing authority.

When all was said and done, nearly every one of the fourth and fifth-year students managed a passing grade. The result was 39 new Albanian licensees. The university has said it plans to continue the program.

International Amateur Radio Union Region 1 Chairman Ole Garpestadt, LA2RR, congratulated the new licensees and welcomed them to the bands. He also participated in final negotiations with Albanian authorities for the country's membership in CEPT and to bring Albania's amateur licensing regime into line with CEPT. This would provide amateurs visiting Albania and Albanians visiting abroad with paperwork-free reciprocal operating privileges.

A group of ARRL instructors took the reins during the second week of the project's Amateur Radio training. The five-week-long course used an advanced Radio Society of Great Britain (RSGB) study package as a reference. Some 50 professional educators from the US, the United Kingdom, Albania, Finland, Germany, Hungary, Israel, Italy, Japan, Macedonia, Spain and Sweden taught components of the course. Most were from the DXing and contesting communities.

Project organizer Martti Laine, OH2BH, was honored at the graduation ceremony as a Senior

Fellow of Polytechnic University of Tirana. Laine first activated Albania in 1970. He returned in 1991 with the ZA1A combined training course and DXpedition.

Among those supporting the educational effort were IARU Region 1, the Associazione Radioamatori Italiani (ARI), ARRL, RSGB, Israel Amateur Radio Club, Unión de Radioaficionados Españoles (URE) and the Northern California DX Foundation, as well as ham manufacturers Vertex-Standard (Yaesu) and Fluidmotion.

For more information, visit the ZA1A Web site <http://www.za1a.com> and click on "Project Goodwill Albania 03." — Martti Laine, OH2BH/Project Goodwill Albania 2004 provided information for this report.



FEMA Says BPL Will "Severely Impair" Essential HF Operations

(From the ARRL Letter)

A proverbial monkey wrench in the works for BPL? Expressing "grave concerns" about likely interference from unlicensed Broadband over Power Line (BPL) systems, the Federal Emergency Management Agency (FEMA) told the FCC that BPL could "severely impair FEMA's mission-essential HF radio operations in areas serviced by BPL technology." FEMA responded December 4 to last April's FCC BPL Notice of Inquiry, ET Docket 03-104. Now part of the Department of Homeland Security — the agency said its primary worry is BPL's potential impact on the FEMA National Radio System (FNARS) on HF. FNARS is FEMA's primary command and control backup medium under the Federal Response Plan.

"FEMA has concluded that introduction of unwanted interference from the implementation of BPL technology into the high frequency radio spectrum will result in significant detriment to the operation of FEMA radio systems such as FNARS," FEMA asserted. "FNARS radio operators normally conduct communications with signals that are barely above the ambient noise levels." FNARS HF stations, FEMA said, typically are in residential areas of the sort that BPL might serve.

As part of the Department of Homeland Security, FEMA's perspectives on BPL could carry substantial weight at the FCC, which may issue a Notice of Proposed Rule Making as early as February. The FCC's BPL Notice of Inquiry has attracted more than 5100 comments — many of them from the amateur community.

FEMA said BPL also could render useless such "essential communications services" as the Radio Amateur Civil Emergency Service (RACES), the Military Affiliate Radio System (MARS) and the Civil Air Patrol. FEMA and ARRL last year signed a Memorandum of Understanding that focuses on how Amateur Radio may coordinate with the agency in disasters and emergencies.

Calling the HF spectrum "an invaluable and irreplaceable public safety resource," FEMA said there's no current alternative to HF in terms of meeting national security and emergency preparedness requirements at the national, state and local levels. The agency advised the FCC to beef up its Part 15 rules to ensure no increase in interference levels to existing FCC or NTIA-licensed communication systems. Otherwise, FEMA predicted, "any noise increase inevitably would diminish the ability to maintain essential communications" and would "directly impair the safety of life and property."

Likewise, FEMA pointed out, amateur HF transmitters could possibly interfere with and interrupt BPL service, leading consumers not familiar with Part 15 to blame licensed radio services.

Concluded FEMA: "The purported benefits of BPL in terms of expanded services in certain communications sectors do not appear to outweigh the benefit to the overall public of HF radio capability as presently used by government, broadcasting and public safety users."

Additional information about BPL and Amateur Radio is on the ARRL Web site, 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/>.



ARRL Propagation Forecast Bulletin

Propagation Forecast Bulletin 1 ARLP001
From Tad Cook, K7RA
Seattle, WA January 2, 2004
To all radio amateurs

This is the first propagation bulletin for 2004, and time to review averages from 2003 and compare them to previous years. This is also the ninth propagation bulletin posted in the last six weeks in an effort to keep you well informed of HF conditions through the Thanksgiving and Christmas holidays.

From the third quarter of 2002 through the last quarter of 2003, the average daily sunspot numbers were 193.5, 152.7, 120.3, 107.3, 110.2 and 99.2. Average daily solar flux for the same six quarters were 178.1, 164.2, 134.3, 124.2, 120.8 and 137.4.

Average daily sunspot numbers for the years 1997 through 2003 were 30.7, 88.7, 136.3, 173, 170.3, 176.6 and 109.2. Average daily solar flux for the same seven years was 81, 117.9, 153.7, 179.6, 181.6, 179.5 and 129.2. We can sure see a decline in the solar cycle over the past few years by averaging the daily numbers annually.

Over the next week, expect solar flux numbers between 120-125. A geomagnetic forecast for January 1 predicted planetary A index values for January 2-8 of 20, 15, 35, 30, 35, 35 and 25. With the exception of this Saturday, January 3, those look like rough conditions with geomagnetic storms, especially when the A index is above 30. This should be the result of a big blast of solar wind beginning on Sunday, January 4. Remember that long winter nights are great for 160, 80, 60, 40 and 30 meters. The noise of summertime is long gone and long hours of darkness are great for the lower frequencies, at least when there isn't a major geomagnetic storm.

We've featured links to U.S. and Canadian sites with information on space weather, but check <http://www.ips.gov.au> from Australia. This is the web site for the Australian Space Weather Agency. Click on Space Weather to get an update on

geomagnetic indices and HF fadeout warnings. Select HF Systems, and then look to the vertical field on the left and click on links to ionospheric maps for Australasia, Asia, North America, North Atlantic and Europe.

If you've ever been interested in plotting solar flux and sunspot numbers, in the past we've mentioned Scott Craig, WA4TTK and his free Solar Data Plotting Utility, which runs in Windows. On New Year's Eve, I uploaded 15 years of data for his program to his web site. This is nice if you haven't been running this program before and updating the data file. The software can pull the data out of the bottom of this weekly bulletin and add it to the existing data file. It can also grab the data via FTP from the ARRL. However, if you have any gaps or are starting new with this program, the complete data file through December 31, 2003 can be quite handy. Download it if you need it, and you can add to it weekly or daily from here on. Get it from <http://www.craigcentral.com/>, specifically at <http://www.craigcentral.com/sol.asp>. Note that Scott has a chart showing that he has an MSDOS version of his program, and the Windows version runs on Windows 95 or NT4. I've personally used his program with Win98, Win98 SE, Win2k Pro and WinXP Pro with no problems.

For more information about 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 December 25 through 31 were 58, 65, 47, 47, 56, 15 and 25 with a mean of 44.7. 10.7 cm flux was 139.1, 137.2, 161.5, 119, 114.5, 107.7 and 105.6, with a mean of 126.4. Estimated planetary A indices were 6, 9, 12, 12, 6, 8 and 17, with a mean of 10.



**THIS SPACE RESERVED
FOR YOUR ARTICLE!**



ARRL DX Bulletin

DX Bulletin 53 ARLD053
From ARRL Headquarters
Newington CT December 31, 2003
To all radio amateurs

This week's bulletin was made possible with information provided by LU1BCE, the OPDX Bulletin, The Daily DX, 425DXnews, DXNL, WA7BNM and Contest Corral from QST. Thanks to all.

SOVEREIGN MILITARY ORDER OF MALTA, 1A0. IK0FVC, IOJBL, IK0FTA and IK0PRG will be QRV as 1A0KM from January 2 to 5. QSL this operation via IK0FTA.

JAMAICA, 6Y. Martin, KN5G is QRV as 6Y5/KN5G until January 4. He is running low power and active on 80 to 10 meters, including 17 and 12 meters. QSL to home call.

BHUTAN, A5. Dane, S57CQ is QRV as A52CQ until January 14. He has been active on 40 meters around 1700z, 20 meters around 1200z and 10 meters after 0900z. QSL via S57DX.

BAHAMAS, C6. Brian, ND3F plans to be QRV as C6A/N3IQ from Treasure Cay, Abaco Island, from January 2 to 10. This includes an entry in the ARRL RTTY Roundup. Activity will be on 80 to 10 meters. QSL to home call.

ITALY, I. The Amateur Radio Group of RAI will be QRV as I19RAI from January 3 to 4 to celebrate the 50th anniversary of the first TV broadcast. I10RAI will also be QRV from different call areas as well during the month of January. QSL both calls via IK0ZRR.

US VIRGIN ISLANDS, KP2. David, N4KZ and Mark, K4MCE are QRV as special event station N4Z from St. Croix until January 6. Activity is on 160 to 6 meters using CW and SSB. QSL via N4KZ.

ARGENTINA, LU. Members of the Radio Club Argentina will participate in the 6th Andes Mountains Land Cross and be QRV as LS4M from January 4 to 15. Activity will be on all HF bands using CW and SSB. QSL via LU4AA.

BANGLADESH, S2. Bazlu, S21BR has been QRV on 20 meters around 1200z.

VENEZUELA, YV. Jose, YV6BTF will be QRV as YV6BTF/p from Chimana Grande, IOTA SA-090, from January 3 and 4. QSL to home call.

CAMBODIA, XU. Hiroo, JA2EZD will be QRV as XU7AAA from January 2 to 7. QSL via operator's instructions.

CAYMAN ISLANDS, ZF. Pete, N2LM is QRV as ZF2PD from Grand Cayman Island, IOTA NA-016, until January 8. Activity is on 80 to 6 meters using CW and SSB. QSL to home call.

SOUTH AFRICA, ZS. The Columbine Radio Club of the Western Cape will be QRV as ZS1BLO from January 2 to 4 to commemorate the Battle of Blaauwberg. Activity will be on 160, 40, 20, 15 and 10 meters. QSL via operators' instructions.



QSL Questions

By Paul Dunphy, VE1DX

We were on 6-meters today trying out our newly constructed delta loop. As luck would have it, one of the first QSOs was with our manager, VE1YX. We never really thought too much about it, just exchanged grid squares and signal reports. It wasn't much of a QSO as we were only 60 miles apart. FN84 - FN74, but when on 50 MHz, do as is done on 50 MHz.

Later on we got some feedback. One of the Local QRPer was listening, and he called us on 2 meters later on. He said, "How come you told VE1YX to QSL to VE1YX for that QSO?" Son of a Gun! One never knows when a QRPer is going to

be listening so we told him, quite properly, that VE1YX is our QSL manager.

"Who else would he send to for a QSL?" we asked him. "But," the Local continued, not understanding the Mysteries of the Ages and the Eternal Enigmas of DXing, "wouldn't that be a waste of postage and an IRC? If he is your QSL manager, why doesn't he just fill out one of the cards from your logs?" We thought about it for a minute and replied, "He likes to see them come in by the mail. That way, he knows the QSL is good."

This QRPer still didn't get it so we said, "What he'll likely do is send for it by the buro. Once he gets his own card back by the buro, he'll respond by the buro, and then he'll finally get a VE1DX QSL 6 months later in his buro shipment. Then he'll know it is genuine and a counter." This seemed to satisfy the Local, and he signed and went away. Sometimes you have to be quick on the draw when cornered by a Local QRPer!



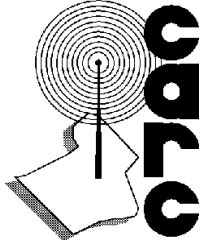
Helpful Hints

Bomb disposal experts' wives: Keep hubby on his toes by packing his lunchbox with plasticine and an old alarm clock.



Shallow Thoughts

If someone with multiple personalities threatens to kill himself, is it considered a hostage situation?



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.

Call sign _____ 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 Schreibermaier, 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 2:00 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 Schreibermaier K3PH
P. O. Box 166
Kresgeville, PA 18333-0166