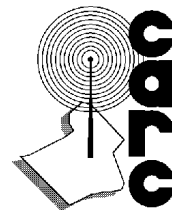




# The Illuminator



The monthly newsletter of the Carbon Amateur Radio Club

June 2003

## June Meeting

The next regular meeting of the Carbon Amateur Radio Club will be held on Thursday, June 19, at 7:30 p.m. at the EOC in Nesquehoning. We expect to finalize plans for this year's Field Day. See you at the meeting!



## Treasurer's Report

By John, W3MF

Previous Balance	1232.70
Receipts (dues)	15.00
Subtotal	1247.70
Disbursements (newsletter mailing and P. O. Box)	5.92
<hr/> Final Total	<hr/> 1241.78



## New 60-meter Band to Become Available July 3!

(From the ARRL Letter)

The new five-channel 60-meter amateur allocation becomes available to US Amateur Radio operators at midnight (12:00 AM) local time on July 3. The local time designation means that amateurs in the US territory of Guam likely will be the first to get a crack at the new band.

The new band will be a secondary allocation — federal government users are primary — and the first on which the only permitted mode will be upper-sideband (USB) phone (emission type 2K8J3E). The FCC last month announced it would grant hams access to five discrete 2.8-kHz-wide channels instead of the 150 kHz-wide band ARRL had requested and the FCC initially proposed. The

League remains optimistic, however, that Amateur Radio eventually may be able to enjoy a band segment with multiple mode privileges at 60 meters. ARRL CEO David Sumner, K1ZZ, has said that in the meantime hams will have to be on their best behavior when taking advantage of the limited channelized allocation, open to General and higher class licensees.

The FCC has granted amateurs center-channel frequencies of 5332, 5348, 5368, 5373 and 5405 kHz — the last channel common to the amateur experimental operation under way in the United Kingdom <<http://www.rsgb-hfc.org.uk/5mhz.htm>>. To be "on channel," users of 60 meters should set their transmitted carrier frequency 1.5 kHz lower than the channel-center frequency. In terms of day-to-day operation, the new band is expected to resemble the sort of channel sharing typical on local repeaters.

ARRL Laboratory Manager Ed Hare, W1RFI, says hams need to be very careful if they're considering modifying their current transceiver or transmitter for 5 MHz. The ARRL advises that members check with the appropriate equipment manufacturers regarding specific modification information. Some modifications not only may void the warranty but could affect or alter a transmitter's operation in unpredictable ways.

"Hams need to be sure that any modifications put them right on the desired channel," Hare said. "Most hams are used to just having to think about band edges, so on other bands, if a mod were a bit 'off,' all operators would need to ensure is that they are not transmitting outside the band."

Hare recommended that on 5 MHz amateurs remain within "a few tens of Hertz" of suppressed-carrier accuracy. He also pointed out that hams have a mandate not to have any of their signal occupy spectrum outside the assigned 2.8 kHz channels.

Noting that high-frequency audio response can vary considerably from radio to radio, Hare has suggested restricting occupied channel audio bandwidth to 2600 Hz, rolling off below 200 Hz on the low end and above 2800 Hz on the high end.

Last-minute opposition to the granting of a band segment at 5 MHz came last year from the National Telecommunications and Information Administration (NTIA), which cited the ongoing spectrum requirements of federal government licensees having homeland security responsibilities. The NTIA administers spectrum allocated to the federal government. A compromise between the FCC and the NTIA resulted in the limited, channelized allocation.

The NTIA selected the channels the FCC authorized to minimize the possibility of interference to federal government users, and it dictated the use of USB so that federal government users — who also use only USB — could readily identify amateur stations if necessary.

The FCC has set maximum power at 50 W ERP and said it would consider a typical half-wave dipole to exhibit no gain.



**Kid's Day II is June 21!**  
(From the ARRL Letter)

The second Kid's Day of 2003 will be June 21, from 1800-2400 UTC. There's no limit on operating time. The twice-annual event, held in January and June, offers a chance for amateurs to invest in the future of Amateur Radio by participating in a simple, but rewarding, on-the-air event. Now in its ninth year, each running of Kid's Day typically attracts more than 1000 participants.

Kid's Day is intended as an opportunity to share Amateur Radio with young people — licensed or not — in the hope that they'll enjoy the experience and possibly pursue their own license in the future.

Activity for Kid's Day  
<http://www.arrl.org/FandES/ead/kd-rules.html> takes place on 20, 15 and 10 meters and can include local 2-meter repeaters. It's an opportunity to

introduce your own youngsters, neighborhood kids and nieces and nephews to participate to the magic of ham radio and perhaps spark a lifelong love for the hobby.

Kid's Day is not a contest, and patience is a must. The role of the licensee and control operator is to help with the basics, keep an eye on the technical aspects of the operation, observe third-party traffic agreements and be sure to ID at the proper intervals. In this event, it's quality of the contacts that counts, not quantity.

The suggested exchange for Kid's Day is first name, age, location and favorite color. It's okay to work the same station again if the operator has changed. Call "CQ Kid's Day." Suggested frequencies are 14,270 to 14,300, 21,380 to 21,400 and 28,350 to 28,400 kHz, and 2-meter repeater frequencies with permission from your area repeater sponsor.

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 send a 9x12 SASE to Boring Amateur Radio Club, PO Box 1357, Boring, OR 97009.

Originated by the Boring Amateur Radio Club <<http://jzap.com/k7rat/>>, the event now is sponsored and administered by the ARRL with the cooperation and assistance of the BARC.



**NorCal, NJQRP Merge to Form American QRP Club**  
(From the ARRL Letter)

The NorCal QRP Club and the New Jersey QRP Club have joined forces, effective June 4, to form The American QRP Club. A larger, more comprehensive single journal, The Homebrewer, will replace QRPP and QRP Homebrewer. The new club already has begun to consolidate kitting operations as well, and a new Web site <<http://www.amqrp.org>> is in the offing. Continuing will be the two QRP forums, Atlanticon and Pacificon, and the NJQRP and NorCal will continue

to plan and execute their respective forums, funded via the American QRP Club. Detailed information is available on the American QRP Club's temporary Web site <<http://www.njqr.org/a-qrp/index.html>>.



### **Norm, K3NZ, in June CQ Magazine**

By Lamar, N3AT

The QRP column in the June issue of CQ magazine includes a story about Norm Zoltack and his Rock Mite transceiver. Dave Ingram, KA4TWJ, writer of the QRP column, includes this report:

"I recently answered a CQ from K3NZ, and was blown away when Norm described his rig... It was a Small Wonder Labs Rock Mite mini-transceiver built on a 2 inch by 3 inch PC board and running less than 500m milliwatts. I'm serious - less than half a watt. Norm's signal was not strong, but it was not so weak that you would just tune past it and ignore his CQ either. I didn't, and I was in a rush and pressed for time to boot. Now that is what milliwatting is all about, friends - having fun with a tiny rig you can hold in the palm of your hand or carry in a shirt pocket, You can see close up views of the Rock Mite's circuitry at <[www.smallwonderlabs.com](http://www.smallwonderlabs.com)>.... This is one hot mini rig!"

There is a picture in the column showing Norm's Rock Mite and his QSL card. Underneath the picture are these words: "Looking over the shoulder of Norm Zoltack, K3NZ, we see what's responsible for his attention-grabbing 20-meter signal - a little 500 milliwatt Rock Mite Transceiver from Small Wonder Labs mounted in an Altoids tin. Using this gem Norm has worked 45 states and 15 countries, including a record-setting 10,000 mile CW QSO with VK4CEU in Australia. Life doesn't get much better than that!"



### **40-meter "Realignment" Tops WRC-2003 Amateur Radio Issues**

(From the ARRL Letter)

When delegates gather June 9 in Geneva, Switzerland, for World Radiocommunication Conference 2003 (WRC-03), Amateur Radio will enjoy robust representation. The International Amateur Radio Union (IARU) is looking to WRC-03 to resolve the longstanding issue of a harmonized worldwide 40-meter amateur allocation. In addition, the IARU has taken positions on several other issues of importance to hams.

"Forty meters is the biggie," says ARRL CEO David Sumner, K1ZZ, who will attend the month-long international assembly in the role of administrative officer of the IARU observer delegation headed by President Larry Price, W4RA. "It's complicated, controversial and involves multiple radio services, and there's simply no way of predicting what the outcome will be."

Citing its desire to "meet the needs of communications for humanitarian assistance," the IARU has expressed strong support for a realignment of the band to make available to hams globally 300 kHz of spectrum in the vicinity of 7 MHz.

While Region 2 amateurs — including US hams — now enjoy 7.000 to 7.300 MHz, hams in most of the rest of the world — Regions 1 and 3 — may use only 7.000 to 7.100 MHz. Methods to get the issue off the dime must address the incompatibility arising from how, where and on what timetable the broadcasters in Regions 1 and 3 should be shifted to higher frequencies while continuing to meet the needs of fixed and mobile services in the band.

Other Amateur Radio-related agenda items include proposed revisions to Article 25 of the Radio Regulations. Article 25 details the requirements for Amateur Radio and includes the obligation to demonstrate Morse code proficiency to operate below 30 MHz. Sumner said he expects the WRC-03 delegates to delete the international requirement, although administrations could continue to require Morse proficiency if they wished to do so.

The IARU favors a revision to Paragraph 25.6 to incorporate an ITU Recommendation (ITU-R M.1544) by reference to establish a minimum international standard for Amateur Radio licensing. The IARU also supports adding new provisions urging administrations to take steps to allow amateur stations to prepare for and meet

communication needs to support disaster relief and to permit individuals licensed in another country to operate temporarily while in their territory. The IARU also supports giving greater flexibility to administrations in the formation of Amateur Radio call signs.

Expressing concern over interference potential, the IARU opposes allocating any spectrum to the Earth Exploration Satellite Service (Active) to deploy spaceborne synthetic aperture radars (SARs) in the 430 to 440 MHz band. Amateur Radio is co-primary at 430 to 440 MHz in Region 1 and in several countries in Region 2.

As an observer at the conference, the IARU can only request that ITU member-states take its views into consideration when deciding on WRC-03 agenda items. ARRL has launched a special WRC-03 campaign <<http://www.arrl.org/defense>> to help generate the funds needed to continue the defense of Amateur Radio spectrum. Sumner said "unquantifiable thousands of hours by volunteers and staff members" have gone into WRC-03 preparations.

ARRL Technical Relations Manager Paul Rinaldo, W4RI, and ARRL Technical Relations Specialist Jon Siverling, WB3ERA, will serve on the US delegation. More than a dozen other Amateur Radio licensees are expected to be in Geneva to help represent Amateur Radio. WRC-03 concludes July 4. More information on WRC-03 is available on the ITU WRC-03 Web page <<http://www.itu.int/ITU-R/conferences/wrc/wrc-03/index.asp>> and on the FCC Web site <<http://www.fcc.gov/ib/wrc-03/>>.



### **News from the QRP-L E-mail List**

By Lamar, N3AT

The NorCal QRP club has a new keyer kit for sale. Price is \$15 shipped. It includes Iambic A and B modes, beacon mode, Paddle reverse, tune mode, 3 forty-character memories, and pot control speed.

There was also a report on QRP-L of a club that sponsored an unusual antenna event, using such things as aluminum extension ladders as verticals, and two connected as a dipole. Probably the most

unusual experiment was with two shopping carts borrowed from a local grocery store, and connected as a dipole. Sound like fun? See if you can come up with some unusual objects to use for an antenna!



### **QRP WARC-Speed DX Challenge Announced**

(From the ARRL Letter)

Danny Eskenazi, K7SS, Ward Silver, N0AX, and the Western Washington DX Club — with the assistance of Bruce Horn, WA7BNM — have announced the year-long QRP "WARC-Speed DX Challenge." The objective is to work as many DXCC entities as possible using low power (QRP) on the so-called "WARC bands," 30, 17 and 12 meters.

The Challenge starts at 0000 UTC June 1, 2003, and ends at 2359 UTC May 31, 2004. For the purposes of the Challenge, QRP is defined as 5 W or less output on digital modes or CW and 10 W PEP on SSB. (AM or FM operators also are welcome.)

Certificates will be awarded for the top three totals from each CQ Zone in each of several categories for working 100 entities on any single band. Results will be posted monthly in the following categories: 17-meter CW, 17-meter phone, 17-meter digital, 17-meter total, 12-meter CW, 12-meter phone, 12-meter digital, 12-meter total, 30-meter CW, 30-meter digital, total CW, total phone, total digital, total overall. Participants may enter as many or as few categories as they wish.

The Challenge involves no QSL cards or cumbersome paperwork. At the end of each month, WA7BNM will post a score submittal form on the 3830 Score Submittal Web page <<http://www.hornucopia.com/3830score/>>. Participants will enter their totals and updated totals will be posted to the 3830 contest score reflector and CQ-contest reflectors (and be forwarded to the DX and QRP reflectors, as well). At the end of the year, participants will be able to download a nice certificate! The honor system rules, Silver said, and he notes the Challenge is not a contest.

For more information, contact Ward Silver, N0AX,  
n0ax@arrl.net.



## ARRL DX Bulletin

DX Bulletin 23 ARLD023  
From ARRL Headquarters  
Newington CT June 5, 2003  
To all radio amateurs

This week's bulletin was made possible with information provided by RW0MM, the OPDX Bulletin, The Daily DX, QRZ DX, 425DXnews, DXNL, WA7BNM and Contest Corral from QST. Thanks to all.

**CYPRUS, 5B.** Alan, G3PMR is active as 5B4AHJ until June 22. QSL to home call.

**SENEGAL, 6W.** Members of the Senegal Radio Association, ARAS, will be QRV as 6V1A from Goree Island, IOTA AF-045, using SSB on all HF bands from Jun 7 to 9. QSL via 6W6JX.

**WEST MALAYSIA, 9M2.** Johnny, G3LIV is QRV as 9M2/G3LIV from Langkawi Island, IOTA AS-058, until June 9. He is using mainly CW with some PSK31. QSL to home call.

**TAIWAN, BV.** Paul, BV4FH and a few members of the BV DX Group are QRV as BV9L from Liu-Chiu Yu, IOTA AS-155, until June 8. Activity is on 40 to 10 meters using CW and SSB. QSL via BV4YB.

**FEDERAL REPUBLIC OF GERMANY, DL.** Members of the Erding Radio Club will be QRV as DA0ED/p during the IARU Field Day contest. QSL via the bureau.

**FRANCE, F.** Eight French amateurs are QRV as F8KOM from Brehat Island, IOTA EU-074, until June 9. QSL via F5IL.

**ISLE OF MAN, GD.** Adrian, M3LCR is active as MD3LCR/p. He is using mainly RTTY on 80 to 15 meters, with some SSB. QSL to home call.

**ITALY, I.** Paolo, IV3DSH, Stefano, IV3LZQ, Giovanni, IV3ODE, Paolo, IV3PUT, Pietro, IV3RUA

and Maria Pia, IV3ZLT will be active as homecalls/1 from Anfora Island, IOTA EU-130, on June 7 and 8. They will be QRV using all modes on 160 to 6 meters and plan to be an entry in the IARU Field Day contest. QSL via bureau.

**JAPAN, JA.** Kaoru, JA3MCA, Aru, JA0KNM, Jun, JJ1EQW and Kai, JE3NJZ are active as homecalls/JR6 from Hateruma Island, IOTA AS-024, until June 9. Activity is on 40 to 2 meters using CW and SSB. QSL to home calls.

**GUAM, KH2.** JA6EGL and JA6KYU are QRV as KH2M and NH7IG/KH2, respectively, until June 7. Activity is on 30, 20 and 15 meters using CW and SSB. QSL to home calls.

**DENMARK, OZ.** Lars, OZ1HPS and Karl, LA8DW are QRV as OZ4DI from Fano Island, IOTA EU-125, until June 7. QSL via OZ1HPS. Meanwhile, Siggii, OZ/DL1AZZ will also visit here from June 7 to 14. He will use CW and SSB on all HF bands. QSL to home call.

**GREECE, SV.** Emil, SV8/DJ4PI/p is QRV from Thassos Island, IOTA EU-174, until June 18. QSL to home call.

**EUROPEAN RUSSIA, UA.** Nick, RA1QQ and Andy, RA3NN are QRV as UE1RRC/1 from an island in the IOTA EU-119 group until June 10. They might also be QRV for one day from Sosnovets Island, IOTA EU-161, as RA1QQ/1 and RA3NN/1, respectively. QSL via operators' instructions. Meanwhile, Oleg, UA6LP is active as UA6LP/6 from Ullu-Tau, until June 13. This includes an entry in the IARU Field Day contest as UA6LP/6/p. QSL to home call.

**ASIATIC RUSSIA, UA0.** RK0LWW team members Oleg, RA0LSO, John, RW0MM, Vitaly, RU0LAX, Yuri, UA0LMO, Paul, UA0LSK and Meela, UA0LHT will be QRV from Verkhovskogo Island, IOTA AS-066, from June 7 to 9. This includes participation in the IARU Field Day contest. They plan on activating new lighthouses on the island as well. QSL via operator's instructions.

**UKRAINE, UR.** Members of the Rivne DX Club are QRV with special event callsign EN720K until July 15 to celebrate the 720th Anniversary of Rivne City. QSL via IK1GPG.

**LAOS, XW.** Champ, E21EIC is QRV as XW1IC until June 27. Activity is on 160 to 10 meters using CW, SSB and RTTY. QSL to home call.



## ARRL Propagation Forecast Bulletin

Propagation Forecast Bulletin 23 ARLP023  
From Tad Cook, K7RA  
Seattle, WA June 6, 2003  
To all radio amateurs

More crazy space weather this week. Average daily sunspot numbers and solar flux were both down, and the average daily A index was up. We've expressed a lot of angst about the solar wind, solar flares, stormy conditions and resulting absorption. However, VHF operators are loving it.

The average daily planetary A index compared to the previous week was up over 50% to 37.1. The stormiest day was Thursday, May 29 with a planetary A index of 89 (Editor's Note: When it hits 100, sell!). Late in the day the planetary K index was 8, which is exceptional.

This week we received a number of comments and reports from fans of VHF propagation. Bob Sluder, N0IS noted the displeasure expressed in this bulletin over high A and K index numbers. He wrote, "It is very obvious that you are not a VHF operator or you would LIKE those numbers, because you know something is going to happen on VHF. Boy, did it happen last week. 6-meters open around the clock and the Aurora was magnificent (radio wise). Had a CW schedule with a friend on 80-meters last Thursday evening and someone had thrown the big low band switch to off, while the VHF one was set on GO."

Jon Jones, N0JK of Kansas wrote that there was a big aurora display associated with coronal mass ejections on May 30. Following the break up of the display, there was an all night E-skip opening on 6-meters from 0300-1800z. He noted it was unusual to hear YV1DIG working California on 6-meters around 0600z.

Al Olcott, K7ICW wrote, "The CME events and related phenomena enhanced VHF on Thursday 29 May briefly here in Las Vegas. We had a rare

aurora event covering a span of about 12 minutes. I had contacts with 3 stations, K17BP (DN13) Idaho, KB7WW (CN85) Oregon and K7OFT (CN87) in Washington in a span of 2 minutes on 6-meters at 2255-2257z on SSB. Beam headings here were 45 degrees azimuth."

He continues, "At 2302z, an unidentified CW signal on 144.200 MHz showed up for about 2 minutes in a DN grid, but no I.D. on the weak signal. Signals from N7IJ (DN44) in Idaho persisted on 6-meters throughout our short opening here, but he didn't hear me. A simultaneous E-skip opening during this period on 2-meters from the Pacific Northwest states to California produced many interstate contacts, but it is unknown which were aurora and which were E-skip.

"Reports from stations in Maine said that the aurora activity was too far south for them for optimum participation. K0AWU (EN37) in Minnesota reported to me that he worked 5 stations on 222 MHz via the aurora at his northerly location. N0LL (EM09) in Kansas said he worked a 222 E skip contact in grid EM83 during the aurora, a rare event in itself!"

Ken Louks, WA8REI wrote about an aurora experience on HF from the week before. "I worked the CQ WW WPX CW contest last weekend from a QTH 720 feet above Lake Superior in Upper Michigan. The aurora both Friday night (May 23) and Saturday night (May 24) was awesome! Shades of green, blue, deep purple....some almost straight overhead, and some way down at the horizon (to the north) of Lake Superior, and even reflecting into the lake."

He continues, "I ran QRP (5 watts from a Yaesu FT-817), and even in the bad conditions worked Japan, New Zealand and the Canary Islands. The aurora seemed to reflect my signal south. I worked many South America stations, but although I had a clear shot to Europe, I heard virtually nothing from Europe until Sunday afternoon."

Note that Ken had propagation to the south, but not to the north toward Europe. On HF his signals couldn't make it through a near-polar path because of the stormy geomagnetic conditions, which worsen toward the poles. Many people have thought that during geomagnetic storms, north-south trans-equatorial propagation is enhanced,

but in reality, it only seems that way because this may be the only remaining path that still works.

Chip Margelli, K7JA wrote in a May 30 email, "2-meters opened up between southern California and Oregon/Washington/BC last night, which obviously is unusual this far from the auroral zone, and 6-meters was going to some degree all night. Now, if we can just get all this storminess to subside on the 27-day rotation, FD should be in good shape! That big spot group is facing more away now, so that should help."

The month of May is over, so let's look at the daily average solar flux and sunspot numbers to spot any trends. The monthly averages of daily solar flux numbers for January through May 2003 were 144, 124.5, 133.5, 126.8 and 116.6. Daily average sunspot numbers for the same five months were 150, 87.9, 119.7, 114.3 and 89.6. To me the trend appears downward.

What about conditions in the near future? It still looks stormy, so have fun on 6-meters. We should enter a new solar wind stream over this weekend, June 7 and 8. The predicted planetary A index for June 6-12 is 15, 20, 30, 30, 25, 20 and 15. Solar flux forecast for the same days is 115, 118, 120, 120, 122, and 124. The summer solstice is this month. As we move toward the longest day of the

year, expect daytime MUF to continue to decline. While 15-meters should decline during the daytime, 20-meters should be good from North America toward the Pacific late into the evening.

Sunspot numbers for May 29 through June 4 were 98, 62, 57, 66, 61, 54, and 74, with a mean of 67.4. 10.7 cm flux was 137.8, 117.2, 113.1, 112.3, 121.4, 114.5, and 105.6, with a mean of 117.4. Estimated planetary A indices were 89, 49, 17, 19, 39, 26, and 21, with a mean of 37.1.



### **Helpful Hints**

Drill a one-inch diameter hole in your refrigerator door. This will allow you to check that the light goes off when the door is closed.



### **Shallow Thoughts**

Why are there interstate highways in Hawaii?

### Carbon Amateur Radio Club – 2002-2003 Officers

President: Anthony “Goody” Good, K3NG, goody@fast.net  
Vice President: Rob Roomberg, KB3BYT, roomberg@ptd.net  
Secretary: Larry Lilly, N3CR, ka3afy@ptd.net  
Treasurer: John Schreibmaier, W3MF, w3mf@ptdprolog.net  
W3HA Callsign Trustee: Bill Dale, WY3K  
W3HA Repeater Trustee: John Bednar, K3CT  
Public Information Officer: Bill Kelley, KA3UKL

### Directors

Bob Schreibmaier, K3PH, John Bednar, K3CT, Bob Culp, KB3IDV

### ARES/RACES Committee

Bruce Fritz, KB3DZN (DC)  
Darryl Gibson, N2DIY  
Todd Deem, KB3IKX

### 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](http://www.qth.net) CarbonARC list for details

Emergency Power Equipment Trustees: Lisa and Bill Kelley, KA3UKL

### 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 Schreibmaier K3PH  
P. O. Box 166  
Kresgeville, PA 18333-0166