



The Illuminator



The monthly newsletter of the Carbon Amateur Radio Club

June 2005

June Meeting

The next regular meeting of the Carbon Amateur Radio Club will be on Thursday, June 16, at 7:30 p.m. at the Emergency Operations Center in Nesquehoning. Plans for Field Day (June 25-26) will be finalized, so be sure to get to the meeting and make your voice heard!

See you at the meeting!



Carbon Amateur Radio Club Regular Meeting Minutes May 19, 2005

Meeting was called to order at 19:40 hours local time.

Attendees included K3NG, KB3BYT, K3PH, N3AT, N3HYB, K3QG (ex-KB3IDV), WB3W, W3EFI, N3TVV, WA3IEM, KB3LFD, and N3OWC

The first thing that happened was the group saw a videotape of the Text Messaging vs. Morse Code segment that aired on the Tonight Show with Jay Leno of May 13.

The treasurer's report was read by K3PH in W3MF's absence.

Treasurer's Report

Previous Balance (4/21)	\$1,047.75
Receipts (dues)	\$35.00
Sub-total	\$1,082.75
Disbursements (newsletter)	-\$4.81
Final Total	\$1,077.94

KB3LFD moved that the treasurer's report be accepted as read. N3TVV seconded. The motion passed.

Old Business

WB3W reported that he has been programming the repeater to link to the weather net, but he doesn't have this feature working yet. He will continue to work on that.

WB3W and K3NG discussed battery backup for the repeater and how we could change the transmitter to a lower power when it is operating from the battery backup. K3NG discussed his plans for battery backup using about six lead acid batteries and employing a PIC with a circuit that detects low voltage. When the voltage drops below the programmed level, the transmit power would be turned down. He noted that, at full power, the repeater draws about 25 amperes. At low power, we would expect it to draw only about 1-2 amperes. This would allow the repeater to operate at the reduced transmit power for several days, perhaps even a week.

New Business

Field Day

WB3W said we need to get commitment from people to schedule operating and that we need to discuss what rigs would be provided, antennas, food, how many stations we would use, etc.

There followed discussion of the Get On The Air (GOTA) station. WB3W indicated that we should put a GOTA station outside under a canopy to attract people who might pass by on the street. He noted that we can get 10 points per young person we get to talk into the mike.

K3NG suggested getting a group to scope out the Bott Building some weeknight for antennas. This will occur on Wednesday, May 25, at 6 p.m.

WB3W generated a list from those in attendance of who will be operating. WA3IEM suggested we poll the membership via e-mail for who can operate, as well as who can bring food.

Equipment: WA3IEM indicated that he could bring a 6-meter rig. N3TVV will bring a Yaesu FT-990, KB3BYT will bring his Icom IC-706 with power supply and antenna tuner, and K3QG will bring his Icom IC-707 and MFJ switching power supply. WB3W will bring his SGC automatic antenna tuner. K3PH will bring the 130-foot ladder line fed dipole that we used last year. He has the club's A3S tribander; K3NG volunteered to pick up the antenna and transport it to the Field Day site.

N3TVV will supply tables, but we still need chairs, power strips, etc.

K3NG suggested we talk about food at the June meeting, where all the plans will be finalized.

WB3W volunteered to bring a canopy for an outside GOTA station. KB3BYT indicated that we have a club sign that could be hung near the GOTA station to attract attention.

Other New Business

N3AT mentioned that N3SQD, who previously delivered a presentation on the care and feeding of batteries, has a new talk on how to make your own wall wart. He asked if we would want him to come up and deliver this new presentation. K3NG indicated that we should schedule this talk for the July meeting.

The meeting adjourned at 20:48 local time, and was followed by a presentation by K3NG on the Zen of Contesting and a presentation by K3PH on the CQ Worldwide DX Contest and the ARRL International DX Contest.

Minutes recorded by Bob, K3PH; formatted and respectfully submitted by Brian, KB3KLJ on behalf of K3PH.



Dayton Hamvention and ARRL 2005 National Convention a Winning Combo (From the ARRL Letter)

By all accounts, Dayton Hamvention and the ARRL National Convention/ARRL EXPO 2005

represented the best of times for all involved — perhaps especially for the Amateur Radio community. The League's 2005 convention was like no other that came before. For the first time, the ARRL virtually took Headquarters on the road, making available in the ARRL EXPO 2005 area all of the League's core activities, plus live demonstrations and mini-forums on a variety of topics. To those who've never made the trek to Newington, ARRL EXPO 2005 was a chance to see the League in action firsthand, showcasing public service, advocacy, education and membership. Perhaps ARRL Vice President Kay Craigie, N3KN, said it best when she called it "an unconventional convention."

"This was the most exciting ARRL National Convention I've attended in my 22 years as a League member," said Craigie, adding that ARRL EXPO showed members what the League has to offer in a fresh, dramatic, participatory way. Craigie was not alone in her hope that the 2005 ARRL National Convention represented the beginning of a trend.

ARRL CEO David Sumner, K1ZZ, put it another way in his "It Seems to Us . . ." editorial set to appear in the July 2005 QST: "A common comment was along the lines of, 'Now I understand the scope of what the ARRL is doing for me and other amateurs,'" he wrote.

All in one place — in the ARRL EXPO 2005 area in Hara Arena's Ballarena — visitors could come face-to-face with HQ staffers and volunteers representing the ARRL Education and Technology Program, youth activities, clubs and mentoring, DXCC, development, spectrum defense, the ARRL Technology Task Force, the ARRL VEC and much more. And they did! Of course, they also could sign up to become League members, renew or extend current memberships and — as a few did — become ARRL life members. This year, more than 900 visitors — a record number — joined ARRL during Dayton Hamvention.

The League's "retail center" — a large, square counter space that greeted visitors as they entered ARRL EXPO 2005 — remained busy throughout the weekend. ARRL Customer Service/Circulation Manager Kathy Capodicasa, N1GZO, said it was fortunate she and her staff thought to pack additional inventory for the convention.

3 *The Illuminator*

"That area was busier than I ever remember over my last 17 Hamventions!" she said. "The crowds on Friday and parts of Saturday were perhaps the largest I have ever seen." The retail center itself was double the size of what the League typically sets up at Dayton Hamvention. "We pulled into the sales booth every available ARRL official, staffer and volunteer for staffing assistance," Capodicasa noted. At its usual concession area in North Hall, the League maintained a sales counter and "Relaxation Station," where Hamventioners could socialize or just sit down and take a break.

The mini-forums on the ARRL Stage at ARRL EXPO 2005 proved popular. Running about 20 minutes each, the illustrated talks covered virtually every interest area within the broad spectrum of Amateur Radio.

One big hit — and something entirely new and different for ARRL — was being able to get your picture on the cover of QST for a modest fee. ARRL staffer Dan Wolfgang and Lieska Motschenbacher — wife of Dennis, K7BV — paired up, shooting upward of 200 faces to place on one of several QST front-cover formats — from vintage to modern.

"Everybody told us what a wonderful idea this QST cover photo booth was, that they hoped we would do it again, and how nice the result was," Wolfgang recounted afterward. "It was definitely a big hit."

The weather cooperated by and large. Fog and drizzle early on opening day gave way to merely overcast skies with occasional sunshine throughout the remainder of the weekend. Moderate temperatures made things comfortable and congenial outside and inside Hara Arena.

Every year, Dayton Hamvention visitors speculate on the size of the crowd, typically in the vicinity of 25,000. Hamvention General Chair Gary Des Combes, N8EMO, says attendance was up.

"We have done a second rough count on the tickets sold alone, and we definitely were up from last year," Des Combes told ARRL this week. "Virtually everywhere I turned people were happy."

Manufacturers typically take advantage of Dayton Hamvention to debut their new gear. Some highlights:

- Yaesu (Vertex-Standard) had the three versions of its FTdx-9000 series of high-end transceivers on display.
- Icom featured its new IC-7000, which resembles the extremely popular — and still available — IC-706, although it's a bit shorter and features IF DSP filtering and a multicolor TFT display.
- SGC showed off its "Mini-Lini," a 500 W class-E amplifier that fits in your hand and weighs approximately four pounds with the ac supply! It uses plug in band modules and comes with one for 20 meters.
- Brian Wood, W0DZ, who made the real cover of QST in January 2004 with his DX-100, has formed a new company selling Heathkit-style kits that flatter the originals right down to the yellow-covered manuals. His first major offering is the Sienna high-end HF transceiver.

Sumner expressed the League's gratitude to the Dayton Amateur Radio Association and Hamvention® Committee for hosting the 2005 ARRL National Convention. "This event has exceeded our expectations in so many ways, due in large part to the volunteers that make Hamvention the 'Greatest Amateur Radio Show on Earth,'" he said. "We thank each and every one of you."



Amateur Radio Emergency Communications Course Registration (From the ARRL Letter)

Registration for the ARRL Amateur Radio Emergency Communications Level I on-line course (EC-001) opens Monday, June 6, 2005, at 1201 AM EDT and will remain open until all available seats have been filled or through the June 11-12 weekend — whichever comes first. Class begins Friday, June 24. ***ACT NOW! THIS IS THE FINAL MONTH TO OBTAIN FEDERAL GRANT REIMBURSEMENT!*** Radio amateurs 55 and older are strongly encouraged to participate. Thanks to the Corporation for National and Community Service, the \$45 registration fee paid

upon enrollment will be reimbursed to students who complete the course requirements and are granted "Passed" status by their mentors on or before August 31. During this registration period, seats are being offered to ARRL members on a first-come, first-served basis. To learn more, visit the ARRL Certification and Continuing Education Web page. For more information, contact Emergency Communications Course Manager Dan Miller, K3UFG, cce@arrl.org; 860-594-0340.



ARRL Propagation Forecast Bulletin

Propagation Forecast Bulletin 23 ARLP023
From Tad Cook, K7RA
Seattle, WA June 3, 2005
To all radio amateurs

Both sunspot numbers and solar flux were higher this week, with the average daily sunspot number nearly doubling to 71.3 and average solar flux up over 10 points to 93.8. These numbers are compared to the average for the previous reporting week, which was May 19-25. This week's numbers are in the last paragraph of this bulletin.

Conditions were good for last weekend's CQ World-Wide WPX CW Contest, at least for most of the first day. But earth passed through a solar wind stream, sparking auroras, and by Monday the planetary A index was 67, indicating a strong geomagnetic storm. But the effect was not as large as the storm during mid-May.

For this weekend, the predicted planetary A index for June 3-6 is 15, followed by 10 for Saturday through Monday. After June 3 predicted solar flux should drop below 95 and possibly stay there until around the end of the month. The Prague Geophysical Institute sent a forecast showing active conditions on June 5-6, unsettled on June 3, 4 and 7, quiet to unsettled on June 8, and quiet conditions on June 9.

Roy Erismann, HB9BJJ sent news of a new book on propagation. It is titled "Space Weather and Telecommunications," by John M. Goodman. The book is very expensive, so I am trying to get it locally via interlibrary loan. If anyone has read it

and would like to comment, I'd like to hear any reviews.

Larry Lilly, N3CR of Jim Thorpe, Pennsylvania (grid FN20) wrote in with 6-meter news. Thursday, May 26 there was a big opening on 6-meters, and Larry found openings in both the morning and the evening, with stronger signals in the later period. He worked stations in Michigan and Wisconsin, and the band stayed open until 10:30 PM EDT (0230z). Larry runs low power, and with 10 watts on May 30 he aimed his 2 element quad to southeast and worked VP9/N0JK in Bermuda on the first call. Larry's antenna is mounted 20 feet high. Larry is enjoying 6-meters, getting on "after a 10-year absence battling 49 MHz baby monitors."

Dave Greer, N4KZ of Frankfort, Kentucky was hearing 6-meter beacons last Saturday (May 28) "from all over North America, but very few live stations." Within a few minutes of each other Dave copied beacons or live stations from W1, C6, Arizona, North Dakota, Florida and Wisconsin. He worked stations on 6-meters in New Mexico, Wyoming and North Dakota.

Eric Christensen, KF4OTN in Greenville, North Carolina (FM15) worked VA2LGQ (FN15) in Ottawa, Ontario on 6-meters on May 26. Eric was mobile using 100 watts on 50.125 MHz USB.

Al Olcott, K7ICW in Las Vegas on May 27 worked several Salt Lake City area stations on 6-meters, with Utah stations running 10-20 watts into vertical whip antennas and coming in very strong. He wrote, "This is not too unusual where there are dense E clouds. We were also simultaneously hearing New Mexico stations at 500 miles."

Al also says that several Salt Lake stations (410-450 miles from him) attempted 2-meter contacts, "but all that was recognized was very weak tropospheric mode." He also wrote, "It is typical that 350-450 mile 6M paths are accompanied by 2M Es openings, but at a distance beyond what is heard on 6M, and the same general direction."

Woody Ebersold, KC0THS of Joplin, Missouri heard plenty of 6-meter activity on May 29 and said WJ0F in Arizona was so strong, "he dominated 50.135 MHz for over a half hour." The day before, May 28, Woody was on 2-meter FM and using a

5 *The Illuminator*

vertical he worked several stations on simplex as far away as Flagstaff, Arizona.

Now that May has turned to June, we can look at some monthly averages in an attempt to discern a trend. The trend overall of course is down, but May was actually pretty good with higher sunspot numbers and solar flux compared to recent months. The average daily sunspot numbers for the months September 2004 through May 2005 were 50, 77.9, 70.5, 34.7, 52, 45.4, 41, 41.5 and 65.4. So May 2005 had higher average daily sunspot numbers than any month since November. Average daily solar flux for the same months was 103, 106, 113.7, 95, 102.3, 97.2, 89.9, 85.9 and 99.5. May's average daily solar flux values were higher than any month since January. But this is just one of those bumps on the long slide down cycle 23, and we are probably still on track to see a sunspot minimum around the end of next year.

The report in last week's bulletin about Larry Bishop, KB9WLM on 6-meters should have read, "he worked Columbian station HK3JRL at 2320z on 50.135 MHz." This generated a ton of mail, because as everyone pointed out, HK is for Columbia, not South Korea (HL), and it was HK3JRL, not an HK2 call.

If you would like to comment or have a tip, email the author at, k7ra@arrl.net.

For more information concerning radio propagation and an explanation of the numbers used in this bulletin see the ARRL Technical Information Service propagation page at, <http://www.arrl.org/tis/info/propagation.html>. An archive of past bulletins is found at, <http://www.arrl.org/w1aw/prop/>.

Sunspot numbers for May 26 through June 1 were 72, 51, 71, 55, 76, 79 and 95 with a mean of 71.3. 10.7 cm flux was 90.4, 95.5, 92.5, 92.7, 94.9, 96.3 and 94.3, with a mean of 93.8. Estimated planetary A indices were 4, 4, 13, 22, 67, 17 and 8 with a mean of 19.3. Estimated mid-latitude A indices were 1, 1, 9, 16, 32, 10 and 5, with a mean of 10.6.



DX Bulletin 22 ARLD022
From ARRL Headquarters
Newington CT June 2, 2005
To all radio amateurs

This week's bulletin was made possible with information provided by MM0BQI, QRZ DX, the OPDX Bulletin, The Daily DX, 425DXnews, DXNL, WA7BNM and Contest Corral from QST. Thanks to all.

UNITED NATIONS HQ, 4U_UN. Subject to the availability of the station, look for W1CX and KT1J to be QRV from 4U1UN on June 5. Activity will be on the HF bands using RTTY and PSK, and possibly on 60 meters. QSL this operation via HB9BOU.

DEMOCRATIC REPUBLIC OF CONGO, 9Q. 9Q0AR has been QRV on 20 meters around 1900z and 6 meters from around 1900 to 2100z. QSL via SM5BFJ.

TONGA, A3. Elizabeth, VE7YL and Gwen, VK3DYL are QRV as A35YL from Nuku'alofa, IOTA OC-049, until June 8. Activity is on 40 to 10 meters using CW and SSB. QSL via VK3DYL.

TAJIKISTAN, EY. Nodir, EY8MM is usually QRV on 20 meters from about 0130 to 0230z. QSL via K1BV.

SCOTLAND, GM. Jim, MM0BQI is QRV as MM0BQI/p from Lunga Island, Treshnish Isles, IOTA EU-108, until June 5. Activity is on 80 to 10 meters, including the newer bands, using CW, SSB and RTTY. QSL to home call.

SOUTH KOREA, HL. Stations HL2EJT, HL1OJQ, HL1OYF, HL1SRJ, HL1VAU, DS1KOQ, DS1NMA, DS3MLG, DS4NMJ, DS4NYE and HL2AGG are QRV as homecalls/4 from Chu'ja Island, IOTA AS-084, until June 5. QSL via operators' instructions.

ITALY, I. Special event station I11TPG is QRV until June 5 during the IX Paralympic Winter Games. QSL via IZ1CCE.

SARDINIA, IS0. Vittorio, IK4CIE, Lorenzo, IK4XQM and Mirco, IZ4GJJ are QRV as homecalls/IS0 until June 7. Weather conditions permitting, they may also be QRV as

homecalls/IM0 from Tavolara Island, IOTA EU-165. QSL via operators' instructions.

NORWAY, LA. Ric, DL2VFR will be QRV as LA/homecall from Otroy Island, IOTA EU-056, from June 4 to 11. Activity will be mainly CW. QSL to home call.

LUXEMBOURG, LX. Operators from the Scouting Radio Spijkenisse will be QRV as LX/PI9SRS from Wiltz on June 4 and 5. Activity will be on 80 to 10 meters, including 17, 12 and 2 meters, using CW and SSB. They will also have an APRS beacon. QSL via operators' instructions.

FINLAND, OH. Members of the Oulu University Radio Club will be active as OH8T/p from Hailuoto Island, IOTA EU-184, during the IARU Region 1 CW Field Day. QSL via the bureau.

POLAND, SP. Special event station SNOLED is active until June 5 for the IX Youth Meeting at Lednica. Activity is on all bands using CW, SSB and FM. QSL via SP3POH.

GREECE, SV. Mike, SV1RK, Stavros, SV3CUJ and Kostas, SV1AER are QRV as J48SI from the Sapientza Lighthouse on Sapientza Island, IOTA EU-158, until June 5. Activity is on 40, 20, 17 and 15 meters. This is the first time amateur radio is active from this island. QSL via operators' instructions.

PALAU, T8. Yasu, JA6BJV and Toshio, JA3IFT are QRV as T88AG and T88AH, respectively, until June 6. Activity is on all bands, but mainly on 40 meters and higher, with Yasu using CW and Toshio using SSB. QSL to home calls.

ASIATIC RUSSIA, UA0. Operators UA0BA, RU0BB, UA0BFN, UA0BIV, UA0BJB, RW0BG and UA0BHC will be QRV as homecalls/p from Mount Medvezh'ya until June 5. Activity is on 40 to 10 meters. QSL to home calls. They will also participate in the IARU Region 1 CW Field Day as RK0BWW/p. QSL contest call via RW0BG.

GIBRALTAR, ZB. Adrian, G0KOM is QRV as ZB2/G0KOM for the UKSMG 6-Meter Contest and is here until June 6. He is active primarily on 6 meters, but will also be active on all HF bands, except for 160 meters. QSL to home call.



Busted Calls

By Paul Dunphy, VE1DX

One of the Local QRPers came by the other day and made his way up the hill. He strolled over to the tower and stood there with his hands in his pockets and a pensive look on his face. We had just finished checking the guy wires on the tower. There were reports the El Niño was stirring things up a bit and we remembered what Lord Baden Powell had so often said, "Be prepared!" And we were. Always.

After a few minutes the QRPer began, "This past week or so there has been a discussion going on as to whether or not electronic logs on the Internet should have the time and date." He paused, took his hands out of his pocket and wiped a bead or two of sweat off his upper lip. "This seems like a serious situation," he continued, "and I don't think the DXCC desk has made public its position on the matter, either. What do you think?" Son of a Gun! If the QRPer thought we were going to dive into this one, he was mistaken . . . so we went for the usual out. We hauled him up the hill to see the Old Timer.

When we got there, the Old Timer was up on the roof of the house, securing another guy rope from the tripod to the ridge board. These were trying times for DXers, with dire forecasts of heavy rain and wind in the southeastern and southwestern reaches and just about everywhere else too. We began to think this might not have been the time to bother the Old Timer with questions about the Internet. He made his way down the ladder and as soon as he cleared the bottom rung, the QRPer started. "Some of the locals are saying that making public the times and dates of the QSOs in electronic logs will encourage cheaters!" he said, staring the Old Timer straight in the eye. The Old Timer was wiping his hands off with a rag and just nodded.

The QRPer, building up a head of steam, continued on, "You see, there are always busted calls in a pileup. And more so in a big pileup, like those generated by major DXpeditions. The same ones that might put logs on the Internet. The Big Guns that have been around the track a bit figure that

someone's call might get in the log accidentally, and if so, that person could search the log and find their call, complete with the time and date it was logged. And that's the problem!"

The Old Timer looked at the QRPer for a moment, then asked, "So, the worry is that this person could send for a QSL for a QSO he didn't make?" The QRPer nodded enthusiastically, "Yes! Of course he could. And that would be cheating. And it would take away from the rest of us. Our DXCC achievements would be lessened . . . they would be diluted by the acts of these dishonest DXers whose totals would be inflated with QSOs they never made." The QRPer was sweating profusely now, and he was glaring at the Old Timer and us with those beady little eyes. "What are we going to do about it?"

The Old Timer took a deep breath and asked, "How many hams are DXers? And how many of these DXers use the Internet? And supposing a DXer did, what are the odds of his call getting busted and into the DXpedition's log? And if it did, what are the chances of him finding it and sending for the card? Wouldn't you say the odds of all these things happening in that manner to be pretty remote?" The QRPer looked at the Old Timer, then down at the ground, then back up and said with a little less conviction, "Well, for all those events to happen, I guess the odds would be fairly unlikely, like maybe one in a few thousand. Maybe a bit more or less. I'm not a mathematician." He still wasn't satisfied: "But you have to agree, it could happen, right?"

"Yes," the Old Timer replied, "it could. Let's take your estimate of one in several thousand, say one in four thousand, OK?" The QRPer nodded in agreement. "Now, the most successful DXpedition on record was the recent one to Heard Island. They made somewhere around 80,000 QSOs . . . a record for any DXpedition. And they posted their logs on the Internet, although without the date and time. Let's assume they had included this extra information. Factoring in all the numbers, that's 20 potential cheaters out of 80,000 QSOs. Or, looking at it another way, the percentage of good, honest QSOs is 99.98%, right?"

The QRPer was pacing in a circle and looking at the ground again. He stopped, looked at us, then the Old Timer and finally said, "Well maybe a 99.98% success rate is good, but it still isn't 100%!

And if all DXers were true blue, we'd have 100%. But since they aren't, we can't post the times and dates . . . this is still serious stuff." He looked the Old Timer in the eye with a triumphant stare. "Most aspects of DXing are serious," the Old Timer agreed, "and one thing that's 100% sure and 100% serious is that if Bouvet comes on and you don't have an antenna, you won't work them." The QRPer followed the Old Timers glance up at the extra guy rope on the tripod. "Ever hear of El Niño?" he asked.

The QRPer never answered. He was off down the hill, arms waving and making his way home to secure down his tower. We looked over at the Old Timer, "Is Bouvet really coming on?" we asked. He shook his head slowly, "Who knows? But if they do, I'd say that fellow has a lot better chance of getting a QSL if he keeps his antenna in top shape than if he spend his time worrying about the 0.02% busted calls in electronic logs." And with that, he turned and made his way into the shack to tune 15 meters for the afternoon opening to the southeast.

What could we say? Only that the Deserving will work the DX. And they will work the DX that is on the air, not the DX that is on the Internet. DX IS!



Helpful Hints

There are two rules for success: (1) don't tell everything you know.



Shallow Thoughts

Where do forest rangers go to "get away from it all?"

Carbon Amateur Radio Club – 2004-2005 Officers

President: Anthony "Goody" Good, K3NG, goody@fast.net
Vice President: Rob Roomberg, KB3BYT, roomberg@ptd.net
Secretary: Brian Eckert, KB3KLJ, eckertb@ptd.net
Treasurer: John Schreibmaier, W3MF, w3mf@ptd.net
W3HA Callsign Trustee: John Bednar, K3CT, k3ct@verizon.net
W3HA Repeater Trustee: Bob Wiseman, WB3W, rwiseman@ptd.net
Associate Repeater Trustee: Anthony "Goody" Good, K3NG, goody@fast.net
Public Information Officer: Lisa Kelley, ldkelley@voicenet.com
Emcomm Coordinator: Bruce Fritz, KB3DZN, bruce56@ptd.net

Directors

Bob Culp, KB3IDV, Bill Kelley, KA3UKL, ldkelley@voicenet.com, Bob Wiseman, WB3W, rwiseman@ptd.net

ARES/RACES Committee

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

Services

W3HA Repeater: 147.255 MHz + PL 131.8

CARC Website: <http://carc.wb3w.net>, Webmaster: Bob Wiseman, WB3W, rwiseman@ptd.net

CARC Email Reflector: <http://mailman.qth.net/mailman/listinfo/carbonarc>

Education Services: <http://www.learnmorsecode.com/cgi-bin/carcnitesurvey.pl>
Contact: Rob Roomberg, KB3BYT, roomberg@ptd.net

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