



The Illuminator



The monthly newsletter of the Carbon Amateur Radio Club

September 2005

September Meeting

The next regular meeting of the Carbon Amateur Radio Club will be on Thursday, September 15, at 7:30 p.m. at the Emergency Operations Center in Nesquehoning. The September meeting will feature a construction program for a 40-meter receiver by Rob, KB3BYT. See you at the meeting!



Carbon Amateur Radio Club Elects Officers

At the August meeting, the Carbon Amateur Radio Club elected officers for the next year. Last year's officers were re-elected, with the exception that Eric Bott, N3TVV, was elected as an at-large member of the Board of Directors, replacing Bob Culp, KB3IDV.

The complete list of officers is shown on the last page of this newsletter.



Amateur Radio Newsline

Just a reminder that Bob, WB3W, transmits the latest Amateur Radio Newsline on Monday nights at 8 p.m. local time on the CARC repeater. Check out this excellent service that Bob provides and hear the latest amateur radio news!



Treasurer's Report

By John, W3MF

As of the August Meeting:

Previous Balance (From July Meeting)	948.32
Receipts (dues)	15.00
Subtotal	963.32
Disbursements	96.19
Final Total	867.13

Disbursements included \$57.35 reimbursement of Kent Shipley for Field Day expenses, \$33.66 reimbursement of Rob Roomberg for Field Day expenses, and \$5.18 to Bob Schreibermaier for postage for the monthly newsletter.



Community Emergency Response Teams (CERT)

(Thanks to Goody, K3NG)

The Carbon County Emergency Management Agency and the Carbon County Citizens Corps Council will be hosting and conducting a day-long CERT RODEO on September 17th at the Carbon County Fire Training Center in the Borough of Leighton. This event will begin at 9:00 am and conclude at 3:00 pm. The CERT Rodeo will be for ALL who have gone through the CERT Program. The day will be filled with practical hands-on training and exercises designed to allow the CERT members an opportunity to refresh their training and to put their skills into practical use.

The CERT Rodeo will also allow for the CERT Members of Carbon County to work and train together, share ideas, and develop relationships with CERT Teams from other communities, which will result in a much stronger and more effective county-wide CERT Program.

The Carbon County Fire Training Grounds are located on Bridge Street in the Borough of Leighton along the Mahoning Creek across from

the Penn DOT building and next to Blue Ridge Pressure Casting. The event will be RAIN-OR-SHINE and lunch will be provided. All participants are urged to bring their issued CERT equipment, a lawn chair, and Rain Gear. Deadline for registration is September 2nd.

To register call: Carbon County EMA at (570) 325-3097.



Pocono Area Hamfest

The Eastern Pennsylvania Amateur Radio Association and the Pocono Amateur Radio Klub are sponsoring their annual hamfest on Saturday, September 10, 2005 at the Stroudsburg Junior High School on Chipperfield Drive in Stroudsburg. Note that this is a new location this year.

The grand prize is two tickets to Orlando, courtesy of TransMeridian Airlines.

Admission is \$5, including a grand prize ticket (spouse and kids free). Talk-in is on the 147.045 repeater (PL 131.8). Vendor spaces are \$10 for an indoor table and \$6.00 for an outdoor table.

For additional information, contact Bill Connelly, W3MJ, at 570-424-0845 or via e-mail at w3mj@ptd.net. For complete directions and a map, check out the web page at <http://home.ptd.net/~w3mj>.



A Message from ARRL President Jim Haynie, W5JBP September 1, 2005

My fellow Amateur Radio Operators,

There is no doubt that the recovery efforts following Hurricane Katrina will be the largest and longest emergency actions that hams have ever undertaken. It will also be one of the hardest, not simply due to the large areas involved, but also because many of us have friends and relatives directly impacted by this catastrophe. For them,

and all the people of the Gulf region, we ask divine aid and comfort in this time of sorrows.

But we are also hardened and resolved to turn this event into one of the most glorious opportunities to show the unique attributes of ham radio - it works! You know that. We can again show the world that we have the best trained, most ingenious and dedicated ARES and RACES operators ever in history. We have the attention of the world press, and we will show what ham radio can do.

This will not happen in a week, not even in a month. The recovery efforts will be drawn out over numerous states and are expected to go well into the winter. Hams will grow weary and need relief and replacement from all across America. The ARRL, the national association for Amateur Radio, is already working on strategic plans to make it possible for these volunteers to come. Our goal is to provide the SECs with all the support we can muster and allow them to do their jobs.

There is a curious coincidence in the fact that the United Technologies grant, which allowed the ARRL to train so many thousands of hams in emergency communications, ends this week. Now we are seeing the results of that effort. Disciplined hams, using correct procedures have already saved many lives, and will save hundreds more by providing timely, accurate and critical communications to our served agencies. To the students, mentors, organizers, funders and teachers of those courses we can only say, "Well done!"

I know many people would like to move NOW - please don't. I know many of you want to enter the fray, come to the coast and get involved. Please, not yet. Instead, get yourself ready. Refresh your skills and knowledge of protocols and procedures. Once the agencies are able to complete a preliminary needs assessment, we will know who is needed and where. For now, the area is simply too dangerous and no one is being allowed in. Transportation and logistics, including volunteer groups coming in, must be done in an orderly manner or we may only add to the chaos and confusion. Information and coordination for such a historically large response is being developed and will be made available soon. But for now, work through your SECs and follow their lead. I would also ask that you be professional and disciplined whenever checking into an HF net. Net control is a

difficult job at best, so be respectful. If you have traffic fine, but if not, please stand by.

There is already no doubt that when the history of this event is written, the role of Amateur Radio will be one of honor. Unpaid volunteers who came through for their country and communities when all other systems failed or were overwhelmed. By working together and mutually supporting each other, we can perhaps give these very dark days a small glint of glory. Let these be the days that hams, decades from now, remember with pride. Together we can - and will - make it happen because, after all, we are HAMS.



Amateur Radio Awareness Day to Feature Emergency Power Operating Event

(From the ARRL Letter)

What makes Amateur Radio unique is its ability to communicate with one another anywhere in the world — and even in orbit — without having to rely on any outside infrastructure whatsoever. Hams can even do this without being plugged into the wall socket. Experienced radio amateurs take this capability for granted, but the general public is far less aware of it. So, an Emergency Power Operating Event (EPOE) on Amateur Radio Awareness Day, Saturday, September 17, will highlight Amateur Radio's ability to communicate worldwide without commercial mains, the Internet or a cellular telephone system.

"What better way to mark Amateur Radio Awareness Day than by calling attention to this unique capability?" says ARRL CEO David Sumner, K1ZZ. "It is particularly appropriate since September is the Department of Homeland Security's National Preparedness Month."

Amateur Radio Awareness Day activities typically focus on increasing public awareness. Past events have included public demonstrations, talks to community groups and getting local media coverage. According to DHS, National Preparedness Month is aimed at encouraging Americans to prepare for emergencies and to raise public awareness about the importance of being prepared.

This Amateur Radio Awareness Day, September 17, the ARRL will sponsor a 15-hour Emergency Power Operating Event for stations operating off the grid. "It is not a contest," Sumner stresses. "It is simply a demonstration of what we amateurs can do without having to rely on the commercial mains, and what we will do whenever the need arises."

An announcement in September QST (page 49) spells out the details. The event kicks off at 1300 UTC on Saturday, September 17, and wraps up at 0400 UTC on September 18. The ARRL is inviting home stations to operate from generator or battery power. Mobiles and portable stations also are welcome to participate, although unlike Field Day, the emphasis is not on setting up a temporary station, but rather on operating your regular station on emergency power.

There is no set exchange; contacts may be casual, but operators are encouraged to share information on their emergency power sources in addition to the traditional signal report, name and location.

ARRL Maxim Memorial Station W1AW will be on the air for the event, running on emergency power from its 60-kW emergency backup diesel generator. W1AW Station Manager Joe Carcia, NJ1Q, says the whole point is to showcase that Amateur Radio is prepared during National Preparedness Month — "and any time, for that matter," he adds. A special QSL will be available to stations contacting W1AW while running from an emergency power source. Include a self-addressed, stamped envelope with all QSL card requests, and indicate on your card the emergency power source used. (Address cards to W1AW, 225 Main St, Newington, CT 06111.)

"I hope we can work stations operating on emergency power in all 50 states," says Sumner. "It should be a lot of fun, and we may even learn something!"

The League is encouraging participating radio amateurs or groups to invite local Citizen Corps leaders to see Amateur Radio installations in emergency power mode.

"The two events offer great opportunities for Amateur Radio to showcase its valued service to the nation," said outgoing ARRL Field and Educational Services Manager Rosalie White, K1STO. She urged ARRL-affiliated clubs and Field

Organization volunteers to take advantage of the occasion to set up public demonstrations of Amateur Radio and to present or even demonstrate — under the banner of National Preparedness Month — the free services Amateur Radio provides to the community.

ARRL Club/Mentoring Program Manager Norm Fusaro, W3IZ, believes a public Emergency Power Operating Event offers a great opportunity to recruit prospective hams for licensing classes clubs that may be forming this fall.



ARRL Propagation Forecast Bulletin

Propagation Forecast Bulletin 37 ARLP037
From Tad Cook, K7RA
Seattle, WA September 2, 2005
To all radio amateurs

Geomagnetic activity was down quite a bit from last week, but solar wind and a south-pointing Interplanetary Magnetic Field late Wednesday left Earth vulnerable. The mid-latitude K-index reached 4, and the planetary K index rose to 6. The IMF is from our Sun, and the point where it contacts earth magnetic field is called the magnetopause. Earth's magnetic field protects us from solar wind, and the Earth's magnetic field at the magnetosphere usually points north.

But when the IMF points south, it is opposite Earth's magnetic field, and the two link up. This carries energy from the Sun directly into the Earth, and this can cause aurora and geomagnetic instability. This is generally bad for HF radio propagation.

The IMF continues to point south on Thursday evening, and this could leave Earth vulnerable to a coronal mass ejection erupting on the Sun on Wednesday, August 31 at 2230z. The wind from this event is traveling at about 3.36 million miles per hour, or 1500 km per second.

The predicted planetary A index for Friday through Monday, September 2-5 is 30, 25, 10 and 10. Sunspot numbers and solar flux should rise slowly over the next week.

As September begins, we look forward to the Autumn equinox in the Northern Hemisphere, always a better time for HF propagation. It is also time to look at the average solar flux and sunspot numbers from August, comparing them to previous months.

Average daily sunspot number in August was 65.6, down slightly from 68.7 in July. July average daily solar flux was 96.5, declining to 92.4 in August.

The average daily sunspot numbers for the months October 2004 through August 2005 were 77.9, 70.5, 34.7, 52, 45.4, 41, 41.5, 65.4, 59.8, 68.7 and 65.6. Average daily solar flux for the same months was 106, 113.7, 95, 102.3, 97.2, 89.9, 85.9, 99.5, 93.7, 96.5 and 92.4.

Peter Baskind, N4LI of Germantown, Tennessee (grid square EM55) reported that on August 27 there was a great 6-meter opening in which he worked stations around the eastern U.S. and Caribbean. Most surprising was a 30 minute opening to Argentina with LU6DRV (grid square GF05) peaking sometimes over S9, uncommon he says for that far north.

I remembered this week that a ham I used to chat with on AMTOR in the 1980s, W5KSI, Angelo Glorioso Jr., lived in New Orleans. I emailed him and his son to inquire about their welfare, hoping they evacuated early from the city before the storm. His son (Angelo III, N5UXT) answered right back, said he was in Baton Rouge and his dad was in Texas. He asked me to call his dad, who evacuated to Houston on Sunday morning. I rang up Angelo, asked how he was doing, and he said, "Everything is gone," including the house he's lived in for 50 years and his mother's home. Angelo lived about 500 feet east of Bayou Saint John, on Filmore Avenue, a mile south of Lake Pontchartrain.

The last they saw their home was around 10:00 AM Sunday morning when Angelo and his wife began the 360 mile drive to the Bunker Hill Village area of Houston via Interstate 10. Even though all of I-10 was switched for the evacuation to westbound traffic only, the traffic crawled the whole way. Angelo and his wife drove nearly non-stop until 4:30 PM Monday, an average speed of less than 12 miles per hour. Angelo told me he wakes up in the morning expecting the nightmare to be over, and then it sinks in, that it really did happen. But he

5 *The Illuminator*

is grateful he made it out of New Orleans safely with his family.

Ed Bruette, N7NVP, the SM for Western Washington sent along some non-ham frequencies to monitor for possible hurricane traffic. Of course, these are outside the ham bands, and all we should do is listen. All are in Upper Sideband. USN/USCG hurricane nets are on 7507 and 9380 KHz. American Red Cross also uses Upper Sideband for disaster communications on 2802.4, 3171.4, 5136.4, 5141.4, 6859.5, 7550.5 and 7698.5 KHz. 7550.5 is the primary frequency. Hugh Stegman, NV6H has put together a list of hurricane recovery frequencies at, <http://www.ominous-valve.com/hurricane.txt>.

I've been asked recently about any new sunspots from the next solar cycle. The conventional wisdom is that sunspots with a new magnetic polarity are actually from the next solar cycle. I talked to Bill Murtagh of the NOAA Space Environment Center, and he said a recent one was what he called a rogue sunspot group, or a "gnarly group." In fact, spots with a magnetic polarity opposite to the prevalent one appear from time to time throughout the solar cycle, and are a good indicator for enhanced geomagnetic activity to come.

I called Bill to ask him about the sunspot cycle prediction tables in the back of the Preliminary Report and Forecast, mentioned in Propagation Bulletin ARLP033, from August 5. I was curious how these are updated and when, and also noted that the prediction for solar cycle minimum around the end of 2006 has not changed in several years. Bill said this estimate is still valid, but they should have an update in April 2006 to be announced during Space Weather Week. A panel of experts will meet to come up with an updated model for the end of the current cycle.

Bill said that so far the prediction for the smoothed sunspot number for the peak of the next cycle ranges from a pessimistic 50 maximum to 150 maximum. By contrast, the famous cycle 19 from the late 1950s had a smoothed peak of 201.3, and cycles 21 and 22 (the last two) peaked at 164 and 158. The current cycle, 23, peaked at 120.8.

The tables I called Bill about can be seen in the back of a recent issue of Preliminary Report and Forecast at, <http://www.sec.noaa.gov/weekly/pdf/prf1561.pdf>.

He said the smoothed solar flux and sunspot numbers are averaged over a 13 month period, so the most recent number that is not a prediction would be six months ago.

The number shown for the current month would be the six predicted months in the future combined with the previous six observed months.

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 August 25 through 31 were 76, 57, 91, 99, 88, 68 and 48 with a mean of 75.3. 10.7 cm flux was 92.4, 93.2, 92.1, 89.8, 89.2, 86, and 84, with a mean of 89.5. Estimated planetary A indices were 24, 11, 7, 7, 9, 4 and 36 with a mean of 14. Estimated mid-latitude A indices were 18, 5, 4, 5, 5, 3 and 17, with a mean of 8.1.



ARRL DX Bulletin

DX Bulletin 35 ARLD035
From ARRL Headquarters
Newington CT September 1, 2005
To all radio amateurs

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

CROATIA, 9A. Roger, 9A/ON4TX is QRV from Prezba Island, IOTA EU-016, until September 11. Activity is on 40 and 20 meters using CW and SSB. QSL to home call.

PAKISTAN, AP. Ijaz, AP2IA has been QRV on 15 meters around 1500z. QSL to home call.

ETHIOPIA, ET. Station ET3TK has been active using RTTY at various times. QSL via OK1CU.

PHILIPPINES, DU. Jon, DU9/N0NM is usually QRV using CW on 160 meters just before 1000z. QSL via W4DR.

DJIBOUTI, J2. J20VB is usually QRV on 40 or 30 meters using CW around 0100 to 0300z. QSL via UA4WHX.

ISLE OF MAN, GD. Four members of the Wrexham ARS will be QRV as GD4WXM/p and GT4WXM/p from the Scarlett Point Tower from September 6 to 9. Activity will be on 160 to 2 meters using CW and SSB. They may also use their personal callsigns. QSL via operators' instructions.

NORWAY, LA. Look for LA3SRK/p to be QRV during the IARU Region 1 Field Day. Activity will be on 160 to 10 meters using CW, SSB, RTTY and PSK31. QSL via SM5SIC.

DENMARK, OZ. Michael, OZ/DK5NA/p will be QRV from Romo Island, IOTA EU-125, from September 4 to 23. He will concentrate his activity on the lower bands, using CW, SSB and Hellschreiber. QSL to home call.

BRAZIL, PY. Special event station PS113QB is active during the month of September to commemorate the 113th birthday anniversary of the first LABRE RN president, Jose Bezerra Marinho. QSL via bureau.

CRETE, SV9. Terry is QRV as SV9/M0CLH/p until September 12. His activity is holiday style, but can usually be found using mostly SSB on 20 or 17 meters. He may try 12 and 10 meters as well. QSL to home call.

MARSHALL ISLANDS, V7. Neil, V73NS is usually QRV on 160 meters around 0900z. QSL via operator's instructions.

NORFOLK ISLAND, VK9N. Kirsti, VK9NL has been QRV on 15 meters around 2300z. QSL direct only.

Five and Nine

By Paul Dunphy, VE1DX

One of the local QRPers came puffing up the hill the other day, this one with a confident look on his face. "I've been on the air for about a year now, and more recently, I've become serious about DXing. I guess I've finally seen the light. There are many facets to Amateur Radio, and I've often heard that the true measure of an Amateur is whether or not he's a 'good traffic man.' Well, I've concluded that this isn't so. I've tried everything and the plain truth is that DXers are the top echelon of Amateur Radio. DXers stand tall, DXers are smarter, better looking and more technically competent. They have better equipment, more money and represent the very best in Amateur Radio!"

We looked at this QRPer for a moment, then replied, "This is exactly what we've been telling you every time you come up and ask questions about the Eternal Enigmas of DXing and the Mysteries of the Ages. Why are you all of a sudden telling us what every true blue DXer already knows?" The QRPer was quick to reply, "I guess I was always hearing the answers, but not really understanding them. Then I experienced the 'DX moment!' . . . and I understood the meaning of DX IS! I became one of the Enlightened Ones, one of the Deserving and a true blue DXer! I am a Believer . . . DX IS!"

We thought back over the years and how long it had taken us to understand all this. We recalled the Old Timer telling us about the early 1920's when the first Amateur trans-Atlantic spark transmission was heard . . . not worked, but just heard. And, when in 1922 the French station 8AB on 100 meters worked 1M0 and 1XAM in the same evening. As the Old Timer had noted, this was CW, and marked the death knell for spark. This had been the beginning of DXing and even the Old Timer would often admit that it took many years after this for him to reach the plateau of DX enlightenment that this QRPer was describing. It was this that was troubling us, for while we wished the QRPer well, we found it difficult to understand how he had achieved the pinnacle of DX understanding in such a short time.

"Tell us more," we asked, "tell us about this 'DX Moment' and when everything became clear to you." The QRPer was not long in replying. "At first, one thinks that the Mysteries of DXing are



shrouded in secrecy and somewhat akin to a long period of study and apprenticeship. We newcomers think this because that's what we are told. But I decided to look deeper . . . and I found the answer! It's simple. The true meaning of 'DX IS!' is simply the RST and nothing more." We looked at the QRPer and put forth our best poker face. What else could we do, for he was dealing and we had to wait for the draw. "I listened to the last two major contests and found that on SSB the signal report was always 59 and on CW it was always 5NN. I never heard any other report. Nothing but S9! So I started thinking about it. Ragchewers and the like give 55 or 48 or whatever, but testers always give 59. They never vary!"

We had to agree this was true, but we were having trouble with the correlation. "What does this have to do with being a true blue DXer and understanding the Eternal Enigmas of DXing?" we asked. "Simple," the QRPer replied. "Most testers are also DXers. Maybe they are more into testing than DXing because they have worked all the DX. But I am sure they are DXers at heart. And the 59 and 5NN RSTs are simply a carry over from their days of DXing." At this point we found ourselves agreeing in part, and perhaps the QRPer had a point about there being a strong similarity between DXers and testers. But being in agreement with a QRPer on a downhill run, deep into explaining the true meaning of DXing is a sign of danger! We had been here before so we tried to get him focused back on the topic. "You may be right about testers and DXers", we replied, "but why does a RST of 5NN explain everything?"

The QRPer ploughed on: "Well, it was listening to the contest that got me thinking about DX pileups and signal reports. And I tried to think of an instance where any exchange between a rare or semi-rare DX station was other than S9. And it never is. And the reason is ego! The DXpeditioner sitting on a rock in the middle of the frigid Antarctic or baking in the sun on a desolate reef isn't going to admit that he can't hear anything less than S9. He's risked his life and spent a lot of money to get there and he isn't going to admit that any signal he hears is less than S9! Never! And likewise, the DXer sitting home in his shack with a monobander and a full-bore linear, or maybe a bit more, isn't going to send or accept anything less than 59 or 5NN. And it's as simple as that. True Blue DXers are always S9. Always! They always have been and they always will be. If you hear a DXer give a

report of less, he is not one of the enlightened ones, not one of the Deserving, and he has a long way to go before he reaches genuine DX Understanding! And it took you Big Guns all these years to figure this out? Sometimes I wonder about you guys!"

And he was off down the hill, still puffing from the non-stop barrage of DX explanation. Son of a Gun! What could we say? We recalled working a 7P8 some years back. And while he was 33, we did give him a 59. But the 7P8 was serious about his report, and even though we asked for a repeat, the most he would give us was a 1 X 1 . . . and that's what he wrote on the QSL. We remembered fretting about sending it in to the league, to be examined under the magnifying glass of W3AZD. Don had looked and Don had counted it. We thought a bit more about what the QRPer had said. While at times it may be that the signal strength of a DX station is directly proportional to how badly you need it, we had to wonder if maybe the QRPer was oversimplifying things a bit. But were we sure? One of these days we are going to look at the top one hundred QSLs on our list and see if any of them are less than S9 . . . but not today. Why? Because the bands are opening and DX IS! And most of it is S9, too!



Helpful Hints

Avoid confusion between these new microwave ovens and televisions by cutting out a large letter "M" in brightly colored paper, and sticking it to the door of the oven.



Shallow Thoughts

If it's tourist season, why aren't we allowed to shoot them?

Carbon Amateur Radio Club – 2004-2005 Officers

President: Anthony "Goody" Good, K3NG, goody@grpis.org
Vice President: Rob Roomberg, KB3BYT, roomberg@ptd.net
Secretary: Brian Eckert, KB3KLJ, eckertb@ptd.net
Treasurer: John Schreibermaier, W3MF, w3mf@ptd.net
W3HA Callsign Trustee: Lamar Derk, N3AT, n3at8z30@netscape.com
W3HA Repeater Trustee: Bob Wiseman, WB3W, wiseman@ptd.net
Associate Repeater Trustee: Anthony "Goody" Good, K3NG, goody@grpis.org
Public Information Officer: Lisa Kelley, ldkelley@voicenet.com
Emcomm Coordinator: Bruce Fritz, KB3DZN, bruce56@ptd.net

Directors

Eric Bott, N3TVV, etb75@hotmail.com, 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.gth.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 Schreibermaier K3PH
P. O. Box 166
Kresgeville, PA 18333-0166