



Pioneer Amateur Radio Association



P.O. Box 330
Glennville, WV 26351

July 2018 - ParaPhrase



President corner . . .

Wow! Another month has come and gone. Time seems to be flying by. We have decided to change the club meeting to the third Saturday of the month. In July the meeting will be on the 21st at 10 am at McDonalds in Glennville. We have a lot to talk about. So, if you can make it, please do. Field day has come and gone now and I hope you were able to participate at least for a few minutes. If you missed it, it is ok, because there is a contest going on almost every weekend. We are experiencing storms now almost daily, so, keep an eye on your rigs and antenna's. One lightning strike can really be costly. I hope to hear each of you on the air somewhere. I hope you are enjoying your summer. 73'

Ed N8OYY



Upcoming Events

- July 1st - Somerset County PA Hamfest - Somerset, PA
- August 18th - Tri-State ARA Hamfest - Huntington, WV
- August 24th - WV State ARRL Convention - Weston, WV
- September 1st - PA State ARRL Convention - Uniontown, PA
- September 9th - Butler County ARA Swapfest - Butler, PA
- September 22nd - Coal County ARA Hamfest - Madison, WV
- October 13th - Parkersburg/Wood Hamfest - Mineral Wells, WV

Local VHF repeaters

- 145.29 WB8WV (91.5) - Glennville
- 145.45 N8LGY (107.2) - Grantsville
- 145.39 N8MIN (No pl) - Weston
- 146.655 K8VE (123) - Flatwoods
- 146.85 K8VE (103.5) - Buckhannon
- +147.030 N8ZAR (103.5) - Buckhannon
- +147.06 W8OO (103.5) - Crawford
- +147.300 WV8RAG (107.2) - Pennsboro

Pioneer Amateur Radio Association Meeting - April 14, 2018

Members present: Eugene Allen KG8KQ, Ed Messenger N8OYY & Steve Ostaff AB8CR

No treasurers report was presented due to Edsel being absent.

This meeting was informal due to the number of members who attended. Ed Messenger mentioned that he and Eric KD8JPE accomplished at the repeater site earlier in the day. The output of the repeater was increased from about 7 watts to 60 watts. Everyone should see a big improvement.

Ed also mentioned that he had heard that the President of the ARRL will be attending the WV State ARRL Convention this year at Jackson's Mill. Dan Ringer, WV Section Manager is requesting all clubs to encourage as many amateurs as possible to attend the Convention to show a large support for him and to listen to his presentation. The Date of the Convention is August 24th. The time for his presentation will be released closer to the event.

Ed, mentioned that he will be out of town this year during the weekend of Field day. Steve suggested that the club should participate in Field day. Currently there is no plan to participate as a group.

Otherwise no club business was done.

Ed Messenger, N8OYY
President

SITUATION ROOM



"I HAVE EVERYTHING UNDER CONTROL."

HAM QUIPS



**SOMEHOW, CLYDE NEVER FULLY GRASPED
THE CONCEPT OF HOW TO ROTATE A BEAM**

Member Spotlight

Cliff Kayhart, W4KKP

Charles "Cliff" Kayhart, W4KKP, is still an active ham at 106 years of age. With a degree in aeronautical engineering and his electronics expertise, Cliff had worked for RCA, AT&T, Bendix Aviation, Philco, the Army Signal Corps, and, before retiring, as an engineer at the Magnavox color TV manufacturing plant in Greeneville, Tennessee.

First Forays into Radio

In 1919, 8-year-old Cliff was fascinated by a friend's crystal radio, and from that time on, learning and operating radios became his favorite hobby. He studied every circuit diagram, and the function of every radio component. Cliff built all of his radios, with many having RCA tubes. As a teen, he built a regenerative radio for himself and his father, and discovered the super regenerative receiver that was developed by Edwin H. Armstrong. All of Cliff's inquisitive hands-on radio knowledge earned him a living in electronics, as well as enjoyment as an Amateur Radio hobbyist.

As an Army Signal Corps Lieutenant stationed in Iwo Jima during World War II, with the help of his crew of 12 men and the Navy Seabees, Cliff set up a commercial-type AM/CW station with a rhombic antenna erected on towers. One antenna was aimed toward the Pentagon, one toward China (US was fighting the Japanese in China), another to Hawaii, and the other to San Francisco.

Dream of a Repeater

While living in Tennessee in the early 1970s, Cliff's dream was to build his own repeater and have it erected on a mountain peak. He decided the repeater should be built on the 4,844-foot peak of Camp Creek Bald. This would be a difficult and dangerous challenge as Cliff drove up the narrow dirt mountain with many 500-foot drop-offs. But because of Cliff's persistence and motivation, his first working 2-meter FM repeater, WR4KKP, was ready to transmit and receive from a 15-foot tower near



Cliff Kayhart, W4KKP, one of the world's oldest active hams at 106, enjoys getting on the HF bands.

the summit of Camp Creek Bald on the Tennessee/North Carolina border. The WR4KKP repeater had a single quarter-wave antenna. Round copper tubes served as resonators so that they could block out the transmitter from the incoming signal when the repeater was operating.

The severe mountain environment frequently detuned the resonators, so Cliff redesigned the repeater using two antennas — one right above the other, with a shield between them. This worked, no matter what the temperature was on the mountain. Today, Cliff's repeater is still operational, and is maintained by the Andrew Johnson Amateur Radio Club, W4WC.

On the Air at 106

A year ago, Cliff became a resident of the Heritage at Lowman, in White Rock, South Carolina, and still enjoys working the HF bands from his room, thanks to members of the Dutch Fork Amateur Radio Group, W4DFG, and the Columbia Amateur Radio Club, W4CAE, who helped set up his antenna. There have been times when Cliff gets on the air and stations pile up to have a contact with one of the world's oldest operating hams.



In the 1970s, Cliff Kayhart, W4KKP, installed his FM repeater on the summit of Camp Creek Bald. The repeater is still operational today and is maintained by the Andrew Johnson Amateur Radio Club.

Proposed—146.82 Repeater

My idea of putting up a new repeater and linking it to the 5.29 repeater is taking shape. The picture to the right is of the new DB-224 repeater antenna and the picture below is the repeater itself. The repeater is a Yaesu DR-1X Systems Fusion which is a digital/conventional VHF/UHF repeater. I have learned quite a bit about C4FM mode. There is a big push for amateurs to transition analog repeaters to digital and connect to Wired X for long range use. In future newsletter, I hope to bring more information about this technology. This repeater will strictly run as analog.

The repeater is running about 10 watts into a station GE Master II amplifier and is set to run 100 watts out. The duplexers are used 2-meter Wacom duplexers and have been tuned for the 146.82/22 split. The power supply is an Astron RS-35M and the controller is a S-Com 7330 with voice. The controller has three radio ports with ctcss boards built in. I have had the repeater running for about three weeks, however, have not had a two way conversation on it yet. Feedline for the repeater has been ordered and I am expecting it to be delivered in the next week or so.

The proposed tower location is on Laurel Mountain in Preston County near Fellowsville. The ground level of the tower is about 2,845 feet and it appears the antenna will be mounted at 360 feet. Thus, the repeater should have pretty good coverage. I am hopeful it will have mobile coverage south to Weston, north to Little Washington, PA, west to Harrisville and east to Keyser. Once it is on the air, the last item will be to link the two repeaters. This shouldn't be to much of a problem but it will require radio programming and adding an additional antenna to both repeater locations. If you would like to learn more about the repeater, don't hesitate to ask.

Ed N8OYY



US Amateur Radio Bands

US AMATEUR POWER LIMITS — FCC 97.313 An amateur station must use the minimum transmitter power necessary to carry out the desired communications. (b) No station may transmit with a transmitter power exceeding 1.5 kW PEP.

Amateurs wishing to operate on either 2,200 or 630 meters must first register with the Utilities Technology Council online at <https://utc.org/utc-databases-amateur-notification-process/>. You need only register once for each band.

2,200 Meters (135 kHz)



630 Meters (472 kHz)

5 W EIRP maximum, except in Alaska within 496 miles of Russia where the power limit is 1 W EIRP.



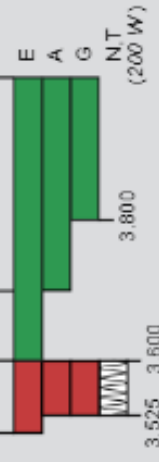
160 Meters (1.8 MHz)

Avoid interference to radiolocation operations from 1,900 to 2,000 MHz



80 Meters (3.5 MHz)

3,500 3,600 3,700 4,000 MHz

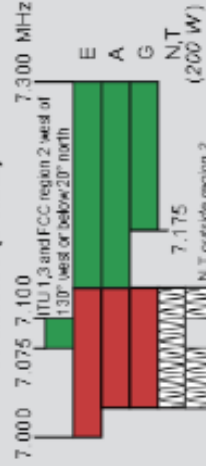


60 Meters (5.3 MHz)

CW, 5332 5348 5358.5 5373 5405 kHz
Dig
USB
5330.5 5346.5 5357.0 5371.5 5403.5 kHz

General, Advanced, and Amateur Extra licensees may operate on these five channels on a secondary basis with a maximum effective radiated power (ERP) of 100 WPEP relative to a half-wave dipole. Permitted operating modes include upper sideband voice (USB), CW, RTTY, PSK31 and other digital modes such as PACTOR III. Only one signal at a time is permitted on any channel.

40 Meters (7 MHz)



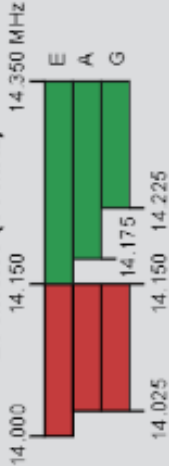
See Sections 97.305(c), 97.307(h)(1) and 97.301(e). These exemptions do not apply to stations in the continental US.

30 Meters (10.1 MHz)

Avoid interference to fixed services outside the US.



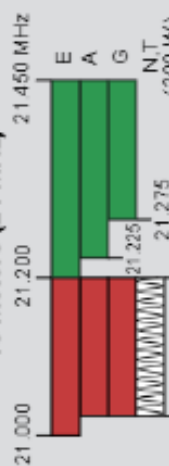
20 Meters (14 MHz)



17 Meters (18 MHz)



15 Meters (21 MHz)



12 Meters (24 MHz)



10 Meters (28 MHz)



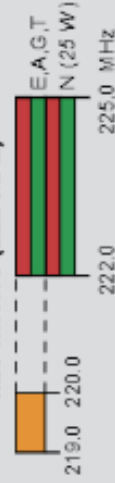
6 Meters (50 MHz)



2 Meters (144 MHz)



1.25 Meters (222 MHz)



*Geographical and power restrictions may apply to all bands above 420 MHz. See *The ARRL Operating Manual* for information about your area.

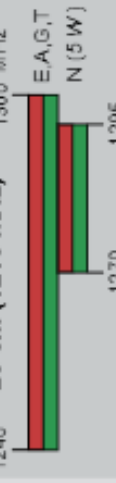
70 cm (420 MHz)*



33 cm (902 MHz)*



23 cm (1240 MHz)*



All licensees except Novices are authorized all modes on the following frequencies:

2300-2310 MHz	10.0-10.5 GHz ‡	122.25-123.0 GHz
2390-2450 MHz	24.0-24.25 GHz	134-141 GHz
3300-3600 MHz	47.0-47.2 GHz	241-250 GHz
5650-5925 MHz	76.0-81.0 GHz	All above 275 GHz

‡ No pulse emissions



KEY

Note: CW operation is permitted throughout all amateur bands.
MCW is authorized above 50.1 MHz, except for 144.0-144.1 and 219-220 MHz.
Test transmissions are authorized above 51 MHz, except for 219-220 MHz.

- = RTTY and data
- = phone and image
- = CW only
- = SSB phone
- = USB phone, CW, RTTY, and data
- = Fixed digital message forwarding systems only

- E = Amateur Extra
- A = Advanced
- G = General
- T = Technician
- N = Novice

See [ARRL Web at www.arrl.org](http://www.arrl.org) for detailed band plans.

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Exam Info

Technician Pool Update / New Form 605 Reminder

New Technician Question Pool to Take Effect July 1

On July 1, 2018, a new Element 2 Technician-class question pool will take effect for examinations. VECs and VEs will have new test designs available for use at exam sessions effective that date.

The newly revised pool, released in January 2018 (updated and re-released on February 12, 2018) by the Question Pool Committee (QPC) of the National Conference of Volunteer Examiner Coordinators (NCVEC), must be in use starting July 1. There are three graphics required for this pool and 423 questions in this pool, down slightly from 426 in the previous pool. To view all three question pools, visit the NCVEC website at www.ncvec.org.

With the Technician-class exam questions changing on July 1, new test designs must be used effective that day. Previous ARRL VEC sup-

plied Technician-class exam booklet versions (2014 series) and computer-generated Technician-class exams created from the 2014 question pool are only valid until midnight on June 30, 2018. At that time, VE team leaders should destroy or throw away the old versions of the Technician exams (do not return them to VEC). To avoid confusion at the session, do not save old exam versions!

ARRL VEC has supplied its officially appointed field stocked VE teams with new exam booklet designs. An updated package will not be provided to field stocked teams that no longer meet the field stock requirements, teams that have not conducted a session in the past year, and non-field stocked teams that have been keeping supplies without qualifying through the VEC. Non-stocked VE teams should be returning their exam packages and supplies to ARRL VEC after each session is completed. The officially stocked VE teams receive

their exam supplies in a large box, which is a 6-month-to-1-year supply, depending on the team's activity levels. To see if your team qualifies to be field stocked with a bulk quantity of our test materials, visit www.arrl.org/field-stocked-ve-teams.

Resources for ARRL VEs

The ARRL VEC VE Resources page (www.arrl.org/resources-for-ves) offers information needed to help conduct exam session business. Our support page offers easy access to exam forms and information, question pools, FCC rules, basic qualification question information, and much more.

Question Pool Schedule

The three current question pools (and any exam designs based on these question pools) are valid as follows:

- New Technician-class (Element 2) Pool, effective July 1, 2018, is valid until June 30, 2022.
- Current Technician-class (Element 2) Pool, released in 2014, is ONLY valid until June 30, 2018.
- Questions withdrawn from use: none.
- General-class (Element 3) Pool, effective July 1, 2015, is valid until June 30, 2019.
- Questions withdrawn from use: G1E10 and G5B08.
- Amateur Extra-class (Element 4) Pool, effective July 1, 2016, is valid until June 30, 2020.
- Questions withdrawn from use: E9H03 deleted from pool.

The question pool review and update is part of a regular process.

Each question pool is reviewed and updated on a 4-year rotation.

The General-class question pool is scheduled to be updated in 2019.

Important Reminder: Basic Qualification Question on 605 Forms

The new NCVEC Form 605 (September 2017 series), which includes the updated basic qualification question section, must be used at exam sessions. Older versions of the form are obsolete. The FCC revised the basic qualifications section of 605 Application Forms (FCC, NCVEC, and Club) in September 2017 to include a question regarding whether an applicant has been convicted of a felony in any state or federal court.

Per FCC policy, exam session candidates will not be issued an FCC license if they do not answer the mandatory basic qualification question, or if they use an outdated form.

Each applicant applying for a new or upgraded license must answer the basic qualification question. A question left unanswered will result in the application being rejected by the FCC. It's imperative for VE teams to ensure that applicants use the correct 605 forms, and that the forms are accurately completed. This will help us support candidates better and prevent unnecessary license issuance delays.

Visit www.arrl.org/fcc-qualification-question for detailed information about the FCC's basic qualification question.

Thank you for your support in the field!