

DELAWARE LEHIGH AMATEUR RADIO CLUB Inc.

MARCH 2023

W3OK

CORRAL

Club Meeting March 2, 7:30PM at the
Nancy Run Firehouse.
3564 Easton Avenue, Bethlehem, PA 18020

**MARCH MEETING PROGRAM
PORTABLE SET-UP & OPS**



QUARTERLY MEETING MINUTES

The General Meeting was held at the Firehouse.

President Doreen, K3PDL called the meeting to order at 1900 hours.

Pledge of Allegiances: Led by Doreen, K3PDL

President's Thoughts: This past weekend was the Winterfest. Adam, N3LAG, Club Station Manager, Wayne, KC3UMO, and myself operated on 20 meters and Wayne logged in, in almost in an hour, we made 20 contacts. Maybe next year we could advertise in QST magazine sending in \$2.00 and DLARC will send a QSL card, I was going to design a QSL car with a snow person operating the radio, saying Winterfest. At the past Board Meeting, a Ham was not renewing their membership because it was too noisy on a Wednesday at the Milk House. Wednesday is the club's social night where we talk about different subjects, where I help program my HT. I suggest that on a Thursday evening that the Milk House be open for those wishing to get on the air. Time frame may be from 3pm-7pm. Any thoughts?

Guests: Mark Petruno, K3MP, was in the area for a family matter. Mark was a club member in the 90s and 2000s. He was very active until he moved to Florida.

Secretary's Report:

Terry, KC3JHT, as Acting Secretary, asked if there was any additions or corrections to the Meeting Minutes that was printed in the last Newsletter. A motion to accept the Minutes was made by Dean, AB3BD and second by Larry, KC3JTK. All was in favor, motion passed.

NOTE: *We are still in the **NEED** of a **PERMANENT SECRETARY** and if interested, contact any Board Member.*

Treasurer's Report:

Larry, KC3JTK, presented the report for the December. A motion by Dean, AB3BD to accept the report. George, N3SQD second the motion. All was in favor, motion passed.

Committee Reports:

Membership: Terry, KC3JHT, reported that there are 95 paid members, 3 Associated, and 7 Life members, for a total of 105. It may be lower by one.

Club Station: No report

Tech Committee: No report

Website: Some glitches which have been fixed.

Repeater: No report

Old Business: Doreen asked George, N3SQD, what the situation was with the work on the tower. George said that he was looking at rotors. George said that he understood that Terry, KC3JHT, talked to Charlie Adams. Charlie, once again, volunteered to help with it. George said the hardest part will be getting a new nose piece fabricated. He said that he was going to get together with Charlie after he gets back from vacation. It may be late spring or early summer at the earliest that things can be done. George said that he wasn't sure whether or not a crane is needed. Using a Jen Pole is possible. Charlie told Terry that he will provide the crane.

New Business: Doreen wanted to let everyone know that Steve Harper, W3NAM, is the newest member of the Board. Now we should have no problems with having a quorum. Welcome Steve to the Board.

Adam, N3LAG, Club Station Manager, announced that every other Saturday the Milk House will be open to all club members and newly licensed club members to see and use the Club's radio equipment. Announcement will be on the forum for when it's open. The date was not said, but it was figured to be February 11th. Al, W3CE, said that he tries to get over there if Adam can't make it.

There was a question about who is in charge of the DLARC Facebook page. After some discussion, without too much information, Terry, KC3JHT and John, N3IGA would look into it. See if we can get back up and running with updated information. Al, W3CE, indicated that the club should invest in a new screen for presentations. Terry, KC3JHT, offered to sell his, which is new, for half of what he paid for which was around \$80. Al, W3CE made the motioned to accept. Dean, AB3BD, seconded. All was in favor, motion passed.

Announcements: Larry, KC3JTK, talked about Redners' "Save the Tapes" program. If you buy your groceries at Redners', bring the tapes in, when there is \$5000 worth of tapes, the club will get some money. He said that last month, he got slips that added

up to \$550. He also showed 3 or 4 envelopes stuffed with Redners' tapes. He said the club appreciates it.

Bob, KE3AW, announced that classes will be starting March 7th. He got permission from the County. They will run for 10 weeks with the 10 week for VE testing. Tech and General Classes will be available. Bob also stated that every other month there will be VE Testing on the Friday after the Thursday meeting. This has been going on for decades. It's always the odd month. So there's testing 6 times a year, besides testing on Field Day. Just a reminder that if the first of the month falls on a Friday, the testing will be the following week which would be after the Club meeting on the Thursday. Classes and VE testing will be at the 911 Center or EOC (new name). There will be VE testing at Field Day.

Awards: None

Adjournment: There being no further business, the meeting was adjourned at 2000 hours.

Program: The program was Quartzfest by Al, W3CE and his wife, Barbara, W3ATC.

2022 PA QSO PARTY RESULTS

The results of the 2022 PA QSO Party have come out. The only thing to wait for is who will be getting a trophy. They are waiting for all the Final Plaque Sponsorships received. There were 6 DLARC members that participated in the QSO Party. The following is who they were and where they placed in first:

Ben Ramig, N3WR, Potable Single Op Low Power, Carbon County

Thomas McDonald, N3MQL, Single Op Low Power Mixed, Lehigh County

Walter Talbott II, KC2ZA, Single Op High Power Mixed, Northampton County

Steve Nordalh, NS3L and his wife, Sharon, N3SET, Multi Op High Power, Northampton County

W3OK with Bob Green, KE3AW and Doreen Gramling, K3PDL operating, Multi Op Low Power, Northampton County

John Holmes, N3IGA, Single Op QRP SSB, Northampton County

John Holmes, N3IGA, Single Op QRP SSB, Pennsylvania

DLARC finished 11th in the State.

The 67th PA QSO Party is October 14 & 15, 2023. Check out their website at

<https://paqso.org> for more information. Let's get out and see what the club can do. Let's

see if DLARC can take the Club Trophy like it did many years ago. It's a fun contest that has no stress.

QUARTZFEST

The program "Quartzfest" was really interesting. Al, W3CE and his wife, Barbara, W3ATC, gave a really presentation with slides. It was amazing see so many Hams from all over gathering together to have fun. All the things that was available during the week was available to everyone. It's always the last full week in January. If you are interested to talk to other Hams all over, check out the website to get the information you are looking for.



Adam, N3LAG

Adam will inform you on what to look for as far as equipment and considerations. He will explain what to look for in a site. Also what to do as far as weather and such. What Adam goes over may help you decide if maybe you would want to go somewhere to do the PA QSO Party or even do your own POTA.

Come to the meeting and learn what you can do to bring more interest to the hobby for yourself.

VE TEST SESSION

On March 3, 2023, there will be a VE Testing Session at the Northampton County 911 Center at 7pm. Candidates are required to pre-register. You must contact Bob Green, KE3AW by phone 610-419-9286 or email address ke3aw@arrl.net. Bob will inform the candidate on what is required and prohibited, etc, the date, time, location, verification required, directions, etc. The candidates need to know they should get their FRN number prior to the testing. If they do not have that FRN number (SS number cannot be used), it will slow their paperwork flow and delay the license delivery to them. They also need to know the fee set by ARRL for their part in the checking process before their paperwork is sent to FCC in Gettysburg, and if paying by check, it shall not be made to any member of our VE Team nor to DLARC. And finally the \$35 the feds are charging for their 10 year license.

“QRP Corner”

Fun with Operating QRP

By Barry G. Kery, KU3X

Operating at a QRP level can be quite challenging and is not for everybody. But you do get a great sense of accomplishment when making that first contact with the use of very low power.

First we have to establish what QRP really means. QRP is one of the “Q” signs used when operating CW. When a CW operator sends a phrase like, “I will QRP”, it means they are going to turn their power down. The operator is not saying to what level it will be turned down to. He may be operating at 500 watts and turning his power down to only 100 watts. It strictly means nothing more than turning your power down to a power level lower than what you started out with. A different meaning is when a ham radio operator sends the following: “W3OK de KU3X/QRP” The “/QRP” now takes on a new meaning. Now it means the operator is working at a power level in the range of 1 to 5 watts. If you read some of the forums or articles on the internet, you will read where a lot of hams start to split hairs when it comes to operating QRP. Some articles will say that when operating SSB, 10 watts is considered QRP, others will disagree. If you enter a QRP contest, 5 watts is considered the maximum power out, side band or CW. It is not written in stone that 5 watts is the absolute maximum allowed power output level for all modes. Since the 5 watt power level, in any mode, is what qualifies one’s station when entering a QRP contest, I use 5 watts as my absolute benchmark for operating at a maximum power level for QRP in any mode. “So what if I operate at only ½ watt?” This is considered QRP. Anything less than 1 watt is considered QRP.

If one decides to purchase equipment strictly for QRP, I would suggest that person talks to an avid QRP'r before jumping in feet first. One of the biggest mistakes some new hams makes is looking a radio like the Yaesu FT818ND thinking this will be a one radio that covers all of the popular ham radio frequencies and no other radio will ever be needed. The next thing they do is start calling CQ and wonder why there's not a pileup of ham radio operators answer their CQ. Before you know it they get frustrated and drop out of hobby.

As I said earlier, "QRP can be quite challenging but very rewarding." When we talk about the signal strength of QRP and compare it to a station running 100 watts, we are looking at a signal that is 13 db less in strength. So what does 13 db down in signal strength equate to? For many years, 6 db would equal a difference of one S unit on the receive end of the signal. Most radios today, but not all radios, still consider 6 db as an S unit. When someone's receiver shows an S9 signal strength from a station running 100 watts, if the transmitting station turns their power down to only 5 watts, the receive station will now see an S meter reading of S7.

You would be surprised at what you can work with only 5 watts. When I purchased my Elecraft KX3, I decided to start over and work 100 DX countries. In 3 months I worked my 100 countries. K3NZ, Norm Zoltac, now a silent key worked Australia, from Schnecksville, PA with only one half of a watt on 20 meters.

When it comes to choosing a frequency to operate on, I would suggest 40 meters for a starting point. 20 meters would be a good band as well, but depending on the sun spot cycle, 40 seems to be open much longer.

Let's put together a nice QRP station. In this article we will address QRP radios. You don't need to get a top of the line radio to have fun with QRP.

One interesting radio, sold by MFJ, is the MFJ 9040. This is strictly a CW only radio. The MFJ-9440 is an SSB QRP radio with the option of adding CW to it. These radios need 12 volts or more to operate. Once the supply voltage goes below 12 volts the radio will not operate. So battery choice is very critical.

Pictured below left is the 9440 SSB QRP radio. This radio will put out 10 watts and also has a great speech processor. Pictured below right is the MFJ 9040. You can usually find either of these used for around \$100.



The little \$50 Rock-Mite CW radio is limited to only one half of a watt on 20 meters on a fixed frequency. This is a copy of the same radio K3NZ worked Australia with. This is kind of a kit radio. Norm made assembling these a club project. Numerous club members ordered these and got together in the evenings to assemble them.



YouKits made some interesting little CW only radios. The HB series. Ten Tec sold a YouKit's model, relabeled under the Ten Tec name. It was the Ten Tec R4020. You can add your own size AA batteries internal to the radio, it was CW only for transmit but could also receive SSB on 20 and 40 meters. With 12 volts to the radio you would get 5 watts out. YouKits later introduced the HB-1B MK3. This little 5 watt CW radio came with internal batteries and covers 15, 17, 20, 30 and 40 meters. The HB series radios did not have an internal speaker. On the used market they sell for anywhere between \$150 to \$250, depending on the model. Shown below is the Ten Tec R4020.



The Yaesu FT-817ND, later updated to become the FT-818ND, is one of the most popular QRP radios. It covers all of the HF bands along with VHF and UHF all modes. It's a 5 watt radio adjustable from one half of a watt to five watts. It is a totally self-contained radio with your choice of internal batteries. Just add an antenna w/coax and you are on the air. You can actually send CW via the up / down buttons on the supplied microphone. These radios sell used for around \$500. They are no longer made by Yaesu due to lack of parts.



The Icom IC703+ was also a very interesting radio. It started out as the basic IC703 and covered 160 meters to 10 meters. The plus version followed with an improvement in the RF final section and they added 6 meters. Some of the features the 703+ had that the FT817 did not have were as follows: Digital signal processing, audio speech processor, built in broad band ATU, up to 10 watts output power and a CW memory keyer.

When the original 703 was replaced by the plus model, the selling price of the original 703 was dropped to \$350. I would suggest if one wants to purchase a 703 they should look for the plus model and stay away from the non plus model. As you can see in the picture, the 703 has a much bigger display then the FT817 has. These are selling for around \$500 to \$600 dollars without the optional CW filter. Power is adjustable from 10 watts down to one half of a watt.



The Xiegu 5105 is a very popular Chinese QRP radio. This is another self-contained radio. It comes with a 3800 mah Lithium Ion internal battery and a very broad band ATU. Power is adjustable from 5 watts down. They sold new for around \$649 and now sell on the used market for around \$450. You could actually attach a resonant shortened 20 meter telescopic antenna to the radio and use this like an HT on 20 meters. A hand held microphone is included with the radio. Pictured below is the Xiegu 5105.



The Xiegu 5105 is still for sale new but Xiegu now is promoting the X6100. The 6100 is an impressive looking radio and features a very nice colorful spectral display. It also has an internal Lithium Ion battery and a broad band ATU. I would not suggest getting this radio. It is very susceptible to front end overload from nearby AM broadcast stations. The X6100 is a works in progress. New firmware is posted on a regular basis. Some of the features advertised for this radio do not work. It is not a dependable radio. Selling price is around \$649



Xiegu G90 is a low power radio and is well suited for QRP'rs. The output power is adjustable from 20 watts down. Frequency range is 106 to 10 meters. It does not operate on 6 meters. The radio needs an external power source. It has a nice little spectral display. It also has a very good ATU as well as good audio. Being able to transmit up to 20 watts makes this a good dual purpose radio, meaning if the band conditions are not all that good, you can increase you ERP by 6 db. Ham Radio Outlet still sells this radio new for \$445. What a great value!



Enter Elecraft with their KX3 and KX2. The KX3 is a completely self-contained radio with its optional CW paddles that attach to the radio and an optional hand held microphone. It has an impressive ATU and provisions for internal batteries. It also has a built in optional charger and a clock. It covers all bands from 160 meters to 6 meters. With an external power source the radio can deliver up to 15 watts out. With internal batteries you are limited to 5 watts out. The power levels are completely adjustable from zero watts to up to 15 watts. To get 15 watts out you need a power source of 12 volts or higher. This is considered one of the top of the line QRP radios. It is packed with features. It also has a built in digital voice and CW keyer. This little radio also has a sub receiver. You can even add 2 meters to this radio. Fully loaded the radio sold for around \$1400 and now sells new for around \$1600. They still seem to hold their value and sell for around \$1200 on the used market.



The Elecraft KX2 is kind of a compact version of the KX3 with a lot of the same features. What it does lack is 160 meters as well as 6 meters. What is improved over the KX3 is a tiny built in microphone and an improved internal battery. The battery in this radio is a Lithium Ion 2600 mah battery. You have to remove the battery from the radio to charge it but it's super easy to do so. With this battery you can transmit up to 10

watts. It has the same broad band ATU as the KX3 has and you can install an optional clock. Take notice that the KX2 has only two knobs under the display whereas the KX3 has three knobs under the display. Those same features are still available on the KX2, but they are addressed with multi-function buttons instead of a deleted knob.

To the left is the KX2 w/hand held microphone. This radio sold new for about \$1200 and like the KX3, it holds its value for resale. To the right is my completely self-contained KX2 go kit which included coax, antenna and nylon rope. The only thing you need to add for a fun day in the park is food.



The Icom IC705 has now become the QRP radio with the most features. The spectral display is out of this world. It covers 160 meters up to and including 70 centimeters in all modes. Output power is adjustable from zero watts up to 10 watts. It includes a hand held microphone and an attached lithium ion battery. When powered by the battery the output power is limited to 5 watts. You need over 10 volts to be able to operate at the 10 watt level. You can get an optional higher current battery supplied from Icom or better yet, an even higher current battery from Batteries America at half of price of what Icom charges for their battery. The Batteries America battery is rated at 3350 mah. The only thing lacking with this radio is an ATU. Most radios cut back on output power once it sees a 1.5 to 1 SWR. This radio can operate at 10 watts out with an SWR of up to 2 to 1. At 5 watts out it can tolerate an SWR of up to 2.5 to 1. This means that if you use a reasonably matched antenna you probably will not even need an ATU. The selling price now is around \$1349. More detailed information about this radio can be found on the following web page: <https://www.ku3x.net/portable-qrp/icom-ic-705>



The LAB599 Discovery TX-500 is a Russian built QRP radio that has an internal battery but no internal ATU. It offers a nice display and the power is adjustable from 1 to 10 watts. Included is a hand held microphone. It is water resistant and is a very rugged radio. It covers 160 to 6 meters. The one odd thing about this radio is it uses non US standard connects. But all cables are supplied with the radio and they have the matching plugs attached. The RF connection uses a BNC. This radio is sold through Ham Radio Outlet and sells for \$1299. I have not seen any for sale used so far.



The next and last radio is called the Mountain Topper. It is a bare bones radio very popular with back packers. It is very limited in features. You can run this radio with a little 9 volt battery at about two and one half watts out. With a 12 volt supply the radio will put out 5 watts. It is strictly a CW only radio and covers 20, 30, 40 and 80 meters. Take note to the lack of a VFO knob. To change frequencies you have to toggle between two push buttons. The radio sells for \$349. The hams that purchase these little radios seem to hold on to them. It is rare to see them on the used market.



With the exception of the Xiegu 6100, these QRP radios are not only very popular but are also very dependable, with the exception of the X6100 and put out clean signals. There is a long list of QRP Chinese junk radios being sold on Ebay. Be very careful when purchasing radios off of Ebay. I've seen more than one Chinese radio that does not comply with FCC rule for harmonic radiation which actually makes them illegal to use on our ham bands.

One thing in common with all of the above radios is low current consumption. On receive all the above radio consume 600 ma or less. The X5105 being the worst at 600 ma followed by the IC705 at 500 ma. The KX3 and KX2 only consumes 150 ma on receive. At five watts out the X5105 consumes around 2-1/2 amps. The rest consume less than 2 amps.

Most of today's modern radios in the 100 watt class have provisions to be able to turn the power output down to 5 watts. For primary station use this is usually not an issue since these radios are run off of either a DC power supply or plugged directly into a wall outlet. At 100 watts out these radios usually draw anywhere from 18 amps up to 23 amps off of a DC supply. Receive current is around 900 ma up to 2 amps. When you turn the output power down to only 5 watts out, these radios can consume anywhere from 7 to 10 amps. For this reason these radios are not all that practicable for QRP portable operating.

Stay tuned for part two of, "QRP Corner."

MEMBERSHIP DUES ARE DUE!

DUES are payable for the calendar year 2023. Here's how easy it is to remit your club DUES and keep your valuable D.L.A.R.C. Membership current. Whether in person or by mail, **CHECKS made payable to the D.L.A.R.C.** is one method of payment to more accurately record your timely renewal. Please ensure that your call sign appears somewhere on the instrument, such as in the memo field. Payment may also be made using PayPal. Paying with cash is discouraged, but if you really, *really* must, kindly make certain you are prepared with the correct sum according to the rate table shown below. Remember, if your DUES are not paid by the beginning of March 2023, your membership will expire.

2023 DUES Rates

Regular Membership 18-64 years of age: Jan. - Dec. -- \$25.

65 and over or retired from all forms of employment (no age limit): Jan. – Dec -- \$20.

Additional Family member each -- \$5.

Associate Individual Membership -- \$15.

You are strongly encouraged to MAIL your DUES so that I may conduct the bulk of the record-keeping duties apart from where I believe you deserve the most of my attention. In person at Club Meetings, I'd prefer to answer your questions, address your concerns, and welcome your thoughtful revenue raising and savings ideas. Therefore, it is firmly advocated that DUES correspondence be mailed to:

Lawrence R. Butler
800 Maple Lane
Easton, Pa. 18045

Enclosing an S.A.S.E will bring your new membership card back to you immediately if you can't attend the next Meeting where they are routinely distributed. You may write to me anytime with questions regarding DUES, or to discuss issues that you believe are my responsibility at: lrbutler@ptd.net include your phone number if you prefer a live reply.

De Larry / KC3JTK, DLARC Treasurer

DLARC NET QUICK CHECK CALENDAR

March 2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1 DLARC NET Terry KC3JHT	2 DLARC MEETNG 7:30pm	3 VE TEST SESSIONS 7PM	4
5	6	7	8 DLARC NET Dave N3EYT	9	10	11
12	13	14	15 DLARC NET Al W3CE	16	17 ST PATRICK'S DAY	18
19	20 BOARD MEETING 7PM	21	22 DLARC NET George N3SQD	23	24	25
26	27	28	29 DLARC NET Ben N3WR	30	31	

WEDNESDAY NIGHT NETS

Additional Net Controls are needed for the Wednesday Night ARES, RACES & DLARC net. If we have enough interested operators, it will only be necessary for each operator to have only one net session in each three-month period. 13 weeks in a period, then 13 net controls would be ideal, and maybe some extras to fill in if needed. This would give us a pool of experienced controls, for any emergency which would arise. Interested operators should contact George, N3SQD at george@bioserv.com. The NIMS IS-700 and ICS-100 courses are not required to be a net control, but should the need arise, and we do supply controls and operators for real emergencies, then the courses requirement will be in effect and EMA issued IDs will be needed to be on the scene of an emergency.

NORTHAMPTON COUNTY ARES, RACES AND DLARC NET

All Radio Amateurs are welcome to participate in the ARES, RACES and DLARC net. This net meets Wednesday at 1900 hours local time, on the W3OK Repeater 51.76, 146.70 and 444.90 (pl 151.4). With an alternate frequency of 147.135 + DPL 315) W3OI Repeater. QCWA Chapter 17 holds a net Monday evening at 8:30 PM on 3960 +/- depending on conditions. Other inputs are the 146.85 repeater, (151.4 PL) and Echolink at K2PM-R. Mid-Atlantic D-Star Net meets each Tuesday at 7:30 PM. The following repeaters Dstar repeaters are available in the Lehigh Valley. W3OK -145.11000MHz -0.600 Port C - W3OI -147.16500MHz +0.600 Port C, - W3OI - 445.02500MHz -5.000 Port B
All repeaters on the net are linked through **Reflector 020 port A**, so all stations checking into the net should make sure that they have *their local repeater call sign followed by the letter "G" in the eight positions of the RPT2 field*. Otherwise, you will only be heard locally and not over the Reflector. Dongle users wishing to check into the net should Log On by connecting directly to Reflector 20, port A, rather than through your local repeater to conserve local bandwidth.

EXECUTIVE COMMITTEE 2022-2023

OFFICERS

President – Doreen Gramling / K3PDL ----- gramlingda22@myyahoo.com
Vice President – Terry Swinney / KC3JHT ----- ldocapt@gmail.com
Secretary – *OPEN*
Treasurer – Larry Butler / KC3JTK ----- lrbutler@ptd.net

BOARD of DIRECTORS

Dean Guth / AB3BD ----- babydean1@hotmail.com
John Barbaz / NT3P ----- nt3p@arrl.net
Adam Gauntz / N3LAG ----- agent1@aol.com
John Holmes / N3IGA ----- n3iga@ptd.net
Dave Frankenfield / N3LWY ----- mycallsign@gmail.com
Steve Harper / W3NAM ----- sharper3152@gmail.com

PHONE NUMBERS FOR THE EXECUTIVE COMMITTEE OF THE DLARC CAN BE FOUND ON THE WEBSITE / MEMBERSHIP LISTING CLUB MEETINGS.

All regular meetings of the D.L.A.R.C. Are held on the first Thursday of each month at 7:30 PM at the Nancy Run Firehouse. TALK IN ON 146.700 (PL 151.4)
Club Station Telephone Number – 484 291-1527 Email Address – w3ok146700@gmail.com

THE W3OK TRUSTEE --- Barry Vogt / N3NVA

The W3OK Corral is published monthly and is the Official Publication of the

DELAWARE LEHIGH AMATEUR RADIO CLUB INC.

**14 Gracedale Avenue
Nazareth, Pa. 18064-9211**

THE NEWSLETTER STAFF

Editor – John Holmes / N3IGA ----- n3iga@ptd.net
Web Master – Larry Kaplan / AB3TY ----- lkdds@ptd.net
Circulation – John Holmes / N3IGA ----- n3iga@ptd.net
Photographer – Dave Blankenship / N3EYT ----- n3eyt@arrl.net