

DELAWARE LEHIGH AMATEUR RADIO CLUB Inc.

APRIL 2023

**W3OK
CORRAL**

Club Meeting April 6th, 7:30PM at the
Nancy Run Firehouse.
3564 Easton Avenue, Bethlehem, PA 18020

APRIL MEETING PROGRAM

3D Printing



MARCH



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: I will say some things about the questions about Social Media being on Facebook, our Parks On the Air, and the website.

John, N3IGA and Terry, KC3JHT have been working on the Club's Facebook cleaning it up. I want to thank Adam, N3LAG for all his work for the Parks On the Air, which will accompany his presentation tonight on Go Kits for portable operation. The website needs some updating. It's tough to navigate and you need help finding what you want. Dean, AB3BD, proposed the Club to donate \$100 to the Wounded Warrior Project, which will be voted on tonight.

Guests: Joe Tomko, who will be taking the License Classes and is a guest of Bob, KE3AW. Richard Fitzgerald, KC3VOY is a new member.

Secretary's Report:

Terry, KC3JHT, as Acting Secretary, asked if there was any additions or corrections to the Meeting Minutes as printed in the last Newsletter. A motion to accept the Minutes is made by Dean, AB3BD and second by Adam, N3LAG. All were in favor, motion passed.

NOTE: We still need a *PERMANENT SECRETARY* and if interested, contact any Board Member.

Treasurer's Report:

Larry, KC3JTK, wanted to bring something up that happened on the website that may or may not be visible to you. We have gotten over half a dozen renewals on already renewed people. They had a couple of choices. Put it towards a donation. A refund can be sent, but the amount will be reduced since PayPal takes a chunk out of it. Larry said it's showing up on the website that it's gone through as a manual submission by WordPress. It's still being looked into.

Then Larry presented the report for the January. A motion by Steve, W3NAM to accept the report. Dean, AB3BD second the motion. All was in favor, motion passed.

Committee Reports:

Membership: Terry, KC3JHT, as of today, we have 107 members, 3 Associates, and 7 Life Members. He said that he noticed that another note put somebody else on the roster just before he left. So that makes 108 members. Still a couple more checks in the mail today.

Club Station: Adam, N3LAG, said that AL, W3CE, George, N3SQD, and Dave, N3EYT brought more stuff from an estate or more. Part of the package was a brand-new Kenwood TS590. So, we moved around and now we have one wall with all Kenwood radios and the other wall all Yaesu radios. Everything is up and running.

Tech Committee: George, N3SQD reported that the plan to replace the Rotator on the tower is progressing. He told us he was talking to Pete, NL7XM about the project. Pete told George that his wife works at a place that deals with stainless steel tubing. He told me that he thought they could give us stainless steel tubing. The thinking is that instead of putting on the Rotator at the top of the panel, you have to climb the tower every time you get to work on it. We could mount the rotator much closer to the base, use stainless steel tubing run up through the center of the tower to the top, and then put the antenna on top. That sounds like a good idea, but it gets a lot more complicated regarding the installation and what we need to do. That still looks like it's something we can do. I'll have to approach it with Charley Adams. There are conversations that there's a need to make sure we don't have this problem again because of poor installing. So more conversations and idea will still be exchanged before everything is done.

Website: Needs to be updated

Repeater: It was mentioned that the Wednesday Night Net had weak output.

Old Business: -The only old business was what's going on with tower repairs which the Tech Committee explained.

New Business:

Dave, N3EYT, talked about if you're a member in good standing and you need a badge, please see me. I have some requests; I got one if you already ordered one.

John, N3IGA gave a report on the Club's Facebook account that some members brought up at the last meeting. John indicated that he and Terry, KC3JHT are working on the process. Terry said that if he posts on his own separate account it shows up on DLARC too. It's a slow learning curve.

Dennis, WA2JTP, indicated that we could set up an Amateur Radio Station at the Northampton County College in their building near the Steel Stacks. It's a great way to educate others, significantly the younger ones. He said that the Club could use a room there for classes. All that has to do is ensure the College knows in advance to prevent double booking.

Dean, AB3BD, suggested at the Board Meeting, that he would like the Club to donate to the Wounded Warrior Project. He said that the Club did it before. He suggested \$100. Dean made the motion. George, N3SQD seconded. Vote on and carried.

George, N3SQD, said we should donate to the ARRL College Scholarship Fund. This will be brought up at the Board Meeting.

Adam, N3LAG, brought up information on more POTA events once the weather improves.

Adam also talked about Field Day, which is coming up in about a few months and has several volunteers, but can use more. Dennis, WA2JTP, will help with the advertisement and will work with all to make it happen.

Announcements: Larry, KC3JTK, mentioned that if your ARRL Membership is coming up shortly, do it through the Club. The Club gets a commission for every membership renewal and new member. It doesn't cost you anything if you renew or become a new member. It's the same amount. If you want to continue your ARRL Membership or become a new ARRL member, see John, N3IGA; he will help you out.

Classes – Bob, KE3AW, talked about classes and the VE Session on Friday night. He thanks Larry, KC3JTK and his wife for the advertisement in the local paper. Bob said there is an event at HAM SCI Works in Wilkes-Barre/Scranton.

There's a Hamfest on Saturday, March 11, 2023 from 8 am to 2 pm presented by the Cherryville Repeater Association--entry fee is \$5.

Field Trip - Doreen, K3PDL plans to go to ARRL in Connecticut. She has to call ARRL for details. Anyone interested to go is welcome. Details will be announced as soon as Doreen gets them.

Doreen reminded everyone that we still need a Secretary for the Club. Lots of help is available to assist.

John, N3IGA raised the question on who does the Club updates to ARRL. Nobody knew the answer. It has been a while since it has been done. So, since John is the

ARRL Membership Liaison, he was asked why he don't do it. Before the meeting adjourned, John said he would do it.

Awards: None

Adjournment: There being no further business, the meeting was adjourned at 2012 hours. Motion to adjourn made by Adam, N3LAG seconded by Carl, AA3IX. Voted on and carried.

Program: The program was Portable Set Up & Ops by Adam, N3LAG.



George, N3SQD

We will discuss 3D Printing for personal use. What it is. How it works. The procedure to prepare your own 3D printed object will be demonstrated. A 3D printer and samples of 3D printed objects will be available for inspection. This should be an informative presentation for anyone interested in getting into 3D printing or just curious about the technology.

DLARC INFORMATION ONLINE

Here is some new things going on with the DLARC. It was found that there is a Facebook account for Delaware Lehigh Amateur Radio Club. It had outdated information. Terry, KC3JHT and John, N3IGA took on the task about finding information on it. Terry found out the Ben N3WR and John NT3P and two others that are no longer in the Club started it.

With the help of Ben, both Terry and John are now the Administrators that took over for the Administrators that are no longer in the Club. Terry and John removed all the old out dated information. Terry put up latest information about the club including License Classes information. John put up some added information.

If anybody is interested in check out the account and already have a Facebook account, just type in the search, "Delaware Lehigh Amateur Radio Club" and it will take it to the page.

DLARC also has an Instagram account started by John, N3IGA. It still a work in progress.

If you have an Instagram account, type "dlarc_w3ok" in search. Click on the "follow" request and John will approve the request. This account is for Hams only. John will check before approving if anyone is going to try and post non-Ham related subjects.

That person will be removed from the account and blocked.

Both Terry and John is trying to bring more attention to DLARC so that we can get new members and also let the existing members know what's going on.

March issue of, ""QRP Corner" correction.

Misquoted: "So what if I operate at only ½ watt? This is considered QRP. Anything less than 1 watt is considered QRP."

It should read: ""So what if I operate at only ½ watt? This is considered **QRPP**. Anything less than 1 watt is considered **QRPP**."

Sorry about the typos.

Barry G. Kery, KU3X

“QRP Corner”
I Got The Power
By Barry G. Kery, KU3X

To get power out of our QRP radio, we need to first put power in. When operating from the primary station, obtaining DC power is usually not a problem. Most ham stations already have some kind of 13.8-volt DC supply. Any regulated DC power source ranging from as little as 3 amps to 70 amps will do. I mention the 70 amp supply only because some new hams think that if they use a 70 amp power supply they will destroy a radio that only draws up to 3 amps. The radio will only draw off enough current to fill its needs.

So for QRP portable, we need a power source. It does not make any sense to carry along a heavy gas-powered generator if we are only going to draw about 3 amps maximum current.

Enter, “The Battery.” We have a variety of choices ranging from what type of battery we want to use as well as the battery’s amp hour rating. We pretty much know that most of the QRP radios we use today all can be operated off of most any 12 volt source so that part of the equation is already resolved. So now let’s talk amp hours. What this comes down to is two things. 1. How much current does your radio draw off of the battery? 2. How long do you want to operate?

For SSB and CW, the average duty cycle is around 50%. For receive the current drain is pretty constant. Let’s use 300 ma for receive current on receive. Transmit is different. Let’s use 2 amps as our current drain as our reference for transmit current drain. If you have a battery with a capacity of 2-amp hours and we look at a 50% duty cycle, we can talk on the radio for more than an hour. Remember, your transmit signal is a 50% duty cycle, but you are not talking for 1 hour continuously. Part of that time you are listening. When listening, our little radio is still drawing current but the current drain is usually very light so we should easily get at least two hours two hours of operating time. If we don’t talk too much, you should get up to three hours of operating time. So if we review the numbers, we come up with an average time of around two to three hours of operating time, which is a variable.

If you are a casual operator and make a quick run to the park, maybe set up for an hour or two, a battery with a 3-amp hour rating will probably fit your needs. If you plan on a full day operating portable and your style of operating is to just listen and try to work a few stations, you could probably get by with a battery amp hour rating in the range of 5 amp hours. If you are planning to do a Parks on the Air activation and spend pretty much of the day operating, you should use a battery of no less than a 10 amp hour rating.

TalentCell makes an interesting battery package. They have two models of interest. One battery pack is rated at 3-amp hours and the second battery pack is rated at 6 amp hours. The internal batteries are 18650 size lithium-ion type rechargeable batteries. The battery packs come with a wall charger, and they also have, in addition to the DC out power jack, a USB type charging port to power you cell phone.

The 3 amp hour battery pack sells for \$28 and the 6 amp hour battery pack sells for \$40 (\$34 w/o the USB port). Once fully charged, these types of batteries hold their charge for a long time. They are available on Amazon. The current drain on these two pack are limited to 3 amp, but this is more than enough to power any of the QRP radios we looked at earlier.



Sealed lead acid (SLA) batteries come in various sizes. I've seen where some hams actually use a 100 amp hour SLA battery to power their portable station. That is one heavy battery and is way overkill. A 10-amp hour SLA battery sells for around \$18 and is a good choice for QRP portable. The next step up is the 15-amp hour battery. This battery sells for around \$28 on Batterysharks.com. For QRP, this battery will give you a lot of operating time. NB3R and I operated QRP field day a couple of times and this battery, along with a 24-watt solar panel powered my KX3 for the entire field day. The station ran for 24 hours with the exception of meal time. One down side of SLA batteries are their life cycles. They are usually good for between 8 and 12 years, if you are lucky? By year 8 the amp hour rating really starts to drop off. An SLA 15-amp hour battery as shown below.



When it comes to getting your money's worth, the lithium iron phosphate (LiFePO₄) battery is the way to go. These batteries are around 2 times more expensive than SLA batteries, but they are not only one half the weight of an SLA battery but will easily last 20 years or more. They also have a little bit higher voltage when full charged. A good quality LiFePO₄ battery has a battery management system (BMS) built in. The BMS will prevent the battery from being overcharged, drained too far, short circuit protected and provides temperature control. You must use a charger designed for charging these batteries.

A 10 amp hour Eco-Worthy LiFePO₄ battery sells for \$45 on Amazon. This is a great choice for the casual QRP operator. The next step up is the Mady LiFePO₄ with a 20 amp hour rating. This battery sells on Amazon for \$83. It actually weighs less than a 15-amp hour SLA battery.



If you would like to learn more about these batteries, go to the following web page:

<https://www.ku3x.net/batteries-for-portable>

Jackery Portable Power Station 300. This may be a little overkill for your needs for QRP portable, but you may also want to run your laptop at the same time. Maybe you are planning to stay for an extended period of time, the Jackery Power Station is something to consider. The Jackery 300 uses a 20-amp hour battery pack and is rated at 300 watts. It will supply 115 volts AC as well as 12 volts DC @ 10 amps. It can be charged at home, charged from your car or even charged using a solar panel. This model sells for \$249 on Amazon. Jackery also sells other models starting at \$139 on Amazon.



An inline volt/amp meter is a good idea to use when operating from a battery. These little guys can tell you the status of your battery. It constantly shows you the voltage and current drain. It also shows the wattage and how many amp hours you have used. The meter is placed between the radio and the battery. As long as you know the amp hour rating of your battery, by just taking a quick look at the inline meter, you will be able to calculate how much time you have left before the battery is depleted. These meters are not all that expensive. The one pictured below sells for only \$14 on Amazon. Just add some Anderson Power Poles to the leads and it becomes super easy to put in line.



A lot of today's QRP radios have a volt meter shown on the display. The Elecraft KX2 has an onboard volt, amp and **amp hour meter** built in.

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

Portable Set-ups and Operation

By Adam, N3LAG

Adam, N3LAG, did an outstanding presentation on Portable Set-ups and Operations. Lots of essential information was given. It would be best if you kept an eye on the weather. Weather places integral part as summertime, you have to watch for storms. Always be aware of surrounding storms. Make sure you pick the proper sight for setting up. If you're using a dipole, make sure you have space for a dipole. The same with a vertical antenna. Make sure you have the room for the verticals and the radials.

For equipment, make sure you have the right one. You may have to walk a few miles for the right sight to set-up. You don't want to have to carry too much weight because you will have to carry the same weight back out. There are a lot of small light QRP radios out there and it depends on you to get the right one to suit what you want. The same with batteries for power. There are a lot of small batteries out there and you have to decide which one suits your needs.

Remember the most important thing when you decide where you will be setting up. That's SAFETY! Make sure you can be located if something happens to you. Ensure your phone is charged and your HT batteries are fully charged. Ensure your HT has all the repeaters programmed in for where you will be. Having the proper safety procedures could save your life. That's really more important than operating.

Remember to clean up after you're done and broken down. Leave the area as you found it. Pick up all garbage. If the place is clean and neat, it will help to be in the location in the future.

If you have any questions, feel free to contact Adam. He usually at the Milk House Wednesday and Saturdays. A few other members that do portable that can help you if Adam isn't at the Milk House.

DLARC ARRL MEMBERSHIP RENEWALS AND NEW MEMBERSHIP

If you are an ARRL Member, please let me know along with your renewal date, which can be found on your mailing label of the QST. Then I can put that information on my spreadsheet so that when it comes to your renewal, I will let you and send you the

paperwork to renew. You fill out the paperwork and send it back to me. I'll send it out with the club paperwork that I have to ARRL and just wait until you get your renewal.

If you're not an ARRL Member, let me know. I can send you the paper work to fill out and to send back to me. Then I fill out my paperwork for the DLARC so that the club will get a commission of \$15.

As I said, just fill out the information, if paying by check, make sure you make it out to ARRL and not DLARC, and then mail it to me. I will also give my mailing address if you're paying by check. If paying by credit card or with a Debit card, you can email it back to me or send it to me through the mail. Email me your request for my mailing address if you don't want to email your form.

Remember that the DLARC gets a commission on new and renew membership which will help the club out.

John Holmes, N3IGA, DLARC ARRL Membership Liaison



It's with deep regret to inform DLARC members of a past member and present member that have become Silent Keys.

Conrad Clark, W3ZMN, who was President of the Club from 1973 and 1974.

Dick Dech, KA3MOU, who was the Club Treasurer for 16 years. 1997 to 2007.

Let's keep their families in our thoughts.

DLARC NET QUICK CHECK CALENDAR

April 2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1
2	3	4	5 DLARC NET Doreen K3PDL	6 DLARC MEETNG 7:30pm	7 GOOD FRIDAY	8
9 EASTER	10	11	12 DLARC NET Terry KC3JHT	13	14	15
16	17 BOARD MEETING 7PM	18	19 DLARC NET Dave N3EYT	20	21	22 EARTH DAY
23	24	25	26 DLARC NET AI W3CE	27	28	29
30						

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

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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

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