

DELAWARE-LEHIGH AMATEUR RADIO CLUB Inc.

MAY 2023

W3OK CORRAL

Club Meeting May 4th, 7 PM at the
Nancy Run Firehouse.

3564 Easton Avenue, Bethlehem, PA 18020

“PLEASE NOTE TO START TIME FOR MEETING”

MAY MEETING PROGRAM

**FD Preps – George, N3SQD/ Al, W3CE/Adam, N3LAG/
Ben, N3WR**



APRIL MEETING MINUTES

The General Meeting was held at the Firehouse.

President Doreen, K3PDL, called the meeting to order at 1931 hours.

Pledge of Allegiances: Led by Doreen, K3PDL

President's Thoughts: I thank Adam, N3LAG, and John, N3IGA, for cleaning up the Milk House. Both Adam and John did an excellent job cleaning, but make sure the Milk House was straightened up and loose items properly in place. Adam informed the Board that he asked John if he would like to be the Assistant Club Station Manager. John said he would. John will help Adam if he's unavailable or if it's a significant project.

Guests: None

Secretary's Report:

Terry, KC3JHT, as Acting Secretary, asked if there were 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 Dave, N3EYT. All were in favor, motion passed.

Treasurer's Report:

Larry, KC3JTK, presented the report for February. A motion by Dean, AB3BD to accept the report. George, N3SQD seconded the motion. All were in favor, motion passed.

Committee Reports:

Membership: Terry, KC3JHT, as of today, we have 119 members, 5 Associates, and 7 Life Members for a total of 131 members. .

Club Station: John, N3IGA, as the Assistant Station Manager, reported what was done in the Milk House last week. Cleaning out the Milk House and tossing out outdated items that had nothing to do with Ham Radio. The Radio Room was straightened up and items were put away. The lock on the Milk House was also replaced. Adam made up a list of who should get a key. The place was swept as clean as possible.

Tech Committee: George, N3SQD, said he spoke with Charley Adams about mounting into the base and putting and putting pipe sections up to the top. Charley wasn't interested. It would just be quite a bit of work for him. He envision the actual rotator replacement. Clamping off the mast, lowering the base plate, pulling the old

rotator around, dropping the new rotator around, rising the base plate, clamping it down and dropping the mast. So he's on board with that. George mention that he got a Yaesu rotator to use for the project. George said that he is still looking to prices for everything. He mention that it's about \$1000 to do the work.

George got a call from Al since he is under that weather, wanted George to make a motion that the club purchased four Chuwi Computers from Amazon which will cost in round figures, \$150. It's a Windows computer. Comes with about ¼ of TB of solid state drive and an 8 gig of RAM Quad Core Processor. They're not fast. The License comes with Windows 11.1. George said that he has one and is a convenient little device to set up. These computers will replace the computers that are old and really out of date. These new computers won't occupy nearly the space that old ones did. They would benefit the club station and make it easier to log in for Field Day and PA QSO Party. Terry, KC3JHT, second. It was voted on and passed.

Website: Terry, KC3JHT, contacted Larry, the webmaster, about the website to see if we can get somebody to do it. If not, I'll do it. There's a need for someone to be able to work on the webpage in case something happens to Larry. Right now, there's nobody. The webpage also need to be updated as far as appearance. Have to make it more interesting to anyone checking out the Club. A little more color, pictures, ease of finding things, and look good overall.

Repeater: No report. It's working.

Old Business: There still a need for a Club Secretary. If anyone is interested, contact someone on the Executive Committee. There will be people willing to help out the new Secretary.

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.

Doreen informed all present that there is a need to change the start time of the General Business Meeting from 7:30 start to 7 pm start. This will give more time if the General Meeting runs longer than 35 minutes. Also, for the presenter presenting the program and questions. As a club, we must be time sensitive to finish by 9:15 pm and leave promptly by 9:30 pm sharp. This is because the person locking up after we are gone must lock up at 9:30 pm. If he can't, he calls the President of the Fire House to come to lock up and may jeopardize us using the Firehouse. There was a discussion about it. Terry, KC3JHT made a motion to start the meeting at 7 pm. John,

N3IGA seconded it. It was put to vote and passed. The next discussion was when we should start the new time. Motion made by Wayne, KG3MGN made the motion to start it for the May meeting. Dave, N3LWY seconded it. It was put to a vote and passed. Hopefully the Fire Company President will okay it too.

Dennis, WA2JTP, showed the members present some banners he made for the Club for Field Day. He was saying that the Club could put them around where the public will see them and maybe come see what Field Day is all about and may get interested in becoming a Ham. It's still a work in progress, but at least we are ahead with Field Day plans. He indicated that if anybody has any ideas to feel free to contact him and he will see what he can do.

John, N3IGA talked about the Club's information on the ARRL website under Affiliated Clubs. He found that it's been quite a few years since the Clubs information was updated. He updated all the Club's information. Since he didn't know if the Special Service Award was ever updated or renewed, John did that. By doing all this, John is the Club's contact person for ARRL. John said in doing all this he found that he can find any new Hams within a 30-mile radius of the Club. That will help get new members.

Announcements: Doreen showed a signup sheet for the Field Trip to ARRL Headquarters, Newington, CT. The date is Friday, June 16, 2023. Those who are going will meet at the Park and Ride Lot, Easton Ave, next to Route 33 between 6:30 and 7 am. As a group, we will be carpooling, George, N3SQD is willing to drive, and more people I think Wayne, KG5MGN, is willing to drive. Please bring a brown bag lunch, snacks, and drinks. On the return trip, the group will stop at a restaurant for dinner. As a Club, we went for the 100th Anniversary of W1AW. Everyone who went on this trip including myself had a great time.

Awards: None

Adjournment: There being no further business, the meeting was adjourned at 2001 hours.

Program: The program was on 3D Printing by George, N3SQD.

VE TEST SESSION

On May 5, 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.

There will be another Test Session on May 9th for finishing up the Classes. Anyone is welcome. Please follow the directions above if you want to test and are not a member of the License Class.

3D Printing by George, N3SQD

George's presentation was quite interesting if you never saw a 3D printer. George gave information about what types of Printers are out there, the type of material you need to do the printing, and many other things about 3D Printing. He showed you where you can find models to do your own 3D Printing. He explained how you could do a 3D Printing of any statue and how it's done. While giving his presentation, he had his first 3D Printer running. After the very interesting presentation, George had a variety of objects he made with his 3D Printer. He also showed the little piece he was printing while doing the presentation. He answered all questions that were asked as the members present were looking at what he had done with his 3D Printer. Members, who were not there and missed an informative presentation that got a lot of members interested in 3D Printing just to be able to make things that can be used around the radio station.

Time to Get Ready for Field Day

ARRL Field Day is just over two months away, but like spring cleaning, it pays to start getting ready now.

2023 Field Day will be held June 24 - 25. It is ham radio's open house. Every June, hams throughout North America set up temporary transmitting stations in public places to demonstrate ham radio's science, skill and service to communities and the nation. It combines public service, emergency preparedness, community outreach, and technical skills all in a single event. Some participants may also operate from home, using the exercise to develop and practice their radio communications capability.

Field Day has been an annual event since 1933 and remains the most popular event in ham radio.

In 2022, 4,929 entries were submitted (including check logs), and there was a total of 29,679 reported participants.

Field Day is open to all amateurs in the areas covered by the ARRL/RAC Field Organizations and countries within IARU Region 2. DX stations residing in other regions may be contacted for credit and may submit entries as check logs.

The main focus of Field Day is to work as many stations as possible on the 160-, 80-, 40-, 20-, 15-, and 10-meter HF bands, all bands on 50 MHz and above, and to learn to operate in abnormal situations in less-than-optimal conditions. A premium is placed on developing skills to meet the challenges of emergency preparedness and acquaint the general public with the capabilities of amateur radio.

For Field Day 2023, several rules changes have been made. It's a good idea to make sure that your logging software has been updated to the most current version to incorporate these rule changes including the updated Canadian sections list. There are many facets to operating on Field Day and knowing the rules and keeping good logs are paramount to successful contacts.

Many local amateur radio clubs participate in ARRL Field Day. To start preparing for Field Day, check out [arrl.org/field-day](https://www.arrl.org/field-day) for the official rules and all the information you'll need. To find a participating radio club in your area, use the Field Day Locator on the page.

From ARRL Letter for April 6, 2023

Field Day Preparation

There is much time put in to prepare properly for Field Day. Everything can't be done at the last minute. You should start planning months in advance so that if anything is working, you still have time to fix any problems.

You need to find a good place to set up for Field Day. Plenty of space, a few close trees, and plenty of parking spaces for those who are going to participate in Field Day and for any people interested in what is going on. That's good for newspapers and TC stations. That gets the word out about Amateur Radio.

There's a need for people for assorted tasks. George, N3LAG, is our Field Day Chairperson. He started getting things started at the beginning of the new year. Adam will be getting the equipment that will be used during Field Day. Terry, KC3JHT, will be getting food together. Dean, AB3BD, will be in charge of safety. Larry, KC3JT, will be taking care of the antennas. Bob, KE3AW, will be taking care of the VE sessions.

There are a lot more tasks like checking generators, advertising, cooking equipment, and much more.

Come to the May 6th meeting at 7 pm and learn what goes into Field Day every year. You may find it so interesting that you may want to help next year. Field Day is not a contest. It's what Amateur Radio is all about. Setting up and operating under emergency conditions.

Club Commission Program Update

Clubs are using the Club Commission Program to generate income for the club and promote ARRL membership nationwide. From January 1 through March 31 of this year, various clubs generated 217 separate memberships, with 21 returning members, 59 new members, and 135 renewals. That translates to a total of \$1,875 paid in commissions to those clubs.

Development is underway to improve the process. As of now, the steps are the same:

- Distribute the application forms to prospective and existing members.
- Collect the applications and fill out a Club Reconciliation Form.
- Send all the forms with the dues to ARRL.

Once the above steps are completed, the club will receive a commission check from ARRL.

I have all the necessary forms for new or renewals. Contact me at n3iga@ptd.net and I'll send you the form you need.

Consider having a quarterly event at a club meeting to discuss ARRL membership and offer this to members. Members can renew at any time without losing time. If your renewal is generally in July and you renew in May, the time is added to your July date. In the spirit of ARRL's Year of the Volunteers, in 2023, we are offering the following promotion to clubs using the Club Commission Program:

- For every five new members signed through the Club Commission Program through the end of 2023, ARRL will give the club a copy of *The ARRL Handbook*, which can be used as a promotion, a door prize, an auction item at hamfests, or however, you choose.

Keep reading ARRL Club News for additional information on how clubs are using this program.

John, N3IGA, ARRL Membership Liaison

“QRP Cornet” Coax and Antennas By Barry G. Kery, KU3X

Let's get that QRP signal to the antenna with the least amount of loss.

You can run 1500 watts but if you feed that power into poor quality or high loss coax along with a junk antenna, you may not be heard as well as you think you should. When operating with very low power, like a portable QRP station, you want to maximize you signal.

We all pretty much know that LMR 400 or even hard line is very good low loss coaxial cable. But you really don't want to be carrying around that kind of coaxial cable to set up for a fun day in the park.

If you take notice to most of the QRP radios in the last article, they use BNC's to connect the coaxial cable to the radio. BNC's are in fact 50 ohm connectors. PL 259 connectors are in the range of 27 to 30 ohms depending on the manufacture. This creates an impedance bump. On HF it's really not a big deal and the losses are so slight that it's almost not even worth mentioning. But BNC's are so much easier to use. They can easily handle up to 1000 watts into a matched load and are great for use in the UHF region.

For portable operating you should consider choosing coax from the follow four types. Starting with the least amount of loss we have RG 8X. The next step down is go to RG 58. And the last two choices would be RG 174 or RG 316.

Here are the losses for each cable with two different lengths for comparison. These calculations are based on a matched 50 ohm load. As the SWR increases, so do the losses in the coax.

	10 meters	15 meters	20 meters	40 meters
RG 8X/100 feet	2.1 db	1.8 db	1.5 db	1.1 db
RG 8X/35 feet	.73 db	.6 db	.5 db	.3 db
RG 58/100 feet	2.9 db	2.4 db	1.9 db	1.2 db
RG 58/35 feet	.9 db	.8 db	.7 db	.5 db
RG 174/100 feet	5 db	4.1 db	3.1 db	2 db
RG 174/35 feet	1.5 db	1.2 db	1 db	.8 db
RG 316/100 feet	6.2 db	5 db	3.8 db	2.58 db
RG 316/35 feet	1.8 db	1.5 db	1.2 db	1 db

As you can see from the above chart, using RG 174 or RG 316 at a length of 100 feet is impractical. The losses are way too high. The best choice for this run would be RG 8X. You can get by using RG 58 and the person on the receive end would not notice any difference in signal strength. When it comes to only using 35 feet of coax, use what's convenient. There's nothing wrong with using RG 174 or RG 316 for this short of a run.

You want to keep you coax length to just enough coax to go from the radio to the antenna with a little room left over so you are not pulling the radio off of the table. If you choose to use RG 8X, which has the least amount of loss, I would start out with 100 feet of this coax. Next I would cut the 100 feet length into two lengths. I would make my cut at the 65 foot mark. This will give you three lengths to choose from when setting up portable. If your antenna is close to your operating position, the 35 foot length would be your choice. Need a tad more coax, use your 65 foot length instead of your 35 foot length. Need even more, now couple the two lengths together to get 100 feet. If you cut your coax in the middle, the 50 foot mark, now you have to use either 50 or 100 feet. Don't forget to take along a barrel connector to couple you coax. By not using BNC's, you must remember to take along an SO 239 to BNC adapter. I would also take along a 90 degree BNC adopter. This will take some of the load off of the radio's RF connector.

When using RG 58, I would make the same two lengths as above. When it comes to RG 58, what I have found over years of use from when I became a ham is from screwing and unscrewing the PL 259 from the SO 239, the center conductor inside of the connector would break. Having this happen in the field makes for a bad day. I have two lengths of RG 58 in my inventory. These were purchased as an assembly with BNC's already attached to each end. Behind each BNC was attached a stress relief boot. This

kept the center connector from breaking off inside of the connector. Installing your own BNC's on RG 58 will also prevent the center connector from breaking off inside of the connector. By design BNC's are far superior to a PL 259.

As you can see from the above chart, there is not too much difference in losses comparing RG 8X to RG 58.

Pictured below is 25 feet of RG 58. Take note of the plastic protective strain relief cover directly behind the BNC.



Use caution when deciding to use either RG 174 or RG 316. You want to use these cables in only short runs. The maximum length I would use would be 35 feet. If you choose to use either of these cables, I would make two lengths. One length would be 25 feet and the other would be 10 feet. There are two benefits for using RG 316. It is a much stronger coax that will take more physical abuse than RG 174 and it can handle more power. For QRP both can handle way more power than you will ever run so power handling is not a concern. If you are trying to squeak out the most power to the antenna and you want to carry around the least amount of weight in your go package, RG 174 would be the best choice between these two types of coax.

Shown below are two lengths of RG 174 coax. One coax is 25 feet long and the other is 10 feet long. On one end of the 25 foot long coax is a #31 snap on ferrite core with 4 turns of coax wrapped around it. This is a very effective balun that covers 80 meters to 6 meters.



Be careful when purchasing coaxial cable. Belden coax cable is one of your best choices. Watch what you purchase off of Ebay or out of surplus catalogs. I found some RG 58 coax with BNC's on both ends for a very reasonable price in a catalog where I purchase a lot of electrical components. The quality of the electrical components are very good so buying this coax seemed like a good idea. When I received the coax I attached it to my KX3 and put a watt meter and a 50 ohm load to the far end. I only saw 2.5 watts on the watt meter. This did not add up. I cut the connector off of the one end and peeled back the protective cover. This junk only had about 50% shielding, if that? Needless to say I did not use it.

A good place to purchase quality pre-made coax cables with connectors already on is, "Cables on Demand." DX engineering is yet another good place to purchase quality pre-made cables.

Enter parallel feeders. To keep your losses at a minimum, parallel feeders are something to consider. 450 ohm parallel feeders will have less loss than 300 ohm parallel feeders. The one down side of using 450 ohm feeders compared to 300 ohm feeders is the size. It takes up more storage space if one is focusing on a compact portable station. You also have to use a 4 to 1 balun along with a transmatch when using parallel feeders. But the payoff is less loss in the transmission line and you can use multi bands on just two pieces of wire for an antenna. More on this subject in the next article.

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

RULES FOR THE MILK HOUSE

1. If you bring in things to sell, you have three (3) months to sell it, whether at a Club Meeting or on a Wednesday/Saturday, after 3 months you remove it, or it will become Club property. Once it is Club property, it is the Club's desire to do what it wants with the equipment.
2. You bring it in, you take it out. Leave no trace. Clean up after yourself or be banned from the Milk House.
3. If you use the equipment, please make sure all power is shut off to the equipment and all antennas unhooked.
4. No equipment for sale goes past the doorway to the Radio Room. The Radio Room is for operating and for meetings. It is not extra storage space.
5. If you use equipment like the Winlink System, make sure you put it back where it belongs and not left on the counter.
6. If it doesn't belong to the Club, it must be removed from the Milk House.

There will be more rules in the future. Station Manager and his Assistant take these rules seriously. Please follow them so that the Club Station looks neat and presentable.

These rules have been seen by the Board of Directors and have been approved.

DLARC NET QUICK CHECK CALENDAR

May 2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3 DLARC NET George N3SQD	4 DLARC MEETNG 7:30pm	5 VE TEST SESSION 7 PM	6
7	8	9 VE TEST SESSION 7 PM	10 DLARC NET Ben N3WR	11	12	13
14 MOTHER'S DAY	15 BOARD MEETING 7PM	16	17 DLARC NET Doreen K3PDL	18	19	20 ARMED FORCES DAY
21	22	23	24 DLARC NET Terry KC3JHT	25	26	27
28	29 MEMORIAL DAY	30	31 DLARC NET Dave N3EYT			

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 PM at the Nancy Run Firehouse. TALK IN ON 146.700 (PL 151.4)

Club Station Telephone Number – 484 291-1527 Email Address – DLARC@ptd.net

THE W3OK TRUSTEE --- Barry Vogt / N3NVA

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

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