DELAWARE-LEHIGH AMATEUR RADIO CLUB Inc.

NOVEMBER 2024

W3OK CORRAL

Club Meeting **November 7th**, 7 PM at the Nancy Run Firehouse.
3564 Easton Avenue, Bethlehem, PA 18020
Will be also a Zoom meeting.

November Program

Solar Powered Station
By Larry Butler, KC3JTK

OCTOBER MEETING MINUTES

President, Terry, KC3JH, called the meeting conducted at Nancy Run Fire Company to order at 1902 hours.
Pledge of Allegiance was led by Terry.
President's Thoughts: None
Secretary's Report: Doug said that he forgot to send the Meeting Minutes to John for the Newsletter. Doug made copies of the Minutes and passed them around. He asked if there were any corrections or additions to the minutes as presented. A motion by Dean, AB3BD, to accept the report. It was seconded by Jay, KC3ZFR. Motion was voted and carried.
Treasurer's Report: Larry presented the Treasurer's report for the month of August. Dean, AB3BD motioned to accept. It was seconded by Doug, K6PGH and motion was carried.
Committee Reports:
Membership: 118 Voting Members plus 8 Life Members for a total of 126 voting members plus 7 Associate Members for a total of 133 members. There was a new Associate Member from the Classes which I just got.
Club Station: Barry, KU3X had some very disturbing news from the Club Station. Saturday, September 14th, I had to go to the Club Station for uncalled maintenance repair. The maintance was for abuse of abuse of Club equipment and Club property. One or more people had decided to write graffiti all over the new benches in front of one radio. That is not acceptable. Barry took a sander and got rid of the graffiti. There are plenty of pads around the Club Station to take notes on instead of on Club property. The second item that Barry wanted to go over is the Club's antennas. The patch panel

where you hook up the antenna you want to use. Each connector is marked with what frequency or frequencies that antenna works on. NEVER use an antenna that is not for that frequency. He said that he knows of 2 members that have use the OCF antenna on 15 meters. It clearly shows on the patch panel that OCF is not for 15 meters.
Trying to send on 15 meters could do damage to the Balun. May also did a job on your finals. The last thing Barry wanted to say is misuse. If you do not know anything about a radio, ASK! He found on 590 radio that the mic gain was turn all the way up. People think that if others cannot hear them, they need to turn the mic gain all the way up. You do not do that. Barry repeated several times that if you have any questions about the radio you are using, ask someone. Barry also said that if anyone wants a one-on-one about a radio that he would be glad to come up to the Club Station to show you how to operate the radio. Make sure you take good notes so that you can refer to them later. There is plenty of paper around for you to take notes on.

Tech Committee: No Report

Repeater: Working

Website: No report

New Business:

John, N3IGA, talked about the PA QSO Party coming up the 2nd full weekend in October. It is the 12th and 13th from noon to midnight on Saturday. 9 am - 6 pm. It is a fun contest trying to get all 67 Pennsylvania Counties.

Old Business: None

Adjournment: There being no further business, the meeting was adjourned at 1923 hours.

Program: Awards were presented to members for their activities of the past year.

John Holmes, N3IGA
DLARC Secretary

DLARC Board Meeting Agenda
Monday, October 14, 2024
7 PM
100 Gracedale Avenue, Nazareth, PA 18064

A meeting of the DLARC Board of Directors at the 911 Center was cancelled because not enough members for a Quorum.
Submitted by
John, N3IGA
DLARC Secretary

NOVEMBER VE TESTING SESSION

On 8 November 2024, 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.

Aferiy P210 Power Station
Barry G. Kery, KU3X

The Aferiy P210 is a 2048-watt hour LiFePO4 power station that will supply up to 2400 watts peak power. This power station will also double as a UPS.

To charge the power station all you have to do is plug the unit into a standard 115-volt wall outlet. The power station will charge on either 50 or 60 cycle. When first plugged in the cycle status will change from 50 hz to 60 hz. By default, the power station will charge consuming 1100 watts. Once the batteries

reach the 80% level the charge rate will drop to 500 watts until they are fully charged. On the right-hand side of the power station is a button that is used to turn on the 6 AC power outlets. By holding this button on for 10 seconds the power station will go into the charge setup mode. This will allow you to choose your charging power level. You can select from the following choices: 300, 500, 700, 900 or the 1100-watt level. There are three ways to charge the power station. One way is by the AC input, the second way is by solar panels and the third way is by a vehicle's cigarette lighter type power outlet. Charging via solar panel or from your car, the input to the power station is via an XT90 socket. The cables needed to charge via a solar panel are supplied with the unit. The car charging cable is an option. I purchased my Aferiy last week. Today I received an email from Aferiy and they thanked me for registering my power station and said they are going to send me the car charging cable for free. OK by me!

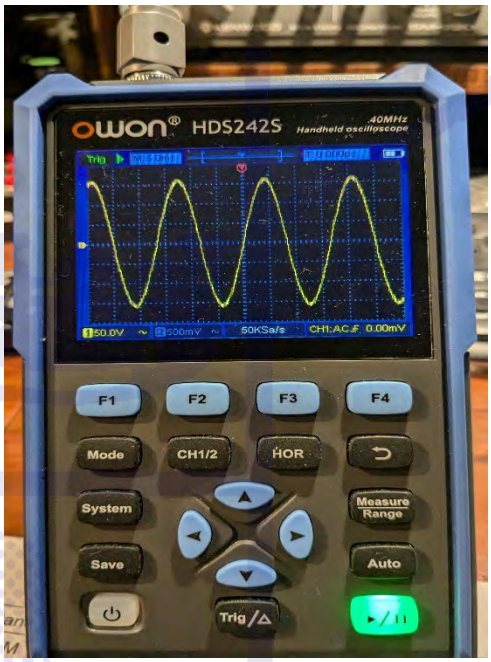
If you charge via solar panels do not exceed 50 volts or exceed 500 watts. You will damage the power station and the warranty does not cover this. When charging from your car, the power station senses the lower charge voltage and will only charge at a rate of 110 watts. That comes to about an 8.5-amp current drain off of your car's electrical system. Once you increase the charge voltage to over 15 volts, the unit will charge at a much higher rate and draw over 16 amps of current off of the charging source. **Warning**…. Some vehicles already have an AC power outlet for powering laptops and other low current drain items. DO NOT plug the Aferiy into one of these outlets. Most of these outlets are rated at 150 watts or

less. Since the Aferiy draws 1100 watts while charging, you will overload the car's AC power outlet. The power station can be charged over 3000 times. LiFePO4 batteries usually last 10 years or more if not abused.

The power station has 6 each AC power outlets on the right-hand side of the unit, as shown below. The button just above the outlet cover is used to turn on the outlets. You may notice two cooling fans just above the push button, behind the grate. They are used to cool the inverter and are thermally controlled. When you first turn the unit on, they will cycle on for about 10 seconds.

Some inverters will produce a square wave, some will produce a modified sign wave, but the Aferiy produces a pure and clean sign wave. The Aferiy outputs 110 volts. I plugged two heat guns into the power station, turned them on and it

loaded the power station down to 1850 watts. I checked the output voltage and it remained at 110 volts. While using the Aferiy to power my portable station I did not notice any RFI issues. In other words, no interference was noted on any of my radios.



As mentioned above, the power station can be used as a UPS. Plug the unit into an AC outlet, turn on the Aferiy via the power button near the top right-hand corner of the display, plug in what you are supplying power to and then push the button on the right-hand side of the until, just above the 6 AC outlets, to turn on the AC power out sockets. The unit puts the internal batteries in bypass. If power to the supply is dropped the unit will supply power from the internal batteries within 10 ms. In UPS mode the station will supply a continuous power level of up to 1100 watts while in the bypass mode.

The display is packed with useful information. The center of the display shows the charge status of the internal batteries. The top left corner will show the amount of time left to charge the batteries. The bottom left shows how much time is left until the batteries are discharged. The bottom right-hand side of the display shows how much power drain is being consumed at that time and the top right-hand side shows how many watts is being supplied to charge the power station.

Starting at the top right-hand corner of the panel, you will see the power button for powering up the power station. Under that is a button to turn the light on which is just below the lights on / off switch.

On the top left-hand side of the panel is a button for turning on the DC outlets. Under that button is the cigarette lighter style 13.8 volt at 10-amp DC socket. Under that are two 13.8 volt at 3-amp coaxial type sockets. They will accept 5.5 mm by 2.1 mm plugs. On the bottom left-hand side of the panel is the XT60 male power outlet. This socket will supply 13.8

volts up to 25 amps. The XT60 plugs do not come with the unit. They can be found on eBay or Amazon and are very inexpensive.

On the bottom of the panel, just under the display, are numerous types of USB sockets. There is a button just to the right of the last USB socket for turning on that part of the power station. I think I should mention that you can turn on all of the power outlets at one time if needed. I did notice that some of the smaller power stations I researched limited you to only one type of power outlet that can be turned on while others will remain off. On the Aferiy you can turn on every power outlet and use all of them at the same time, including the light on the front of the unit. You can also charge the power station at the same time.

There are two handles on the top of the power station that makes it easy to carry. The Aferiy is not lightweight. It weighs 48.5 pounds. There is also a little storage compartment, with a lid, on top of the Aferiy for storing your power cables. The Aferiy uses LiFePO4 batteries with a built in BMS (battery management system). You cannot over charge the batteries nor can you deplete them to a point that the batteries would be damaged. The unit is also protected from short circuits or overloads via circuit breakers and is thermally protected.

So why did I purchase the Aferiy P210? One reason was I needed something to keep the lights on in my house overnight during power outages. For daytime power outages I use my Honda EU2000. The last thing I want to do is use the Honda generator unattended overnight. The second reason was ham

radio related, which is the reason for this article in the club's newsletter.

I enjoy activating POTA from any of the local state parks. I usually operate with either 5 watts, 40 watts or 80 watts. My 20-amp hour LiFePO4 battery can run my radio and computer, in the park, with up to 100 watts out for the time I set aside to operate. But how about running my POTA station at 400 watts out? Doing a little math and trying to find a balance of a power station that is big enough to manage the job but not so big as to break my back and supply enough power to operate my station for a reasonable amount of time, I found the Aferiy P210. When I activate a POTA station by myself, I usually operate from inside of my van. So, I loaded up my van and off to Lake Nockamixon I went.

I set the gear up inside of the van and started to operate. I used my digital voice recorder to call CQ and hammered away like I was in a major contest.

The radio is a Yaesu FT-710 with the FH-2 remote keypad for triggering the DVR. To the left is my Windows laptop that uses Log4OM for logging. I use my cell phone as a WiFi hotspot. The solid-state amplifier is an Elecraft KPA500. Since I only use matched resonant antennas, no ATU is required.

The power station is placed on the floor next to the rear door. Shown below is the Aferiy with the power cable for the radio plugged into the XT60 socket on the front and the SS amp's plug on the right-hand side of the power station. The laptop uses 12 volts. I use an Anderson Power Pole Y connector that shares power from the DC power cable going to the radio.

So how did the power station hold up? The answer is, “better than I ever imagined”! After one hour of heavy use the battery level was only down by 12%. After three hours of continuous use the batteries were at the 66% level. I took a very short lunch break and then back at it. My total operating time, including my short lunch break, was 4 hours. I got on the air at 0815 hours and stopped at 1215 hours. At the end, the battery level was at 59%. That means that I could have kept operating for four more hours and then some.

Before I sat up at the park I made a quick test at home. I put the station together on my work bench. I keyed the radio in the RTTY mode at 400 watts out of the KPA500 and the station drew 850 watts of power off of the power station. The capacity of the power station is rated at 2048-watt hours. I figured this was good for a tad over 2 hours of operating. Since SSB with audio compression is rated around a 50% duty cycle, I thought the most I would get out the power station would be around 4 hours and that was plenty for me. What I forgot to add to the equation was receiving and logging time. I am not drawing high current off of the power station while logging. To be able to keep a POTA activation going for eight hours at 400 watts out with use of a box of batteries that only weighs 48.5 pounds. is simply amazing!

Need more operating time? Just plug in your solar panels and you will charge the power station while you operate. Here is a trick I found by experimenting. I have two 20-amp hour LiFePO4 batteries in a plastic carry case. I plugged them into the XT90 charging connector and I was able to charge the power station at 110 watts off of the external batteries. I

checked the current drain off of the external battery pack and it drew 8.5 amps. What this equates to is a four-hour charge at 110 watts per hour. For me that would add another 2 hours of operating time to my eight hours.

I purchased mine off of Amazon. The link it too long to print so just go to Amazon.com and search, “Aferiy P210.” It lists for $1399. Click on the coupon and get $400 off. I watched numerous YouTube video and one video by Amily Clark said, “enter my name until Sept 9 and get another 10% off of the list price.” Darn…. Sept 19, I missed it by 10 days. So, I began to process my order and figured why not enter Emily Clark in the window anyway. I did and it actually applied the additional 10% off. Made me a happy camper. It took about 7 days to receive the power station.

EDITIOR’S NOTE:

The new Executive Committee list is located at the back of the Newsletter as always. Note that this listing is up to date as of 3 October 2024. The new Executive Committee starts their position as of 0001 on 4 October 2004. Welcome the new Executive Committee.

VE TEST SESSION

On 8 November 2024, 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.

MEMBERSHIP DUES ARE DUE!

DLARC membership is due for 2025. The best way to renew is to log in to dlarc.com, click on the "Members" menu item, go to "Renew membership" tab and click the "Join or Renew" button at the appropriate member level. Check that your information is up to date and remit a payment via Paypal. A Paypal account is not required for the transaction. If you need online help, please contact the web team via email or at the monthly meetings.

DLARC Membership Dues Rates:
Regular Membership
18-64 years of age Jan through Dec - $25
65 and over or retired from all forms of employment (no age limit) Jan through DEC - $20
Additional Family member each - $5 Please identify who the Family Member is.
Associate Individual Membership - $15.

If you need to pay by checks payable to D.L.A.R.C. and ensure that your callsign appears in the memo field. Paying with cash is discouraged, but you really, really must kindly make certain you are prepared with the correct sum according to the rate table shown above.

If mailing, send 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 as soon as possible via mail. 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

November 2024

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2
3	4	5	6 7 pm DLARC NET N3WR Ben	7 CLUB MEETING 7 PM	8 VE TESTING 7 PM	9
10	11	12	13 7 pm DLARC NET K3PDL Doreen	14	15	16
17	18	19	20 7 pm DLARC NET KC3JHT Terry	21	22	23
24	25	26	27 7 pm DLARC NET N3EYT Dave	28 THANKSGIVING DAY	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 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 needed 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 take part 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 7:30 PM on 3958 +/- 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 2023–2024

OFFICERS

President – Terry Swinney / KC3JHT ---------- ldocapt@gmail.com
Vice President – Diana Lambert / KC2ZGQ -- diana.lambert1@verizon.net
Secretary – John Holmes / N3IGA ---------- n3iga@ptd.net
Treasurer – Larry Butler / KC3JTK ---------- lrbutler@ptd.net

BOARD of DIRECTORS

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Dave Frankenfield / N3LWY ---------- mycallsign@gmail.com
Steve Harper / W3NAM ---------- sharper3152@gmail.com
Doreen Gramling / K3PDL (Past Pres.) ------- gramlingda22@myyahoo.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 PM at the Nancy Run Firehouse. TALK IN ON 146.700 (PL 151.4)
Club Station Telephone Number **484-291-1527** Email Address – W3OK@arrl.net

THE W3OK TRUSTEE --- Barry Vogt / N3NVA

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

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