

**DELAWARE LEHIGH AMATEUR RADIO CLUB Inc.**

**APRIL 2018**



***W3OK***

***CORRAL***

**Club Meeting April 5<sup>th</sup>, 7:30PM At the  
Bethlehem Township Community Center**

**APRIL MEETING PROGRAM**

**“Deep Space Communications”**

**Ken / KB3MDT**



**MARCH PROGRAM**

**“ Common Mode Noise Problem & Solutions ”**

**Mark / KC3ENV**



## MINUTES FROM THE MARCH MEETING

A General Meeting of the Delaware-Lehigh Amateur Radio Club was held on March 1, 2018 at the Bethlehem Township Community Center, Bethlehem, PA. President, Steve Harper, W3NAM, called the meeting to order at 7:31 p.m.

### President's Report:

- There is a new Club Station phone number: 484-291-1527
- As a result of the February 10<sup>th</sup> DLARC emergency service drill on simplex, the Board wants to identify the best areas for stationing members during an emergency.
- The Board has identified a number of ways to introduce ham radio to young people. Steve asked members to consider volunteering to spearhead a Youth Committee.
- The Board's final proposals for revising the By-Laws are ready for review by the membership. Copies are available at the meeting, and will be available at the April and May meetings. It takes three-quarters of the voting members at a General meeting to adopt the By-Laws changes. A vote will be held at the May meeting.

### Member Announcements:

- Al (W3CE) and Barb Weimann (W3ATC) attended Quartzfest and the Yuma HamFest.
- Mark Bond (W2MB) mentioned that a new DMR repeater will be installed on Montana Mountain.
- Pete Varounis (NL7XM) was in Cuba for a week attending a party for YLs who turned 15.

**Secretary's Report:** JoAnn Schaffer, ND3JJ, announced that the Minutes for the February General Meeting were emailed to the membership on Feb. 23, 2018. She read to the membership a revised item under Old Business, section a. A motion to accept the Minutes was made by Mark Bond (W2MB), seconded, and so moved.

**Treasurer's Report:** Mike Gower, KB3LOD, gave his report. A motion to accept the Treasurer's Report was made by Evelyn Uhler (W3DOY), seconded, and so moved.

### Committee Reports:

**Membership:** JoAnn (ND3JJ) reported that 145 members who have paid their 2018 dues; 56 members have not yet renewed. New Member applications were received from: Ian Rufe (KC3KOP), Scott Scheirer (KC3PCS), John Schneck (K3UBW), and David Eisenberg (WA3HVR). A Motion to accept these applications for membership was made by Barry Kery (KU3X) seconded, and so moved.

**Education:** Bob Green (KE3AW) reported that registration for spring licensing classes, which start on March 6, is picking up: there are 12 people for the tech class, and 6 or 8 for the general class.

### Old/Unfinished Business:

- David Blankenship (N3EYT) reported on the Club' emergency drill on simplex on Feb 10th. The premise of the exercise was that all commercial power was out. Twenty-seven contacts were made, 19 through relays, most from an operator located in the tower at Lehigh University. We tried using DMR, but only got one respondent. The Tech Committee will check the Milk House antennas because we should have had better reception within a 25-mile radius. Barry (KU3X) pointed out that if adjustments are need, climbing the tower will not be permitted by the County.
- Ben Ramig (KB3CTX) has purchased of a VoiP box for the Club Station. Our new Google phone number has voice mail. He suggested that we not use the Club answering machine so callers do not get overlapping messages. It was decided that we did not need 911 calling capability on the Club phone. The Board will discuss whether to use CallFire or DialMyCalls for blast services. One member suggested another option: Whatsapp. Another recommended that we use the service to reminder members of each General meeting.

### New Business:

- It has been suggested that the Club could use a Contesting Chair, who would act as a "cheerleader" to get more member participation. There were no volunteers.
- On the sign-in sheets, members were asked to indicate in which areas they would be willing to act as an Elmer. The goal is to offer sessions at the Milk House on such topics as antennas, the use of Club radios, DMR, digital options, CW, and kit assembly.
- George (N3SQD), the Club's ARES/RACES Chair, thanked David Blankenship for handling the emergency drill. George said he will be running workshops on Saturdays in March for those who are interested in learning more about VH/UHF set up for emergency operations.
- Stephanie Koles (WX3K) noted that members have expressed interest in our sponsoring a HamFest. She suggested that we start with a winter swap meet, which might also include a youth lounge with activities like designing QSL cards, a 2-meter contest, or access to equipment they can experiment on. About 20 years ago the Club held regular HamFests, which last about 12 years. We have also held a swap meet **instead of a meeting** program. As one member pointed out, HamFests are really social events. Highlighting new technologies might bring a new flavor to it and attract more IT people. We might also incorporate a maker fairs. It was suggested that we start by looking for local maker fairs that we could link up with.
- Harold Sherer (AE3T) donated a Handicam to the Club, which will be used to record presentations, if the speaker agrees, and then posted on YouTube for members only.
- Bob Green (KE3AW) asked if anyone was interested in going as a group to see the Iron Pigs. About 15 people

raised their hands.

- Carl Seier (AA3IX) requested that we remove old items for sale that are still listed on our website. He wondered if it might be worthwhile for the Club to sign up on EchoLink for the use of former members who have moved of the area. (To be discussed at a Board meeting.)

**Adjournment:** There being no further business, the Meeting was adjourned at 8:20 p.m.  
Minutes submitted by Secretary JoAnn Schaffer, ND3JJ

#### APRIL QUICK CHECK CALENDAR

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1 <b>EASTER</b>	2	3	4 DLARC Net (ND3JJ)	5 DLARC Meeting 7:30 PM	6 NO VE SESSION	7 Passover Ends
8 Eastern Orthodox Easter	9	10	11 DLARC Net (W3CE)	12	13	14
15	16	17 <b>TAX DAY</b>	18 DLARC Net (KC3II)	19	20	21
22 <b>Earth Day</b>	23	24	25 DLARC Net (N3SQD)	26 DLARC BOARD MEETING	27	28
29	30					

#### APRIL CONTESTING AT THE OK CORRAL



- April 7 & 8 – SP DX Contest
  - EA RTTY Contest
- April 14 & 15 – OK/OM DX Contest – SSB
  - Yuri Gargain International DX Contest
- April 21 & 22 – Worked All Provinces of China DX Contest
  - CQMM DX Contest
- April 28 & 29 – SP DX Contest
  - Helvetia Contest



#### MARCH PROGRAM REPORT

##### “COMMON MODE NOISE”

**Problem & Solution  
MARK / KC3BNV**

Noise is common in ham radio. They come from many sources. Especially from today's electronic devices like TVs, cell phones etc. it also comes from household electric power and also earned of course coming from your antennas mismatch.

Mark demonstrated how he handled his noise levels on 80 m which is his prime operating frequency using Toroids of his own construction he built chokes which is helped keep his noise level down to an acceptable level.

It wasn't that easy, because he researched and built his own trunks using his knowledge and some testing equipment he was able to come up with satisfactory chokes. He showed the formulas he used, and explained the values injected into the formulas to reach the results be required. He compared his formula results with that of a antenna analyzer. Later on he obtained a spectrum analyzer which after some difficulty he was able to get it to function and aid in the construction of his chokes.

Using a slide presentation and a printed out guide, Mark was able to demonstrate all that was needed to get a usable noise level deduction. While this may sound simple it did require a lot of research on his part.

Mark ended the presentation with the usual question-and-answer session.

If you were not here for this presentation, you missed and highly instructive presentation.

### VE TEST SESSION

There will not be a test session this month. The next session will be on May 4<sup>th</sup> at 7 PM at the Northampton County 911 center. Pretest registration is required. Contact John / NC3P at nc3p@arrl.net

### NEW MEMBERS

The DLARC is continuing to grow, so be sure to greet our new members, shake their hands, and give them a warm welcome to our club. The newest members are Ian Rufe, KC#KOP, Scott Scheirer, KC3PCS and David Eisenberg, WA3HVR.

### MONTHLY BRAIN TEASER

"A special prize awaits the first Club Member to submit the correct answer to this month's Brainteaser to the Pete / NL7XM, *only*, at nl7xm@arrl.net The winner must be present at the next Meeting to receive it, or it goes unrewarded. Officers, Board members, Newsletter staff, and Brain Teaser Authors are not eligible to win."

de Pete / NL7XM

### MARCH BRAINTEASER ANSWER

On a clock –10 plus 3 is 1

The winner is Bob / KE3AW

### APRIL BRAINTEASER

What four- digit number, when multiplied b y four, equals the original with its digits in reverse order.



### REFLECTIONS FROM THE PAST



HACKETT'S PARK, Field day 1983

GET YOUR BOTTLE TODAY



Only \$29.95 & Free Shipping at Amazon!



## TROUBLESHOOTING A "NOISY CW SIGNAL"

by Paul Schlueter III, KB3LIC

It was so interesting to read the Nov. '17 meeting minutes in the newsletter, and learn about the Milkhouse's CW troubles. Not to step on anyone's previous troubleshooting work (which I happily assume was done well), this is a good opportunity to address a few basic TS procedures so the less experienced can learn.

As described, "tearing up the front end" of a receiver usually means that the incoming signal has severe power spikes overdriving the receiver input. CW is a process of abruptly turning on or off a steady-state (DC) signal with a paddle, which is basically a switch. The "on" and "off" edges of active signal presence should ideally have "square" edges without spikes. The switching process is notorious for introducing spurious voltage spikes, which get amplified many times in the transmitter rig. A well-designed CW transmitter eliminates such spikes while they're small signals; assuming that the Milkhouse uses a commercial, well-designed rig, the most likely source of trouble in a noisy output is some part failure within the transmitter, and not a design flaw requiring aftermarket "output filter" modification now.

In a technical lab, you could trace the problem signal using oscilloscope and spectrum analyzer readings, but most people don't have those devices at their home shack. What can you do to TS such a problem without a lot of gear and technical experience?

One of the simplest TS procedures is called "swap and test." It's just like it sounds. One piece of gear at a time, you swap out a portion of your rig for your substitute. Since it's usually easiest (and cheapest) to fix problems involving the smallest signal values, begin at the beginning; change out your CW key for a different unit. Test your rig to see if the problem persists. If it does, swap back and move on to the next component in your rig. If the problem goes away, you have a good indication that the key was the source of your trouble. Old automotive contact point ignitions regularly "burned" from repeated sparking; refreshing the contacts with emery cloth was a common fix of that problem. Ignition fixes often included replacement of the "condenser" (a.k.a. a capacitor); replacing the electrolytic capacitors - near the front end of the rig is a good idea, since these are well-known to "dry out" and become "leaky" with age.

The next device you swap is the one your key plugs into. Chances are good that you're running a single-component transmitter that includes several preamps, a power amp, and a built-in power supply. You can't easily swap and test sub-circuits in a unit-construction rig, so just swap the whole transmitter. If you swap out a whole unit and the problem goes away, that's a good sign that the trouble is inside the unit you removed. It can be given an in-depth internal TS job at another time.

It's remotely possible that your transmitter has swappable components within. One example is that old vacuum tube technology: with tubes, a careful tech (tubes carry voltages that can be lethal!) can swap one tube at a time inside the unit, to learn if it's simply one tube acting glitchy (one problem with tubes was that they were pretty often a source of trouble.) Be sure to turn off the rig and unplug it before playing with tubes; ask an Elmer for help in learning how to discharge the high-voltage power capacitors in the power supply before poking around inside! In some rigs, only the power amp (the final transmitter stage) uses tubes, and as with any other tube, these could be causing your noise. Tube SOCKETS are often a source of glitches; be sure to check, clean and tighten the contacts of sockets before you put the new tubes in!

Transistor units are tougher to troubleshoot, but the good news is that they seldom go bad (unless abused somehow). If the unit includes IC chips, those chips might be mounted in solderless sockets, which give you an opportunity to swap and test them - again, it's not likely that the chip will go bad, but sometimes there can be an intermittent connection in the socket, and just the act of swapping chips can restore a good connection. Such bad connections are often the cause of signal noise.

Another thing to TS is the building's AC power system. To check this, remove your entire rig and take it to another building, plug it in, and fire it up. There's a remote possibility that some problem in the AC electrical supply was passing through the rig and showing up in the signal as noise. CW slams the building's power supply with a load that turns on/off suddenly (though the rig's own power supply should filter AC supply voltage, this step of TS might help you to isolate the source of trouble). Keep in mind that most buildings have two "phases" of AC power, the "plus" and "minus" halves of the big power transformer on the utility pole. To avoid some (potentially lethal) hazards, most AC sockets within a given room are all on one phase or the other (not a combination), but over time the addition of new sockets can sometimes bring the wrong phase into a room. The best advice for novices IS to have an Elmer or an Electrician check all the outlets in the shack to ensure that they all run on the same phase.

Don't forget to check your antenna connections; these can also cause noise. The transmission line between the power amp and the antenna feed point might have an insulation problem that shows up as weird noise in a CW signal, so swap it to make sure. Check all the connection terminals (especially those found outdoors) for tension and corrosion; terminals can also have faulty insulation ("the jiggle test" will often reveal this problem), though this problem seldom introduces "spikes" on the output.

The club solution, installing relatively expensive filters on the high-power output end of your rig, has a good chance of curing the propagation of spurious signal (noise); what it does not do is isolate and solve the root cause of the spurious signal itself. Remember, it's almost always cheaper, safer, and easier to fix problems where your signal is weak (at the front end), so that's the best place to start looking. Troubleshooting is really a Sherlock Holmes-type exercise of rationally eliminating all the possible sources of trouble. If done right, it will solve the problem (though the fix may be one you hoped you wouldn't have to spend \$\$\$ on!). It sometimes also reveals problems you never knew you had (worn insulation, broken connectors, coffee spills inside your gear, etc.). It's a skill that improves with practice (and it helps to start out with a tutor). Becoming adept at troubleshooting might even lead you into deeper study of electronics theory, and a repairman hobby. Good luck!

## **ARRL REQUESTS EXPANDED HF PRIVILEGES FOR TECHNICIAN LICENSEES**

ARRL has asked the FCC to expand HF privileges for Technician licensees to include limited phone privileges on 75, 40, and 15 meters, plus RTTY and digital mode privileges on 80, 40, 15, and 10 meters. The FCC has not yet invited public comment on the proposals, which stem from recommendations put forth by the ARRL Board of Directors' Entry-Level License Committee, which explored various initiatives and gauged member opinions in 2016 and 2017.

"This action will enhance the available license operating privileges in what has become the principal entry-level license class in the Amateur Service," ARRL said in its Petition. "It will attract more newcomers to Amateur Radio, it will result in increased retention of licensees who hold Technician Class licenses, and it will provide an improved incentive for entry-level licensees to increase technical self-training and pursue higher license class achievement and development of communications skills."

Specifically, ARRL proposes to provide Technician licensees, present and future, with phone privileges at 3.900 to 4.000 MHz, 7.225 to 7.300 MHz, and 21.350 to 21.450 MHz, plus RTTY and digital privileges in current Technician allocations on 80, 40, 15, and 10 meters. The ARRL petition points out the explosion in popularity of various digital modes over the past 2 decades. Under the ARRL plan, the maximum HF power level for Technician operators would remain at 100 W PEP. The few remaining Novice licensees would gain no new privileges under the League's proposal.

ARRL's petition points to the need for compelling incentives not only to become a radio amateur in the first place, but then to upgrade and further develop skills. Demographic and technological changes call for a "periodic rebalancing" between those two objectives, the League maintains.

"There has not been such a rebalancing in many years," ARRL said in its petition. "It is time to do that now." The FCC has not assessed entry-level operating privileges since 2005.

The Entry-Level License Committee offered very specific data and survey-supported findings about growth in Amateur Radio and its place in the advanced technological demographic that includes individuals younger than 30. It received significant input from ARRL members via more than 8,000 survey responses.

"The Committee's analysis noted that today, Amateur Radio exists among many more modes of communication than it did half a century ago, or even 20 years ago," ARRL said in its petition.

Now numbering some 378,000, Technician licensees comprise more than half of the US Amateur Radio population. ARRL said that after 17 years of experience with the current Technician license as the gateway to Amateur Radio, it's urgent to make it more attractive to newcomers, in part to improve upon science, technology, engineering, and mathematics (STEM) education "that inescapably accompanies a healthy, growing Amateur Radio Service," ARRL asserted.

ARRL said its proposal is critical to developing improved operating skills, increasing emergency communication participation, improving technical self-training, and boosting overall growth in the Amateur Service, which has remained nearly inert at about 1% per year.

The Entry-Level License Committee determined that the current Technician class question pool already covers far more material than necessary for an entry-level exam to validate expanded privileges. ARRL told the FCC that it would continue to refine examination preparation and training materials aimed at STEM topics, increase outreach and recruitment, work with Amateur Radio clubs, and encourage educational institutions to utilize Amateur Radio in STEM and other experiential learning programs.

"ARRL requests that the Commission become a partner in this effort to promote Amateur Radio as a public benefit by making the very nominal changes proposed herein in the Technician class license operating privileges," the petition concluded.

## **ARES TRANSITIONING TO NEW ONLINE REPORTING SYSTEM**

The Amateur Communications, and reporting system. The new system will allow information to be logged by ARES members and managed through the Field Organization. The advent of *ARES Connect* is one of the key elements highlighted in "The Amateur Radio Emergency Service (ARES) 2017 Annual Report," released this week.

"*ARES Connection* is a volunteer management system that covers event signup, reporting, and roster management," ARRL Emergency Preparedness Manager Mike Corey, K11U, said. "It does not change how ARES operates when serving a partner entity; it is simply a system that will make managing volunteers and events easier." Beta testing of *ARES Connect* will begin in March. ARES made changes to its report forms last year to make it easier to process information at ARRL Headquarters and to standardize the format for all forms. ARES Monthly Reports have been posted to the ARRL website, providing regular information on Amateur Radio public service communication activity, the report noted. According to the 2017 report, ARES membership stands at 31,332, up by nearly 13% from 2016. The number of emergency operations events reported was up by 665 from the previous year, with 1,913 reported in 2017. The top three states in terms of ARES membership in 2017 were California (2,265), Texas (1,930), and Ohio (1,858).

Reported ARES events amounted to 51,673 in 2017 -- a 4% increase -- accounting for 718,930 volunteer hours at a calculated value of more than \$17.3 million.

"There was a noticeable increase in reported activity during August through November," the *ARES 2017 Annual Report* said. "During this period there was Amateur Radio response activity for hurricanes Harvey, Irma, and Maria; wildfires in the western states, and the total solar eclipse that occurred on August 21."

According to the report, 26 states gained ARES members, while 13 lost members. Amateur Radio Emergency Service (ARES) will phase out the traditional ARES report forms later this year in favor of an online system called *ARES Connect*, a volunteer management, com

## HAM RADIO “A SPECIAL HOBBY” YOUNG ARRL MEMBER TELLS COLLEGE PUBLICATION

A

rising star in the Amateur Radio world -- 19-year-old Ruth Willet, KM4LAO, of Lawrenceville, Georgia -- has caught the eye of her school, Kettering University in Michigan, where she is majoring in mechanical engineering and engineering physics. Willet already has attracted attention through her ham radio activities. Last spring, she was the keynote speaker at the 32nd annual DX Dinner® held in conjunction with Hamvention®, where her topic was "Experiencing the Hobby of a Lifetime." The previous summer, she was a member of the 2016 Dave Kalter Memorial Youth DX Adventure, which operated from the island of Saba that year. Last year, she won a QST Cover Plaque Award for the article she wrote about her YDXA experience. At the 30th Hamvention Youth Forum in 2017, Willet spoke on "Plugging into Your Valuable Club Resources." She is the recipient of the ARRL Rocky Mountain Division Scholarship.

*Kettering University News* took notice of Willet in a February 12 article, "Kettering University Student Brings Ham Radio Hobby, Expertise to Campus," by Sarah Schuch. The article explains how an early fascination with Morse code led Willet into ham radio and inspired her to obtain her license in 2015. She now holds an Amateur Extra-class license.

"I would encourage people to consider exploring Amateur Radio, because it's a hobby that allows you to explore anything from technical electronics to international friendships," Willet is quoted as saying in the article. "It's such a special hobby because there's so many people that want to get to know you and want to help you learn and grow. It really has enabled me to mature into who I am today."

Set to graduate in 2021, Willet said her ham radio experiences have taught her a lot, some of which she is able to apply to her studies, and vice versa. She hopes to start an Amateur Radio club on campus this spring to get more students interested. In the article, Willet also pointed to Amateur Radio's public service role, citing the devastating 2017 hurricanes, where ham radio sometimes was the only available communication resource.

Ruth Willet and her mom Sharon, KM4TVU, participated in ARRL's highly successful National Parks on the Air (NPOTA) event in 2016, which also was mentioned in the Kettering article.

"It's a stress relief for me," Willet said of ham radio. "I really enjoy sharing this hobby with other students."

## POSTPONED DXPEDITION TO DISPUTED SPRATLY RESET FOR MARCH

An international Amateur Radio team that postponed a December 2017 DXpedition to the disputed Spratly Islands now plans to be on the air in early March from Layang Layang Island — also known as Swallow Reef — under Malaysian call sign 9M0W, with CW, SSB, and digital operation on 160 through 6 meters. The team, headed by Hrane Milosevic, YT1AD, had to change its plans because the resort on Layang Layang Island, from which the DXpedition will operate, was closed from December until February. In addition to its call sign, the 9M0W team has a landing permit from the Malaysian government. While the Royal Malaysian Navy maintains a presence on the reef, ownership of the Spratlys has been asserted by the People's Republic of China (PRC), Taiwan, Vietnam, and the Philippines — in addition to Malaysia. The Spratlys are #56 on Club Log's DXCC Most-Wanted List.

A group of islands and associated "maritime features" (reefs, banks, cays, etc.) of economic and strategic importance, the Spratlys are just part of ongoing territorial disputes throughout the South China Sea, characterized by diplomatic stalemate and the employment of military pressure — including the occupation of disputed territory — to advance territorial claims. The Spratlys and Scarborough Reef, another rare DXCC entity, have caught the attention of news media in recent years, owing to the PRC's increasingly vocal objection to the presence of fishing vessels as well as that of American naval vessels transiting the area's busy trade routes in order to assert the right to freedom of navigation within what the US considers international waters.

The approximately 15-acre Layang Layang Island includes some land "reclaimed" from the ocean floor. The PRC has also been involved in an ambitious program of artificially expanding the land mass of South China Sea islands. In 2014, China commenced dredging activities within the Spratlys and, the following year, satellite images showed that China was building an airfield on Fiery Cross Reef, while continuing land reclamation at other sites in the region.

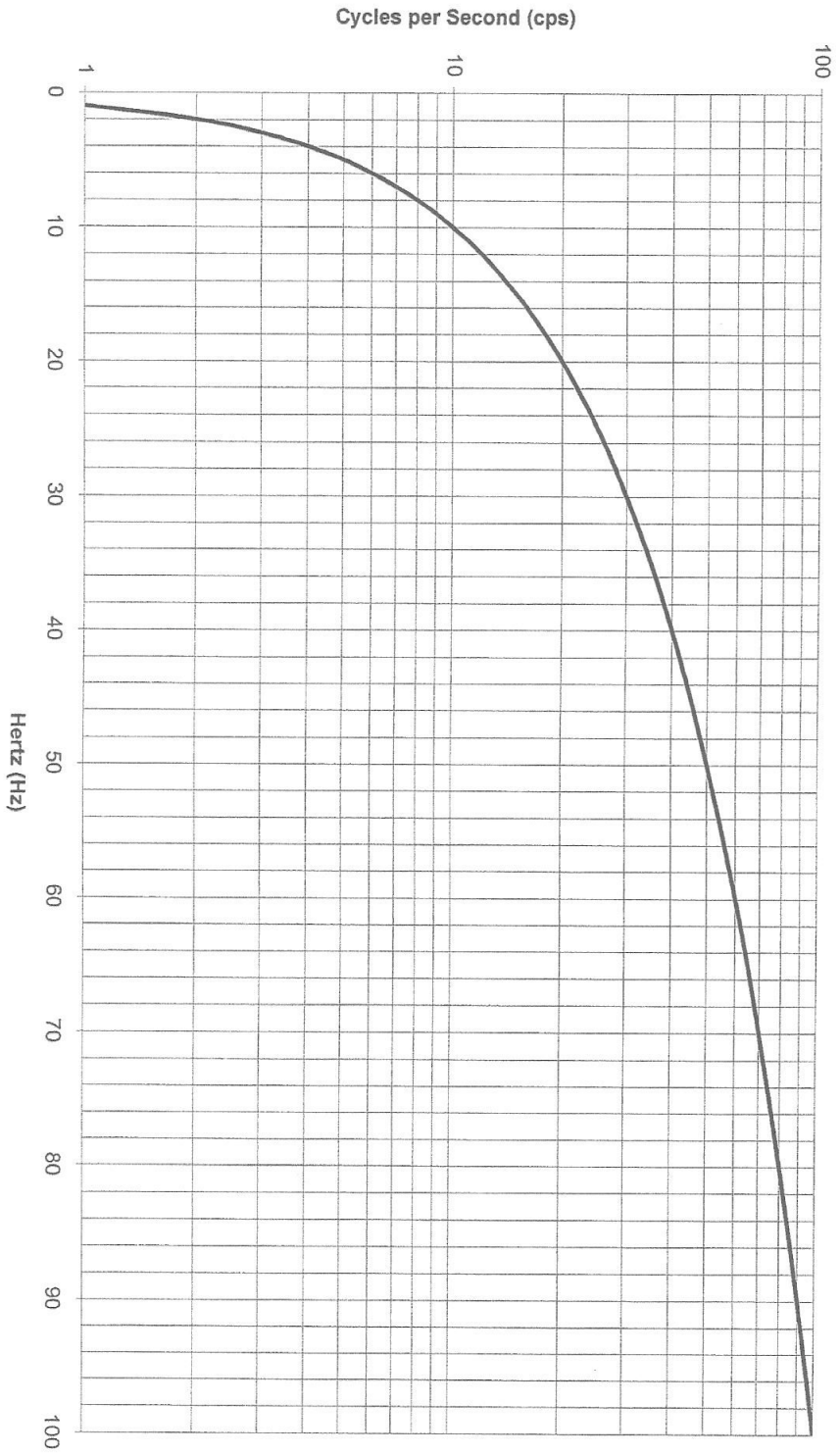
The most recent DXpeditions from the Spratlys took place in 2015 and 2016. In 2015, the DX0P DXpedition operated in the spring of that year from Thitu Island (called Pag-asa in Tagalog), using a license issued by the Philippines. The DX0P operation took place just a few years after the planned DX0DX DXpedition to the Spratlys was "permanently cancelled" in 2011 without explanation after being pushed back at least twice. The next year, James Brooks, 9V1YC, and Chris Burger, ZS6EZ, operated as 9M0Z, granted by Malaysia, from Layang Layang Island for 6 days in May of that year, logging 11,000 contacts.

A 2016 ruling from an international tribunal discounted the PRC's claims with respect to the Spratlys and Scarborough Reef. The Permanent Court of Arbitration in the Hague, Netherlands, ruled in favor of the Philippines in a dispute with the PRC over Scarborough Reef — also known as Scarborough Shoal. The tribunal said that although navigators and fishermen from China and other states have historically made use of South China Sea Islands, there was no evidence that China had historically exercised exclusive control over the waters or resources.

According to the tribunal, the PRC had violated the Philippines' sovereign rights and had caused "severe harm to the coral reef environment" by building artificial islands and an air strip. The PRC refused to take part in the arbitration and said it would not be bound by the tribunal's ruling. The tribunal made clear that its ruling did not address issues of territorial sovereignty.



CPS to Hertz Conversion Chart



Based upon the earlier work of James Barry, Baxter, MN, where  $(\log_{\text{cps}}(\text{Hz}))^2 = 1$  for values of CPS > 0. To date, the Hz equivalent for negative values of CPS has yet to be defined but research is continuing.

**F.Y.I.**

The May Program will be "Planning & Designing 911 Operation Systems" – Tom / N2TDZ

The D.L.A.R.C. meets the "FIRST" Thursday of each month. Membership, friends and interested persons meet at the Bethlehem Township Community Center, 2900 Farmersville Road, Bethlehem, Pa. 18020 ) at 7:30 PM. Committee reports and announcements of all present and future activities will be presented at that time. Followed by that month's program.

**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 147.350 ( DCS 315 ) W3OI Repeater.

QCWA Chapter 17 holds a net Monday evenings 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 position 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 in order to conserve local bandwidth.

The OK Corral is an organization publication for the purpose of informing members of the D.L.A.R.C. of educational and training opportunities, club events, relevant news articles and a monthly calendar of daily activities, meetings and dates.

**EXECUTIVE COMMITTEE 2017 – 2018  
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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 Bethlehem Township Community Center  
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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