

**DELAWARE LEHIGH AMATEUR RADIO CLUB Inc.**

**APRIL 2020**



***W3OK***

***CORRAL***

**Club Meeting April 2nd, Canceled  
All Activities Canceled Until Further Notice**

**FUTURE MEETING PROGRAM**

**“Homebrew Night: Hands on Experience”  
Stephanie / WX3K**

**MARCH MEETING PROGRAM**



**“ Arduino: What's All About”  
Larry / KC3JTK**



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### MARCH MEETING MINUTES

A General Meeting of the Delaware-Lehigh Amateur Radio Club was held on March 4, 2020 at the Bethlehem Township Community Center, Bethlehem, PA.

Vice-President, Steve Harper, W3NAM, called the meeting to order at 7:30 p.m.

#### **President's Report:**

Steve opened the meeting by relating that Stephanie/WX3K will be contacting local colleges and universities to see if DLARC can be of assistance in starting amateur radio clubs or helping established stations.

Steve said Jim / KC3MKP has stepped up to be the point person for the prospective Hamfest. Jim said that he and Stephanie will be attending local Hamfests as they explore what is the best plan of action to make the event successful. Jim said that there are many factors to consider.

Steve related Stephanie will be contacted members who joined in the past three years to identify what would bring them out to a meeting for those not attending.

**Guests:** Carl / KE5CK, and Connor / KC3OAC

**Secretary's Report:** Larry / AB3TY, announced the Minutes for the February 2020 General Meeting. JoAnn / ND3JJ motioned to accept. It was seconded by George / N3SQD and so moved.

**Treasurer's Report:** Larry / AB3TY reported for Mike Gower / KB3LOD, on the Club's financial status for January 2020. Skip / KD2BDA motioned to accept. It was seconded by George / N3SQD and so moved.

#### **Committee Reports:**

**Membership:** Membership Chair Terry Swinney / KC3JHT via email reported there are currently 147 Paid Members, 9 Associate members and 9 Life members for a total of 65 Members through March 3, 2020. There were no new members announced.

**Club Station:** Steve / NS3L reported all is working at the Milkhouse.

**Classes:** Bob / KE3AW reported that classes began on March 3. The tech session has 21 on the roster with 15 attending. The general class has 8.

**Tech Committee:** Nothing to report.

**Website:** No issues reported.

Adjournment: There being no further business, the meeting was adjourned at 7:45p.m.

### APRIL CONTESTING AT THE OK CORRAL

**April 4 & 5** – PODXS 070 Club PSK-31Flvors Contest  
– SP DX Contest

**April 11 & 12** – JI DX CW Contest  
– Ftn DX Contest

**April 18 & 19** – Worked All Provinces of China DX Contest  
– CQ MM DX Contest

**April 25 & 26** – SP DX RTTY Contest  
– Hekvetia Contest

**APRIL QUICK CHECK CALENDAR**

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SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1 DLARCC Net (K3PDL)	2 Meeting Canceled	3 NO VE SESSION	4
5	6	7	8 DLARCC Net (W3NAM)	9	10	11
12 EASTER	13	14	15 DLARCC Net (ND3JJ)	16	17	18
19	20	21 DLARCC BOARD MEETING	22 DLARCC Net (KC3MKP)	23	24	25
26	27	28	29 DLARCC Net (W3CE)	30		

\*\*\*\*\* NOTICE \*\*\*\*\*

The Executive Committee wishes to support the growth of our hobby. They feel that a youth program would be the ideal way to do this. To do this we need a member to step forward and chair and form a committee to get this idea rolling. Any interested member or members should contact any member of the Executive Committee to get details. The Executive Committee member information can be found on the web site or on the back page of the newsletter.

**VE TEST SESSION**

There will not be a test session this month. The next session will be on May 8th at 7 PM at the Northampton County 911 center. Pretest registration is required. Contact John / NT3P at nt3p@arrl.net

**W3OK CLUB STATION**

Better known as the "Milkhouse" the W3OK Station is open Wednesdays' 6 PM until ??, and Saturdays' 9:30 AM until ??. Our repeater 146,700 is always on ... So just call W3OK and check.

de Steve / NS3L

**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**

**"410"**

The winner is **Tom / W3HMX**



**APRIL BRAINTEASER**

Three boxes - one containing two black marbles, one containing two white marbles, the third containing one black marble and one white marble - are put before you. The boxes are labeled to indicate their contents - BB, WW, and BW. But you are told that the tops have been switched so that every box is now incorrectly labeled. You are asked to take one marble at a time out of any box, without looking inside, and using this sampling process, to determine the contents of all three boxes. What is the smallest number of drawings you will need to determine the contents of each box?

Explain your answer.

## MARCH PROGRAM REPORT

### "ARDUINO"

Larry / KC3JTK

Larry began with information on Arduino and Raspberry Pi units, their relationship. Raspberry Pi are Mini Computers that come in only one size. They have multiple ports But no analog inputs. While Arduino are mini-controllers, that come in various sizes, various I/O combos.

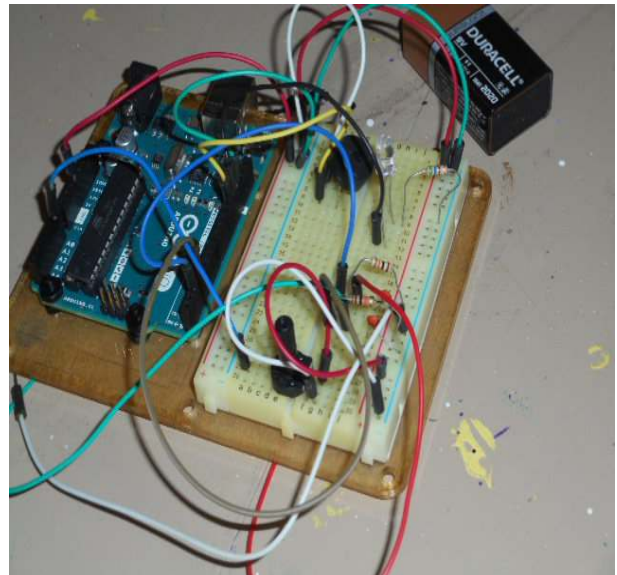
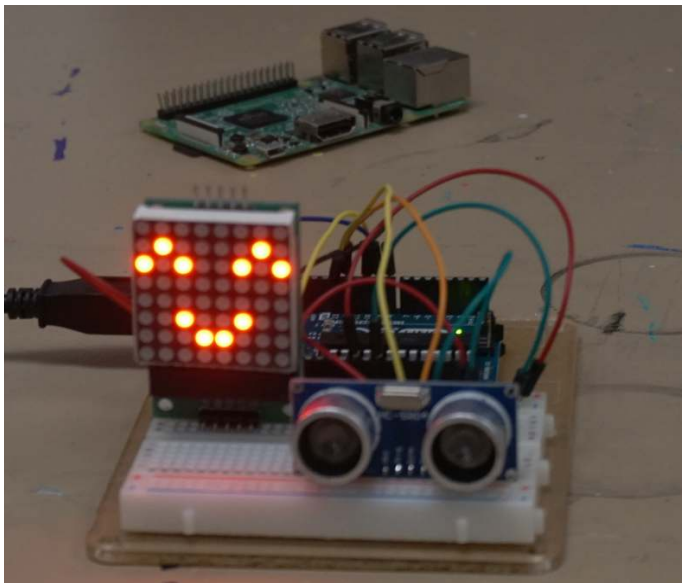
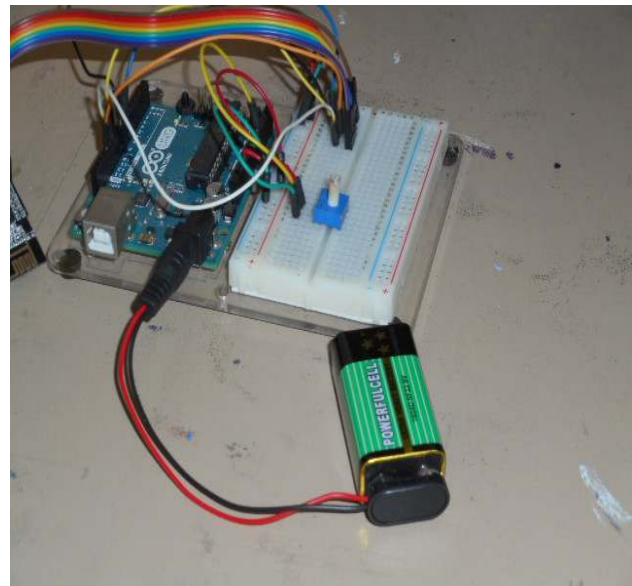
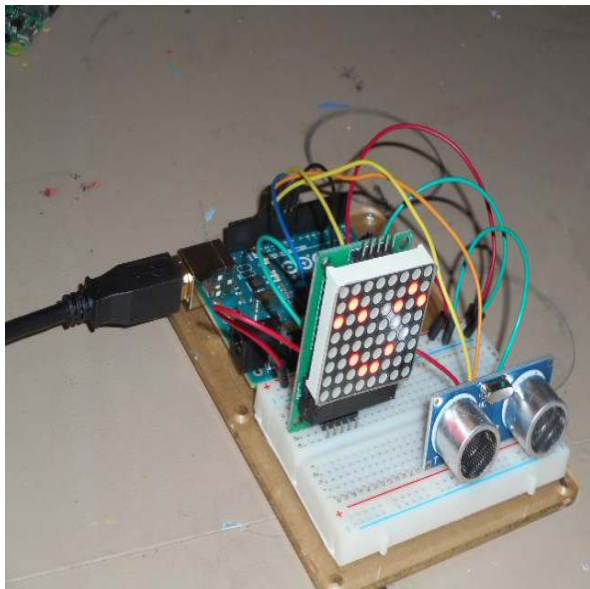
The types are MEGA, UNO, NANO, PICO and LILYPAD. All use the same interface various expansion boards called shields. The boards feature serial communications interfaces, including USB on some models, which are also used for loading programs from personal computers. The microcontrollers can be programmed using C and C++. In addition to using traditional compiler toolchains, the Arduino project provides a IDE based on the Processing language project.

The Arduino project started in 2005 as a program for students at the Interaction Design Ivrea in Ivrea, Italy, aiming to provide a low-cost and easy way for novices and professionals to create devices that interact with their environment using sensors and actuators. Common examples of such devices intended for beginner hobbyists include simple robots, thermostats and motion detectors.

The uses for the Arduinos are as many, Also there are many Books and magazines available for information. Kits are available from Amazon at reasonable prices, and the software also. Software for Window, Mac and Linux and free.

Larry brought with him several examples of how he used Arduino, some practical and some for your intertainment.

The program ended with the usual Qand A session. This was a really fine program one not to be missed.



## FROM THE FILES OF Bill / K3ANS

### An Email to Mel Snyder / W3PYF

Mel

As everyone knows, a picture is worth a thousand words. Your father's excellent picture which could be titled "The HamFest", stokes many great memories on my part as you will see below:

I'm 95% sure that the picture was taken in July of 1954 at a HamFest in Lancaster, PA ... I think the pavilion is within Long's Park in Lancaster, and is probably still standing.

I can only positively identify three of the men in the picture. The cigar smoker is Ben Zarfoss of Red Lion, PA, call sign W3GES. Ben owned a TV sales/service store in Red Lion (York County), had a 1 KW home built rig, and was highly experienced and a great mentor to those of us who belonged to the local Red Lion Ham club ... the Hilltop Transmitting Society. Ben is definitely the smartest guy in the picture. On Ben's left is my father, Dale R. Smith, Sr., call sign W3VNH. He owns the equipment ... a Johnson Viking Ranger transmitter and a Hallicrafters SX-71 receiver. I remember watching my father drill the hole for the toggle switch in the receiver's case, although I can't remember what the toggle did. Dale Sr. is now 91, an Alzheimer's patient, and lives a block from me here in York. When I showed him the picture, he remembered many of the above details. He sends his best wishes along.

I am the chubby young fellow with the W3VNJ tag. When I received my novice license (WN3VNJ) at age 11, the FCC examiner told me I was the youngest person ever to pass the test at that time. I'm pretty sure that that was in the spring of 1953. I'm equally sure that I passed the general test less than a year later, so W3VNJ would be right for July of 1954.

The faces of the other men in the foreground of the picture are all familiar to me, but I can't pull out any of their names. They were all more or less contemporaries of my Dad, so that they would all be aged in the area of 90 to 95 if they remain alive [today](#). It was a wonderful group of men, all focused on learning Ham Radio, helping one another, and not sweating any small stuff. There's a reason why I remember this HamFest vividly ... sort of a long story, but I'll pass it along. The 1953 thru 1955 period encompassed the Korean War. Many American GIs were in Korea, and Hams routinely shepherded messages back and forth from the Far East. Most messages were simple, but many were very poignant, and the unofficial yet efficient messaging network that Hams provided was very important at the time. This was the era of MARS (Military Amateur Radio Service). I became very interested in this type of operation, and spent a lot of time signed into both CW and phone "nets" on air wherein messages were collected, transmitted, received, and delivered (by telephone, once a local ham had received the inbound message). Each "net" had a network controller, who operated like a taxi dispatcher in moving inbound traffic to local hams for delivery, and gathering locally originated outbound traffic for subsequent transmission to Korea. (K4AF, Via MARS, etc.)

One network I frequented daily was the Eastern Pennsylvania Phone Net. The network controller there was W3TSY, in East Stroudsburg, PA, I think, and his name was Sam. Sam was a very efficient operator and I sort of latched onto him as a role model, patterning my operating style after his. In addition to being a good operator, he had a great sense of humor, and assigned nicknames to regulars on his net. He called me "Peter Rabbit", because at age 12 or 13, my voice had not yet changed, and I sounded like a woman, or like "Peter Rabbit" over the air.

When I found out that Sam planned to attend the Lancaster HamFest **in person**, I was thrilled to think that I would at last be able to meet my mentor, sit at his knee, and learn even more about how to be cool on air. Now here's why I remember the event so vividly. I met Sam, alright. When I identified him, he was wearing a wife-beater tee shirt over a huge over-the-belt gut ... holding a beer in one hand, a cigarette in the other hand and ... and ... I swear he only had one tooth in his head! So much for network innocence!

Your father would be proud that his picture generated many more than a thousand words!

From Dale Smith Jr / W3VNH dated 5 December 2009



## **ARRL COMMENTS IN OPPOSITION TO FCC PLAN TO DELETE THE 3.4GHz BAND**

ARRL has filed comments opposing an FCC proposal to delete the 3.3 - 3.5 GHz secondary amateur allocation. The comments, filed on February 21, are in response to an FCC *Notice of Proposed Rulemaking (NPRM)* in WT Docket 19-348 in which the FCC put forward a plan to remove "existing non-federal secondary radiolocation and amateur allocations" in the 3.3 - 3.55 GHz band and relocate incumbent non-federal operations. The FCC's proposal was in response to the MOBILE NOW [Making Opportunities for Broadband Investment and Limiting Excessive and Needless Obstacles to Wireless] Act, enacted in 2018 to make new spectrum available for mobile and fixed wireless broadband use. ARRL noted that amateur radio has a long history of successful coexistence with primary users of the band.

"There is no reason suggested by the Commission, or known to us, why the secondary status for amateur radio operations should not be continued for the indefinite future," ARRL said in its comments. "We understand that secondary commercial users are less flexible than amateur radio users and may desire to relocate to protect continued provision of services and service quality. Radio amateurs, by contrast, benefit from having technical knowledge and no customer demands for continuous service quality, more flexibility to make adjustments, and often have the technical abilities necessary to design and implement the means to coexist compatibly with the signals of primary users."

ARRL pointed to amateur radio's "decades-long experience observing and experimenting with radiowave propagation" in the 3.3 - 3.5 GHz band that includes mesh networks, amateur television networks, weak signal long-distance communication, Earth-Moon-Earth (moonbounce) communication, beacons used for propagation study, and amateur satellite communications. In its comments, ARRL argued that it would be "premature" to remove the current secondary amateur radio allocation.

This spectrum should not be removed from the amateur radio secondary allocation and left unused," ARRL told the FCC. "Only at a later time may an informed assessment of sharing opportunities be made in the specific spectrum slated for re-allocation.... This depends upon the Congressionally mandated NTIA studies of sharing or relocation options that have yet to be completed and, if all or part of this spectrum is re-allocated, the nature and location of buildout by the non-federal users." The National Telecommunications and Information Administration (NTIA) oversees spectrum allocated to federal government users. ARRL noted that radio amateurs have established extensive infrastructure for the current band and are engaged in construction and experimentation that includes innovative "mesh networks" and amateur television networks that can be deployed to support public service activities.

With the NTIA report addressing the 3.1 - 3.55 GHz spectrum not expected until late March, ARRL said, "we do not yet know how much spectrum below and above the amateur secondary allocation may be reallocated to non-federal users and what opportunities may exist or be developed to share [that] spectrum" with new primary users and systems.

"Even if suitable new spectrum could be found for the existing amateur uses -- which is difficult before the spectrum musical chairs activity is concluded -- the costs to radio amateurs would be significant and be borne with no countervailing public benefit," ARRL told the FCC.

"If the advent of new primary licensees forecloses some types of secondary operations, the amateur community will reevaluate the situation when some certainty exists," ARRL concluded.

## **AMSAT CITES NEED FOR ADEQUATE SPECTRUM IN OPPOSING DELETION OF 3.4 GHz BAND**

AMSAT has commented on the FCC *Notice of Proposed Rulemaking (NPRM)* in WT Docket 19-348 that proposes to delete the 3.3 - 3.5 GHz (9 centimeter) amateur band and relocate incumbent non-federal operations. The band includes the 3.40 - 3.41 GHz Amateur Satellite Service allocation. In its remarks, AMSAT said it opposes deletion of the allocation and stressed the necessity of having adequate microwave spectrum available for future amateur satellite projects, including AMSAT's GOLF program and the Lunar Gateway. AMSAT acknowledged that the 3.4 GHz Amateur Satellite Service allocation is not currently used by any amateur satellites and that it is unsuitable for worldwide communication because it is not available in ITU Region 1. AMSAT said a number of potential future uses for the band remain, however, as worldwide usage of other available allocations increases.

"These potential uses include a future amateur satellite in geostationary orbit above the Americas," AMSAT said, explaining that the segment could support uplink or downlink frequencies for such a spacecraft without potential interference to worldwide activities involving space stations in high-Earth or lunar orbit. The most-desirable allocations for use as uplinks are between 2.4 GHz and 5.67 GHz -- 80 MHz in all, AMSAT told the FCC. "As many of the proposed uses include amateur television and high-speed data transmission with satellites in high-Earth orbit or lunar orbit, these allocations may quickly become inadequate," AMSAT said.

AMSAT told the FCC the 3.40 - 3.41 GHz allocation could be utilized as a command channel or secondary data downlink for AMSAT ground stations in ITU Region 2 without interfering with the primary communications on the other allocations or other satellites utilizing those segments.

AMSAT said several non-amateur satellites use the broader 3.3 - 3.5 GHz amateur allocation, which also sees wide use for amateur radio mesh networking, EME communications, and contesting.

"The Amateur Satellite Service continues to provide immense value to the growing field of small satellites," AMSAT concluded. "Experiments conducted by amateur satellites...continue to inform the development of the commercial small satellite industry. Additionally, student participation in amateur satellite projects provides both inspiration for young men and women to pursue careers in the commercial satellite industry and practical experience for those careers.

"A strong and robust Amateur Satellite Service will continue to benefit the public interest and inspire future developments in satellite technology," AMSAT said. "Continued progress in achieving these goals requires adequate spectrum, especially in suitable microwave bands."-- *Thanks to AMSAT News Service via AMSAT Executive Vice President Paul Stoetzer, N8HM*

## **CORONAVIRUS OUTBREAK POSTPONES SWAINS ISLAND W8S DXPEDITION**

The W8S Dxpedition to Swains Island in the Pacific, set to take place in mid-March, has been postponed until September as a result of travel restrictions imposed on individuals entering American Samoa, stemming from the recent coronavirus outbreak

The Department of Health allows non-residents to enter American Samoa only via Hawaii after a 14-day mandatory quarantine, and the DXpedition was unable to accommodate that requirement. "Everything is prepared for our DXpedition, and we are eager to go, but unfortunately the coronavirus outbreak is out of our control," the DXpedition team said in announcing the delay. "Although this is a disappointment for everyone, the W8S DXpedition is not cancelled, just postponed for later this year."

The DXpedition said it would alert the DX community as soon as it has new firm dates for the trip.

## **FEMA Releases 2020 Homeland Security Exercise and Evaluation Program (HSEEP) Doctrine**

FEMA released the revised 2020 HSEEP Doctrine earlier this month. The update incorporates feedback and input from exercise planners and practitioners across the country and ensures that HSEEP doctrine, the training course, and corresponding documents continue to best meet the needs of the whole community. HSEEP is flexible, scalable, adaptable, and is for use by stakeholders across the whole community and nation-wide use of HSEEP directly supports the National Preparedness System by providing a consistent approach to exercises and measuring progress toward building, sustaining, and delivering core capabilities. The 2020 HSEEP doctrine continues to make HSEEP a practical and yet effective tool for exercise planners and practitioners across the whole community.

The HSEEP doctrine was used for the planning of Florida's major exercise - *2020 Hot & Cold* - to be held on March 1 in Gainesville, Florida. View the exercise plan [here](#).

With the release of the new 2020 HSEEP doctrine, FEMA will be hosting webinars to provide information, highlights, and changes as a result of the review process. The webinars will continue until May 15, 2020. Please visit the HSEEP webpage to get additional dates and time: <https://www.fema.gov/hseep>. See also the Information Sheet and Frequently Asked Question sheet at the same page

## **INTERNATIONAL SPACE STATION RESUPPLY MISSION TO CARRY NEW ARISS HAM RADIO GEAR**

The scheduled March 7 (UTC) SpaceX CRS-20 mission to the International Space Station (ISS) will include the initial Amateur Radio on the International Space Station (ARISS) Interoperable Radio System (IORS) flight unit, which is listed as a primary payload. The IORS is the foundation of the ARISS next-generation amateur radio system on the space station. Once at the space station, the IORS will be stowed for later installation.

The ARISS hardware team built four flight units, and the first will be installed in the ISS *Columbus* module. A second flight unit expected to be launched on a later 2020 cargo flight will be installed in the Russian Service Module. NASA contracts with SpaceX to handle ISS resupply missions.

The IORS represents the first major upgrade of on-station ARISS equipment. The package will include a higher-power radio, an enhanced voice repeater, and updated digital packet radio (APRS) and slow-scan television (SSTV) capabilities for both the US and Russian space station segments. The IORS consists of a custom-modified JVCKenwood TM-D710GA transceiver, an AMSAT-developed multi-voltage power supply, and interconnecting cables.

The ARISS hardware team remains busy on IORS development and final certification. While the initial unit has been certified for launch and stowage on ISS, the team is still deep into the final certification of the IORS for flight operations, and construction of a second flight unit is in progress.

ARISS will mark 20 years of continuous amateur radio operation on the space station in November.

## **HENRY RADIO LOS ANGELES FOUNDER TED HENRY IS 100!**

Henry Radio Los Angeles founder Ted Henry, W6UOU, turned 100 years old on January 25. The fascinating Henry family history in amateur radio marketing and manufacturing dates back to the late 1920s.

The original Henry Radio shop, started by Ted's brother Bob Henry, W0ARA (SK), opened in 1927 in Butler, Missouri. It stayed in business until Bob died in 1985. Ted and another brother, Walt, later W6ZN, worked with Bob Henry during the early years and became fascinated with ham radio. After Ted moved to Los Angeles in 1941, he opened a small radio shop, which he operated while attending college at UCLA with the intention of going into teaching. His shop survived the suspension of amateur radio during World War II by purchasing gear from hams and reselling it to MARS stations around the world, and by manufacturing crystals (in Butler and Los Angeles) for Hallicrafters' war production. The LA store grew quickly after the war, expanding to a new location where it operated for nearly 35 years, becoming a gathering spot for hams visiting from around the world.

Walt Henry opened a Henry Radio branch in Anaheim, California, in the 1960s, which closed in 1990, after his health declined. In 1962, Ted Henry began manufacturing tube-type power amplifiers for the ham radio market, starting with the original Henry 2K. Many of the popular line of HF amplifiers remain in use today. The plant expanded into the industrial RF equipment sector. In the 1970s, the company developed its own line of solid-state amplifiers, which it still manufactures for various services.

Henry Radio also became the first Kenwood dealer in the US, marketed the Tempo line of ham gear, and is the oldest dealer for Bird RF test equipment. The current store on South Bundy Drive in Los Angeles opened in 1981.

Ted Henry retired from the business in 2005. -- *Thanks to Marty Woll, N6VI; Henry Radio.*

**F.Y.I.**

The May Program will be **“Powerline Interference Detective”** Mark / W3BQD

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 2018 – 2019 OFFICERS**

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Vice President – Steve Harper / W3NAM ----- vicepresident@dlarc.org  
Secretary – Larry Kaplan / AB3TY ----- secretary@dlarc.org  
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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**

**The W3OK Corral is published monthly and is the Official Publication of the DELAWARE LEHIGH AMATEUR RADIO CLUB INC.**

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