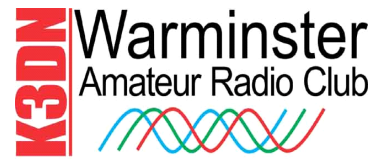




FEEDBACK



Web Site k3dn.org

Warminster Amateur Radio Club

February 2018

Next Meeting February 1st - Auction

President's Message

With our January meeting having been postponed due to weather, we've had quite a bit of time between get-togethers, and quite a lot has taken place since then, amateur radio-wise. The most notable, and perhaps most important, of these is the shake-up of the Board of Directors at ARRL.

For those not familiar, I will summarize by saying that over the course of the last two years or so, there have been numerous actions taken by the ARRL BoD that have caught the attention (and ire) of a lot of hams, culminating with the resignation of ARRL CEO Tom Gallagher NY2RF this past week. There were also several significant changes proposed for the ARRL Board meeting held recently (Jan. 19 & 20), which potentially would have had a major impact on the League and how they conduct business going forward. As I had posted to our Yahoo Group, this is a matter that affects all hams, whether or not you are a League member, as the ARRL sets the tone for amateur radio in this country as a whole. If you would like to do further research into the issues outlined above, a good place to start is the CQ Magazine White Paper (<http://cqnewsroom.blogspot.com/2017/12/cq-white-paper-on-arrrl-secrecy-and.html>) and the myARRLvoice website (<https://www.myarrrlvoice.org/>), as well as the response from ARRL President Rick Roderick K5UR (<http://www.arrrl.org/news/a-note-to-members-from-arrrl-president-rick-roderick-k5ur>).

While this topic is fresh on our minds, let me assure you that the founders of our club have set into place safeguards to avoid just this type of behavior from a sitting WARC Board. Any changes to the Constitution or By-Laws can only be enacted with the input and approval of the General Membership, and any such proposals must be presented to membership with a set time for review before any action may be taken. This keeps the Board from making changes in governance that reduce, or significantly alter, the representative democracy that our founders envisioned, and has carried us through the years. On top of that, our Board holds open meetings, both in person and electronic, where any interested members are encouraged to attend and give input (where appropriate) on the business of the club. This is a two-fold benefit: first, it keeps our business open to the membership, assuaging any concerns about hidden agendas or back-room dealings; and second, it allows the Board to hear from members who may have concerns, issues or other business to share with the club, of which we may have otherwise been unaware.

Let me also disclose that I have taken the opportunity, as a ham and ARRL Life Member, to comment online about my perception of the issues at ARRL. In all of these postings, I have attempted to make clear that the opinions expressed are mine as an individual, and not related to my position as President of WARC, nor have I implied that WARC has expressed a position as a club. WARC has enjoyed a great relationship with ARRL, and until such time as we as a club decide it is necessary to react, the club will remain neutral on the situation.

On a lighter note, the postponement of January's meeting also meant that our "Stump the Chumps" gameshow was cancelled – bummer! As this was quite a hit last year, we've decided to try to fit it in later this Spring, if a vacancy in our presentation lineup allows it.

Lastly, don't forget that February means our annual Club Auction is on tap. The auction has something for everyone, and almost always has a surprise item or two up it's sleeve! Come prepared to buy, and that doesn't necessarily mean you need a stack of money to take home something interesting.

de Tony, W3FLH

73

(Continued from page 1)

HAM Radio Classes in the Spring of 2018 – Starting March 12th

Morse Code is no longer required for HAM Radio licenses

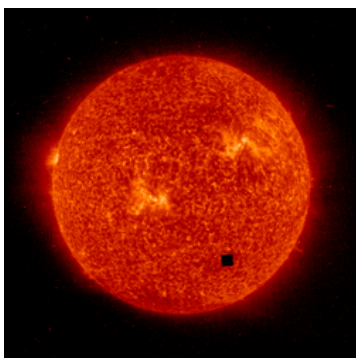
If you're interested in Ham Radio, or think you might be, this is your opportunity. Perhaps you'd like to learn about digital communications, VHF, UHF, satellite, or perhaps you'd rather sit down and chat with someone in South Africa, Russia, Great Britain or in the space station.

Technician classes will be taught by **Ron Small, WB2OOB** starting March 12th for 6 Mondays in a row from 7 to 9 pm

Extra classes will be taught by **George Altemus, KA3WXV** starting March 12th for 8 Mondays in a row from 7 to 9 pm

For further information contact George Brechmann, N3HBT at 215-443-5656

THE K7RA SOLAR UPDATE



Tad Cook, K7RA, Seattle, reports: Low solar activity continued over the January 18-24 reporting week, with zero sunspots visible for the past 5 days. The average daily sunspot number changed from 7 over the previous 7 days to 3.3 this week. Average daily solar flux was down slightly from 70.7 to 70. Geomagnetic indicators were also quiet.

Predicted solar flux is 70 on January 25; 68 on January 26-31; 69 on February 1; 70 on February 2-16; 68 on February 17; 69 on February 18-19; 68 on February 20-26, and 70 on February 27-March 10.

Predicted planetary A index is 8 on January 25-27; 5, 8, 10, and 8 on January 28-31; 5 on February 1-3; 8 on February 4-5; 5 on February 6-8; 8, 12, and 8 on February 9-11; 5 on February 12-14; 8, 12, 8, 10, 10, and 8 on February 15-20; 5 on February 21-23; 10 on February 24; 5 on February 25-March 2; 8 on March 3-4; 5 on March 5-7, and 8, 12, and 8 on March 8-10.

Sunspot numbers for January 18-24, 2018 were 12, 11, 0, 0, 0, 0, and 0, with a mean of 3.3. The 10.7-centimeter flux was 71.1, 70.8, 69.6, 68.3, 70.1, 70.5, and 69.9, with a mean of 70. Estimated planetary A indices were 2, 8, 8, 10, 12, 4, and 9, with a mean of 7.6. Estimated mid-latitude A indices were 1, 6, 5, 8, 8, 3, and 6, with a mean of 5.3.

Courtesy of the ARRL Newsletter

ARRL President Rick Roderick, K5UR, Re-Elected; Barry Shelley, N1VXY, is New CEO

Incumbent ARRL President Rick Roderick, K5UR, has been re-elected by the League's Board of Directors for a second term. The Board convened for its Annual Meeting January 19-20 in Windsor, Connecticut. President Roderick, the League's 16th President, received 9 votes, while the only other nominee, New England Director Tom Frenaye, K1KI, received 6 votes.



Chief Financial Officer Barry Shelley, N1VXY, was elected as Chief Executive Officer, replacing Tom Gallagher, NY2RF, who announced his retirement on January 18 after 2 years at ARRL Headquarters. Shelley will serve until the Board selects a new CEO, and is expected to serve in an advisory role to assist with the transition beyond that. The Board has created a CEO Search Committee. Shelley was unopposed as ARRL Board Secretary. ARRL Comptroller Diane Middleton, KC1BQF, was elected Chief Financial Officer, replacing Shelley.

ARRL First Vice President Greg Widin, K0GW, was declared re-elected without opposition. Incumbent ARRL Second Vice President Brian Milesosky, N5ZGT, did not stand for re-election, and Pacific Division Director Bob Vallio, W6RGG, was elected to succeed him. Pacific Division Vice Director Jim Tiemstra, K6JAT, will succeed Vallio as Pacific Division Director. The Vice Director vacancy there will be filled by appointment.

Courtesy of the ARRL Newsletter

(Continued on page 3)

(Continued from page 2)

ARRL Board of Directors Agrees to Review of Conduct Code for Directors

Meeting January 19-20, the ARRL Board of Directors adopted a motion to a review the entire code of conduct for Board members, known officially as the [ARRL Policy on Board Governance and Conduct of Members of the Board of Directors and Vice Directors](#). ARRL Officers, Directors, and Vice Directors will review the code of conduct and complete a final draft version by mid-May for the July Board meeting.



(L-R) New ARRL CEO Barry Shelley, N1VXY; General Counsel Chris Imlay, W3KD; Radiosport Manager Norm Fusaro, W3IZ (seated at rear), Treasurer Rick Niswander, K7GM, and Second Vice President Brian Milesosky,

and Finance Committee for further consideration.

It was decided that if these or any additional changes are proposed, they will be made available to the membership and will be accompanied by explanatory "white papers" before the Board considers action on them.

In other action, the Board

- approved a motion requiring that minutes of Board meetings be published only after being formally approved by the Board.
- unanimously adopted ARRL's 2018-2019 financial plan. Up to \$30,000 was allocated to fund the discovery and strategy phase of the Lifelong Learning Initiative.

Courtesy of the ARRL Newsletter

In the same motion, the Board deleted and suspended, effective immediately, sections that were considered ambiguous and in conflict with the intent of the code of conduct requiring Board members to act in the best interest of the League's membership.

The Board also voted unanimously to amend a policy affecting candidates for ARRL elected offices, including Directors and Vice Directors. The new policy calls for candidates to be informed in writing at the outset of the nomination process that decisions of the Board's Ethics and Elections Committee concerning candidate eligibility will be made public unless the candidate requests otherwise. In addition, if the Ethics and Elections Committee rejects a candidate's petition, the candidate may ask that the reason(s) for rejection not be made public. Unless confidentiality is requested within 10 business days, the reason(s) for rejection may be made public.

A proposed addition to the [ARRL Articles of Association](#) regarding the personal liability and indemnification of Directors will be reviewed by the Executive Committee, the General Counsel, and ARRL Connecticut corporate counsel. Proposed amendments to the [ARRL Bylaws](#) regarding Life Membership were referred to the Administration



(L-R) ARRL International Affairs Vice President Jay Bellows, K0QB; Radio Amateurs of Canada President Glenn MacDonell, VE3XRA; IARU President Tim Ellam, VE6SH/G4HUA, and ARRL Atlantic Division Director Tom Abernethy, W3TOM. [Michelle Patnode photo]

(Continued on page 4)

Mode Usage Evaluation: 2017 was "the Year When Digital Modes Changed Forever"

[Club Log](#) author and UK radio amateur [Michael Wells](#), G7VJR, has [reported](#) that data compiled from 8,000 Club Log users indicates the proportion of FT8 usage relative to other modes has risen dramatically since FT8's introduction last year. Every few years, Wells has posted charts depicting mode usage on the amateur bands, based on log data uploaded to Club Log. Graphs he posted last week show the proportion of contacts on each mode for the last 20 years and then for the last 12 months.

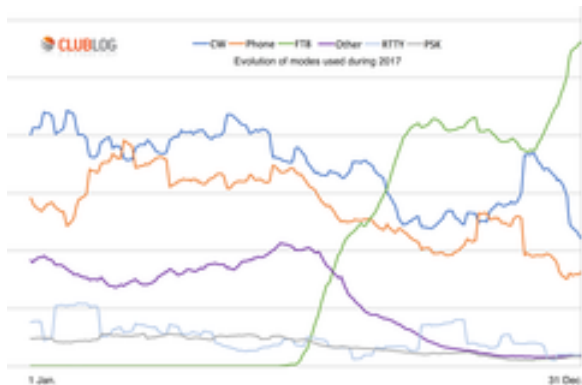
"2017 was, of course, the year when digital modes changed forever with the advent of FT8," said Wells. "It is a remarkable technical achievement, which has breathed life and enthusiasm into DXing for a whole new audience."

Now out of beta testing, FT8 -- included in [WSJT-X](#) version 1.8.0-rc3 -- continues to capture the imagination of the Amateur Radio community, luring away many of those who had been using the popular JT65 "weak-signal" mode. FT8 is included in [WSJT-X](#) version 1.8.0-rc3, with several refinements from the original beta release. Among FT8's biggest advantages is a shorter transmit-receive cycle, with contacts four times faster than with JT65 or JT9; an entire FT8 contact can take place in about a minute. Many DXpeditions now routinely include FT8 operation.



Michael Wells, G7VJR.

Wells reported that 8,000 Club Log users uploaded FT8 contacts last year, logging 46,000 discrete call signs in that mode. "For reference, in 2017 the total number of QSOs uploaded to Club Log (all modes) was 32 million," Wells said. "Of that total, the number of QSOs made with FT8 was 4.8 million." That works out to 15% of all contacts posted to Club Log, which may or may not be representative of Amateur Radio activity at large.



graph for 2017 shows a dramatic increase in mid-2017 in the per-centage of FT8 contact relative to other modes, by year's end overtaking CW and Phone usage, already trending downward except for a significant increase in CW usage toward the end of the year. RTTY and PSK31 usage remained comparatively stable over the course of 2017. The usage of other undefined modes declined dramatically after the introduction of FT8. Wells explained that the graph does not show absolute levels of activity, but only relative levels of activity.

Wells pointed out that the data is smoothed, and the values are for a 28-day moving average. "Therefore, a weekend of only CW and no FT8 has no effect -- the trend is gradually adjusted by ongoing activity, and not by shocks."

Club Log graph showing modes used by radio amateurs in 2017, and the emergence of FT8 (green trace). Lines on the graph are based on 28-day moving averages. Data were smoothed to reduce the prominence of peaks related to mode-specific contests.

than the bare minimum for a valid contact.

Last fall, Taylor expressed some surprise about the "rapid uptake" in the use of FT8 on HF, calling FT8 and the other WSJT-X offerings "special-purpose modes" designed for making reliable, error-free contacts using very weak signals. Taylor pointed out that the level of information exchanged in most FT8 -- and other similar digital modes -- isn't much more

Secretive "Numbers Stations" Persist on HF

For many years, unidentified radio broadcasts have been transmitting coded messages, using numbers, such as "6-7-9-2-6 or 5-6-9-9-0." Even today, tuning across the HF spectrum typically will yield a "numbers station," a mechanical-sounding voice (male or female) methodically announcing groups of single-digit numbers for minutes on end. [According to Radio World](#), you may have tuned into a spy agency's numbers station transmitting coded instructions to their minions worldwide.

Numbers station transmissions typically consist of a voice "reading out strings of seemingly random numbers," explained Lewis Bush, author of *Shadows of the State*, a new history of numbers stations. "These are sometimes accompanied by music, tones or other sound effects," he said. The *Radio World* article quotes Paul Beaumont, an associate editor of [Eye Spy Intelligence Magazine](#), a publication dedicated to espionage and intelligence, "Voice (numbers) stations are known to be spy messages."

The article said that one of the best-known numbers stations was "The Lincolnshire Poacher," so called due to its use of "The Lincolnshire Poacher" folk song played on a pipe organ as an identifier. Radio amateurs used direction-finding equipment to pin down the station's eventual location to an RAF base on Cyprus, the article said.

ARRL member Chris Hays, AB6QK, on the west coast, said this week that he frequently hears a CW station on 7.163 MHz sending random alphanumeric characters, each group terminated by one or more question marks.

Courtesy of the ARRL Newsletter

ARRL Life Member Receives Patent for "Cloaking" Technology

Nathan "Chip" Cohen, W1YW, of Belmont, Massachusetts -- the founder of Fractal Antenna Systems Inc and inventor of the fractal antenna -- has been granted a patent for deflective electromagnetic shielding -- essentially "cloaking" technology to defend against detection by radar and similar technologies.

"Ham radio experimentation can lead to some pretty cool innovations!" Cohen said in response to a recent QRZ forum post about the patent. "Let's keep that spirit alive in 2018."

The patent covers electromagnetic cloaking/deflection of, among other things, satellites, rockets, towers, antennas, vehicles, body coverings, ships, spacecraft, and even people.

"Much time and effort has been devoted to the quest for so-called invisibility machines," the patent's background information states. "Beyond science fiction, however, there has been little, if any, real progress toward this goal."

According to the detailed description, the technology "provides one or more surfaces that act or function as shielding and/or cloaking surfaces for which at least a portion of the surface includes or is composed of 'fractal cells' (small fractal shapes, functioning as antennas or resonators) placed sufficiently close to one another, so that current present in one fractal cell is replicated or reproduced to an extent in an adjacent fractal cell. Without being limited by any theoretical explanation, surface plasmonic waves are believed to cause such replication in conjunction with evanescent waves." The resulting surface would deflect around an object.

In terms of backscatter, upon which radar systems depend, Cohen has explained it this way: "The incoming wave reflects off a boundary condition at the object. Its reflection is out of phase and phase-cancels with the incoming wave. Bye-bye, backscatter."

Fractal Antenna Systems first publicly demonstrated "person invisibility" in 2012 for a Radio Club of America audience. He also has demonstrated invisibility cloaks at Hamvention® and at the ARRL New England Division Convention. According to the company's BusinessWire release, "Uses of the newly patented technology extend to commercial needs such as towers, antennas, people, and shielding, but it may also be used in defense and intelligence arenas."

The BusinessWire release said the technology "produces the desired effects without any requirements on special orientation, composition, or shape of the object. The cloak/deflector can be very thin, and the effect can happen over a wide bandwidth."

The company noted that cloaking applications concentrate on microwave and infrared wavelengths, but the technology and patents also apply to visible light.

"Cloaking at visible light has limited needs," Cohen has said. "Camouflage and projection methods are easier and cheaper at making something disappear to the eye. But at radio and heat wavelengths, the cloaking technology is an important enabler."

Thomas Fire Response Also Demonstrates Amateur Radio's Social Media Value

Santa Barbara Amateur Radio Club ([SBARC](#)) members kept a close watch on the Thomas Fire after it broke out in early December. Using a variety of the club's analog and digital Amateur Radio assets, radio operators were able to observe fire-fighting efforts first hand and pass along immediate information, often before it was reported by official sources or by local news media. SBARC operates five communication sites in Santa Barbara County, including sites on Diablo Peak on the mostly uninhabited Santa Cruz Island, and on Santa Ynez Peak.

"These two sites host [Automatic Dependent Surveillance-Broadcast] ADS-B receivers that are connected via a combination of amateur microwave IP links and mesh networking and were used to track and monitor airborne firefighting activities," Levi Maaia, K6LCM, co-chair of SBARC's Telecommunications Services Committee, told ARRL.

Starting in mid-December, a round-the-clock emergency net convened on 2 meters, as commercial power for much of Santa Barbara County was cut and the fire descended on residential communities in Santa Barbara County, prompting multiple evacuation orders. With repeaters on generator power and many operators running on battery power, net traffic consisted of official information, including evacuation orders, live reports on the rapidly approaching fire line from operators who remained inside the mandatory evacuation area, related traffic about firefighting efforts, and wind and weather conditions. SBARC volunteers set up an ad hoc remote receiving station to stream live fire ground and air communications audio over the internet and mesh network.

As fire crews came off duty, one firefighter and Amateur Radio operator joined the net to offer a firsthand account of operations from an insider's perspective. SBARC members also assisted visiting fire crew members with mobile radio antenna repairs in the field.

Maaia said social media proved to be a valuable communication asset, as most official organizations, such as incident command and emergency management agencies, were disseminating official information via Twitter immediately upon release. "Amateur stations without power, cell phone or internet access could be kept informed of important information including evacuation orders, via the Amateur Radio net," Maaia explained. "SBARC also served as an aggregator for Thomas Fire-related information by featuring tweets on the club website."



An early image of the Thomas Fire, caught by a remote digital Amateur Radio TV camera on December 4.



California's wildfires were visible from space. [NASA photo]

The largest in modern California history, the Thomas Fire caused devastating losses in Ventura and Santa Barbara counties. "Although the Santa Barbara ARES group never activated, Amateur Radio proved to be a valuable mode of communication, especially when coupled with social media, amateur mesh networking, IRC chat (over mesh and internet) and live audio streaming," Maaia said.

In Ventura County, the Thomas Fire damaged or destroyed some Amateur Radio resources normally available to provide emergency communication. It was an Amateur Radio TV camera that caught the first images of the Thomas Fire on December 4. [A fundraising effort](#) now is under way to help a repeater system operator to replace gear and to bolster the rest of the system for future such emergencies. Fundraising sparkplug Ben Kuo, AI6YR, said the fire demonstrated the difficulty of keeping equipment running in remote locations during fire

emergencies.

"We also discovered other sites faced serious limitations after utility power was cut and solar panels were obscured by vast clouds of smoke," Kuo recounted in his solicitation. "This GoFundMe [campaign] will go toward enhancing the existing ham radio repeater network, to make it more reliable in emergencies." High-quality video cameras for those repeater sites is another possibility.

During the Thomas Fire, Kuo helped bridge the divide between Amateur Radio and social media, and even firefighters would check his feed to see what was going on in other areas of the fire, he said. "It's a very powerful combination," Kuo [told VC Star](#). An ARRL member, Kuo, of Newbury Park, founded the [socaltech news site](#). He's been licensed for 3 years and serves as an ARRL Technical Specialist for the ARRL Santa Barbara Section.

Courtesy of the ARRL Newsletter

CLUB INFO

PUBLIC SERVICE

CLUB STATION

The WARC club station is open to anyone with an interest, on the first Thursday of the month (meeting night) between the hours of 6:30 and 7:30 pm. with the exception of the December dinner meeting For further information, call George Brechmann N3HBT at 215-443-5656.

WARC ALUMNI MEMBERSHIP

An Alumni membership category is available for WARC members who are unable to attend meetings and club activities on a regular basis because of health considerations, travel impediments, or other hardships. Dues for the Alumni membership are \$10.00 annually and are approved by the Board. Please contact the Membership Committee for more information if interested."

ATTENTION MEMBERS

The Membership Committee can provide Club badges. Two types are available: an engraved plastic callsign and name badge for \$8 or a free, laminated plastic, photo ID badge/card. The photo id badge is included with your membership. Pictures for the club badge will be taken before club meetings on even numbered months. If you do not have at least a Warminster Amateur Radio Club badge with your picture on it, please contact your Membership Chairs at the WARC monthly meetings. Otherwise, please contact Membership by email at: membership@k3dn.org.

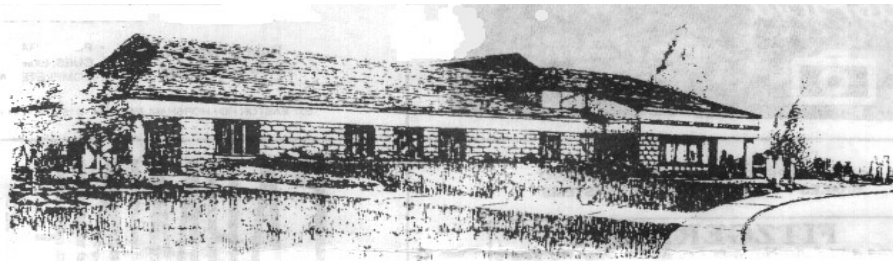
If you want to have your picture taken to be placed on the 'Members' Photos' section of the www.k3dn.org website, please contact Membership with your interest. When we get enough people who are interested we will post a notice in Feedback and have a camera ready at the following club meeting.

PROGRAMS 2018

February - Club Auction

March – CAP Comms w/Chris Trotter KB3CET

The Club Station - K3DN - is located at the Benjamin Wilson Senior Center, Delmont Avenue, Warminster, PA. The station is open for club members and the interested general public on the first Thursday of the month (meeting night) between the hours of 6:30 and 7:30 pm. with the exception of the December dinner meeting . The station is fully operational on HF (80 meters through 10 meters) both phone and CW. There is an assortment of amateur radio shareware which may be copied under the shareware licensing agreement.



For additional information on the Club Station please call the Station Manager N3HBT - George at 215-443-5656.

➤ WARC Meetings are held the first Thursday of each month at 7:30 pm at the Benjamin Wilson Senior Center, Delmont Avenue, Warminster, PA. Talk in is available on the 147.09 & 443.950 repeaters.

2018 Contest Calendar

February

12-16 [School Club Roundup](#)

1300 UTC Monday through 2359 UTC Friday.

17-18 [International DX – CW](#)

Starts 0000 UTC Saturday; ends 2359 UTC Sunday

March

4-5 [International DX– Phone](#)

April

15 [Rookie Roundup – Phone](#) 1800 UTC through 2359 UTC

QSO Parties

Vermont	0000Z, Feb 3 to 2400Z, Feb 4
Minnesota	1400Z-2400Z, Feb 3
South Carolina	1500Z, Feb 24 to 0159Z, Feb 25
North Carolina	1500Z, Feb 25 to 0059Z, Feb 26

V.E. TEST LOCATIONS

Confirm all information, in advance, with the contact person. Licensed applicants must bring the original, and one photocopy of their license. All applicants, including children, must bring two forms of positive ID. Also bring the original, and a copy, of any Certificate of Successful Completion needed to prove current status. The ARRL VEC'S 2018 test fee is **\$15.00**.

Warminster Amateur Radio Club,
Monthly, Last Mon. 7:00 pm at the Wilson Senior Community Center 580 Delmont Avenue Warminster, PA 18974
George Brechmann (215) 443-5656.

Atco, NJ, The fourth (4th) Tuesday of each month, at 7 p.m. Winslow Township Senior Center, 33 Cooper Folly Road, 08004-2603.
Mark (K2AX) jtra@comcast.net

Levittown, PA, Monthly, 3rd Monday at 6:30. Falls Township Building - Ben Johns, K3JQH, 215-657-5994

Telford, PA, RF Hill ARC. Indian Valley Library. Held the third Monday of odd months (January, March, May, July, September, November)
Contact: Jim Soete 215-723-7294
wa3ylq@arrl.net.

Philadelphia, PA, Testing is done on the 4th, non holiday Thursday of the month at the, Community Ambulance Association of Ambler, 1414 E Butler Pike, Ambler PA 19002 at 7:00 PM We also are testing on Saturdays at least once per quarter at 9:00 AM. For further information contact James McCloskey at jmccloskey@msn.com and by phone 215-275-2979.

Lansdale, PA Testing on the fourth non-holiday Thursday of the month starting at 7:00 PM. The Lansdale Library Community Room Vine St. and Susquehanna Ave. Lansdale, Pa. Registration is required 48 hrs. or more before the scheduled exam date. If there are no registrations the scheduled exam date will be canceled. NO WALK-INS. You can register by contacting:
Olaf N. Markert - Phone (610) 517-5074, E-mail w3pa@arrl.net
Alt Contact: Jim, 610-287-5630

➤ ATLANTIC DIV. HAMFESTS ➤ 2018

March 24 - FredFest 2018
Independent Hose Company
310 Baughmans Lane
Frederick, MD 21701
<http://frederickarc.org>

April 21 - Delaware State Convention (Delmarva Amateur Radio & Electronics EX-PO)
Cheer Community Center
20520 Sand Hill Road
Georgetown, DE 19947
<http://www.radioelectronicsexpo.com>

May 6 - Eastern Pennsylvania Section Convention
Bucks County Community College - Lower Bucks Campus
1304 Veteran's Highway (Rte. 413)
Bristol, PA 19007
<http://www.k3dn.org>

May 27 - Memorial Day Hamfest
Howard County Fairgrounds
2210 Fairgrounds Road
West Friendship, MD 21794
<http://www.marylandfm.org>

SKYWARN INFORMATION

MOUNT HOLLY NWSFO SKYWARN Weekly Information Net: EVERY THURSDAY AT 21:00 HOURS
SKYWARN Net Repeater Listing/ Streaming Audio of scheduled SKYWARN Net: <http://www.skywarnnet.net>
You do NOT have to be a certified SKYWARN Weather Spotter to check into the Net

Bucks County SKYWARN Weather Spotter PRIMARY FREQUENCY: 147.300MHZ (+ 131.8)
 Fairless Hills, PA (many remote access locations throughout Bucks County)

Mount Holly NWSFO SKYWARN Homepage:
<http://www.erh.noaa.gov/phi/skywarn/index.html>

SKYWARN Basic Weather Spotter Educational Programs URL:
<http://www.erh.noaa.gov/phi/skywarn/training.html#sched>

➤ **CLUB EQUIPMENT**

WARC has 2 Baofeng UV-5R dual band HT's and a Yaesu FT-2900 2M mobile that are available for use by members of the club. The radios are available on a month-by-month basis and have been purchased primarily to help new hams get on the air. However, they may also be used by any club member who is in need of a temporary 2-meter radio. They are also available for use by participants in WARC's public service activities.
 DE, George Acker KC3ESH

Area Repeaters

VHF

- 145.310 R.F. Hill
- 145.350 Doylestown R.C.
- 146.790 Penn Wireless
- 145.330 Hilltown
- 146.670 DVRA
- 146.685 Holmesburg
- 146.925 Willingboro
- 147.000 Ham Buergers
- 147.030 Phil-Mont
- 147.090 Warminster
- 147.270 Frankford
- 147.300 BEARS
- 147.390 CBRA

220

- 224.580 PackRats
- 223.76 K3NAL

UHF

- 442.650 DVRA
- 443.250 TAG
- 443.050 Metro-Comm
- 443.950 Warminster
- 444.200 BEARS
- 447.475 WR3B
- 448.225 Penn Wireless
- 444.759 RF Hill Analog/Fusion

D-STAR

- 146.61000 K3PDR DV
- 445.18125 K3PDR DV
- 445.01875 AA3E Montco RACES

6 Mtr

- 53.030 WA3BXW
- 53.230 N3DQZ
- 53.320 K3MFI

*The Warminster Amateur Radio Club
 Announces Free Ham Radio Instructional Classes*



If you're interested in Ham Radio, or think you might be, this is your opportunity. Perhaps you'd like to learn about digital communications, Morse code, VHF, UHF, satellite, or perhaps you'd rather sit down and chat with someone in South Africa, Russia, Great Britain or in the space station.

Technician classes will be taught by **Ron Small, WB2OOB** starting March 12th for 6 Mondays in a row from 7 to 9 pm

Extra classes will be taught by **George Altemus, KA3WXV** starting March 12th for 8 Mondays in a row from 7 to 9 pm

For further information contact George Brechmann, N3HBT at 215-443-5656.

Bucks County Amateur Radio Emergency Service (BCARES)

www.bucksares.org
 Bucks County ARES will be on the air Wednesdays, at 9:00 PM . We will be using Warminster Amateur Radio Club's repeater on 147.090, pl 131.8. This net is linked as shown in the Net Schedule box for the Wednesday night net. It may also be linked to 147.300.

Winlink Gateway Stations:
 Lower Bucks NY3J-10 145.530 Bensalem

Net Schedules

Sunday	2000	10 Meter Net	28.445 MHz
Wednesday	2000	2 Meter Net	147.09 Rptr.
Wednesday	2000	Linked w/ 2 Meter Net	443.95
Rptr.Wednesday	2000	Linked w/ 2 Meter Net	53.230 Rptr.
Sunday	2030	Informal Net	223.5 Simplex
Thursday	1900	Mont. Cnty RACES Net	146.835 Rptr.

Are you submitting an article for the Feedback ?

Contributions of articles to be published are always accepted for consideration. Please follow these guidelines:

- E-Mail to:
wa4ywm@comcast.net
Or via snail mail to:
FEEDBACK EDITOR
Warminster Amateur Radio Club
Box 113
Warminster, Pa 18974
- Use both upper and lower case letters.
- Use your program's spell check.
- If you don't have a computer, then typewritten sheets are o.k. but please use both upper and lower case.
- Put your name and call at the beginning or end of the article, and show credits if you are using material from another source.
- Deadline for articles is the Saturday before the regular meeting.

For general club correspondence:

k3dn@k3dn.org

Visit our Home Page at:

<http://www.k3dn.org>

The annual dues rate structure is as follows:

Full Member: \$ 20.00
2nd FamilyMember: \$ 10.00
Student: \$ 10.00
Alumni: \$ 10.00

- Are your dues current ?

2018 Officers

Executive Officers

President	Tony Cuttone	W3FLH	267-679-9297
Vice-President	George Acker	KC3ESH	215-815-7783
Secretary	Kathy Acker	KC3FBY	215-815-7978
Treasurer	Herb Hickmott	KB3VMN	267-718-3601
Director (A)	Michael Shanblatt	W3MAS	267-491-5773
Director (E)	Larry Abbott	WA3ELQ	215-704-3282
Director (A)	Brandon Penglase	N3UO	215-259-7255
Director (E)	George Brechmann	N3HBT	215-443-5656
Past President	Irwin Darack	KD3TB	215-343-8170

Committee Chairpersons

ARES/RACES Liason	Karl Harris	K3KH	215-264-1855
ARRL Liason	Irwin Darack	KD3TB	215-343-8170
Awards Manager	Vince Pironti	KD3TC	215-674-0446
Classes	George Altemus	KA3WXV	215-855-3856
Digital and APRS	Ron Wenig	NY3J	215-638-9257
Feedback Editor	Jim Elmore	WA4YWM	215-538-1889
Field Day 18	Doc Whitticar	W3GAD	215-968-6397
Hamfest 18	Michael Shanblatt	W3MAS	267-491-5773
Hamwear	Kathy Acker	KC3FBY	215-815-7978
Holiday Dinner	George Brechmann	N3HBT	215-443-5656
Membership	Jacek Ostrowski	KC3HXF	
Net Manager	George Brechmann	N3HBT	215-443-5656
Publicity	Bernice Kraut	KB3PCX	215-884-8195
Refreshments	Brandon Penglase	N3UO	215-259-7255
RF Interference	Andy Vavra	KD3RF	610-287-3295
RF Interference	Bill Ballantine	K3FMQ	215-766-0764
Repeater Coordinator	Brian Taylor	N3EXA	215-257-6303
Safety Officer	Mike Malone	W3MJM	
Station Trustee	George Brechmann	N3HBT	215-443-5656
Sunshine Club	Vince Pironti	KD3TC	215-674-0446
Township Liason	George Brechmann	N3HBT	215-443-5656
VE License Testing	Larry Abbott	WA3ELQ	215-704-3282
VHF/UHF/MW	George Altemus	KA3WXV	215-855-3856
Website Coordinator	Al Konschak	WI3Z	215-491-9941
Youth Programs	Steve Larson	WW3Y	215-822-1511