



FEEDBACK



Warminster
Amateur Radio Club

Web Site k3dn.org

Warminster Amateur Radio Club

April 2017

Next Meeting April 6th - Hamfest Prep

President's Message

Contest season is in full swing, with the CQWW WPX SSB contest having just wrapped up, and events such as the NA SSB Sprint (April 2nd), NRAU 10m Activity Contest (April 6th, all modes), Japan Itn'l DX CW (April 8th & 9th), and the ARRL Rookie Roundup (April 16th), not to mention multiple state QSO Parties and other assorted club events – and that's just this month! If you have an interest in contesting and would like to get started, or if you're an active contester looking to possibly improve your skills or pick up a few extra tricks, there are several members of the club that would be happy to take some time and help. Contact one of our Board members for more information.

This month is the nominations for our club officers, and next month will mark our annual elections. If you would like to help lead the club, and are willing to volunteer for a Board position, please contact Bill K3FMQ and get on the ballot. The club is only as strong as it's active members, and we invite you to take part in the process. Your input is not only welcome, but important to us, and vital to the growth of the club.

Our trip to ARRL HQ on April 4 is almost upon us, and it's shaping up to be well-attended. There should be a nice mix of our club members, along with several attendees from other local clubs – a good chance to show them how WARC does things! We'll be sure to give a full report back to the general membership at the club meeting two days later...

Preparations for our Hamfest/EPA Section Convention are well under way, and we are making steady progress. Mike W3MAS led a group of us on a walk-through at the Bucks County Community College - Lower Bucks Campus, where we saw firsthand the layout of the building and parking situation, and began to formulate our approach to traffic and vendors. Volunteers are still needed, and you can find a volunteer form that you can fill out on our website, or be sure to attend this month's General meeting, where our final plans will be laid.

de Tony, W3FLH
73

WARC General Membership Meeting Minutes March 2, 2017

Attendance:

Call to order – *Tony W3FLH*

Introductions – pass mic

Minutes from last Board Meeting

Additions/Corrections – Minutes approved with no additions/corrections

Committee Reports

Treasurer's Report: *Bill K3FMQ*

As reported at the meeting

Programs: *George KC3ESH*

April – Hamfest prep

May – Elections/Hamfest recap

June – Pizza Night/Field Day recap/Special Event (W3U) prep

July or October – Repeater system with Brian

August – Laura KC3GWL give her science fair presentation

September – Home Brew Night

Membership: *George KC3ESH*

New Member Applications – 1 new application this evening

(Continued on page 2)

(Continued from page 1)

Membership Update – 159 members, still with some people on grace

Public Service: *George N3HBT*

Need volunteers for March for Babies, Sunday April 30 in Tyler State Park. Meet at approximately 8:00 am until about 12-12:30pm.

June will again be the Hole in One golf outing at 5 Ponds Golf Course

Haven't heard anything from Hatboro for the Moonlight Madness Car Show

We have received an email from Karen about her requests for the year including Memorial Day Parade.

Classes: *George KA3WXV/Ron WB2OOB*

Next classes will be the 2nd Monday in March for Tech with Ron Small, WB2OOB will teach in the Gordon West style. Extra course with George KA3WXV, will be using the ARRL Extra book but only as a reference.

VE Testing: *Larry WA3ELQ*

Next session will be Monday, March 27, 2017

1 candidate was successful at the February 27, 2017 test session

Repeater: *Brian N3EXA*

443.95 repeater working as well as the 147.09

Need to check EchoLink

Good and Welfare: *Vince KD3TC not in attendance* – no one is aware of anyone needing a card

Other Committees – nothing to report

Old Business

Day trip to ARRL HQ (Tony W3FLH) – Tuesday, April 4, 2017 – Payment due by March 17, 2017. You can use the PayPal link on the website or give Tony W3FLH a check. Make sure you bring a copy of your license so you can work W1AW. If you need any further information, see Tony W3FLH.

Special Event – Union League/W3U (Tony W3FLH): June 17, 2017; W3U special event call sign for the entire weekend. More information will be available as it gets closer. We are looking for operators to get on the air and be on the receiving end of pile ups.

WARC Hamfest/EPA Section Convention (Mike W3MAS) – May 7, 2017 – We have confirmed our speaker, Norm Fusaro W3IZ from ARRL will speak about the state of the league as well as National Parks on the Air. We have rented 75 – 8' x 30" tables and will need a crew on Saturday at 3:00pm to move and set up the tables. We will also need a crew to tear down the tables and stack them to be picked up on Monday morning. Postcards will be ready for stamping and labeling on March 30. We will be looking for volunteers to come and help. Irwin KD3TB is collecting email addresses from local clubs so that we can send out a flyer to each of them advertising the Hamfest. Vendors are starting to sign up. We need volunteers. There will be signup sheets at next month's meeting.

New Business

Penn Wireless will be running a special events station, W3K, from March 4 through March 18. They will be working all bands. See pennwireless.org for more information.

Nominating Committee – We are accepting nominations for board positions for our May elections. If you are interested in serving on the board or serving on the nominating committee see Bill, K3FMQ.

Constant Contact – We have subscribed to Constant Contact to send out emails from the club for the Hamfest as well as other things.

Irwin KD3TB has been creating crossword puzzles that are being published in the Feedback. Please let him

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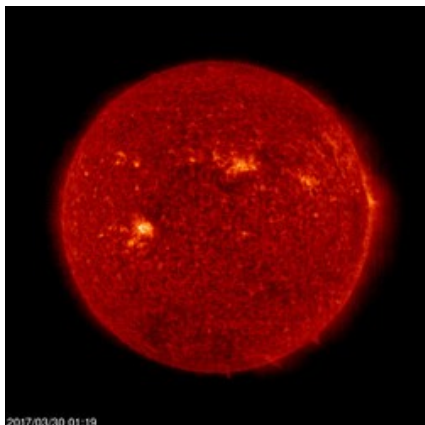
know if you are interested in him continuing to do this.

Motion to Adjourn

Meeting adjourned at 8:12pm

THE K7RA SOLAR UPDATE

Tad Cook, K7RA, Seattle, reports: Solar activity rose over the past week, with average daily sunspot numbers rising from 3.4 to 29.7 and solar flux from 71.2 to 77.9. The average daily planetary A index increased from 10 to 18.3, and the average mid-latitude A index went from 7.1 to 13.6.



Predicted solar flux is 83 on March 30; 82 on March 31-April 3; 80 and 78 on April 4-5; 71 on April 6-14; 73 on April 15-17; 75 on April 18-22; 78 on April 23-26; 75 on April 27-29, and 73 on April 30-May 1.

Predicted planetary A index is 24 and 20 on March 30-31; 16 on April 1-2; 14 on April 3; 12 on April 4-6; 5 on April 7-16; 24, 25, and 10 on April 17-19; 5 on April 20-22; 25, 40, 35, 20, 18, and 12 on April 23-28; 8, 16, 12, 15, and 12 on April 29-May 3, and 5 through mid-May.

Tamitha Skov released a [video](#) a week ago, although it is a bit out of date by now, but her observations are always interesting.

Sunspot numbers for March 23 through 29, 2017 were 12, 12, 11, 20, 49, 51, and 53, with a mean of 29.7. The 10.7-centimeter flux was 72, 72.3, 74, 77.2, 82.8, 83.7, and 83.3, with a mean of 77.9. Estimated planetary A indices were 11, 6, 4, 4, 54, 28, and 21, with a mean of 18.3. Estimated mid-latitude A indices were 9, 7, 3, 3, 34, 22, and 17, with a mean of 13.6.

Courtesy of the ARRL Newsletter

STANAG 4285 Signal Showing Up on 40 Meters, Other Intruders Spotted

A STANAG 4285 intruder has been showing up on 7101.8 kHz, according to the International Amateur Radio Union ([IARU](#)) Region 1 Monitoring System (IARUMS).

“The signal was strong in South America, but rather weak in Europe,” the [latest edition](#) of the IARUMS newsletter reported. “We had the same problem in earlier times. Location probably Falkland Islands.”

Its unusual designation aside, STANAG 4285’s motorboat-like signals are pretty common on HF frequencies between about 2 MHz and 23 MHz. It is the data communication “modem” that North Atlantic Treaty Organization (NATO) military agencies use for the purposes of standardization, and it comes in several flavors (sub-modes), with a variety of speeds — from 75 bps to 3600 bps — and interleaving, both short and long. BPSK, QPSK, and 8PSK are used with STANAG 4285 for specific speeds. The waveform consists of an 1800-Hz carrier with PSK modulation.

It’s not unusual to hear STANAG-4285 signals around the world, not all of them from NATO stations. Most of the traffic is encrypted, but sometimes it is not, and software is available on the Internet to decode it.

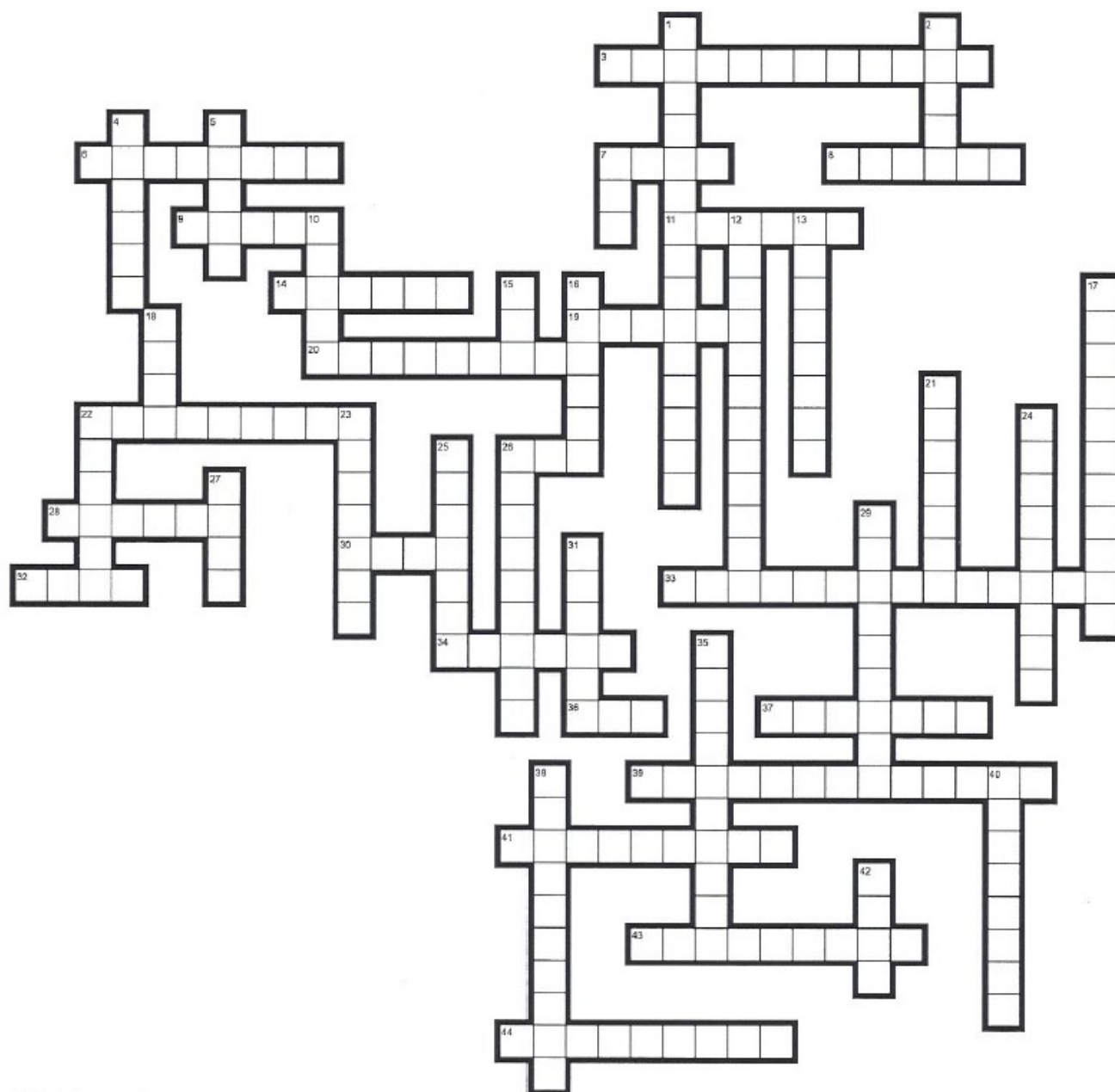
IARUMS further reported that a Russian Air Force F1B (frequency-shift keying) intruder (REA4) was showing up on 7.018 MHz during February, but another F1B intruder on 7.193 MHz from Kaliningrad, Russia, was no longer active at the end of February. German telecommunication authorities had filed a formal complaint. No complaint is

Courtesy of the ARRL Newsletter

(Continued on page 4)

(Continued from page 3)

April 2017
KD3TB



EclipseCrossword.com

CLUES ARE ON THE NEXT PAGE

Across

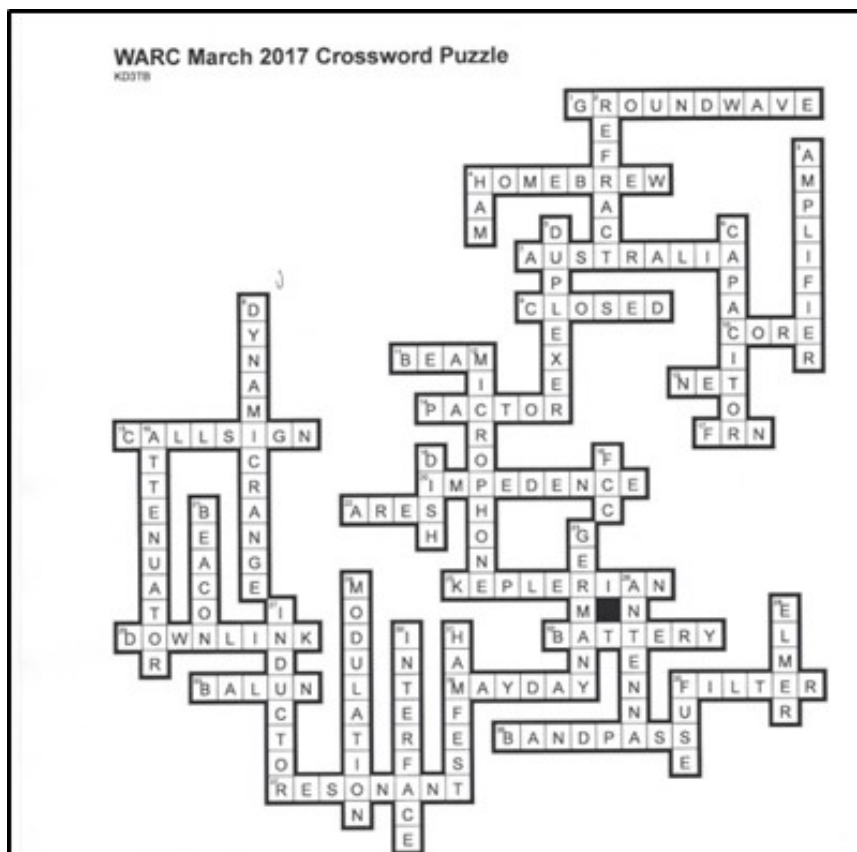
3. Used to describe the orientation of the electric field produced by an antenna compared to the surface of the Earth.
6. An integer multiple of a frequency
7. Electronic QSL service offered by ARRL
8. A type of silicon dioxide crystal cut to vibrate at a particular frequency when an electric current is applied to it. Used in high stability oscillators
9. Abbreviation for a sub-audible low frequency tone used on many repeaters to unlock a receiver
11. A digital mode using multiple FSK carriers; intended for operation under QRP or weak-signal conditions on shortwave bands.
14. VE's DXCC Country
19. The point in a satellites orbit when it is the farthest from the earth
20. ___ Elements; mathematical values used to compute a satellites position
22. Frequencies that are integral multipliers of a fundamental frequency
26. A simple mechanical device used to send Morse code
28. An early digital radio mode developed in Canada in 1978
30. The reduction of power, voltage or current due to dissipation of energy
32. How much more effective an antenna is as a radiator than a half wave dipole
33. The distortion of a SSB/FM signal that results in spurious signals called splatter, usually resulting from too high an audio gain
34. A donut-shaped solid usually constructed of ferrite, used as the former for transformers and inductors'

36. Bouncing a signal off the moon
37. Radio operator who is responsible that all Amateur Radio Rules are followed
39. A digital mode for sending and receiving text using facsimile technology invented by Rudolf Hell
41. The number of complete waves that pass a reference point per second
43. A diagram that describes the electronic circuit in a radio
44. A type of antenna in the shape of a dish

Down

1. The waves emitted by an antenna, having two dimensions, electric and magnetic
2. The rate of energy consumption. Calculated by multiplying voltage by current, $P = VI$
4. ___ tube, A device that creates or modifies an electrical signal through the movement of electrons in a low pressure space
5. ___ Meters (7000 to 73000 kHz)
7. Slang in amateur radio, used to denote a poor or inept operator
10. A room where Hams keep their station
12. The interaction between a desired frequency and an undesired frequency
13. A device that converts a DC source to and AC output
15. Abbreviation for an index that describes the amount of 2800 MHz radio energy coming from the sun
16. A call sign selected by the Ham versus one issued sequentially by the FCC
17. HB's DXCC Country
18. Abbreviation for Transceiver

ANSWERS TO MARCH PUZZLE



Election of Officers

Term of Office: June 1, 2017 – May 31, 2018

The election of officers and directors for the 2017 – 2018 term will take place at the May 4 meeting.

The following positions will be voted on:

President

Vice-President

Secretary

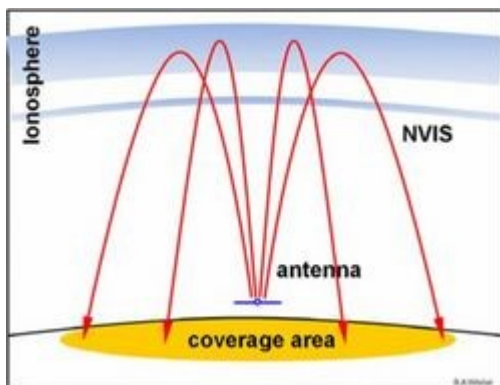
Treasurer

Two Directors

Club members interested in running for these positions should contact Bill, K3FMQ, Membership Committee, no later than April 15. K3FMQ@verizon.net

NVIS Research Paper Available

A thorough and fully annotated discussion of Near Vertical Incidence Skywave (NVIS) is available in the [research paper](#), "Radio Communication via Near Vertical Incidence Skywave Propagation: An Overview," by Ben A. Witvliet, PE5B/5R8DS, and Rosa Ma Alsina-Pagès.



First investigated in the 1920s, NVIS propagation was rediscovered during World War II as "an essential means to establish communications in large war zones such as the D-Day invasion in Normandy," the paper notes, adding that the US Army subsequently sponsored a lot of NVIS field research, especially between 1966 and 1973. More recently, NVIS has become a popular means to enable close-in communication on Amateur Radio HF bands between 3 and 10 MHz. NVIS can be used for radio communication in a large area (200-kilometer radius) without any intermediate manmade infrastructure, and it has been found to be especially suited for disaster relief communication, among other applications, according to the paper.

"A comprehensive overview of NVIS research is given, covering propagation, antennas, diversity, modulation, and coding," the *Abstract* explains. "Both the bigger picture and the important details are given, as well as the relation between them." As the paper describes it, in NVIS propagation, electromagnetic waves are sent nearly vertically toward the ionosphere, and, with appropriate frequency selection, these waves are reflected back to Earth.

"The great reflection height of 80 to 350 kilometers results in a large footprint and homogeneous field strength across that footprint," the paper says. "Due to the steep radiation angles large objects such as mountain slopes or high buildings cannot block the radio path."

As for NVIS antennas, the paper stipulates that important parameters are antenna diagram, polarization, and bandwidth. "As only high elevation angles contribute to NVIS propagation, optimizing the antenna diagram for these elevation angles will increase the effectively transmitted power and improve the signal-to-interference ratio at reception."

Courtesy of the ARRL Newsletter

Motorola Solutions Sues Hytera Communications, Alleging Patent, Trade Secrets Theft

[Motorola Solutions](#) has filed [complaints](#) in federal court (US District Court for the Northern District of Illinois), alleging that [Hytera Communications](#)' digital mobile radio (DMR) products employ techniques and systems that infringe on Motorola Solutions' patents and trade secrets. Already known for its Land Mobile Radio Service products, Hytera entered the Amateur Radio DMR market last year. Motorola alleges that proprietary and patented information was taken illegally by three former company engineers who now work for Hytera, as "part of a deliberate scheme to steal and copy" its technology.

"Motorola Solutions believes that Hytera is intentionally infringing its intellectual property and misappropriating its trade secrets, which has enabled Hytera to compete unfairly by bypassing investment in innovation," Motorola said in a March 14 news release. Motorola Solutions General Counsel and Chief Administrative Officer Mark Hacker characterized the copying as brazen, blatant, and willful.

The three former Motorola engineers all signed non-disclosure agreements, agreeing to treat all Motorola trade secrets as confidential, when they left the company to assume similar positions with Hytera. According to the lawsuit, none of the three disclosed beforehand that they intended to go to work for Hytera.

Motorola contends that its digital radio products were rendering Hytera's analog systems obsolete, and rather than develop its own digital products, Hytera stole Motorola's ideas, its attorneys allege. Motorola said technology features it developed started showing up in Hytera products soon after Hytera began hiring engineers who had left Motorola in 2008, according to the lawsuit.

In a statement, Hytera, headquartered in Shenzhen, China, said it adheres to high ethical standards and complies with "the laws and regulations in markets where we operate," and "firmly believes that its business practices and operations will be fully vindicated." -- *Thanks to IWCE's Urgent Communications, The Chicago Tribune, and Motorola Solutions for information used in this story*

Courtesy of the ARRL Newsletter

ARRL Seeking Synergy with Maker Movement

ARRL is reaching out to members of the Maker movement to explore avenues of cooperation and collaboration, and perhaps to recruit some new radio amateurs. Considered an extension of the arts and crafts tradition, the Maker movement gained its own magazine, [Make](#), in 2005. The philosophy of the Maker movement is reminiscent of an era when radio amateurs built their own equipment rather than buying it off the shelf. Those considering themselves Makers have tended to focus on such areas as electronics and computers, robotics, 3D printing, metal and woodworking, and even Amateur Radio, among other avocations.



The Bay Area Maker Faire attracted youngsters and adults in 2016.

Recognizing the similar characteristics of radio amateurs and Makers, the [Ham Radio](#) exhibition each summer in Friedrichshafen, Germany, has shared space with a Maker Faire, as Maker gatherings are known, for the past few years. Maker Faires in the US have attracted thousands more attendees than even the largest hamfest. The "Hamvention" of the Maker movement takes place in San Mateo, California, and ARRL will have a presence at events in the Bay Area in May, and in Chicago later this year.

"Maker communities and Makerspaces are springing up across the country, becoming the latest nexus of youthful aspirants and exotic technology, as well as the locus of highly innovative forms of experimentation -- including Amateur Radio," ARRL CEO Tom Gallagher, NY2RF, wrote in his Second Century editorial, "Make It Happen," in the April issue of *QST*. Gallagher considers Makers as "the next generation of hams."

Gallagher suggests radio amateurs consider attending Maker Faires -- not only to promote and give a presence to Amateur Radio, but to learn what they have in common with Makers, many of whom already are licensees. (An article in the January 2017 issue of *QST*, "Maker Faire Success for Ham Radio Clubs" by David Witkowski, W6DTW, is on Gallagher's recommended reading list, as is an interview in the same issue with Jeri Ellsworth, AI6TK, who is well known in the Maker and gamer communities.)

Any radio amateur who enjoys tackling an Arduino or Raspberry Pi electronics project for the shack should find some common ground in the Maker movement. Gallagher notes in his editorial that at last September's Maker Faire in New York City, a club in Queens offered a simple build-a-code-practice-oscillator project, provided by [QRPme.com](#), that only required five components. "The attendees were lined up six deep in two lines," Gallagher recounted. "There is nothing to match the delight in the builder's eyes when he or she first experiences the joy of oscillation." He hinted that this could, in time, translate to new licensees.

Courtesy of the ARRL Newsletter



CLUB INFO**PUBLIC SERVICE**

March for Babies, Sunday April 30 in Tyler State Park. Meet at approximately 8:00 am until about 12-12:30pm.
June will again be the Hole in One golf outing at 5 Ponds Golf Course.

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 2017

April - Hamfest

May - Field Day Prep/Hamfest recap – elections

June – Field Day recap and pizza night

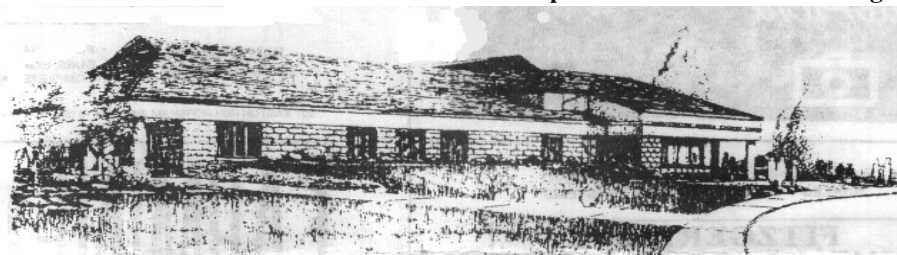
July – Repeater system with Brian

August – Laura KC3GWL gives her science fair presentation

September – Home Brew Night

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.**

2017 Contest Calendar

APRIL

Rookie Roundup (SSB) - April 16

1800 UTC through 2359 UTC

JUNE

VHF Contest - June 10-12

Begins 1800 UTC Saturday, runs through 0259 UTC Monday

Kids Day - June 18

1800 UTC through 2359 UTC

Field Day - June 24-25

1800 UTC Saturday and running through 2059 UTC Sunday

QSO Parties

New Mexico	1400Z, Apr 8 to 0200Z, Apr 9
Georgia	1800Z, Apr 8 to 0359Z, Apr 9 and 1400Z-2359Z, Apr 9
Michigan	1600Z, Apr 15 to 0400Z, Apr 16
North Dakota	1800Z, Apr 15 to 1800Z, Apr 16
Ontario	1800Z, Apr 15 to 0500Z, Apr 16 and 1200Z-1800Z, Apr 16
Nebraska	1300Z, Apr 22 to 0100Z, Apr 23 and 1300Z-2200Z, Apr 23
Florida	1600Z, Apr 29 to 0159Z, Apr 30 and 1200Z-2159Z, Apr 30

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 2017 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 ➤ 2017

April 22 - Delaware State Convention (Delmarva Amateur Radio and Electronics EX-PO)

Cheer Center
20520 Sand Hill Road
Georgetown, DE 19947
<http://www.radioelectronicsexpo.com>

April 29 - York Hamfest

Elicker's Grove Park
511 Roth Church Road
Spring Grove, PA 17362
<http://www.yorkhamfest.org/>

May 7 - Eastern PA Section Convention (Warminster Amateur Radio Club - Hamfest)

Bucks County Community College - Lower Bucks Campus
1304 Veterans Highway
Bristol, PA 19007
<http://www.k3dn.org>

May 28 - Memorial Weekend 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>

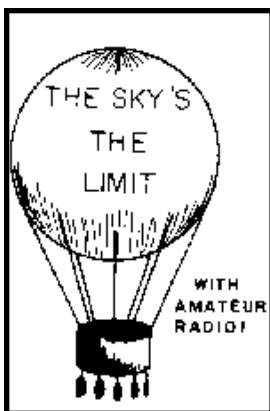
SKYWARN Basic Weather Spotter Educational Programs URL:

<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



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 March 13th for 6 Mondays in a row from 7pm to 9 pm.

Extra classes will be taught by George Altemus KA3WXV March 13th for 8 Mondays in a row from 7pm 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	2100	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.

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

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 ?

2017 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	Bill Ballantine	K3FMQ	215-766-0764
Director (A)	Michael Shanblatt	W3MAS	267-491-5773
Director (E)	Larry Abbott	WA3ELQ	215-704-3282
Director (A)	Brandon Penglase	KC3DYT	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	Richard Luce	AG3L	215-441-8264
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 17	Doc Whitticar	W3GAD	215-968-6397
Hamfest 17	Michael Shanblatt	W3MAS	267-491-5773
Hamwear	Kathy Acker	KC3FBY	215-815-7978
Holiday Dinner	George Brechmann	N3HBT	215-443-5656
Membership	George Acker	KC3ESH	215-815-7783
Net Manager	George Brechmann	N3HBT	215-443-5656
Publicity	Bernice Kraut	KB3PCX	215-884-8195
Refreshments	Brandon Penglase	KC3DYT	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			
Station Trustee	George Brechmann	N3HBT	215-443-5656
Sunshine Club	Vince Pironti	KD3TC	215-674-0446
Township Liason	Richard Luce	AG3L	215-441-8264
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