



FEEDBACK



Web Site k3dn.org

Warminster Amateur Radio Club

August 2019

Next Meeting August 1st - Yaesu System Fusion

President's Message

Well, the "Dog days" of August are upon us. The past couple of weeks have been your typical Delaware Valley summer weather, hot and sticky. A lot of my work as a general contractor requires me to be outside, depending on the job. I'm glad to have the comfort of an air-conditioned shack to retreat into so I can enjoy the hobby.

August also is a "slow" time in the activities of our club. All the events of the spring, Hamfest, Field Day and elections are now over. I would like to welcome to the board Marty, NR3Z who will serve as Vice-President and to Norm, AB3ZZ who takes over as Secretary. Mary, KC3KJZ will be taking on the responsibility as Membership Chair. We will soon be starting the plans for the fall and winter activities for the club.

One thing that is happening now is the shift of the Club's previous message boards to Groups.io. So far, the switch seems to be happening with no major problems. Our previous board was a Yahoo Groups and Yahoo has been cutting back on support for this service which is why the change is taking place. Various other groups that I belong to, along with other board members, have already made the switch. All the other switch over's that I have been a part of have been seamless and it looks like ours will be the same. If you are already a member of other groups on Groups.io the WARC group will just appear in your list of groups. If you are new to Groups.io you should have received an email inviting you to join the new group. We will have computers and people at the next meeting to help you if you have any questions about the conversion. If you have a question or need help signing in, bring your email and password to the meeting and we will help you sign up. In a few weeks, we will be shutting down all previous message boards. So, we encourage you to join us on Groups.io so that you can stay up to date on all club activities as well as discussions between our club members. Thanks to Brandon, N3UO for all his work in making the switchover a success.

73, George, KC3ESH
KC3ESH@yahoo.com

WARC General Membership Meeting Minutes July 11, 2019

Attendance:

Call to Order 7:41PM (Late start due to unload from Field Day)

Introductions - pass mic

Minutes from last Meeting

Additions/Corrections – Approved as published in Feedback

Committee Reports

Treasurer's Report: *Herb KB3VMN*

As Reported at meeting

Programs: *Marty NR3Z*

August-Yaesu System Fusion-Mark Hinkel, WA3QVU & Bruce Farrington, WA3ZPC

September-Amelia Earhart Story- Bill Strunk, K3ZMA

October-Home Brew Night

Membership: *Mary KC3KJZ* (Not in attendance)

119 Members

1 Pending

Public Service: *George N3HBT*

Nothing to Report

(Continued on page 2)

(Continued from page 1)

Classes: *George KA3WXV/Ron WB2OOB*

2nd week after labor day, if we have students. Monday night, 7 - 9

VEC Testing: *Larry WA3ELQ (Not in attendance)*

4 Techs, 1 General, 1 Extra, 100% pass rate

July 29 is next session

No session in August

Repeater: *Brian N3EXA*

Working great

Added center city input (now total of 7 inputs, 1 transmitter

Courtesy beep function to identify input is not working properly.

Transmitter is located at Warminster Township

On club website there is a section which explains the repeater

Good and Welfare: *Ken K9KJL*

Sent 1 card out to Kathy for field day injury

Other Committees

Radio Sport: *Irwin KD3TB (Not in attendance)*

IARU HR Championship this weekend

Field Day: *Doc W3GAD*

More participation than previous years

Food was great, weather was great

Most people liked having the tent row, but we need to spread the antennas out more. We are looking into acquiring long runs of feed lines to spread them out, or to center the tents and have the antenna circling the tents to achieve more spread.

We operated as Class 4A with 850 or so contacts

Hospitality: *Brandon N3UO*

Please remember to contribute to refreshment fund

Groups IO: *Brandon N3UO*

We will officially migrate from Yahoo Groups to Groups.io on Friday (7/12)

All members in good standing will receive welcome email.

Everything from Yahoo groups will be copied over to Groups IO.

We will have laptops at August meeting to assist any members.

Old Business

Constitution Review

Tabled, will be starting

Club Challenge

Mark won

New Business

Groups Migration to Groups IO

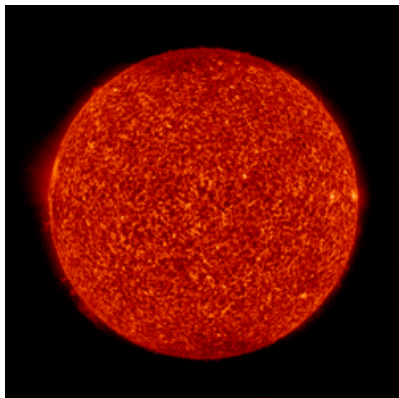
Club Trustee

George N3HBT to be stepping back from some duties, including Club Trustee, board will be writing up job description

Motion to Adjourn

Program: Radio Astronomy w/Robert Welsh, N3RW

The K7RA Solar Update



Tad Cook, K7RA, Seattle, reports: On Monday, July 22, a new sunspot appeared, but just for 1 day, and the magnetic signature showed it to be from the current Solar Cycle 24.

Average daily solar flux increased insignificantly, from 67 to 67.3. Predicted solar flux is 67 for July 25 through September 7.

Predicted planetary A index is 5 on July 25; 8 on July 26 - 27; 5 on July 28 - August 3; 8, 15, 15, and 8 on August 4 - 7; 5 on August 8 - 18; 8 on August 19 - 20; 5 on August 21; 8 on August 22 - 24; 5 on August 25 - 30; 8, 15, 15, and 8 on August 31 - September 3, and 5 on September 4 - 7.

An [article](#) in *EurekAlert*, "'Terminators' on the Sun trigger plasma tsunamis and the start of new solar cycles," discusses the end of the current cycle and beginning of the new one.

(Continued on page 3)

(Continued from page 2)

FOR SALE

Nine (9) aluminum military mast sections sold by the MAST COMPANY, high quality aluminum, each section about 3.75 feet once overlapped on each other for a total height of approximately 34 feet. Brand new in shipping carton. I can bring them to one of the meetings if you are interested. Contact, Bob, K3SRO at dlrwild1@verizon.net

267-535-9189 cell ASKING: \$110 cash or check

REDUCED PRICE!!

Kenwood TS-520S in good working order priced at 150.00.

Kenwood R-2000 Receiver with optional YG-455C included 150.00.

Both Items sell on EBAY for well over 300.00.

Elliott Ressler W3YEP

erressler27@gmail.com

Tel: 215-635-4893

A European Space Agency (ESA) [article](#) discusses the Solar Wind Composition Experiment during the Apollo 11 mission.

Sunspot numbers for July 18 - 24 were 0, 0, 0, 0, 11, 0, and 0, with a mean of 1.6. The 10.7 centimeter flux was 67, 66.7, 67, 67.7, 67.3, 67.4, and 67.8, with a mean of 67.3. Estimated planetary A indices were 3, 4, 3, 8, 8, 6, and 5, with a mean of 5.3. Middle latitude A index was 4, 3, 5, 9, 11, 7, and 5, with a mean of 6.3.

A comprehensive K7RA Solar Update is posted Fridays on the ARRL website. For more information concerning radio propagation, [visit](#) the ARRL Technical Information Service, [read](#) "What the Numbers Mean...", and [check out](#) K9LA's Propagation Page.

A propagation bulletin [archive](#) is available. [Monthly charts](#) offer propagation projections between the US and a dozen DX locations.

[Share](#) your reports and observations.

Courtesy of the ARRL Newsletter

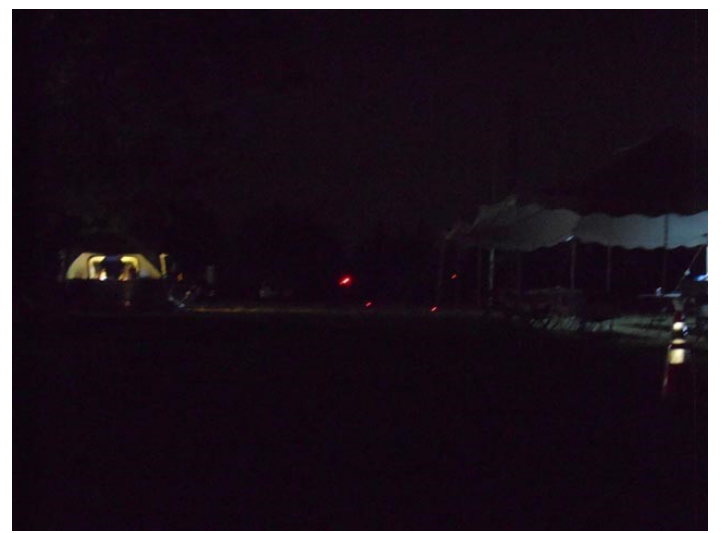
Language in the Federal Aviation Administration (FAA) Reauthorization Act of 2018 will exclude all but a small number of Amateur Radio towers from marking requirements.

Thanks to action taken in 2017 and 2018 by ARRL, the bill's original language was amended to the extent that amateur towers, as well as residential towers used for over-the-air TV reception, were effectively exempted from marking requirements. The topic was addressed at the annual "Ham Radio and the Law" forum at the [Dayton Hamvention](#)® this past May. Some key points from that presentation: (1) Towers covered by the rules are structures at least 50 feet tall that support an antenna and are located in a rural area or on farmland or immediately adjacent to such land. (2) According to the Act, the term "covered tower" does *not* include any structure that is adjacent to a house, barn, or other building, and "is within the curtilage of a farmstead or adjacent to another building or visible structure." ARRL Regulatory Information Manager Dan Henderson, N1ND, explains that, while a few Amateur Radio towers will fall under the Act's marking requirements and will have to be registered, towers in residential yards or within farmland are specifically exempted. [More information](#) is on the ARRL website.

Courtesy of the ARRL Newsletter

FIELD DAY PHOTOS





Some European Telecoms Regulators Keeping an Open Mind on French 2-Meter Proposal

At least two European telecommunications regulators appear inclined to give serious consideration to a French proposal to allocate 146 – 148 MHz to the Aeronautical Mobile Service on a primary basis. A number of International Amateur Radio Union (IARU) Region 1 member-societies have written their governments' regulators, expressing opposition to the proposal, aired at a June CEPT meeting. The matter remains a regional issue at this stage but could become an agenda item for World Radiocommunication Conference 2023 (WRC-23).

In response to a letter from Switzerland's IARU member-society USKA to telecommunications regulator BAKOM, the agency's head of frequency planning assured USKA that this was not a matter of depriving radio amateurs of primary use, but said "so-called co-primary" usage of 144 – 146 MHz by both services could be examined.

"We don't see how the Amateur Radio Service...and the Aeronautical Service could co-exist without operating restrictions," USKA said in a report that asks, "Is the 2 Meter Band Threatened?" The article's author, Bernard Wehrli, HB9ALH, advised radio amateurs to keep using 2 meters and to avoid taking on the issue individually. "Of course, our goal is to preserve primary use of the 2-meter band, and we will do our utmost to avert such 'co-primary' usage," Wehrli said, adding that USKA was in close contact with the German and Austrian IARU member-societies.

Meanwhile the Netherlands IARU member-society VERON reports what it called a "disappointing response" from national regulator Agentschap Telecom to a call from Dutch radio amateurs that 144 – 146 MHz be protected. According to VERON, an initial Agentschap Telecom response indicated that the French proposal "fits in with Dutch frequency policy" that encourages joint and shared use of spectrum. VERON said Agentschap Telecom has indicated that it's necessary to take a good look at actual use of the segment and to have insight into compatibility.

On July 20, radio amateurs in the Netherlands conducted a 2-meter "propagation experiment" aimed, at least in part, at demonstrating that hams use and need the band. "VERON shares the opinion that this proposal has no viability," the organization asserts, pointing to remarks from IARU President Tim Ellam, VE6SH/G4HUA, that said the proposal to share 144 – 146 MHz would require 4 years of studies and reach the same conclusion.

Radio Society of Great Britain (RSGB) President Dave Wilson, M0OBW, also wrote to the UK's telecoms regulator Ofcom, strongly expressing the RSGB's concerns about the effort to put the issue of including 144 – 146 MHz among bands for Aeronautical Mobile Service use on the WRC-23 agenda.

Wilson said RSGB "views the French proposal as lacking a proper understanding of the implications of sharing an aeronautical application with weak-signal terrestrial and space communications services."

Ellam told ARRL this week that he's not concerned that some telecommunications regulators are giving serious consideration to the French proposal at this point. "I think this is just part of the ongoing discussions," he said.

Courtesy of the ARRL Newsletter



Major WSJT-X Upgrade Boosts FT4 into "a Finished Protocol for HF Contesting"

The [WSJT Development Group](#) has announced the "general availability" release of *WSJT-X* version 2.1.0. This major upgrade formally introduces FT4 as a finished protocol for HF contesting. *WSJT-X* version 2.1.0 supplants any "release candidate" (beta) versions, and users should discontinue using any beta versions of the software. The latest edition of the popular digital software suite also includes improvements and bug fixes in several areas, including FT8. The list includes:

- FT8 waveform generated with GMSK, and fully backward compatible
- User options for waterfall and spectrum display
- Contest logging



- Rig control
- User interface
- UDP messaging for inter-program communication
- Accessibility

The WSJT-X Development Group is providing a separate *WSJT-X* version 2.1.0 installation package for 64-bit Windows that offers significant improvements in decoding speed.

A detailed list of program changes since *WSJT-X* version 2.0.1 is included in the cumulative [Release Notes](#). Upgrading from earlier versions of *WSJT-X* should be seamless, with no need to uninstall a previous version or to move any files.

[Installation packages](#) for Windows, Linux, and Macintosh are available.

WSJT-X is licensed under the terms of Version 3 of the GNU General Public License (GPL). "Development of this software is a cooperative project to which many Amateur Radio operators have contributed," said Joe Taylor, K1JT, for the WSJT Development Group. "If you use our code, please have the courtesy to let us know about it. If you find bugs or make improvements to the code, please report them to us in a timely fashion."

Some users have reported a low audio level to the transmitter when using the 64-bit Windows version, which required greatly increasing the sound card Playback device used to feed audio to the transmitter.

Visit the [FT8/FT4/JT9: WSJT 2-Way Narrow Modes for Amateur Radio](#) Facebook page for additional information.

Courtesy of the ARRL Newsletter

Centenarian Radio Amateur's Efforts Helped Pave the Way to the Moon



The Nashville Tennessean newspaper recently [featured](#) the story of a 104-year-old ARRL member who contributed to NASA's effort to put the first humans on the moon 50 years ago this month. Cary Nettles, W5SRR, of Columbia, Tennessee -- who calls himself the nation's oldest rocket scientist still alive -- was a NASA project manager and research engineer on rocket propulsion systems in the 1950s and 1960s.

While working on the Centaur second-stage rocket program, Nettles determined that the rocket engine failures NASA was experiencing were a result of misdirected exhaust destroying the vehicles' engines. Nettles told the *Tennessean* he came up with an "exhaust pipe" that solved the problem. In May 1966, an Atlas-Centaur launcher propelled the first *Surveyor* lander toward the moon. That year, NASA awarded Nettles and colleague Ed Jonash with its Distinguished Service Medal for "their superhuman effort in turning the troubled rocket into a reliable upper stage," according to a 2004 NASA publication, "Taming Liquid Hydrogen -- The Centaur Upper Stage Rocket 1958 - 2002."

On July 16, 1969, a Saturn V rocket with a liquid hydrogen-fueled second stage carried astronauts Neil Armstrong, Buzz Aldrin, and Michael Collins to their rendezvous with the moon. Nettles retired from NASA the following year.

Nettles got his Amateur Radio license in 1945 and remains active on 40 meters as well as on VHF and UHF repeaters. He is a member of the Maury Amateur Radio Club. In addition to sustaining his interest in ham radio over the decades, Nettles is an enthusiast of "large-scale" steam trains, which he works on in his basement. Look for him Tuesdays at 1400 UTC on 7.215 MHz on the Steam Railroad Net.

In 2015, the year he turned 100, the ARRL Tennessee Section presented Nettles with its Elder Statesman Award.

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 2019

August-Yaesu System Fusion-Mark Hinkel, WA3QVU & Bruce Farrington, WA3ZPC

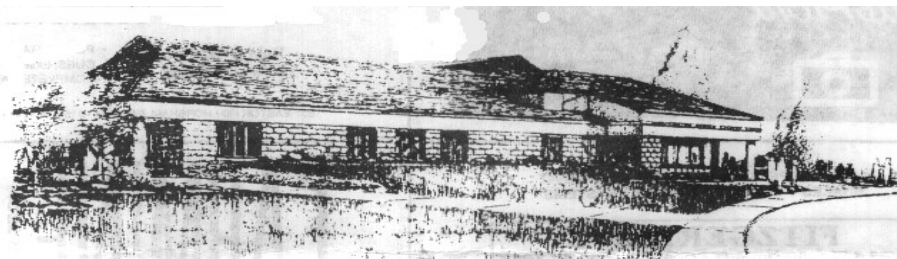
September-Amelia Earhart Story- Bill Strunk, K3ZMA

October-Home Brew Night

November – ARRL Night

December – Holiday Dinner

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.

2019 Contest Calendar

August

3-4 [222 MHz and Up Distance Contest](#)

1800 UTC Saturday and ending at 1759 UTC Sunday

18 [Rookie Roundup – RTTY](#)

1800 to 2359 UTC

17-18 [10 GHz & Up – Round 1](#)

6:00 AM local Saturday though 12:00 midnight local Sunday

September

14-16 [September VHF](#)

1800 UTC Saturday and ends 0259 UTC Monday

21-22 [10 GHz & Up - Round 2](#)

6:00 AM local Saturday though 12:00 midnight local Sunday

16-17 [EME - 50 to 1296 MHz](#)

0000 UTC on Saturday through 2359 UTC Sunday

QSO Parties

Maryland-DC	1400Z, Aug 10 to 0400Z, Aug 11
Hawaii	0400Z, Aug 24 to 0400Z, Aug 26
Kansas	1400Z, Aug 24 to 0200Z, Aug 25 and 1400Z-2000Z, Aug 25
Ohio	1600Z, Aug 24 to 0400Z, Aug 25
Colorado	1300Z, Aug 31 to 0400Z, Sep 1

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 2019 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 ➤ 2019

August 3 - [Reading Radio Club's Hamfest](#)

Heritage Park, Sinking Spring, PA 19608
992 Clematis Street (GPS) - Park Entrance
Sinking Spring, PA
<http://readingradioclub.org>

September 15 - [Gloucester County ARC Hamfest](#)

Gloucester County 4-H Fairgrounds
235 Bridgeton Pike (rt 77)
Mullica Hill, NJ 08062

October 5 - [7th Annual TailgateFest](#)

Hollywood Volunteer Fire Dept. Bingo Hall
24801 Three Notch Road (MD Route 235)
Hollywood, MD 20636
<http://www.k3hki.org>

October 6 - [CARAFest 2019](#)

Howard County Fairgrounds
2210 Fairgrounds Road
West Friendship, MD 21794
<http://www.carafest.org>

SKYWARN INFORMATION

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:

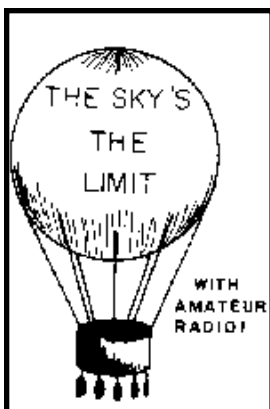
<https://www.weather.gov/phi/Info>

SKYWARN Basic Weather Spotter Educational Programs URL:

<https://www.weather.gov/phi/classes>

➤ **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, Jacek Ostrowski KC3HXF



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.

2nd week after Labor Day. Monday night, 7 - 9

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.

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 ?

2019 Officers

Executive Officers

President	George Acker	KC3ESH	215-815-7783
Vice-President	Marty Squicciarini	NR3Z	
Secretary	Norm Miles	AB3ZZ	
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	Tony Cuttone	W3FLH	267-679-9297

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 19	Doc Whitticar	W3GAD	215-968-6397
Hamfest 19	Michael Shanblatt	W3MAS	267-491-5773
Hamfest 19	Tony Cuttone	W3FLH	267-679-9297
Hamwear	Kathy Acker	KC3FBY	215-815-7978
Holiday Dinner	George Brechmann	N3HBT	215-443-5656
Membership	Mary Miles	KC3KJZ	
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