



FEEDBACK



Web Site k3dn.org

Warminster Amateur Radio Club

November 2019

Next Meeting November 7th - ARRL Night

President's Message

The falling leaves, cooling temperatures, and earlier sunsets are some of the things I always look forward to with the coming of autumn. Of course, in a couple of months I'll be ready for the longer, warmer days of the summer months but for now I will enjoy what is here. I hope in the next couple of days to start checking out the antennas and feed lines and make sure they are ready to go for the winter. As I am writing this message, it is the weekend of the CQWW contest in which I am having a very bad showing. Unfortunately, due to lots of personal commitments this weekend prevented me from getting in front of the radio as much as I would have liked. Also, when I was operating, it was rough. Not sure if it was the conditions, equipment issues, or operator error but not many contacts were being made. I pulled out the test equipment and gave everything the "once over" and it looks good so it's probably the latter of the problems.

At the time writing, there are still some tickets left for the Holiday Dinner, but I expect they will not last long. For something different this year, we are holding the dinner at Giuseppe's Restaurant right in front of the Ben Wilson Senior Center. Dinner is being catered by them and there will be a cash bar in the room that we will be using. Door prizes will be presented, and the awarding of the Dave Simpson Outstanding Ham of the Year. I am looking forward to a great evening with a bunch of good friends, and fellow club members.

In case you missed it, our November meeting is our ARRL night. Our impressive line up of speakers from ARRL are as follows: Howard Michel, WB2ITX, ARRL CEO, Tom Abernathy, W3TOM, Atlantic Division Director, Bob Famiglio, K3RF, Atlantic Division Vice-Director, George Miller, W3GWM, EPA Section Manager and our own Tom Mills, AF4NC, EPA Assistant Section Manager will all be in attendance. Come out and hear about everything all things ARRL related. You won't want to miss this night!

Speaking of the CQWW Contest, I am currently listening on the frequency that our club members were last spotted on operating as VP5W from Turks and Caicos. They are currently sounding like the grownups from a Charlie Brown cartoon, "Wah, waah, waah, wah, wah." I think I'll try tuning around a little.

73 George, KC3ESH
KC3ESH@outlook.com

WARC Meeting Minutes

October 3rd, 2019

Attendance:

- Call to Order 7:37pm
 - o Introductions - pass the mic

Program – Outstanding club of the year (Program run at beginning of meeting to accommodate speaker's schedule.)

Minutes from last Meeting

- Additions/Corrections – Motion to approve/approve as amended?
Approved

Committee Reports

- **Treasurer's Report:** *Herb KB3VMN*
As reported at meeting
- **Programs:** *Marty NR3Z (Not in Attendance – Tony W3FLH)*
October – Outstanding Club of the Year

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November – ARRL Night
ARRL CEO will be present

December – Holiday Dinner
Starting at 6:30PM

- **Membership:** *Mary KC3KJZ (Not in Attendance)*

121 active members

1 Pending

- **Public Service:** *George N3HBT*

October 14, 5 ponds Golf Outing

8:30 start with hot meal at 2:30

Possibly 5k at Warminster Community Park for Craven Hall. Details to follow.

Central County Bikes covered bridge ride, 10/13

1500 riders, free tshirt and food, after event party for volunteers.

Contact Kc3JXT, or Drex WI3C?

October 13th covered bridges ride

A few more volunteers needed

- **Classes:** *George KA3WXV/Ron WB2OOB*

Elmering Class once a month on Monday after meeting

There are 4 people in tech class.

- **VEC Testing:** *Larry WA3ELQ*

2 new techs

Next sessions October 28

- **Repeater:** *Brian N3EXA*

Everything is working well

- **Good and Welfare:** *Ken K9KJL*

Sent 1 card.

- **Other Committees**

- o **Radio Sport:** *Irwin KD3TB*

This weekend is California QSO Party

PA QSO is October 13

CQWW Sideband End of the month

- o **Union League Special Event**

Joe – AA3JH

Veterans' day weekend November 9

Using K3DN

ARRL has been notified and we will be in Nov QST

7 people already signed up, more volunteers can be accepted

Running 1130am – 5pm, 2 bands

Old Business

- **Constitution Review**

Tabled

- **Holiday Dinner**

Holiday dinner will be at Guisseppes on December 5, 2019 starting at 6:30pm.

Tickets will be available for purchase online or at a meeting for \$24 each. Tickets must be purchased in advance, by November 25, there will be no tickets available at the door.

- **OHOTY-Dave Simpson Award**

Nominations due before October board meeting (10/24)

New Business

- None

Motion to Adjourn 8:49pm

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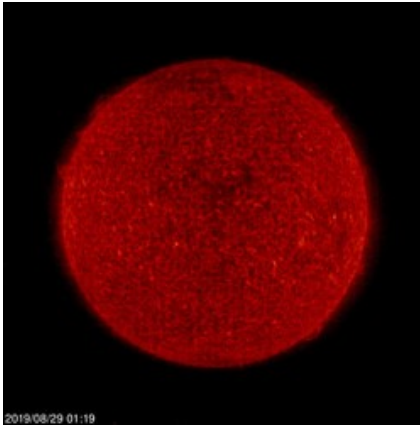
FOR SALE

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

The K7RA Solar Update



Tad Cook, K7RA, Seattle, reports: Still no sunspots, but average daily solar flux rose this week from 65.3 to 68.5 -- yet there have been surprising reports of HF stations heard and worked over long distances.

On Friday and Saturday, a coronal hole let loose a solar wind stream, causing geomagnetic instability, and the average daily planetary A index rose from 4.7 to 16.4.

Predicted solar flux has increased recently, with values of 70 on October 31 - November 7; 66 on November 8-23; 70 on November 24 - December 6, and 69 on December 7-14.

Predicted planetary A index is 8 on October 31 - November 1; 5 on November 2-4; 8 and 10 on November 5-6; 5 on November 7-16; 15, 8, and 5 on November 17-19; 20 and 24 on November 20-21; 15 on November 22-23; 12 on November 24; 5 and 15 on November 25-26; 12 on November 27-28, and 5 on November 29 - December 14.

Sunspot numbers for October 24 - 30 were 0, 0, 0, 0, 0, 0, and 0, with a mean of 0. The 10.7-centimeter flux was 65, 68.6, 68.6, 68.8, 69.4, 69.2, and 69.7, with a mean of 68.5. Estimated planetary A indices were 18, 29, 25, 15, 11, 8, and 9, with a mean of 16.4. Middle latitude A index was 12, 29, 17, 11, 8, 8, and 6, with a mean of 13.

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.

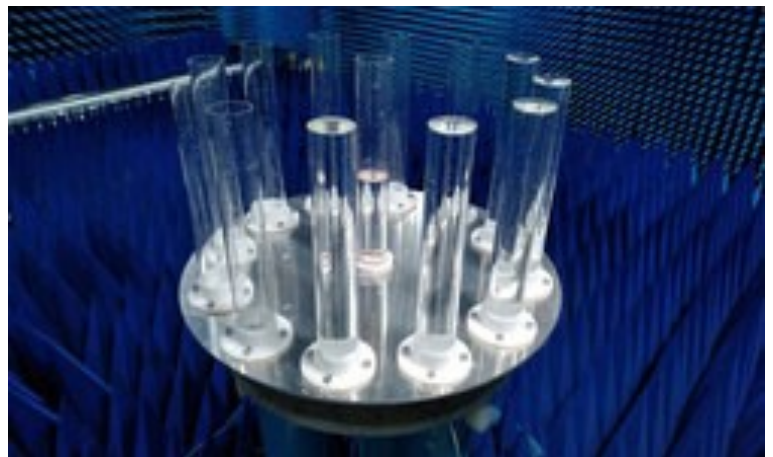
[Share](#) your reports and observations.

Courtesy of the ARRL Newsletter

New Antenna Concept Uses Saltwater and Plastic Instead of Metal Conductor

A new antenna that uses saltwater and plastic instead of metal could make it easier to build VHF and UHF networks, an *IEEE Spectrum* [article](#) asserts.

Michelle Hamson says, "Being able to focus the energy of a radio signal toward a given receiver means you can increase the range and efficiency of transmissions," in her article, "New Antenna Uses Saltwater and Plastic to Steer Radio Beams." According to the article, beam-steering or [beamforming](#) on a large scale is one of the key underlying mechanisms behind the rollout of 5G networks. The configuration of the saltwater antenna allows 360° beam-steering and works for frequencies between 334 and 488 MHz. In a recent publication in *IEEE Antennas and Wire-*



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less Propagation Letters, Lei Xing and her colleagues at the College of Electronic and Information Engineering at Nanjing University of Aeronautics and Astronautics in China have proposed a new saltwater-based antenna that achieves 12 directional beam-steering states, and one omnidirectional state.

"The proposed design consists of a circular ground plane, with 13 transparent acrylic tubes that can be filled with (or emptied of) salt water on demand. One tube is located in the center to act as a driven monopole. Surrounding it are 12 parasitic monopoles," the article explains. "The 12 remaining monopoles, when filled with water, work together to act as reflectors and give the broadcasted signal direction."

"The attractive feature of using water monopoles is that both the water height and activating status can be dynamically tuned through microfluidic techniques, which has a higher degree of design flexibility than metal antennas," explains Xing.

One limitation of salt water-based antennas, she notes, is that that the [permittivity](#) of salt water -- i.e, how it interacts with electrical fields -- is sensitive to temperature variations.

Courtesy of the ARRL Newsletter

Arizona Club Takes Advantage of Low Bands to Support 100-Mile Endurance Run

The Coconino Amateur Radio Club ([CARC](#)) provided safety and coordination communications for the 100-mile Stagecoach Line Run over the September 21 - 22 weekend. This 31-hour endurance run from Flagstaff to the Grand Canyon takes place every September. Supporting the event requires planning and commitment. Because of the geographical coverage required, the club's amateur radio support even took advantage of 160 meters, which is not a band typically associated with public service communication.



The Hull Cabin checkpoint, south of the Grand Canyon, with Bill Smith, KQ1S, and Hannah Seidler on duty.
[Photo courtesy of Bill Smith, KQ1S]

"Because we are in a solar minimum, a combination of bands and communication methods were required in order to track and maintain contact with the numerous stations," said Dan Shearer, N7YIQ, the club's Public Information Officer. "What worked well at 3 o'clock in the afternoon was not going to work at 2 in the morning." The club's communication infrastructure required a combination of HF and VHF/UHF equipment that included setting up portable repeaters and stations powered by generators and other power sources.

"When you add in the cold weather of the high desert in September and the possibility of rain and snow, this becomes a test of what Amateur Radio may be called upon to do to support a disaster somewhere in the nation," Shearer said.

CARC members invested more than 300 hours of their time in planning and supporting the race, helped by a few additional volunteers from Glendale and Prescott. Nineteen club members staffed eight sites, where volunteers set up camps and kept vigil through the night to track and make sure runners were accounted for throughout the race.

In addition to tracking runners into and out of each aid station, net control entered these times into an online spreadsheet as they progressed through the race, allowing runners to be located easily in case they did not make it to the next checkpoint.

During the event, CARC members helped locate two missing runners and helped save the life of another who developed severe asthma. Medical care and treatment during these types of extreme events poses a significant challenge, as EMS responses are delayed. "Much of the area between Flagstaff and the Grand Canyon is US Forest Service land, and travel through these areas by vehicles is slow," Shearer explained. "Severe emergencies can only be handled by aircraft, if conditions permit."

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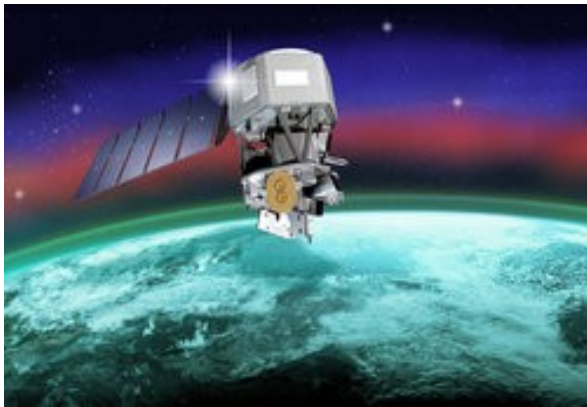


A typical race checkpoint. This one was north of Flagstaff. [Scott Downard, N7SMD, photo]

During the race, 75 meters worked well during the day, but 160 meters was put into play after dark. Cross-band repeaters were placed at remote sites to allow access to existing repeaters. Although VHF and UHF were used, these links at times became unusable, and alternate forms and bands were required to maintain contact.

Courtesy of the ARRL Newsletter

NASA Spacecraft Launches on Mission to Explore Frontier of Space



An artist's rendering of NASA's ICON spacecraft, which was launched into space last week at 39,000 feet from a L-1011 Stargazer aircraft. [NASA image]

NASA's Ionospheric Connection Explorer ([ICON](#)) spacecraft is in orbit for a first-of-its-kind mission to study a region of space where changes can disrupt communications and satellite orbits, and even increase radiation risks to astronauts. ICON was launched on October 11 after a Stargazer L-1011 aircraft from Cape Canaveral Air Force Station in Florida carried it to about 39,000 feet. Then, a *Pegasus* rocket fired the roughly refrigerator-sized ICON into space.

The spacecraft's solar panels successfully deployed, indicating it has power with all systems operating, NASA reported. ICON will start sending back its first science data in November.

ICON will study changes in the ionosphere, where, in addition to affecting radio signal propagation, space weather can prematurely decay spacecraft orbits and expose astronauts to radiation-borne health risks. "Historically, this critical region of near-Earth space has been difficult to observe," NASA explained. "Spacecraft can't travel through the low parts of the ionosphere and balloons can't

travel high enough." ICON's orbit around Earth places it at a 27° inclination at an altitude of about 360 miles, from which it can observe the ionosphere around the equator.

Nicola Fox, Director for Heliophysics at NASA Headquarters in Washington, said that ICON will be the first mission to simultaneously track what's happening in Earth's upper atmosphere and in space to see how the two interact, causing the kinds of changes that can disrupt radio communication. ICON will employ four [instruments](#) to explore the connections between the neutral atmosphere and the electrically charged ionosphere. Three of these rely on the phenomenon called airglow, which is created by a process similar to that which causes aurora -- gas is excited by radiation from the sun and emits light. By way of airglow, ICON can observe how particles throughout the upper atmosphere are moving. ICON's fourth instrument provides direct measurements of the ionosphere around it.

Amateur Radio on the International Space Station ([ARISS](#)) veteran Will Marchant, KW4WZ (ex-KC6ROL), is part of the ICON team.

Courtesy of the ARRL Newsletter

Lynyrd Skynyrd Founding Member Larry Junstrom, K4EB, SK

Southern Rocker Larry "LJ" Junstrom, K4EB, died on October 6. He was reported to be 70. Junstrom was a founding member and bassist of Lynyrd Skynyrd, although he left the group before it recorded its first album. He's better known as a member of another Southern Rock band, 38 Special, with which he performed from 1977 until retiring in 2014.

"The Big Man on the Big Bass has left us," a statement on the 38 Special website said. "He rocked arenas all over the world and succeeded in living his dream. He was truly one of a kind, a congenial traveling companion and a great friend to all with a humorous slant on life that always kept our spirits high -- a kind man with a big heart for everyone who crossed his path."

Licensed in 1962 as WN2LKF, later becoming WA4LKF, he was a regular attendee of Orlando HamCation. Junstrom was inactive in Amateur Radio during his busy years on the road but picked up the hobby again in 1990 and became an avid DXer with 347 entities in mixed DXCC. He was a frequent check-in to the Musicians' Net on 40 meters.

After retiring, Junstrom worked in real estate in north central Florida.

Courtesy of the ARRL Newsletter



The Weather Channel Cites "Old School Tech" Amateur Radio as Storm Resource

Julio Ripoll, WD4R, Amateur Radio Assistant Coordinator of [WX4NHC](#) at the National Hurricane Center ([NHC](#)) [explained](#) Amateur Radio's role during severe weather situations to interviewers from The Weather Channel ([TWC](#)). In a September 16 segment headlined, "Using Old School Tech During a Storm," Ripoll -- seated at WX4NHC -- told Weather Channel interviewers Rick Knabb and Mike Bettes, that information NHC forecasters receive via Amateur Radio volunteers and spotters "sometimes fills in gaps they can't get from satellites or reconnaissance."



Knabb recounted an occasion when he was trying to pin down information about a storm system in Central America. "The only way I was able to accurately document what happened with that system in Central America was because of data through the ham radio operators that relayed it," he told Ripoll.

Ripoll cited the WX4NHC volunteer staff of approximately 30 radio amateurs who gather and essentially screen information gathered via Amateur Radio for weather data that may be of use to forecasters.

Over the weekend, Ripoll expressed appreciation to WX4NHC, Hurricane Watch Net, and VoIP Hurricane Net volunteers for the time they donate during hurricanes and the reports they send to WX4NHC.

"Sometimes, we sit for hours listening to static. Sometimes, we receive many reports that are unremarkable. Sometimes, we receive very few reports. But then there are those times that one or two reports make a difference," Ripoll said. He noted that NHC Hurricane Specialist Stacy Stewart cited Amateur Radio in a Hurricane Humberto [advisory](#).

The advisory noted, "An Amateur Radio operator at Ports Island near the southern end of Bermuda reported a sustained wind of 75 MPH and a gust to 104 MPH during the past hour. An Amateur Radio operator in Somerset Village recently reported a sustained wind of 70 MPH and a gust to 89 MPH." -- *Thanks to Julio Ripoll, WD4R*

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.

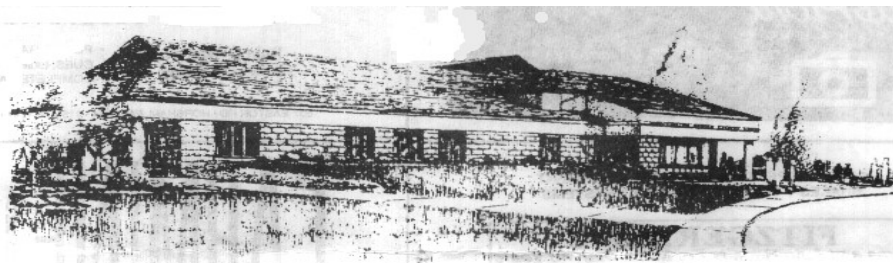
If you want to have your picture taken to be placed on the 'Members' Photos' section of the www.k3dn.org website, please contact Membership with your interest. When we get enough people who are interested we will post a notice in Feedback and have a camera ready at the following club meeting.

PROGRAMS 2019

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

November

2-4 [Nov. Sweepstakes – CW](#)

2100 UTC Saturday and runs through 0259 UTC Monday.

16-18 [Nov. Sweepstakes – Phone](#)

2100 UTC Saturday and runs through 0259 UTC Monday.

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

0000 UTC on Saturday through 2359 UTC Sunday

December

6-8 [160 Meter](#)

2200 UTC Friday, ends 1600 UTC Sunday

14-15 [10 Meter](#)

0000 UTC Saturday; runs through 2359 UTC Sunday

22 [Rookie Roundup–CW](#)

1800 to 2359 UTC

January

1 Straight Key Night

4 Kid's Day

4-5 RTTY Roundup

18-20 VHF Contest

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

➤ 2019-2020



December 7

[SantaFest](#)

American Legion Youth Camp 9201 Surratts Road Cheltenham, MD 20623

<http://www.pgares.org/>

January 11

[WinterFest](#)

Vietnam Veterans of America 8000 Derry Street Harrisburg, PA 17101

<http://www.w3uu.org>

January 26

[Post Holiday Hamfest](#)

Odenton Volunteer Fire Company 1425 Annapolis Road Odenton, MD 21113

<https://sites.google.com/site/marylandmobileers/hamfests-1/hamfest-2>

April 18

[DELMARVA Amateur Radio and Electronics EXPO, ARRL Delaware State Convention](#)

CHEER Community Center 20520 Sand Hill Road Georgetown, DE 19947

<http://www.radioelectronicsexpo.com>

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

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 Bueggers
- 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

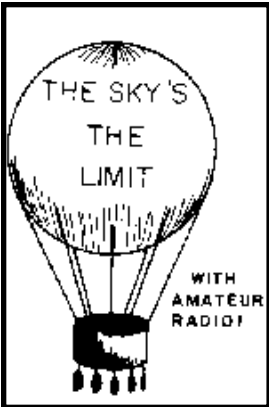
6 Mtr

- 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, 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.

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 ?**

2019 Officers

Executive Officers

President	George Acker	KC3ESH	215-815-7783
Vice-President	Marty Squicciarini	NR3Z	215-872-9644
Secretary	Norm Miles	AB3ZZ	267-625-9117
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 20	Doc Whitticar	W3GAD	215-968-6397
Hamfest 20	Michael Shanblatt	W3MAS	267-491-5773
Hamfest 20	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	267-625-8538
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	215-639-2175
Station Trustee	George Brechmann	N3HBT	215-443-5656
Sunshine Club	Ken Lichtenstein	K9KJL	847-697-1188
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