FEEDBACK

K3DN Warminster Amateur Radio Club

Web Site k3dn.org **Warminster Amateur Radio Club** **May 2021**

Next Meeting May 6th via ZOOM - Understanding and Applying Solar Indices

President's Message

With Spring in full effect, now is the time for hams to start taking their operations outdoors! There has been a huge uptick in outdoor activity in the hobby, which got initial notoriety with the SOTA (Summits On The Air) and IOTA (Islands On The Air) programs. Creative hams have taken that premise to a multitude of new areas: ARRL's NPOTA (National Parks…) was a huge hit, spawning an independent program of POTA (Parks…), and many a ham has taken advantage of putting together a portable station (of varying complexity) and travelling to a local park for a day to activate it. This is a great way to test out some new equipment, get some fresh air by yourself or with a loved one, and maybe introduce a curious bystander to Amateur Radio. There are many other "OTA" programs, including, but certainly not limited to: JOTA (Jamboree…), YOTA (Youth…), LHOTA (Light Houses…), CPOTA (Canadian Parks…), and who could forget WMPLOTA (Wal-Mart Parking Lots…)!! There's literally something for everybody – so get On The Air!

Speaking of outdoor activities, although WARC has opted not to sponsor an on-site gathering this Field Day (June 26 & 27th, as a reminder!), we are encouraging all members to take part in FD from wherever you feel comfortable. This can be from your home station (Class D), a portable operation as mentioned above (Class B), from a mobile (Class C), or even as a scaled-down group in the traditional FD spirit (Class A) – whatever style works for you! Keep in mind that ARRL has modified the rules again this year to allow aggregate club scoring (submit your log under "Warminster ARC" for the club to receive credit) and has limited all Class D & E stations to 150W max this year, to help even the playing field a bit.

I'd be remiss if I didn't mention that May would normally see WARC hosting our Hamfest, however we are all too acutely aware of the lingering effects of pandemic restrictions which prompted our decision to postpone the event again this year. There are some positive signs: with more people opting to get vaccinated, and a general growing sense of restlessness, I think we can be confident in hosting a live Hamfest in 2022. Although there will most likely be changes required, WARC is committed to putting together the best event possible. Stay tuned…

Tony W3FLH
73

Warminster ARC General Meeting Minutes
April 1, 2021

Attendance:

Call to Order

Minutes from last Board Meeting

Additions/Corrections - Motion made and approved for minutes as printed in Feedback

Committee Reports

Treasurer's Report: Herb KB3VMN

As reported at the meeting

Programs: Tony W3FLH

May – Understanding and Applying Solar Indices w/Carl K9LA
June – Field Day Prep
July – Battleship New Jersey - NJ2BB
August – System Fusion w/Bruce WA3ZPC

(Continued from page 1)

There are other programs set up for the fall including contesting and ARRL night

Membership: Kathy KC3FBY

106 paid & active members

18 members who still have yet to pay dues for 2021 – will send one last email reminder to them

Welcome new member Patrick Falco Jr. KC3RLJ

Public Service: George N3HBT

The Memorial Day parade has been cancelled again this year

Golf outing in June is on and we will need 8 hams to operate. 8:30 am start time at Five Ponds Golf Course. Please let George N3HBT know if you can help out.

Classes: George KA3WXV

Not in attendance. Interested in getting classes going soon, maybe Nothing to report.

VE Testing: Larry WA3ELQ

Last session was this past Monday, March 29th. We had 8 scheduled candidates, 7 were successful, 6 new techs and 1 upgrade.

Since we are still continuing to limit the number of candidates, we are requiring preregistration. The April session is full with a waiting list already.

Repeater: Brian N3EXA

Brian will cover the repeater in his presentation.

Good and Welfare: Ken K9KJL

Nothing to report. No cards were sent out this past month. If you know of anyone in need of a card, please let Ken K9KJL or Tony W3FLH know.

Other Committees

Radiosport: Irwin KD3TB – sent a list of upcoming contests in WARCTalk. All major contesting is over for now. Lots of state QSO parties are coming up. Good time to work all states. VHF Spring Sprints is also coming up.

Hamfest: Tony W3FLH – Cancelled.

Field Day: *Doc W3GAD* - 4th weekend in June. The board discussed our options and have decided that we will not be working Field Day at the Shrine due to safety concerns and the ability to abide by CDC guidelines. You can work from home and score can be added to the WARC score. More information will be covered at the June meeting.

Old Business

Elmer Program – Online – A Zoom session was held regarding the use of N1MM as a test to see if this could be a program that others might be interested in. Irwin KD3TB put the session together. It was decided that we will offer these small Zoom sessions with members who are interested in setting up N1MM on their own computers with their radios. We will be sending out an email to gauge interest and sign up for a session.

Club Station: Interest/Activity (Marty NR3Z/Andy KD3RF) – tabled.

Appointed Director 2021 – Still looking for someone.

Annual Club Auction/Online – tabled. Maybe do an in-person tailgate mini Hamfest type sale in the fall. If not, we will do an online auction in the Fall.

New Business

Nominations for Board – We are looking for officers for the club. An email was sent out this evening right before the meeting. A few of the current board members have agreed to fill another term, but if you are interested in stepping up and filling on of the position, please contact Irwin KD3TB or Bill K3FMQ.

BWSAC restrictions – With a max occupancy of 34 people the center will be opening as of May 1. Board has decided to hold off until occupancy is closer to what our normal meeting attendance would be. We will also see what the interest is of the club is in getting together as a group.

Motion made and accepted to adjourn meeting at 8:11 pm

Presentation: The K3DN Repeater w/Brian N3EXA

(Continued on page 3)

FOR SALE

Drake TR-4C, RV-4C, AC-4 with Harbach modes by WB4HFN, Drake desk mic 7075, original Drake manual for TR-4C, a few spare Drake parts. All in excellent electrical and physical condition. New matched finals replaced a few years ago. No issues. Great back up set-up or set up for new ham.

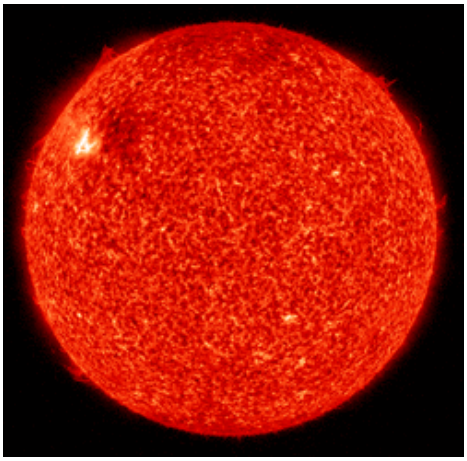
ASKING: $495 with local pick-up at my home or nearby local to be discussed.

Contact Bob Wilderman a WARC member at dlrwild1@verizon.net or 267-535-9189 cell

K3SRO

(Continued from page 2)

The K7RA Solar Update



Tad Cook, K7RA, Seattle, reports: Sunspots have continued to show every day since April 11, the last day with no sunspots.

Average daily sunspot numbers rose this week from 35.1 to 47.6, and average daily solar flux also rose, from 78 to 79.2.

Geomagnetic indicators were quieter, with average daily planetary A index declining from 16.4 to 10.7. The most active day was April 25, with the planetary A index at 20.

Predicted solar flux over the next month is 78 on April 29 - 30; 75 and 72 on May 1 - 2; 70 on May 3 - 5; 72 on May 6 - 9; 73 on May 10 - 11; 74 on May 12 - 13; 77 on May 14; 79 on May 15 - 23; 78 on May 24 - 27, and 75 on May 28.

Predicted planetary A index is 5, 8, and 8 on April 29 - May 1; 12, 8, and 12 on May 2 - 4; 5 on May 5 - 10; 8, 12, 20, and 30 on May 11 - 14; 15 on May 15 - 16; 12 on May 17; 5 on May 18 - 19; 15 and 10 on May 20 - 21, and 5 on May 22 - 28.

Sunspot numbers for April 22 through 28 were 42, 29, 62, 57, 54, 47 and 42, with a mean of 47.6. The 10.7-centimeter flux was 83.5, 77.4, 78.5, 78.8, 80.3, 79.4, and 76.8, with a mean of 79.2. Estimated planetary A indices were 5, 15, 10, 20, 14, 8, and 3, with a mean of 10.7. Middle latitude A index was 4, 15, 10, 16, 12, 8, and 4, with a mean of 9.9.

In Friday's bulletin, look for more insights from Frank Donovan, W3LPL, and 6-meter observations from Jon Jones, N0JK.

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. For customizable propagation charts, visit the VOACAP Online for Ham Radio website.

Share your reports and observations.

Amateur Radio Credited with Rescue of Back-Country Hiker in Tennessee

A back-country hiker was rescued from Great Smoky Mountains National Park with assistance from amateur radio after she became exhausted on the trail and possibly dehydrated. A member of the hiking group on the park's Little River Trail, Tim Luttrell, KA9EBJ, put out a call on the evening of April 11 via the W4KEV linked VHF repeater in Gatlinburg, Tennessee, requesting assistance in extricating the injured member. No cell phone service was available at the location, and Luttrell's signal was spotty at times, owing to the mountainous terrain.

Responding was David Manuel, W5DJR, who obtained more information and called 911, which routed the call to Great Smoky Mountains National Park Emergency Medical Service (GSMNP EMS). The national park EMS relayed through Manuel a request for the group to continue down the trail as far as possible to shorten the rescue time. Parties were asked to stand by.

(Continued on page 4)

(Continued from page 3)

A medic with the Park Service search-and-rescue team subsequently reached Manuel by telephone, who served to relay questions to Luttrell. Manuel contacted members of the hiker's family after Luttrell provided contact numbers. Manuel was asked to relay information for the family to arrange to meet in Cherokee, North Carolina, and be prepared to transport the distressed hiker's vehicle to her home. By this time, a couple of hours had passed. Manuel maintained occasional contact with Luttrell, who indicated that all was well but his battery was low and that he would power down the radio in between contact attempts to conserve power.

Manuel continued to monitor the repeater system and got a call from Luttrell indicating "all clear" shortly after 2 AM. Manuel later received a text indicating that the family members had connected with the distressed hiker and extended their thanks to all who had helped out.

Luttrell said afterward that Manuel "was calm, professional, and persistent but patient in obtaining information he needed through the challenges I was having with my radio." He allowed that without his spare battery pack and high-gain antenna, the incident may not have gone so well. A newer radio had been damaged in an earlier rescue effort, he told ARRL Tennessee Section Manager Dave Thomas, KM4NYI.

The injured hiker was hospitalized and required surgery and rehabilitation. Thomas told ARRL that he'd learned another hiker in the same group was close to hypothermia by the time they were rescued.

Thomas will recognize each of the radio amateurs involved in the rescue with a Certificate of Merit during the ARRL Tennessee State Convention in Knoxville on June 19.

Courtesy of the ARRL Newsletter

National Science Foundation Funds Creation of Research Lab at Alaska's HAARP

A 5-year, $9.3 million National Science Foundation (NSF) grant will allow the University of Alaska Fairbanks (UAF) Geophysical Institute to establish a new research observatory at the High-frequency Active Auroral Research Program (**HAARP**). A former military facility, HAARP is now operated by UAF and is home to HAARP Amateur Radio Club's KL7ERP. The new Subauroral Geophysical Observatory for Space Physics and Radio Science will be dedicated to exploring Earth's upper atmosphere and geospace environment. The facility's 33-acre Ionospheric Research Instrument will be the centerpiece of the observatory.

"This NSF support will provide the scientific community increased access to the instruments at the observatory and, hopefully, grow the scientific community," said Geophysical Institute Director Robert McCoy, the project's principal investigator.

A second NSF-funded project will add a Light Detection and Ranging (LiDAR) instrument at the site, which will allow the study of other regions of the upper atmosphere. A LiDAR sends pulses of laser light to determine the composition, temperature, and structure of regions of the upper atmosphere from 90 to 150 kilometers. UAF hopes to add additional instruments over time at the Gakona, Alaska, research site.

A short video, about 3 minutes long, displays the HAARP HF antenna system in a more artistic vein. According to the accompanying text, it's "a full-night photography shoot of the magnificent Class 1 quality night skies over HAARP, and this video and the rare footage in it is the result of that effort. As chance would have it, aurora borealis rolled in halfway in the night, providing a spectacular northern lights show as a backdrop." The shoot took place in –30 F weather as prolonged total darkness in Alaska predominantly takes place during the winter months.

Floyd says the HAARP facility is much larger than what's seen in the video, with many science pads and other large transmit and receive diagnostic systems. He advises turning up the volume.

(Continued on page 5)

The research grant will allow scientists to investigate how the sun affects Earth's ionosphere and magnetosphere to produce changes in space weather. Their work will help fill gaps in knowledge about the region, which is important because ionospheric disturbances, if severe enough, can disrupt communication systems and damage the power grid.

Research at the observatory is initially expected to include the study of various types of aurora and other occurrences in the ionosphere, which stretches from about 50 to 400 miles above Earth's surface.

A section of the HAARP antenna array field at sunset with Mount Drum in the background.

The Gakona facility is a prime location for the study of the ionosphere and magnetosphere because of its location in relation to one of Earth's magnetic field lines that reaches deep into the magnetosphere, the magnetic field that shields the planet from much of the sun's plasma energy.

"Amateur radio will clearly benefit with an improved understanding of ionospheric propagation and space weather physics, and providing improved HF propagation prediction modeling data," HAARP Research Station Chief Engineer and ARRL Life Member Steve Floyd, W4YHD, told ARRL. He said, "Radio science experiments will also provide a valuable data set to encourage development of new radio technologies and modulation methods useful from VLF through HF."

Floyd is the KL7ERP trustee, which, he says, is available "to demonstrate amateur radio to visiting scientists and students, to maintain contact with Alaska hams, and to provide visiting hams with an opportunity to operate from this unique Alaska location."

For more than 25 years, UAF, the US Air Force, the US Navy, and the Defense Advanced Research Projects Agency (DARPA) have collaborated on ionospheric research at HAARP. As Air Force funding for research and development decreased, the Air Force transferred the research equipment to UAF under an Education Partnership Agreement (EPA). The UAF Geophysical Institute operates the facility under an agreement with the Air Force.

Courtesy of the ARRL Newsletter

Intrepid-DX Group Joins Forces with LA7GIA in Bouvet Island Attempt

The Intrepid-DX Group has teamed with DXpeditioner Ken Opskar, LA7GIA, in its quest to activate Bouvet Island, the second most-wanted DXCC entity according to Club Log. The **3Y0J DXpedition** is planned for January through February 2023. A dependency of Norway, Bouvet is a sub-Antarctic island in the South Atlantic. The last Bouvet activation was 3Y0E, during a scientific expedition over the winter of 2007 – 2008.

"There's a lot to do, and we have a big financial mountain to climb," DXpedition co-leader Paul Ewing, N6PSE, said in a recent interview with Tim Duffy, K3LR. Ewing will share leadership duties with Opskar in the amateur radio adventure.

"The cost of the *Braveheart* charter is enormous, but we've got some experience under our belt doing South Sandwich and South Georgia back in 2016. That was perfect preparation for Bouvet. We'll have a very difficult landing, so we're prepared for that."

Ewing has said that the team began planning for its DXpedition on the Norwegian island of Bouvet right on the heels of the successful VP8STI and VP8SGI efforts. A 2018 DXpedition to Bouvet was scuttled after severe weather and an engine problem forced the team — with Bouvet already in view — to turn back.

The plan calls for the 3Y0J team of 14 to board the vessel *Braveheart* in Capetown, South Africa, for "the treacherous voyage to Bouvet," Ewing said. "We will plan to spend 20 days at Bouvet and, weather permitting, we plan to have 14 to 16 good days of radio activity."

"This will be an arduous and expensive mission. Our budget is $764,000, and the 3Y0J team will fund much of this mission. We desperately need the global DX Community to support our mission and help us make this important activation of the second-most wanted DXCC entity. It is only through this kind of support that we can achieve our mission of making 100,000 contacts or more from Bouvet."

The Northern California DX Foundation and the International DX Association have already stepped up to the plate.

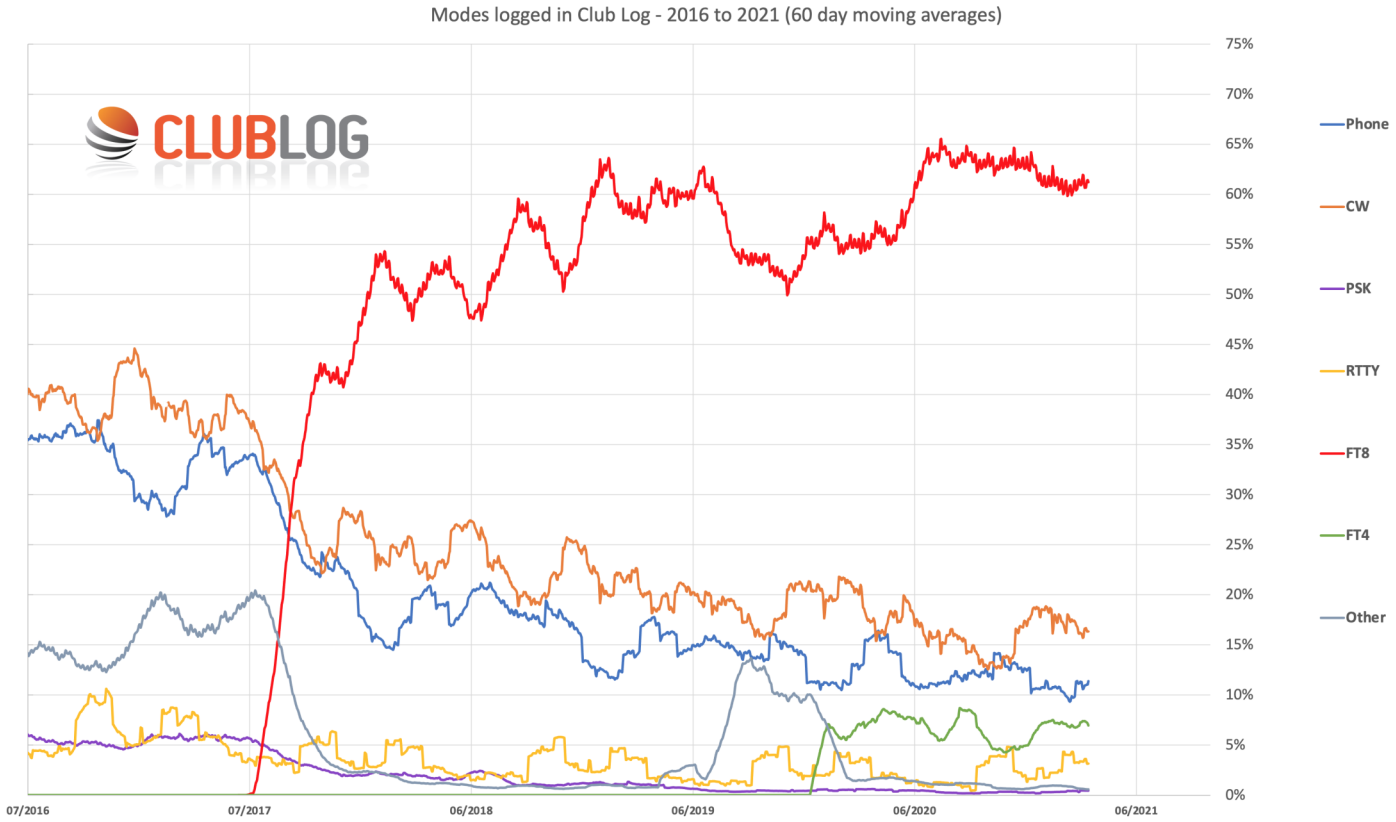
"We plan to make best use of propagation and modes on 10 – 160 meters," Ewing said in the announcement. Operation will be on SSB, CW, and digital modes. "We pledge to assemble the strongest team possible and to use good operating practices to optimize your ability to reach our stations. We are confident that the *Braveheart* crew can get us there and back safely."

"But I want to make it clear," Ewing told Duffy. "There's no doubt. We *are* going!"

Follow the Intrepid-DX Group's 3Y0J plans via Facebook. Visit the **3Y0J website** for more information and to make a donation.

The Rebel DX Group has announced that its 3Y0I DXpedition is still on for later this year, with a team of eight spending up to 30 days on Bouvet Island.

Courtesy of the ARRL Newsletter



FT8 Accounts for Nearly Two-Thirds of HF Activity

Since zooming to prominence after its debut in mid-2017, the popular FT8 digital protocol has become the mode of choice for some 60% of HF operators, according to Club Log's latest activity report compiled by Michael Wells, G7VJR. FT8 is one of the protocols in the *WSJT-X* suite of free programs. Wells says FT8 activity level sits at nearly 85% on 6 meters. The dramatic FT8 upswing has come at the expense of phone, CW, RTTY, PSK, and other modes. Over the same period, the number of FT8 contacts logged each year per active call sign has continued to climb to about 60% between 2015 and 2021, with the most dramatic increase being nearly 29% in the past year. The use of all other modes has continued to flutter downward since the advent of FT8, which occupies vastly less spectrum than the more traditional ham radio operating modes.

Between 2015 and 2020, the number of contacts logged per day by Club Log users has trended steadily upward, regardless of mode. The report draws on data of more than 84,000 logs uploaded to the Club Log site -- some 730 million contacts in all.

Wells reported that in 2020, the "typical call sign" logged 620 CW contacts, 558 SSB contacts, and 372 data (digital) contacts. Five years later, the statistics were 500, 300, and 1,700, respectively.

ARRL's Logbook of The World (LoTW) does not typically report this level of detail as far as mode usage is concerned, but the statistics available certainly confirm FT8's increasing popularity. The rocketing usage of FT8 over the past few years may be demonstrated most dramatically by a comparison in contacts-by-mode statistics between March 2017 and March 2018, when FT8 contact numbers in the hundreds shot to some 2.6 million contacts by the following year -- an increase of nearly 1 million percent.

From mid-2019 to mid-2020, FT8 usage appears to have slumped slightly to 50% before climbing back to 60%. FT8 usage peaked at just over 65% in late 2020 and has held steady at 60 - 65% since.

The same period saw SSB usage dip by 15%, CW activity by 10%, and RTTY by 29%. Introduced later, FT4, the contest mode of FT8, also showed an initial fast upward trajectory, before steadying at 5 - 8%.

Named after its developers, Steven Franke, K9AN, and Joe Taylor, K1JT, FT8 indicates the mode's eight-frequency shift-keying format. Tones are spaced at 6.25 Hz, and an FT8 signal occupies just 50 Hz.

Courtesy of the ARRL Newsletter

MARS is a Not Always an Obvious Resource in Emergencies

The Military Auxiliary Radio System (MARS) is a US Department of Defense adjunct comprised of radio amateurs that's not always the first resource that comes to mind in an emergency, even within the military. In a recent article in *SIGNAL*, US Marine Corps Major Brian Kerg exhorts the brass to more fully exploit amateur radio in general, and MARS in particular, for use in times of distress.

"As future threats continue to evolve, day-to-day communications architectures will become more unreliable in times of crisis," Kerg concludes. "It is imperative that joint communications planners turn to amateurs to remain experts. By building awareness of how to employ MARS and training military radio operators in ham radio technique, leaders will ensure their planners are proactively leveraging the organic amateur communications networks that abound across the globe."

In his article, Kerg -- who does not appear to be a radio amateur -- attempts to raise the amateur radio consciousness level of military planners who are deciding how to address an emergency. He characterizes ham radio as a robust and readily available communications resource when things go south.

"And they are often every bit the expert as professional military communicators and signalmen. The term 'amateur' refers not to their technical acumen but to the private, non-business use of allocated radio bands by those possessing amateur radio licenses," Kerg points out. He notes that while voice communication may be the most common ham radio mode, operators are skilled at sending and receiving text, images, and data.

With MARS, the Defense Department has a mechanism employing amateur radio operators who can actively support military operations. "Notably, military aircrews remain capable of using MARS phone patches through high-frequency radios when satellite communications are unavailable," he writes.

Kerg says the downside is that the use of MARS "remains a largely unknown or niche capability, one that is usually stumbled upon by planners in the moment of crisis and then poorly implemented." He said awareness of MARS was not helped when the Navy and Marine Corps MARS were shuttered in 2015, leaving only Army and Air Force MARS.

Military planners should focus on raising awareness of MARS and of amateur radio by making it available through training and other activities, Kerg said. Contesting could be a component. "The wide variety of annual amateur radio competitions can further incentivize military operators to improve their amateur radio skills while inevitably improving proficiency in their mission-essential tasks," he wrote.

Kerg currently serves as the fleet amphibious communications officer, US Fleet Forces Command.

Courtesy of the ARRL Newsletter

2021 Contest Calendar

June

12-14 June VHF
1800 UTC Saturday, ends 0259 UTC Monday

19 Kids Day
1800 UTC through 2359 UTC

26-27 Field Day
1800 UTC Saturday and running through 2059 UTC Sunday

July

10-11 IARU HF World Championship
1200 UTC Saturday and ending 1159 UTC Sunday

QSO Parties

7th Call Area	1300Z, May 1 to 0700Z, May 2
Indiana	1500Z, May 1 to 0300Z, May 2
Delaware	1700Z, May 1 to 2359Z, May 2
New England	2000Z, May 1 to 0500Z, May 2 and 1300Z-2400Z, May 2
Arkansas	1400Z, May 8 to 0200Z, May 9

➢ **ATLANTIC DIV. HAMFESTS**
➢ **2021**

May 30
MFMA Hamfest
Howard County Fair Grounds
2210 Fair Grounds Road
West Friendship, MD 21794
http://www.marylandfm.org

June 20
Father's Day Hamfest at Arcadia
Arcadia Fairgrounds
16920 Carnival Ave.
Upperco, MD 21155
http://W3FT.com Facebook Baltimore Amateur Radio Club

July 4
Murgas ARC Hamfest and Computerfest
Polish American Veterans Club
2 South Oak Street
Plains, PA
http://hamfest.murgasarc.org

July 31
CVARC 2021 Hamfest
CVAEMA Show grounds
1501 Criders Church Road
Chambersburg, PA 17201
http://w3ach.org

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 2021 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

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."

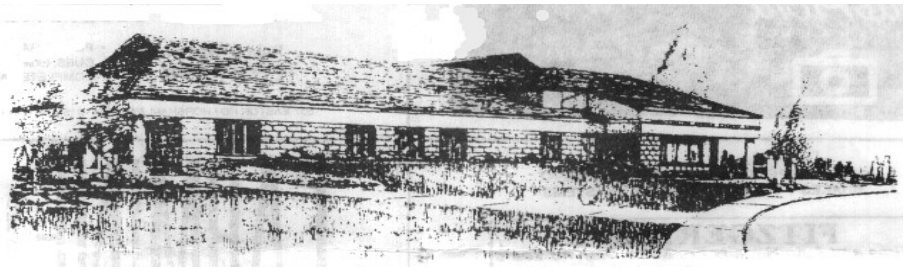
ATTENTION MEMBERS
The Membership Committee can provide Club badges. Two types are available: an engraved plastic callsign and name badge for $8 or a free, laminated plastic, photo ID badge/card. The photo id badge is included with your membership. Pictures for the club badge will be taken before club 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 2021

May - Understanding and Applying Solar Indices
June - Field Day Preparation
July - The Battleship New Jersey
August – System Fusion w/Bruce WA3ZPC

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.

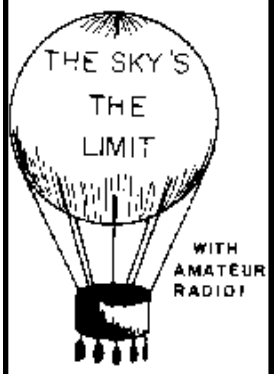
- **WARC Meetings are held the first Thursday of each month at 7:30 pm at the Benjamin Wilson Senior Center, Delmont Avenue, Warminster, PA. Talk in is available on the 147.09 & 443.950 repeaters.**

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



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.

➢ **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, Tony Simek N3YNH

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 ?**

2021 Officers

Executive Officers

President	Tony Cuttone	W3FLH	267-679-9297
Vice-President	Tony Simek	N3YNH	
Secretary	Kathy Acker	KC3FBY	215-815-7978
Treasurer	Herb Hickmott	KB3VMN	267-718-3601
Director (A)	Doug Becker	KC3MNQ	
Director (E)	Larry Abbott	WA3ELQ	215-704-3282
Director (A)			
Director (E)	George Brechmann	N3HBT	215-443-5656
Past President	Marty Squicciarini	NR3Z	215-872-9644

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 21	Doc Whitticar	W3GAD	215-968-6397
Hamfest 21	Michael Shanblatt	W3MAS	267-491-5773
Hamfest 21	Tony Cuttone	W3FLH	267-679-9297
Hamwear	Kathy Acker	KC3FBY	215-815-7978
Holiday Dinner	George Brechmann	N3HBT	215-443-5656
Membership	Kathy Acker	KC3FBY	215-815-7978
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