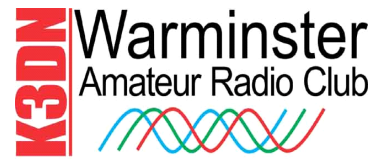




FEEDBACK



Web Site k3dn.org

Warminster Amateur Radio Club

March 2025

Next Meeting March 6th -

President's Message

I would like to thank the generous donors that made the club auction a success. Special thanks to our auctioneers Mark WA3QVU and Dan K3NXX and our cashiers Elaine N3TMP and George N3HBT.

The auction raised \$454 for the club treasury plus \$77 from the sale of the 50-year anniversary coffee clubs we re-discovered in the loft cleanout, which are still available for \$5 each.

Our club cannot function without your help and input. Have you considered becoming a member of the WARC Board of Directors? Nominations start in March and club elections are in May, please consider serving on the board.

If you have not done so, please take a few minutes to log into Ham Club Online - <https://www.hamclubonline.com/>

Upcoming Events

- Next VE session will be Monday March 31st at 7:00 PM.
- WARC Hamfest is 5/4/2025.
-

There is an ongoing Technician License Class on Monday nights. If you are or know someone that is interested please contact me at mcgowan2@comcast.net

Upcoming presentations

- March - Upcoming presentations (note the change)
- April - Hamfest Preparation
- May - Beyond- TBD

Thanks, Dave
K3FTD

General Meeting Minutes February 6, 2025

Call to order at 7:30 PM

Introductions: Approximately 48 attendees

Minutes from last Board Meeting: Approved as submitted.

Committee Reports:

Treasurer's Report: Tom K3PLA

As reported

Full report was available under separate cover.

HamClubOnline: if you have not already done so, please sign into <https://www.hamclubonline.com/>

(Continued from page 1)

Membership report: Tony W3FLH

Paid Membership	116
Regular Members	107
Student	3
Alumni/Associate	6
Past Due	0
Total Roster	116

○ **Programs:** Dave K3FTD

February – Auction no presentation

March - Jack Sullivan, W2INF, update on his earlier presentation,

April - Hamfest preparation

May - KC3JXT Dean Hedin, 3D printing

○ **Public Service:** George N3HBT - Nothing to report

○ **Classes:** Dave K3FTD/Dan K3GMQ/Tony N3YNH – General class starting in February 3rd 2 - 4 students

○ **VE Testing:**

Monday January 27th session; 5 candidates 3 Tech & 2 general.

Next session is Monday February 24th, 7:00 PM

○ **Hamfest:** Tony W3FLH -

Nothing new at this time, Hamfest planning will be at our April meeting.

As previously reported, we have been approved to host the ARRL EPA Section Convention once again for 2025. The college facilities have been secured, although Slack's cannot open as they have in prior years. He is working with them on other options and will report as I have more info. Still fielding suggestions for the main presentation, and am exploring several leads.

○ **Field day:** Herb KB3VMN - Nothing to report

○ **Club Station Status:** - Still down due to the condition of the loft

○ **Shed Update/Loft Clean Out:** - Herb KB3VMN -

We are still getting quotes. Should have more information soon.

Thank you to everyone that helped us move everything out of the loft area and transport it Echo's house for temporary storage in his garage. The move went smoothly with the help of 10 members along with 5 trucks and several cars. In addition to Echo allowing us to store the equipment in his garage, he has also offered to inventory it.

○ **New Business:**

No new business.

Meeting adjourned at 7:35 PM and Club Auction began.

(Continued on page 3)

(Continued from page 2)

WA4YWM BLOG

WSJT-X Modes

Introduction and History

I want to provide some explanation and history of WSJT for those of you who are not familiar with this suite of digital modes. WSJT, the predecessor to WSJT-X, was originally released in 2001 by Joe Taylor, K1JT. WSJT stands for Weak Signal Joe Taylor. Since its introduction WSJT has undergone many revisions and modes have been added resulting in an alphabet soup of modes. Joe has other developers helping him continue to develop the code. Two of the more prominent developers are (were) Bill Somerville, G4WJS (now SK) and Steve Franke, K9AN. Franke is the F in FT8/FT4.

Joe is a Nobel Prize laureate in Physics for his discovery in 1974 of the first Binary Pulsar which also provided the first experimental evidence for the existence of gravitational waves and gave powerful support to Einstein's theory of gravity. He was on the Physics faculty of Princeton University from 1980 until his retirement in 2006.

It is my understanding that much of the original software used in WSJT was a result of Joe's studies of pulsars which emit a very weak signal.

The idea of this development was to provide a means of detecting very weak signals deep in the noise. The first modes released were intended for meteor scatter (FSK441 and JT6M – 2001 and 2002) and moonbounce (JT65 -2003). HF operators soon realized the advantages of using JT65 to detect very weak signals. As stated in my earlier blog I started using JT65 in 2016. FT8 was introduced in 2017 and it took off like a rocket on HF. A faster version, FT4, was introduced 2 years later. FT4 is a faster version that Joe intended for use by testers but it has found a niche in general HF use as well.

There is an excellent video here:

<https://vimeo.com/828432363?share=copy>

that is a presentation by Joe in which he explains the many different modes. This video was shown at a recent WARC meeting.

Modes

The modes currently available are discussed in the following paragraphs which are copied from the WSJT web site.

“**JT4** and **JT65** were designed for EME ("moonbounce") on the VHF/UHF/microwave bands. **JT9** is optimized for the MF and HF bands. It is about 2 dB more sensitive than **JT65** while using less than 10% of the bandwidth. **Q65** offers submodes with a wide range of T/R sequence lengths and tone spacings; it is highly recommended for EME, ionospheric scatter, and other weak signal work on VHF, UHF, and microwave bands.

FT4 and **FT8** are operationally similar but use T/R cycles only 7.5 and 15 s long, respectively. **MSK144** is designed for Meteor Scatter on the VHF bands. These modes offer enhanced message formats with support for nonstandard call signs and some popular contests.

FST4 and **FST4W** are designed particularly for the LF and MF bands. On these bands their fundamental sensitivities are better than other WSJT-X modes with the same sequence lengths, approaching the theoretical limits for their rates of information throughput. **FST4** is optimized for two-way QSOs, while **FST4W** is for quasi-beacon transmissions of **WSPR**-style messages.

WSPR mode implements a protocol designed for probing potential propagation paths with low-power transmissions. **WSPR** is fully implemented within *WSJT-X*, including programmable "band-hopping".

Operation of FT8/FT4

I don't have the space here to go into a complete description of WSJT operation but I would like to give a quick overview so you get a feel for its operation. All the information you need to get started is found here:

<https://wsjt.sourceforge.io/wsjsx.html>

This site has the download links, Quick Start guides and full operations instructions. Also I am available if anyone has questions. The screen shots below show a typical FT8 operation in progress. On the right side labeled Rx Frequency you will see that I called CQ DX and DC3AK responded. Once I started the CQ call everything is automatic. I did not need to click on anything as the QSO moved through the steps shown until a 73 from DC3AK ended the QSO. At the bottom right is the standard sequence of automated transmissions. You can see that DC3AK is being called by me as the QSO proceeds. I initiated the call by selecting the Enable Tx button with CQ DX WA4YWM FN20 selected.

(Continued on page 4)

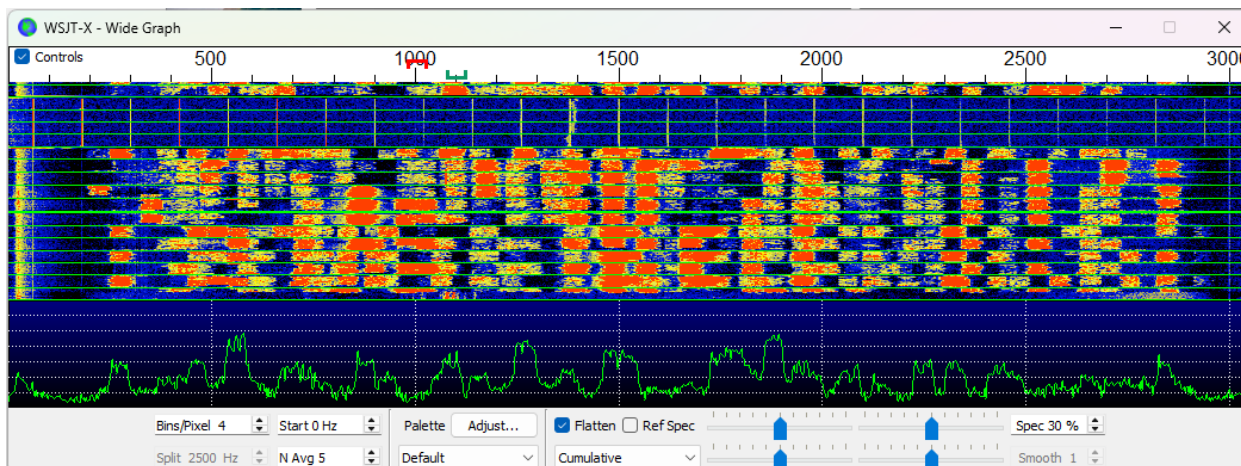
Looking at the waterfall shot you will see a red inverted U which indicates my transmit frequency in the audio passband at 1079 Hz. The green U at 981 Hz is the receive frequency at which DC3AK is transmitting. How do I know those precise frequencies? Look at the Freq column on the main display and you will see the two frequencies.

The left side of the screen shows all Band Activity in the 3 KHz passband including the 73 transmission from DC3AK to me in red. That's all there is to it for a completed QSO.

Note the S/N ratios shown on the left in the dB column. They range from 1 to -24. Think about that -24. A signal buried in the noise at a -24 dB S/N. That's remarkable! This is the strength of FT8 and the other modes – the ability to reliably detect and complete a QSO with signals that can't even be heard.

The screenshot shows the WSJT-X v2.7.0-rc8 interface. The 'Band Activity' table on the left lists various stations and their signal strengths. The 'Rx Frequency' table on the right shows the received signals, including the 1079 Hz transmission from DC3AK. The interface also includes a control panel with buttons for 'Monitor', 'Decode', and 'Generate Std Msgs', and a display showing the current frequency (21.074 000) and date (2025 Feb 24 16:10:21).

Band Activity					Rx Frequency				
UTC	dB	DT	Freq	Message	UTC	dB	DT	Freq	Message
161000	-3	0.2	1220	DL1HW R-17	160715	-16	0.0	2426	VR2WAA I4VDZ JN54
161000	-10	0.1	567	DG5PI DM4ET R-17	160745	-10	-0.0	2426	VR2WAA I4VDZ JN54
161000	1	0.9	475	I1FLC GWOBNN R-15	160816	Tx		981	CQ DX WA4YWM FN20
161000	-5	0.4	417	KP4PUA UA4CPM R-16	160845	Tx		981	CQ DX WA4YWM FN20
161000	-7	0.8	1876	<...> F2VX IN94	160900	-6	0.1	1079	WA4YWM DC3AK JO62
161000	-3	0.1	1928	WY0V DA6SC R-04	160915	Tx		981	DC3AK WA4YWM -06
161000	-16	0.1	1708	EW6FW G4FRD IO95	160930	-3	0.2	1079	WA4YWM DC3AK R-06
161000	-2	0.1	494	KP4PUA KI4GIP EL29	160945	Tx		981	DC3AK WA4YWM RR73
161000	-3	0.1	2687	IU2HUQ CT7BQH 73	161000	-4	0.1	1079	WA4YWM DC3AK 73
161000	-1	1.6	1363	CQ DK1IJ JO43					
161000	1	0.3	1579	TF8KW HB9M2I JN46					
161000	-17	0.1	1862	SP9VEY A91KWI -09					
161000	-16	0.1	1746	EW6FW EA7KDN IM77					
161000	-7	0.1	1615	UN7EAX EA7DJN 73					
161000	-4	0.1	1079	WA4YWM DC3AK 73					
161000	-1	0.9	1547	CQ IK5GUQ JN53					
161000	-15	-0.1	806	IZ2ACM HK3UA FJ24					
161000	-15	0.1	1346	CQ 7Q5BM KH67					
161000	-16	0.3	794	OE2OWM VA6DM RR73					
161000	-24	0.1	755	MW7CIE DF3RP JN68					



A very useful companion program to WSJT is JTAlert which is available here:

<https://hamapps.com/>

A screen shot is shown below. JTAlert shows the decoded signals as boxes containing the call, country or state, the type of call – CQ, DX, POTA, etc., and whether or not you have previously worked the station (indicated as B4). Colors for various situations can also be specified. In the panel marked DX decodes you can see that I chose a color for B4 so that I can quickly see who I have worked. A different color is selected for a calling station shown in the Callers:Alert panel.

These panels can be set up in a variety of ways that you prefer to provide you with station information. Colors can be selected according to your preferences. If you want to initiate a QSO with a particular station just double-click the box. I use JTAlert for my QSO control far more than I do WSJT.

There are many more features than I have space to discuss here. One interesting feature that I want to mention is a chat mode that can be used to exchange messages with a station that has JTAlert on the other end. Sometimes you may want to just say thanks or point out that you have copied a station during a difficult exchange.

You can also tie the logging in to your logging program which in my case is Ham Radio Deluxe.



Some Technical Stuff

I'll wrap this up with a brief discussion of some technical aspects of FT8/FT4.

FT8 has a transmission time of 15 sec and FT4 has a time of 7.5 sec. The shorter time of FT4 results in less sensitivity so most of the time you will use FT8. FT8 sensitivity is speed at -21 dB and FT4 at -17.5 dB although as shown above a station was decoded at -24 dB.

The 8 and the 4 in FT8 and FT4 refer to the number of tones used to transmit the information. The tones are sent at a rate of 6.25 baud. Thus, FT8 occupies a bandwidth of 8 x 6.25 baud or 50 Hz. Likewise, FT4 occupies a bandwidth of 4 x 20.8 baud or 83.2 Hz. These narrow bandwidths are one of several reasons for the signal detection in noise.

For FT8 each symbol (tone) in a message is transmitted for 160 ms. There are 79 symbols in each message so the total time of the message is 79 x .16 sec for a total message time of 12.64 sec. A pad of .5 sec is provided at the front of the message for time for any needed settling of the transmitter output. This leaves 1.86 sec for the decoding time of the received signal. Thus, the 15 sec for a message to be sent.

There are a number of techniques used by the WSJT team to provide for the ability to receive a signal buried in noise. I will briefly discuss some of the more important ones.

I have already mentioned the narrow bandwidth above.

Timing is extremely important to ensure that a bit is properly detected when it is expected to be present. The computer clock must be accurate within .5 sec to be certain of synchronization between stations. To achieve this I use the Meinberg Network Time Protocol which can be downloaded from here:

<https://www.meinbergglobal.com/english/sw/ntp.htm>

As part of the synchronization process 7 known bits are attached to the message at the beginning, in the middle and at the end. If they are properly decoded, the message is synchronized and can be decoded. These are called a Costas Array.

Forward Error Correction is used to correct for any errors that occur during the transmission. This is a very sophisticated process called LDPC (Low Density Parity Check). I will not discuss any of this here due to its complexity. As they say it is left to the interested student to study.

Another technique is Source Encoding which basically means that the message is not sent as an ASCII stream of characters but is encoded in to a stream of bits. This keeps the message short resulting in fewer possibilities for errors being introduced in the transmission.

Another interesting technique is multi-pass decoding. Assume there are 2 or more signals on or near the same frequency. On the first pass of decoding the strongest signal is fully decoded. All of the signal information is available for inspection in the process of decoding. Therefore the first signal can be subtracted from the total decoding information revealing the next strongest signal. It is technically feasible to detect a 3rd signal in the same manner. This is a somewhat simplistic description of the process but is basically what takes place.

Well, I think that this is enough for this month. As always I welcome comments and questions. See you next month.

73,
Jim WA4YWM

RigExpert's Administrative Office Destroyed in Russian Missile Attack — Production Remains Intact

On February 12, 2025, RigExpert's administrative office, in Kyiv, Ukraine, was destroyed by a Russian ballistic missile. All employees are reported to be safe.

RigExpert is a leading manufacturer of antenna and cable analyzers and officials said they are committed to restoring operations as soon as possible.

"Our top priority is the safety of our team and the continuity of our operations," said Ashot Andeev, Chief Executive Officer. "While our administrative office is in ruins, our production facilities survived, allowing us to continue serving our customers and partners."

The company is working to minimize delays and fulfill its commitments while maintaining customer support operations.

The ARRL Solar Report



A Coronal Mass Ejection (CME) associated with a filament eruption became visible on February 26 at 1448 UTC. Model analysis determined this CME to be a miss ahead of the Sun/Earth line.

Unsettled to active levels are likely on February 28 to March 1 as a Coronal Hole influence continues, and a glancing blow is possible from a Coronal Mass Ejection that occurred on February 25.

Solar activity is forecast to range from low to moderate levels through March 22.

Minor to Moderate activity (R1 to R2) is possible at different points throughout the period as active regions grow, evolve, and return from the far-side of the Sun. There is a slight chance for R3 (Major) or greater events if any of the active regions develop additional complex magnetic structures.

Geomagnetic field activity is expected to be at quiet to unsettled levels until March 6 with periodic, weak Coronal Hole influences. Unsettled to active levels, with isolated G1 (Minor) storming conditions are likely from March 7 to 18 as recurrent negative polarity Coronal Holes are expected to be in a geoeffective position.

NOAA Space Weather forecasts a 55% chance of a Class-M flare, and a 10% chance of a Class-X flare, both within the next 48 hours (February 28 to March 1).

Weekly Commentary on the Sun, the Magnetosphere, and the Earth's Ionosphere - February 27, 2025, by F. K. Janda, OK1HH:

"Solar activity is now increasing, but the increase is irregular, which causes, among other things, a decrease in the reliability of forecasts. Geomagnetically quiet periods, especially when associated with an increase in total solar activity (such as 20-23 February), are accompanied by improved conditions for ionospheric radio wave propagation. A subsequent disturbance can cause even further improvement (which happened on 24 February).

"Following the increase in solar flare activity (from 23 February), two proton flares were observed on 24 February. In the following days, the Earth's ionosphere was under the influence of a solar-derived proton rain, after which the density of free electrons in it decreased due to recombination.

"However, the worsening of conditions was only noticeable on 25 February. The very next day, 26 February, there was an improvement, in particular an increase in the MUF on a global scale. The jump in the solar wind speed also contributed. However, the changes were so rapid, even within a single day, that our assessment of the level of conditions could have been reversed, depending on the time of day and the frequency bands used.

"The developments described can be considered as a harbinger of a March increase in solar activity. Since the Spring Equinox is approaching, it will contribute to an improvement in ionospheric shortwave propagation, more accurately called decameter waves. The possible shorter worse spells on March 1-2 and March 5-6 will make no difference, with the seasonal improvement not fully manifesting itself until the second half of the month."

This weekend is the ARRL International DX SSB contest. Information can be found at, <https://www.arrl.org/arrl-dx> .

For more information concerning shortwave radio propagation, see <http://www.arrl.org/propagation> and the ARRL Technical Information Service web page at, <http://arrl.org/propagation-of-rf-signals>. For an explanation of numbers used in this bulletin, see <http://arrl.org/the-sun-the-earth-the-ionosphere> . Information and tutorials on propagation can be found at, <http://k9la.us/> .

Also, check this:

<https://bit.ly/3Re8Njt>

"Understanding Solar Indices" from September 2002 QST.

The predicted 10.7 cm flux for February 28 to March 6 is 195, 195, 190, 190, 190, 190, and 185, with a mean of 190.7. The predicted Planetary A Index for February 28 to March 6 is 12, 10, 8, 5, 5, 5, and 5, with a mean of 7.1. The predicted K Index for February 28 to March 6 is 4, 3, 3, 2, 2, 2, and 2, with a mean of 2.6.

2025 Contest Calendar

March

1 [International DX- Phone](#)

0000 UTC Saturday and runs through 2359 UTC Sunday

9 North American Sprint, RTTY

0000Z-0359Z

23 North American SSB Sprint

0000Z-0400Z

April

13 [Rookie Roundup - Phone](#)

1800 to 2359 UTC

QSO Parties

Oklahoma 1500Z, Mar 8 to 0200Z, Mar 9

1500Z-2100Z, Mar 9

Idaho 1900Z, Mar 8 to 1900Z, Mar 9

Wisconsin 1800Z, Mar 9 to 0100Z, Mar 10

Virginia 1400Z, Mar 15 to 0400Z, Mar 16

1200Z-2400Z, Mar 16

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 2024 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, 1st Wednesday at 6:30. Levittown Library - 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 3rd, non holiday Monday of the month at the Giant Supermarket, 315 York Rd., Willow Grove, 19090 at 6:30 PM in the Community Room. For further information contact James McCloskey at jmcloskey@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

➤ 2025



March 22 - [FredFest 2025](#)

Independent Hose Company Social Hall

310 Baughmans Lane

Frederick, MD 21701

<https://frederickarc.org/fredfest-2025/>

April 26 - [Delmarva Amateur Radio and Electronics Expo, ARRL Delaware State Convention](#)

Cheer Center

20520 Sand Hill Rd.

Georgetown, DE 19947

April 27 - [Maryland Mobileers Spring Hamfest](#)

Odenton Volunteer Fire Company

1425 Annapolis Rd.

Odenton, MD 21113

<https://sites.google.com/view/marylandmobileers/hamfest?authuser=0>

May 4 - [Warminster ARC - Annual Hamfest, ARRL Eastern Pennsylvania Section Convention](#)

Bucks County Community College-Lower Bucks Campus

1304 Veterans Highway (Route 413)

Bristol, PA 19007

<http://wp.k3dn.org/hamfest/>

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 \$12.50 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.

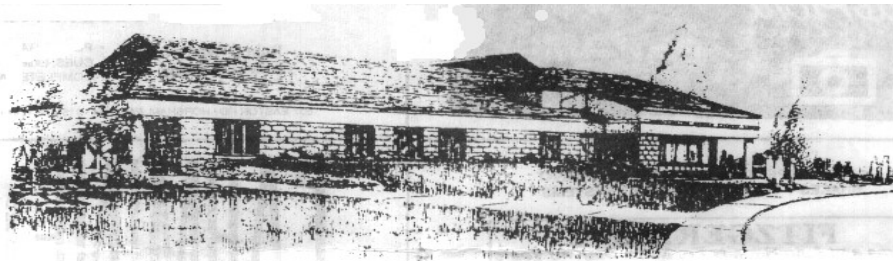
If you want to have your picture taken to be placed on the 'Members' Photos' section of the www.k3dn.org website, please contact Membership with your interest. When we get enough people who are interested we will post a notice in Feedback and have a camera ready at the following club meeting.

PROGRAMS 2025

April - Hamfest Preparation

May - Dean Hedin - KC3JXT, 3D Printing

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>

➤ **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, Dave McGowan KC3RAT

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

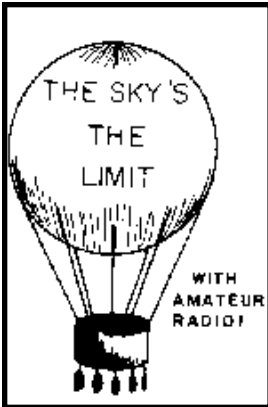
D-STAR

- 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.

New Classes (Tech and General) to start Sept 13 from 7 pm to 9 pm.

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

Bucks County Amateur Radio Emergency Service (BCARES)

www.bucksares.org

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

Winlink Gateway Stations:

Lower Bucks NY3J-10 145.530 Bensalem

Net Schedules

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

Are you submitting an article for the Feedback ?

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

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

For general club correspondence:

WARMrinfo@gmail.com

Visit our Home Page at:

<http://www.k3dn.org>

The annual dues rate structure is as follows:

Full Member: \$25.00
Student: \$ 7.50
Alumni: \$12.50

- Are your dues current ?

2025 Officers

Executive Officers

President	Dave McGowan	K3FTD	215-850-5846
Vice-President			
Secretary	Tony Simek	N3YNH	215-796-0336
Treasurer	Tom Newman	K3PLA	215-630-5965
Director (A)	Doug Becker	KC3MNQ	215-932-1370
Director (E)	Herb Hickmott	KB3VMN	
Director (A)	Bruce Farrington	WA3ZPC	215-262-4215
Director (E)	George Brechmann	N3HBT	215-443-5656
Past President	Ray Oechslin	KA3TRU	267-269-3198

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	Dave McGowan	KC3RAT	215-850-5846
	Dan Clementi	K3GMQ	267-337-0392
Digital and APRS	Ron Wenig	NY3J	215-638-9257
Feedback Editor	Jim Elmore	WA4YWM	215-538-1889
Field Day 25	Herb Hickmott	KB3VMN	267-718-3601
Hamfest 25	Tony Cuttone	W3FLH	267-679-9297
Hamwear	Kathy Acker	KC3FBY	215-815-7978
Holiday Dinner	George Brechmann	N3HBT	215-443-5656
Membership	Tony Cuttone	W3FLH	267-679-9297
Net Manager	George Brechmann	N3HBT	215-443-5656
PA QSO Party	Mark Kempisty	AA3K	
Publicity	Herb Hickmott	KB3VMN	267-718-3601
Refreshments	Arlene Newman	KA3PLA	215-345-4539
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
Good and Welfare	Regina Litman	KC3LRF	
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	Kathy Acker	KC3FBY	215-815-7978
Youth Programs			