



# Signals

Serving the ARES® in Eastern Pennsylvania



Volume 1

October 2022

Number 2

## KC3POC APPOINTED EC FOR WAYNE COUNTY

Peter Marcano, KC3POC, was appointed as the Emergency Coordinator for Wayne County in September. Peter has been active with Wayne County ARES® for two years and was appointed AEC in 2021. He has been licensed since 2020 and holds an Extra class license and serves as a certified Volunteer Examiner. He has participated in 14 exam sessions and has helped many new hams get licensed.

Peter was employed for 17 years with AT&T, with 5 years in management. He has previously served as Vice President for Operations for 3 national and international communications corporations. Additionally, Peter has worked as a certified real estate appraiser and owns Mountain Appraisals, LLC.

Peter brings a wealth of management experience to his new ARES® position along with great enthusiasm. His ability to effectively deal with diverse personalities and manage group dynamics will make him a successful leader.



Cliff Hotchkiss, KC3PGT, Philadelphia County ARES® EC (right) works with Nate Prentice, KC3PQT in a portable radio programming session during the meet and greet with the Southeastern PA Chapter of the American Red Cross on August 20.

## PHILADELPHIA AREA ARES® UNITS MEET WITH SOUTHEASTERN PENNSYLVANIA RED CROSS

On Saturday, August 20, ARES® units in the five-county Philadelphia region held a coordination meeting with the Southeastern Pennsylvania chapter of the American Red Cross at Norristown State Hospital in Montgomery County. The meeting was attended by representatives from the SEPA Red Cross chapter and local ARES® emergency coordinators who discussed methods for forging a close working relationship to better serve the public during disasters and other widespread emergencies. Speakers included ARRL Atlantic Division Vice Director Bob Famiglio, K3RF, EPA Section Emergency Coordinator Bob Wilson, W3BIG and First District Emergency Coordinator Dick Stewart, K3ITH. The meeting was moderated by Jay King, W2AFE of Philadelphia County ARES®. One of the goals of the meeting was to set the stage for including the Red Cross in the upcoming Simulated Emergency Test in October as well as subsequent section-wide exercises. In addition to the discussions, a training session was conducted for attendees on manually programming portable radios.

### Inside October 2022 Edition of Signals

- 1 *KC3POC Appointed EC for Wayne County*
- 1 *District 1 ARES Units Meet with Red Cross*
- 2 *QTX—SEC Observations and Comments*
- 2 *N3YGH Appointed EC for Pike County*
- 2 *Upcoming Events*
- 3 *SET Activities Around the EPA*
- 4 *More SET Activities*
- 5 *And More SET Activities*
- 6 *Hank Grilk, WA2CCN, SK*
- 7 *Overcoming Conflicts—By Robert Griffiths, NE3I*
- 8 *Tools of the Trade : Heil BM-17 Headset*
- 9 *US Amateur Radio Bands, Grid Square Map*

# QTX\*

Bob Wilson, W3BIG

EPA Section Emergency Coordinator

SET 2022 is in the books. The scenario for the section-wide simulated emergency test was a category 4 hurricane making landfall in southern New Jersey bringing tropical winds and rains that caused widespread flooding and communications outages in our area. The exercise was conducted in the wake of Hurricane Ian, a real storm that devastated the west coast of Florida. The remnants of Ian did affect eastern Pennsylvania, but the impact was relatively mild. The storm served to add a realistic flavor and impetus to the SET.

The EPA turnout for the October 1 SET was robust. The great efforts in planning and prepping for the exercise were evident in excellent overall performance. Our main area of focus for the drill was digital messaging using Winlink to transmit shelter messages and other routine forms. This aspect was a resounding success. Scores of Winlink messages were transmitted from 14 counties. A few county ARES® teams used the SET to train new members using digital messaging and many newbies were able to transmit their first Winlink emails during the drill.

Another focus area was to encourage inter-county communication and despite the always challenging Pennsylvania terrain, quite a few teams were successful on VHF. Relaying traffic via simplex operation still needs some tweaking and we encourage all county teams to continue to practice these valuable techniques.

The American Red Cross was included in the October SET and we received a terrific acknowledgement from the Southeastern Pennsylvania (SEPA) chapter championing the success of the exercise. They received shelter status and health and welfare messages via Winlink and were very pleased with the utility of this protocol for relaying these important messages. A big thank you to Philadelphia EC Cliff Hotchkiss, KC3PGT, and his entire ARES® team for providing the important liaison duties with the American Red Cross.

The foremost objective of a simulated emergency test is to practice the rapid deployment of ARES® teams to set up stations for conducting communications during disasters and to evaluate the response. Our section has certainly proved itself up to this task. The other major goal is to identify issues with plans, protocols and equipment to tweak and improve performance. There is always room for improvement and individual teams are already addressing noted issues.

Our section's participation in the October SET was the first time in many years the EPA has come together as a team in this important exercise. We appreciate the many long hours of hard work that went into planning and execution. Our teams excelled and proved their worth. And they performed with safety in mind. No injuries were reported during the drill.

I hope you share the pride I feel in being a part of this team of em-comm champions. Thank you!

## Upcoming Events

### SUSQUEHANNA NUCLEAR DRILL: OCTOBER 18

Luzerne County ARES® will provide auxiliary communications for the Susquehanna Steam Electric Plant nuclear drill scheduled for October 18. This is a major drill evaluated by both FEMA and PEMA.

**Any EPA ARES® unit with upcoming events to announce should forward information to [W3BIG@comcast.net](mailto:W3BIG@comcast.net).**

### N3YGH APPOINTED EC FOR PIKE COUNTY

Carl Griffiths, N3YGH, was appointed Emergency Coordinator for Pike County in September. Carl was born and raised in Manhattan and spent summers in Blacksburg, Virginia. He earned his novice license at age 12 and his Tech Plus ticket after graduation.

After attaining the rank of Life scout, Carl acknowledged that the Boy Scout motto, *Be Prepared*, has become a permanent part of his DNA. He says that has served him well throughout life.

Carl is a life member of his local fire and rescue company after 23 years of service. About 8 years ago, Carl joined Pike County ARES®RACES Group (PARG) and earned his General license. His lifelong passion for aviation has led to a long career in flying and managing aircraft.



## Signals



Signals is published bimonthly by the Eastern Pennsylvania Section of the ARRL with the express interest of fostering and promoting the art of Amateur Radio emergency communications.

Publisher: George W. Miller, W3GWM, SM

Editor: Robert G. Wilson, W3BIG, SEC

Articles, announcements and pictures may be submitted for consideration by emailing the editor at [W3BIG@comcast.net](mailto:W3BIG@comcast.net). All materials are subject to editing for content, accuracy and brevity.

# EPA Simulated Emergency Test Activities



Chuck Farrell, W3AFV, Montgomery County EC, directing operations from Montgomery County EOC.

## Montgomery County ARES®



Tom Nolan, W3EX, Montgomery County AEC, at the SET Auxiliary Communications Center.



## Delaware County ARES®



Tom Barrett, KC3KIB, operates from the Delaware County Emergency Services Training Center during the October 1 SET.

## MONTGOMERY COUNTY SET OPERATIONS

Robert Griffiths, NE3I

By 0900 Saturday, October 1st, three MCAR Operators were on site in the "RACES Room" at the Montgomery County EOC. A "SAFER" system text message was dispatched announcing the anticipated simulated Activation and establishment of a Resource Net which occurred at 1000 hours using the AA3E 2 Meter Repeater. Stations checked in indicating their Emergency Power, Winlink, deployment and other capabilities. Assigned HF stations reported their communication with the EPA SET Net on 7.227.5 and with the WPA SET Net on 3.918 MHz. The MCAR MESH system was also utilized to establish a "Hot Line" to the EOC. On their own, individual MCAR stations proceeded to send Winlink messages to the designated Red Cross and Philadelphia ARES® addressees.

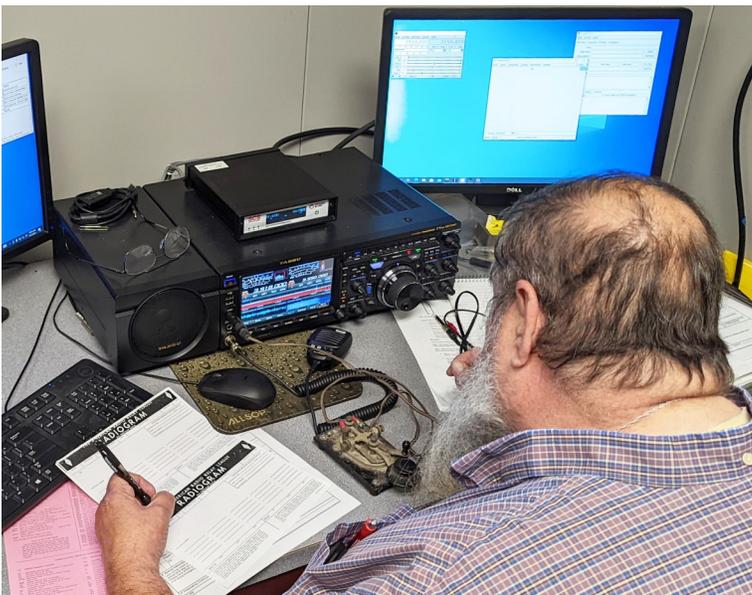
Operators at the EOC were also busy establishing 2 Meter Simplex Communication with adjacent Berks, Bucks, Chester and Delaware County ARES® groups and contact with Philadelphia County ARES® was established later in the day. In the meantime, the Auxiliary Communications Center had been busy digitally receiving and acknowledging a message from MARS. MCAR SET Nets were terminated at 1118 Hours and the 2022 MCAR SET concluded with Status Reports to Section Leadership on the EPA SET HF Net. During its short exercise, MCAR engaged 17 participants reporting from 14 sites with 12 stations operating on Emergency Power.

# EPA Simulated Emergency Test Activities

## Luzerne County ARES®



Jeremy Allen, N1ZZZ, briefs the Luzerne County ARES® team in the County EOC prior to commencement of the October SET.



Philip Galasso, K2PG sending and receiving radiograms via CW at the Luzerne County EOC during October SET.



Luzerne County team of N3RN, K3EAM, KB3VS, WA2BBS operates from the field at Francis Slocum State Park during the SET.

# EPA Simulated Emergency Test Activities



Ed Otto, KC3RFX, sending VHF traffic from the New Cumberland Township Building.

**Cumberland  
County  
ARES®**



South Mountain Radio Amateur Club (SMRA) members operated from 4 sites during the SET. Participants included Bob-N3ACP, Patti-KC3CDL, Robin-W3KAT, Ed-KC3RFX, Paul-KC3QIU, Ed-AB3X, Doug-N3UTN, Deb-KC3RTP, Pat-KC3UBZ, Jeff-W3JWK, Jack-NC3O and W3HMS.



Patti Single, KC3CDL and Robin Cartwright, W3KAT, operate from the Cumberland County EOC during the October SET.



Paul Harig, KC3QIU, sends UHF / VHF message traffic from the New Cumberland Township Office during the October SET.

## *In Passing*

### **HANK GRILK, WA2CCN, DISTRICT 3 DEC AND WAYNE COUNTY EC SILENT KEY AT 80 YEARS**

Peter Marcano, KC3POC

Henry “Hank” Grilk, WA2CCN, Eastern Pennsylvania District 3 Emergency Coordinator and Wayne County EC, passed away at home in Lakeville on September 3. He was 80.

Originally from Passaic County, in Northern New Jersey, Hank obtained his Novice license at the age of 14 in 1957. At that time, the Novice license was valid for only one year and had to be upgraded or lost. Hank would go on to upgrade several times and ultimately became an Extra class holder and an ARRL certified Volunteer Examiner.

Hank became fluent in antenna design and his passion for learning was evident in his academic achievements including a BSEE, BSME, BS in Math and a BBA in Business Management. His employment history was equally impressive, having served as Director of Engineering for Westerbeke Corp., Director of Engineering at Cole Hersee Company, VP of Engineering and Quality Control at Limitorque Corp., VP of Engineering at Datcon Instrument Company and several other engineering positions in technology companies.

In 1985, while living in Lincoln, Rhode Island, Hank became active in pushing for the passage of PRB-1, a bill designed to prevent local governments from enacting or attempting to enforce zoning restrictions on antenna tower installations that would negatively impact Amateur Radio licensees. Although the bill died in the Rhode Island State Senate, the bill was ultimately adopted and approved in 15 states.



**Hank Grilk, WA2CCN, DEC and Wayne County EC, SK.**

In 2009, Hank and his wife, Ann Marie, moved to Lakeville in Wayne County. He formed a band called *Moonlight on the Pocono's Big Swing Band*. The 20 member ensemble, led by Hank, played big band favorites such as *Boogie Woogie Bugle Boy* and *Don't Sit under the Apple Tree*.

In 2018, Hank was appointed Wayne County ARES® Emergency Coordinator and later the DEC for EPA District 3. At that time, the ARES® unit in Wayne County numbered only 6 members. In the following 4 years, Hank helped to increase that number to 47, a terrific accomplishment in a county with only 125 Amateur Radio operators. Hank was also named the Eastern Pennsylvania Traffic Handler of the Year. Committed to the National Traffic System, Hank used every opportunity to teach ARES® members proper communications techniques.

Suffering from liver cancer, Hank passed peacefully at home on September 3, after learning that his friends had just completed the installation of new antennas on his tower. Hank is survived by his wife of 57 years, Ann Marie and sons Brian and Andrew.

## OVERCOMING COMPETING CONFLICTS TO ARES® PARTICIPATION AND TRAINING

Robert Griffiths, NE3I

We are all well aware of the difficulty that ARES® units have in scheduling group participation, particularly in-person training events. Family outings, youth sports activities, parent-teacher meetings, birthdays, weddings and even our jobs often take precedence. The reality of everyone's *busyness* makes group preparation for an upcoming drill or an unexpected emergency difficult. Montgomery County ARES® has found a partial solution to the challenge by incorporating multitasking during its regular weekly nets.

Probably every ARES® group in the EPA conducts some sort of regular net. In the 1960s, weekly nets in Montgomery County were conducted simplex on 10-meter AM and 6-meter FM using single channel surplus Dumont FM transceivers. Geography required a central net control station to coordinate with 5 county zones, each with its own NCS for a roll call and report. Though seemingly antiquated, this zone format can still be useful when more modern facilities are not available or fail. The advent of prolific repeater systems made county-wide communications much easier. ARES® units adopted repeaters in droves, and in many cases, eliminated traditional roll calls.

About a dozen years ago, Montgomery County ARES®/RACES, MCAR, began to conduct auxiliary nets simultaneously during weekly Thursday evening 2-meter nets. The additional nets were conducted on 6-meters, 75-meters and 10 meters, each handled by an auxiliary NCS who reported the list of check-ins to the main 2-meter NCS. Eventually, additional nets were added for Echolink, Winlink, D-Star, DMR and MESH operations. The usual announcements from leadership as well as a practice FLDigi message continued to be concurrently transmitted over the 2-meter net. Naturally, handling multiple frequencies, modes and exchanges of information and messages presented a challenge for ARES® operators, particularly those performing NCS roles. By purposely creating a radio communications frenzy, activity simulating conditions that may typically occur during a real communications emergency were created.



Robert "Griff" Griffiths, NE3I operates solar-powered from his deck as a 1 Echo station during a past Field Day.

Over time, MCAR made adjustments for the multitasking frenzy to be more efficient. The 440 net and 75-meter nets are now conducted immediately prior to the scheduled 7:00 PM 2-meter net start time. The 10-meter starts at 7:10 PM and stations check in to the Echolink, Winlink, DMR, D-Star and MESH nets when practical, shortly before or after the 2-meter net start time. Auxiliary net control stations have also begun to submit their reports via email to simplify and shorten 2-meter NCS duties.

What are the benefits of this concentrated frenzy of activity? Over time, net discipline and efficiency has improved. Multiple operators get an opportunity to practice NCS duties each week. Rather than participants being "in and out" or waiting to answer during roll call, operators can utilize multiple VFOs or separate radios to quickly check in to multiple nets and develop the skill of giving attention on more than one frequency. Each week, operators can also check performance of their stations on multiple bands and modes, including those facilitated by computer assistance.

If you have not tried multitasking during regular nets, consider it to see what may benefit your ARES® team. If you have tried it, add a few wrinkles, perhaps even an unannounced session where the repeater is powered off to practice your go-to SOP. Regular nets provide great training opportunities.

*Robert "Griff" Griffiths, NE3I, was first licensed as a novice in 1966. Griff has previously served as Montgomery County RACES Radio Officer, trice as Emergency Coordinator and presently serves as the Public Information Officer for MCAR.*

# Tools of the Trade

## HEIL BM-17 HEADSET PERFECT FOR EMCOMM

Bob Wilson, W3BIG

Heil Sound is a legendary manufacturer of top quality microphones and headsets. In the field, a headset is often a great way to avoid fumbling for a microphone and reducing background noise. The headphones also permit focusing on important transmissions that could be lost in the background noise at deployment sites.

A recent addition to the Heil lineup of headsets is the BM-17. Supplied in a bright yellow color, it is a medium-weight headset designed for emergency communications. A convenient feature is that it is available as either a single-side or dual-side model to match your operating preference.

The headset can be purchased with either a dynamic microphone element (BM-17) or an electret element (BM-17iC). The iC electret model is designed to match the low gain audio of many ICOM transceivers.

The BM-D dynamic microphone element is 500 Ohms and will work on most amateur radio rigs requiring low-Z impedance. The dynamic element has

## Heil BM-17 Headset



a frequency response of 120 Hz to 10 KHz. The iC electret element has a frequency response of 35 Hz to 12 KHz.

The BM-17 headset is furnished with a 1/8 inch mono connector for microphone audio. The headphones terminate with a 1/8 inch stereo plug equipped with a 1/8 to 1/4 inch adapter (included).

To mate the BM-17 headset to your transceiver, an AD-1 series adapter is required. Heil's website has a handy adapter selector to make it a snap to pick the proper adapter for your transceiver.

I have a number of Heil headsets for use with various HF radios, but I found I needed one to mate with the ICOM VHF / UHF dual-banders in my portable emcomm station. The BM-17iC headset with the AD-1-iCM adapter was the perfect solution for field use. It is durable, comfortable and can be worn for multiple hours without experiencing fatigue.

You may also want to add a convenient hand switch for keying the PTT on the transceiver. The Heil HS-2 is the perfect accessory to the headset. It features a comfortable trigger and plugs directly into the mating connector on the BM-17. You will also need a 1/8 inch extension speaker cable for the headset.



AD-1-iCM Adapter

HS-2 PTT  
Hand Control

# US Amateur Radio Bands

## US AMATEUR POWER LIMITS

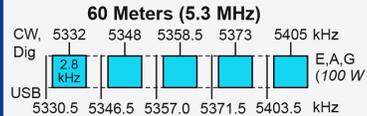
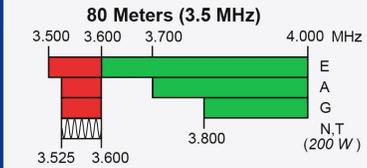
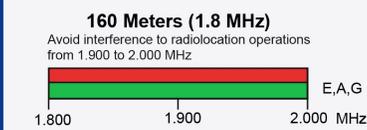
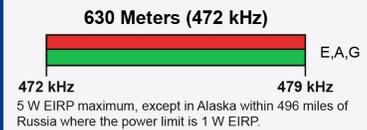
FCC 97.313 An amateur station must use the minimum transmitter power necessary to carry out the desired communications. (b) No station may transmit with a transmitter power exceeding 1.5 kW PEP.

Effective Date for  
2,200 and 630 Meters  
to be announced

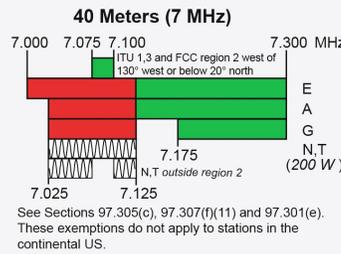


The national association for  
**ARRL AMATEUR RADIO**

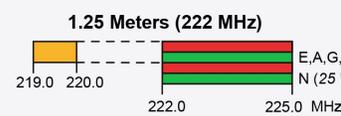
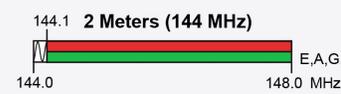
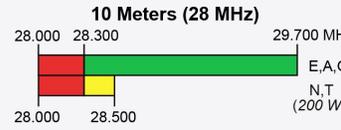
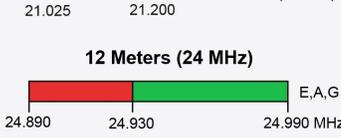
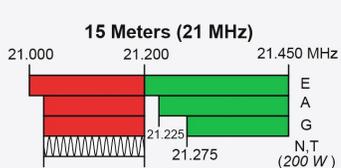
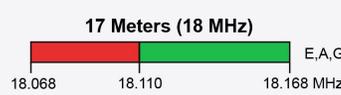
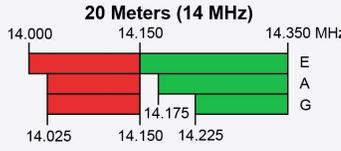
On March 28, 2017, the Federal Communications Commission adopted rules that will allow Amateur Radio access to 472-479 kHz (630 meters) and to 135.7-137.8 kHz (2,200 meters). However, amateurs cannot use these frequencies until 30 days after the Report and Order is published in the Federal Register and the final procedures for registering stations with the Utilities Telecom Council (UTC) have been approved and announced. At the time this chart was created, the Report and Order had not been published and the UTC online registration site is not yet available. Follow ARRL news for further information. New charts will be published at [www.arrl.org/graphical-frequency-allocations](http://www.arrl.org/graphical-frequency-allocations) when the bands are fully available for use.



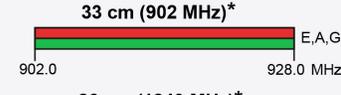
General, Advanced, and Amateur Extra licensees may operate on these five channels on a secondary basis with a maximum effective radiated power (ERP) of 100 W PEP relative to a half-wave dipole. Permitted operating modes include upper sideband voice (USB), CW, RTTY, PSK31 and other digital modes such as PACTOR III. Only one signal at a time is permitted on any channel.



See Sections 97.305(c), 97.307(f)(11) and 97.301(e). These exemptions do not apply to stations in the continental US.



\*Geographical and power restrictions may apply to all bands above 420 MHz. See The ARRL Operating Manual for information about your area.



All licensees except Novices are authorized all modes on the following frequencies:

2300-2310 MHz	10.0-10.5 GHz ‡	122.25-123.0 GHz
2390-2450 MHz	24.0-24.25 GHz	134-141 GHz
3300-3500 MHz	47.0-47.2 GHz	241-250 GHz
5650-5925 MHz	76.0-81.0 GHz	All above 275 GHz

‡ No pulse emissions

### KEY

Note: CW operation is permitted throughout all amateur bands.  
MCW is authorized above 50.1 MHz, except for 144.0-144.1 and 219-220 MHz.  
Test transmissions are authorized above 51 MHz, except for 219-220 MHz.

- RTTY and data
- phone and image
- CW only
- SSB phone
- USB phone, CW, RTTY, and data
- Fixed digital message forwarding systems only

E = Amateur Extra  
A = Advanced  
G = General  
T = Technician  
N = Novice

See ARRLWeb at [www.arrl.org](http://www.arrl.org) for detailed band plans.

### ARRL We're At Your Service

ARRL Headquarters:  
860-594-0200 (Fax 860-594-0259)  
email: [hq@arrl.org](mailto:hq@arrl.org)

Publication Orders:  
[www.arrl.org/shop](http://www.arrl.org/shop)  
Toll-Free 1-888-277-5289 (860-594-0355)  
email: [orders@arrl.org](mailto:orders@arrl.org)

Membership/Circulation Desk:  
[www.arrl.org/membership](http://www.arrl.org/membership)  
Toll-Free 1-888-277-5289 (860-594-0338)  
email: [membership@arrl.org](mailto:membership@arrl.org)

Getting Started in Amateur Radio:  
Toll-Free 1-800-326-3942 (860-594-0355)  
email: [newham@arrl.org](mailto:newham@arrl.org)

Exams: 860-594-0300 email: [vec@arrl.org](mailto:vec@arrl.org)

Copyright © ARRL 2017 rev. 4/25/2017

