

SHORT CIRCUITS

Newsletter of the Kent County Amateur Radio Club

December 2024

Officers			Repeaters
President	Jim Moore	KC3BTV	146.970 (-) 77hz pl Dover
Vice-President	Hunter Grier	W3CZ	146.910 (-) 77hz pl Camden
Secretary	Tim Reisinger	KC3OO	147.300 (+) 77 hz pl N3YMS
Treasurer	Tom Libertore	N3ARX	444.550 (+) 77hz pl Dover (down) 442.450 (+) 127.3 hz pl Harrington 449.775 (-) 114.8 hz pl N3IOC Felton

Merry Christmas

Happenings

December 7	Rehoboth Marathon, more info below
December 10	Christmas Gathering at the EOC
December 14	VE Testing, Wyoming Methodist Church, 09:00
January 9, 2025	AUXCOMM Meeting, 19:00
January 14, 2025	Membership Meeting, Kent County EOC, 19:00
January 25-26, 2025	Winter Field Day, more to come
January 27, 2025	Emcomm Meeting, EOC, 19:00
February 11, 2025	Membership Meeting, Kent County EOC, 19:00
February 13, 2025	AUXCOMM Meeting, 19:00
February 24, 2025	Emcomm Meeting, EOC, 19:00
March 11, 2025	Membership Meeting, Kent County EOC, 19:00
March 13, 2025	AUXCOMM Meeting, 19:00
March 31, 2025	Emcomm Meeting, EOC, 19:00
April 8, 2025	Membership Meeting, Kent County EOC, 19:00
April 10, 2025	AUXCOMM Meeting, 19:00
April 28, 2025	Emcomm Meeting, EOC, 19:00
May 8, 2025	AUXCOMM Meeting, 19:00
May 13, 2025	Membership Meeting, Kent County EOC, 19:00
May 26, 2025	Emcomm Meeting, EOC, 19:00

Hamfests

April 19, 2025 **Delmarva Amateur Radio and Electronics Expo, ARRL Delaware State Convention**

Sussex Amateur Radio Association

Cheer Center, 20520 Sand Hill Rd., Georgetown, DE 19947

Contact: Jamie Ashton , W3UC, 7446 Parker St Pittsville, MD 21850

Phone: 410-202-7690 **Email:** ashton@mchsi.com **Talk-In:** 147.090 156.7

More hamfests listed at www.arrl.org/hamfests. Check at the web site, or call the contact person, before going to any hamfest to make sure it has not been canceled.

Editor's Comments

As the Christmas season comes upon us, hurricane season leaves. As the holidays bring happiness for many, there are some still recovering from the latter. Though this hurricane season was well below the predicted by the "experts", we saw how just one can cause damage that will take years to recover from the fury unleashed by Mother Nature. Called a "thousand year event" by some, it shows that something as devastating as one storm can decimate an area. Even though we have been bypassed by "the big one" for many years, as in North Carolina it could happen here at any time.

While referring to the weather, I heard one amateur in one of the traffic nets say he had 19 inches of snow on the ground the week before Thanksgiving. Is that a forecast of things to come? The one who knows isn't telling, but it might be wise to go over your "go kits", look at supplies that are on hand and stock up, and begin to pay attention to the weather forecasts. Unless you live on a major thoroughfare or have a politician living down the road from you, snow removal might take a few days. Keep those tanks full and batteries charged!

If you haven't heard, there is a new "game" in amateur radio that revolves around traffic handling. Called the "Treasure Hunt", it is an idea that comes out in the NTS Newsletter put out monthly from the ARRL. You don't get the newsletter? It's free and all you need to do is go on the ARRL website and sign up. Every other month, at this time, a new question comes out in the newsletter. The question in November was, "during a NTS net which station does NCS call first when sending stations off to pass traffic?" You then send the answer to a station listed, in the radiogram format, and if you are correct, then you will get another question and another person to send the answer to. All by radiogram. Any mode can be used to send the radiograms, I use CW, and you'll usually get the answer on the Delaware Traffic Net, or by telephone. It's fun and you learn message handling.

I hope you all have a very Merry Christmas and a joyous and prosperous new year!

President's Column

I like to play with antennas. For the last several months I have been using a full wave loop antenna in my backyard tuned to 3.905 MHz erected 10 feet above the ground, feeding the shack using coax through a 2:1 balun. Obviously it is an NVIS antenna but I was looking for a lower noise alternative to my doublet fed with a window line. I was using my IC-7100 to feed it so I didn't have to change the settings on my IC-7300 (my primary HF radio). I finally did an A-B test between the two setups and the Doublet clearly won. The loop wire is now back on the spool.

Since we are near the peak of the sunspot cycle, the 10 meter band is hopping. It is a daytime band which can give great results and then nothing. The coverage moves with the sun so you can do Europe in the morning and Asia in the afternoon. I built a 10 meter vertical Moxon antenna to do some testing with gain and directivity. Some sources tell me that for HF DX the difference between horizontal and vertical polarization is insignificant. I plan on building a horizontal Moxon to compare. The nice thing about 10M antennas is their small (relatively speaking) size. At any rate, when I threw out a CQ on 10M FT-8, I had an immediate pile up. You would think that Delaware is some remote DX entity! The important thing is to try what works for you as you get out there and play radio.

73,
Jim KC3BTV

From the Section Manager's Shack

Delaware Section Manager's Annual Update

As I reflect on my first year as Delaware Section Manager, I'm proud of all we've accomplished together. Thanks to the hard work and collaboration of many individuals, we've made significant strides in several key areas:

- **Regular Drills & Training:** We've implemented ongoing drills to keep our Emergency Communications (EmComm) skills sharp. Regular training helps ensure we're always prepared for any situation, and this year, we've integrated the Delaware Emergency Management Agency (DEMA) into our section training, enhancing our coordination.
- **Winlink Training:** The Winlink program continues to expand, further strengthening our section's digital messaging capabilities. As we move forward, this initiative will enhance communication between hams, served agencies, and emergency management.
- **2025 Training Standards:** New training standards are set for 2025, ensuring we provide even more value to our served agencies. These updated guidelines will help us stay effective and responsive in our work.
- **Grant for Digital Infrastructure:** I've applied for a \$25,000 grant to improve our section's digital communications infrastructure. This funding will significantly enhance our ability to communicate in a variety of scenarios.
- **Information Dissemination:** This year, we've made great progress in sharing relevant information across the section. It's no longer just about updates from the ARRL—it's about connecting and engaging with every part of the community.

I've also enjoyed seeing clubs come together for joint events, and I look forward to more collaborative efforts in the future.

ARRL Affiliated Club Annual Update

A reminder for all ARRL-affiliated clubs: Clubs are required to update their records annually, even if there have been no changes. This update ensures that the ARRL knows your club is still active. The best time to do this is after your club's annual elections. To update your club's information, the designated officer needs a valid login on the ARRL website. Simply search for "updating your club record" on the ARRL homepage. The overview document provided will guide you through the process.

2025 SKYWARN Recognition Day – December 7, 2025

We're excited to announce that SKYWARN Recognition Day (SRD) will celebrate its 25th anniversary on December 7, 2025. This event honors the dedication of SKYWARN volunteers who provide real-time, ground-truth reports to the National Weather Service (NWS) during severe weather events. Amateur radio operators and SKYWARN spotters are encouraged to participate by exchanging QSO information with as many other spotters and NWS stations as possible. The event runs from 0000 to 2359 UTC on December 7, 2025. Special event station: The ARRL Radio Laboratory Station, W1HQ, will operate under the call sign WX1AW during the event. Participation certificates will be available after the event. For more details and to register, visit: www.weather.gov/crh/skywarnrecognition.

Upcoming Events & Contests

- **160 Meter Contest – December 6-8, 2024** - Amateurs worldwide will exchange CW information on the 160-meter band with W/VE amateurs.
- **10 Meter Contest – December 14-15, 2024** - This contest challenges amateurs worldwide to exchange QSO information on the 10-meter band.
- **Winter Field Day – January 25-26, 2025** - Winter Field Day (WFD) is an annual event where amateurs set up operations in remote locations to simulate emergency conditions. The event encourages preparedness and operational excellence. Whether you set up solo, with a group, or at a Park on the Air (POTA) location, make sure to register and get on the map! For more details, visit Winter Field Day.

• North American SSB Sprint Contest – November 10-11, 2024 - The contest runs from 0000 UTC on November 10 to 0359 UTC on November 11. North American stations will contact as many other stations as possible, while non-North American stations focus on North American stations. For rules and more info, visit SSB Sprint.

For more contest details, visit ARRL Contests or Contest Calendar.

A Warm Welcome to Our Newest & Upgrading Members

Please join me in welcoming the newest members of our vibrant community:

- JT Koffenberger, Jr KD3ACF
- Wendy Griffin KD3ACR
- Benjamin Dennison KD3ACF
- Katina Thongvong KD3ADF
- Guanglu Miao KD3AEI
- Haifeng Xie KD3AEK
- Brian Keithly KD3AFF
- Andrew Hensler KD3AFR

We're excited to have you with us!

Wishing You a Safe and Joyous Holiday Season! As we head into the holiday season, I want to take a moment to wish you and your loved ones a safe, restful, and enjoyable time. Thank you all for your continued hard work and dedication to our section.

73,

Steven Keller

Delaware Section Manager

The Emcomm Corner

It is interesting to read the feedback from hams involved in disaster communications. Several themes frequently emerge.

First, there is initially chaos regarding who is in charge and what is needed to become operational. In our minds establishing communication is paramount, but in the mind of the person in charge it may not rank in the top ten concerns they have. That underscores the need to establish relationships with the various actors prior to the event and us being able to prove we are a valuable resource and not just a thorn in their side. It also underscores the need for us to be able to set up with as little bother to those in charge. Most of the players are used to having their cell phones and internet availability all the time. They have never not had that resource. We need to make sure we are competent to do whatever task we are called to perform. That means training.

The second lesson is akin to the first, whatever can go wrong, will go wrong. We need to be prepared for anything to happen and be totally self-sufficient. When the manure hits the propeller we cannot run down to Radio Shack (if it was available) to get a connector or adapter. That means using the equipment and thinking outside the box. What are some alternative ways to get a VHF antenna up in the air? Can we use a broomstick up a flagpole? How do we know about the problem of sun glare on a computer screen if we haven't experienced it?

73,

Jim KC3BTV

Kent County EC

AUXCOMM News

Another year is almost over; what have we learned, what have we accomplished, and what could we have done better? The quick and easy answer is, "lots!" As you have heard in meetings and read in this column, Sussex AUXCOMM has undergone several changes and met new challenges in 2024. It's been a year of growth, change and challenge. Change and growth are always a challenge, and the AUXCOMM Group has certainly seen both in the past twelve months. And, I see more coming in 2025. But, at least I hope, we'll be building on a solid foundation.

In January the Community Emergency Response Team (CERT) program was added to the AUXCOMM Management Team responsibilities by Joe Thomas, at that time the Emergency Operations Director for the county. I have had the pleasure and valuable experience of working under him for many years. I certainly learned a lot. However, times change, the county has grown, and Emergency Management is now a more complex field of practice. To embrace the needs of the county The Sussex County Administrator and Council directed several changes following the retirement of the longtime director. The most visible change is the huge new Public Safety Complex at the airport. The new Director of Public Safety is Robert W. (Robbie) Murray. There are three Deputy Directors, one for the Emergency Medical Service, one for the 911 Response Center, and one, Timothy (Tim) Cooper, for the Emergency Management. The AUXCOMM and CERT programs are under his direction. As one who is usually resistant to change, I firmly believe the changes that we are accomplishing and the tasks that are getting completed, will provide a better overall response when disaster does strike again, as it will. We've been very lucky not to have had anything really serious in a long time. That's both good news and bad news. On the down side this makes it kind of difficult to convince people to train and prepare. With no recent experience in the county with a disaster scenario, this is going to cause immense concern, and yes a bit of panic, for those across the county that have never seen how quickly conditions can deteriorate, and how bad it can get. It's going to be a shock and a wake-up call to many. However, through preparation and training we can be ready.

As we close out this year, both the AUXCOMM and CERT management are trying to fill positions of responsibility in both organizations. The new management structure for the Public Safety Complex is the Incident Command System (ICS). The old EOC ran under FEMA's EOC model. The ICS provides for Continuity of Operation with "deputies" for all critical positions. It's also a good way to train the replacements you will eventually need as people move on. Finding qualified individuals, willing to take on the responsibilities of these positions, is the problem. Unfortunately public service is not popular these days, despite the fact that neighbor helping neighbor is what built this country!

The CERT Program will enter 2025 with new program guidance from DEMA. The revised documentation requires training of the leadership, and local Community CERT Teams meeting standards. With the new guidance as an outline, we are structuring the county level CERT management in a way that eventually AUXCOMM and CERT can operate cooperatively, yet separately. Interestingly, we are seeing CERT people getting their ham license and AUXCOMM people taking the Basic CERT Course. Maybe the two groups won't be that far apart after all!

If you've been looking for something to do to help your community, there are several organizations where you can utilize your ham license to support the response effort. Also, consider what CERT training could do for you and your family in developing preparedness and resilience to disaster. Kent County, by the way, has recently named a CERT Program Manager for the county, so good things will be happening there, too.

Happy Holidays to you and yours, and a happy and healthy New Year, too!

73, John
K3PFW

Club Happenings

EMCOMM Meeting For December Canceled

The regular meeting of the ARES group has been canceled for December. The meeting will take place as usual in January on 27 2025, right after Winter Field Day. I bet the main topic will be Winter Field Day!

Elections Held

If you missed the meeting in November and were afraid you got elected for an office, here's the results to ease your mind;

President	Paul Tuley	N3BUH
Vice-President	Danny clay	N3WCB
Secretary	Tim Reisinger	KC3OO
Treasurer	John Snyder	AB3JS

Come to the upcoming Christmas gathering in December and show your support for our new officers and give thanks to those outgoing.

KCARC Christmas Gathering

KCARC will be holding its annual holiday gathering in place of the regular meeting. **December 10th at 6pm, note the hour earlier than a normal meeting.** Paul, KC3VTI, has volunteered to chair the coordination of the event and is asking people bringing dishes to the EOC to let him know what you are planning on bringing. He asks that your dish serve 8 to 10 people. If you are planning on attending and wish to bring your favorite dish, let Paul know either on the air, or text him at 302-494-4987 if you want your dish to be a surprise!

New Assistant EC Named

Our EC, Jim, KC3BTV, has named Doug, KB3PRW, as assistant EC for Kent County. Doug is also our RACES Radio Officer, and now he assumes a new post. Congratulations to Doug for his appointment.

Rehoboth Marathon on December 7

On Saturday, December 7, Sussex AUXCOMM will be supporting the Sussex Mobile Command Unit in Rehoboth Beach for the Rehoboth Marathon. This is a "qualifier" for the Boston Marathon and is usually well attended by competitors. The race consists of simultaneous full and half marathons, both with the same race start time of 0700 from the Bandstand area in downtown Rehoboth. The race will be completed by 1400. The course is basically a couple of "out-and-back" legs utilizing sections of the Gordons Pond and Junction/Breakwater trails, and some local streets within Rehoboth. Maps and more detailed marathon information are available on the event website <http://www.rbmarathon.com/>

We will need Operators for fixed, walking, bike, and mobile assignments. We will begin to deploy at 0600, with some posts later in the race having later start times. If you are able to come out and support this event, or have any questions, please reply to this email, or email ws3eoc@gmail.com with 2024 Rehoboth Marathon in the subject line, and indicate your preferred type of posting and any special scheduling needs such as starting later or leaving early. We will have more details and roster information for those who sign up as we get closer to the event date. Several have signed up already, but we need many, many more volunteers to cover this large event. Spread the word!

Bill, N3ID

Sussex County DE AUXCOMM

Technician Class Held

There was a Technician class held by KCARC at the Kent County EOC on November 25 – 26. It was organized and run by our Vice-President Hunter who did an excellent job. Hunter was assisted by Rich, N3JCP and Jerry, N3KRX. On the second day a VE test was given and of the six, three earned new technician class licenses.

Thanks to Hunter for organizing and putting it on, and to the VEs, Rich, Doug, Jim and Jerry for putting on the test. The next VE exam scheduled by the club is December 14 at the Wyoming Methodist Church.

Gobble Wobble A Success

Members of KCARC provided public service communications to the 8th Annual Gobble Wobble 5K run in Felton on November 24. The 5K course snaked its way through the streets of Felton from the school to the north end of town and back. The event was organized by our Vice-President, Hunter W3CZ, and ran very smoothly. There were only two medical issues, and they were reported and handled very quickly.

Thanks to those who participated and many positive comments were given by the organization running the event, and they were very appreciative. Might be an annual event for KCARC also.

Useless Facts of the Month

Mexico and Thailand are the most common countries for American tourists to die abroad. (Good places to avoid!)

The top speed at the world's first real automobile race in 1895 was just 15 mph. (Where's my ticket book!)

Boanthropy is a psychological disorder where people think they're cows. (And some confused as cows!)

Devils Tower, located in northeastern Wyoming, holds the distinction of being the first national monument in the United States. It was designated by President Theodore Roosevelt on September 24, 1906, under the newly enacted Antiquities Act. Rising dramatically 867 feet from its base, the tower is a striking geologic feature, formed by an igneous intrusion and characterized by its unique hexagonal columns. The 1977 movie *Close Encounters of the Third Kind* used the formation as a plot element and as the location of its climactic scenes.

The praying mantis, a fascinating insect known for its hunting skills and distinctive posture, has only one ear—a feature that sets it apart in the animal kingdom. Scientists once believed that mantises were deaf because they couldn't find any ears on their heads. It turned out, they were simply looking in the wrong place! Its ear is located in an unexpected spot: right in the middle of its chest. While this single ear doesn't allow the mantis to identify the direction or frequency of sounds, it does enable it to detect ultrasonic waves, like those made by bats.

Uranus experiences an extraordinary seasonal cycle, with each of its poles undergoing 42 years of continuous summer sunlight followed by 42 years of winter darkness. This phenomenon occurs because Uranus's axis of rotation is tilted at an extreme angle of 98 degrees relative to its orbit around the Sun. As Uranus completes its 84-year orbit, one pole is pointed almost directly at the Sun for half of the journey, basking in uninterrupted sunlight, while the opposite pole remains in shadow, plunged into winter. When Uranus reaches the other half of its orbit, the roles reverse, with the opposite pole facing the Sun.

Tidbit of Information of the Month Department

FBI: China Targeting Commercial Communications

James Morley III

The FBI and the Cybersecurity and Infrastructure Security Agency released a joint statement Wednesday alerting the public to widespread espionage efforts on behalf of the People's Republic of China via the hacking of commercial telecommunications infrastructure.

"Specifically, we have identified that PRC-affiliated actors have compromised networks at multiple telecommunications companies to enable the theft of customer call records data, the compromise of private communications of a limited number of individuals who are primarily involved in government or political activity, and the copying of certain information that was subject to U.S. law enforcement requests pursuant to court orders. We expect our understanding of these compromises to grow as the investigation continues," the statement read.

In October, the FBI revealed that a China-based firm had hacked 260,000 internet-connected devices in the U.S., Britain, France, and other countries. The web of internet routers and other devices known as a botnet could have been used to conduct precise attacks on U.S. companies or government agencies. The technique is appealing to cybercriminals because the users around the world are typically unaware their device is being used to conduct scamming or espionage. China has demonstrated great prowess in cyberattacks since President Xi Jinping shifted the country's priorities and now produces 70,000 cybersecurity experts via their National Cybersecurity Talent and Innovation Base.

Atlantic Council, a Washington, D.C.-based think tank, in a report last month said, "China has built the world's most comprehensive ecosystem for capture-the-flag (CTF) competitions—the predominant form of hacking competitions, which range from team-versus-team play to Jeopardy-style knowledge challenges."

The agencies advised any organization that believes it might be a victim of a cyberattack or data breach from a foreign agent to contact the local FBI field office or the CISA.

Thanks to Newsmax on line

MOBILE EMERGENCY RESPONSE SUPPORT

Fact Sheet

FEMA's Mobile Emergency Response Support (MERS) detachments provide mobile telecommunications, life support, logistics, operational support and power generation during presidentially declared emergencies and disasters required for the on-site management of disaster response activities. There are a total of five MERS detachments nationwide, each supporting two FEMA regions. They are located in Bothell, Wash.; Denver, Colo.; Maynard, Mass.; Denton, Texas; and Thomasville, Ga.

MERS' primary function in disaster response operations involves communications support. MERS can deliver voice, data, and video services in support of the response officials. They employ satellite, terrestrial, land mobile radio, and line-of-sight transmission systems to deliver communications support for response and recovery operations.

MERS also includes the Mobile Emergency Operations Vehicle (MEOV), self-contained mobile communications vehicles with power generation and satellite communications that are deployed to provide mobile office support such as video teleconferencing at locations with no infrastructure. The units vary in size and provide support and location for a Command Post, Initial Operating Facility or a Joint Field Office. MEOVs are integrated communications and operations platforms that also have served as Disaster Recovery Centers for a disaster affected community.

MERS units also provide logistical support for field operations including water, fuel, power generation, heating ventilation and air conditioning (HVAC), and life support for responding personnel. In addition MERS provides administrative support needed by federal, state and local responders in their efforts to save lives, protect property and coordinate disaster operations.

MERS assets include:

- ☞ Approximately 275 mobile units that provide emergency telecommunications, logistics and operations support;
- ☞ Heating, ventilation and air conditioning units that generate enough BTUs for a 16,000 square foot building;
- ☞ Several truck-mounted generators, ranging from 20 to 400 kilowatts, for power generation and distribution for several large facilities.

MERS detachments transport and distribute fuel via 1200, 2200 and 3500-gallon tankers. They can also transport water via 3000-gallon tankers and, through a reverse osmosis purification unit, make brackish and saltwater safe and drinkable.

Thanks to FEMA

Hurricane Milton: Lessons Learned by First-Time ARES Responder

By Gary Konecky, KQ4STK

Hurricane Milton was the situation for my first ARES deployment. It was educational. I learned, first of all, that “disasters are local.” It does not matter what is happening in the next county over: where you are is what you will have to deal with. Secondly, the response by the state was a textbook example of how to do things right: hurricane preparedness and response started nearly a week before the arrival of the storm. Evacuation orders were given days before the onset of hurricane conditions. Recovery resources were mobilized days before landfall. I live in central Florida, which was hard hit by Milton. In mere days, Duke Energy had restored power here. Public works cleared roads of fallen trees and other debris in mere hours in contrast with New Jersey’s efforts after Hurricane Sandy, when the same task took the better part of a week. That said, no prep nor response is flawless. For at least a week before Milton, meteorologists and hurricane forecasters were predicting a severe hurricane. People spent days stocking up on food and filling their cars with gasoline. The result was that even before Hurricane Milton made landfall, gas stations were out of gas. This situation continued for several days after the passage of the hurricane. Lesson learned: if you live in an area facing an impending disaster, do not let your vehicle fall below half a tank.

My plan was to shelter in place. I live in a solid building on relatively high ground. I procured an ample supply of items needed: a solar generator, flashlights, candles, battery-powered fans with solar panels, camp stove, camp stove fuel, canned goods, and water. I charged my batteries for my radios, testing them on local nets.

Deployment

The night before landfall, I was asked to deploy with ARES, which works with the county's EOC – it runs a top-notch operation and is well equipped and staffed. It is responsible for administering the disaster response plan. I learned that teamwork and effective communication with others are critically important.

I was deployed to a special needs shelter that cared for evacuees with serious medical issues. The County Department of Health (DOH) deployed a sizable, excellent professional staff to the shelter. Their care was exemplary. The shelter was in a school. School cafeteria workers fed residents. The custodial staff kept the shelter clean. If a shelter resident had a dietary restriction, however, they needed to bring their own food. For sleeping accommodations, the shelter staff furnished cots; if you wanted a sleeping pad, sheets, pillows, or blankets, you had to bring your own. Under federal law, schools are gun free zones. Therefore, I was glad to see that the sheriff's department officers were deployed to this shelter for law enforcement.

I was not going to leave my beloved dog at home, and I took her along to the shelter. She stayed in my car while I set up the radio station. When I took her out of the car, I had to deal with Animal Control, which treated us poorly. Even when the shelter manager was willing to work with me about this, Animal Control refused. There were multiple government agencies (school, health department, sheriff's department, EOC, animal control) plus ARES personnel all involved at the shelter. This is where the weak spot is: These agencies had other responsibilities too, not just disaster relief to cope with. So, multi-agency coordination is crucial, but was lacking at this shelter. The shelter may or may not be under the jurisdiction of the EOC, but is effectively staffed by DOH, school personnel and others. DOH's disaster response was flawless, but was not coordinated well with the EOC. The EOC and ARES thought I was to report to the shelter manager, an employee of the school district. DOH thought their field manager was the shelter manager. I got caught in the middle. It took an hour of phone calls from me to ARES coordinators, and from ARES to the powers that be to iron this problem out.

The school district administrators had not allowed a shelter inspection for a couple of years and nothing pointed out in the last inspection had been addressed. I had arrived at the shelter with the EOC-supplied radio (my thanks to the county for supplying ARES with radios), a roll-up antenna, lots of coax, and two toolboxes filled with miscellaneous tools and supplies. I had everything I needed but the one thing that an earlier shelter inspection would have told me I needed was several feet of PVC pipe. A field inspection would have told me that the building is basically nothing but metal, and hence I would need a PVC pipe so that I could attach my antenna to a fence outside, away from the building, and thereby get the antenna to work. Fortunately, when I was deployed, Tony McGhee, KT4WM, who had been deployed at this school previously, had been assigned as my person to call in case of issues. Tony came to the rescue, bringing PVC pipe and more supplies. The lesson is, when possible, ARES volunteers should be deployed in pairs. If this is not possible, each person deployed should have a nearby back-up person assigned to them to assist with equipment, supplies, and experience to help out if necessary.

As the schools do not let us make needed site inspections, I think it would be a good idea if at the end of a deployment, ARES volunteers prepared a brief document so that the next ARES volunteer would have a better idea of what they may be getting into. The following would be an example for the school where I was deployed: "Off the cafeteria/multi-purpose room is a storage room used by cafeteria workers to store disposable items such as paper cups, plates, trays, etc. The radio should be set up in that storage room. The feed line should be run through the double-doors to the right of that room. Outside those doors is a courtyard with a chain-link fence. A non-conductive pole (PVC pipe or a 2"x4") can be attached to the fence and an antenna mounted on the pole. The doors tend to pinch coax, and the doors also have sharp edges. Therefore, something needs to be wrapped around the feed line to protect it from being crimped, and to protect it from being cut."

Additionally, the school has a back-up generator. Do not assume it will work and even if it works, it may not supply power to the part of the school where your station is. Therefore, plan accordingly. That said, there is a limitation to this as people in the school could move things, resulting in this information being out of date. Something is often better than nothing, I suppose.

The next big lesson, and this is a lesson for everybody, not just ARES volunteers: Disasters happen in places that you don't think they would happen. Hurricane Helene destroyed a part of the country that is

not prone to hurricane destruction. The result was unimaginable devastation, a very slow government response, and no significant aid for the devastated remote areas, especially in the early days of the disaster. It was citizens, not the government, who provided the first significant aid and comfort to the victims in that area. I am proud of the ham radio operators who stepped into this breach and did all they could to help. Where I live, I have high praise for the government response. If you are going to get hit by a hurricane, the best place to be is in Florida. The response in Florida to Milton was textbook perfect (except for the aforementioned lack of coordination between agencies at the local level). That said, however, the lesson I have learned is that you are largely on your own in a disaster, post-onset. Ham radio is the only communication that can be counted on in an emergency. Cell phones fail. The internet goes down.

If a hurricane doesn't get you, an earthquake might. If an earthquake doesn't get you, a flood might. If the flood doesn't get you, a fire might, and so on. Therefore, the lesson that Milton taught me was that you, and only you, can be counted on in a disaster. Help may be delayed, maybe by hours, maybe by days, maybe by weeks. I say this because even before Milton made landfall, the winds were so powerful that ambulance service had to be suspended. Hours after Milton made landfall, the calls for assistance came in hard and fast: Person after person, calling because a tree fell on their house, or their house was flooding. Those calls went unanswered because the roads were impassable due to flooding or debris. That is why I say you need to work on the assumption that you will be on your own and no help is coming.

Where I live, I have high praise for the government response. If you are going to get hit by a hurricane, the best place to be is in Florida. The response in Florida to Milton was textbook perfect (except for the aforementioned lack of coordination between agencies at the local level). That said, however, the lesson I have learned is that you are largely on your own in a disaster, post-onset. Ham radio is the only communication that can be counted on in an emergency. Cell phones fail. The internet goes down.

The Go-Bag

If you are deployed, you are going to your assignment and you are not leaving your assigned location for the duration. Therefore, not only do you need your properly stocked go-bag, you need to secure your property. You also need to safeguard important legal documents, as your home could be destroyed. Also, secure your antennas.

The little things, some seemingly of no consequence, matter. When I arrived at the shelter, the parking lot was nearly full. In addition, emergency services vehicles were parked in a no parking zone. As I had equipment to unload, I asked the shelter manager where I should park and I was told to park with the emergency service vehicles that were parked in the no parking zone. The problem is that if people see a civilian vehicle parked there, they may think they can park there, and that would have caused a problem at this shelter. Fortunately, a friend had given me ARES logo magnetic placards that I stuck on my car. I also wore an ARES shirt that had the bold, large words "AMATEUR RADIO EMERGENCY COMMUNICATIONS."

My thanks to Doug Lynch, W4DBL, for checking on everyone in ARES for needs and well-being checks. Not only are we responsible to those we are helping, but we are also responsible for our fellow team members. Thanks also to Jim Jaeger, KO4KUS, for asking me to deploy, and troubleshooting any issues.

Conclusion

I am a new ham and survived my first ARES deployment. Having had a very positive experience, I will be volunteering again. You don't have to be a veteran, experienced ham to help when disaster strikes. Therefore, I encourage everyone (experienced hams and new hams alike) to get involved with ARES.

KEY TAKEAWAYS

- Communication and coordination (including a clear chain of command) among all the agencies involved in a disaster is crucial.
- Try to get as much information about where you are going as possible. If possible, site inspections should be done before disaster strikes.
- Have a go-bag. Include in your go-bag things you want, as well as what you need, as the shelter may not have them.
- If you have a pet, be prepared to deal with animal control.
- ARES volunteers should bring things that they don't think they will need (e.g., PVC pipe).
- Secure your property before you deploy or evacuate.
- Seemingly inconsequential things (e.g., car magnetic signage and t-shirts) matter.

Thanks to the ARES Newsletter

FEMA Nuclear Guide: Prevent Radiation Exposure

By Charlie McCarthy

With Russian President Vladimir Putin threatening the use of nuclear weapons in his country's war against Ukraine, and with Middle East conflicts involving terrorist groups, the U.S. and its European allies are informing citizens how to respond should a nuclear attack occur.

The Federal Emergency Management Agency (FEMA) has compiled a 258-page "Planning Guidance for Response to a Nuclear Detonation" that begins, "If a nuclear detonation occurred in an American city, it would be one of the most catastrophic incidents the United States (US) has ever experienced." In its latest advice to "Be Prepared for a Nuclear Explosion," FEMA says a nuclear explosion "may occur with a few minutes warning or without warning."

"Nuclear explosions can cause significant damage and casualties from blast, heat, and radiation but you can keep your family safe by knowing what to do and being prepared if it occurs," the agency says. "Fallout is most dangerous in the first few hours after the detonation when it is giving off the highest levels of radiation," the preparation document says. "It takes time for fallout to arrive back to ground level, often more than 15 minutes for areas outside of the immediate blast damage zones. This is enough time for you to be able to prevent significant radiation exposure ..." The document stresses three steps: get inside, stay inside, and stay tuned.

It's advised to remain indoors for at least 24 hours or until further instructions are given. Family members should not attempt to reunite with each other outside the house to avoid radiation exposure. People should stay informed through available media channels, which is essential to keep abreast of the situation and safety announcements.

Hawaii, Nevada, California, Arizona, and New York were identified as the most dangerous states to live in during a nuclear apocalypse, the Irish Star reported. According to NoDepositDaily.com, Vermont would be the safest state in the event of a nuclear attack, closely followed by Maine, Louisiana, Wyoming, and New Hampshire. If Putin and Russia's adversaries become involved in a nuclear war, there are certain countries that potentially could offer sanctuary, according to The Express. They include Antarctica, Iceland, New Zealand, Switzerland, Greenland, Indonesia, Argentina, Tuvalu, Bhutan, Chile, and South Africa.

Thanks to Newsmax on line

Mysteries in polar orbit – space's oldest working hardware still keeps its secrets

Rupert Goodwins 25 Nov 2024

The oldest functional off-Earth space hardware? Well, that is a great question for those into pub quizzes, aka bar trivia. 1977's Voyagers hold some impressive records beside those golden discs, just not that

one. Any guesses? Astronomers are still bouncing range-finding lasers off the reflectors left on the Moon by Apollo 11, but fancy mirrors hardly count. Nope. The best contender is from 1974 and wasn't even launched by NASA or the Soviets. It's still in orbit, still functioning remarkably well, it celebrates its 50th birthday this month, and, lastly, has the suitably prize-winning name of Oscar.

Its full name is AMSAT-OSCAR 7, known to its friends as Oscar 7, and it is remarkable for many reasons – not least of which are two great mysteries that may never be resolved. For a tiny box built on a budget that shames shoestrings for their conspicuous wealth, it pioneered some amazing technologies, got amazingly lucky more than once, and repaired itself after two decades of being dead (perhaps). Start with the luck. The Oscar in Oscar-7 stands for Orbiting Satellite Carrying Amateur Radio, and it was – is – the seventh of its kind. It cost around \$60,000 in 1974 money to build, and as The World Radio News pointed out at the time "was built on evenings and weekends by volunteers, many of whom are involved professionally in the aerospace industry." It added: "A comparable satellite commercially built would cost two million dollars."

The hardware weighs just 28.6 kg, and is an octagon covered in solar cells, about half a meter tall, and with spikes sticking out. Its mission, which was planned for either five or ten years depending on sources, was to relay ham radio signals over an area roughly the size of the continental US, and if you've got a ham radio license you can use it right now, orbit permitting.

To build and launch anything for that kind of coin needed volunteers, exceptionally smart thinking, and donated parts. We may have Arduinos in space in 2024, even if nobody knows why, but 50 years ago it was all custom unobtainium. So Oscar-7 scored several big pieces of luck: firstly, it was given a rechargeable battery used as a test item for a long-forgotten lunar orbiter, and spare solar cells found in a NASA Earth observation satellite program. The battery was space-rated with a limited number of charging cycles before it died, and most solar cells are also limited life, being degraded by radiation. These ones were designed to go through the Van Allen belt and had an unknown lifetime.

Another great piece of luck was the project team, which was scattered around the world in universities, agencies and companies. Time and resources were donated, cadged or constructively shoehorned into theses, all coordinated without even email, and with some brilliant engineering. The spacecraft had to be in a permanently controlled spin for thermal management and had to be permanently aligned to Earth, but moving parts were out, let alone control jets. Alignment was taken care of by strapping large magnets to align with the Earth's magnetic field, and four antennas made out of cut-up metal tape measures were painted black on one side and white on the other. Arranged as a propeller, the pressure of sunlight would make them act as solar sails, as long as that arrangement also worked for the radio side. It did.

Ah yes, the radio side. With a 1,000 km orbit and a power budget of 12-14 watts - less than a three amp USB charger, the satellite's transmitters had to be exceptionally efficient to have any chance of being usable by ordinary radio hams with ordinary radio ham gear. That design pioneered ideas still in use today in digital mobile comms. Then there were telemetry, control, beacon and data transmission systems, all touched with genius, all deliciously documented in a 50th anniversary paper. Moreover, it all worked. Launched on November 15th, 1974 and activated a few days later, it wired superbly for six years and six months before, cell by cell, the battery failed, shorting out the solar cells and turning off Oscar-7 for good in June 1981. So far, as expected – and then we hit two intertwined mysteries.

The first mystery is unambiguously attested. In 2002, 21 years after the satellite died, a British radio ham picked up telemetry signals proclaiming it had returned to life. One of the shorted cells in the battery had somehow gone open circuit, letting all the power from those fortuitously robust solar cells to flow back into the electronics. Oscar 7 worked again, providing it was in sunlight, and since it's in a polar orbit that rarely dips into eclipse, that's most of the time. The problem? Those kinds of batteries never do that. They stay short circuited. This one didn't, and nobody knows why.

The second mystery or theory also says Oscar-7 came back to life, only this time claiming the revival happened mere months after it went to sleep in the summer of 1981. In December of that year, the Polish Communist Party declared martial law in that country due to widespread protests by the Solidarity organization. This included confiscating all two-way radio equipment and aggressively controlling the telephone system. In response, a network of scientists, engineers and technicians in universities and television repair shops started building clandestine equipment and used it to organize protests and strikes across regions, until martial law was rescinded in 1983. It was one of the big triggers for the collapse of the Soviet Union, and is well documented. So, what to make of claims (Polish) that the clandestine radio network somehow "reactivated" Oscar-7 and used it within Poland and to communicate with the West?

Thanks to The Register through the PVRC Reflector

Joke of the Month

Big Family

Flying home from France on a recent trip I noticed a rather haggard looking mom walking into the customs area with eight children-- all under age 10. Collecting their many suitcases, the nine of them entered the cramped customs area.

A young customs official watched the large entourage in disbelief, "Ma'am," he said, "do all these children and this luggage belong to you?"

"Yes, sir," the lady said with a sigh, "they're all mine."

The customs agent began his interrogation: "Ma'am, do you have any weapons, contraband or drugs in your possession?"

"Sir," she calmly answered, "if I'd had any of those items, I would have used them by now."

Quote of the Month

"The older I get, the better I used to be."

Lee Trevino