PostScript
Ohio Section

"November 22nd Edition"

CQ CQ CQ de WB8LCD

This week might be just a bit shorter than I like, it's been another crazy week for me! I never did get that new ARRL receiver kit built, but I'll be doing that and reporting on it soon. Add to that the SSB Sweepstakes this weekend, I'm having a hard time getting started on this weeks PostScript. As you can see, I'm not a "die-hard" contester, but that is a "Clean Sweep" mug I'm drinking my coffee from. Doubtful I'm going to qualify for one again this year, but I am having fun! And that's an important part of my enjoyment of the hobby.

I've always said that Amateur Radio is the King of all Hobbies! One of the things that makes it so much more interesting than most hobbies is that it's actually a whole bunch of different hobbies *within a hobby*. It's possible that you and I can both be avid hams, and never run across each other on the air. If I'm an avid 6-meter operator and you like to work HF, our paths will probably not cross – at least on air. But, since I belong to several clubs in which I attend and participate in we very well could meet each other that way. It's also possible we could run into each other at a Hamfest, or some other type of convention. My

point is, get involved, on the air and with all of the other activities the Hobby has to offer. I promise, you'll meet some fascinating people and make some really good friends.

So, let's say you're a new ham, just got your Tech license and you want something just a little more than talking to the locals on repeater. Let me make some suggestions. I'm going to start with Fox-Hunting, because you can actually do that *without* even being licensed!

Anyone can get started in Fox-Hunting. The equipment to get started can be very simple and inexpensive. Many local clubs sponsor local hunts so that you should be able to find one not too far away. There are also regional, national and international organizations that sponsor Hunts and other activities related to hunting. There are "foot hunts" and "car hunts". Most occur on the VHF/UHF frequencies, but some also occur on HF. You can participate in all because anyone can listen! There are projects you can build to satisfy your desire to make some of your own equipment. I would encourage more clubs to get involved in sponsoring hunts, especially as an "introductory" activity for kids.

Did you know that not all activity on VHF/UHF frequencies is FM? Most "weak signal" work, and DX-ing is done using SSB. Ham Radio has a whole bunch of satellites in space using both FM and SSB. Again, a satellite station can be as simple and inexpensive, or as complex and costly as you'd like to make it. Even as a Tech class licensee, you've got full operating privileges on 6 meters.

As a Tech class license, you've also got a slice of the 10 meter band from 28.3 to 28.5 Mhz where you can operate SSB. A 10 meter antenna can be pretty easy to make, and it's small. If you don't want to go all-out on an HF rig, there are some good, used, 10 meter only radios out there that are pretty inexpensive. The nice thing is, that as we are starting the climb up solar cycle 25, 10 meters will have lots of good openings for some fun DX Q's! Want a chance to really get in on the excitement of HF radio? You got it. All you have to do is learn the morse code. It's not even that difficult! Once you learn, you can get on the air and there are plenty of folks who will slow down to give you a chance to make some Q's and increase your proficiency and speed. You have privileges on 15 meters, 40 meters and 80 meters.

After I let my novice license expire in 1969, I knew I had made a mistake. It took me about 6 months to go back and get my technician class license. I held that license for almost 10 years (I graduated from college, got married, started a business, started a family all in that same time) and I had a lot of fun with amateur radio. At the time, all I needed to move from technician to general class was to pass the 13wpm morse code test. Me and a friend spent about a year, running CW on either 6, 10, or 15 meters about 3-5 times a week, until I had my speed up at about 20wpm. In August of 1979 I drove to Detroit where I breezed by the 13wpm test and was upgraded to general. I was an avid cw operator for about the next few years. I'd have to work at it to get my speed back up there. That's on my bucket list. The General class license is really the most "Bang for the Buck" as ham licenses go. I was happy with that until 2006 when we started the PCARS club. I was listed as member number 1, and was also the first president of the club. As I looked at the club roster that year, I noticed that the next 5 members all had the Extra Class license. That's when I was motivated to study for and get the Extra class license.

I will still argue that the license to have is the General class license. I want you to have Fun as a Technician class Amateur Radio operator. But, I also want to see you move up to General. In the grand scheme of things, moving from Tech to General is only a little bit of work and is well within the reach of most people. Going from Tech to General opens up huge amounts of radio spectrum to you with which to have more fun! Getting the Extra class license is another story. It's much more involved with radio / electronics theory, and you only

get a small slice of additional spectrum allocation for all of your work. You WILL need to be motivated! Is it worth it? Of course it is.

As I sign off this week, I want to wish you all a Joyful and Peaceful Thanksgiving with family and friends.

73,

Tom Sly – WB8LCD
ARRL OHIO Section Manager
330-554-4650

What I Learned in Seven Terms as Net Manager
C. Matthew Curtin, KD8TTE

In December 2012 I got my amateur ticket. Like most of us, I was on a journey that started many years earlier, listening and working in other radio services. A few months earlier I went to Universal Radio and talked about options, then walked out with a new Yaesu FT-60R. Rugged, able to transmit on both 2m and 70cm, and a wide range of listening from 108MHz to just short of 1GHz. I did a lot of scanning, looking for any signal, just to hear what was out there. I heard air traffic control, airport ground control, city service, commercial broadcast relays, and much more. One thing that caught my attention was something that came on every evening at 7:15. Same Bat-Time, Same Bat-Channel. Every day.

It was "the Central Ohio Traffic Net [COTN], a part of the Ohio Section of the National Traffic System [NTS]." Not that I had any idea what any of it meant, I listened to try to figure it out. I listened evening after evening to messages being voice relayed by radio. I took notes as net control called for stations and stations reported into the net with traffic, without traffic, and with words for the net. In time I developed an understanding of what they were doing.

My radio log from Friday, December 21, 2012 says I "appeared between 1000 and 1500 in the ULS as KD8TTE!" That very evening I reported into the net without traffic. The remainder of the log that evening is a hilarious record of trying to capture what was happening much like what I had been writing in the weeks before I was granted a license. Pieces of callsigns read too quickly for me to understand. Recording "W8" then writing above it "WA8?" Groups of radio messages garbled beyond all recognition. "8RL50 FX ARL60 51 AND MANY MORE." You can't make this stuff up.

Fast forward my radio log to December 3, 2013 and it shows that I was net control that evening, and after the net I got a phone call from the previous net manager asking if I'd be willing to serve if elected as net manager. There had been a lot of discussion in the days leading up to that about what was required to serve as net manager, what the duties were, and so on, but there was very little available from the archives of COTN. Our training officer, Denny WA8EYQ, had given a fair bit of background from memory and experience and it seemed that as long as there were others who knew more than I did, I could handle some day-to-day work to support the operators working so faithfully to relay messages and apparently in need of this net to do it.

My plan was to serve a term and then to hand off to someone else while I continued pursuing more active operations to be supported by radio rather than to support those supporting those doing the "forward" work. I served as Net Manager in 2014, and in 2015 was asked to stand for election again, which I did, and have served continuously as Net Manager from 2016-21.

Along the way I had to figure out a lot of things and do a lot of reading to get a clear picture of ARRL's Field Organization, the respective missions of ARES and NTS, and how they related to each other. Earlier this year I announced that I would not be standing for election for Net Manager for 2022, and began to focus some of my training efforts on showing some of what happens behind the scenes, hoping to find someone who would take an interest and whom I could help to have an easier time of getting started than I had.

COTN now has a book of Standard Operating Procedures (SOPs) that include a good part of what needs to be addressed, reports of training events, reports of process improvement, and a good deal of information to help operators understand what we're doing and why. I've recorded a training video to help explain what's available and how to use it. The video is directly tutorial for COTN, but it largely applies to any net affiliated with NTS, Radio Relay International, or the Amateur Radio Emergency Service (ARES), and even agency auxiliary communications (AUXCOMM) teams.

Here are a few highlights of what I present in the video.

1. What's Needed for Nets Organized for Message Relay?
   a. ARRL Programs for Messaging
   b. Learning Objectives and Instructor Background
   c. Organization Behind the Net and Operating Standards
   d. Being Part of a System
2. Understanding the Relationship Between the Net and Its Users
   a. Starting Auxiliary Communications When Regular Systems Fail
   b. Expanding Incidents and Creation of Records
   c. Adding Message Relay Service
3. Using Founding Documents to Find Net Manager Duties and Scope of Authority
   a. Articles of Association Define the Organization
   b. By-Laws Implement Articles
   c. Standard Operating Procedures Show How It's Done in Detail
4. Making Appointments and Managing Volunteers
   a. Everyone's Time Is Valuable and All Volunteers are Assets
   b. Why COTN Volunteers Come Together
5. Planning for the Year
   a. Encouraging Activity In Daily Operations
   b. Annual Meeting and Monthly Training & Planning
   c. Using VHF+ Contest as a Training Event
   d. Using NVIS Day as a Training Event
   e. Using ARRL Field Day as a Training Event
   f. Using SET as a Training Event

You can find the video directly on my YouTube channel at https://YouTube.com/KD8TTE or via the COTN Training Tips web site at https://www.cotn.us/tips/the-role-of-net-manager.

Whatever your interest I hope you find it helpful and maybe even encourage you to volunteer to help your fellow amateurs by acting as one of the many net managers that we need to keep our NTS and ARES programs viable.
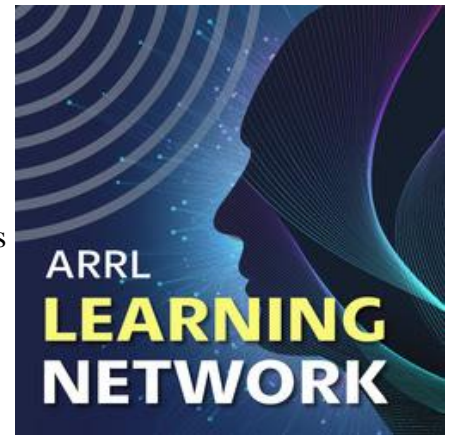
National News

ARRL Learning Network Webinars

Visit the ARRL Learning Network (a members-only benefit) to register, check on upcoming webinars, and to view previously recorded sessions.

More webinars coming soon!

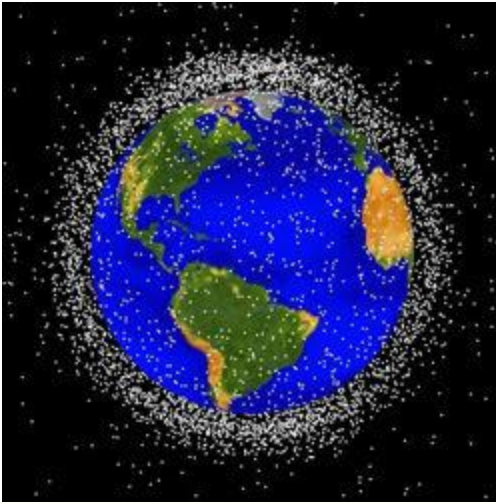ARRL members may register for upcoming presentations and view previously recorded Learning Network webinars. ARRL-affiliated radio clubs may also use the recordings as presentations for club meetings, mentoring new and current hams, and discussing amateur radio topics.

The ARRL Learning Network schedule is subject to change.

Russia's Destruction of an Orbiting Satellite Raises Space Debris Concerns

Russia tested an anti-satellite weapon on November 15, destroying Kosmos 1408, one of its own old and now-defunct satellites. Launched in 1982, Kosmos 1408 was some 300 miles above Earth. Its destruction generated a debris field in low-Earth orbit that prompted the seven International Space Station crew members, including one Russian cosmonaut, to take cover in their crew capsules for several hours, in case they had to abandon the station.

The proliferation of spacecraft in Earth orbit has greatly increased the possibility of collision with space debris. [Photo courtesy of NASA]

"The [ISS] is passing through or near the cloud every 90 minutes, but the need to shelter for only the second and third passes of the event was based on a risk assessment made by the debris office and ballistics specialists at NASA's Johnson Space Center in Houston," NASA Chief Bill Nelson explained. Occupants of the Chinese space station are reported to have taken similar action.

The incident also has generated criticism from many corners, as well as a grave discussion on the possible impact of any future such tests, by Russia or anyone else.

The danger of damage to the ISS or an orbiting satellite aside, tracking a debris field that could include thousands of pieces, in order to head off collisions, is a concern all its own. Very small debris in space is essentially impossible to track reliably, if at all. The incident also comes at a time when the number of spacecraft orbiting Earth continues

to grow. AMSAT President Robert Bankston, KE4AL, said that Russia's action will pose a threat to all activities in low Earth orbit for years to come, placing satellites and human spaceflight missions at risk.
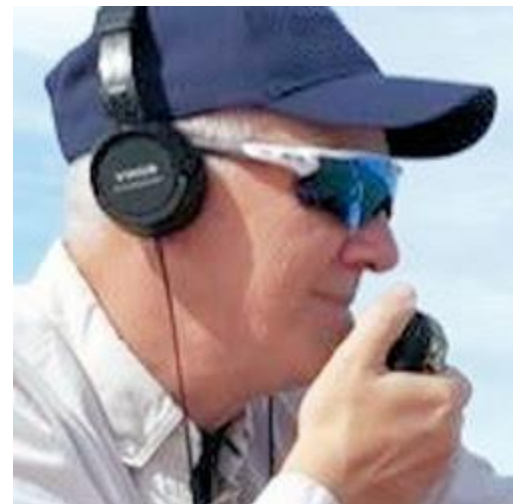
"Space is already crowded, but now there are at least 1,500 trackable fragments and, possibly, hundreds of thousands of smaller yet still-threatening pieces of debris in low-Earth orbit," Bankston said. "While space stations have the capability to move out of the way, with sufficient notice, most satellites in low-Earth orbit, including those designed, built, launched, and operated by AMSAT, do not. As such, they face greater risk of catastrophic destruction or degraded mission functionality, if struck by fragments from Russia's destruction of Kosmos-1408."

AMSAT President Robert Bankston, KE4AL.

Bankston said AMSAT is closely monitoring the situation and hoping for the best.

Nelson echoed Secretary of State Antony Blinken in expressing his own outrage at Russia's action. "Their actions are reckless and dangerous threatening as well the Chinese space station and the taikonauts on board," he said.

FCC Commissioner Nathan Simington condemned the incident as "irresponsible" and noting that orbital debris fields pose a threat to hopes for the peaceful use of space and "make the work of using space complicated and difficult," he said in a statement. "No one owns space," Simington said. "And no one should intentionally make it more difficult to use."

The FCC has made it clear that orbital debris rules apply to amateur satellites, in general requiring submission of an orbital debris mitigation plan with each license application. Read an expanded version.

Emergency Communications Academy: Plan Now to Attend the 2022 ARRL National Convention at Orlando HamCation and Emergency Communications Training Track on Thursday!

Plan on attending the 2022 ARRL National Convention, set to take place at Orlando HamCation® on February 11-13. A day-long workshop on emergency communications is scheduled as one of the training tracks that will be offered as part of the National Convention program that will precede HamCation on Thursday, February 10. The training presentations will feature current protocols, techniques, and responsibilities for the modern volunteer radio operator serving partner agency and organizations. The presenters are all subject-matter experts. Topics to be covered include the ARES, AUXCOMM and Florida Emergency Communicator Position Task Books, an overview of amateur radio responses to disasters, basic voice traffic handling with hands-on voice traffic net/message transfer practice, using the ICS-213 form, Winlink's ARDOP (Amateur Radio Digital Open Protocol) and VARA protocols, and the Radio Mail Server (RMS) hybrid internet/HF radio gateway system. The event will be held on Thursday, February 10, 2022 at the Doubletree by Hilton Orlando at SeaWorld. Participants should arrive at the hotel, check in at 8 AM, and be in seats by 8:30 AM. A National Convention Luncheon (for everyone) runs from noon to 1 PM in the banquet room. The track ends at 5 PM. Registration for the ARRL National Convention at Orlando HamCation is now open.

ARES Resources

· Download the ARES Manual [PDF]

· ARES Field Resources Manual [PDF]

· ARES Standardized Training Plan Task Book [Fillable PDF]

· ARES Standardized Training Plan Task Book [Word]

· ARES Plan

· ARES Group Registration

· Emergency Communications Training

The Amateur Radio Emergency Service® (ARES) consists of licensed amateurs who have voluntarily registered their qualifications and equipment, with their local ARES leadership, for communications duty in the public service when disaster strikes. Every licensed amateur, regardless of membership in ARRL or any other local or

national organization is eligible to apply for membership in ARES. Training may be required or desired to participate fully in ARES. Please inquire at the local level for specific information. Because ARES is an amateur radio program, only licensed radio amateurs are eligible for membership. The possession of emergency-powered equipment is desirable, but is not a requirement for membership.

How to Get Involved in ARES: Fill out the ARES Registration form and submit it to your local Emergency Coordinator.

Job Openings at ARRL Headquarters

ARRL is hiring for the following positions at its Headquarters in Newington, Connecticut. Qualified candidates are invited to email their cover letter and resume to ARRL Human Resources. Visit the ARRL Employment Opportunities page for more information.

- Lab Engineer EMC/RFI Specialist
- Administrative Assistant
- Director of Information Technology
- Marketing Communications Associate
- Public Relations & Outreach Manager
- Social Media Strategist

To apply to any of these positions, submit your resume and cover letter by mail, email, or fax to ARRL Human Resources, 225 Main St., Newington, CT 06111. Fax: 860-594-0298. ARRL is an equal opportunity employer.

The ARRL Foundation Scholarship Program Open Through Dec 31st

The ARRL Foundation Scholarship application period for the academic year 2022-2023 opens on November 1st and ends on December 31, 2021. I am asking you as a Section Manager to notify your Section membership of this opportunity. The Foundation issued $550,000 in scholarships for 2021-2022 and for the academic year 2022-2023 there has been a significant increase in the number of large dollar scholarships available thanks to a generous contribution from Amateur Radio Digital Communications, Inc. (ARDC).

For the academic year 2022-2023, 130 scholarships will be offered totaling $900,000! There are twenty $25,000 scholarships, four $15,000, seventeen $10,000 scholarships, nine $5,000 scholarships as well as dozens of $1,000 and $500 scholarships.

The descriptions of the many scholarships available are on line.

http://www.arrl.org/scholarship-descriptions

It is also very easy to apply as the scholarship application is on line.

http://www.arrl.org/scholarship-application

Since only amateur radio operator students may apply, the chances of being selected for a scholarship are good. It would be a shame for your members to miss this opportunity. Please place a notice in your Newsletter or send a separate E-Mail to your Section to let your members know that the ARRL Foundation offers over 130 scholarships and it only takes a simple online application to apply.

Since 1973, the ARRL Foundation, with the generosity of many donors and the hard work of a long line of dedicated Foundation Directors, has had a positive impact on the lives of many young amateur radio operator students. To ensure that this positive impact does not wane, I ask each of you to timely notify your members of this opportunity. Being awarded an ARRL Foundation scholarship could mean the difference in whether a student can pursue their education in 2022-2023 or not.

Thank you.

Dr David Woolweaver, K5RAV
President, ARRL Foundation

Club Corner

This is YOUR cornner of the newsletter. Send me what your club is doing and I'll make sure that it gets in. Got a special event or club project that you want everyone to know about? Send it to me! Need help with a project? Send it to me.

Let me know what you club is up to. Are you going to have a special guest at your meeting or are you having a special anniversary?
Just sent it to: webmaster@arrl-ohio.org   Please! Format as below:

If you want me to publish your club information, or even an article you have written, please send it in WORD format (.docx). Please use Times New Roman font size 12 for the body of the aritcle. Any photos please include as a .jpg or .bmp – the time you save me in doing all the conversions will be greatly appreciated.

Portage County Amateur Radio Service (PCARS)

While the final total is not in yet, PCARS had kept its streak of continually increasing its annual contribution to the Portage County Center of Hope. For the second straight year donations have exceeded $10,000 and it appears this years total will exceed last years! Thank you to everyone who contributed.

Athens / Hocking County FoxHunt Winners 11/20

A joint County FoxHunt was held this morning in Athens and Hocking counties. Here FoxHunt games-master Kirk Groeneveld KC8JRV presents the winning fox trophy to both Eric McFadden WD8RIF and Phil Stanley KB8NZB for coming in first place from their respective counties
 The fox was hiding on the county line…. But neither group knew the other was involved. Kirk had written some 13 clues delivered over the air on a simplex frequency shared by the two ham clubs, ACARA and HVARC. As the final Hunt of the season, all finishers were provided York Peppermint Patties, which answered one clue and identified the township of York where Kirk was "hiding."

Southern Ohio Amateur Radio Association (SOARA) Christmas in November Meeting/Dinner

The Southern Ohio Amateur Radio Association's (SOARA) Christmas in November meeting/dinner on, November 15, 2021, at the Frisch's Big Boy restaurant, Ironton, Ohio, was a huge success. A special welcoming sign "Welcome Ham Radio Group" on the Frisch's marquee set the stage for the perfect evening. Special live entertainment was provided by Barbara Crockett KE8SRN. Barbara has trained internationally and has played with the Columbus Symphony Orchestra. Although she plays other musical instruments, she prefers the flute. She shared her beautiful flute music with the group and several guests were seen humming along with her songs.

 The food and service were excellent, and the waitresses did a superb job taking care of everyone.

Inasmuch as this was a meeting/dinner, SOARA President, Tim Nicely AC8VQ called the meeting to order and requested a motion to defer the reading of the minutes and treasurer's report until the next SOARA meeting, which was approved. Additional business approved was to cancel the regular SOARA meeting, December 20. The next scheduled meeting will be Monday, January 17, 2022. Tin Nicely also introduced the SOARA officers for 2022.

Tim Nicely, AC8VQ President

Eddie Jenkins, N8URU Vice President

James Reneau, N4REN Secretary

Dave Bruce, KD8NYN Treasurer

Special Office Holders

Jerry Lockhart W8HIC ARES, EC

James Rowe N8TVO Assistant ARES EC

Eddie Jenkins N8URU Assistant ARES EC

Keith Brooks N8DKB Assistant ARES EC

Keith Brooks N8KDB Two Meter Net Manager

James Rowe N8TVO Assistant Two Meter Net Manager

Michael Love WB8YKS Public Information Officer

Silent Keys Reconnection

The following SOARA Silent Keys were remembered in a moment of silence.

Annabella Jenkins, KB8TGI

Mary Thompson, KD8FPW

Steve Sheers, W8AFX

Door Prize Drawing

Lesa Breeding N8SKZ Big Boy Coin Bank

Barbara Crockett KE8SRN Big Boy Coin Bank

Faye Rowe $20.00 Frisch's Big Boy Gift Certificate

Tim Nicely AC8VQ $25.00 Frisch's Big Boy Gift Certificate

Mike Love WB8YKS *Grand Prize Winner* of a Baofeng Dual Band Handheld UV-5R Pro with all the accessories. The grand price was donated by Tim Nicely, AC8VQ.

It was a great evening for the 16 in attendance.

The next SOARA activity is to provide communications and assistance in the lineup for the Ironton Lions Club Christmas Parade, Monday, November 29, 2021. Members are requested to meet at the parking lot at 4th and Railroad Street at 5:00. This is a rain or shine event! Please wear highly visible clothing like the ARES vest. James Rowe N8TVO is the communication coordinator.

Michael Love, WB8YKS

SOARA / ARES

Ohio Section PIO

VE Sessions

Dayton Amateur Radio Association (DARA)
If you are interested in testing for a new or upgraded license, please come see us at the DARA Clubhouse. If you have questions about testing, please email exams.w8bi@gmail.com

Lake County Amateur Radio Association (LCARA)
Saturday December 4
All exams start at noon and are held at the Kirtland Library, 9267 Chillicothe Rd. Kirtland, OH

Portage County Amateur Radio Service (PCARS)
The first Saturday of every even numbered month -10 am – at the PCARS club site in Ravenna. Please visit the PCARS web site and check out the information about VE testing in the latest newsletter at www.portcars.org . If you have any questions, don't hesitate to contact me at KB8UUZ@gmail,com

The Milford Amateur Radio Club (MARC) is now doing VE testing on the third Thursday of each month at 6:00 PM. Location; Miami Township Civic Center located at 6101 Meijer Drive, Milford, OH 45150. Please pre-register at www.milfordhamradio.org

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Your Club news should be listed here!

I know you're out there doing things! Send me a write-up (MSWord please) and some photo's (.jpg please) and we'll get your club hi-lited here for the other OH Section Clubs to see! Send to WB8LCD@ARRL.ORG
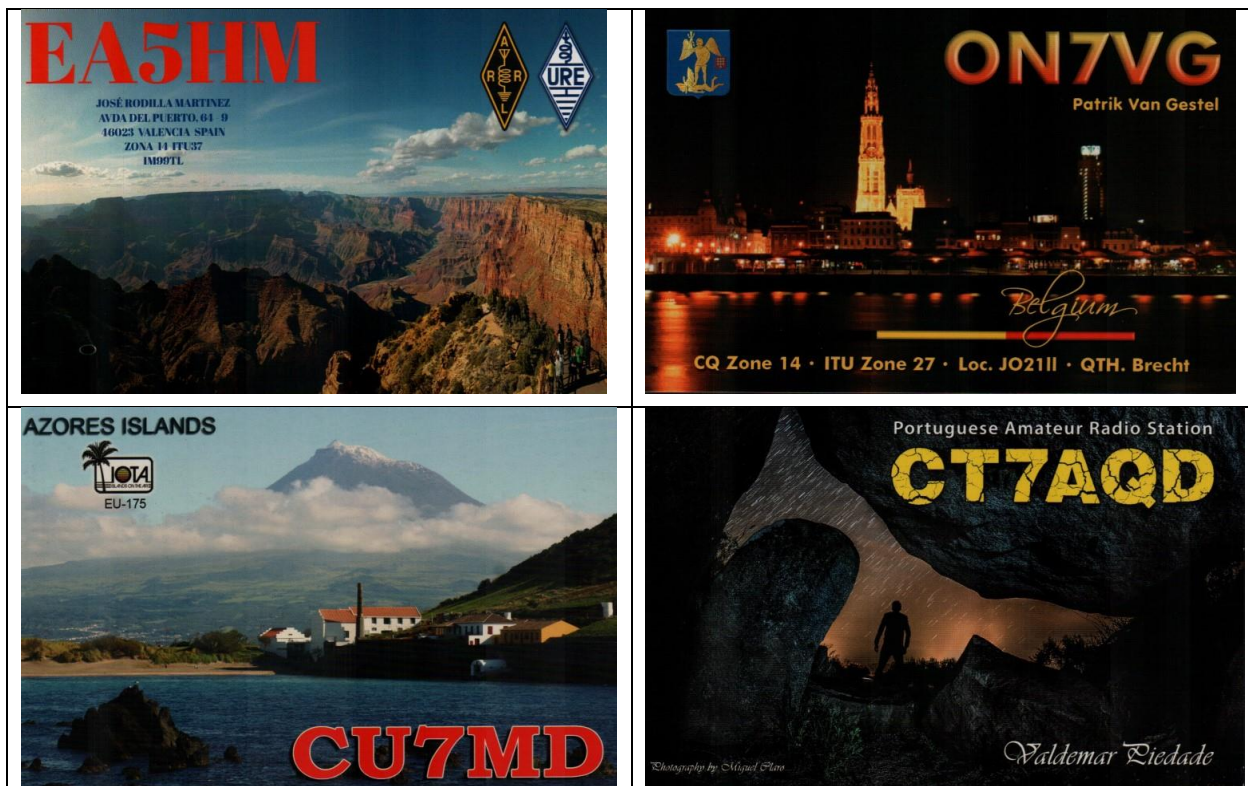

DX This Week – PC Protection
Bill AJ8B (aj8b@arrl.net, @AJ8B, or www.aj8b.com)
CWOPs Member #1567

The spots this week included

I received several nice cards this week including EA5HM – Jose in Valencia Spain, ON7VG – Patrik in Brecht, Belgium, CU7MD – Jose in Porto Santo, the Azores, and CT7AQD – Valdemar in Ameal, Portugal. As always, send along what you received!

DAH DIT DIT DIT DAH   DAH DIT DIT DIT DAH

Last week at the Southwest Ohio DX Association meeting, the W8OK award was bestowed on one of the SWODXA members, John Comella, N8AA. The award is described this way:

The W8OK award is given to the SWODXA member who exhibits those traits that Frank Schwab embodied. Frank was a Co-founder of the Dayton Hamvention® and the founder of Dayton Sky-Warn. Frank was a well-known top-flight contester and CW operator. He soon rose to the top of the DXCC ranks and eventual membership in the CQ DX Hall of Fame.

Frank is known to have said and appreciated the statement "CW is an art…be an artist!"
Members who are considered for the W8OK award must exhibit the following traits and characteristics:

- *Operating ethics and courtesy.*
- *Station activity.*
- *Observance of FCC rules.*
- *Contribution to the club such as participation in club activities, contests, etc.*
- *Contributions to amateur radio such as helping new hams or foreign operators in any way practical.*
- *Attitude toward fellow hams.*
- *Attitude toward the public, including neighbors – e.g. managing TV, BC and telephone interference.*
- *Perseverance in listening for new countries, obtaining QSLs, striving for DX goals of various sorts, and ferreting out DX information.*

This is the most prestigious award given to a club member by the club. (www.swodxa.org/w8ok-award)

The award was presented to John by the club president, Tom, NR8Z. The picture of the presentation and the details are below. Congratulations to a great ham and person, N8AA!

2021 W8OK Award Presentation
John Comella, N8AA

John has been licensed since 1954, coming up through the ranks starting as a novice (ex-WN8QXQ and W8QXQ). He has been a SWODXA member for over a decade since moving to Southwest Ohio. A partial list of his DX accomplishments includes: Top of the DXCC Honor Roll, 9 band DXCC, and he's one Zone short of 5 band WAZ. He also has completed 6 band WAS.

John is an avid contester with entries a wide variety of contest formats. He is an accomplished CW operator and he gives back to the hobby as a member and instructor with CW Ops. He's been on the other end of a DX pileup from CY9C – St Paul Island.

When SWODXA asked for help updating our Constitution and By-Laws a few years ago, John stepped in and did a tremendous job sorting through much conflicting and changing input. The club owes John a dept of gratitude for creating the foundation that supports the club to this date.

Congratulations John, you truly represent the spirit of ham radio and W8OK.

DAH DIT DIT DIT DAH   DAH DIT DIT DIT DAH

Many of you may be considering the acquisition of a new PC this Holiday season, either for yourself or a family member. I occasionally get requests about cyber security based on the article that I published in the National Contest Journal in 2019. I thought it might be helpful to reprint the article here with black Friday sales looming! Thanks to the NCJ for allowing me to reproduce the article here.

Protecting Your PC — More Complex than Ever

Bill Salyers, AJ8B **aj8b@arrl.org**

Imagine this situation. You are at the contest station of Dave, K8DV. Jay, K4ZLE, finishes working the last multiplier needed for an all-time new score in excess of 9-million points for the 8th call area in the CQ WW CW. The team stands together, just taking a deep breath and wondering if it will be enough. Suddenly, K8CR, Chuck asks me what a bitcoin is. Being an IT guy, I freeze before asking, "Why?" Chuck says that he tried to

copy the logbook database to a thumb drive and when he selected it, he received the ransomware window in Figure 1.

Now we have a *real* problem. We can pay the requested $300 to get the files unencrypted (if we pay within one hour and 20 minutes), or, we don't pay and lose the weekend's record-breaking work. Other than the blackmail issue, $300 may be worth it. However, what if it were $3,000? In fact, in 2019, the average ransomware charge was $84,116.

This is a worst-case scenario, but, it is very possible. There are also denial-of-service (DoS) attacks, phishing and spear phishing attacks, drive-by attacks, password attacks, and more. You may think that this is just a Windows issue, but in February, **vox.com** released a report that said, "The amount of malware on Macs is outpacing PCs for the first time ever, and your complacency could be your worst enemy."[1]

Linux/UNIX is certainly a better platform to minimize virus activity, but I can remember a couple of sleepless weekends at GE Aircraft cleaning up workstations after we were hit with the Morris Worm.

There are two types of questions that I hear all the time. The first is about the need to stay prepared. I hear questions such as, "Who would target us?" or "I am just a single user." or "We are a small company!" The reality is that most successful attacks did not directly target the victim. The villain throws a wide net hoping to catch *anyone*! The second myth is that these attacks are put together by someone who has extensive resources and a lot of money. Successful attacks have been launched against companies and individuals from a coffee shop using little more than the internet and Facebook.

Cisco produced an excellent video a few years ago that I still use as a teaching tool. This is a true story about a company about to go public. The attack eventually forced a CEO to resign and cost the company millions of dollars. You can view this video at: **https://www.youtube.com/watch?v=j0EZpH_eIsY**

Needed Concepts

There are a couple of computer concepts that we need to discuss, so we can then understand the remedies. I will stay very general in these discussions as each one has books written about them, and I don't want to bore you even more.

The first is Domain Name Services (DNS). DNS is the phone book of the internet. Imagine that instead of **www.aj8b.com**, I told you to view my website at an IP (internet protocol) address of 50.28.8.76. And then, later, due to expansion, cost, or a host of other issues, I decided to move to a different hosting company. Now my address is 23.235.203.61. A system was developed to provide the appropriate IP address when asked. When asked what the IP address for a particular website is, a DNS server will respond with the current IP address of the particular domain in question. A vast majority of attacks use invalid or redirected IP addresses to cause havoc for the local PC or on the network.

The next concept is operating system access levels on the PC. Many hams use the PC right out of the box and don't set up any sort of user access level. Windows typically allows for two different types of users; local users and administrative (admin) users. Local users can execute programs that use local resources. Web browsing, office applications, and logbooks are examples of local programs. If a local user attempts to change a system setting, such as deleting a disk drive, they would not be able to do that. However, an admin level user can do anything. If you use the computer out of the box, then you are probably running with admin access.

It is important to understand that when a user executes a program, that program inherits the access and permissions of the person who executed it. If you are erroneously attempting to run a program that would

unknowingly execute a phishing attack for instance, that may fail if you are just a local user, but it would succeed if you had admin level access associated with your account. You don't have to log in as administrator to have admin privileges. If the person who set up the computer created an account, they can associate a level of privilege with an account. For instance, a log-in account of AJ8B could be either a local user or an admin user, depending upon the setup.

Finally, it is important to have some idea as to how computer programs actually execute in a Windows environment. When you double-click on an application — let's say *AJ8B Cool Logger* as an example — that application is loaded from the hard drive into RAM, and resources are lined up in a specific order, with specific links and interfaces set aside for that application. Windows will determine how much memory, I/O, and other resources it will allocate. Once *AJ8B Cool Logger* is loaded into RAM and the resources are connected to it, *AJ8B Cool Logger* is off and running. The danger is that *AJ8B Cool Logger* may not be the application you expected it to be. For instance, if you loaded a compromised copy of the software that you downloaded (or were sent), all may *seem* just fine. But, when you run it, strange things may happen as the "bad" code is now attempting to do what it wants.

Many applications are compromised, and you won't know it even after you have started to run it. For instance, in our example, perhaps *AJ8B Cool Logger* is doing what it was expected to do. It may, however, spawn off a task that would search for credit card information, log-in and password information, or bank account information. You would not — and may never — realize that you have been compromised as everything appears to be just fine.

In the 1990s, a popular "word processor" also contained a key logger that would capture log-in and password information and pass it along to the nefarious creator. It all makes you want to go back to paper logging, doesn't it?

Layered Approach

So, how can you address all of this? It would seem like a lot to worry about, given the complexity of operating systems, networking, and the internet. *MalwareFox*[2] has a model that we have modified to identify the threat level and the corresponding approach to mitigate the threat. You have to think of this as a holistic approach. I like to describe the problem as a one-story building shaped like the Pentagon. You may have all of the doors fully monitored and protected and all but one of the windows covered, but someone eventually will find the "open" window.

Although this article may seem like a plug for these products, it is intended to show the layered approach and the reason *why* we choose a particular product. We could have hours of discussion about which approach and mix of products are the best, and there are probably hundreds of combinations. The layered groups of products discussed here, however, have successfully protected our 500+ PCs, servers, portable devices, and mobile devices, and I am passing along what has worked for us.[3]

If the data we want to protect is at the center, or the target, we have wrapped layers of protection around the data as shown in Figure 2.
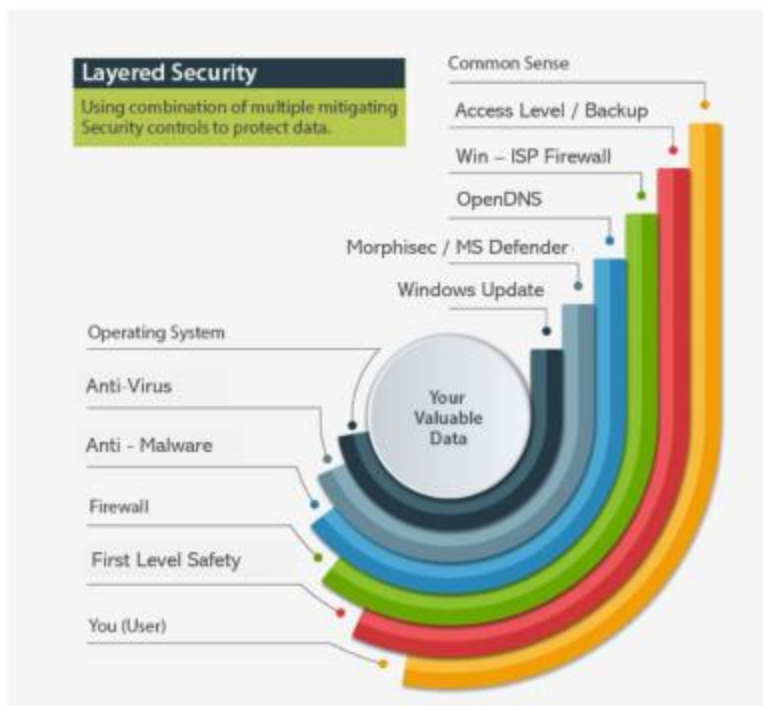
• **Operating System Level —** Whether your operating system is Windows, Mac OS X, Unix, Raspbian, Ubuntu, or any other, it should be up to date. Our entire approach assumes that you are using the latest and greatest. Older versions of these operating systems may work just fine, but, if you are concerned about threats, then it's time to upgrade. Make sure that you are receiving the patch bundles and upgrades for your operating system *and* for your applications.

Layered Security — Using combination of multiple mitigating Security controls to protect data.

• **Anti-Virus Level —** For many years, Microsoft *Windows Defender* was little more than a "me-too" addition to Windows XP and Windows 7. However, Microsoft committed resources to bring *Windows Defender* on par with the best out there, and has included it, and the regular virus definition files, free of charge as part of the Windows 10 operating system. *PC World* magazine reviewed *Defender* last July. The review said, "Multiple test results make the case that *Windows Defender* is good enough to protect your PC from viruses and malware."[4] *MalwareFox* said, "*Windows Defender* is a well-integrated security system built-in to the operating system."[5]

One of our two silver bullets is a product called *Morphisec*.[6, 7] This Israeli company has developed an approach that allows Windows programs to start up while monitoring them, comparing their behavior to the typical Windows program start-up behavior. Remember our discussion about Windows tracking resource requests and then allocating PC resources? *Morphisec* has a way to "morph" — or scramble — "the process structure relocating and transforming libraries, functions, variables and other data segments in a controlled manner. Each run is unique, per process instance, making the memory constantly unpredictable to attackers. Applications continue to load and run as usual. A lightweight skeleton of the original structure is left as a trap." This is all the explanation they will give, but I can testify that it works, and it works well.

The real benefit of *Morphisec* is prevention of "zero day" attacks. You can make sure that your anti-virus definition files are up to date and the operating system and applications are patched, but what if you are among the first users to get the "new virus?" There is no protection yet. The historical approach was to hope someone else was infected and then download the necessary files from the anti-virus companies when they became available. The approach that *Morphisec* takes will catch the zero-day attack as it starts to run. There are no files to keep current. *Morphisec* monitors the execution of the program to determine if something is wrong. It is by far the best $24/user/year we spend. This is a revolutionary approach to protecting PCs, and it really is effective.

• **Anti-Malware Level —** Even though we are patched, have our virus definition files in place, and have other products working for us, users may still go to a website directly, or click a link in an email, that takes them to a site that may try to introduce a harmful app. What can be done about that? We use a product from Cisco called *OpenDNS*, now called *Cisco Umbrella*. This is our second silver bullet. This free product for home users addresses the issues of internet browsing, both intentional and unintentional. Our discussion about DNS is useful now. I mentioned DNS servers are out on the internet, but I did not mention where. Cisco has worked with hundreds of companies to be their DNS provider. In fact, they are now the largest DNS provider in the

world. They have a huge database of DNS requests and results. As soon as a link is flagged as being a problem (ransom-ware site, phishing site, etc.) it is recorded in the DNS database. If you are using *OpenDNS*, you will be alerted that the link you are trying to go to, or that some application (bot, rogue application, etc.) on your PC may be going to, is fraudulent and the request will be denied. Remember the key-logger application that had hijacked a word processor? *OpenDNS* would have flagged that key-logger application and blocked its ability to transfer the information it had collected from your PC. How large is the *OpenDNS* database? Cisco monitors 200 billion internet requests every day from 100 million active users in 190 countries.[8]

• **Firewall Level** — To be honest, I really don't do much with this layer at home. I have found that the default settings of the Windows firewall per PC and the default settings that most ISP modems have in place are adequate. If you are hosting websites on your network, then you would more than likely need more than the PC and ISP would provide and that is most definitely a discussion beyond the scope of this conversation.

• **First-Level Security —** There are two aspects of first-level security: Access level, and file backup. As mentioned earlier, the real issue with access level is that the program executing takes on the privileges of the person who started the program. If you are the admin (full rights), then the program will have full rights to do whatever it can. If you are standard user, then the user will behave with the rights of a standard user. You need admin access when you are doing things such as installing software, changing some operating system settings, or deleting files and directories. You don't normally need admin access for the day-to-day usage of your computer. So why take the chance? I recommend two accounts. The first is your day-to-day login that has standard user privileges. The second account can be used to perform admin type duties. It is a basic safety procedure.

Gary Sutcliffe, W9XT, wrote an excellent *NCJ* article about backing up your files.[9] In my case, I have a Dropbox directory set up and all of my contest files are located in that directory. As soon as a file is saved, it is backed up to the Dropbox cloud. (**dropbox.com**)

• **You (User) Level** – As Voltaire said, "Common sense is not so common." That is certainly true when it comes to using your computer. You might think that with all of the layers of protection that we have wrapped around your data, we would not need to talk about the safest way to use your computer. However, that is not the case.

For instance, one of the Big Three auto manufacturers had a design division shut down by a network "worm" that was doing no more than replicating itself to every other computer (Windows) and workstation (Unix) on the network and then starting the process over again. It was happening so many times that the network was swamped, and no one could get any work done. They eventually found that the worm was introduced by an e-cigarette charger that had been plugged into a USB port on a PC on the network. You never can tell.

Web browsing and handling email present many of the same dangers. Here are some things to watch out for:

• If you don't recognize the sender's email address, and the subject is not something you would normally receive, be wary.

• The sender's email address is from a suspicious domain (i.e., **AJ8B@hoax.ru**)

• An email has an embedded link or an attachment, that may be a dangerous filetype such as an .exe or .bat file.

• A sender asks you to click on a link or open an attachment to avoid a negative consequence or to gain something of value.

• You go to a particular website. Although the URL is correct, the site you reach want your credit card information.

• The website I am using to troubleshoot my logging program wants to take control of my PC. Be very careful.

Summary

By all accounts, cyberattacks in general and ransomware attacks in particular, will continue to increase. According to the FBI, ransomware has netted more than $1 billion for criminals, and that figure is expected to rise. If you follow the layered defense plan I described, or at least some of it, your chances of a cyber problem will greatly diminish. It is important to note that even with all of this in place, you may still encounter an issue. The more you have in place, however, the more you can mitigate the risk, and that is what this is all about.

Notes

[1.] **www.vox.com/recode/2020/2/12/21134681/mac-pc-virus-malware-malwarebytes**

[2.] **www.malwarefox.com/layered-security/**

[3.] **products.office.com/en-us/business/customer-stories/791885-towne-properties-professional-services-windows-defender-antivirus?returnURL=/en-us/sharepoint/customer-stories**

[4.] **www.pcworld.com/article/3434097/why-you-can-stop-paying-for-antivirus-software.html**

[5.] **www.malwarefox.com/is-windows-defender-enough/**

[6.] **www.morphisec.com/**

[7.] **www.microsoft.com/security/blog/2019/08/27/improve-security-simplify-operations-windows-defender-antivirus-morphisec/**

[8.] **https://umbrella.cisco.com/why-umbrella/interactive-intelligence**

[9.] "Handling Contest Computer Files — Part 1 and Part 2," by Gary Sutcliffe, W9XT, *NCJ*, May/June and July/August 2019

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Here is an update from Bernie, W3UR, of the DailyDX and the WeeklyDX, the best source for DX information. http://www.dailydx.com/ . Bernie has this to report:

6O – Somalia - EP3CQ, Ali, is back at work for the United Nations in Mogadishu as he began operating yesterday again as 6O1OO. HC1MD/2 (NE8Z), Rick, reported Ali started up on 30 meters (10.140 MHz) FT8 Fox and Hound yesterday around 2200Z. "I just installed my new antenna and got a FT- 450", says Ali, who "will be in Somalia until the first week of December". Afterwards he will answer any QSL card requests until the first week in January 2022. During this current time in 6O he will be "active on all bands except 160m". QSL details at https://www.qrz.com/db/6o1oo

FS - Saint Martin - K9EL, John Sweeney, tells us the upcoming TO9W team, who are heading to Orient Bay during the first ten days of December, met early this week to finalize their plans as they will depart for the Caribbean in less than three weeks. John along with W9MK, Mike; K9NU, Paul; W9AP, Bob; will be teaming up with FS4WBS, Marco as TO9W from December 1-10. They will have three Elecraft K3's as well Expert 1.3K amplifiers to supply approximately 1 KW at each station. Their antennas will be dipoles and verticals with plans to be on CW, SSB, FT4, FT8 and possibly some RTTY on 1.8 through 50 MHz. QSOs will be uploaded to Club Log in real time, "pending stable internet connection" and daily to LoTW. W9ILY, John, will be handling the QSLs. They have a website at: http://www.k9el.com/TO9W/TO9W.htm as well on Face Book https://www.facebook.com/groups/539588070673287 where they will be posting updates and photos.

VP8 – Antarctica - SQ1SGB, Sebastian, is heading back to Halley VIa British Research Station, Antarctica where he plans to operate as VP8/SQ1SGB in his spare time. He expects to be there from December 1 to January 31, subject to change. Seba will have a 100 watt FT-857 and inverted vee. Activity will be on SSB and FT8 on 40 meters (7.190 MHz) and possibly 80 and 20 meters. Best times to look for him will be several times per week in the 2200 to 0100Z time frame. QSL via EB7DX.

E5 - Cook Islands - E51RMP, Pete Leng, expects to be in the Cook Islands in mid-January "for about 10 days." It will be Rarotonga "and maybe a couple of days in Aitutaki." His home call is ZL4TE. A previous plan to be there in October, last month, was scratched due to covid flight cancellations.

<p align="center">DAH DIT DIT DIT DAH   DAH DIT DIT DIT DAH</p>

CONTEST CORNER

Below is a list of upcoming contests in the "Contest Corner". I think this is important for someone who is trying to move up the DXCC ladder since entities that are on the rarer side and easiest to work in contests. Some of my best "catches" have been on the Sunday afternoon of a contest when the rarer entities are begging for QSOs. Of course, the gamble is that if you wait until Sunday, conditions may change, or they simply won't be workable. However, it is not a bad gamble. Of course, why not work the contest and have some fun!
Check out the WA7BNM Contest Calendar page (https://www.contestcalendar.com/) and CQ Magazine for more contests or more details.
The contests in red are those that I plan to spend some significant participation time on. PLEASE let me know if you are working contests and how you fared.
Thanks!

Dec. 1	VHF-UHF FT8 Activity	www.ft8activity.eu/index.php/en
Dec. 2	QRP ARCI Top Band Sprint	www.qrparci.org/contests
Dec. 3-5	**ARRL 160-Meter Contest**	www.arrl.org/160-meter
Dec. 4-5	PRO CW Contest	www.procontestclub.ro/PCC%20Rules.html
Dec. 4-5	FT Roundup	www.rttycontesting.com/ft-roundup/rules
Dec. 8	VHF-UHF FT8 Activity	www.ft8activity.eu/index.php/en
Dec. 12	QRP ARCI Holiday Spirits Homebrew Sprint	www.qrparci.org/contests

Dec. 11-12	**ARRL 10M Contest**	www.arrl.org/10-meter
Dec. 11-12	Veron 28 MHz SWL Contest	http://bit.ly/2L9eT1L
Dec. 11-12	TRC Digi Contest	https://trcdx.org/rules-trc-digi/
Dec. 11-13	PODXS070 Club Triple Play Low Band Sprint	http://bit.ly/2Cq2yUA
Dec. 12	CQC Great Colorado Snowshoe Run	https://tinyurl.com/y9dytetf
Dec. 17	AGB Party Contest	https://tinyurl.com/6fke5yb6
Dec. 17	**Russian 160M Contest**	www.qrz.ru/contest/detail/90.html
Dec. 18	RAC Winter Contest	www.rac.ca/contesting-results
Dec. 18-19	Croatian CW Contest	www.9acw.org/index.php/rules/english
Dec. 18-19	OK DX RTTY Contest	www.crk.cz/ENG/DXCONTE
Dec. 18-19	**Stew Perry Topband Challenge**	www.kkn.net/stew
Dec. 19	ARRL Rookie Roundup, CW	www.arrl.org/rookie-roundup
Dec. 26	DARC Xmas Contest	www.darc.de/?id=820
Dec. 26	RAEM Contest	https://raem.srr.ru/rules
Dec. 30	YOTA Contest	www.ham-yota.com/contest

ARLD046 DX news

This week's bulletin was made possible with information provided by
AA3B, The Daily DX, the OPDX Bulletin, 425 DX News, DXNL, Contest
Corral from QST and the ARRL Contest Calendar and WA7BNM web sites.
Thanks to all.

MAURITIUS, 3B8. Operators G0CKV, KX7M, M0CFW, M0SDV and W6NV will be QRV as 3B8/home calls, and 3B8HA, from November 22 to December 1. Activity will be on the HF bands. They will be active as 3B8M in the upcoming CQ World Wide DX CW contest. QSL 3B8M and 3B8HA via M0OXO, and all others via operators' instructions.

UGANDA, 5X. John Paul, KN6NNF is QRV as 5X3Z from Kubamitwe. Activity is on 80 to 10 meters using FT8. QSL via LoTW.

SOMALIA, 6O. Ali, EP3CQ is QRV as 6O1OO from Mogadishu until the first week in December while on work assignment. Activity is mostly on 40, 30 and 20 meters using FT8 and FT4, but also CW and SSB. QSL direct to home call.

BAHAMAS, C6. Brian, ND3F will be QRV as C6AQQ from New Providence Island, IOTA NA-001, from November 24 to December 7. Activity is on the HF bands. He plans to be active in the upcoming CQ World Wide DX CW contest as a Single Op/All Band/Low Power entry. QSL via EA5GL.

COMOROS, D6. Don, K6ZO will be QRV as D60AB from November 22 to 29. Activity will be on the HF

bands using CW and SSB. This includes being an entry in the upcoming CQ World Wide DX CW contest. QSL direct to home call.

SOUTH SHETLAND ISLANDS. Lee, DS4NMJ is QRV as DT8A as part of a scientific team on the King Se-Jong Korean Antarctic Base on King George Island, IOTA AN-010, until December 31. Activity is on the HF bands using CW, SSB and FT8. QSL via DS5TOS.

BOSNIA AND HERZEGOVINA, E7. Special event call sign E7BOSNIA is QRV from the ancient royal cities of Bobovac, Visoko, and Jajce until November 28 to celebrate Statehood Day of Bosnia and Herzegovina. QSL via the bureau.

SPAIN, EA. Special event station AM500ESP will be QRV from November 20 to 27 to commemorate Magellan's circumnavigation of the globe. Activity will be on the HF, and V/UHF bands using CW, SSB, SSTV and various digital modes. QSL via EA7URF.

ST. BARTHELEMY, FJ. Dario, KP4DO is QRV as FJ/KP4DO until November 24. Activity is mainly on 20 meters, but also on 40, 17, and 10 meters as propagation permits. QSL direct to home call.

BONAIRE, PJ4. Operators K4BAI and KU8E will be QRV as PJ4/home calls from November 24 to December 1. Activity will be on the HF bands. They will be active as PJ4A in the upcoming CQ World Wide DX CW contest. QSL all calls to K4BAI.

MALI, TZ. Ulmar, DK1CE is QRV as TZ1CE from Bamako until December 8. Activity is on 160 to 6 meters using CW, possibly SSB, and FT8. QSL to home call.

ANTIGUA AND BARBUDA, V2. Bud, AA3B, will be QRV as V26K from Antigua, IOTA NA-100, from November 21 to 29. Activity will be on the HF bands using CW. This includes being active in the upcoming CQ World Wide DX CW contest as a Single Op/All Band/Low Power entry. QSL to home call.

BELIZE, V3. Damian, G4LHT is QRV as V31HT from San Pedro Ambergris Caye until November 29. Activity is on 40 to 10 meters using SSB and FT8. QSL via G4LHT.

ANTARCTICA. Sebastian, SQ1SGB is QRV as VP8/SQ1SGB while working on the Halley VIa Base until the end of January 2022. Activity is in his spare time on 40 meters using SSB. QSL via EB7DX.

INDIA, VU. Special event station AU2JCB will be QRV from November 19 to December 14 to commemorate Jagadish Chandra Bose's birthday. Activity will be on 80, 40, 20, 15 and 10 meters using SSB, with FM on 10 meters and 6 meters. QSL direct to VU2DSI.

Upcoming *Hamfests*

We **DO** have some hamfests scheduled for 2021!! Yes, take a good look at the list. The sad news is, if it doesn't show up here now, it's been cancelled!

******Starting in December we will be listing all the upcoming 2022 Hamfests! And, there are a bunch already. Stay tuned.*******

12/04/2021 - FCARC WinterFest
Location: Delta, OH
Sponsor: Fulton County Amateur Radio Club
Website: http://k8bxq.org/hamfest
Learn More

Print an Official or Unofficial Copy of Your Amateur Radio License

(By Anthony Luscre, K8ZT)

As of February 17, 2015, the **FCC no longer routinely issues paper license documents** to Amateur Radio applicants and licensees. The Commission has maintained for some time now that the official Amateur Radio license authorization is the electronic record that exists in its Universal Licensing System (ULS). The FCC will continue to provide paper license documents to all licensees who notify the Commission that they prefer to receive one.

Licensees also will be able to print out an official authorization — as well as an unofficial "reference copy" — from the ULS License Manager. I've created a set of instructions on how you can request an **"official" printed copy of your license***

Click here to download the instructions

One Question Questionnaire

How about going to http://arrl-ohio.org and giving me a click? (It's in the bottom left corner of the page) I'll have more to say about this in the next OH Section Journal!

Do you have alternate power available for your station should there be a storm or some other disruption to commercial service?

From the last Poll: ***"Are you planning to attend the 2022 Hamvention?***

46 said yes (81%) and 11 said no (19%).   If those numbers hold true, then this years Hamvention could be a HUGE success!

Section Manager – Tom Sly, WB8LCD	Section Traffic Manager – David Maynard, WA3EZN
Section Emergency Coordinator – Stan Broadway, N8BHL	Section Youth Coordinator – Anthony Luscre, K8ZT
Technical Coordinator – Jeff Kopcak, K8JTK	Affiliated Clubs Coordinator – Tom Sly, WB8LCD
State Government Liaison – Bob Winston, W2THU	Public Information Coordinator – John Ross, KD8IDJ

Hey Gang,

Have you taken a look at the **Swap & Shop** page on the Ohio Section webpage yet??   Here's a link that will take you there…   http://arrl-ohio.org/sm/s-s.html

Do you have equipment that you just don't need or want anymore? Here's a great venue to advertise it, and it's FREE!! Is your club doing a fund raiser to help raise money? After a lot of thought, it was decided that the Swap & Shop webpage could also contain these types of items as well. The same rules will apply as do for the For Sales and Give-A-Ways and will only be posted for a month at a time. Please see the Terms & Conditions on the webpage.

If your club is doing a fund raiser and wants more exposure, please forward the information to me and I'll advertise it on the Swap & Shop webpage for you.

Now, I still want to remind you that it won't be listed in this newsletter because it would take up way too much space, so your ad will only appear on the website. It is there for any individual to post equipment Wanted / For Sale or Give-Away as well as for Club Fund Raisers. No licensed vehicles/trailers or business advertising will be posted.   Postings are text only (no pictures or graphics) will be posted for a maximum of 1 month from date posting and require a contact phone number or email within the posting. Send your Wanted / For Sale or Give-Away post to: swap@arrlohio.org

Back Issues of the PostScript and Ohio Section Journal

Hey, did you know that PostScript and Ohio Section Journal (OSJ) are archived on the website? You can go back and look at any edition simply by clicking: http://arrl-ohio.org/news/index.html

Want to Share your Club Newsletter With Others?

We have a webpage where you can download and read all of the newsletters that I get from around the state and

even other sections!

Here's the link to the page…. http://arrl-ohio.org/club_news/index.html

Please, if you don't see your club newsletter posted, it's because I'm not receiving it. Just have your newsletter editor contact me and I'll get your club's newsletter listed on the site!!

We all learn and steal (I mean, share) from each other's work. So, get me your newsletter!!! Send it to: webmaster@arrl-ohio.org

Chit – Chat, and All That!

Do you know someone that's not getting these Newsletters? Please, forward a copy of this Newsletter over to them and have them "Opt-In" to start receiving them. Heck, just have them send an email to: webmaster@arrl-ohio.org   and we'll get them added to the Ohio Section Emailing list.

We now have many thousands of readers receiving these newsletters weekly. Quite impressive, I'd say! I urge all of you to make sure that everyone, regardless of whether they are a League member or not, get signed up to receive these weekly Newsletters.

You can always "Opt-Out" at any time if you feel this is not what you were expecting. It's fun and very informative. All of your favorite past newsletters are now archived too. You can go back at any time and read them.

Just go to: http://arrl-ohio.org/news/

The pictures on the front page and throughout this newsletter are from various newsletters, Facebook posts and/or were sent directly to me in recent weeks. Take a good look at them, you just might be in one of the pictures! "SMILE… you're in the Ohio Section News!!"

PostScript is produced as a weekly newsletter. I want to thank everyone that has contributed articles and ideas to make this an even better news source. I sincerely hope that you have enjoyed this edition and will encourage your friends to join with you in receiving the latest news and information about the Ohio Section, and news and events happening around the world!