



## Tax Day Edition



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## From the Technical Coordinator

Jeff Kopcak – TC

[k8jtk@arri.net](mailto:k8jtk@arri.net)

Hey Gang,

In all the ragging (er, discussion?) on Windows 10 last month, Bill - K8RWH had some good points and questions about Linux that I decided to write a follow up this month. There is a lot to parse, especially different terminology. The most useful website for Linux information is called [DistroWatch](#), short for Distribution Watch. Most of the information here will come from that site. Let's get to it.



### History

Linux came out of the Unix operating system implemented by Ken Thompson and Dennis Ritchie (both of AT&T Bell Laboratories) in 1969. “Linux began in 1991 with the commencement of a personal project by Finnish student Linus Torvalds to create a new free operating system kernel. Since then, the resulting Linux kernel has been marked by constant growth throughout its history. Since the initial release of its source code in 1991, it has grown from a small number of C (programming language) files under a license prohibiting commercial distribution to the 4.15 version in 2018 with more than 23.3 million lines of [code] ... “  
([Wikipedia](#)).



Tux

I'd be remiss if I didn't mention the official Linux mascot. “Torvalds announced in 1996 that there would be a mascot for Linux, a penguin. This was due to the fact when they were about to select the mascot, Torvalds mentioned he was bitten by a little penguin on a visit to the National Zoo & Aquarium in Canberra, Australia. Larry Ewing provided the original draft of today's well known mascot based on this description. The name Tux was suggested by James Hughes as derivative of Torvalds' UniX, along with being short for tuxedo, a type of suit with color similar to that of a penguin” ([Wikipedia](#)).

### Crash course in Linux terminology

[GNU/GPL](#) – software licensing methodologies frequently used by Linux and Unix variants.

**Open Source** – anyone can see the building blocks of a project known as the source code. This is beneficial because anyone with skills can fix and improve upon an open source program.

**Kernel** – is the core to any operating system (not only Linux). It interacts with and controls the computer's hardware (mouse, keyboard, monitor/graphics, hard drive, USB devices, network). It is the lowest level of the operating system.

**Operating System** – collection of kernel and software that make a computing device work. Most operating systems include drivers, text editor, file manager, and a method for installing & removing applications (known as a “Package Manager” in Linux).

**Architecture** – type of processor an operating system can run. 64-bit, 32-bit processors, Raspberry Pi and mobile devices are examples.

**Live CD/Medium** – the operating system can be run from a CD or USB drive without installing to a hard drive. This is useful in testing different operating systems or to aid in recovering an inaccessible system.

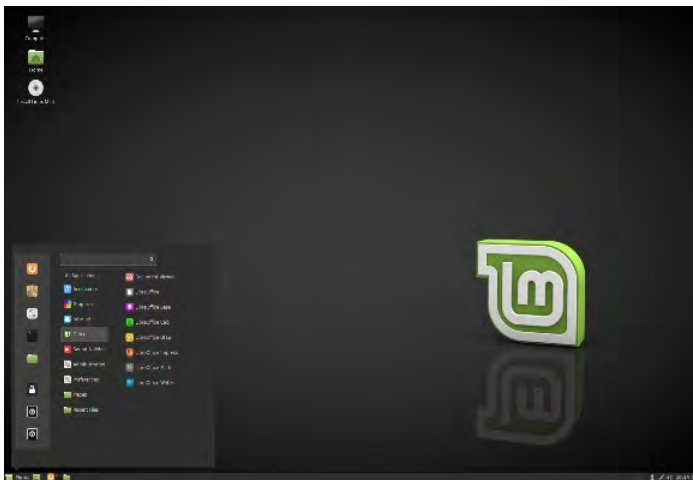
**Dual-boot** – in contrast to “live CD,” installation of one or more operating systems on the same computer. My experience: install Windows first, then Linux. The Linux boot-loader plays nice with Windows but not the other way around. Reinstalling Windows will also break the Linux boot-loader. It can be repaired but will stress your Google and command line-fu skills.

**Distribution** – similar to “Operating System” but often targeted for a specific purpose or category: servers, desktops, beginners, education, gaming, multimedia, security, utilities, telephony, etc.

**Checksum or Hash** – applies an algorithm to data. It is used to track errors introduced in transmitting data or storing data. Checksum programs are standard in Linux operating systems. A third-party program like [HashTab](#) or [QuickHash GUI](#) are needed to verify a checksum in Windows.

**Desktop environment** – how a user interacts with multiple applications at once. This is a matter of personal preference. Popular desktop environments are: [Cinnamon](#), [GNOME](#), [KDE](#), [MATE](#), and [Xfce](#).

## Popular Linux Distributions



*Linux Mint*

DistroWatch has just short of 900 Linux distributions in their database. Over 300 are considered active (updated in the last 2 years). Only about a handful are useful to average users. For a complete guide see “[A Guide to Choosing a Distribution.](#)”

[Linux Mint](#) – launched in 2006 to address many of the drawbacks associated with a more technical operating system such as Linux. Using the Ubuntu distribution as a base, many beginner enhancements were created for usability. I had read about security concerns with Mint and began to steer users away from it. However, DistroWatch published a “[Myths and Misunderstandings](#)” debunking many of those points. If you’re a noobie and want to dive into Linux as an alternative operating system, start with Mint.

[Ubuntu](#) – Launched a few years earlier in 2004, this project took off faster than any other distribution and was touted as the way to get average people to use Linux. Learning from the mistakes of other projects and taking a professional approach to its users made it a popular choice. Excellent web-based documentation and an easy to use bug reporting facility was created. Though frequent major changes and the Unity interface – more suited for mobile devices – have driven users away.

[Elementary OS](#) – This one is for Mac users. It emulates MacOS and puts a lot of focus into ascetics.

[Debian](#) – base for the above and 120 other Linux distributions. Debian is remarkably stable due to its high level of quality control. It has support for many software packages and processor types making it a great choice for older systems. Due to that level of processor support it lacks newer technologies.

In the 300 other active Linux distributions, specialized versions serve an intended purpose:

- Network attached storage (NAS): [NAS4Free](#), [FreeNAS](#)
- Disk, recovery, and utilities: [GParted Live](#), [CloneZilla](#), [Knoppix](#)
- Firewall: [FreeBSD](#), [pfsense](#), [VyOS](#)
- Forensics and security: [Kali Linux](#)
- Gaming: [Lakka](#), [LinuxConsole](#)
- Older PC: [antiX](#), [ReactOS](#), [Puppy Linux](#)
- Incognito and anonymity (useful on the hotel provided “business center” PCs): [Tails](#)

## Windows Compatibility

Users who’ve switched to Linux or Linux users that need to run a Windows app might ask: can I run Windows applications on Linux? Yes, there are a couple ways to accomplish this.

Run a virtual machine program like [VirtualBox](#). A virtual machine emulates hardware and the functionality of a physical computer. Similar to dual-booting it requires a full installation of the desired (guest) operating system. Emulation is resource intensive for the physical (host) operating system hardware. It doesn’t make much sense to have a multi-gigabyte Windows virtual install to run a small application.

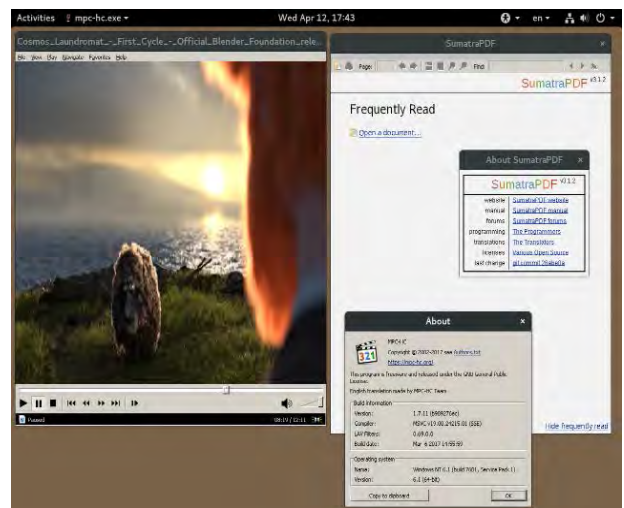
This is where [WINE](#) comes into play. Wine stands for **Wine Is Not an Emulator**. It’s not a virtual machine but rather a compatibility layer to translate Windows system calls into Linux system calls. WINE takes a considerable amount of configuring but programs like [PlayOnLinux](#) and [Winetricks](#) make life much easier. Neither solution is perfect and won’t succeed in cases of complex applications or ones requiring specialized hardware.

In terms of ham radio, Windows was the overwhelming platform of choice for Morse Code and digital mode applications because everyone was using it. Older Windows only applications (MMSSTV, Digitpan) are going to run well on that platform. The good news is programs like Fldigi and QSSTV are viable replacements on Linux and, in many cases, better than their dedicated Windows counterpart. In addition, the Ubuntu package manager has an entire category dedicated to Amateur Radio applications. If you’re someone whose fed up with the badness and frustrations of Windows 10, give Linux a try.

Thanks for reading and 73...

**de Jeff - K8JTK**

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*WINE running Media Player Classic and SumatraPDF (Wikipedia)*

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## *From the Affiliated Club Coordinator*

*Tom Sly, WB8LCD - ACC*

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I want to talk about the image of Amateur Radio, the image of your club, and yes, maybe even your own image as an Amateur Radio Operator. Our image to the public is the sum total of everything we do (or don't do) as an active ham. As an example: when floods, hurricanes, forest fires, earthquakes and other natural disasters hit, amateur radio is usually there, doing something good for society. But if no-one knows about it, they can't include it in their overall image of what Amateur Radio is. That's why it's so important to promote Amateur Radio where-ever and when-ever we can. If we aren't proactive in our promotional efforts, what do you think the "image" of Amateur Radio will be?



You, as an individual, can do a lot to bolster not only your own image, but "Our" image. When someone asks you about what you're doing, or what your gear is all about – give them your attention! Use that instant as an opportunity to create an "interest" in the other person to learn more. In the sales profession, they call it the "elevator speech" – a short, but concise explanation of our hobby, what you can do with it and how you can get involved with it. Not something you do on the fly... think about what you would say, write it down, condense it into a 2-3-minute talk. LEARN it so you can give it without even having to think about it!

Do you belong to any other social organizations? All groups that have monthly meetings have the same issue – "who can we get to give us an interesting presentation for our meeting?" You can hook them up! If you don't feel comfortable doing a presentation personally, that's OK. Pass it off to someone who will. Who are some of those groups that need help? Social clubs of all sorts, Boy Scouts, Church groups, Service clubs (like the Lions Clubs), Sr. Citizens groups. Making a presence in our community could go a long way towards making us a well-known entity. I hate it when someone says "Ham Radio? They still do that? Why would they??" That's when you move into your elevator speech.....

Field Day is coming up in June. Do you work Field Day from your home station? If you do, ask some of your acquaintances to come over and take a short look at what you're doing. Clubs I'm giving a bigger assignment to..... Let's start right now. Make a list of all the newspapers that serve your area – daily's and weekly's, college and university papers. Find out the address or email address where they would want a "press release" sent to, both before and after an event (such as Field Day). While you're at it, got any local radio stations? Do the same for them. And the TV stations.

You'll want to send them ALL information on your events BEFORE they happen (especially if the public is invited, like for Field Day) and then again AFTER the event with information on how the event went specifically for your club. Next month we'll talk about a properly formatted Press Releases. Invite all those other community organizations and service clubs to visit you at Field Day. If you do all of the above, you will have Field Day visitors.

When people show up at Field Day, make sure you have one or two members available at all times to welcome them, show them around and answer any of their questions. You might want to have an information packet ready to hand them when you first meet them. You would want to have some basic Ham Radio information (including the printed version of the "elevator speech" with just a bit more detail), an information sheet about your club, and maybe some ARRL information as well. You want to make sure that if they took the time to show up, that they were treated like you appreciated them being there and you were prepared and expecting them to be there. Make sure that you get the names and email addresses of all your visitors.



Everyone should receive a "Thank-You" for coming out after the event. If you've invited local Government officials and dignitaries, I would suggest a handwritten Thank You note after the event.

If you take the whole population of the Ohio Section I'm guessing there is a very large percentage of them who are totally unaware that Amateur Radio even exists. We all have our own sphere of influence and we know that those people have heard about ham radio, our goal needs to be to expand that sphere of people who have been exposed to it in some way. After the initial exposure, we want to have continued and repeated exposures, or points of contact, so that eventually Amateur Radio becomes a known entity. If we do it right, it will be a known entity with a good reputation, known for providing valuable services to all of the citizens of the Ohio Section. With that good reputation, we might get some social benefits for being recognized as Amateur Radio Operators! That could come as more favorable antenna regulations in our communities – and that would be a good thing.

Remember, it's a process, not an event. You don't go to the gym one day the end of April and drop that extra 50 lbs you put on over the winter, and you don't do all these things for Field Day and find yourself as some new social elite because you are a ham. You have to do this process continuously and repeatedly to make the long-term impact we want to have. It has to be a program that continues from one club administration to the next. And it has to be expanded each and every year! You have to be willing to make an investment in it, and you have to be willing to make that investment realizing that this is not a short-term issue. I mentioned early on that sometimes we need to think about running our clubs in the context of running a successful business.

If you are someone involved in the running of a club, success is not a goal – it's your duty!

**73, Tom, WB8LCD**

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***From the Section Emergency Coordinator***

***Stan Broadway, N8BHL - SEC***

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What's in a name?

Thank all of you who took the time to attend our Ohio State ARES Conference in Marion! All my thanks to the speakers, and to Marion's ARES organization for hosting! Our objective was to provide information you could take home and use, and George's hurricane presentation was an eye-opener that we need to be ready not just to communicate, but to restore antennas and equipment to do that. His positive message, "You CAN do that" was well received.



Our lead-off speaker was Division Director Dale Williams, WA8EFK. Dale chaired the ARRL committee which has produced changes to the ARES program. I appreciate Dale's candor in giving us a preview of the 'new world'. The committee report was moved forward by the ARRL Board last January. It is in the process of being 'ARRL-ized' by staff writers, and will then go to the proper operating committee for final approval. That will probably come this spring/summer. So, while the plan is pretty solid, there could still be modifications.

The biggest impact will be the initialization of "ARES Connect"- an online volunteer management program. County and other ARES units will establish an identity in the database, and EC's can enter their members with their certifications. EC's can also enter events, recruit volunteers, and account for their time. It's a real-time system, so rather than regular monthly reports, we will be able to dive in at any time and track stuff. Four ARRL Sections, including Ohio, are in BETA testing now. The entire system should be operational by the end of this year.

There is one change we are going to institute immediately in Ohio. You won't have to grip your chairs for this one, it's a "name only" kind of change for the most part. Last year we instituted a two-layer tiered program for our members, based on whether they had the four NIMS courses. Following our pattern, the national level organization will be a three-tiered system. The first two levels basically reverse the number that we're using, so it's only a paperwork thing. We'll change our names to match as follows:



**Level 1:** This is an entry level, or for members who do not have NIMS training. Participation is more that welcome for public service events and such, but these members won't be on activation lists for emergencies that would involve interaction with EMA and similar agencies.

**Level 2:** This level is for all members who have completed the four NIMS courses (100, 200, 700, 800) and are qualified to respond either within your own county or in an ARESMAT role to other locations.

**Level 3:** This is a new level envisioned for upper management in ARES. It would require the four NIMS basics, plus additional training such as IS 300/400. Because those are rare classes usually wait-listed and on weekdays, there will be a lot of leeway. This is a level that can be worked toward as an EC, DEC, or higher.

These changes are now in effect for Ohio. EC's can adjust your rosters accordingly.

### What's Ahead?

Ohio NVIS Day is on the horizon – April 28 starting at 10 AM. With the bands as they are, I suspect the only hope we have to communication NVIS or not is 80 meters. We will have the opportunity to try 40. We'll circulate ~suggested~ times and bands within that framework. Sonny Alfman suggested this as his go-to NVIS antenna: a low-altitude 80-meter dipole with a reflector wire 12.5" above the ground. If you're out of ideas, you could start from there on both 80 and 40-meter lengths.

Matt is working on Black Swan 2018, plans continue! Air Force MARS and Iowa along with OHDEN are already on the participant's list. It's going to grow from there.

Again, many thanks to Scott and all the way through the list for the conference success! Please remember we need to be READY!

**73, Stan, N8BHL**

You can view all of the SEC's monthly reports on the website.. <http://arrl-ohio.org/SEC/default.html>

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### *From the Public Information Coordinator*

*John Ross, KD8IDJ - PIC*

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### FROM THE PIC



I believe that just about everyone has received the message about the 2018 Ohio Section Newsletter contest...and I mean EVERYONE! The last few days I have gotten tons of newsletters and, of course, all are great.

But just as a reminder, the deadline for entry is June 30<sup>th</sup>. You'll need to submit at least two newsletters, for different months, to be entered. If your newsletter is on-line... just a quick email notifying me of that will do nicely.

I talked to a couple of the judges the other day and they are hooked on us. Already they are anticipating the big "judging extravaganza" in July and all of the hoop-la that goes with it.



I'm going to try and get at least a few of them at the award ceremony this year so they can tell you firsthand how good the Ohio Section newsletters really are.

Keep up the good work...just a couple of months left to enter.

## SIBLINGS WITH SIDECUTS

I look pretty hard each month for hams doing extraordinary things. Apparently, though, I need look no further than my Uncle Dave...and his kids...for a ham radio story with, well, a not-so-good ending.



Uncle Dave was a ham radio guy back in the late 1940's and 50's. He learned to build all of his equipment like most hams of that era and felt he was good enough to try his hand at building a television...the new-fangled electronic fad of the day. So he bought what I think was a kit...or at least enough parts to put together his very own "boob tube" and proceeded to get to work.

Uncle Dave had two rather unique children...my cousins Tom and Bill. Both were farm boys, which is not a bad thing, but at least one was a little more "unique" than the other. I still haven't figured out which.

So, Uncle Dave began the task of putting together his television. Every night after work he would retire to the basement and add a tube socket, a transformer or a capacitor and begin the arduous job of wiring and soldering the whole mess together. I got to look at the job once or twice and it was pretty good...all color coded and the soldering job was great. (yes, I realize there are several generations that know nothing about soldering)

Well, one of his unique kids was a little miffed one night, snuck into the basement, and cut EVERY wire that Uncle Dave had soldered in place. That was end of the TV build project and I guess I'm glad I was not there when he found about the snip job.

A lot of morals from this story...I'm not sure just which one applies. Certainly one about locking up your tools or workshop would work as would one about not making your kids mad. But I guess you want to be wary of angry children walking around the house with side cut (wire cutting) pliers.

By the way, I have not seen my cousins for many years and I swear I'm still missing a pair of side cuts!



## ARES

If you missed the annual ARES conference earlier this month...WOW...what a presentation! KUDOOS to Stan Broadway (N8BHL) and his gang for a great job. ARES is undergoing many changes and I'm still trying to process all that I learned from the meeting.

I do know this, ARES is alive and well in Ohio and we have the right people leading the way. Like so many other good things about Amateur Radio, ARES gives hams the opportunity to put their knowledge and their gear to good use.

I'm sure Stan can talk you ear off if you ask him...but please ask him. Even if you can't participate in ARES you'll be glad to know what's it all about and why it is so important to the many other facets of ham radio. You'll also come to know why the rest of country and the rest of the world relies on ham radio when nothing else works.

Thanks, Stan and thank every ARES member who has worked hard to keep this part of our “hobby” going.

## **HAMFEST 2018**

Whether you call it the Dayton Hamfest or the official title of the 2018 Dayton Hamvention at the Green County Fairgrounds...it’s almost here...May 18<sup>th</sup>-20<sup>th</sup>.

Last year was great and the word is this year will be even better.

The Ohio Section again has booth and I’ll be there Saturday afternoon to meet and greet the throngs of hams that walk by. Please stop and say hello, tell me your stories, and tell me anything you want about amateur radio. I’m a good listener.

There will be drawings and other things to take with you including my appreciation for just being there.

I’ve been going to this hamfest since I was 15 and I don’t think I’ve missed one. In fact, I still have some “stuff” from the early days in my basement and still in storage at my parents’ house. I bring a few things over each year when the XYL is out of town!!!

That’s all for this month. Thanks for all of the emails,

**73, John, KD8IDJ**

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### ***From the Section Traffic Manager***

***David Maynard, WA3EZN – STM***

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First things first, I want to congratulate Mike, KC8WH who this month has been reelected the net manager for the Ohio Single Sideband Net. Mike has been doing a good job as is evidenced by his reelection. Wish him well and support him and the OSSBN so we can continue to make the Ohio Section a proud part of the National Traffic System.

I would also like to thank Dick, WD8SDH for stepping up and accepting the elected position of advisory board member. This is a three-year term position so welcome aboard Dick.

Dick is a former Chief of Police, Cambridge, Ohio PD. Dick is retired now after 35 years of service to the community and 21 years USAF active and Guard service. He keeps very busy with the Amateur Radio Emergency Services, the CARA and the Boy Scout program. Dick holds an Extra class ham ticket.



This OSSBN meets three times a day, 365 days a year on 3972.5 kHz and has never ever been overloaded or unable to handle the quantity of traffic that has been brought to the net. This net is always on the top of the scoring for the annual SET exercises.

The OSSBN along with the Buckeye CW nets move traffic in and out of all corners of the state of Ohio and its members are prominent supporters of the regional Eighth Region Net and liaison to the Eastern Area Net. The five Ohio digital relay stations are all members of the OSSBN. Many of the OSSBN members are also ARES members in their own areas. The OSSBN meets three times a day at 10:30 AM, 4:15 PM and 6:45 PM. Check it out.

## **LOOK TO THE SKY**

This month has already seen spring storms bring destruction and tornadoes to Ohio. On April 3rd five tornadoes touched down and did damage. It appears that the worst damage was done on Hoover Road in Grove City.

The EF1 tornado that struck the central Ohio suburb and adjacent Jackson Township about 5 PM knocked out power to several neighborhoods. Fortunately, nobody was injured.

The National Weather Service in Wilmington OH has confirmed a tornado near Grove City in Franklin County Ohio on April 3, 2018. National Weather Service personnel conducted a damage assessment and confirmed that an EF1 tornado with a maximum wind speed of 105 mph had struck the Grove City area. It was one of four confirmed tornadoes in Ohio.

A brief EF0 tornado with a top wind speed of 85 mph damaged barns on Roberts Mill Road and on Routes 38 and 56 southwest of London in Madison County. Two other tornadoes were reported the same day in Greene County and in Clark County in southwestern Ohio.

The tornado that struck the Grove City area initially touched down just south of Orders Road and moved northeast, crossing Hoover Road, Interstate 71 and White Road before lifting just south of Stringtown Road, the weather service's survey crew determined. The tornado's widest path was about 75 yards, and it extended for 2.6 miles.

Eight large utility poles were snapped off at the base and left lying across the roads. Several people were stuck on Hoover Road because live power lines were downed on their vehicles and several homes had roofs torn off or partly lifted. Power in some areas was not restored for one week.

What are the differences between watches & warnings? A Watch indicates the possibility of severe weather in a relatively broad area. For instance, a tornado watch means conditions are favorable for the development of tornadoes. Go about your normal routines, but watch for threatening weather.

A Warning is issued when severe weather is actually occurring. For instance, a tornado warning means a tornado has actually been sighted or has been indicated by radar. The warning usually encompasses a relatively small geographic area. If a warning is issued for the area in which you live, take cover immediately!





### **What is a wall cloud?**

A Wall Cloud is a localized, persistent, often abrupt lowering from a rain-free base. Wall clouds can range from a fraction of a mile up to nearly five miles in diameter, and normally are found on the south or southwest (inflow) side of the thunderstorm. When seen from within several miles, many wall clouds exhibit rapid upward motion and cyclonic rotation.

However, not all wall clouds rotate. Rotating wall clouds usually develop before strong or violent tornadoes, by anywhere from a few minutes up to nearly an hour. Wall clouds should be monitored visually for signs of persistent, sustained rotation and/or rapid vertical motion.

### **← WALL CLOUD**

A wall cloud is a large, localized, persistent, and often abrupt lowering of cloud that develops beneath the surrounding base of a cumulonimbus cloud and from which tornadoes sometimes form. Many wall clouds do rotate, however some do not.

The rear flank downdraft is the motion in the storm that causes the hook echo feature on radar. A condensation funnel is made up of water droplets and extends downward from the base of the thunderstorm. If it is in contact with the ground it is a tornado; otherwise it is a funnel cloud.

What is a shelf cloud? A shelf cloud is a low, horizontal wedge-shaped cloud, associated with a thunderstorm gust front (or occasionally with a cold front, even in the absence of thunderstorms). A rising cloud motion often can be seen in the leading part of the shelf cloud, while the underside often appears turbulent, boiling, and wind-torn.

Shelf clouds are typically seen at the leading edge of a thunderstorm or squall line of thunderstorms. While menacing in appearance, shelf clouds are not tornadoes or wall clouds. What you're seeing in a shelf cloud is the boundary between a downdraft and updraft of a thunderstorm or line of thunderstorms.

Most false tornado and false funnel cloud reports are associated with shelf clouds. Shelf clouds are low-hanging, horizontal cloud features attached to the front side of lines of storms or even a single storm. Usually there isn't any persistent rotation on a vertical axis within shelf clouds or within individual cloud fragments that extend downward from the shelf cloud, therefore they are just another scary-looking cloud.



### **SHELF CLOUD**

Shelf clouds often resemble snow plows, big waves or tsunamis and can be very scary-looking since they are usually low-hanging. Sometimes they may be found only a couple hundred feet above the ground. There are two other phenomena that might resemble tornadoes or funnel clouds but are not. They are dark rain shafts or narrow columns of heavy rain, and the white color of a hail shaft, a column of hail extending from the ground to the cloud base, may generate a light-dark contrast with surrounding rain, resulting in what might appear to be a funnel cloud or a tornado to the untrained eye.

Source: NOAA

READ MORE:

[Tornado Dopplergangers: AccuWeather HQ Shelf Cloud](https://weather.com/science/news/shelf-cloud-photos-20130412)

<https://weather.com/science/news/shelf-cloud-photos-20130412>

<https://www.nssl.noaa.gov/education/svrwx101/tornadoes/>



NOAA says more people are killed each year from lightening than flood and tornadoes combined. What You Need to Know.

NO PLACE outside is safe when thunderstorms are in the area!! If you hear thunder, lightning is close enough to strike you. When you hear thunder, immediately move to safe shelter in a substantial building with electricity or plumbing or an enclosed, metal-topped vehicle with windows up. Stay in the safe shelter at least a half hour after you here the end of the thunder.

Indoors stay off corded telephones, computers and electrical and radio equipment until the storm passes and the lightening stops. Avoid plumbing like sinks, showers, baths and faucets. Stay away from windows and doors and keep of porches.

If you are caught outside with no safe shelter anywhere nearby the following actions may reduce your risk. Immediately get off elevated areas such as hills, mountain ridges or peaks. Never lie flat on the ground, or stand under an isolated tree. Get out and away from ponds, lakes, swimming pools and other bodies of water. Stay away from objects that conduct electricity like barbed wire fences, power lines, windmills and metal objects.

More information at: <http://www.lightningsafety.noaa.gov/>

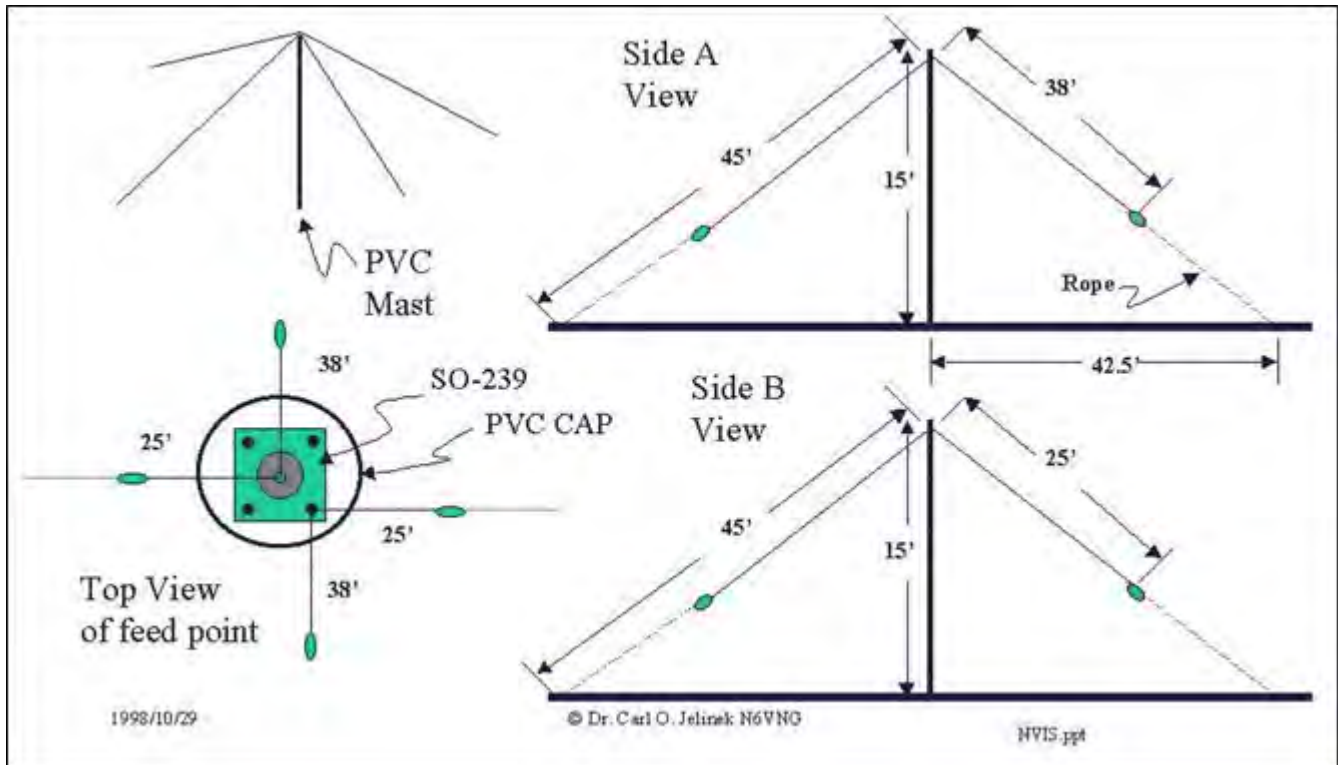
Now, to the fun stuff..

## **ARES NVIS ANTENNA TEST**

In support of the antenna test I offer this information to all Amateur Radio Operators.

On April 28 the Ohio ARES is planning a NVIS ANTENNA DAY. It would be an excellent time for all traffic handlers to join in this test even if you are not an ARES member. And speaking of ARES membership I encourage all traffic handlers to seek out the ARES in your area and join so you can be better prepared to assist in the evet of a disaster in your area.

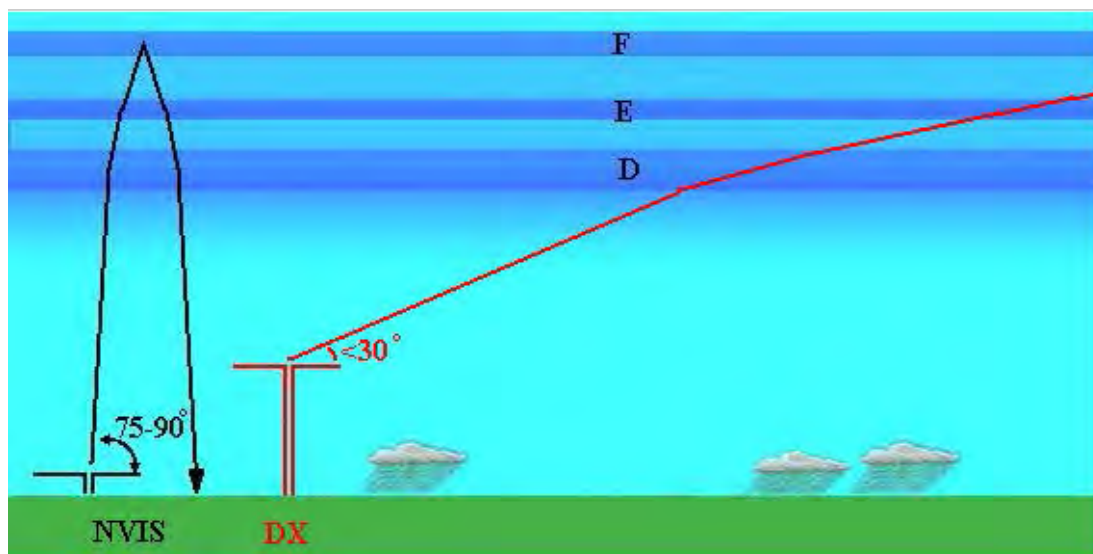
You should be working now on antennas to try out during the event! For more information check out this ARES link <http://arrl-ohio.org/SEC/nvis.html> and some excellent antenna plans so you can build your own NVIS antenna. One advantage of this antenna is that you will not need a tower or to climb anything to install these antennas as they are all low to ground level antennas.



### SIMPLE ANTENNA

### HOW NVIS WORKS

If you don't know what NVIS is it stands for Near Vertical Incidence Skywave. RF is launched at a high elevation angle and is refracted back to earth as shown below. Notice below that unlike a signal launched at a low angle for DX, the NVIS signal returns to the ground close to the antenna.



NVIS is well suited to regional emergency communication. Reliable NVIS communications are possible out to distances of approximately 300 miles. This means that a small number of NVIS stations are required to provide a statewide network.

Amateurs can quickly establish communications using NVIS after a natural disaster because NVIS uses readily available HF equipment and simple antenna that can be constructed from readily available materials and do not require towers or other special types of mounting. CW, SSB and various HF digital modes all can be used with NVIS.

That is all for this month. I have provided the information above instead of more traffic handling information this month because of the high importance of the information. I hope that all have a chance to get involved in these activities as they are very worthwhile.

**73, David, WA3EZN**

You can view the STM's monthly report on the website.. <http://arrl-ohio.org/stm/stm.html>

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### ***Out and About***

***Lyn Alfman, N8IMW - ASM***

[lynalfman@aol.com](mailto:lynalfman@aol.com)

Is Spring ever going to get here? I had almost 2 inches of snow on the ground the day after Easter! Speaking of weather, with snow melt and plenty of rain, many areas of Ohio face the real possibility of flooding. Do you know which roads are prone to flooding in your county? If flooding occurs in your area and the local Emergency Management Agency deploys you to provide communications help for some of its territory, can you safely get there? Perhaps this is an area in which ARES and/or your club can provide training or conduct exercises.



Here is a list of amateur radio activities I have been involved with this last month. I attended the Guernsey County ARES meeting where I gave a presentation on National Weather Radio. I also attended the Zanesville Amateur Radio Club (ZARC) and the Cambridge Amateur Radio Association (CARA) meetings. I attended five amateur radio lunches, participated in an amateur radio exam session, and updated the W8VP website calendar. I, along with District 9 Emergency Coordinator Sonny Alfman, W8FHF, attended the Guernsey and Noble County (Emergency Management Agency sponsored) Long Term Recovery Partnership meeting where Guernsey County Emergency Coordinator Dick Wayt, WD8SDH, gave a presentation on how ARES does and can benefit the local communities.

As PIO and Newsletter Editor for CARA, I also filed CARA's annual report on the ARRL website. Hopefully someone from your local club has done the same. I sent out the Spring newsletter on March 1. If you club has a newsletter, please be sure to enter it in the Ohio Newsletter Contest by sending it Ohio PIC John Ross, KD8IDJ by email: [john.ross3@att.net](mailto:john.ross3@att.net),

In Guernsey County, the CARA participated in the Statewide Tornado Siren Test on March 21 at 9:50 am. Eight members checked into a net at 9:30 and were given assignments to monitor the five sirens in the Cambridge area or they could opt to monitor another siren near their home or work.

There were reports that four sirens in Cambridge were heard; the fifth was not working. These results were passed on to the local EMA Director.

Ohio NVIS Day is just around the corner (April 28). Hopefully, you as an individual or you club plans on participating in this event. There are more hamfests each month to attend as the weather improves. The Hamvention (May 18-20) is coming soon to Xenia! Make plans to attend and visit the ARRL area and the Ohio Section booth there.

Spring brings thoughts of Field Day (June 23-24) to my mind. CARA will be operating from The Grove Park in Bloomfield near New Concord. Morgan Amateur Radio Club and Sunday Creek Amateur Radio Federation are also working on Field Day plans. Has you group started making plans for a site yet? What about checking your equipment to see if it is working properly? With this weather keeping many of us indoors, it seems like a good time to make repairs, check our coax cables, get together media packets, make a list of officials to invite, etc.

The Cambridge Amateur Radio Association will mark its 105<sup>th</sup> anniversary of its founding on December 4 this year. Their first event for the year will be setting up a special event station as a show and tell at the National Road Museum in Norwich for Zane Grey Day on April 29 from 1 to 4 PM. Of course in June, they will participate in Field Day. And in September, they have already planned filling a display case at the local library branch for the month, participating in the OSPOTA Contest from Blue Rock State Park on September 8, and joining the Belle Valley American Legion Amateur Radio Club on September 15 in a joint special event from all three sites of the crash of the airship USS Shenandoah in 1925.

Remember to be “Radio Active”!

**'73 de Lyn**

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### **FROM THE EDUCATIONAL OUTREACH ASM**

Anthony Luscre, K8ZT

[k8zt@arrl.net](mailto:k8zt@arrl.net)

### **I'll Take Mine To-Go!**

This month I thought I would talk about a club project I have been involved in that you might want to copy for your own local radio club, a Go-Box (it also ties in with one of my official section activities, doing radio demos to school groups). Go-Box is just one name for a portable radio setup, other names include Radio Jump Kits, Bug Out Kit, Emergency Kit, Mobile Ham Shack, Briefcase Radio, Mobility Box, Tactical Kit, Drop Kit, Grab & Run, Traveling Case, Radio Backpack and my other favorite-- Rapid Deployment Amateur Radio (RaDAR). Basically, the idea was an HF and/or VHF radio along with accessories and/or power source that is easily and safely transportable.





Besides the obvious usefulness of a Go-Box for emergency communications there are a number of other good reasons your club might benefit from its own Go-Box. Some radio clubs are lucky to have a meeting place that supports a permanent radio shack setup. This provides a great service to members who have no home station to use, as a way to introduce potential hams to HF radio or even to do group operating events like contests.

Unfortunately, many clubs do not have this luxury but a Go-Box that is Rapid Deployment Amateur Radio (RaDAR) style can easily provide a station for use at club meetings. It can be “deployed” for the evening of the club meeting and then stowed until the next meeting. In addition, it is great for a wide variety of club activities throughout the year: Field Day, Special Events Station, School Demonstrations, Classes and especially Emergency Communications.

So now I would like to give you a few details of Go-Boxes via a club program I have presented to a few local clubs via a slide show- [tiny.cc/to-go](http://tiny.cc/to-go) (If your club is interested and in my area of travels I would be happy to present it in person or online via a Google Hangout).

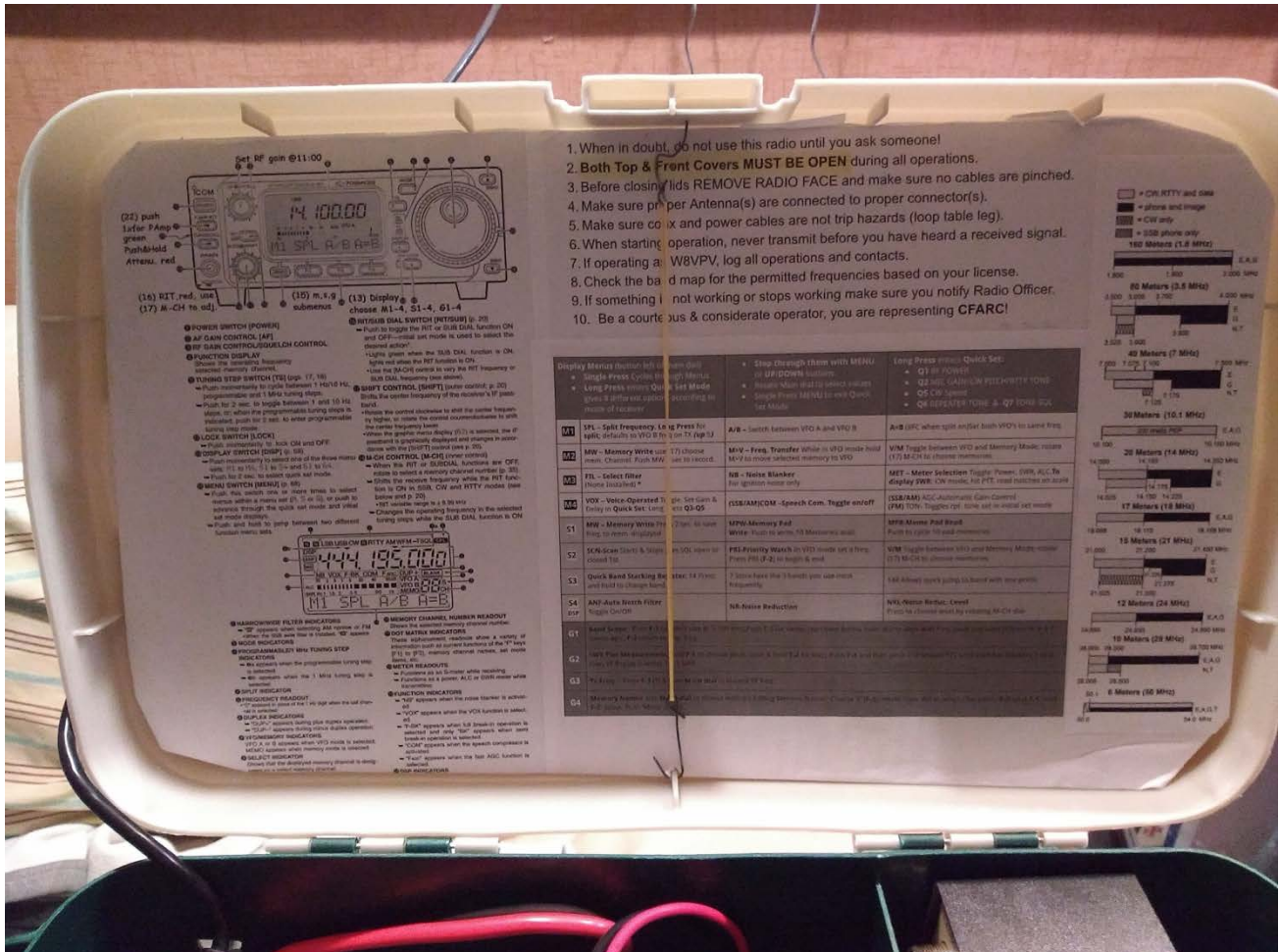
In addition, here are a few notes from my latest Go-Box project with my club, the Cuyahoga Falls Amateur Radio Club (CFARC.org). This project was designed for HF utilizing a radio the club already owned, an ICOM IC-706 MK II g HF/VHF/UHF transceiver. We added a MFJ 4230 power supply, MFJ Automatic Antenna Tuner and Tigertronics SignalLink. I used a Plano 758 tackle box to create a RaDAR style setup. Because we also wanted to be able to use the kit for digital modes and along with contest style logging software we also added a companion computer. This dedicated companion computer allowed all the complexities of interfacing and setting up software and supported ports to be in place so individual users of the Go-Box would not need to fumble through interfacing their personal computer with the box.

The last item I would like to mention is probably actually one of the most important suggestions I can make for your own club’s Go-Box project-- a detailed step-by-step checklist and instruction set for operation of the box.



This was done as a two-pronged method:

1. A cardboard quick guide in the top of the box when you open the lid
  - a. Reminder that box lid must be kept open during operations
  - b. Basic information on using the box
  - c. Simple operating guide to radio
  - d. Frequency Allocation Band Plan (modified ARRL sheet)



2. A detailed [operations notebook](#)
  - a. Information on Go-Box Usage
  - b. Information on Callsign Usage
  - c. Copy of operating manuals from each piece of equipment (*for reference, don't count on users to read these unless they need to look something up!*)
  - d. Step-by-step guides to using each of the [free computer programs](#)
    - i. N1MM for contest type logging like Field Day
    - ii. Log4OM for general logging
    - iii. WSJT-X for FT8 and JT65
    - iv. FLDigi for RTTY, PSK, FLMsg, etc

If you decide to build a Go-Box I would love it you would share photos with me.

Now, on to another one of my favorite topics.. **ARRL 2018 Teachers Institute on Wireless Technology Application Deadline is May 1st.** As part of its educational outreach to schools through the Education & Technology Program, ARRL will offer three summer sessions of the 2018 [Teachers Institute \(TI\) on Wireless Technology](#) -- an expenses-paid professional development seminar.



The deadline to apply for this summer's sessions is May 1. [Apply](#) online. Teachers Institute provides teachers at all grade levels with tools and strategies to introduce basic electronics, radio science, space technology, satellite communication, weather science, microcontrollers, and basic robotics in their classrooms. Wireless technology can be a useful tool within a context of science, technology, engineering, and mathematics (STEM) project-based education. The Teachers Institute curriculum is designed for motivated teachers and other school staff who want to learn more about wireless technology and bring that knowledge to their students.

Two TI levels are offered. The introductory TI-1 course will be offered twice this summer: July 16 - 20 in Dayton, Ohio, with Larry Kendall, K6NDL, and July 23 - 27 at ARRL Headquarters in Newington, Connecticut, with Tommy Gober, N5DUX. The TI-1 course is a prerequisite for the advanced TI-2 course, which will be offered July 9 - 12 at ARRL Headquarters with Matt Severin, N8MS. TI-2 students must hold an Amateur Radio license. An Amateur Radio license is *not* required to take the introductory workshop.

The TI is only the beginning of a participant's exploration of wireless technology. The goal of the TI program is to equip educators with necessary foundational knowledge, and -- through hands-on learning -- inspire them to continue to explore wireless technology, adapting relevant content into classroom instruction.



Qualified applicants must be active teachers at an elementary, middle, high school, community college, or university, or be in a leadership or enrichment instruction role in an after-school program. Teachers Institute grants cover transportation; accommodations; a modest per-diem for meals; instructional resources for the electronics, microcontroller, and robotics segments of the course, and a resource library of relevant ARRL publications. A refundable \$100 enrollment fee must be submitted with the application.

Graduate credits are available through Fresno Pacific University. These can be used to satisfy professional growth requirements to maintain teaching credentials. The class is self-contained, and participants are expected to complete all requirements during the class time allotted. Graduate credit forms may then be requested at the end of the Teachers Institute. [More information](#) is on the ARRL Education & Technology Program page. [Contact](#) ARRL Lifelong Learning and Knowledge Department Administrator Ally Riedel with any questions.

73,

Anthony, K8ZT

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## ***ARES Training Update***

***Jim Yoder, W8ERW – ARES Data Manager***

[w8erw@arrl.net](mailto:w8erw@arrl.net)



### **ARES Training Update**

The ARES Conference this last Saturday was a winner. Great Lakes Division Director Dale Williams WA8EFK was on hand to tell us about some of the changes coming to the ARES program. We will not know all of the details until they are approved by the board of directors after they meet in June, but we do know our training requirements are being looked at and there will likely be levels of participation based on training requirements. The changes are being rolled out with Ohio being one of the four ARRL Sections that will implement them first.

Level 1 will be ARES participation for those who have not completed any of the required training. Level 2 will be members who have completed the core FEMA courses which now relates to our Tier 1 level and are deployable. And finally, a level 3 status that will require additional training and is intended for ARES members who are deployable and have had the additional training to function in a management capacity. All of this must be finalized and approved by the Board of Directors and the exact details may change subject to that approval which will come after June.

Proposed training enhancements for a Level 2 person will include the present four FEMA NIMS courses that we have been tracking, ICS-100, 200, 700 and 800. For our Level 3 persons (our management level), ICS-300 and 400 along with other additional FEMA and ARRL courses could be implemented sometime in the near future. We are now tracking these courses in the database and you will see this posted on the website. Further enhancements are likely to include two more ICS communications courses COM(T) and COM(L).

Director Williams also indicated that a nationwide system of tracking ARES participation is being rolled out online to be used to register members and log hours replacing the current manual arrangement.

ARES in the Ohio Section is ahead of the curve and we have been actively encouraging training for our members. Although these coming changes will require some adjustments for us, we are already established and the final details of what is to come will not require a lot of change for us. The biggest adjustment will be the training requirement for ARES full membership status. We have encouraged training and now it will be a requirement.

I am sure there will be many questions, “Why are these changes now necessary?”, “How does this affect me?”, “And What if I don’t get this required training?”, are among them. Let’s have a look and perhaps I can put all of this into perspective.

Over the last several years, we have been encouraging our ARES members to complete FEMA NIMS training, the ICS-100, 200, 700 and 800 courses which are free to take online. We have increasingly seen our served agencies make this a requirement. This is a requirement that has been given to them as well and they realize that to be effective in a disaster environment, knowledge of how the organized response will work is necessary and essential. NIMS is the way it will be done and we must now fully embrace the concept and train ourselves in order to play an active role alongside our served agencies.

We simply do not have a choice if we wish to remain a relevant resource to our served agencies. They do not need us if we are not NIMS trained and understand the structure we will be working within.

Let me put this in a very simple and direct to the point way that I once was told by one of my customers. My team had been proposing a new network solution to a large customer who had asked us to take a look at his current network which we were providing. He had indicated he wanted to take a step into the future to insure his company was prepared for the technology to come. He wanted the elements of flexibility, reliability, efficiency and of course cost to be a part of our proposal. Over the course of several months, we had many meetings with the customer to discuss different aspects of what we were working on to address his requirements. Although he had not directly told us what exactly he wanted in terms of the technology, he had hinted many times about what it would look like. I have to tell you that we were not listening well and had gotten ourselves stuck on a course which was with a few changes, the same basic architecture that was currently in place.

I got a call from him one morning indicating that he wanted to see our team in his office later that day. Unfortunately, I was the only one who was available and I told him that I would be happy to talk to him. Although disappointed that he could not speak to all of us he agreed to see me. I later that day sat down with him in his office and I heard something that I have not forgotten since which I think is relevant to us in ARES at this point. My customer proceeded to tell me that he had been leaving some hints all along about what he was looking for and although he had not said so directly in specific terms as he did not want to give an unfair advantage to us, he was disappointed that we had not been considering the direction that he intended to go. He then told me exactly what he wanted and said, "This is what I want and the business is yours to lose". I won't bore you with the rest of the details other than to say that I immediately went to work on what he was asking for and we did retain his business by being responsive to his needs.

So, what does this have to do with ARES? Our served agencies are our customers. They are telling us that we need to have NIMS training and more depending upon the situation. They are saying it is not an option or a desire. It is a requirement and if we do not have the training, they do not need us. Their business is ours to lose. No, we don't want that to happen.

And here is why. I think we all realize the pressure that exists as more and more technology companies develop products that require RF spectrum. We live in a wireless world and it is all around us from cellular, to WiFi and IoT all being ubiquitous in our world. There is not a piece of the spectrum that we enjoy that is not in demand from commercial ventures. It is hard to justify Amateur radio as a hobby alone having access to the amount of RF spectrum that we enjoy. We are and have been successful in retaining our frequency allocations and have gotten approval for additional utilization recently. We continue to enjoy our hobby and the spectrum we use because we have successfully demonstrated our ability to step in "When all else fails" and make things work to support our communities and our country. I can't over emphasize how critical this is to maintaining our use of spectrum. ARES is our means to continue our hobby by way of our service to the communities we live in and to the country.

Let me get back to those questions before I finish. These changes directly relate to ARES members being deployed and serving in a capacity as communicators during an emergency. Our served agencies are telling us that it is not an option and that in order to do so, we must have the required training. Many of you are perhaps looking at this as being pushed out of ARES which I want to assure you that it is not. It is also very evident that many of us are of the age that doesn't allow us to be as physically active as we would like to be. Oh yes, I know... Don't tell me that I can't do something. I may just do it to show you that I can. The truth is, many more of us are not going to be deployed for various reasons including our age and physical abilities. We also have job and family responsibilities that come first. We all can't pick up, leave home, job and family while we head off to volunteer as Amateurs to a disaster situation.

Most of us will be where we are and if not deployable, we will remain the force that supports the many public service events that ARES traditionally does. The charity runs, bike races, parades and sporting events all still need us and NIMS training is not all that important in these situations. ARES is not going to shrink and exclude those who want to be a part of the daily activities. After all, we are the dedicated “Elmers” and experience that are still capable of being useful and necessary to the strength of our Hobby.

For those of you who can and are able to serve in a higher capacity, training is a requirement. FEMA NIMS training is necessary and is certainly not a bad idea for everyone. It will give you the knowledge to understand what is going to happen when a disaster strikes, putting you in a much better position to not only survive, but to be a useful resource. Additional training will prepare you for more specific rolls to address the needs of our served agencies.

It wouldn't be me here each month without a report on how we are doing. So here are the latest numbers. Our Ohio Section Amateurs continue to lead with ARES training. We now have more than 900 members in the database, 683 are NIMS complete and I have logged 6,342 courses of which 274 have been recorded this year. You are “Fantastic” as our Section Manager often says when I send him the latest report. My sincere thanks go to each of you who have diligently worked and completed your training. The Ohio Section is not only the largest, but we are leading the way with ARES and our training.

Please let me know if I can help you. All of your Ohio Section officials are here for one reason, to serve you. It is an honor. Again, I extend my thanks and appreciation for your support.

73, **Jim, W8ERW**

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### ***The Hamshack Hotline is here, are you “plugged in”?***

*(from Ken Dorsey – [KA8OAD@neo.rr.com](mailto:KA8OAD@neo.rr.com))*

Calling all amateurs. Do you have a VOIP phone just laying around the shack, maybe one you use for EMCOM and it's sitting in your go-box just waiting to be used? Or maybe you still have an old POTS touchtone phone sitting on a shelf gathering dust? If so you can now put either one to use in your shack or in your local EOC. Introducing Hamshack Hotline the amateur's free PBX system. So, what is Hamshack Hotline, here is the description from their Facebook page: “The Hamshack Hotline is a new off-air voip resource that is exclusively free for life to all Ham Radio Operators.”



The Hamshack Hotline is essentially an on-line PBX service that will allow you to connect your Cisco VOIP phone or Cisco SPA112 analog to digital adapter (for use with an analog touchtone phone) to their phone server over an internet connection. You request an extension for your phone from the administrators and they will send you the hostname and password to access the PBX and assign you a 4 digit extension on the PBX server. You then attach your VOIP phone or digital adapter to the network, configure it with the hostname and password and you are connected. From that point the phone works like any other PBX phone system allowing you to dial any other extension on the system or enter several conference bridges available on the server.

The goal for the system is to support amateurs in their local EOC's giving them the ability to connect to a private phone network for direct communication between EOC's. Having this option available would provide a path to pass "sensitive" information between sites or between users without passing that traffic using less secure RF methods. The system also supports other methods of communication such as the ability to send faxes between extensions. There is voicemail included that can be picked up from the extension and is also sent to an email address, an echo test function, speed dialing, blacklisting and do not disturb options. For a small additional monthly charge (\$5) the system admins can also setup your extension to direct dial outside of the network to any phone number.

The admins will also allow requests for private conference bridges and will setup a password protected private conference bridge or public bridge for any group requesting one. For instance, they have setup a private nationwide conference for any ARES member, requests for access to that conference can be made through the conference admin. Ring groups are also supported and, like the conference bridges, can be setup by the system admins on request.

At this time, they only support certain models of Cisco VOIP phones and the Cisco SPA112 adapter but additional support will be added as the system grows. They also request that the phone remains connected to the server (to the network) but they do give a 30-day grace period allowing the phone to be disconnected for up to 30 days, any phone disconnected for more than 30 days will be removed from the server. So, if you are using the phone for local EMCOM on a mesh network or for some other reason, you have the ability to remove the phone for a reasonable amount of time without having to be re-instated on the system. You can also connect your own PBX to Hamshack Hotline if you already have a PBX that supports SIP and IAX trunking.

For more information please check out their website <https://hamshackhotline.com> or their Facebook page "Hamshack Hotline" and be sure to read the following documents in the files (Facebook) or documents (website) section:

HH FAQ.pdf

HH Supported Endpoints.pdf

HH Covenant.pdf

The current phone listing in both spreadsheet and pdf format, updated almost daily, can also be found on their Facebook page in the files section under the filename(s):

Hamshack Hotline Dir (date in MM-DD-YY format).xlsx

Hamshack Hotline Dir (date in MM-DD-YY format).pdf

If you don't have a VOIP phone and you would like to get connected you can get some good deals on used Cisco phones from EBAY (\$30 range) and on new Cisco phones from Amazon (\$60 range). If you have an old POTS touchtone phone you can connect it using the Cisco SPA112 analog to digital adapter also available on Amazon (\$30 range). Warning, if you do purchase any used phone check with the seller to verify the phone has been taken back to factory defaults and is NOT password protected. Also most VOIP phones are POE powered, meaning they get their power from a special inline power injected Ethernet connection, and will require a separate power supply (usually not included) if the Ethernet port the phone is being plugged into does not support POE.

Give me a call, I can be reached at extension 4061 or 4062 and in the evenings I'm usually lurking about in conference 302 (Hamshack Hotline Bridge 1)...

73, Ken Dorsey – KA8OAD

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***Bobcat nanosatellite selected by NASA for launch –  
Our Own Ohio University Student is a member of the Team  
(from the russ college of engineering and technology)***



NASA has selected Ohio University's research nanosatellite Bobcat-1 as one of just 11 small spacecrafts from the U.S. and Puerto Rico as auxiliary payloads aboard upcoming space missions.

The result of an ongoing partnership between the Russ College of Engineering and Technology's [Avionics Engineering Center](#) at Ohio University, and NASA Glenn Research Center, Bobcat-1 was chosen for the ninth round of the NASA [CubeSat Launch Initiative](#). Often referred to as nanosatellites, CubeSats measure about four inches square and weigh less than three pounds – making them more affordable than conventional satellites – and are designed to last roughly six-to-twelve

months in orbit.

Ohio University undergraduate student, OU radio club member, and ACARA member Kevin Croissant, KE8HRK, who earned his amateur license just last summer, is part of a team at OU's Russ College of Engineering that is designing and building a satellite that is one of eleven small satellites that NASA has chosen for a launch into low Earth orbit.



According to David Juedes, chair of the School of Electrical Engineering and Computer Science (EECS), OHIO and NASA began to collaborate in the 1960s. This included research at OHIO's [Radar Hill](#) facility that involved bouncing microwaves off the moon to map its surface, receiving data from the first lunar lander, Surveyor I. The Radar Hill facility was one of the NASA's backup ground stations.

Senior [Kevin Croissant](#), KE8HRK a computer engineering major; and sophomore Alexis Lanier, electrical engineering and computer science double major; collaborated with Russ Professor [Frank Van Graas](#), Cheng Professor [Maarten Uijt de Haag](#) and EECS Visiting Professor [Sabrina Ugazio](#) on the project.

Built by educational institutions and non-profit organizations, selected CubeSats are eligible for placement on upcoming launches to demonstrate technology, perform scientific investigations or serve educational purposes. Bobcat-1 measures time offsets between global navigation satellite systems (GNSS) to create a precise time reference in orbit, transmits the offsets to the Stocker ground station, Russ College personnel sends them to NASA, then NASA transmits them to their satellites for use.

Croissant, who designed and built the ground station with Lanier, explained that some satellites are placed at higher orbits than GNSS satellites, and as a consequence, they have limited visibility of their signals. Bobcat-1, however, will be at a low orbit that has higher visibility of the GNSS signals and can perform measurements to assist the other satellites in finding their position



The Cubesat Launch Initiative has selected a total of 158 CubeSats from 39 states, and has launched 59 CubeSat missions as part of the Educational Launch of Nanosatellites (ELaNa), an initiative to attract and retain students in the STEM field, through [NASA's Launch Services Program](#).

## One Question Questionnaire

There's another NEW – one question – questionnaire on the Ohio Section Website! <http://arrlohio.org> It seems that an overwhelming majority (75%) of you don't use Echolink or IRLP! I'm really surprised, it's a great way of being able to check-in to many of the local nets around the state and country for that fact!



Now, on to the next question that's on my mind. Let's see how you answer this...  
**“Do you still use a hard copy log book for your logging?”**

The survey will only take 2 seconds for you to answer it, and you can see how your answer stacks up with others instantly. If you haven't done it yet, please do. I really want to hear from you. Hey... If you've got a question that you'd like to see on our questionnaire, please send it to me!

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## The Ohio Weekly DMR Net Report

### April 11 DMR Net

District 1 – 7	District 5 – 9	District 9 – 6	QNI: 114
District 2 – 3	District 6 – 19	District 10 – 13	
District 3 – 9	District 7 – 23		Time: 49 minutes
District 4 – 11	District 8 – 7	Outside of Ohio – 11	NCS: K8MDA



The reason for conducting this net every week is to make sure that all of our connections to the now ever-growing list of repeaters throughout the state are working as we want them to be.

Interested in being a net control for this net? Contact Duane, K8MDA at: [k8mda@arrl.net](mailto:k8mda@arrl.net) It's really easy to do and if you're checking in to the net on a regular basis anyway, you're already there! Please, we need volunteers from all over Ohio to do this net. It is important, and I will guarantee this, it's really FUN!!

The reason for conducting this net every week and having you actually check “IN” is to make sure that all of our connections to the now ever-growing and changing list of repeaters throughout the state are working as we want them to. Sometimes things don't always work as we expect them to, and testing this system, and ourselves, each week gives us the ability to better understand what can happen during any emergency situation. Come join in on the fun every Wednesday evening at 8:30pm local on the DMR - 3139 talk group!

Has your club taken the challenge? I have challenged all the clubs in Ohio to get your members to “check-in” to the DMR Net at 8:30pm every Wednesday night. Let's get everyone on DMR to check in!

Now, I know that it's gonna' take some time to get everyone to buy into this idea, but I know that it will be worth it for sure! Just think of it, around 2,000 folks all checked in on a controlled net, it will be amazing for sure and maybe one that will break a record! We've peaked thus far at 107 check-ins. How's about it, let's try to 125 this next week!

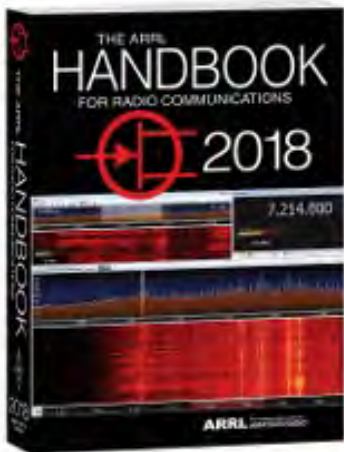
Don't know which ARES District you're in? Click on this link: [http://arrl-ohio.org/SEC/district\\_map.htm](http://arrl-ohio.org/SEC/district_map.htm) and find your county. You will then see which District you reside in.

You can also find a ton of information about DMR and the most popular DMR Nets on the website: <http://arrl-ohio.org/digital/digital.html>

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## *The Handbook Give Away*



Hey Gang,

Have you registered for the "Handbook Giveaway" drawing for this month yet? If you haven't, go to: <http://arrl-ohio.org/handbook.html> and get registered. You never know, you just may be the next winner!

What's the catch? I want to get everyone checking in to the Ohio Section website as often as possible, and in order to register each month, you have to visit the website often! There's nothing else to it. I pay all expenses, and from time to time, I Give Away more than just a Handbook. You'll never know just what months will be those special times that I will have more than just a Handbook to Give Away!!

Many of you ask me just how do I know when the drawing is on? Well, that's easy all you need to do is check in on the Ohio Section Website on a regular basis and watch for the big **RED** Arrow that will appear on the left side of the page. This is the sign that the drawing is on and you need to get registered. So, keep a sharp eye out on the website and check in often! <http://arrl-ohio.org>



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## *Fun Things To Do, Classes & Hamfests Too*

*(from various newsletters and sources)*

Class Instructors - Don't forget to register your classes with the ARRL. It's easy to do. Make sure that you send me that information too! Just think of all of the extra publicity that you'll get for your classes!



>> *Classes starting near you* <<

**Dayton Hamvention – Get your License in ONE DAY!**

**Start/End Dates:** 05/19/2018 - 05/19/2018

**Times:** 8:30am - 4:00pm

**# of Sessions:** 1

**Class level:** General

**Morse code offered:** No

**Pre register required:** Yes

**Fee:** 149

**Pre Study required:** Yes

**Class Type:** Weekend/One Day

**Exam offered:** Yes

**Instructor:** W1SJ

**Contact:** Mitch Stern W1SJ

**Phone:** (802) 879-6589

**Email:** [w1sj@arrl.net](mailto:w1sj@arrl.net)

**Location:** Greene County Fairgrounds

210 Fairground Rd

Xenia, OH 45385

**Additional Information:** Special General Class Upgrade Course held at Dayton Hamvention, Saturday, May 19, 2018. This course is for Technician class hams who want to upgrade to General. The course has 3 parts: On-line training, 2-hr video class and full day class at Hamvention. Students must do the pre-class training to be successful. Class size is limited, so enroll soon.

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***ARRL V.E. Test Sessions***

**04/17/2018** | [Sandusky OH 44870-1926](#)

**Sponsor:** Sandusky, Ohio VE Team

**Location:** Sandusky Radio Club

**Time:** 7:00 PM (Walk-ins allowed)

[Learn More](#)

**04/21/2018** | [East Liverpool OH 43920-9486](#)

**Sponsor:** Triangle ARC

**Location:** Glenmoore Volunteer Fire Station

**Time:** 1:00 PM (Walk-ins allowed)

[Learn More](#)

**04/21/2018** | [Mansfield OH 44907-1502](#)

**Sponsor:** Inter-City ARC

**Location:** Peoples Community Center

**Time:** 1:00 PM (Walk-ins allowed)

[Learn More](#)

**04/21/2018** | [Toledo OH 43604-5117](#)

**Sponsor:** Toledo Mobile Radio Assn

**Location:** Lucas County EMS Training Ctr

**Time:** 3:00 PM (Walk-ins allowed)

[Learn More](#)

**04/22/2018** | [Dayton OH 45434-7154](#)

**Sponsor:** DARA

**Location:** Beavercreek TWP Fire Station #61

**Time:** 6:00 PM (Walk-ins allowed)

[Learn More](#)

**04/29/2018** | [Athens OH 45701-2110](#)

**Sponsor:** ACARA Hamfest

**Location:** Athens City Rec/Community Center

**Time:** 10:00 AM (Walk-ins allowed)

[Learn More](#)

**05/03/2018** | [London OH 43140](#)  
**Sponsor:** MCARC  
**Location:** Madison County Engineer's Office  
**Time:** 7:00 PM (Walk-ins allowed)  
[Learn More](#)

**05/03/2018** | [Youngstown OH 44505-1400](#)  
**Sponsor:** Mahoning ARA  
**Location:** Red Cross  
**Time:** 6:30 PM (Walk-ins allowed)  
[Learn More](#)

**05/05/2018** | [Bryan OH 43506-8410](#)  
**Sponsor:** Williams County ARC  
**Location:** Williams County 911/EMA  
**Time:** 10:00 AM (Walk-ins allowed)  
[Learn More](#)

**05/06/2018** | [Marion OH 43302-1523](#)  
**Sponsor:** Marion ARC  
**Location:** TV 39  
**Time:** 2:30 PM (Walk-ins allowed)  
[Learn More](#)

Here's also links to other great V.E. testing sites:

[Laurel V.E. Test Locations](#) & [W5YI V.E. Test Locations](#)

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The Stark County ARES in conjunction with the Stark County EMA Office will be sponsoring FEMA ICS Training over the next few months. Training will be for the ICS-200, ICS-700 and ICS-800 certification.

Currently we have scheduled training for the ICS-200 Certification on **Wednesday, April 18th** at the County EMA Office on Route 62 lower level.

There is no cost for the training and it will run from 5:30 PM until about 9:00 PM. Future courses will also be offered based on interest.

Please contact me if you are interested!

Terry Russ, N8ATZ. Emergency Coordinator - Stark Co ARES  
Home 330-837-3091 or cell 330-802-0958

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### ***Training Opportunities from your Ohio EMA***

The following is just a partial listing of classes that you can attend and get certified for.

- ICS-400 Advanced ICS, April 16-17, Erie County
- ICS-300 Intermediate ICS, April 23-25, Portage County
- G290/291 Public Information Officer/Joint Information Center, April 23-25, Hancock County
- L-548 Continuity of Operations (COOP) Program Manager, April 24 - 25, Ohio EMA
- ICS-300 Intermediate ICS, April 24-25, Noble County
- ICS-300 Intermediate ICS, April 24-26, Summit County
- L146 Homeland Security Exercise & Evaluation (HSEEP) Program, April 24-26, Hamilton County

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**Contests – Just for the FUN of it!!**

**April 16**

- [Run for the Bacon QRP Contest](#)

**April 17**

- [222 MHz Spring Sprint](#)

**April 18**

- [Phone Fray](#)
- [CWops Mini-CWT Test](#)

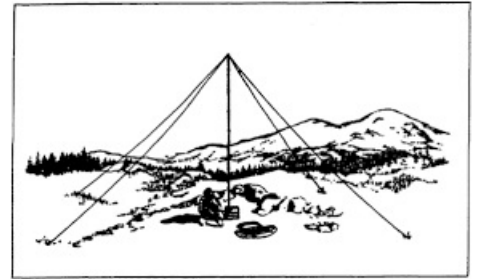
See the [ARRL Contest Calendar](#) for more information. For in-depth reporting on Amateur Radio contesting

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>> **Ohio NVIS Day** <<

Hey everyone, Stan, N8BHL has let me know that the date for NVIS Day is scheduled for **Saturday, April 28th**. Are you ready? Start your planning now!

Like last year, we are planning on having the operation run from 10 – 4 EDT. Take a lunch break, enjoy each other’s company. Transmit power should stay at 100 watts for accurate signal comparison. You may operate anywhere, home, club, portable.



Want to know more about what NVIS is? Go to: <http://arrl-ohio.org/SEC/nvis.html> and learn all about Near Vertical Incident Scattering and how you can easily put up a NVIS antenna and participate in this great exercise.

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***Parma Radio Club Celebrates 6<sup>th</sup> Annual Earth Day With Special Event Amateur Radio Station***

This **April 21<sup>st</sup>** the Parma Radio Club will celebrate its 6<sup>th</sup> Earth Day at Stearns Farm located near Parma's city center. Members will be operating multiple amateur radio stations at the historic, educational farm, powered only by energy from the sun. In previous Earth Day operations, the club made contact with numerous U.S., Canadian and South American stations. The public is welcome to attend and receive a station tour between 10am and 2pm.

The club is celebrating its 70<sup>th</sup> anniversary this year, having begun in 1948. The club is attempting to collect as much information about its history as possible. If you have any stories or printed information about the PRC's history your submission would be appreciated.

For more information: [www.parmaradioclub.com](http://www.parmaradioclub.com)

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### *Miamisburg Celebrating 200 years*



The City of Miamisburg is celebrating its 200th year this year and the Mound Amateur Radio Association (MARA) is going to be instrumental in lending support for several of the planned activities.

There is a scheduled event every month; however, the big celebration will be the week of **16 to 23 June** with parades on the two Saturdays. MARA will be providing parade support and the club has been granted a special call, W8M, for use during the two weeks surrounding the parade.

MARA normally has the club call of W8DYY and a webpage at [www.w8dyy.org](http://www.w8dyy.org). MARA has three repeaters and a Monday night net at 1900. The first and fourth Monday's are on 147.195+, the second and fifth Mondays are on 443.000+ pl 88.5 and the third Monday is on 145.330-. The nets on 147.195 and 145.330 can also generally be reached through Echolink, w8dyy-r.

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### **Relaxed Learning Session: I'm new to Amateur Radio! Now what?!** *(from the toledo mobile radio association (TMRA) weekly announcements)*

**May 5th** from 9am - 1pm



Maumee Fire Station #2 (rear entrance of building next to blue water tower)

Join Toledo Mobile Radio Association Members at Maumee Fire Station #2 for a learning and Q&A session that should work to help newer Amateur Radio operators get started with some of the practical items that we all wish we knew when starting off in Ham Radio. :

This is going to be a very relaxed learning session which is a great place to get to know TMRA members and for newer amateur radio operators to ask questions related to items they are concerned about. (going more in depth than the class when/if needed)

We'll discuss and help newer hams resolve some of the typical early ham radio challenges including (but not limited to) the following types of discussion items (no specific order);

1. Answer any early questions and discuss list of items that we all have soon after becoming a ham. (and worries that we each had)
2. Discuss Hand-held and mobile radio types / drawbacks and benefits. Who can help me program it?
3. What is needed to setup and use a mobile or "base" radio - in car or in home (and benefits and types).
4. Discuss Effective Radiated Power in terms of Antenna benefits - Discuss types of antennas indoor/outdoor options (and why). Horizontal vs. Vertical antennas.
5. Types of feed line and what you will need (and for what) - and where to find it.

6. VHF/UHF vs HF - Who can I talk to and when?
7. Discuss using local Repeaters, internet linked repeaters, PL Tones, (repeater book/radio reference),
- 8 . Discuss Simplex vs Repeater typical etiquette (just so you know) - Examples: Q signals, calling CQ, breaks, etc.
9. First Contacts – what to expect (most important, you won't be judged so don't "sweat it".... really...)
10. Hamfests + Ham Conventions. - Why bother?
11. Where should I buy equipment and what are the risks?
12. Useful websites
13. Foxhunting and Satellites - how/where?
14. Where to find manuals and information?
15. If there is time: Antenna Analyzers and SWR Meters - what are they and when do I need one?
16. If there is time: N vs PL-259, vs SMA, versus BNC connectors
17. Benefits of organizations/clubs
18. Foxhunts - what are they and how does it work? Do I need anything?
19. HF - club events (what can I participate with?) - Operating events.

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***This year's theme for the Dayton Hamvention is  
 "AMATEUR RADIO.... SERVING THE COMMUNITY"***



Continuing the tradition and in harmony with this year theme, Dayton Hamvention will once again have a setup and display of emergency communications vehicles, an “ECOMM TRUCK RALLEY”. The purpose of the display is to promote emergency communications and for groups who build and operate mobile communications facilities to display their equipment and demonstrate their capabilities it’s also a chance for the groups to talk about how to develop emergency communications in the field and to exchange ideas with Hamvention visitors.

This is a great opportunity to share your concepts, designs, ideas, layout and equipment for mobile emergency communication in the field and to give others ideas on designing their own unit or updating their existing unit!

We have had displays as simple as a pop up tent to RV style operations. We have had displays from local groups, out of state hospital support teams, Salvation Army, Civil Air Patrol, MARS, DHS and many others.

There will be a meet and greet and “review of the troops” during the event with emergency communications leaders and managers from the ARRL, ARES, MARS and others. This would be a great time to explain your display and your emergency communications program.

It is recommended that your organization have information such as handout or flyers. Also take lots of pictures for possible publication.

There are a few basic rules:

- Setup will be on Thursday May 17, 2018 anytime during the day. Before/ afterhours arrivals by appointment.
- Display area will be in the parking lot of 2017 Hamvention tents.

- Vehicles will not be allowed to leave the display area during active Hamvention hours, but may be driven out after hours.
- Electricity hookups may not be available or some distance away. Bring long extension cords.
- No noisy generators such as construction site type above 65db noise level
- Selling/flee market out of displays prohibited.
- No holes or damage to the blacktop. If you have to use jacks or stabilizers they should have a large footprint or use a 2" thick wooden pad sufficient to distribute the weight of the vehicle.

Hamvention has offered up to four (4) gate passes that allows you entry into the entire Hamvention which are also eligible for the door prizes and one (1) parking pass to the display unit.

We do need the following Contact Name/call:

Agency/Affiliation:  
 Phone: Email Address:  
 Size of the unit:  
 Picture of unit:  
 A short description of your unit:

Send request to:  
 Gary Hollenbaugh, NJ8BB  
 Ecomm Display Coordinator  
[ecomm.display@yahoo.com](mailto:ecomm.display@yahoo.com)  
<http://hamvention.org/emcomm/>  
 937-503-7070

Please review QST March 2018 advertisement on page 122 and ARRL news letter dated March 15 2018.  
 Website <http://hamvention.org/emcomm/>

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**04/21/2018 | Portsmouth Radio Club Hamfest**

Location: Portsmouth, OH  
 Sponsor: Portsmouth Radio Club  
 Website: <http://www.facebook.com/groups/portsmouthradioclub/>

**04/28/2018 | 2018 JCARC Hamfest**

Location: Jackson, OH  
 Sponsor: Jackson County Amateur Radio Club  
 Website: <http://www.jacksoncountyarc.org>

**04/29/2018 | Athens Hamfest**

Location: Athens, OH  
 Sponsor: Athens County Amateur Radio Association  
 Website: <http://www.ac-ara.org/>

**05/18-20/2018 | Great Lakes Division Convention (Dayton Hamvention)**

Location: Xenia, OH  
 Sponsor: Dayton Amateur Radio Association  
 Website: <http://hamvention.org/>



Find all the Ohio Hamfests in one location? Go to: <http://arrl-ohio.org/hamfests.html>

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## ***From the Official Observer Coordinator***

***John Perone, W8RXX - OOC***

[w8rxx@arrl.net](mailto:w8rxx@arrl.net)

The Ohio OOs monitored a total of 1099 hours during March.

There were no OO cards sent.

In case members missed it in the April QST, here is the latest on the OO program that was discussed at the ARRL Board of Directors January 2018 meeting.



Outgoing Second Vice President Milesosky, who chaired the OO Study Committee, told the Board that the Committee is awaiting feedback from the FCC on the proposed program changes. Once that is received, the panel can begin to finalize a proposal for consideration by the Board and its committees.

We will have to wait a bit longer to see what changes are going to be made within the program.

73,

John, W8RXX

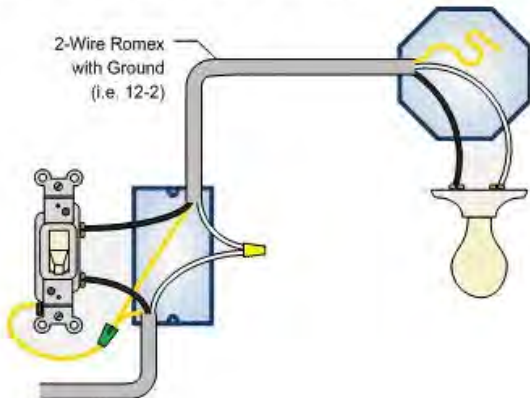
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## ***Shack Safety***

***Why are household switches “Switched” from the Hot side? Wouldn't it be safer on the neutral side since the load would take the electricity first?***

### **Basic Light Switch**



Single phase AC used in households have a Hot (black) and a Neutral (white). These are the current carrying conductors, with the Hot being the feed and the Neutral being the return.

To use the Neutral (white) side would be dangerous because Hot would be present from the supply, to the load, through the load all the way to the switch, even when the switch is OFF.

To put it in another way, you turn the water On and Off from the supply side, not the drain side.

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## Income Tax – Why do we have it?

Income tax was first introduced in the United States of America in 1861. A rate of three percent was levied on incomes above \$800 per year and the resulting revenue was used to help fund the American Civil War effort. However, income tax was seen as unconstitutional and the law was repealed in 1872. The idea of a tax on personal income, at a rate of two percent, was reintroduced in the Revenue Act of 1894, but the legal status of this kind of tax was still unclear. In 1913, the "Sixteenth Amendment" to the Constitution of the United States was ratified. This cleared the way for the modern income tax system in the USA.



The details of the income tax system have changed greatly since 1913. The top rates of tax have varied enormously and were particularly high during the First and Second World Wars and the Great Depression. Individuals and families with very low levels of income do not have to pay income tax and may receive some subsidy via the tax system.

In 1913 Tax Day, or the filing deadline, was fixed on March 1. However, it was moved to March 15 in 1918 and April 15 in 1955, where it has remained since then. If April 15 falls on a Saturday, Sunday or a civil holiday, such as Patriot's Day, the deadline is extended to the next working day. An extension due to a holiday may only affect certain states. In 2007, the residents of some states were granted an extension due to the disruption to public life in many areas caused by a huge Nor'easter storm. In some years, like this year, in Washington DC, Emancipation Day may be the reason to extend the deadline for filing an income tax return (Tax Day).

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Tax Day Weekend Greetings from Ham Radio Deluxe! From now until the clock strikes midnight on Tuesday **April 17th ALL HAM RADIO DELUXE software and merchandise is 20% off**

Use the coupon code TAXTIME at <https://www.ham-radio-deluxe.com/buy/>

Your purchase of Ham Radio Deluxe includes Software Maintenance & Support and entitles you to direct access to our fantastic technical support staff and all feature enhancements to-date and produced for the next 12 months. View our release notes by visiting <http://releasenotes.ham-radio-deluxe.com>.

We are also excited to offer Ham Radio Deluxe merchandise - including hats, mugs, and t-shirts - also at a discounted holiday price.

So, for those of you who have been hesitating about purchasing the HRD package, now's the perfect time. I doubt if it will get any cheaper!



***Final.. Final..***  
**Scott Yonally, N8SY - SM**  
[n8sy@n8sy.com](mailto:n8sy@n8sy.com)

Hey Gang... This past week has been busy for sure. I loved seeing everyone at the Cuyahoga Falls Hamfest and at several meetings, classes and even a breakfast that I attended this past week. Yes gang, I want you to know that even I have been taking more NIMS classes. As I've stated over and over, when you become an Amateur, your classroom work just begins!

Now, on to another subject... It seems that many of you have taken my challenge about getting on the Ohio ARES DMR net Wednesday evenings and have been checking in. Why are we doing this? We are testing the systems.

Not much action on the website this week to report. As you know, we did make the switch over from a Tier System to a Level system within ARES so that we could align ourselves better when the national system gets rolled out in the very near future. I will also remind everyone that was a Tier I member, you are now automatically become a Level 2 member with this change. We won't be issuing new certificates, so hang on to the old ones that you were sent, if you requested them.

Ok, I to want to update you on the NIMS count. We now have 682 persons registered in our NIMS database. I'm sure that you've already read who received the Vest. I am once again setting the bar up even higher to get the **700th person** register, and YES, I will send that person an ARRL ARES Mesh Vest! Have you gotten your courses in yet? How about it, I know that there's still a lot of you out there that have not taken the NIMS classes yet. C'mon, what have you got to lose? Here's a link to get you started on your way:

<http://arrl-ohio.org/SEC/training.html>

That's going to do it this time around... I'll catch you on down the log for sure, and stay warm my friends, remember the Dayton Hamvention is just 32 days away!!!!

Scott, N8SY...

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[ARRL-OHIO.org](http://ARRL-OHIO.org) Website Stats for March

Summary					
Reported period	Month Mar 2018				
	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Viewed traffic *	10,388	15,202	72,344	875,796	14.29 GB

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## *Back Issues of the PostScript and Ohio Section Journal (OSJ)*

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>

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## *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 me an email [n8sy@n8sy.com](mailto:n8sy@n8sy.com) and I'll get them added to the Ohio Section Emailing list. We now have over 6,000 folks 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.

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>

Got questions, concerns or would just like to sit and chat awhile? Heck, I'll even buy the coffee!! Give me a call at (419) 512-4445 or email me at: [n8sy@n8sy.com](mailto:n8sy@n8sy.com)

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*The Ohio Section Journal (OSJ) is produced as a comprehensive look at all the programs within the Ohio Section. I sincerely hope that you have enjoyed this edition of the OSJ, and will encourage your friends to join with you in receiving the latest news and information about the Ohio Section, and from around the world!*