



The *ORC* Newsletter



Official publication of the Ozaukee Radio Club, Inc. Email all contributions to the editor, Bill Shadid, W9MXQ (newsletter@ozaukeeradioclub.org). Permission to reprint articles published in any issue is granted provided the Author (as shown in the article) and the Ozaukee Radio Club Newsletter are fully credited in any publication.

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Volume XXXVIII

September 2022

Number 9

From the President

de Pat Volkmann, W9JI



August was a very slow month for me, at least with ham radio. My wife and I took a short vacation in northern Wisconsin, as we have done for many years. The “vacation” this year included lots of maintenance on our cabin and continuing to clean up after the storms earlier in the year. I usually spend some time on the air from that location, but not this year. The antenna came down over the summer, a combination of broken ropes and dead support trees. The storms and maintenance work over the last couple of years have left some very tall trees on either side of the clearing around the house. It is a perfect setup for a new wire antenna. I’m looking forward to getting back to the cabin this fall and getting that antenna put up.

Last month I asked you for some program ideas and got a couple of great suggestions, so I’ll ask again. We need programs for November and December. Maybe you would like to tell us about a project that you have been working on or talk about a subject that you find interesting? Perhaps you’ve heard of someone outside of the Club who has done an interesting presentation and might be willing to talk with us. What about doing something besides a presentation? Send me those suggestions!

Elections are coming up in January, just a few months from now. The ORC has term limits for the offices of President, First Vice President, and Second Vice President. I believe that the term limits are very good for the Club as they allow new people with a different point of view take a turn in office. Ben Evans K9UZ (First VP) and I have reached the limit for our offices. Let me know if you are interested in running for any of the Club positions. January will be here before you know it.

The weather forecast for the Fall Swapfest (two days from when I'm writing this) looks great. By the time you read this we should know how things went. I'm looking forward to seeing many you and looking through all the piles of "good stuff" that appears at the Swapfests.

See you at the meeting.

Pat Volkmann W9JI

A Message from the Editor Newsletter Table of Contents

de: Bill Shadid, W9MXQ

See Club President, Pat Volkmann, W9JI, and his monthly message on Page 1. Pay careful attention to Pat's request for programs. This is the tough side of leading a radio club (or any technical club) – the thing that is the most popular for members (programs at meetings) is also the hardest thing to do.

Pat talks about the upcoming International Lighthouse and Lightship Weekend and our part in leading a special outing for that event. Also check for details of the entire global event at <https://illw.net/index.php>.

Our regular Ozaukee Country Amateur Radio Emergency Coordinator Ozaukee County EC, Don Zank, AA9WP pens are article on, "Ready or Not." This time on Receiving. Stan Kaplan, WB9RQR, talks about Dual Boot Computer Setup. Bill Shadid, W9MXQ, (your Editor) brings a bit of past experience to the table. And, Gary Sutcliffe, W9XT, talks about this months On the Air Activities – Contests, DX, and Special Events.

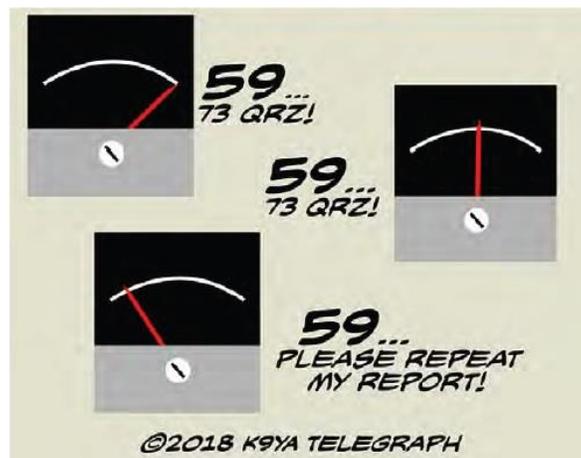
Nicely done this month are two member written articles. One is from Fred Schwierske, W9KEY, with results of the International Lighthouse / Lightship Weekend Special Event Station done by Ozaukee Radio Club, in cooperation with LEFROG Radio Club. The other is from Ken Boston, W9GA, with the results of the 2022 Ozaukee Radio Club ARRL Field Day Event.

Remember the Ozaukee Radio Club Fall Swapfest at Fireman's Park in Cedarburg, tomorrow, 10 September. Check Page 8 for more detail – and the Swapfest Flyer at the very end of this Newsletter.

I am always looking for first person articles about your life in ham radio. Interesting projects involving radio, operating events in which you were a participant, getting that first license or an upgrade, etc. Contact me for details at newsletter@ozaukeeradioclub.org

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INTERNATIONAL LIGHTHOUSE / LIGHTSHIP WEEKEND

August 19 – 21, 2022

de: Fred Schwierske, W9KEY

Covid interrupted many activities during the past 2 years, including our participation in the annual International Lighthouse Lightship Weekend (ILLW). But things are slowly returning to normal and the LEFROG Radio Club and Ozaukee Radio Club organizations again joined forces to participate in this wonderful event, now celebrating its 25th year.



20 Meter Beam & 40 Meter Dipole Stations at the Port Washington, WI 1860 Lighthouse – ILLW 2022

Held on the 3rd full weekend in August, ILLW is one of the most popular international amateur radio events in existence today. Nearly 400 Lighthouses / Lightships were activated by Clubs this year. It is NOT a contest – there are very few rules, no prizes, no certificates, no power or antenna restrictions, and no cost to participate.

Rather (quoting their website), the “**concept of ILLW is to promote public awareness of lighthouses and lightships and their need for preservation and restoration, and at the same time to promote amateur radio and to foster International goodwill as well as remembering the dedication of those who served as lighthouse keepers.**”

In this spirit, the main rules clearly define what constitutes a valid historic Lighthouse structure and also stipulates the amateur radio station “**must be at, or directly adjacent to**” the light – with visible presence to passing public who may be visiting the lighthouse during the weekend. For more detail, see: <https://illw.net/>

Fully complying with both the intent and specific Event rules, we are most fortunate to have access to the nearby 1860 Light Station in Port Washington, Wisconsin. Located at 311 Johnson Street (up on the hill), this beautifully renovated structure overlooks the western shore of Lake Michigan and is operated as a museum during summer months by the Port Washington Historical Society. <https://www.pwhistory.org/1860-light-station> When contacted earlier this year, museum manager Patrick Curtiss and his volunteer staff offered their enthusiastic support and went out of their way to welcome us.

The Lighthouse event officially ran for 48 hours, starting 7:00 pm Friday evening. But to minimize impact on the quiet residential neighborhood, we decided to operate only Saturday & Sunday daylight hours:

Friday - Setup of 3 HF stations began early afternoon August 19, 2022 – including a 30-foot tower with tri-band beam for 20/15/10 meters, a 30-foot fiberglass mast supporting the far end of a 40-meter wire dipole, and a 3rd frequency agile, end fed multi-band vertical antenna. In addition, we set up a D-STAR station to hit the W9FRG B repeater (442.81875) to work 30C, 1C and other reflectors as noted on our DPLUS Dashboard page (B Module) at: <https://w9frg.dstargateway.org/>



Bill K9GN, Joe KD9RAW, & Gary W9XT
Working on the 30 Foot Tower

Radio equipment, power supplies, and logging computers for each of the 3 HF stations were to be protected by individual pop-up canopies located around the West (40m), North (20m), and East (15m) sides of the lighthouse. The museum kindly provided “shore power” for the event, eliminating need for generators and fuel.



Gary W9XT, Bill K9GN, Joe KD9RAW,
Fred W9KEY, Steve W9MCU, & Loren,
N9ENR Installing the 20 Meter Beam

Thanks to our skilled group of 10 volunteers, antennas were up by late Friday afternoon and Loren, N9ENR verified all were properly tuned for their respective bands. Having free time, we decided to perform a “radio check” with the 20-meter station. Since operations were not starting until early Saturday morning, our protective pop-up canopies had not been erected. During the second test QSO, I was surprised by a huge water drop crashing onto our Icom IC-7600 transceiver. Looking up, a dark overhead cloud spit out a second large drop - again smacking the radio - followed by many more!

Unfortunately, the Lighthouse was not open Friday, our shelters were not up, and only a tiny sliver of overhead roof near the back entrance offered any immediate protection. Everyone grabbed a piece of gear, found whatever cover they could (it was now raining hard) while frantically searching for umbrellas. I’m happy to report, the equipment survived, and everyone eventually dried out – but the weather sent us home earlier than expected.

Saturday dawned foggy, cool, and damp. Arriving at 7:00 am, one fully expected to see the lighthouse light shining and foghorn blaring. Popup canopies were erected, electronics unpacked, Club banners hung, and we were ready to operate by 8:00 am.

Nancy, KC9FZK and Stan, WB9RQR arrived early both Saturday & Sunday to bolster our 20-meter totals. But the bands were frustrating all day with stations sometimes



Nancy KC9FZK and Stan WB9RQR Worked 20 Meters Saturday and Sunday

completely fading during the call sign exchange. 40 meters was tough going, too - and in spite of working hard, Joe, KD9RAW had no activity what-so-ever on 15 meters. We struggled with poor band conditions most of the day, thunder forced a short shut down mid-afternoon, and heavy late afternoon rains finally convinced us to simply give up and go home. In spite of the nasty conditions, we had 14 rugged participants / visitors check-in on Saturday. Everyone who wanted "seat time" had an opportunity to make contacts, but they probably got wet!

Highlighting that – Scoutmaster Joe Bettencourt, KD9RAW assisted Jake, KD9TRQ (a Scout who just earned his General ticket) to make his first HF contacts with his new license! Watching a new ham having an opportunity to operate a well-designed HF station for the first time, reinforces why we all enjoy Special Event and Field Day stations. All the construction effort immediately becomes worthwhile!



Mentor / Scout Leader Joe Bettencourt, KD9RAW (left) with new General license holder Jake KD9TRO at the mic. Jake made his first HF contacts during the 2022 Lighthouse Event!!

Sunday was even better. Although band conditions remained "dynamic", the weather situation improved. Occasional sunshine allowed both canopies and operators to dry out and overall, it was a very pleasant day. We again had 14 sign-in members / visitors, including several museum staff. Visitor log shows Dan Reed, K0DSC and wife Pam who just relocated from New Mexico; and well-known local hams Jerry, K9FI & Cherri Riedel, K9WOC who stopped by to chat. Sitting around talking with friends is a great part of ham radio – so difficult choices had to be made whenever an operating chair was vacated. But we kept the radios warm until 2:00 pm



Joe, KD9RAW at the End Fed Vertical Battery Powered Portable Station

tear-down. Our efficient crew had the stations dismantled, trailer & vans packed, and everything safely stored away by dinner time.

So - - - now that I've complained about challenging band conditions and wet weather:
– How did we do??

- Total HF Stations Logged: 281
- Total Lighthouses Contacted: 12
- Total Daily Participants / Visitors: 42
- Total Unique Operators: 10

In closing - A special thanks to museum manager, Pat Curtiss and his dedicated volunteer staff of docent guides who devote their summer weekends to educating visitors on the historical significance of the Port Washington 1860 Light Station. Thanks also to Mr. Comer for kindly allowing access to his adjacent property for our equipment set up.



Nate KC9TSO & Joe KD9RAW struggle with 15-meter band conditions

And of course, none of this would have been possible without our enthusiastic core construction group, including Tom KC9ONY, Loren N9ENR, Will K9OO, Don K9MOI, (and Russ), and LEFROG Radio Club President, Steve W9MCU. Gary W9XT and Bill K9GN also assisted. A pre-event press kit was created and distributed by Markus, KD9UWG, and incoming QSL card requests will be handled by Mike, KD9GCN and Gary, K9DJT. Thanks to everyone who participated!!

What's Next? – We have already been invited back to the 1860 Light Station and look forward to possibly operating next year under protection of their new lifeboat display shelter. Construction is about to begin, with completion scheduled for early 2023.

If you were unable to attend this year – immediately mark your calendar for the 3rd full weekend in August (Friday 8/18 to Sunday 8/20), 2023. You too can have the opportunity to help assemble several state-of-the-art amateur radio stations, watch / learn from experienced operators, log contacts of your own, possibly work another lighthouse somewhere in the world, and maybe even get rained on (well, hopefully not).



Mike KD9GCN Logging Contacts on 20 Meters

53 Clubs have already registered for the 2023 Lighthouse event.

Do you want to participate next year?
If so, let me know.



Cherri K9WOC and Jerry K9FI Visiting
the 40 Meter Station

73, Fred Schwierske, W9KEY
fred.schwierske@gmail.com

Don't Forget!!!!

Message from Tom Ruhlmann, W9IPR

The 16th annual Ozaukee Radio Club outdoor Swapfest
will be held this Saturday, September 10th,
at Fireman's park in Cedarburg WI.
(That's Tomorrow!!!)

Great opportunity for sales from your trunk and bargains
galore. Hours are from 6 AM to noon and admission is
only \$5. Weather looks good but inside tables will be
available for \$10. For more information go to
<https://www.ozaukeeradioclub.org>
or check the flyer at the end of this Newsletter.

Hope to see you at Fireman's Park
for some great bargains.

Ozaukee Radio Club ARRL Field Day 2022

de: Ken W9GA, Field Day Chairperson

The American Radio Relay League, the predominant participation group in Amateur radio, did establish in the 1930's an exercise that would get the amateurs out into the public to 'showcase' their skills and expertise in providing communications to the community. They named this enterprise 'Field Day.' It has been a mainstay in the Amateur Radio world for many years and remains so even today. Thousands of amateurs and hundreds of clubs in the US and Canada participate every year in late June in this activity.

This last June 2022, the ORC once again placed 5 stations in a park just north of Cedarburg and Grafton. [3 HF stations, a VHF station and a GOTA station for newbies and guests. We were located in Pleasant Valley park, just off county trunk I, about 2 miles north of highway 60. Several club members, their guests and a few trailers descended on the park and set up for the weekend of operating action.



A few trailers had short towers installed on them, containing a rotatable beam antenna, which were parked and deployed for the three main HF stations and a 6-meter station. An RV housed the radio position for the 40-meter phone station, while tents were set up for the 20meter+ phone; CW [all bands] and the VHF/SAT stations.



View of the park pavilion, our main tent, and one of the beam tower trailers.



CW [multiple bands] Tent: Mark KD9NOO and Vic WT9Q manning the key



20 Phone: Ken W9GA, in the main tent, alongside the PR table and the GOTA station



40-meter phone station: Nate KC9TSO and Bill K9GN operating



Satellite station: Gary N9UUR operating



VHF station [6 meters] with Jeananne N9VSV and Tom AA9XK



Emergency power supplied by a pair of generators, and our custom power distribution panel

With nearly 30 club members participating; operating, assembling stations, setting up and tearing down, cooking, stopping by and just generally pitching in; a great time was had by all.

This year we ran our club effort using the 3A category, with the idea that due to a shrinking operator corps, we needed to make sure that all the stations could be adequately manned. In the past we had listed as either 4A or 5A; but kept finding that we didn't have sufficient operators to fully man the stations. Even at 3A this year, we managed to have a reasonable effort put forth on the bands, with a QSO count of 2847, which was in line with past efforts. We also managed to qualify for all but a couple of the bonus point add-ons, which helped ORC to obtain a good score, totaling almost 10,000 points overall.

We all had fun, made lots of contacts, and had fairly good weather for the weekend, doing radio out in the park.

Now looking forward to a great effort for 2023, ALL are welcome!!

Kenneth Boston, W9GA,
Chairperson FD 2022



Signals from the Ether – It's what we do!!

THE COMPUTER CORNER

No. 294: How To Dual Boot – Win and Linux

de: Stan Kaplan, WB9RQR
715 N. Dries Street, Saukville, WI 53080-1664
wb9rqr@gmail.com

This article will show you an *approach* to setting up a dual boot machine with Windows 10 and Linux. It should work for other versions of Windows as well as 10. I am writing it over a period of days during the installation on a desktop computer (yes, it will also work on a laptop).

I. Windows MUST BE INSTALLED FIRST! Don't even think about installing Linux first, because Microsoft's products do not play well with other operating systems and if Linux is on the hard drive first, it will be overwritten by Windows. Install Windows and get it running the way you like it, FIRST. Then install Linux and all will be well.

a. Decide on how much space to allocate for Windows and Linux. For example, if you have a 1 TB hard drive, you might want to allocate half to Windows and half to Linux. Thus, 500 GB is way more than enough for Linux and will do nicely for Windows as well.

b. Wipe the hard drive using disk wiping software such as free DBAN (Derik's Boot And Nuke) or other drive wiping software which you may find at our old friend, <https://www.majorgeeks.com/> or elsewhere. The aim here is to remove any malware or glitches from the drive, show up any errors in surfaces or logic and begin with a clean, empty slate. This is definitely best practice. When you are done wiping, there will be nothing on the drive, and that includes no partitions of any kind. It definitely will not boot at this stage!

c. Use EaseUS Partition Master Home Edition 16.5 (free, 2022 edition), available at Majorgeeks, or other some other partitioning software to partition the Windows half of the drive. Leave the Linux half unallocated. Make the part for Windows all NTFS, which is what Windows uses. If you like, make it just one big C: drive. What I suggest, however, is to make it three approximately equal partitions. Read on for at least 30 years of tried-and-true reasons.

1. C: for Windows itself and any software that absolutely insists on being installed on the C: drive (many programs try to do that, though most can be convinced not to do so).

2. D: for programs, such as DBAN, EaseUS Partition Master, drawing or graphics software, ham logging programs, or any of the myriad of programs you might wish to have, all isolated on the D: drive.

3. E: for stuff you create. Drawings, programs you write, documents you author, and so on. This makes it incredibly easy to back your stuff up. Just burn a CD once a month or so, with all the contents of the E: drive! You may eventually have enough stuff, so it won't fit on a CD, so just use a DVD. I promise, unless you are a professional pho-

tographer and have thousands of pictures, you will be over 100 years of age before you overrun the space on a DVD with your personal creations! It is not necessary to back up Windows or programs – you can always get these from disks or downloads or whatever. But you cannot afford to lose stuff you author, and once they are on CD or DVD, you are safe.

Now after partitioning is done, be careful. Take the time to double check the partitions to be sure that the unallocated half for Linux is still there. In the setup I am doing now for this article, I had Windows hog all of it for the C: drive, leaving no unallocated space for Linux, and it did this without notifying me or asking my permission. If necessary, redistribute the partitions the way you originally intended before you install Linux. You can use Windows itself for this purpose once it is installed, but better to use EaseUS because it will do what you tell it to do without any sneaky, underhanded shenanigans. Remember, Microsoft Windows is no friend of Linux, and it may do to you what it did to me. EaseUS will give you a list of partitions, and a graphic map showing all of them, which you can tweak (make smaller or larger) as you prefer. Your aim is to wind up with something close to this for a disk partition map of a 1 terabyte drive:

WIN C: NTFS 167 GB	WIN D: NTFS 167 GB	WIN E: NTFS 166 GB	UNALLOCATED (for LINUX installation) 500 GB
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II. You can use EaseUS to rearrange drive letters as you wish to conform to the above. Or, you can just have a C: drive for Windows, which I claim is not ideal. Once you have something akin to the above, or at least a good chunk of unallocated space for Linux, you are ready to install it. Although there are many, many “distros” of Linux, I suggest Linux Mint Cinnamon (64-bit) 20.3 (“Una”). If you are familiar with Windows, this release will not present many learning curve changes. And it’s a snap to install. You just shove a Live DVD into the drive and reboot with it. After a bit, you will have Una’s desktop showing, and you can play with it as you wish. When ready to install, note the icon for **Install Linux Now** on the desktop and click it. The installation is smooth and easy and quite intuitive. Need that Live DVD for installation? Contact me to arrange to pick a free one up. And, by the way, Happy Computing!

ORC Repeaters are On the Air – Awaiting Your Call . . .

- 146.97 MHz (- Shift) (127.3 PL)
 - 224.18 MHz (- Shift) (127.3 PL)
 - 443.75 MHz (+ Shift) (127.3 PL)
-

OZARES: Ozaukee Amateur Radio Emergency Services
de: Don Zank AA9WP, OZARES Emergency Coordinator, aa9wp@arri.net
Ready or Not on the Receiving Side



Last month's article discussed how to prepare for an emergency when you are away from home. You could be at a campsite, a state park, or visiting relatives and friends out of state. How could you use your amateur radio operating skills and knowledge to provide communication help?

Many practice or informal radio nets begin with the question, "Before we start the net, does anyone need the repeater or have any emergency traffic?" You can hear the sigh of relief from the net control station when nobody replies. But what if someone did reply? Imagine you are at home with the radio on in the background, monitoring the local repeater, or the national calling frequency, and you hear a ham asking for help. What do you do? Turn the squelch up? Change frequencies? Go mow the lawn? I did not think so. Hams tend to be a friendly and helpful bunch.

First, unlike last month, you have the advantage of operating from the friendly confines of your home station. You will be working in a less stressful situation.

Before you can provide any help, it would be best to determine the callers' location and type of issue.

Maybe he just needs directions to his destination. That should be simple. However, with all the new roads and housing developments in Ozaukee, it may not be. This could be a real learning experience.

What if it is a medical emergency and the caller is in the local area? Now, you need to keep a cool head, because there is a good chance the ham on the other end is not. You and the caller are going to work together to decide the correct course of action. Do you try and get the caller to a local medical facility? It could be difficult to provide directions to someone not familiar with the area. The best course of action may be to contact local emergency responders or 9-1-1. And, hopefully, the caller can provide a somewhat accurate location. APRS would be very helpful in this difficulty.

Now, how about more complex conditions? The caller is not in the local vicinity but somewhere in the state or a different state. He or she may be calling on the statewide WECOMM system or on a hf band.

Again, the location and type of issue would be the starting point.

If the caller is lost, providing directions to a local destination may or may not be possible. But you could give it a try. The best solution may be to locate a local repeater for the caller.

How about a medical emergency in another county or state? (You can assume that caller is using the radio because he has no cell phone coverage). Is the caller able to provide an accurate location such as a county or nearby city? From that information, it should be possible to locate emergency phone numbers via our friend Mr. Google. If an accurate location is not provided, say someone on a trail or off-road, estimating their location, while difficult, is not impossible. Any information the caller can provide, including the name of the state or county park, trail path, or where the car is parked, could help in determining their location.

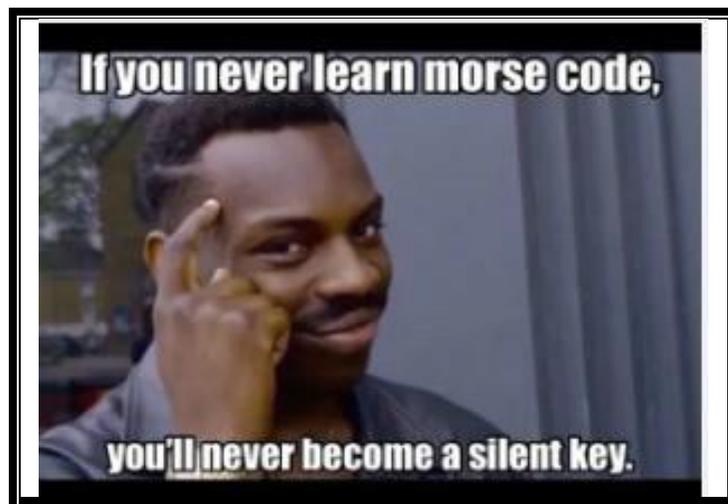
We could continue for a long time with various scenarios. Imagine a severe weather event that impacts both of you. Cell phone and internet services are not available. What courses of action are available?

Should you reach out to stations outside of the area? What would be the best mode and frequency to use?

What if there was a widespread power outage? Do you have emergency power available?

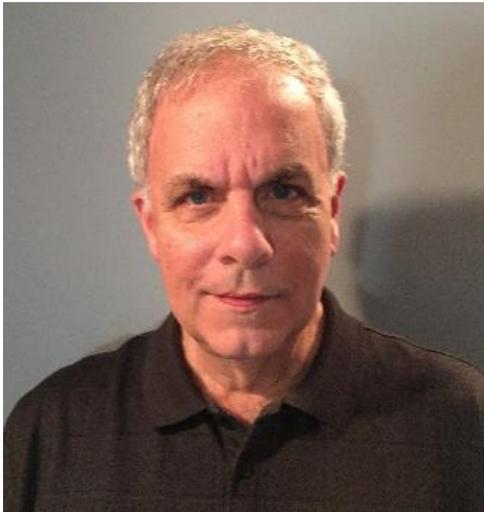
Flooding or wildfire emergencies may require you to evacuate. Are you ready?

Preparation, training, and knowledge of your equipment, communication modes, emergency power, and procedures are things to prepare before they are needed. So, you will be ready when you are the net control operator and someone calls asking for help.



Vintage Amateur Radio

de Bill Shadid, W9MXQ



Every once in a while, it is a good idea to share a few details of simple tricks learned over the years that can help keep a Vintage Amateur Radio – or an inventory of these interesting and challenging historic items – working and performing.

This month we will get into several subjects relating to things discovered over the years to make Vintage Amateur Radios work and perform better.

Replacement for Incandescent Pilot Lamps:

One of the first things that happens with a vintage radio is that one of the little light bulbs used to illuminate the frequency readout dial or the panel meter(s) is burned out. We refer to these as “lamps.” For most of us, we are referring to the #47, 6.3-volt, or the #1851, 12.6-volt, lamps that are common. The 6.3-volt or 12.6-volt operating voltage is not all that uncommon as it matches the voltage rating of most of the vacuum tubes in the radio. Some radios require such lamps to comfortably read the dial for determining frequency.

Finding suitable replacements for the common #47, #1851, or any of the other 2.5-volt, 5.0-volt, 6.3-volt, 12.6-volt, and more incandescent bulbs has become somewhat problematic. While suppliers from Asia exist and are plentiful at the present time, they lack the quality and consistency of the classic American bulbs from General Electric, Chicago Miniature, and others. The classic bulbs are available as new old stock (NOS) from the original manufacturers – but are becoming harder and harder to find. The Asian equivalent parts are inconsistent as to internal structure and can project objectionable shadows in the viewing area. The internal structure of a high-quality pilot lamp is consistent with the placement of the alignment pins in the base. The original radio manufacturers used this alignment to properly orientate the lamp mounting to provide a clear projection of light onto the panel – absent any shadowing from internal lamp parts.

A reasonably acceptable alternative to the classic incandescent lamp for use in radios comes in the form of LED Replacement Bulbs. I have found over time that the highest quality LED Replacement Bulbs come from a company called Titan Pinball. I have no association or connection with that company. However, in my opinion, they make a quality product. They can be found on eBay™ by doing a search (within eBay) for “Titan Pinball.” Look for “Warm White” color – or color temperature of about 2700-3000 Kelvin. That color target removes most of the harsh tones of the typical white LED. The light diffusion from the little LED bulbs is excellent.

Take a look at a comparison of a Titan Pinball LED Replacement Lamp and a traditional one from Chicago Miniature Lamp Company. The Titan Pinball product is a replacement for the 6.3-volt #47 Lamp. The Chicago Miniature Lamp Company lamp is an original #47 design.



**Titan Pinball
LED #47 Lamp Replacement
W9MXQ Photo**



**Chicago Miniature Lamp Company
#47 Lamp
W9MXQ Photo**

There is a nasty little secret when using LED Replacement Bulbs that can spell doom for your vintage radio. Occasionally, LED devices can fail to a short rather than an open circuit. Such a short on the filament line of the radio's power transformer can very quickly burn out the filament winding and significantly damage the radio. At the very least you must then find a replacement power transformer (almost unobtainium), have a custom transformer made (guess where that falls in price??!!), or find a suitable filament only transformer and install it in the radio. The failure of these devices to a short was unknown to me but came up in a discussion with a very well-respected radio technician who is a friend, Jeff Covelli, WA8SAJ. I believe this to be a very real potential problem.

To mitigate the dangers of damaging or destroying the power transformer of the radio, I urge you to follow WA8SAJ's suggestion and install a Pico Fuse¹ between the LED Replacement Lamps and the filament circuit of your radio. Only add this fuse in line with the LED lamps – not the overall filament circuit. I suggest a 0.5 ampere fuse here for two to four lamps.

Many old radios had a fuse in such voltage feeds. If not an actual fuse, some had a small loop of fuse wire that would melt and open in over current occurrences. Also, carefully check the filament line circuit diagram. This array of voltage and current distribution often is complicated and sometimes uses the current running the incandescent pilot lamps to provide adequate loading in places within the distribution. Only if the pilot lamps are directly across the filament winding of the transformer should LED lamps be considered. When in doubt, find a replacement incandescent pilot lamp!

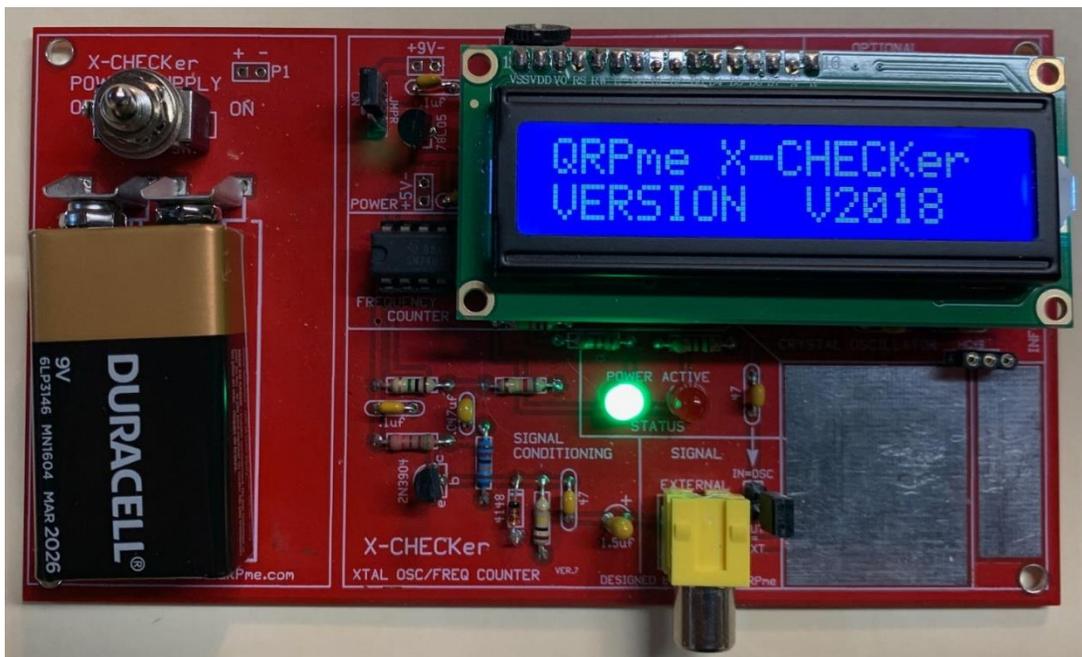
My personal use of LED Replacement Bulbs has run from quick adaptation to the idea and now back to refusing to use them. For this collector, the "look" of the best of the LED bulbs is not acceptable to my eye. While they truly do save energy, the savings in miniscule at best. So, I have put together what I consider a lifetime supply of high-quality new old stock (NOS) General Electric and Chicago Miniature Lamp Company

pilot lamps. Your preferences may differ and if the LED look is acceptable to you (and you protect the radio's power transformer) then this is a good way to go.

Checking Crystals:

As time goes on in restoring and using Vintage Amateur Radio equipment, we are finding that crystals are not a "forever device." They age and they sometimes become inoperative or move in frequency. In my collection of radio parts, I have crystals from the 1930's right up to crystals used for heterodyne band setting in radios from the 1980's. All groups share the same faults of being inoperative, off frequency (but probably within tolerance), off frequency to the point of being worthless, or oscillating right on (or very close to) posted operating frequency. It is good to check for crystal frequency accuracy before getting too far into the process of alignment.

So, okay, how does a restorer go about testing a crystal? I imagine there are all kinds of ways, but I used a small Crystal Activity Checker, called the "X-CHECKer." This little circuit board kit is available here: <http://qrpme.com/?p=product&id=Q17>



X-CHECKer Crystal Activity Checker from QRPme

W9MXQ Photo

Looking at the above picture – note the power toggle switch in the upper left-hand corner of the circuit board. You can also see the boot-up screen in the two-line LCD readout. The illuminated green LED indicates that power from the 9VDC battery (lower left corner of the board) is engaged, and the little checker is awaiting a crystal to check. The checking pads are located at the lower right-hand corner of the circuit board. See below for use of the device:



Checking a Crystal on the X-CHECKer

W9MXQ Photo

Holding the crystal in one's hand and touching its connection pins on the pads is all that is required to make a test on the X-CHECKer. The crystal shown is a 160-meter band range heterodyne crystal for a Drake R-4(x) series Receiver or a Drake T-4X(x) series Transmitter. The posted reading on the crystal body shows this to be a 12.6 MHz crystal. It shows itself to be oscillating at 12,601,400 Hz, or 12.601400 MHz. This is well within tolerance, and this is a good crystal.

Using the X-CHECKer requires some thought and checking of the design of the circuit. For instance, some are used in circuits that use frequency multiplication. In such cases it is to be remembered that the crystal will be marked by the factory to show its frequency in use – not necessarily the frequency for which it actually oscillates.

Let's take an example of what is presented in the previous paragraph. For 160-meters the Drake radios mentioned use a 12.6 MHz heterodyne crystal that works at its fundamental (12.6 MHz) frequency. This when mixed with other mixers in the radio nets a range of 1.5 to 2.0 MHz – which includes the 160-meter band. When the desired frequency range is 28.0 to 28.5 MHz, however, the crystal required is much higher in frequency. In this case, it is 39.1 MHz. That crystal value is too high for this kind of crystal, so the circuit takes the third harmonic of the crystal. So, 39.1 MHz divided by 3 would equal 13.033 MHz. The crystal I tested for that position in my Drake R-4C Receiver shows a reading of 13,025,730 Hz, or 13.02573 MHz. That is close enough for proper operation.

When I say, "close enough for proper operation," I mean that the difference in dial readout is easily accommodated by the mechanical dial adjustment on the R-4C Receiver.

Here is another picture of the X-CHECKer shown next to several of the kinds of crystals it can test.



QRPme X-CHECKer Device
Readout is indicating it is ready to test a crystal.

W9MXQ Photo

Shown above are four crystals. The one at the left is the 12.6 MHz 160-meter range crystal first mentioned above. The next from left is a range crystal from the Swan 100MXA Transceiver at W9MXQ. The large crystal, second from the right 7930.000 kHz crystal from WWII surplus. It oscillates at 7929.79 kHz, which is acceptable. The crystal at the right is an FT-243, WWII surplus crystal marked as 5950 kHz. It checks at 5949.24 kHz. Again, it is acceptable.

Another example is the crystal in a 1961 vintage Collins KWM-2 for the 7.2 to 7.4 MHz range. It is designed to operate at 10.355 MHz. The radio proved to be way out of range and even sluggish in working at all in that band position. When testing the crystal on the X-CHECKer, I found it to be operating at 10.400006 MHz. It was way off and needed to be replaced. Clearing that issue up before digging into other circuits in the radio is very beneficial.

I was made aware of the X-CHECKer from a good friend in the hobby. He is also a seller of vintage radio equipment².

Operating with Excessively High Primary AC Line Voltage:

Many radios built in the 1950's and even into the 1960's are designed to operate with 110 or 115 VAC as the primary supply voltage. These radios, operating today, see 120 to as much as 127 volts (personal experience) from the AC mains. As I write this, I am seeing 123 volts from my AC line monitor. That works well with my Yaesu FTdx-101MP that specifies 100 VAC to 200 VAC that is automatically accommodated. So, all is well with a current model radio.

This is much different as we move to older equipment. I find specifications to 110, 115, and 117 VAC as required power input from AC Mains. This tends not to apply to later vacuum tube radio equipment. For instance, the Drake R-4C Receiver, made up until about 1979 or 1980 specified 120 VAC – so it is relatively safe to use on today's AC Mains. The real problem collectable radios are the likes of the Collins S-Line Separates and the KWM-2 Transceivers using the 516F-2 AC Power Supply. It specifies, in my documentation, an AC Mains supply of 115 VAC.

These differences do not seem like much but a 6.3 VAC tube filament on a circuit design for a 115 VAC Primary will see over 6.8 volts at a 122 VAC primary. That will shorten the life of the tube. Similarly, the voltage developed by the power transformer for receiver and transmitter plate voltage will be increased to a point where they will stress the power supply components in the high voltage circuits.

Over the years, I had chosen to ignore this issue – that is, I ignored it until doing the math and understanding that in such delicate items as power amplifier tubes with their very narrow range of tolerance for over (or under) filament voltage for proper operation and tube life. The final straw for me was watching that my Collins KWS-1 Power Amplifier was significantly high in filament voltage on the 4CX250B finals and also generating enough extra plate voltage to compromise the filter components in the power supply. Equally, this was impacting many radios of that 1950's vintage Gold Dust Twins³ setup.

So much for the problem. How do we solve it? Actually, for the 110- to 120-volt side the solution is relatively simple with readily available equipment. Handling 220 VAC equipment is more involved and will be covered a bit later. For the 110- to 120-VAC items, I use an autotransformer (generally known as a Variac™ but this one is not a trademark Variac product). These are common on eBay and can come from Bulgaria, China, or

other offshore makers – all seem to look similar. The one I bought was sold on eBay, was brand new, beautifully made, and shipped from a warehouse in the United States. It was made in China and, from my experience, source by a company providing for good oversight of the manufacturing plant. Contact me (W9MXQ@TWC.com) for details.



Meter on the autotransformer ("Variac™) is reading voltage to the radio or device/load connected. Hard to read here but it is 110 VAC.

Meter on the AC Socket (on the right) is reading 122 VAC.

Shown at the top of the transformer is the voltage adjustment knob.

2000 VA Autotransformer – Variac™ Device

W9MXQ Photo

The pictured device runs cold with one of my Swan 550-watt 500cx or 750cw Transceivers, the Swan 600-watt 600-T/600-RC Transmitter/Receiver Twins. I set the secondary at about 110 volts. Output is sourced from the two outlets you see on the front of the autotransformer.

At W9MXQ, only current vintage equipment plus later vintage Drake and Cubic equipment operate without the autotransformer. The Drake and Cubic equipment are rated for 120 VAC – very close to the 123 VAC experienced here.

Now let's discuss a 220 VAC Circuit. If you can imagine the distribution of 220 VAC circuits in the United States and Canada you will note that it is not really 220 VAC – it is 110-0-110 (or, as it is here right now, more like 123-0-123 VAC. While a 0-240 VAC autotransformer would seem to work, they are intended for other locations, such as Europe. A single autotransformer will not work because in our installations (USA and Canada) we see the center-tap ground. So, rather than 0-240 volts, we like to see 120-0-120 VAC for our 240-volt AC installations. To accomplish what is needed, a user would have to have two of the above 0-140 VAC autotransformers in tandem – one on either side of the 120-0-120 circuit. While it is possible to combine two separate 0-120 VAC units, it is better using a single assembly where the two 0-120 VAC units are mechanically connected with a common rotating shaft and therefore always matched as to voltage setting.

At W9MXQ, I use a surplus General Radio W20G2 Dual Autotransformer 140-0-140 VAC to run Vintage Amateur Radio equipment requiring “220 VAC” primary. This includes the Collins KWS-1 Transmitter (1955 vintage), the Hallicrafters HT-45 Linear Amplifier (1963 vintage), and the National NCL-2000 Linear Amplifier (pre-1969 vintage). In all of these cases, the autotransformer is set to 110-0-110 VAC. The W20G2 Autotransformer will handle about 2,800 watts of power to the load.

Here are a couple of views of the General Radio W20G2 Autotransformer:



General Radio Dual W20G2 140-0-140 VAC Autotransformer
 Showing the two identical connection panels for the tandem 0-140 VAC autotransformers. Showing the top panel with the voltage control knob plus additional view of the mechanical construction.

W9MXQ Photos

This Autotransformer has recently been removed from service and is awaiting installation in a roller equipped floor cabinet.

In this dual configuration, each of the two separate transformers are linked by a common shaft and control knob.

The W20G2 140-0-140 VAC Autotransformer weighs about 45 pounds. It was sourced from the University of Iowa in a sale of excess laboratory assets several years ago. I found it via a lead from a fellow Collins collector. These, in surplus, cost about \$200.00 and then another \$100.00 to pack and ship. It appears to never have been used (but was sold as a “used, like new” unit). Note some missing screws on the connection panels. Those are part of my removed cable harness that I fabricated for installation with

the various radios. That cable and new connectors will be integrated into the new cabinet installation.

In closing this section, it is my suggestion that if your line voltage is close to 120-volts AC then you should be using an autotransformer with your vintage radios. If the radios are the vintage of later Drake models – then they are okay at current AC power voltage levels. I would, however, question the vintage of the AC-3 Power Supply (for the TR-3 Transceiver, the original R-4, R-4A, and R-4B Receivers and matching T-4X and T-4XB Transmitters (with early AC-4 Power Supplies). When in doubt, setup an autotransformer equipped circuit for using these radios. ANY, Hallicrafters radio should be using the autotransformer – and the same with Hammarlund, National, and others of the same period. Am I overly cautious? Probably. But being over cautious with Vintage Amateur Radios is always acceptable.

Cleaning Wrinkle Black Cabinets and Panels:

Many Vintage Amateur Radio pieces have cabinets that are painted with what is called Wrinkle Black Paint. Chemically, this paint is designed to have the top layer constrict a bit (I am not a chemist!!) when drying and thus provide an attractive finish that does not show finger marks and is remarkably durable. This is not to be confused with the smooth pebble texture finish found on many later Hallicrafters and Drake cabinets. Most will recognize this as the finish on virtually all Swan radio outer cabinets (top and sides). Going back into the 1930's through the 1950's, it was very common⁴.

This finish is very attractive but since it has pockets and folded over areas from the constriction of the drying paint, it tends to attract dirt from the hands when handled and generally grim from just being in the open air. Simple cleaning can actually make it look worse than when dirt first appears. While very durable, you must be very careful when cleaning it. Some cleaners, in my experience, such as Krud-Kutter™ tend to clean but at the same time can soften the paint – and allow damage when scrubbing the surface to remove dirt⁵.

For Wrinkle Paint cleaning I use one or the other of two products – 409™ or Fantastic™. I buy whichever one is the lowest price when I need to refill my supply. Spray the cleaner on the part and spread it around the surface with your fingers (unlike Krud-Kutter™, 409™ and Fantastic™ are safe to touch). After a few minutes, scrub all areas of the panel with a soft toothbrush (or similar soft bristle brush. Then rinse the part in water that is as mineral free as possible. I use Reverse Osmosis (RO) water for this purpose. You may need to repeat multiple times. The result is a very nearly brand new look. The key ingredient in my two favorite cleaners is ammonia. You can use household ammonia mixed in water (following the instructions on the ammonia container) but I dislike working around ammonia in its pure state, so I prefer the commercial cleaner version⁶.

There is another method – well known but not as preferred in my experience. These parts can react well to being run in a short cycle in the dishwasher. (Not the entire radio,

mind you!!) I have tried this method and found that it can begin to lift the paint in some cases. Those cases are likely tied to the original preparation of the metal for painting or even the actual paint mixture in spots. Be sure that the dishwasher is on a very short cycle, all heating is off, and water temperature is just slightly warm, at the highest. I experienced some bubbling of the paint that easily pressed back in place immediately after removal with no damage apparent once dry. I have never used this method again, however. It may work well – and maybe your dishwasher has more temperature control than mine.



A beautifully clean Swan 750cw HF Transceiver
After cleaning the top and sides with Fantastic™ Cleaner, scrubbing with a soft
bristle toothbrush, then flushing with water.
(Cover is removed for the process, of course!!)

W9MXQ

When flushing the final cleaned part with water, be sure to get collected water out of the areas where the metal is folded back onto itself to create a smooth edge. These folds collect water – and that can encourage rust. The thin steel of the Swan cabinets (typical of many of the time), are very susceptible to such damage.

Everybody has favorite tips they have mastered for the restoration and maintenance of vintage radios. Paint and finish seem always an issue as to aging components (off tolerance or failing crystals, resistors, and capacitors). Another area of concern with vintage radios is how to make them more able to deal with today's band crowding and the

noises that make their way into the speaker and headphones of today's operating. That will be one of several topics covered the next time I pen an article on operating and maintenance tips. Do you have a favorite fix or technique you would like presented? Let me know at the address in the next paragraph and I will include your thoughts, with proper credit to your work.

I appreciate that you read my articles. Remember that I am open to questions and comments anytime at my email address, W9MXQ@TWC.com.

A special note of thanks to my proofreader, Bob Bailey, W9DYQ. Bob is a lot more than a proofreader as he often adds commentary that makes it into the article. Certainly, in an article like this, it is good to have a second person review the process.

Credits and Comments:

¹ A Pico Fuse is an axial leaded subminiature fuse. They are similar in size to a resistor.

² My good friend and equipment seller is Mark Olson, KE9PQ, at Nationwide Radio & Eq. Sales LLC, Suamico, Wisconsin. He can be located at <https://ke9pq.com>

³ The Collins "Gold Dust Twins," as I have often mentioned are the Collins KWS-1 Transmitter, 75A-4 Receiver, and 270G-3 Speaker Console setup. They were called the "Gold Dust Twins" because of their high selling price back in 1955, when introduced.

⁴ Wrinkle Black Paint can also be known as Black Crackle Paint. As you come across this finish you should be aware of several finish appearances. Swan paint of this variety seems to have been unique – with the common variety found on military surplus equipment and several other amateur radio brands being of a more open texture than Swan.

⁵ I am a faithful user of Krud-Kutter™ for many areas of cleaning up old radios. However, be very careful with it as it will tend to remove silk screen lettering on radio chassis' and panels. It softens paint, as mentioned in the article.

⁶ Remember that ammonia or cleaners including ammonia can cloud clear plastic or Plexiglas™. These cleaners can ruin clear plastic covers over readouts, meter crystals/bezels, or other clear or shiny color opaque plastic parts. Beware!

© **W9MXQ**

Remember that these old radios are dangerous and unforgiving. High voltages that are way beyond the 12 VDC running today's radios. Keep your wits about you when you work with vacuum tube radios. Here are the scenarios:



Laugh Later



Laugh Never

On The Air!

de: Gary Sutcliffe, W9XT



HF conditions typically get better starting in September. As we approach the autumnal equinox, the days get shorter at a fast rate. We are losing just under three minutes per day. It adds up quickly. On September 1, we had 13 hours and 11 minutes of daylight. By the 14th, the day of our monthly meeting, we will be down to 12 hours and 33 minutes, 38 minutes less.

So have radio conditions gotten better? Well, not really. We have been getting a lot of solar flares. As I write this, on Labor Day, the A index is 64. You want it to be down around zero or low single digits.

We had a bit of excitement on August 29. The solar flux reached 252! We had been a bit over 100. It didn't reach 252 at the peak of the last solar cycle! But, it was an artifact of "corrupted data," as a later announcement indicated. There was a solar flare at the same instant they took the daily reading. It was sort of like measuring the light level in a dim room at the exact instant someone was taking a picture with a flash. Oh well.

International Lighthouse & Lightship Weekend

It sounds like the joint effort by the ORC and LEFROG Radio Club was a success. I stopped by on Friday to help set up and took the picture below. I understand Fred, W9KEY, has an article about it elsewhere in the newsletter. Be sure to check it out.



Lighthouse event set up. A 40 meter dipole was set up on the left.

SMC Fest

The Society of Midwest Contesters had its annual SMC Fest at the end of August. I am on the board of directors for this club and always attend this event, even though my 50th high school reunion was on the same day this year. Vic, WT9Q, went down with me.



Vic, WT9Q, receiving his LAA award for making 10,000 QSOs

DX University. This is an optional day for those learning the ropes of contesting or DXing. If you attend, you sign up for one or the other, but you can mix and match which presentations you want to attend. I will give my program, *Antennas, The Third Dimension*, on Friday afternoon. The talk is about the importance of matching the take-off angles of antennas for the type of operating you do.

Six Meter Grid Rovers

I talked about this a fair amount in the late spring and early summer during the sporadic E (Es) season. There is an award that Ken, W9GA, Gary, K9DJT, and I participate in, the Fred Fish

The SMC has an award for its members, the Lifetime Achievement Award. You earn the award by making 10,000 QSOs in specific contests. That is a lot of QSOs! Vic qualified last year, but he did it just after the cut-off for last year's presentation, so he had to wait almost a year to get his award.

Congratulations Vic!

W9DXCC

This event kicks off the fall radio season for me is W9DXCC. This year it is on September 17. It is a convention for DXers. The day is filled with talks about previous and upcoming DXpeditions, radio propagation forecasts, an update from the ARRL, and usually a technical talk.

There is a banquet on Saturday night. The banquet speaker is Tim Duffy, K3LR, who runs DX Engineering.

On Friday, September 16, the day before W9DXCC, they have Contest University and

Memorial Award (FFMA). Fred Fish, W5FF (SK), was the first person to work each of the 488 grids that contain land in the continental US.

It has become a difficult but popular award, with only 40 people achieving it. Most of them have been achieved in the last two years.

Besides the often-challenging propagation to some areas, many of these grids have few, if any, people living there, let alone active hams that operate 6 meters. In the DX world, DXpeditions fill the voids. On VHF, rover stations give us the rare ones. FFMA chasers owe a lot to the hams that go out and give us the rare grids, often at great personal expense and difficulty.

Gary, K9DJT, decided to give VHF roving a try. He outfitted a trailer with a tower and 6-meter beam. He gave it a test run to grid EN56 in late August with his friend Lyle, WE9R. This was a needed grid for me, putting me at 447 confirmed grids for the award.



K9DJT/R tower trailer ready to go.



K9DJT/R in operation



Gary, K9DJT/R operating 6 meters from EN56. He made 25 contacts in this operation.

Thanks Gary! I hope we see him out a lot next year during the Es season.

Pictures are courtesy of WE9R.

HRO Superfest

HRO will hold their Superfest on September 23-24. This is an excellent chance to meet with the manufacturers. At the bigger Hamfests, the lines to talk to the manufacturers are long, but here you often have a lot of time to chat and talk to them about their products.

Superfest is also the ARRL Central Division Convention, and they will have a table and ARRL representatives attending.

Wisconsin's largest ham radio manufacturer, Unified Microsystems, will have a booth showing my products. I will also be giving a talk titled *Receiving Antennas For All Yards*. It covers a variety of low band, low noise receive antennas from small loops to 1000'+ Beverage antennas. The forum schedule was not published at the time of this writing.

Contesting

I mentioned the Parks on The Air program a few months ago. I got into chasing parks, but I kind of got away from it during the 6-meter Es season, and I am stalled around 550 parks confirmed. The Fox Cities Amateur Radio Club is sponsoring an event to put Wisconsin parks on the air on September 17.

In addition to promoting Wisconsin parks and POTA, they are making a contest. There are several categories for park activators and home stations, both inside and outside of the state. Check out their website in the contest list. I just wish that they had not picked the W9DXCC weekend.

The ARRL September VHF contest starts on Saturday, September 10, at 1900 UTC. This gives plenty of time to hit the ORC Swapfest and get home for the start. Maybe you can try out that VHF purchase from the ORC Swapfest.

The exchange is your grid square. Work stations once per band, regardless of mode.

The September event usually does not have the Es propagation that the June event does. However, it sometimes has tropospheric propagation that can extend a thousand miles or more under really favorable conditions. Periods after a weather front passes through are good times to look for these conditions.

The California QSO Party starts October 1. This is probably the largest state QSO Party. It is not as good as the Wisconsin QSO Party of course, but I might be biased.

I usually try to put some time in as a shake-down for the station prior to the fall season. There is a lot of activity on this one. We work the California stations. Work once per band/mode. If the sunspots cooperate, we might have much more fun on the higher bands for the first time in years.

The multipliers are their counties. If you are unfamiliar with them, print off the county list and abbreviations from their website. If you have one of the top 20 out of state scores in the CQP, you win a bottle of wine! Talk about incentives!

DXpeditions

DXpedition activity is starting to pick up after a couple of years of being mostly shut down due to COVID. Some really good ones are planned for the end of 2022 and into 2023. Stay tuned.

Starting in September is an operation by a group of Argentina hams to San Andres Island. It is off the east coast of Nicaragua but is owned by Columbia. It should be an easy shot.

Svalbard is a group of islands way up in the Arctic Ocean owned by Norway. It may be best known for the Global Seed Vault, where seeds are stored inside a mountain as a post-apocalypse source of many varieties of plants. The natural cold will preserve them for many years.

A group of primarily American hams will activate the JW5E club station for a week this month. They plan to run three stations if propagation allows.

The Comoros Islands are in the Indian Ocean. It can be a tough path from here but improving sunspot activity may help us in early October. A large group of European operators will be heading that way. They even have a YouTube video!

<https://www.youtube.com/watch?v=fSPBmcAQW10>

That wraps up September. It really is a busy month for ham radio in the area. I hope to see you at many of the events.

W9XT's Contest, Operating, Special Event, and DXpedition Picks for September and early October 2022

W9XT's contest picks for September and early October 2022					
Name	Start	Length	Bands	Mode	Link
ARRL Sep-tember VHF	2:00 CDT Sep 10-11	6 hours	VHF	CW, SSB, Digital	https://contests.arrl.org/ContestRules/JanJunSep-VHF-Rules.pdf
WI Parks on the Air	1:00 PM CDT Sep 17	32 hours	HF, 6M, 2M	CW, SSB,FM	http://wipota.com/about/
California QSO Party	11:00 CDT Oct 1	30 hours	HF, 160M	CW, SSG	https://www.cqp.org/Rules.html

Dates/Times in local times. HF = 80, 40, 20, 15, 10 Meters

W9XT's DXpedition picks for September and early October 2022					
QTH	Dates	Call	Bands	Mode	Link/notes
San Andres & Providencia	Sep 16-28	5K0T	HF + 6M	CS	
Svalbard	Sep 19-26	JW0A	HF + 160M	CSD	
Comoros	Oct 5-17	D60AE	HF 160M	CSD	

Modes: C = CW, S = SSB, D = Digital (may include RTTY) HF = 80, 40, 20, 15, 10 Meters

W9XT's operating & event picks for September and early October 2022					
Event	Dates	Call	Bands	Mode	Link/notes
ORC Fall Swap-fest	Sep10				https://ozaukeeclub.org/downloads/fall-swap-fest/2022_Fall_Swapfest_flyer.pdf
W9DXCC	Sep 16-17				https://w9dxcc.com
HRO Superfest	Sep 23-24				https://www.hamradio.com/locations.cfm?storeid=21
Radio Expo Hamfest	Sep 25				http://www.chicagofmclub.org/images/Radio_Expo_flyer_2022.pdf

Ozaukee Radio Club Minutes of Membership Meeting. 8/10/2022

de: Ken Boston, W9GA, Secretary

The monthly ORC meeting occurred at the senior center as we have returned to live in-person meetings, along with a streaming version held via Zoom.

ORC 1ST VP Bill K9GN officially initiated the meeting at 7:29 PM; and with actual members attending, a go-around was conducted. Zoom attendees were also in attendance but were not addressed individually. The ORC was presented with a plaque for placing 1st place in the 2022 WI QSO party: presented by Chuck W9WLX and accepted by Gary W9XT for the club. Tom W9IPR reminded the membership of the upcoming hamfest and solicited further volunteers to help.

Program:

Bill, W9MXQ gave a presentation on the line of R L Drake Linear RF amplifiers. These amps were introduced in the late 1960s with the L-4 linear, meant to match the TR-4 transceiver and other Drake transmitters. The L-4B followed, using a pair of 3-500Z tubes. Late in the 70s saw the L7 and L75 introduced, to match the solid-state transceivers, the TR7 and TR5. Bill specified several details along the way that identified the particular models, as they evolved. He also revealed some failure modes in the models and added repair details.

Scholarship Auction:

Stan WB9RQR held a sort auction, with a small variety of parts and cables auctioned off.

Committee reports:

[there were no first or second VP reports and no RPT VP report]

Treasurer: Gary N9UUR gave a short verbal report, listing the balances in all the accounts, and also a \$300 payout to assist the lighthouse event. The July treasurers' report was accepted in a motion made by W9DHI, with 2nd by W9GA, and carried.

Secretary: Ken W9GA reported the July 2022 minutes are posted; a motion to accept was made by KC9FZK, 2nd by N9VSV, and motion carried.

Scholarship/STEM: Tom W9IPR hoping to convene the STEM committee to consider some projects on the local level, with awards to be presented locally.

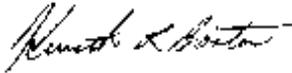
Tech committee: Greg W9DHI will be turning over the zoom meeting operation to Bill KD9HLN effective in September.

OLD business: Tom W9IPR added some further detail for the upcoming fall Swapfest.

NEW business: Fred W9KEY gave a sort rundown on the upcoming lighthouse event, with some of our members joining LEFROG Radio Club in activating the Port Washington lighthouse for 2 days in mid-August. He is seeking more volunteers for the event.

Adjournment: WB9RQR moved to adjourn, W9IPR 2nd, motion carried; time ending was 9:08 PM. There were 24 in-person attendees, 12 Zoom attendees.

Respectfully submitted,



Kenneth Boston, W9GA, Secretary:



Upcoming ORC Monthly Meeting Programs

de: Pat Volkmann, W9JI

- September – Dave Ellison, W7UUU - From the Ashes: Fire and Rebuilding the Ideal Ham Shack
- October – Jason Spetz KC9FXE, ARRL Wisconsin Section Manager
- November – Open
- December – Open
- January - Elections

We need some programs for later in the year. Please consider sharing some of your experiences with the rest of us. Contact Pat, W9JI, with your program ideas.

Creating a Presentation

Many of our presenters use Microsoft's PowerPoint to organize and present their information. If you don't have access to or aren't familiar with PowerPoint, there is an alternative. The Open Office package contains Impress, which is similar to PowerPoint. Impress is easy to use and available at no charge. You can check out OpenOffice here: <http://www.openoffice.us.com/>

The monthly program is the highlight of the Ozaukee Radio Club meeting. We are fortunate to have a number of very talented people in our club, many of whom have shared their knowledge through a presentation. Share your expertise and experience with the club. Programs can be on any topic that is ham radio related. Contact Pat Volkmann, W9JI, at orc_pat_w9ji@outlook.com to discuss your idea for a program

ORC Meeting Agenda <i>August 10, 2022</i>	
1. 7:15 – 7:30 PM Check-In and Introductions	6. 1 st VP Report: Ben Evans (K9UZ)
2. 7:30 PM Call to Order: President Pat Volkmann (W9JI)	7. 2 nd VP Report: Bill Greaves (K9GN)
3. Announcements, Bragging Rights, Show & Tell, Upcoming Events, etc.	8. Repeater VP Report: Gregg Lengling (W9DHI)
4. Presentation: Dave Ellison W7UUU From the Ashes: Fire and Rebuilding the Ideal Ham Shack	9. Secretary's Report: Ken Boston (W9GA)
5. President's Update: Pat Volkmann (W9JI)	10. Treasurer's Report: Gary Bargholz (N9UUR)
	11. Committee Reports
	12. OLD BUSINESS
	13. NEW BUSINESS
	14. Adjournment

**Next Month's ORC Meeting
Planned Hybrid In-Person/Zoom Meeting
12 October 2022**

**Program
ARRL Wisconsin Section Manager
Jason Spetz KC9FXE**

7:00 PM – Doors Open
7:15-7:30 PM – Zoom Check-In
7:30 PM – Meeting Begins



ORC Regional Fall Swapfest



The Ozaukee Radio Club presents its 17th annual outdoor regional
Fall Amateur Radio and Hobby Swapfest

Saturday, September 10th, 2022

Firemen's Park (W65 N796) on Washington Avenue in Cedarburg WI 53012
N 43 ° 18.283' W 087 ° 59.500'

Setup and general admission from 6am to noon – Door prizes

Refreshments available inside the exhibit hall

\$5 admission at the gate – buyers and sellers – 12 & under free

Just park and sell your stuff or just browse & buy their stuff

Inside tables \$10 as available (5 for \$40) – ARRL and Commercial Vendors are typically inside



Go to

www.ozaukeeradioclub.org or

Facebook.com/orcwi

For more information call

262-421-6351

swapfest@ozaukeeradioclub.org