



The *ORC* Newsletter

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ORC Repeaters on 146.97 (-127.3PL), 224.18 (-127.3PL), 443.75 MHz (+127.3PL) - Callsign W9CQO

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From the President

de Pat Volkman, W9JI



December is here again, signaling the end of another year. The Holidays will be here soon. For most of us, celebrations will be different this year because of disruption from the Corona virus. The vaccine is in sight and with it the promise of a more normal future. I am grateful that we are able to keep in touch with Zoom meetings and the repeater. I do look forward to the possibility of in-person meetings and a Hamfest later next year.

The Repeater Committee is reviewing the results of the recent repeater survey. We had over 40 responses and many thoughtful comments. The Committee will report on the results at an upcoming meeting. Thank you to all who took the time to fill out the survey and share your thoughts with us.

The election of Club officers will take place at the January meeting. Tom Ruhlmann, W9IPR, is the Chairman of this year's Nominating Committee. Tom has prepared a list of candidates for each of the positions. That list appears in this month's newsletter. If you are interested in running for office, please contact Tom at teruhlmann@wi.rr.com.

To vote in the election your dues must be paid up. You can renew through the ORC website or by sending a check to the Treasurer. Information on renewing can be found on the Club website at <https://ozaukeeradioclub.org/>. Click the link in the upper right hand corner.

Some time ago, I began the process of converting all my 12 volt power connections to Anderson Powerpoles. Powerpoles are very convenient, much easier than the Molex connectors that I used to use. One problem with Powerpoles has been how to mount them in a panel. There are several solutions that have been around for a while, each having their drawbacks. I recently found a new product that works very well and is less expensive than the others. They're called Anderson Autogrips and are made by Hardened Power Systems, located in Tennessee. Autogrips are CNC milled from high density polyethylene, a stable and sturdy plastic. The Powerpoles are an "interference fit" in the holder. That means that the hole is a bit smaller than a Powerpole, requiring quite a lot of insertion force. They also didn't come with instructions, but after some head scratching I figured out how to insert the connector. See you at the meeting.—Pat, W9JI



THE COMPUTER CORNER

No. 273: Why NOT to use Teamviewer

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We are into the 27th year (!) of the Computer Corner, and I have not written many negative articles in all that time. Well, maybe a couple on Microsoft. But never before on Teamviewer. However, it is time.

For those of you who don't know, Teamviewer is software that permits you to take control of another computer, across the room or across the world, and across platforms (Microsoft control of a Linux machine, or the reverse, and the like). It works well. And there are several other software packages that work as well or better than Teamviewer, so they are not the only game in town.

Teamviewer claims that it is free for non-commercial use. But lately, they have made it very difficult to use if you are not one of their paying customers. I claim, therefore, that it is no longer free for non-commercial use; rather, they are placing impediments in the way of non-commercial use by non-paying customers, contrary to what they advertise.

What are they doing? Using criteria to judge your use that they admit they will not disclose. When you use their software it comes up with a note to the effect that you are using it for commercial purposes and it will shut off your remote connections with in 5 minutes. This effectively makes the software useless for most users.

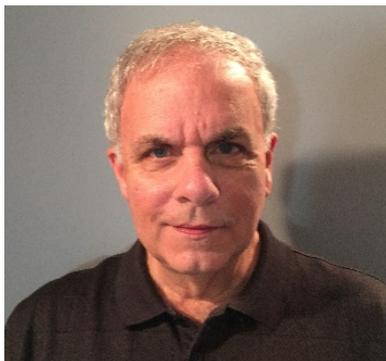
Now, let us look at my case to judge. I have three computers in my office: my main desktop, a laptop, and my wife's laptop. Two of those are dual-boot, using both Windows and Linux. Therefore, we could count those as 5 separate computers to be controlled remotely by Teamviewer. Two floors down in my basement are three more; one Windows/Linux dual-boot machine, one is a pure Linux machine and one is a pure Windows machine for Winlink. That is 4 more computers for a grand total of 9 computers at my address. Beyond that, I maintain 2 Linux computers off-site for my son-in-law and one more Windows machine for a friend. That totals up to an even dozen platforms, though it is only 9 physical computers.

That admittedly is a lot, but I use Teamviewer only to update software or to help a relative or friend when they get into trouble or to prevent having to run down to the basement to check into a Winlink net. No money is involved at any time. And I explained all this back in August 2019 when I filed a Declaration of Private Use with the company, outlining how I used it to provide help to family and friends and monitor and administer devices outside of a commercial environment. That worked for about a year, but now the time limited use notices that makes the software unusable have come back. Accordingly, I removed Teamviewer from all 9 computers yesterday, and now use one of the other remote software packages exclusively (for awhile, I was using two such packages, with Teamviewer as a backup). If you need this type of software, I recommend AnyDesk. It works well (actually somewhat better than Teamviewer) without the unreasonable (and I think untruthful) restrictions.

Happy Computing!

Vintage Amateur Radio

de Bill Shadid, W9MXQ



Sometime in the past, I penned an article on what would be called rare or even “unobtainium¹” ham radio products. That came with a promise to detail some of those products, based on personal experience.

As I have often said in the past, in every product family manufactured, there are common items in the resulting population and items that are somewhat hard to find, if you are a collector. Ham radio is no different – there are items from the past you can readily find, items that can take a lot of time and work to find, and then there are items that seem impossible to locate – no matter how

hard one tries.

One such hard to find item is what my friend, Mark Olson, KE9PQ, who runs a business based on Vintage Amateur Radio Equipment², once referred to Swan’s last vacuum tube-based transceiver as “The Swan Song of Swan.” That is the theme of this article’s subject.

The radio defined here is the Swan 750cw Transceiver. It dates from its introduction, in 1977. Most think of it as Swan’s last tube transceiver, so it was their “Swan song.”

Here is a picture of the Swan 750cw as it sits with its matching PSU-3 AC Power Supply and Speaker . . .



**Swan 750cw HF SSB/CW Transceiver
Shown with its matching PSU-3 Power Supply/Speaker**

W9MXQ

The 750cw was more like the Swan 500c and 500cx models than it was any unique, upgraded product. Except, that is, for its rather odd “cw” in its model number. More about that a bit later. For now, look at some comparisons between the extremely popular 500cx and the 750cw:

- Both models covered the 80 through 10-meter ham bands. There was some overlap for MARS³ and CAP³ use with no modifications for those services required on either radio.
- Power input was the same with 550 watts PEP input on SSB and 360 watts DC input power on CW. Output was roughly 275 watts on SSB and 180 watts DC on CW. There was some variance band to band with less power on 10 meters.

- Receiver specifications were identical.
- The rather unique Swan conversion scheme – with the VFO running on different ranges, depending on the operating frequency band.
- Regrettably missing on the Swan 750cw, but present on earlier models, was the effective Automatic Noise Limiter circuit. While not a true Noise Blanker, it was effective on many kinds of impulse noise. (Swan did offer an external cabinet mounted Noise Blanker as an option for the 500c, 500cx, 700cx, and 750cw. It was also quite effective – especially when these radios were operated in a vehicle.)

Up to the release of the 750cw, the model number of Swan transceivers closely paralleled the SSB input power of the radios. Between the 500 series and the 750cw, Swan had offered the 700cx transceiver with SSB and CW input power of 700 and 400 watts, respectively. That model owed its performance to its Tung Sol model 8950 graphite anode sweep tubes. The tubes had a short marketing life due to the demise of tube televisions (their primary volume customer). By 1977 these tubes were most likely close to impossible to source for an OEM product. So, Swan returned to the 6LQ6/6JE6/6MJ6 tubes that had begun their use in Swan radios with the 500c and 350c models. With the introduction of the 750cw the move to an increasingly higher model number seemed to meet a marketing plan requirement – thus ending a long connection between model number and power.

The biggest differences one can see in the Swan 750cw, when compared to earlier models was the meter and the readout dial color. Long known for their large, easy to read, and smooth operating meters, the 750cw moved to a relatively small meter with unacceptable (in my opinion) resolution and erratic operation. Perhaps the biggest problem is the black on white background on the earlier models compared to the white on black on the 750cw. Look at the meters and the dials compared in these pictures:



Swan 500cx – Left side of Front Panel
W9MXQ



Swan 750cw – Left side of Front Panel
W9MXQ

Swan seemed to try and improve the 750cw meter. Even though the total number of 750cw built was small, they tried to reorganize the space available for the legend. But it was not too successful as the mechanical characteristics of the meter assembly did more to determine the view than did the printing of the face. If you look carefully at the two pictures below, you can see that the actual arc of the meter readout scale is not changed from one version to the other. Moving of the Swan logo from the left side to the lower center only seems to improve resolution.



Swan 750cw – Early Meter
W9MXQ



Swan 750cw – Late Meter
See Note 4

There may have been a perceived difference in resolution, but it was not present in reality!

The change in the dial segment was from a two-color background to a white on black frequency dial. At that time, it appeared that it was to give a more military look to the radios. I think that the change removed a very well recognized Swan look of color. But, at the same time, the new look was not necessarily objectionable.

Owners of the Swan 350, 350c, 500, 500c, 500cx, 700cx, HF-700S, and 750cw will see little difference in the interior view of their respective transceivers. Here are top interior views for the 500cx and the 750cw . . .



Swan 500cx – Left side of Front Panel
W9MXQ



Swan 750cw – Left side of Front Panel
W9MXQ

Evident in the 500cx is the shielded tube at the top center of the picture – and the fact that there is a vertically mounted circuit board in that location in the 750cw. That is V13, the Balanced Modulator tube in the 500cx – replaced by a solid-state circuit in the 750cw. Also evident is the change in brand of the i-f filter (blue in the 500cx and silver in the 750cw). The i-f filters in Swan equipment were some of the best found in ham radio. For the most part, these two designs stayed the same throughout the production of the 350, 350c, 500, 500c, 500cx, 700cx, HF-700S, and 750cw models. The supplier of choice, however, did change, as it appears. I have seen both Network Sciences and C-F Networks filters in Swan radios.

The PSU-3 AC Power Supply/Speaker (shown to the left of the 750cw in the first picture in this article) is a gem and is a substantial upgrade over the 117x and 117xc (Power Supply alone and with Speaker, respectively) that had been in service with Swan transceivers since the time of the Swan 240. The PSU-3 used the power transformer from the much more substantial Swan 600-T Transmitter and gave a new power capability for the high-powered Swan HF Two-Tube Final HF Transceivers. The PSU-3 Power Supply was first marketed with the extra powerful 700cx. However, the 117x and 117xc will, in fact, power even the 700cx Transceiver – but it will run a bit warm doing so.

The 750cw was marketed as “the CW Operator’s Dream” due to its included digital bandwidth filter (an audio-based filter) that was quite effective at 80 or 100 Hz. While audio filters have their advantages – they can only partly replace a good narrow bandwidth crystal or mechanical filter in the i-f path. The audio filter in the 750cw (installed also in the same form in the HF-700S) is relatively free of hiss and other issues that makes many such filters objectionable. Like most radios when operating CW, the proper use of RF Gain adjustment in the 750cw minimizes any AGC-pumping evident in these filters outside the AGC loop.

The audio filter is nice, but CW as a convenient operating feature eluded most Swan transceivers before the release of the Astro⁵ models – that is, unless the Remote VFO is installed. While no longer manufactured at the time the 750cw Transceiver, the Model 508 VFO – shown below with the 500cx Transceiver – worked perfectly as an accessory.



**Swan 500cx Transceiver with 508 Remote VFO and 117xc Power Supply/Speaker
W9MXQ**

The Swan transceivers mentioned here lacked the capability to shift the receiver (separate from the transmitter) for listening comfort. Sometimes this was necessary on SSB as well. That feature is present in radios with Receiver Offset Tuning (RIT) as a part of their feature set. The use of a Remote VFO allows that flexibility. Late model Swan Remote VFO’s (such as the 410c⁶ or the 508) are plug and play with the 750cw. Adding the remote VFO has the added benefit of allowing split operation – such as often done working DX. The lack of Receiver Offset Tuning was not just a Swan issue. Collins, Drake, Galaxy, and other transceivers of the day lacked this feature – but they all offered accessory Remote VFO units. Only Hallicrafters offered Receiver Offset Tuning from the beginning of their SSB and CW transceivers. National followed shortly behind Hallicrafters. Swan’s late generation solid-state transceivers, just over the horizon at the time of the 750cw, offered this important feature.

The CW transmit monitor in the Swan 500c was terrible. It improved a bit with the 500cx and 700cx (marginally!) then seemed to finally work in the HF-700S and the 750cw. Even in those last two units, it was only barely acceptable.

These are the last two-tube final Swan Transceivers – four models.



Swan 500cx

W9MXQ



Swan 700cx

SwanNetwork



Swan HF-700S

KE9PQ



Swan 750cw

W9MXQ

The HF-700S is more toward a Cubic Communications product (Swan's parent company) in panel design and cabinetry. And, unlike the other three, only the 700cx used the 8950 final tubes – as noted, above.

The Swan HF-700S and the 750cw are electrically identical – according to what I can determine by an examination of literature and schematics. Notice the Swan styling change between the 500cx and the later 700cx and 750cw. The line across the lower third of the front panel on the 500cx dips below the main tuning knob while on the 700cx and 750cw it seems to go through the knob area. While mostly identical in layout, the 750cw and HF-700S also differ in two other places. One was the use of the much more desirable paddle switches in the HF-700S and the movement of the PTT/VOX switch on the HF-700S to the location under the meter rather than to the right of the readout window on all models up through the 700cx.

Swan radios are very dependable – probably tied to their rather unsophisticated design that provided excellent basic communication. That was a hallmark of Swan's product engineering until the release of the much more advanced Astro⁵ line of radios.

A dependability issue in late models was the balanced modular in the HF-700S and the 750cw. Swan moved to a solid state design after progressing from a 7360 tube based design, to a 6JH8 tube based design, then on the HF-700S and 750cw the final move to a solid state design based on a MC1496 chip. The solid-state design increased failures by 20 times⁷. If you find yourself with a Swan HF-700S or a 750cw you had better also have a few Motorola MC1496P chips on hand as well. It would seem from I can determine, use of the optional SS-16 i-f filter seems to be linked with the failure of the solid-state balanced modulator⁷.

I remain unsure of which of the two transceivers, the HF-700S or the 750cw was the last of the Swan two-tube final amplifier transceivers. Certainly, the 750cw was the last that “looked like a proper Swan should look.” Neither of them was a commercial success with the HF-700S seeing only 950 made⁷, and the 750cw seeing only 1,000 units⁷. A lot of evidence – such as the complete appearance revision – would seem to indicate that the HF-700S may have had that honor. Whichever one it really was – I can tell you that all Swan and Cubic radios have a special place with me and my life as a ham radio operator.

Special thanks go to Bob, W9DYQ, for his proof reading. And I appreciate that you read my articles. Remember that I am open to questions and comments at my email address, W9MXQ@TWC.com.

Notes:

¹ This is found in a Bing search of the word, “unobtainium.”

² Mark Olson, KE9PQ, is the owner and operator of Nationwide Radio & Eq. Sales, Inc. Locate them at [Nationwide Radio \(mybigcommerce.com\)](http://NationwideRadio(mybigcommerce.com)).

³ MARS is Military Auxiliary Radio System. CAP is Civil Air Patrol. Check these references:
MARS: [Military Auxiliary Radio System - Wikipedia](#)

CAP: [Civil Air Patrol - Wikipedia](#)

⁴ Unfortunately, while I am certain from personal experience in seeing these meters, I cannot identify the source for the late 750cw meter picture.

⁵ Subject of a future article.

⁶ The 410c requires the use of the Swan Model 22 Remote VFO Adapter to use with any Swan transceiver. The 410c has no internal switching for VFO selection as does the model 508. This necessary switching is accommodated by the Swan model 22 or 22B Remote VFO Switch. This device plugs into the rear panel Accessory connector of Swan Transceivers (and the 600-R and 600-RC Receivers) and allows for necessary switching by extending a switch over the top of the radio – easily reached by the operator.

⁷ Information from the Swan Compendium, Revision 4.

Remote Station Building, Part 3

De Jeff Whisler W9KW

At the end of Part 2 of this series (in the December 2019 issue of this newsletter), I lay on the deck at my house after a crushing fall from the roof after returning from an inspection of a chimney chase-mounted antenna that I was going to remove.

October 5th, 2019, continued. I was in absolute agony. Fortunately, I did not lose consciousness. I briefly considered trying to crawl to my truck and drive myself to the hospital. Hoping that they could fix me up enough so my wife wouldn't kill me. I made a very small movement towards my truck which caused profound blinding pain and I quickly abandoned that idea. Fortunately, I had my cell phone with me and despite taking the brunt of the fall, it still worked. About 45 minutes later the cavalry arrived. I spent the next two months in four different hospitals or rehabilitation facilities, enduring five ambulance rides, two surgeries and two eight-inch screws all of which put humpty dumpty back together again. After my discharge I enjoyed another two months of arduous physical therapy.

To all the people who took care of me over those four months, you have my deepest and heartfelt gratitude. At the top of that list are my wife Correen and RN daughter Stacy. Correen worked tirelessly to get me fixed up and back home. She waited patiently for 45 days before chastising me for the foolish behavior which led to my accident. Daughter Stacy kept all the medical folks on their toes making sure they were doing their very best to make me better. I couldn't have asked for a more skilled or compassionate care team.

I can't turn the page on this episode without offering a few lessons learned. The first is don't climb alone, ever. No matter your skill level or physical condition. Even if it is just a short simple job wait until someone can be there to observe and help. Think thru your plan of action and how you could make it safe before you start to climb. I could have easily rigged a safety line and body harness as well as a stop for the ladder base. Despite having all the materials and knowhow I completely skipped that step. Don't be like me. The medical expenses alone from my fall were well over \$300,000.

Now back to remote station stuff.

In January 2020 I began to think about next steps with the remote project. I wanted to finalize the software solution for internet access and radio and peripheral controls. I am not a LAN / WAN guy and I don't write code. I was looking for something I could plug and play and it needed to be compatible with ICOM radios. Further, the solution needs to work with my kludgy internet connection which is a Wi-Fi Hot Spot using a cellular router. I wanted to provide an overview of the popular software solutions as well as some basic pros and cons. Alas, after careful consideration I decided based on my skill level I couldn't do that properly. Your experience, if you should try something similar, will be affected by many different variables including your choice of radio, computer operating systems and ISP method.

With the above in mind, you might be thinking this sounds way too hard for me. Not so. There are many ways to approach this problem. Perhaps you have been off HF for a while and can't

have an antenna. If you have internet access there are options for you. As I was recovering, I spent a lot of time in a recliner not able to get down the stairs to my shack in the basement. One day, I got special dispensation from the chief medical officer to go down to the shack for a brief visit. While there, I installed TeamViewer software on my shack computer which is connected to my IC-7610. Back upstairs I connected to the shack computer from my iPad also using TeamViewer and was thus able to control WSJT-X / FT-8 to make a number of contacts. It was very simple and a real morale booster for me.

My basic remote requirements are as follows:

- All operating modes: SSB, CW and Digital
- Switching between three antennas
- Rotator control (Yaesu)
- Future amplifier control
- No custom software coding
- User friendly....HiHi

There are three major use cases for “remote operation.” The first is on a “Local Area Network” or LAN. For example, the radio and its control computer hardware and software located in the basement and your operator control computer or tablet is upstairs in the living room or something similar. This is easy to do and relatively straight forward. Second is a case where your radio, computer and shack are located at your primary residence and you want to operate while away from that home perhaps traveling for business or pleasure and connect over a WAN (aka the internet). Many of the popular remote software and hardware solutions are designed to support this specific use case. It **assumes** you have an unlimited, fast, robust, reliable internet connection such as Cable or Fiber to the Home. In addition, many of these solutions require a Publicly Addressable IP at the radio site to function. I am operating in a third use case. This is where the radio, antennas and controlling computer hardware and software is, in my case, a truly remote location. It’s not the end of the world but you can see it from here. It is akin to a repeater site housed on a mountain top. You use the remotely sited radio from the comfort of your home 100 miles away. The critical cable or FttH Internet connection is simply not available. It might surprise you to learn that much of rural America has little to no internet access. For most rural dwellers the best they can get is dial up. Some, as in my neighborhood, don’t even have that as an option. I am fortunate to have (for the moment) a cellular-based internet service which is reasonably priced. The problem is cellular carriers use CG-NAT to route internet traffic and that means I don’t have a public IPv4 address to access my radio.

One basic option which I am using is to use remote desktop access software. These are popular programs that have permission to bypass CG-NAT and allow you to connect remotely to another computer. You still don’t have a public IP but this the approach I am using at present.

Remote Desktop options include:

- TeamViewer (free): TeamViewer has a reputation of treating hams poorly, classifying them as commercial customers. Not good. <https://www.teamviewer.com/en-us/>

- MS Remote Desktop (not so free) <https://www.microsoft.com/en-us/download/details.aspx?id=50042>
- Anydesk (free): I am using Anydesk at present. <https://anydesk.com/en>

The next options needed are radio control software tools which allows the user to control another computer thru a LAN or the internet (WAN) and then to your radio:

- Remote Hams (free): Originally engineered for Elecraft radios. Needs a public IP. Remote Hams allows people and clubs to “host” their stations and provide access to members or guests. <https://www.remotehams.com/>
- ICOM RS-BA1v2 (\$125): Hopefully you are fluent in Japanese language and culture. Kludgy, hard to setup, and needs a public IP. This is from a guy who loves Icom radios. <https://www.icomamerica.com/en/products/amateur/hf/rsba1/default.aspx>
- Ham Radio Deluxe (current version is \$99): <https://www.hamradiodeluxe.com/>
- Win4IcomSuite (\$60): My choice. Easy to use, outstanding support. <https://icom.va2fsq.com/>

I also acquired rotator controller software, PSTRotator. It has also been very helpful.

On the software side, I still have some other applications I want to integrate including CW Skimmer, N1MM and HDSDR.

I did run a Category 6 Ethernet cable from my cellular router at the remote radio site to my shack computer to remove any latency that would have been there using Wi-Fi.

I would like to report more specific results, but the pandemic has impacted my ability to test things out in depth. My main concern right now is latency with my current setup.

Part 4 will focus on the remaining installation details of the tower, antennas and grounding system.

If you are a network engineer reading this and thinking to yourself “Why didn’t he do it this way?”, please reach out to me directly at Jwhisler33@gmail.com I would love to hear your thoughts.

73,

W9KW

DX'ing & Contesting

De Gary Sutcliffe (W9XT)



If you turned your HF radio on during the last week or so of November, you got a taste of things to come. We had a nice sunspot group, and then another large group of sunspots rotated into view. As the CQWW DX CW contest got closer, the new group rotated towards us, and the solar flux rose.

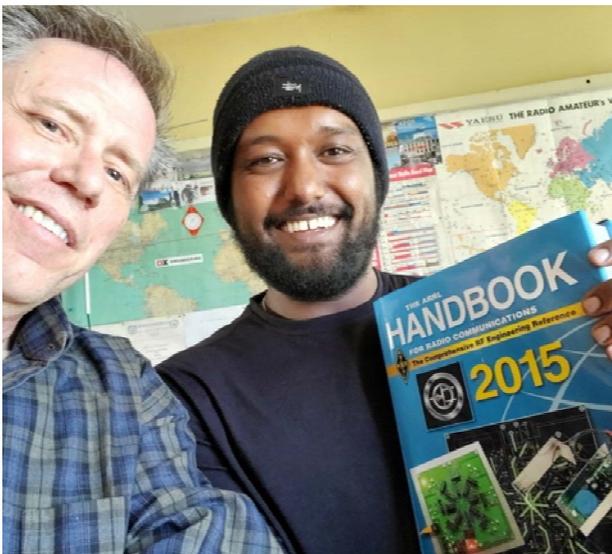
The solar flux, a proxy for the number of sunspots, had been hanging in the low 70s the last few months but shot up dramatically. By the November 28-29 weekend contest, it was 110, and I saw it briefly hit 116. By comparison, solar flux was 70 in last year's running. The last time the solar flux was in this range for the CQWW CW contest was 2015,

when it was 99.

The better conditions meant 10 and 15 meters were at their best in years. I made some contacts in western Europe on 10M. I made my first CW contact to Japan on 15M in three years. Twenty meters also provided some longer distances than in recent years. Hopefully, this means the sunspots will return faster than usual after a minimum and not just a tease. Unfortunately with COVID the number of countries on were way down from previous years.

There has not been much DXpedition news in past months due to COVID-19 pretty much ending those. There is one that just started, and this one is extra special to me because of the Wisconsin connection. Bob, W9XY, and Ken, K4ZW, arrived in Ethiopia on December 3. Both are friends of mine. Bob lives up in Montello, Wisconsin. Ken lives in Virginia but grew up, I believe, in the Sheboygan area.

They are at the Addis Ababa Institute of Technology and helping out the ham club there. The first job is helping the students make repairs to the station. Unfortunately, much of the repair materials are being held at customs. They had hoped to be active on the low bands, but staying there at night is not possible because of recent civil unrest. They also discovered a noise source that is S9 and covers all the bands. They have their work cut out for them.



Bob, W9XY, presenting an ARRL Handbook to Efriem, the President of the Ethiopian Amateur Radio Society. W9XY Photo

They will be using the calls ET3AA and ET3YOTA (Youth On The Air – December is YOTA Month). The best band will probably be 20 or maybe 15 meters. They have been spotted on 15 meter SSB. They will be leaving on the evening of December 12. The ARRL 10 Meter Contest is December 12-13. They are hoping to start the contest and have the students take over after they leave.

Speaking of the ARRL 10M Contest, that could be interesting if the solar conditions hold up. I covered it last month. It would be nice to have some propagation besides brief Es opening to isolated spots in the US and occasional whispers out of South America. Signals to Africa, South America, and the South Pacific were good on 10M during CQWW. Some F layer propagation to the West Coast would be a real treat.

The last contest for the year is the Stew Perry Top Band DX Challenge. This is a 160M CW contest that starts at 1500Z and runs for 24 hours on December 26, but you can only operate a maximum of 14 hours with 30 minute minimum time off periods. There are high, low, and QRP categories. DX spotting assistance is not allowed for single op categories. You send your grid square for the exchange.

Scoring is much different than most contests. First, there are no multipliers. The score is the total of your QSO points. QSO points are based on the distance between the stations, as computed by the grids. You get one point per QSO, plus one additional point for each additional 500 KM distance. Contacts to places like Hawaii are worth a lot of points.

The points get multiplied by 1.5 if you are low power and by three if you are QRP. The neat thing is that the points are multiplied by two if the other station is low power and by four if the other station is QRP. Of course, you have no idea what power the other station is running. That is all computed based on the other station sending in a log. It is interesting watching the claimed scores go up as logs are received.

Because of the multipliers for working lower powered stations, DX is often willing to listen harder for weak stations. I hear pretty well with my array of low band receiving antennas and have a high percentage of worked low and QRP power stations compared to others with similar QSO totals.

The SPTBDXC is an odd contest, and it does not stop with the rules. There are a lot of plaques for notable achievements. The list for 2020 does not seem to be out yet, but last year there was a plaque for the highest score by a Wisconsin station running low power and operating this contest for the first time. Some of the other 2019 plaques included the highest score from a lot under ¼ acre, the highest score with no busted calls or exchanges, the top score without calling CQ, the VE/W/XE with the most contacts to the British Isles and Ireland, and the best score with a temporarily installed antenna.

The rules are at <https://www.kkn.net/stew>

The first contest for 2021 is the ARRL RTTY Roundup on January 2-3. The RTTY RU starts at 1800 (noon local) on January 2 and runs until 2359 UTC Sunday. Despite being called an RTTY contest, you can use other digital modes, include FT8 and FT4. Previous results show the highest scorers spend the largest percentage of their time on RTTY, moving over to FT8 or FT4 when conditions get too poor for RTTY or they run out of stations to work. I don't know about this contest, but there were times in the VHF contests when too many ops failed to recognize that 6M was not open enough to support CW, but was good enough for FT4, but stuck with FT8. Although FT4 will not handle signals as weak as FT8, it is much faster. I would check the FT4 frequencies first when not on RTTY.

Full rules are at www.arrl.org/rtty-roundup

Last month I posted a scan of my QSL for a QSO with the Soviet space station MIR. I will continue the space theme this month, showing my card from the Space Shuttle. If you were involved with ham radio back in 1983, you remember it was a huge deal for the first amateur radio operation from space by Owen Garriot, W5LFL (SK).

Competition to make a contact was fierce, and I was not able to get through. His operation was recorded, and if you could provide details of who he was working at a given time, you got what is es-

essentially an SWL card, which is what I have. I remember going out to the parking lot at work during passes trying to make a contact with my HT. My co-workers were impressed I could even hear the Shuttle.



FLIGHT OF COLUMBIA STS-9/Spacelab-1

Launched on November 28, 1983
and after 247 hrs, 47 min
landed at Edwards A.F.B. on December 8, 1983

- First launch of Spacelab (provided by the European Space Agency)
- Longest Orbiter flight to date
- First European crewmember
- First 'Payload Specialists' (non-career astronauts)
- First six-person spaceflight
- ★ First Amateur Radio station in space:
W5LFL

Transceiver: modified Motorola MX-300 2-meter FM transceiver, hand-built by the Motorola Amateur Radio Club in Florida.
Antenna: directional ring radiator with cavity, designed to fit in the upper window of the spacecraft; built for NASA by volunteer employees of Lockheed.

Power: 4.5 watts
Mode: FM, CW (by keying carrier) All transmit and receive audio were tape recorded, which constitutes the station log.

Operating orbits: 40D, 56D, 62A, 71D, 91A, 96A, 97A&D, 110D, 111A&D, 112A, 113A, 129A, 130A, 134A, 134D, 135A&D, 144A&D, 145A&D, 146A, 149D and 150D.

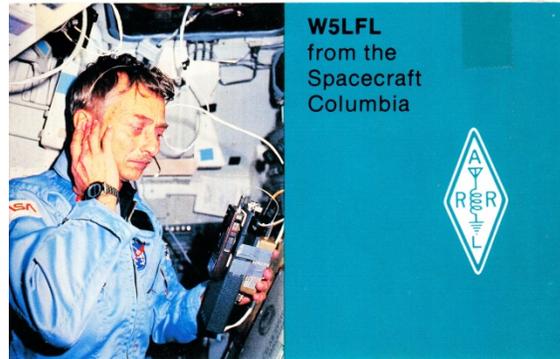
Stations, 2-way contact: over 350
SWL: approximately 10,000 cards received
Countries: 23
Total operating time: about 4 hrs, 30 mins.

W5LFL Space Shuttle Columbia

I am happy you were able to receive my Amateur Radio 2-meter signals from space during the STS-9/Spacelab-1 mission between 28 Nov. 1983 and 8 Dec. 1983.

73, Owen

Owen K. Garriott, W5LFL



QSL for hearing the first ham radio operation from orbit.

Space operations from the ISS are common now, but most of them are pre-arranged with schools instead of random QSOs. Maybe before the end of the decade, the Moon will be a new DXCC country.

I just had a big radio anniversary. My original Novice license was issued at the end of November 1970. It took a week to get to me through the mail, and I made my first QSO in early December. I don't have the logs, so I don't know the exact date. Fifty years is a long time, and it has been quite a ride!

That wraps up the last one for 2020. I hope Santa leaves some nice piece of gear under the tree for you, and hoping for a better 2021.

A Tale of Two W9HERs

This article is reprinted from the QRZ.com website, with permission from the author.

My daughter Hannah was born in May of 2002. She has always had a ham radio-crazy dad. Whether it was code paddles on the passenger seat, a disembodied voice in the car, Field Day on the porch, or hilltop contacts while hiking, she has always been around ham radio. In one of my favorite photos, from November, 2002, she's sitting on my lap, eating the Yaesu FT-817 microphone during ARRL Sweepstakes, but I don't think she completed the exchange.



Ham radio has given me lifelong friends, and I now have an all-ham family. I love the weird occurrences and coincidences that seem to pop up in ham radio, like going to a hamfest and seeing a callsign you've only heard on the air, an Oregon-to-Japan 20 meter CW contact with the power control set to zero, or finding out that a co-worker was a ham as a kid in the 1950's and has many stories to tell.

Hannah always resisted dad's geeky hobby, although she was always a good sport when I asked her to make a couple of contacts with me during a contest, go to a hamfest, or help set up and operate during ARRL Field Day. But she has always humored me,

and I've always appreciated that. I convinced her to study for her Technician class license back in 2013, but she didn't pass the exam, and it sat on the back burner for a while.

Six years later, Hannah found herself in the midst of two years' worth of high school physics. I mentioned that, during the summer, studying for her license would bridge the gap between those physics classes, not to mention that there were scholarships available for hams going to college. She received her Technician's license in August, 2019. A few months later, I mentioned that the General exam would match up well with the electromagnetics and waves section of her physics class. She passed her General exam in December.

When the pandemic hit in March of this year, Hannah decided she would stay close to home and go to the University of Oregon. Her senior year of high school ended abruptly, like everyone else's, and with a six month summer vacation looming, I recommended that she study for the Extra class exam as a way to prepare for college while doing something useful. We also discussed her becoming a volunteer examiner, as it would give us something to do together once the lockdown was over.

Our family of hams belongs to the Valley Radio Club, a large, supportive, active radio club here in Eugene with an active VE team. Hannah turned 18 in May. We administered exams together in June. Her high school physics teacher studied for his Technician license during the "down time," and Hannah was privileged to administer and grade HIS exam (for a change), and sign his certificate and Form 605. She also passed her Extra class exam in June, right before the question pool changed.

I started searching for unassigned callsigns, and to my shock, W7HER was available. It's obviously an ideal callsign for a YL, and "HER" are Hannah's initials, too! After 18 days, the FCC assigned her new callsign, giving Hannah her own amazing coincidence to experience.

The FCC ULS database listed the previous licensee as Harlan E. Rolph, who held the callsign in the 1990's and 2000's, but I figured that it must have been assigned to someone well before that.

I searched for traces of W7HER in the online archive of Radio Amateur Callbooks, and found it assigned in 1939 to Marjory Allingham of Tigard, Oregon. In the late 1940's, her address (and name) changed to Marjory Ramey of Eugene, Oregon, and in 1979, it disappeared.

"Hmmm, she lived in Eugene, and we live in Eugene, how weird," I thought.

The great thing about re-allocated callsigns is that each one has a unique history, having been used by someone else in a different time. W7HER was originally allocated and used years before transistors existed, when "phone" simply meant "AM" because SSB wasn't used yet. Since Eugene is a "big, small, college town," I searched for "Marjory Ramey" on the web, and immediately discovered a transcript of an interview with "Marge Ramey" of Eugene, in which she talked about attending the University of Oregon, living just east of campus, and working as the UO Director of Housing.

I thought, "wow, the 7th call area is really large, what a coincidence that she had lived a mile from us, went to UO, and worked there." My father-in-law, a retired UO professor, had even met her.

Because the phone book called "the white pages" doesn't exist anymore, I thought I would look online for people named "Ramey" who lived in Eugene. Amazingly, there was an "M. Ramey" listed, with an address identical to W7HER's last published callbook address.

I nervously called the phone number, and someone answered.

"Is this the Ramey residence?"

"Yes."

"Is this Marjory?"

"Yes, that's me."

"Were you W7HER?"

"Yes, I was."

I was absolutely stunned to be speaking with the original W7HER.

I proceeded to tell her the story of W7HER, my daughter, who was born and grew up in Eugene, and was also going to be an Oregon Duck. Marjory explained that she'd gotten her license when she was 13, and although she could copy CW at a very young age, it took her five tries to pass the written part. She also said that her father had petitioned the FCC to give her that call. Now 95 years old, she had let her license lapse, but was thrilled to hear from me. We agreed we should all meet before Hannah disappeared into the Covid-19 induced student bubble in the dorms.

September brought historic forest fires that filled the Willamette Valley with thick, choking smoke, so our meeting would have to wait. I searched further on the web for her call, and found a photo of Marjory and her mom (also a ham) from the January, 1940 issue of Radio magazine.

Finally, at the end of September, the day before Hannah checked into the dorms, the smoke finally cleared out of the valley, and the original W7HER and the new W7HER, were thrilled to finally meet. We even heard a great story that most hams can appreciate:

"A young ham was to attend UO, and wanted to bring his ham equipment to the dorm. He went to resident housing to ask for permission to set up his equipment in his dorm room. He obviously expected a response of "no," but didn't realize he was speaking with a ham radio operator at the time, and instead received an answer of, "well, if you hide the wire up under the eaves, nobody will ever see it."

We chatted for about 20 minutes. Hannah received some very sage advice, and will be updating Marjory periodically about how her college experience is going.

One of the greatest thrills of ham radio is how it can link generations. We offered to help Marjory get licensed again, but she graciously declined. At any rate, hopefully this the first of many amazing experiences radio will provide for my daughter Hannah, the new W7HER.



• A mother and daughter team in a really radio-minded family—Lucille Allingham (left), W7FXE, is the wife and Marjory Allingham (right), W7HER is the daughter of William Allingham, W7KY. Marjory obtained her license when she was 13 but could copy 10 per when she was five. Her transmitter is on 160 phone, W7FXE's is on 40 c.w., and the om's is on 20 phone.

73,

Scott N7JI
Karen K3LUX
Hannah W7HER
Nate K7NAR

Sources:

Online archive of Radio Amateur Callbooks.
<https://archive.org/details/callbook> Radio magazine, January, 1940, page 103.
https://worldradiohistory.com/Radio_Magazine_Guide.htm

The caption under the photo from Radio magazine reads as follows: "A mother and daughter team in a really radio-minded family—Lucille Allingham (left), W7FXE, is the wife and Marjory Allingham (right), W7HER is the daughter of William Allingham, W7KY. Marjory obtained her license when she was 13 but could copy 10 per when she was five. Her transmitter is on 160 phone, W7FXE's is on 40 c.w., and the om's is on 20 phone." —Ben, K9UZ



Ozaukee Radio Club

November 11, 2020 Meeting Minutes

de Ken Boston W9GA



This ORC meeting was conducted via an online (internet) connection using the ZOOM app. Prior to the meeting start, those members who were able to access the 'waiting room' via phone or computer/webcam were then introduced into the meeting space hosted by Pat W9JI. At that time various audio and video connection issues were addressed for the members before the meeting began.

ORC President Pat W9JI officially initiated the meeting at 7:32 PM. As introductions were recognized when members checked into the meeting, a go-around was not conducted.

Program:

Ken W9GA (yours truly) gave a program detailing the process of building your own yagi antennas, with particular attention to the designs found at the YU7EF website. Details on materials, mounting methods and other specifics of mechanical details were presented for some 6 meter designs, along with some cost estimates.

Announcements:

A mention was made about VA day, and tendered recognition of our Ham Radio ops who are Veterans. Tom W9IPR provided an update about the silent auction of scholarship fund donated items; so far this has had a low response. Tom wanted our members to give the auction a look, with a mention of some of the items being auctioned there. Greg W9DHI made sure the auction posting was current.

Committee reports:

Tom KC9ONY reported that the system is running normally; Nels WA9JOB added that the Germantown system link is back, after a move of equipment to Big Nate's QTH

Gary N9UUR gave the treasurer's report; the club is still solvent; the scholarship fund has \$38,700 currently, with a commitment of \$26K coming up for ARRL foundation. Currently most of the funds are in a CD which matures/renews in October 2021, leaving over \$12,000 for local STEM program support. There has been discussion as to whether we close out the CD early and transfer the funds into the ARRL program, or wait until the maturity date. The membership renewals are open, two people have renewed, and webpage PayPal link is open. W9MXQ moved acceptance, WB9RQR 2nd, motion carried.

Ken W9GA has posted minutes of the October ORC meeting; WB9RQR moved, W9MXQ 2nd, motion to accept then carried.

Tom W9IPR is current nominations chair; the election will occur via Zoom, nominations will be taken from the floor, and the details of the Zoom process will be worked out.

OLD business:

Repeater survey has been released, and over 30 replies have been collected; additional comments are found in the "free form" boxes.

NEW business:

Tom KC9ONY informed the club that jackets and other club items are available; check the "club swag" tab on the ORC webpage. Gary K9DJT is managing these orders.

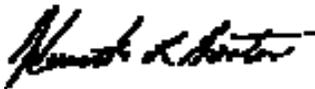
Pat W9JI mentioned a review of the bylaws with regard to voting via internet, or online meetings, and mentioned our dues remain at \$15.00, which are due by January 2021.

Adjournment:

Stan WB9RQR moved to adjourn, Bill W9MXQ seconded the motion, and motion carried.
Meeting ended at 9:00 PM.

39 members (unique callsigns) were on the ZOOM site. Contact Ken W9GA to obtain the list.

Respectfully submitted,



Kenneth Boston W9GA
Secretary

2021 ORC Nominating Committee and ORC Board Nominees

Nominations Committee: Tom Ruhlmann (W9IPR), Chairman
Kevin Steers (K9VIN)
Stan Kaplan (WB9RQR)

Nominees:	President	Patrick Volkmann (W9JI)
	1 st Vice-President	Ben Evans (K9UZ)
	2 nd Vice-President	Bill Church (KD9DRQ)
	Repeater VP	Gregg Lengling (W9DHI)
	Secretary	Ken Boston (W9GA)
	Treasurer	Gary Bargholz (N9UUR)

Should you like to run for an office or nominate another with their permission, contact Tom Ruhlmann (W9IPR) at 262-377-6945 prior to January 6, 2021. The election will be held on a Zoom membership meeting at 7:30 PM on January 13th.

You must have paid your dues to be eligible to vote. You can pay your dues using a credit or debit card at the ozaukeeradioclub.org website using the PayPal feature.

Tom Ruhlmann (W9IPR)

ORC Meeting Agenda

January 13, 2021

1. 7:20 – 7:30 PM – Check-In and Introductions
2. 7:30 PM Call to Order – President Pat Volkmann (W9JI)
3. Announcements, Bragging Rights, Show & Tell, Upcoming Events, etc.
4. Election of Club Officers – Tom
5. President's Update – Pat Volkmann (W9JI)
6. 1st VP Report – Ben Evans (K9UZ)
7. 2nd VP Report – Bill Church (KD9DRQ)
8. Repeater VP Report – Tom Trethewey (KC9ONY)
9. Secretary's Report – Ken Boston (W9GA)
10. Treasurer's Report – Gary Bargholz (N9UUR)
11. Committee Reports
12. OLD BUSINESS
13. NEW BUSINESS
14. Adjournment

Meeting Note:

For the foreseeable future, we will be holding the meetings via the Zoom Videoconferencing platform on the same evening and time as we had the in-person meetings. Sign-in info will be emailed via the ORC remailer usually about an hour before the start of the meeting.

Return undeliverable copies to:

The ORC Newsletter

524 Alta Loma Drive
Thiensville, WI 53092

First Class

Next ORC Meeting via Zoom
January 13, 2021

7:20-7:30 PM – Check-In
7:30 PM – Meeting Begins