



The *ORC* Newsletter

Official publication of the Ozaukee Radio Club, Inc. Email all contributions to the editor, Ben Evans, K9UZ. Permission to reprint articles published in any issue is granted provided the author and the Ozaukee Radio Club Newsletter are credited.



ORC Repeaters on 146.97, 224.18 and 443.750 MHz - Callsign W9CQO

Web site: www.ozaukeeradioclub.org

Facebook: facebook.com/orcwi

Volume XXXI

August, 2019

Number 8

From the President

de Kevin Steers (K9VIN)



Well, I tinkered with my new MultiMeter, and turns out it takes two different batteries and two different fuses, from what I can tell. I'll be sure to bring it to our August meeting to entertain.

I recently went on a family vacation to Nova Scotia. I struggled with my HT and charger before leaving, so I borrowed one from Tom T. KC9ONY. He was even kind enough to use CHIRP to program in frequencies for the cities I would be staying in.

Apparently, 2 meters is as popular in that maritime province as it is here. I did join in a morning coffee Net, which was nice. I had hoped to work more 2 meters, but it is a remote region, and I was doing a bunch of busy family stuff to boot. I certainly didn't want to wake anyone up during the four-hour drives that we did on two different days 😊 A side note to anyone with teenagers: their AT&T phones don't work in Canada, so it was kind of nice with them only having texting abilities when in WiFi areas. Funny when they texted me from in front of a BMO Harris bank that had WiFi . . . modern day foxhunters I guess.

I heard from Jeff Whisler WV9X recently, and he is close to having his new tower up in northern Wisconsin, Langlade County. He should be getting concrete poured soon, and hopefully the tower erected as soon as the concrete fully cures. His ambition is to use this northern location as a remote ham shack. I certainly hope we can hear from his trials and tribulations, and ultimate success.

Let's get ham radio out into the public. If you have an idea on how to do so, just let me know.

Cheers and 73,
K9VIN
Kevin



Port Washington Historical Society
1860 Historic Lighthouse
Port Washington, Wisconsin

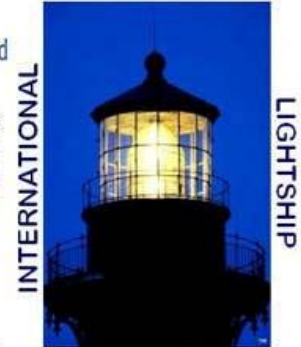
W9CQO

Ozaukee Radio Club, Ozaukee Co. USA
www.ozaukeeradioclub.org



Port Washington has been home to several lighthouses. Nothing remains of Port Washington's first lighthouse that was constructed atop St. Mary's Hill, just north of the harbor in 1849. The tower was poorly constructed and was replaced with the current lighthouse in 1860, the year set in brick on the front of the building. The light was discontinued in 1903, as the pierhead light that had been added to the harbor in 1889 was deemed sufficient for navigational needs. Today this beautifully restored lighthouse is a nautical museum with guided tours on weekends!

LIGHTHOUSE



WEEKEND

International Lighthouse Lightship Weekend - ILLW

de Tom KC9ONY

Once again, members of LEFROG and the Ozaukee Radio Club will join together to participate in the International Lighthouse Lightship Weekend (ILLW), which started in 1998. In 2018, there were over 49 countries and 440 lighthouses signed up. Amateur radio clubs and amateurs across the globe will be doing the same type of thing as we attempt to contact other lighthouses. This is to bring awareness and recognition of the importance of lighthouses, their restoration, and maritime heritage. See <https://illw.net> for more information.

We are registered as US0114 and will be using the W9CQO call sign. Our event station will be set up on the property of the 1860 Light Station & Museum located on the top of the hill in Port Washington, WI (near St. Mary's Church). See <http://pwhistory.org/visit/lightstation>.

Friday, August 16, 2019, we will be erecting a 30' tower and a Cushcraft AS4 tri-band beam. We will operate mainly on 20 meters, depending on band conditions, but are also considering putting up a 40-meter dipole.

The ORC will be setting up one 10' X 10' tent, club banner, and operating table next to the Lighthouse, and LEFROG will be doing the same. LEFROG will supply an Icom IC-9100 and possibly an Icom IC-7600, along with a logging computer. We will also have D-STAR. We could use your help setting up on Friday afternoon, and tearing down on Sunday as well.

All are welcome to join us. If you don't own HF equipment nor have any experience operating HF, don't let that stop you from coming out. We will get you on the radio to try it out. This is not a contest, so there is no pressure! It's about having fun and learning!

Bring your own cooler with drinks, and maybe something to eat. However there are several restaurants in the area. You might consider bringing a chair if you want to ragchew when not on the air.

If you need directions or talk-in, someone will be monitoring the ORC 2-meter repeater, 146.970 MHz, (- offset), CTCSS 127.3 Hz.

WHO: Ozaukee Radio Club and LEFROG (Local Emergency Field Radio Operating Group)

WHAT: International Lighthouse Lightship Weekend special event station

WHERE: 1860 Light Station & Museum
311 Johnson Street, Port Washington, WI
<http://pwhistory.org/visit/lightstation>

MAP: <http://tinyurl.com/1860-Light-Station-Museum>

WHEN: Friday, August 16th: Setup 1pm - 5pm? (until tower is set up, radios tested)
Saturday, August 17th: Operating 9:00 am - 5 pm
Sunday, August 18th: Operating 9:00 am - noon
Sunday, August 18th: Teardown noon – 5 pm

If band conditions are good, we might continue operating past those times.

If you do come out, please **DO NOT park in front** of the 1860 Light Station Museum, as those parking spaces are meant for visitors to the museum. We want to maintain a good relationship with the folks at the Port Washington Historical Society.

DX'ing & Contesting

De Gary Sutcliffe (W9XT)



The results of the Wisconsin QSO Party (WiQP) were just released. The ORC did pretty well. It has been several years since the club had a presence in the WiQP. Bob, W9LO (SK), used to be the sparkplug to get everyone motivated to get on and make a few contacts for the club. The ORC did very well for many years. Since Bob's passing, we haven't had much of an effort.

Early this year I talked to a couple of members who are into radio contesting and we decided to talk up the WiQP and see if we could generate some interest in the club. The WiQP was promoted in this column and at the meetings for the March 2019 event.

AC9IV, K9DJT, K9QLP, AA0WP, W9MXQ, WT9Q, and W9XT operated. We missed being the winning club by about 20,000 points. Looking through the results in more detail, I saw that Gary, K9DJT's score didn't get included with our club score. A computer glitch apparently didn't change the club from the SMC, which he normally is submits his score to, to the ORC which was what he wanted.

Gary's score would have put the ORC into first place! Well, there is only one thing to do. Next year we get more members on, so if there is a problem we still win! The WiQP is normally the second Sunday of March. Mark the 2020 date on your calendar now. You can see the results at <https://www.warac.org/wqp/2019/results2019.pdf>.

The new version of WSJT is out. It is version 2.1.0. The biggest change is that it makes the new FT4 mode a general release. FT4 is similar to FT8, but is designed for faster QSOs for contests. It trades speed for the ability to dig out weaker stations. I discussed my experience with the FT4 Beta versions in the Beta versions in previous columns. I have not installed 2.1.0 at this time, but will definitely do it before the meeting.

A new contest to take advantage of FT4 (and FT8) has been created by the World Wide Radio Operators Foundation (WWROF). This organization was created several years ago to promote contesting. They are sponsoring the first annual World Wide Digi DX Contest (WW Digi). It starts at 12:00 UTC (7:00 AM local) on Saturday, August 31 and runs for 24 hours. You contact other stations and send your grid square.

The score is QSO points times multipliers. QSO points are distance based. You get one point per QSO, plus an additional point for each additional 3000 KM between the stations. Thus, long contacts are worth more points. Don't worry about calculating the point value. The logging programs will be updated to do that for you.

The multipliers are the two letters at the start of the grid square. Most ORC members are in grid EN53 or EN63. They will provide the EN multiplier. Total multipliers are the number of grids per band, 160-10M, excluding the WARC bands. More information is on their website at <https://ww-digi.com/rules.htm>.

The WWROF is also putting on a webinar on how to operate digital contests. The live events will happen before the newsletter is published, but WWROF seminars are typically recorded and available a few days later. I have found their past webinars to be excellent. Information on the webinar can be found at <https://wwrof.org/webinars/>. Be sure to check out the archives for other past webinars.

Other larger contests this month are the North American QSO Party – Phone. That starts on Saturday, August 17 at 1800 UTC (1:00 PM local) and runs for 12 hours with two off hours required. The exchange is name and state. The NAQPs have been covered many times before in this column. More info at <https://ncjweb.com/naqp/>.

I have heard several hams recently saying they need KH6 (Hawaii) for the Worked All States (WAS) award. The path to KH6 is generally pretty good if you are around at the right time. Your best shots will be on 40-20M. Forty will be best a couple of hours before sunrise to may a half hour after. The next band up, 30M will be best between around 9:00-midnight. Maybe the best band will be 20 Meters, starting around 3:00 PM until around 9:00 PM, or a bit later. Evening openings on 17M are also possible.

Then, there have to be stations from Hawaii on the air. Well, there is the Hawaiian QSO Party this month. It is not going to be the biggest state QSO party, but if you want to make a contact with the state, this will be a good time. Note that they will not be on 30 or 17M for the QSO party. You should concentrate on 20 and 40M. It starts at 0400 UTC (11:00 PM local) Saturday, August 24, and runs for 48 hours. More info can be found at <http://www.hawaiiqsoparty.org/>.

A premier event for contesters in the 9th call district and surrounding area is the SMC Fest. It is August 24 in Bloomington IL. and is an all-day event. I know there will be at least four ORC members attending. I will be one of the speakers this year. <https://www.w9smc.com/smc-fest/>

There are not a lot of big DXpeditions this month. Maybe the biggest is to St. Pierre and Miquelon. These islands are just south of Newfoundland but are not part of Canada, but of France. Hence they are separate DXCC entities. They will be using the call TO5M from August 10-18. They plan to be on all bands, 6-160M.

A multinational group will be activating Market Reef on August 17-24 for the International Light House Weekend. The call sign for Market Reef will be OJ00.

Several ORC members participate in the Light House Weekend, operating near a light house in Port Washington. The Light House Weekend starts at 00:01 August 17 (7:01 PM Friday, August 16 local) and runs for 48 hours. The ORC group will be using the W9CQO call. They are always looking for members to stop by. More information on ILHW can be found at <https://illw.net/index.php/entrants-list-2019>.

That wraps up August. Enjoy the rest of the summer!

THE COMPUTER CORNER

No. 257: You and Your GPS

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(262) 268-1949 wb9rqr@att.net



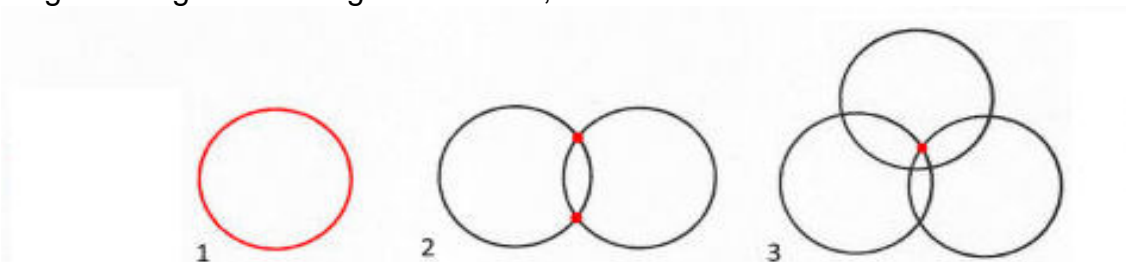
Did you ever wonder how your GPS or device with a GPS in it (smartphone, laptop, desktop, tablet, car or even running shoes) knows where you are (i.e., can pinpoint your location)? It is an amazing feat of modern electronics and space technology. By the way, GPS stands for Global Positioning System.

Until recently, 31 satellites covered the entire earth at any one time. Originally, it was thought the best way was to fly the satellites in geosynchronous orbit, which means they are each positioned about 22,000 miles above a single fixed point on the surface of the earth, never changing that distance or speed with relation to that point. So, if one were directly above Milwaukee right now, it would continue to be directly above Milwaukee 12 hours from right now, and 24 hours from now as well. No easy feat to fire one up there the right distance and speed to do this! Like many existing concepts in technology, a geosynchronous orbit was first conceived by a science fiction writer – Arthur C. Clarke (1917-2008) – back in 1945.

But a geosynchronous orbit is not how it is done now (thanks, Ben Evans, for catching this error in an earlier draft). Rather, they fly in medium Earth orbit at 12,550 miles up and each satellite circles the Earth twice a day. Flown by the US Air Force, at least 24 of these “birds” were needed to maintain complete coverage of the globe, and 31 was the magic number to include serviced and decommissioned units. Recently, they juggled and adjusted flight paths so that only a 27-slot constellation improved coverage in most parts of the world, and users can view at least four birds from any place on the planet.

Every thousandth of a second, the satellites broadcast a signal that identifies themselves and the time the signal was sent. A ground station constantly updates this info and applies corrections to the satellite’s time signals to keep them ticking correctly.

On earth, your GPS device listens to these signals coming from different satellites, and how long each signal took to get to it. Now, look at these sketches:



If the signal was broadcast from a single satellite (a single point), it would cover a circle on the earth as shown in Sketch 1. This is a circle, whose radius has the overhead satellite at its center and whose circumference shows all the possible locations of the receiver (your GPS) on the

earth. All these possible locations are shown in red (the entire circle), since there are an infinite number of locations around the circle of possible positions.

On the other hand, if two satellites are involved as in Sketch 2, there are only two possible positions, and these are shown as red points. Your GPS could be at either point. This is a much smaller area than the whole circle circumference shown in Sketch 1, but it is still not a very accurate description of your location.

Now, with three satellites as in Sketch 3, there is only one point (the red dot) where all three circles intersect. This pinpoints your position to within a few yards. Since any point on earth has between 5 and 8 satellites “visible” at any one time, we can add a fourth or even a fifth satellite to improve accuracy to within a few inches or less. How cool is that?

Next time you are tooling down the road in your car, glance at the little car (you) on your GPS screen. Watch it moving down the road as you do. Think about the (usually) four satellites, 12+ thousand miles above your car, that are transmitting data to your GPS to make that possible. Wow!

LINUX UPDATE RELEASED!

The most popular brand/version/release of Linux (Linux, Mint, Version 19.2, Cinnamon, “Tina”) was released at the beginning of August. Interestingly, this release was named after Tina Turner, the singer! You can read about it and even get a copy of the .iso file at <http://www.linuxandubuntu.com/home/linux-mint-19-2-tina-released>.

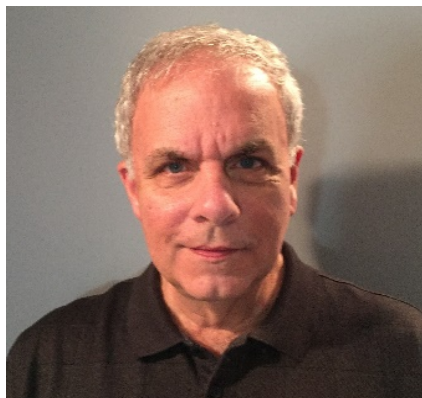
To make a bootable disk, you need to download this .iso file and use it to burn a bootable installation disk using your burning software. Alternatively, you can order a disk at <https://www.osdisc.com/> for as little as \$6 plus \$2 shipping. They also have bootable thumb drives with the operating system installed. Make sure you get Version 19.2.

BUT, if you already have 19.1 on your machine, you do NOT need to get a disk. Go to your Update Manager (click the green shield in your tray) and make sure all updates have been downloaded and installed. It might even be best to reboot after this, though not strictly necessary. Then open the Update Manager again and click Edit at the top of the Update Manager box. Then select Upgrade to “Linux Mint 19.2 Tina” and you are on your way. Follow all instructions and you should come up with “Linux Mint 19.2 Cinnamon” when you search for and click System Info in the Menu (the green Linux icon on the left side of the tray). It might take as much as an hour to accomplish this major update.

Happy Computing!

Vintage Amateur Radio

de Bill Shadid, W9MXQ



This month's article was scheduled to be Part 4 of my series on the Drake TR7 / TR5 / TR8 Transceivers. However, due to some copyright issues on some of the material, I am moving that article out a month, at least. Meanwhile, I want to talk a bit about a new item in the W9MXQ Radio Collection. That would be a meticulously restored Johnson Viking Valiant Transmitter. The Viking Valiant plays an important part in my ham radio history. I never held a Novice license – I started as a General – so the VFO equipped, high powered Johnson Viking Valiant was my first ham radio transmitter.

This installment documents my experience with several Valiant transmitters in my ham radio lifetime. It was not only my first transmitter used on the bands, right now it is also my most recent addition to my collection. Now, however we need to go back to 1964 for my first Valiant:



**Johnson Viking Valiant 160-10 Meter CW/AM Transmitter
Similar to one Purchased Used/Reconditioned from
Amateur Electronic Supply, Milwaukee, Wisconsin in 1964
(Very nice condition – but only about five years old at the time.)**

One of my best friends – in those days, and still today, is Gary Frankeberger, WA9BJU. At that time, we both lived in Normal, Illinois – being friends and schoolmates starting in the fifth grade. We got interested in ham radio about the same time, but Gary received his license about two and a half years before it was my turn – model railroading, at that time, was ruling my life. When my license, WA9MXQ, came along in 1964, Gary was using a Valiant for his transmitter with a Hammarlund HQ-100 Receiver and Gotham Vertical Antenna. (Do any of you remember the Gotham Vertical?) After several overnight operating sessions at Gary's shack, running the Valiant, I decided it was also the transmitter for me. I bought a used Valiant from Amateur Electronic Supply, in Milwaukee, and a used Hallicrafters SX-101 Mark III Receiver from Klaus Radio in Peoria, Illinois. At the same time, I bought my first antenna, a HyGain 14-AVQ Vertical – also coming from Klaus Radio. My first contact was with a station, on 40-meter CW, only blocks

away. But to me, it was real DX. DX, after that, was defined a bit further away – but, we all remember that moment when we first knew – it works!!

The Valiant was a superb radio for CW and AM. It ran 275 watts input on CW with a bit over 200 watts output. And, it ran 200 watts input of plate modulated AM with a 150-watt output. If you calculate that at about 75% efficiency, you are correct. The transmitter ran Class C Amplification – the final was not a linear amplifier. Those of you that do not understand the difference have perhaps a bit of reading to do. The Valiant had the ability to switch its final amplifier to Class AB1 to allow for the insertion of a low power (2 to 5 watts) of excitation from an SSB Exciter to allow for 275 watts PEP input (for an output in Class AB1 of about 130 watts). Exciters like the Central Electronics 10A, 10B, or 20A were widely used with the Valiant for such purposes. In that kind of operation, only the driver and final amplifier section of the Valiant were utilized. The Valiant would be set to the proper band with the lower stages disabled.

The Valiant used three 6146 tubes in the final amplifier that were modulated by two more 6146 tubes in the plate modulation circuit. The modulator had the ability to produce more than 125 watts of audio. At 200 watts of RF input there would have been a requirement of 100 watts, or more, of audio. The radio was no light-weight design. It was constructed of steel, painted like an automobile (I used to wax my Valiant!), and was massive at 21 x 11-5/8 x 16-1/4 inches (WHD) and with a shipping weight of 83 pounds. One of its many talents was to hold down the operating desk in a windstorm!! Mind you, the Hallicrafters SX-101 I was using at the time was no lightweight either – it was 20 x 10-1/2 x 16 inches (WHD) and weighed in at 74 pounds, shipping weight.

I continued with my Valiant into 1965 and added the Viking SSB Adapter to the operation that year. The SSB Adapter was different than the idea of an outboard exciter, it used the VFO and lower level stages in the Valiant. But the Valiant had to be modified with a special kit to allow such operation. Here is a picture of the SSB Adapter, taken from the 1965 Johnson Amateur Products Catalog:



The Viking SSB Adapter matched, and was plug and play with, the later Valiant II Transmitter. However, the original Valiant could be modified to accept the Adapter. This modification made the Valiant (by then referred to as the Valiant I) the electrical equivalent to the Valiant II.

The modification was extensive. It involved adding connectors to the back panel and required numerous internal alterations and connections. I was pleased with the results. When finished, it worked perfectly and the SSB Adapter and the Valiant came to life on SSB. Tuning the pair was a nightmare compared to what we experience today.

If there was ever a shortcoming with me and equipment it was my desire to have pieces from a manufacturer match each other. The Valiant and the SSB Adapter did not match each other. In my mind, that was a problem. (In reality, it made no difference – a point that never held much water in my thought process.)

To slake that thirst for matching equipment, in 1966, I sold the Valiant and bought a brand-new Johnson Viking Valiant II – in kit form – again from Amateur Electronic Supply. My AES salesman then, as he is now at Ham Radio Outlet, was Paul Szczerbinski, K9KHO. I remember waiting what seemed like an eternity for the kit to arrive from Milwaukee, via Railway Express. In kit form, the box approached 100 pounds and I can still remember the Railway Express agent wheeling up to my parent's house. Those days were well before the instant gratification, one or two day (order to delivery), of our Amazon crazed world.

Doing the modification on the original Valiant to use the SSB Adapter had prepared me for the kit approach from Johnson. So, the complexity of the Valiant II kit was no surprise. Believe me when I say that Johnson was certainly not Heathkit. The kit took many hours, a lot of thinking, a lot of learning, and was very satisfying to complete. When done, however, it did not work!! But, in short order, retracing my footsteps I found the problem to be an incorrectly wired terminal strip. I had wired one side correctly (pins 1 through 8 on one side were wired 8 through 1 on the other side). It was a wonder I did not blow up the radio!! Over the years, I have found several other hams who assembled the kit and made the same error. Here is the Valiant II as shown in the 1965 Johnson catalog:



**Johnson Viking Valiant II 160-10 Meter CW/AM Transmitter
From the 1965 E. F. Johnson Amateur Equipment Catalog**

By that time, the original SX-101 Mark III Receiver was gone from the shack. It was replaced by a Hammarlund HQ-170AC Receiver⁴. A three-element triband HyGain TH-3 beam had been added on a 50-foot tower. But, alas, that all ended in late 1966 when Jean (my XYL) and I got married and moved into an apartment. The Valiant II, the SSB Adapter, and the HQ-170AC quickly morphed into a tiny Sideband Engineers SB-34 Transceiver. The tower and beam came down and were replaced by an end fed wire and home brew antenna tuner.

Many pieces of gear have come and gone since then – along with the development of my radio collection. But the fun that I had with the Valiant was not to be forgotten.

Back in June of 2017, another very nice Valiant came into the shack by way of Pat Volkmann, W9JI, in the form of a trade. I guess I was not ready to tackle that beast at the time, and about a year later it went back to Pat in yet another trade.



This is the Johnson Viking Valiant from W9JI. My intention at the time was to fully restore it. I have been thinking of late that I would like to attempt that again. Many of the big CW/AM Transmitters from the 1950's and 1960's are open and accessible in most areas. A significant exception to that statement are the 32V series transmitters from Collins. A nightmare!

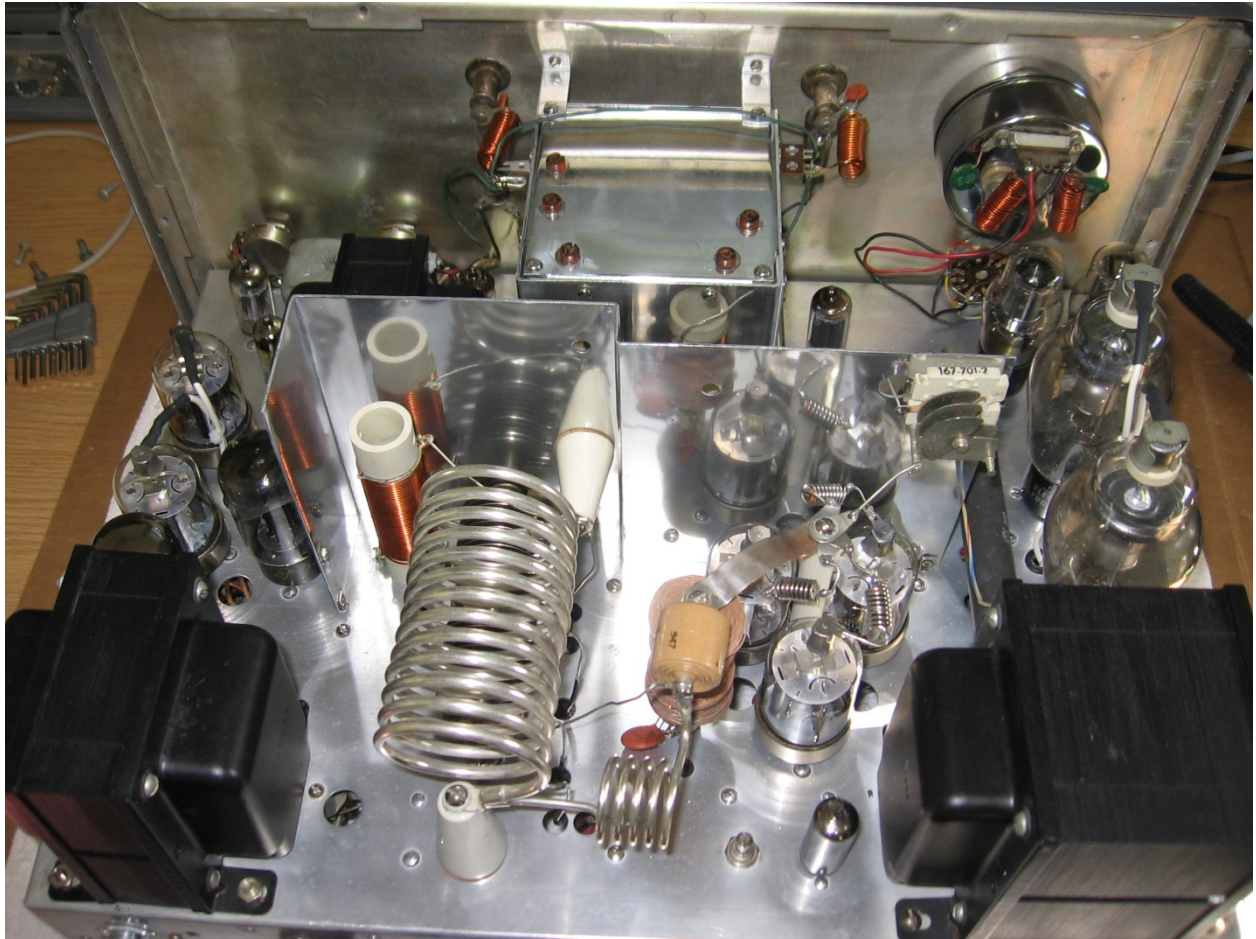
Very recently I had the opportunity to secure yet another Valiant – and this time I hope that I am smart enough to keep it in the collection as long as I can keep radios here. This is an original Valiant (not a Valiant II) and has been restored to original condition – it appears to have come of the assembly line just today. Here it is:



Fully restored Johnson Viking Valiant 160-10 Meter CW/AM Transmitter sitting in the shack at W9MXQ in August of 2019 (If you see a mark on this radio it IS a reflection!)

This fine example was meticulously restored by one or both well-known restorers, Howard Mills, W3HM, and/or Chuck Hurley, K1TLI¹. Both of their names appear on documentation and packing of this radio. It currently does not work, due to an issue caused by the shipper in getting it to Milwaukee. It is certainly repairable, and it will soon be on the air.

All Valiant and Valiant II Transmitters are essentially the same – with only cabinetry and the SSB Adapter circuitry changing over a long span of production². Here is an internal picture, provided on-line by Chuck Hurley, K1TLI. It is identical to the interior of the recently acquired Valiant at W9MXQ:



Interior View – Johnson Viking Valiant Transmitter

Looking toward the interior side of the Front Panel, from the rear. To the left are the two 6146 Modulators. Just left of rear center is the Tank Coil in the Pi-Network Output Circuit. To the right of the coil are the three 6146 Final Amplifier tubes. To their right is the HV Power Transformer. To the right center are the two 866A Mercury Vapor Rectifier Tubes. Those rectifiers glow in “electric blue” flashes as CW is sent. At the lower left is the Power Transformer for filament, bias, and low high-voltage requirements of the radio. The power supply chokes are under the chassis.

This radio came to W9MXQ in a radio trade with John Schroeder, KB9PBM, a fellow member of the Wisconsin Amateur Radio Club. John is a fellow appreciator of vintage radios.

As a final item, I want to share with you a story about the first Valiant. That was the one mentioned first in this article, from 1964. As a collector, I always wonder what happened to radios that are no longer in my collection. Some come back! But many are gone like a lost family member or friend and I wonder what became of them. I had especially wondered about this one since it was my first transmitter. But, in a lucky break, I received this message from Italian ham operator, Roberto Lucarini, IKØOKT:

Hi William,

I found the callsign WA9MXQ written on the frame of this Johnson Valiant, here you see that before the restoration.

*It was by chance really yours?
If so, from United States it's arrived in Germany and later in Italy ...
Greetings from Rome.....
Roberto, IKØOKT*

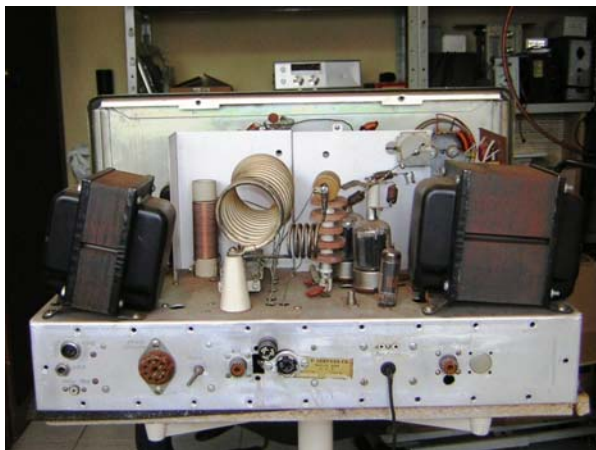
Wow, what a great piece of news!! Back in those days, I would scratch my name³ into the chassis of radios I had owned. Here is how that appeared to Roberto:



This may be hard to see, but here is the “hen scratching” showing “WA9MXQ.” (My call until only a few years ago.)

Roberto found the Valiant in Germany and had it shipped to his QTH, in Rome. The radio was inoperative, and it was not known at that time if it could be restored to full operation. Its story – how it traveled from the USA to Germany – is still unknown.

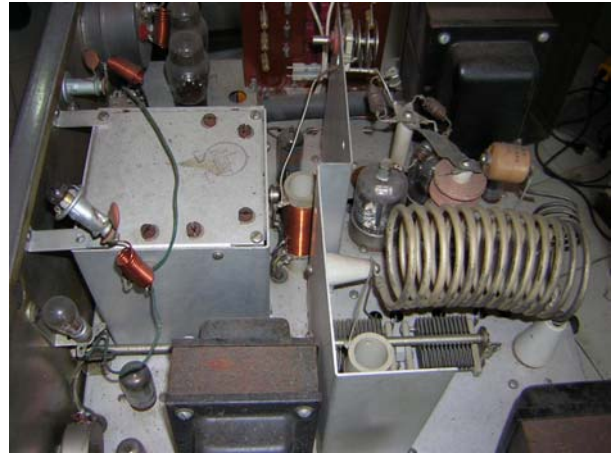
Picture details of my once beautiful, 1964 edition Valiant, as Roberto received it, are shown, below. It is evident that the transmitter had been dropped on its left side (when viewed from the front). The inertia of the two power transformers and the tank coil is evident in the overall picture. The close-up picture of just the lower voltage power transformer shows even more detail. If either of these transformers had broken away from their mounts the interior damage could have been much worse. The integrity retained by the chassis is a tribute to Johnson’s all steel construction:



Views showing that the transmitter had been dropped (close-up detail at the right).

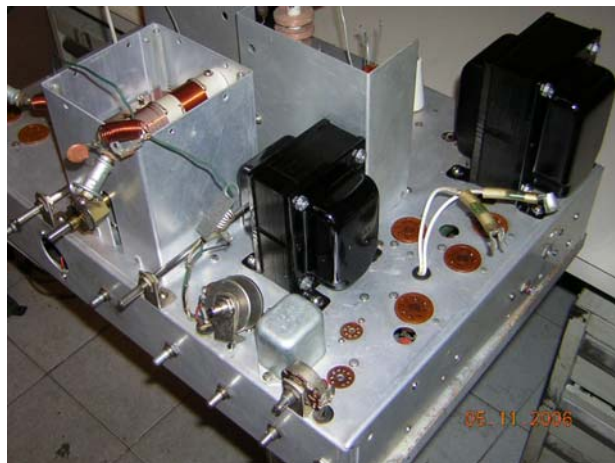


Front of Transmitter – Note thermometer!



Interior view – See distorted tank coil.

Now, here is the same Valiant as restored by Roberto:



Cleaned up Chassis and Completed Transmitter



And, my old Valiant in Roberto's ham station: (Also see the IKØOKT QRZ page.)

The before and after pictures of the Valiant (above and below) are a tribute to Roberto's restoration ability. It appears, but is not confirmed, that Roberto returned the very visual 866A Mercury Vapor Rectifiers to their rightful place in the Valiant.



IKØOKT Shack – Left to Right:

Johnson Viking 500, Drake R-4B Receiver on top of Drake MN-2000 Antenna Tuner, Johnson Ranger on top of National HRO-60 Receiver, and.... the Johnson Valiant (ex-W9MXQ Valiant) at the very right side. (A somewhat newer picture appears on IKØOKT's QRZ page, today.)

A special thanks go to Bob, W9DYQ, for his proof reading of my articles. Remember that I am open to questions and comments at my email address, W9MXQ@TWC.com.

Reference Notes:

1. I am in the process of sorting out the involvement of Howard Mills and/or Chuck Hurley in this radio. I have a work sheet of what was done to the radio as provided by Hurley. But, the appearance of Howard Mill's call letters on the packing leads me to believe that there was some cooperative effort involved. Howard Mills is best known for his Collins Restorations with a good reputation for some Johnson equipment. Chuck Hurley owns a Score Board Sign Company. He also restores collectable automobiles – in addition to his exclusive Johnson restorations of Rangers, Valiants, Pacemakers, 500s, Couriers, Thunderbolts, Challengers, and Matchboxes.
2. There is another difference in the Valiant and the Valiant II that is a real surprise when moving from the original to the "II" model. Just to the right of the FINAL control on the front panel, immediately to the right of the VFO knob, is the DRIVE control. That control was on the front panel, just outside the chassis mounted 6AL5 Dual Diode, Audio Clipper Circuit Tube, V13. The heat from V13 transferred to that the DRIVE potentiometer was substantial. The original Valiant had Bakelite knobs that did not transfer heat to the fingers. On the Valiant II, the knobs were aluminum and that knob became too hot to touch. Johnson supplied a replacement knob that was drilled out and with a cardboard tube installed to isolate the knob from the heat of the potentiometer shaft. That was only partially successful – the knob still became a bit too warm.
3. Hey, ever bought a radio from me? My call letters are in there somewhere!
4. As it turns out, Gary Drasch, K9DJT, used the same receiver and transmitter when he was a young ham. We both had the Johnson Viking Valiant Transmitter and the Hammarlund HQ-170 Receiver.

ORC Field Day 2019

de Robert Eskola, K4WTH



ORC memory boards

It's a wrap! 2019 ARRL Field Day is now history, and while we reminisce by looking at photos posted on Facebook, we begin making notes for 2020 (constructive self-criticism on what to do better, what additional research needs to be done and what items get added to the toolbox, to name a few).

Some bands were wide open and kept operators quite busy and then some bands were full of hash,

where each contact was a real struggle. Those of us who weren't as busy as we had hoped to be ON the radios experienced the rare commodity of spending a lot of time talking with visitors.

The history of ham radio is important but only if it gets shared.

We were also coaching and instructing visitors not only on how to "work" a radio or make a contact, but why we do what we do while operating. Time well spent!



Patrick Moretti of ARRL visits our tent

If you weren't able to attend, there's always next year ... mark your calendar now for June 27 and 28, 2020. Posts will probably begin sometime in early May about location and such. [#arrlfd](#)

If you attended Field Day -- ANY Field Day -- this past June, what was your highlight? Learn anything new? Farthest contact? This is your opportunity to share! [#arrlfd](#)



Field Day setup



Julia's painting of our Field Day site

Says Jeananne, N9VSV:

1. After 26 years, I'm still amazed by how many hands drop what they're doing to help others.
2. Best roast turkey on Friday night after set up. Thanks, WB9RQR and KC9FZK for all your hard work in preparing the feast.
3. Gear breaks ... special thanks to KD9KOY, AE9MY and N9UUR for everything you did to replace/repair my rotator control box!
4. Computer networks are beyond me; having 6+ computers networked in a field? Way to go, K4WTH!
5. Band conditions on 6m weren't the best but we had brief bouts of sporadic e! Quebec, Ontario, New York and Texas!
6. Meeting a ham from the Netherlands who was here in Wisconsin, on vacation!
7. Seemed like the forecasted rains waited until we were almost packed up on Sunday.

UPCOMING EVENTS

Breakfast at Jim's Grille in Cedarburg – Saturdays at 7:00 AM

**International Lighthouse Lightship Weekend, August 16-18,
1860 Light Station & Museum, Port Washington, WI**

Upcoming ORC Monthly Programs

August - Homebrew Night

September – Chuck Curran W9KR, Direct Digital Synthesized VFO

October – Bill Shadid W9MXQ, The Hallicrafters Twins

Homebrew Night

de Pat Volkmann, W9JI

The August ORC Meeting will give you a chance to show off one of your projects. You can bring anything that is ham radio related. If it's too big to bring in, bring some pictures. Please let me know if you are bringing something so that I will be able to budget the time accordingly. For now, plan on 3 to 5 minutes to talk about your project. Send me no more than three Power-Point slides. If you don't use PowerPoint, send me some photos and information and I'll put it together for you.

No pictures? No problem! Just bring your project in and tell us about it.

I'm looking forward to hearing about YOUR project at the ORC meeting in August.

Presenters Needed!

de Pat Volkmann, W9JI

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 w9ji@arrl.net to discuss your idea for a program.

Sailing the Airwaves?

de Tom KC9ONY

I was sailing the airwaves using WebSDR (<http://websdr.org/>). If you aren't familiar with WebSDR, here's an explanation from their website: "A WebSDR is a Software-Defined Radio receiver connected to the internet, allowing many listeners to listen and tune it simultaneously." So basically you just go online with your computer to listen in with someone else's SDR station that's connected to a server. Lots of fun, as you can choose different bands and different parts of the world.

I'm not sure which SDR I was on, whether in Utah or San Francisco, but I heard a really strong signal from Jim WB2REM, based in Florida. At one point, there was a gentleman from the US traveling in Paris, France. From his hotel, he was using the internet to remotely transmit from his house in the US. I didn't hear if he was using a Flex radio or what. Then I heard them talking with Jeanne (Jan) Socrates VE0JS via a satellite phone that Jim was putting on the air. They were congratulating her on crossing the equator in the Pacific Ocean. What?! Was this on a cruise ship or something?

After listening for quite a while, I had to learn more about VE0JS, so went to her QRZ page. Jeanne is attempting to be the oldest person to circumnavigate the world solo, unassisted, non-stop. This would be her third time. She is already the oldest woman to sail solo, unassisted, nonstop around the world, as well as the first woman to sail solo, unassisted, nonstop around the world from North America! She is currently 76 years old. Can you imagine packing a sailing vessel with necessary items to go nonstop around the world? Jeanne left Vancouver, B.C. on October 3, 2018.

What's this have to do with amateur radio if she was using a satellite phone? Well, just listen to a recent QSO Today podcast: <https://www.qsotoday.com/podcasts/VE0JS> or go to Youtube: <https://www.youtube.com/watch?v=wcKkLND5HjM>. Jeanne became aware of amateur radio from other sailors. She also found the value of using Winlink to send and receive e-mails. Jeanne's call sign VE0JS is a maritime mobile call. She holds a few other calls, including one from the US. She can be heard sometimes on 7.163 MHz at 1100Z and 14.183 MHz at 0515Z. As time and weather permit, she tries to get on various Nets, too.

Speaking of weather... At the time I am submitting this article, S/V Nereida, Jeanne's vessel, is dealing with Hurricane Erick and Tropical Storm Flossie to the north of her, as she is ESE of Hawaii. Now I see there is also a new Tropical Depression named Gil in the Eastern Pacific, heading west. These storms have forced her to heave to or hove to. Yeah, I had to look that one up, too, as I'm not a sailor! It's a way of slowing the vessel down to avoid the storms.

If you want to read more about Jeanne VE0JS, go to <https://www.svnereida.com/> and click on the various links about the boat, equipment, etc. You can even find her current position by using the links on the right of that page. The one I like is the Via Aurora GPS Tracking. Once that page opens up, you can put the mouse on lines and see her course direction and speed. On the upper right of that page, you can also layer over the World Satellite Infrared, so that when you zoom out, you can see what storms are around her. Amazing technology. Lots of good information is on VE0JS's Biography tab on her QRZ profile page, including maps.

Jeanne is hoping to arrive back in Vancouver, B.C. by the end of August 2019.

Ozaukee Radio Club

July 10, 2019 Meeting Minutes

de Ben Evans (K9UZ), Secretary



President Kevin Steers (K9VIN) called the meeting to order at 7:30 PM. All the attendees introduced themselves.

Announcements, Show-and-Tell, Bragging Rights:

Jim (K9QLP): Ron Yokes (W9BCK) is in the Heritage nursing home in Port Washington following a bad fall that resulted in a broken rib and other injuries. He wants company and to talk to people, and he's anxious to get back on the 9-7 repeater, so if you ever hear him on the repeater,

please give him a shout.

Robert (K4WTH): Julia (KB9WBQ) made a painting of our Field Day site which is being considered for inclusion in QST Magazine's Field Day scores issue.

Tom T. (KC9ONY): Cindy is asking for volunteers to provide radio communications for a ladies-only cycling event on July 27th, west of Big Cedar Lake.

Fred (W9KEY): Fred and Bill Schnell (AC9JV) have been selected to be operators for the WWV 100-year anniversary special event station at the end of September in Fort Collins, Colorado.

Program:

Tom R. (W9IPR) gave his presentation about the Sun 'n Fun Aerospace Expo Center near Lakeland, Florida.

50/50 Drawing:

Ken (W9GA) was the winner of the 50/50 drawing.

Auction:

Stan (WB9RQR) conducted the auction. Many items were sold, including a Dell Dimension E3-10 computer with Linux Mint 19.1 installed, a jump-start battery charger, a trans-match that Stan built, and some whip antennas.

Officer Reports:

Kevin S. (K9VIN), President's Update – None.

Pat V. (W9JI), 1st VP – Not at the meeting. No report.

Tom T. (KC9ONY), Repeater VP – No report.

Ben E. (K9UZ), Secretary – The minutes from the June meeting are in the newsletter. Motion to accept the minutes was made by Stan (WB9RQR), seconded by Art (AC9CD) and approved by the members.

Robert E. (K4WTH), Treasurer – The financial report for June was handed out to members prior to the meeting. If anyone hasn't submitted receipts for Field Day, please do so and they will be covered.

There was a \$50 donation from the Sunshine Fund to the American Cancer Society. Motion to accept the treasurer's report was made by Stan (WB9RQR), seconded, and approved by the members.

Committee Reports:

Ken B. (W9GA), Field Day Committee – Ken gave his preliminary report on the results of Field Day. He thanked those that showed up to help set up and tear down. He commented on the good participation of ORC members, many of whom attended Field Day for the first time. We could have used a few more operators, however.

The raw numbers are as follows: Total contacts – 1829; 40 meters phone – 248; 20 meters phone – 929; 6 meters – 49; digi-station – 135; 20-40-80 meters CW – 661. There were three active contesting stations throughout the event. The fourth station was split between GOTA with about 100 contacts, and contesting with around 200 contacts.

We had issues with the computer network and hope for a better networking solution in the future. The white canopy tent worked well. Ken will do a full presentation on the results at an upcoming meeting.

Tom R. (W9IPR), Scholarship Committee – A letter from ARRL Scholarship was received, saying that Adam Johnson (KD9KIS) of Ellsworth, Wisconsin was selected to receive the 2019 ORC Scholarship Award in the amount of \$2,000.

The scheduled transfer of money from the Money Market to the Endowment Fund has not been done as yet.

Tom highly recommended that members over 60 years old have themselves checked out by the Life Screening preventive testing outfit. Tom was checked out by them recently and was alerted to a serious medical condition which he then had taken care of.

Old Business:

There was no old business.

New Business:

Tom T. (KC9ONY): There's a lot going on in the months of July and August. The World Scout Jamboree July 21 – August 2, the EAA special event station July 22 weekend, and the Lighthouse Event August 16-18. Regarding the Lighthouse Event, the Historical Society has purchased the vacant lot next to the museum and they did some landscaping on it. It is hoped that the vacant lot can once again be used to erect the antenna for the event station. Setup is August 16, operation is 17 through 18, and teardown is August 18.

Tom R. (W9IPR): There will be a Fall Swapfest organizational meeting on a date in August to be announced. Everyone who wants to help with the swapfest is invited to come to this meeting.

Gary D. (K9DJT): There's eighteen thousand dollars in the club's operating account. What are we doing with it? Nels (WA9JOB) responded that the operating fund is divided up and earmarked for various uses, such as the repeater improvement fund.

Gabe (W19GC): There should be sandwich board signs set up at all the stations at Field Day, each describing what the station is about, for the benefit of visitors to Field Day. Other members agreed this was a good idea.

Jim (K9QLP): Our lease runs out on the storage shed in October. Perhaps we should look into a commercial storage unit. Ken (W9GA) responded with a report of possibilities for storage. He talked to the buyer of the property who is currently renting the property. The buyer is planning to convert the shed, which now houses our trailers and other equipment, into a shop. But there's a barn to the south of the shed. If there's room in the barn after the seller vacates the property, the buyer is willing to lease space to us in the barn. If this doesn't work out in the way desired, one or both trailers will have to be stored outside. Nate Seidler's grounds could probably be used for parking the trailers; the white trailer from Leon Rediske is currently there. The yellow trailer has to be sealed up from adverse weather if it has to be parked outside. Ken has convened a committee of himself, Mike York and Vic Shier to deal with the trailer issue. They will work to clean out the white trailer as well. Jim (K9QLP) commented that we should look into casualty insurance for the club's equipment.

Adjournment:

Stan (WB9RQR) made the motion to adjourn the meeting, which was seconded by Bill Shadid (W9MXQ) and was passed by the members. The meeting was adjourned at 9:12 PM.

Attendance:

There were 35 members and five guests present at the meeting.

A copy of the attendance sheet is available upon request in PDF format. Please contact Ben Evans via email at ben@evansengsolutions.com for a copy.

Respectfully submitted,



B. Benjamin Evans, K9UZ
Secretary

ORC Meeting Agenda

August 14, 2019

1. 7:00 – 7:30 PM – Network & Rag Chew
2. Call to Order – Kevin Steers (K9VIN)
3. Introductions
4. Announcements, Bragging Rights, Show & Tell, Upcoming Events, etc.
5. Program: Homebrew Night
6. Fellowship Break
7. 50/50 Drawing
8. Auction – Stan Kaplan (WB9RQR)
9. President's Update – Kevin Steers (K9VIN)
10. 1st VP Report – Pat Volkmann (W9JI)

11. Repeater VP Report – Tom Trethewey (KC9ONY)
12. Secretary's Report – Ben Evans (K9UZ)
13. Treasurer's Report – Robert Eskola (K4WTH)
14. Committee Reports:
 - a. Fall Swapfest – Tom W9IPR
 - b. Scholarship – Tom W9IPR
 - c. Field Day – Ken W9GA
 - d. Trailers – Ken W9GA
 - e. Other
15. OLD BUSINESS
16. NEW BUSINESS
17. Adjournment to ?

Return undeliverable copies to:

The ORC Newsletter

465 Beechwood Drive
Cedarburg WI* 53012

First Class

Next ORC Meeting:

Grafton Multipurpose Senior Center

1665 7th Avenue, Grafton, WI
Wednesday, August 14th, 2019

7:00 PM – Doors Open

7:30 PM – Meeting Begins