



# The *ORC* Newsletter

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

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## International Lighthouse Lightship Weekend

De Tom KC9ONY

The ORC and LEFROG clubs joined together to operate the Lighthouse event station for the 2019 International Lighthouse Lightship Weekend on August 17<sup>th</sup> and 18<sup>th</sup> (<https://illw.net/>).



ILLW Station setup at the 1860 Light Station & Museum – Port Washington, WI  
<http://pwhistory.org/visit/lightstation/>

According to the ILLW website, there were 426 entrants worldwide and 62 entrants from the USA for the 2019 International Lighthouse Lightship Weekend.

The very first 20-meter contact we made on Saturday, August 17, 2019 was the Cape Canaveral Lighthouse, US0099, the Kennedy Space Center Amateur Radio Club, N1KSC. The very first

40-meter contact was also a lighthouse, the Port Clinton Lighthouse US0228, near Port Clinton, OH. It's the last remaining timber-frame lighthouse on Lake Erie.

Going through the log file, it shows we contacted 17 US lighthouses, which included one US lighthouse that did not meet the guidelines (W8FTC), one Canadian lighthouse and one ARLHS Lighthouse (USA 1837). ARLHS stands for Amateur Radio Lighthouse Society.

We also had one lightship, the Lightship Huron Museum (LV-103), US0229, in Port Huron, MI. We had one maritime mobile on a cargo ship at the Port of Houston, TX, in the Gulf of Mexico, who was from the Netherlands, (PE1OAD). There was one portable summit checking in, KB1HXO on W1/GM-007 Stratton Mountain, ME, and one battleship, the Battleship New Jersey, operating from the radio room. We had several QRP stations, some mobile stations, and at least one station on solar battery. The log also shows we had one contact in France, one in Panama, one in the British Virgin Islands, and four in Canada. We logged 319 total contacts for the weekend.



Fred W9KEY and Mike K9EMD



Mark KD9NOO

Mike K9EMD celebrated part of his birthday by operating on Saturday. He ended up operating the most contacts (61) on 20 meters and one lighthouse. Mark KD9NOO operated the most contacts (20) on 40 meters and four lighthouses.

Band conditions were up and down all weekend. We did encounter some noise or interference when pointing the tri-band beam to the West. Gary K9DJT said he also gets this at his house in Port Washington. On Sunday, there were storms in the morning, but the worst were to the south of us. We did sustain some minor wind damage to one of our tents. Thankfully, the weather cleared and dried up things for an easy tear-down of all the equipment.

Thank you to all the ORC and LEFROG members that came out to safely help set up, operate, and tear down. Thanks also to those members that came out to observe, as well as those who made contact with us from their QTH or mobile. Another successful year in the books.

# DX'ing & Contesting

*De Gary Sutcliffe (W9XT)*



Summer is over, at least if one considers the summer to be between Memorial and Labor Days. Officially we have a few more weeks. That means cooler temperatures, which is fine with me, but also shorter days. Or, rather fewer daylight hours. To the best of my knowledge, days are still 24 hours long.

The length of the day, of course, is due to the earth's tilt. The northern hemisphere points towards the sun from late April through late September and points away from the sun during the rest of the year. Of course, it is the opposite in the southern hemisphere. The length of day light varies like a sine wave (almost). Remember those? That is the form of AC (and RF!) signals. The daylength (or voltage) changes fastest around the zero crossings. The equinoxes are the annual solar zero crossings, and we will be making the negative going one on September 23. Around that date, we will be losing almost three minutes of daylight each day. That is about 20 minutes per week! It is going fast!

The longer days and the equinox mean the HF bands will be getting out of the summer doldrums. The higher HF bands tend to open more. The longer nights give us better low band conditions, further aided by a decrease in thunder storms and the resulting static.

So, just how good will the HF bands be this fall? Along with Bill, W9MXQ, Vic, WT9U, and Gary, K9DJT, I attended the Society of Midwest Contesters annual SMC Fest in August. They always reserve a segment of time for our Central Division leadership to give us an update on the recent developments at the ARRL. The Vice Director is Carl Luetzelschwab, K9LA. Carl is a propagation guru and my go-to guy when I have a question on the subject. He slipped in some slides showing where we are at the bottom of solar cycle 24 while we anxiously wait for cycle 25 to start. A couple of his slides are presented at the end of this article with his permission.

The first slide (Figure 1) shows the solar flux for cycle 24. The solar flux index is a proxy for sunspot counts. One curve shows the monthly counts. Monthly averages are pretty noisy, so we usually look at the smoothed numbers. The smoothed count is the average of the month and the six months before and after the month. The red line is the prediction going forward. It is not pretty.

The recent solar flux index has been very low. We have hit 66 a lot this summer. That is about the lowest it gets. It got to 64 at the bottom of the previous cycle, but only for a few days. We have had 163 spotless days so far in 2019. That is about 2/3 of them.

The second slide (Figure 2) is very interesting. It shows curves with smoothed sunspot counts under 20 for the last seven solar cycles. The red line is the current one and the green line the last one. You will notice that the others are not as deep or as long. History shows us that the longer and deeper the minimum is, the smaller the next peak is. The minimum between cycles 23 and 24 was the longest in 100 years. The peak for cycle 24 was pretty poor. The current minimum is looking very similar to the last one. That predicts the next peak is likely to be similar to the last one.

So, when will be out of this? A few cycle 25 sunspots have appeared, but they have been very brief. New cycle sunspots tend to appear at high solar latitudes and have the opposite magnetic polarity of the last cycle. Most predictions have the minimum ending in 2020 or maybe early 2021, but we don't know. Only time will tell. In the meantime, my 10 Meter Yagis will stay in the shed.

There are not a lot of major contests in September. The Worked All Europe (WAE) SSB contest and Scandinavian Activity Contest (SAC) can provide a lot of fun when the higher bands are open. There should be a fair amount of activity on 20M for them. The WAE contest starts at 0000 UTC September 14 (7:00 PM September 13 local) and runs for 24 hours. The rules are kind of complex because of QTCs. A QTC is a report of a previous QSO to a European station. If you are interested, check out their web site. <https://www.darc.de/der-club/referate/conteste/worked-all-europe-dx-contest/en/>

The SAC CW contest starts on Saturday, September 21 at 1200 UTC (7:00 AM local) and runs for 24 hours. Send a signal report and serial number starting with zero. For a list of the countries you can work and the rules, go to their web site. <https://www.sactest.net/blog/rules/>

The most interesting contest is the ARRL September VHF Contest. It starts at 1800 UTC (1:00 PM local) September 14 and runs to 0259 UTC Monday, September 16 (10:00 pm Sunday local). You can work a station once per band using any mode. FT8 has become a popular mode for working distant weak stations in the VHF contests. Now that FT4 is released it will be interesting to see if the fast speed is a worthwhile tradeoff for requiring stronger signals than FT8. Other modes like MSK144 are also used for working stations on meteor scatter. Of course if we get Es or tropo, you should be on SSB or CW because you will be able to work stations much faster with these modes. Use the digital modes as a fill in between band openings. Full rules at <http://www.arrl.org/september-vhf>.

With better propagation, more DXpeditions start up this month. An interesting one is to Kyrgyzstan by a group of Polish hams. They are there now through September 12. The call is EX0QP, and they will be operating the HF bands, SSB, CW, RTTY, and FT8.

Mongolia will be activated by some Russian hams September 5-9 using the call JT7A. They will be using the HF bands, with SSB, CW, FT8 and will be giving a shot at FT4. West Kiribati will be represented by a group from Latvia September 6-15. They will be on 160-6M, CW, SSB, RTTY, and FT8. From there they will go to Nauru with the call C21WW September 16-25.

A group of Japanese hams will be on Palau September 14-25. 160-6M, CW, SSB, RTTY. No call has been announced, but the prefix for the island is T8. Yet another Pacific Island operation will be Tonga, A35JT, by an Australian team September 24-Oct 6. 160-6M, SSB, CW, FT8, RTTY, and especially for Ken, W9GA, they will be on 6M EME.

The one that really has my attention is Minami Torishima, JD1BNA. I only have this on one band and don't even have a QSL. I have confirmation from an old rule where you could get a confirmation if you worked a DX country in an ARRL DX contest and you were in their log. This rule was discontinued a long time ago.

JD1BNA gets on from time to time. I believe he does scientific work there. Usually, he gets a little operating in between work. His operating is usually at times we don't have propagation. I did hear him last winter. I heard him make one QSO before he went QRT. He is scheduled to be there September 25-30.

The island is used as a training base for the Japanese military and is off limits with a few exceptions. There are reports of huge quantities of rare earth elements there, like Lithium and materials used in high strength magnets. Lithium is, of course, the material in so many batteries. Electric vehicles use huge quantities of it. China currently produces most of the rare earth materials. China has been cutting back on exporting some of its raw earth materials, causing concern to the rest of the world. Hopefully there will be mining there soon, and more opportunities for hams.

As usual, there are many single op DXpeditions. These are usually part of a vacation or business travel, with limited operating. You need to be on the bands to catch them.

The same weekend as the WAE and VHF contests is the W9DXCC convention. I have attended this from the early 1980s and have missed it only once or twice. It is held in the Chicago area. The convention is Saturday, but there are other activities on Friday including Contest University and DX University. These are a series of programs aimed at teaching beginning contesters and DXers. The banquet speaker is Martin Jue, K5FLU. He is the founder and owner of MFJ. I think the lineup of speakers is especially good this year. [www.w9dxcc.com](http://www.w9dxcc.com)

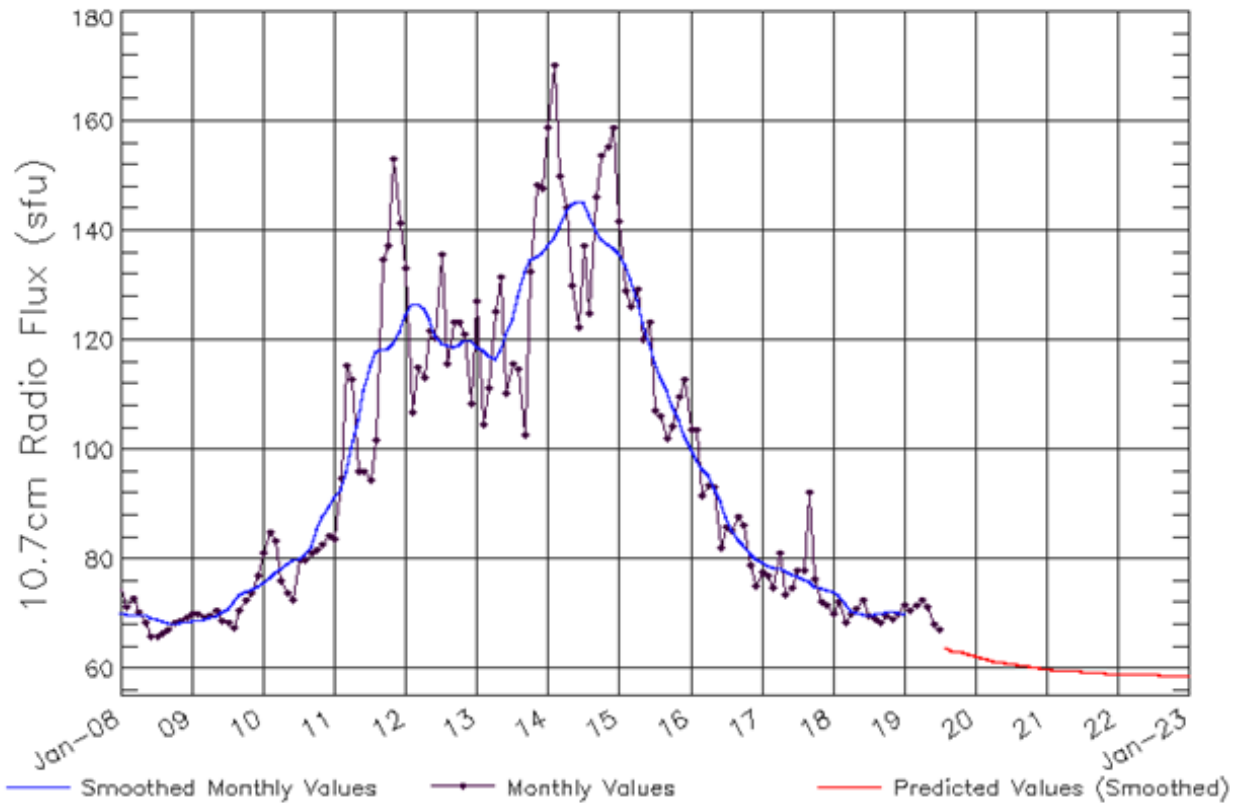
The last weekend of the month is the HRO Superfest. It opens at noon Friday, Sept 27. Saturday hours are 9:00 AM to 4:00 PM. It is also the ARRL Central Division Convention. That means a lot of ARRL HQ people will be there, including the new ARRL CEO, Dr. Howard Michel, WB2ITX.

Superfest has dwindled in size the last few years, but this year it is much bigger with lots of major vendors present. Speaking of major vendors, Slinger's largest ham radio manufacturer will be giving the debut of an exciting new product.

That wraps up September. There sure are a lot of radio related things to do this month. Don't forget to get busy on those fall antenna projects. There are not too many days of nice weather left this year.

# ISES Solar Cycle F10.7cm Radio Flux Progression

Observed data through Jul 2019



Updated 2019 Aug 5

NOAA/SWPC Boulder, CO USA

Figure 1. Solar Flux for Cycle 24

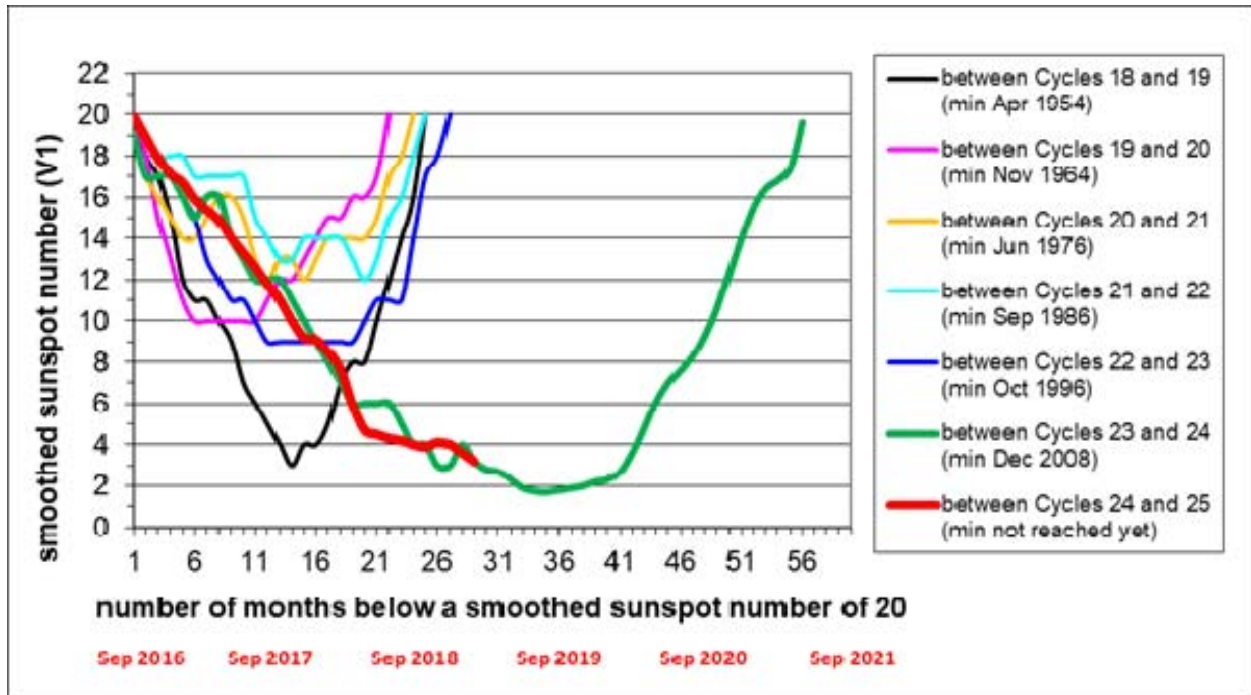


Figure 2. Smoothed sunspot numbers for last 7 solar minima - Courtesy of K9LA

## THE COMPUTER CORNER

# No. 258: Libre Office

Stan Kaplan, WB9RQR 715 N. Dries Street Saukville, WI 53080-1664  
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Well, I bit the bullet. Here is how it played out.

Yesterday, Nancy's (my wife, KB9FZK) copy of Microsoft Office 2000 Professional died. She could not open her birthday list, recorded in Excel, or any spreadsheet (.xls) file. I convinced her to let me uninstall all of Office 2000 and install Libre Office. I convinced her by showing her on a different machine that the Libre Calc spreadsheet program would open her birthday list and other .xls files just fine, and that the Libre Writer program (equivalent to Microsoft Word) would open her letters and other documents just fine, too. In a few minutes, she was up and running with the new software on her Windows 10 machine, happily updating and printing her birthday list file. She likes it.

Then came my turn. Today, on my main machine (also Windows 10, Home Edition, just like Nancy's), my Microsoft Office 2016 failed – it would not open a thing. So, in the period of about half an hour, I uninstalled Microsoft Office and installed Libre Office 6.2.5. My first job was to compose this article. I found it a snap to use, and I really do not notice a difference between it and Microsoft Word in the way it feels and works. If anything, it looks even more efficient than Word in the icons and controls at the top of the editing page. I recommend it highly as another way to get out from under Microsoft.

So, what version should you look for and where? Go to <https://www.libreoffice.org/> and seek out version 6.3 or higher (version 6.3 is scheduled for release in early August 2019 while this article being written on 30 Jul 2019). To give you a feel for size, version 6.2.5 is a 282 MB download. The installation file, named LibreOffice\_6.2.5\_Win\_x64.msi, is so named for 6.2.5, for Windows 64-bit, so yours will be a little different depending on the exact version you encounter. Double-click the .msi file and you will be on your way to installation, which takes only a couple of minutes at most. Here is the line up:

<b>MICROSOFT OFFICE COMPONENT</b>		<b>LIBRE OFFICE COMPONENT</b>
Word	DOCUMENT	Writer
Excel	SPREADSHEET	Calc
PowerPoint	PRESENTATION	Impress
Access	DATABASE	Base
---	DRAWING	Draw
---	FORMULA	Math

Happy Computing!

# Vintage Amateur Radio

de Bill Shadid, W9MXQ



This month we will be back in the 1960's with the desktop, heavy weight offerings from Hallicrafters. I call this one, "Hallicrafters Big Iron!!" Hallicrafters held a place of honor with their SX-101 Receiver, HT-32 Transmitter, and HT-33 Linear Amplifier station. These radios were some of the first of the many new technology SSB/AM/CW radio stations of the time. They did not really fit the marketplace created by the Collins S-Line but there was still at that time a good base of customers looking for full sized separate receiver, transmitter, and linear amplifier stations. Hallicrafters did well in that market. But, at the same time, there existed a market for a lower cost station with a similar footprint. The answer from Hallicrafters was the popular SX-111 Receiver, HT-37 Transmitter, and HT-41 Linear Amplifier. Depending on how we define "full power" this combination provided 1,000 watts input on the then popular 80, 40, 20, 15, and 10-meter bands.



**SX-111 Receiver**



**HT-37 Transmitter**



**HT-41 Linear Amplifier**

The radios above were lower cost versions of the set radios shown here – and mentioned above:



**SX-101 Receiver**



**HT-32 Transmitter**



**HT-33 Linear Amplifier**

These radios have a long history with me. In fact, the SX-111 Receiver and HT-37 Transmitter were in my station in the 1970's and they have been through several owners since then, always known to me, as they are to this day. I followed them after they departed WA9MXQ (my call in the 1970's) and they finally went to Ed Fischer, KC9LRJ, now a Silent Key. After Ed Fischer, they went to Bill Schnell, AC9JV, where they remain.

Their most recent long operating period was in an operating event setup by Ed Fischer in early 2014. In a one-week period, Ed and I worked close to 200 stations in what was to be his last major ham radio adventure. All but about 15 QSO's that we made from Ed's shack were on SSB – with the balance being CW. We ran the station with the HT-37 Transmitter driving the HT-41 Linear Amplifier to about 600 watts PEP output on SSB and CW. We also used a Barker & Williamson Speech Processor. Later that year the SX-111 and HT-37 were sold to AC9JV and the HT-41 to a ham whose name is lost to history.



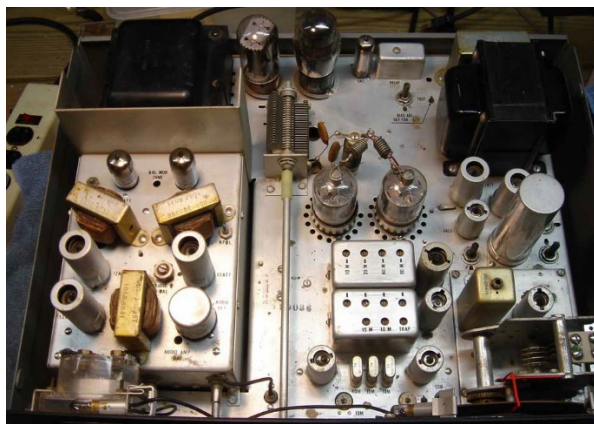
The designs of the two radio lines from Hallicrafters were more alike than different in the SX-111 vs the SX-101 and in the HT-37 vs the HT-32. Here are a few details:

Parameter	HT-37	HT-32
Final Amplifier Tubes	6146 (2)	6146 (2)
SSB/CW Input Power	144 Watts	144 Watts
SSB Generation	Phasing	Crystal Filter
Cabinetry	Wrap Around, Perforated, with no access without disassembly.	Rack Style Enclosure with a Top Access Door.

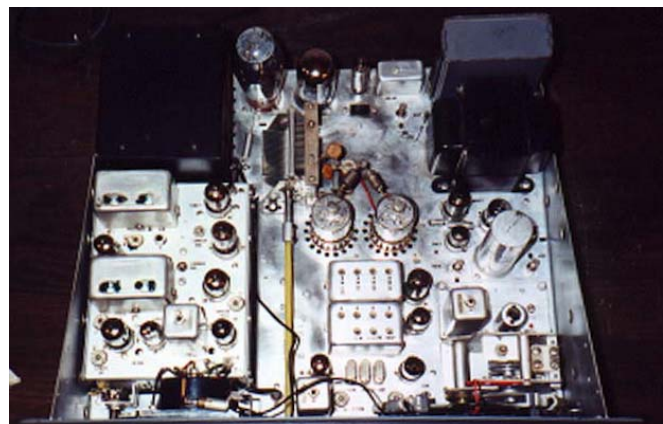
The difference in SSB Generation was a separate sub-chassis that was inserted into the HT-37 or HT-32 Main Chassis – otherwise the Main Chassis was the same on both units. The HT-37 was open inside with the final amplifier tubes in the middle of the chassis. The HT-32 layout was identical but with a shield cage around the finals and a small fan to cool the enclosed tubes. Perhaps Hallicrafters felt that if you did not want to spend the extra money for the HT-32 then you did not deserve the extra interference filtering.

There may be more of these radios in our midst. I know, for instance of at least one other SX-101 and HT-37 pair among the members of the Wisconsin Amateur Radio Club. Both of those pairs used to reside at W9MXQ. There is an SX-101 and HT-32 pair in Ozaukee Radio Club in the shack of Tom Ruhlmann, W9IPR.

To get an idea of the modular construction shared on the Main Chassis between the HT-37 and HT-32 Transmitters, please see these pictures:

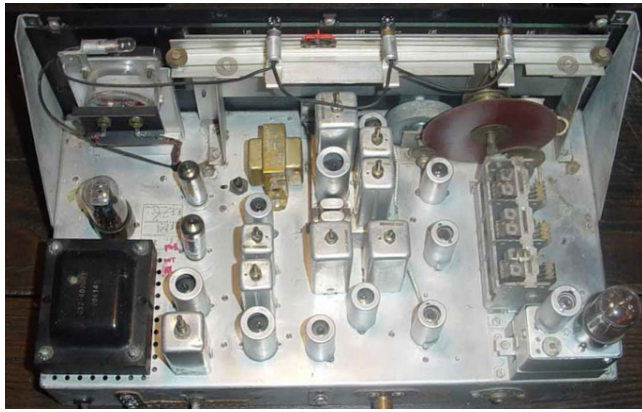


**HT-37 Transmitter (Front at Bottom)**

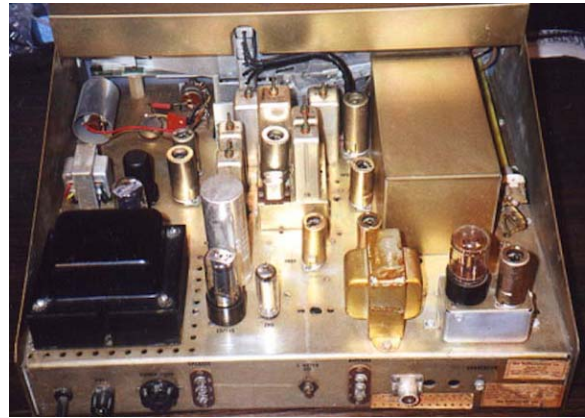


**HT-32 Transmitter (Front at Bottom)**

**See similarities in Main Chassis – but the Phasing SSB Sub Chassis to the left on the HT-37 and the Filter SSB Sub Chassis in the same place in the HT-32.  
(Photograph angles make it difficult to see just how similar these radios were.)**



**SX-111 Receiver (Front at Top)**



**SX-101 Receiver (Front at Top)**

**“Matching” was not in the design concept of the SX-111 Receiver to its partner Transmitter, the HT-37. The cases were painted similarly but the designs were different.**

The SX-111 was a good deal smaller and lighter than the SX-101 from where it took its design concepts. Chassis layout was slightly different but if you look carefully you can see many similarities. The simple readout dial illumination on the SX-111 was much more complex on the SX-101 with its feature of only illuminating the band in use. Circuitry was very similar but the extra heavy chassis on the SX-101 made it more stable in a day when bulk meant less stress on the mechanical frequency determining elements (variable capacitors, primarily) and therefore better stability.



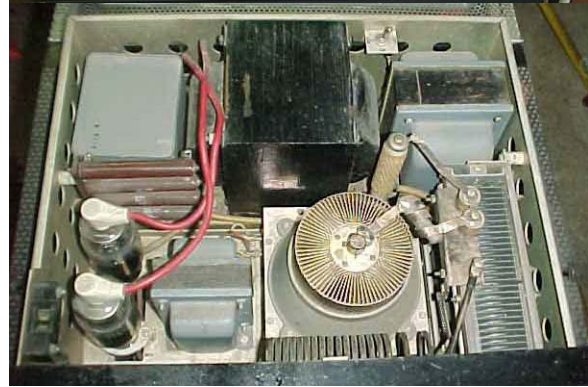
**See the Illuminated 20-Meter Band on this SX-101. The entire dial on the SX-111 is always illuminated. 1960's high tech!!**

Let's discuss the rarer part of the SX-111/HT-37 and SX-101/HT-32 Stations – their matching Linear Amplifiers. Those would be the HT-41 (which has been a part of my station) and HT-33, respectfully.

Check these pictures of these fine amplifiers with the HT-41 being in a cabinet to match the HT-37 and the HT-33 being in a cabinet to match the HT-32:



**HT-41 Linear Amplifier  
Front View and  
Interior View (Front at Bottom)**



**HT-33 Linear Amplifier  
Front View and  
Interior View (Front at Bottom)**

You can see the more complex construction in the HT-33 amplifier with its forced air-cooling system vs the small fan – extreme rear – blowing air at the two final tubes.

The HT-41 used a rather novel tube in the 7094 Pentode – two of them working together in parallel. “Novel” is my word for this final extension of the design of the 6146 tube we see commonly in radios of the time. The 7094 had a dissipation of 125 watts<sup>1</sup>. This was tight for use in a Class B Linear Amplifier at the 1,200 watts input of the HT-41. Two tubes could dissipate 250 watts (2 x 125) while at 50% Class B efficiency the 1,200-watt HT-41 would want to handle 600 watts of waste heat. However, with SSB and CW duty cycle of well under 100% the heat was handled in fine fashion. The HT-41 required only 40 watts to be driven to full power input of 1,200 watts SSB and 1,000 watts CW (600 watts and 500 watts, respectfully).

The HT-33 was a different story in that the PL-172 Final Amplifier Tube was a 1,000-watt dissipation Pentode that could loaf along at 1,000 watts input on CW or as much as 2,000 watts PEP input on SSB. That netted 500 watts output on CW and probably over 1,000 watts PEP output on SSB. The pictures above show the much more powerful components in the HT-33. These were earlier days and high voltage solid state rectifiers were expensive. The HT-41 used two 866AX Mercury Vapor Rectifier tubes while the HT-33 used the more powerful 866A Mercury Vapor Rectifier tubes in a similar circuit. The HT-33 later switched to 3B28 High Vacuum Rectifier Tubes. The HT-33 also added four regulator tubes in the internal power supply making a tube compliment of eight tubes.

Page 6 the 1964 Hallicrafters Catalog showcasing the HT-37 and the SX-111 along with Hallicrafters own version of the Astatic 10-D/TUG-8 Microphone and PTT Base. Also, the Hallicrafters R-48 Speaker Console sitting atop the SX-111. Just at the far left is a Vibroplex VibroKeyer that must somehow be feeding an off screen Hallicrafters HA-1 'TO Electronic Keyer.



As time went on and more sophisticated radios came from other manufacturers, the SX-111 (most certainly) and even the mighty SX-101 lost their luster. The SX-111 gradually faded away – knowing in its heart it was simply an SX-101 “want to be.” But, even the SX-101, which had morphed by then to the SX-101A, was getting long in the tooth. The market was being eaten up by the Hammarlund HQ-170A, the National NC-303, the Collins 75A-4 and 75S-3, and even the Drake 1-A, 2-A, and 2-B. Hallicrafters responded in what was to be their finest receiver. The SX-115.



The SX-115, shown on the left, pictured next to the last of the SX-101 series, the SX-101A. By that time, the SX-115 was the main piece in the final “big iron” picture from Hallicrafters. Time

moved on and the SX-111, HT-37, and the HT-41 were gone. The new breed was already online in the form of the SX-117 Receiver, HT-44 Transmitter, and the matching HT-45 Linear Amplifier. In their last form, here is the big iron Hallicrafters station, and my longtime favorite:



**Left to Right  
Hallicrafters HT-32B Transmitter, SX-115 Receiver, and HT-33B Linear Amplifier**

Notice the somewhat smaller size (in width) of the SX-115. The SX-101 was the same size as the HT-32 and HT-33 series radios. The SX-115 was not. The SX-115 had a transmitter type VFO and had it been wired that way it is possible that the SX-115 and HT-32B could have been made to transceive. Technically, the SX-115 was ahead of the game – within Hallicrafters. Compared to the likes of the Collins 75A-4, the Collins 75S-3, and perhaps even the Drake 2-B, it was not quite the superior receiver that Hallicrafters had needed. This deficiency was moved forward in the next Hallicrafters series which used the similar design and feature set, SX-117, as its receiver

But, feature set aside, those of you that know this author have often heard him say that from this series of products come his favorite Vintage Ham Station. My idea of a perfect station is centered on an SX-115 receiver, just as you see, above. After all these articles on great radios – my favorite is on this page. To me, it just says, “Vintage Ham Radio.”

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](mailto:W9MXQ@TWC.com).

#### **Notes:**

1. By comparison to the 125-watt dissipation of the 7094, other tubes of the day in amplifier use that were similar in capability were:
  - a. the 4X125 with 125-watts of dissipation.
  - b. The 813 with 125-watts of dissipation.
  - c. The T-160L/572B with 160-watts of dissipation

**W9MXQ.**

# Remote Station Building, Part 1

De Jeff Whisler W9KW

The project started in 2014, when we finished building our second home in Northeastern Wisconsin. We have eight heavily wooded acres that border the Chequamegon-Nicolet National Forest. Because our primary home in Jackson is located in an HOA-controlled subdivision, the only antennas I have are “stealth” types. For years I longed for a tower and much more substantial antennas. Building a station up north felt like a good option but it would also require remote operation capability.

At the time I began my research, I was very fortunate that Chuck, W9KR, offered me a tour of his tower and shack. Chuck has superb shack and a US Tower crank-up that I really envied. I looked at a number of other tower options but decided on the US Tower TX-455 in late 2014. The price was sporty but just doable. Life intervened and my plan to order the tower was delayed for about eight months. When I called HRO for an updated quote, I got a rather rude shock. The price increased over 100%! Disgusted, I turned back to the drawing board.

Over the next several years, I considered and rejected several different tower options. Due to a mountain climbing accident in 2000, my wife instituted a strict “no climbing” policy. On occasion I surreptitiously violate this edict but at my considerable peril. Many conventional options, such as a Rohn 25 guyed tower, were rejected because I would need to rent a bucket truck or hire someone to climb anytime the tower or antennas needed work. My past history portends I will frequently tinker with the antennas. Also, building the guy anchor points and clearing the huge trees for the guy wires would be a major project and a costly exercise. Finally, guy wires offended my wife’s keenly honed sense of aesthetics. Freestanding towers offered no good way to tilt them over for maintenance, again requiring a bucket or climber. In addition, some freestanding towers have significant limitations on antenna boom length. During this period, I was actively looking for a used crank-up tower. While I did locate several used towers over the years, most all had significant issues of distance to pick up, de-installation challenges, as well as transportation cost back to my job site. In the end, the initial cost savings were outweighed by these other considerations.

In mid-2018, I became aware of Tashjian Tower. They make a variety of crank-ups for amateur use which are very similar to US Tower products. The price for a 70 foot crank-up with a tilt-over fixture came in only slightly above the original quote from US Tower. The shipping cost was greater because Tashjian is based in California. I ordered the tower in late January of 2019, and while waiting for the tower delivery, I began planning the rest of the project in earnest.

Over my ham career I have had two other towers at different QTHs. My first tower was a freestanding Rohn HDBX-48 when I lived in Madison. I also had a fifty-foot Rohn 45 for a short time at our home in Sussex. Building on that experience, I subscribed to several email lists and acquired two books on tower construction. I will list the specifics of each at the end of this article.

It took a bit of cajoling with Tashjian to facilitate delivery as they were busy with a number of large projects. Finally, on July 12<sup>th</sup>, I took delivery of my new tower. Getting the tower off the delivery truck was challenging and took some creativity. At the suggestion of an email forum, I

engaged a local tow truck operator to do the job. He suggested we use his flatbed truck. The tower was collapsed, of course, and wrapped in a heavy-duty shipping crate. The package was 24 feet long and weighed 1800 pounds. He carefully slung the load inside the truck and dragged it from the delivery truck to his truck bed. He was able to tilt the bed of his truck to exactly match the end of the delivery vehicle. He then maneuvered his truck near the job site and tilted the bed again and we slide the tower off.



I also began working to improve the site by removing some trees as well as excavate for the tower base. I spent quite some weeks trying to find someone near the job site to excavate the hole for the tower base. I contacted more than twenty different companies with negative results. At the suggestion of several members of the Tower Talk forum, I decided to rent a mini-excavator and dig the hole myself. A local company delivered the excavator and Chris, the driver, gave me a crash course in excavator operation. Chris was very kind and very patient with me. I dug a smaller test hole off to the side to practice and then filled it in. It took me, working very slowly and carefully, about two hours total to dig a 4' long x 4' wide x 6' deep hole. I would love to report it was a perfectly shaped hole but I cannot. The hole ended up being about fifty percent larger than the specifications called for. It was a bit nerve wracking but also fun. I also used the excavator claw to move some large rocks, with the grandkids helping at the controls.

Next, I engaged my next-door neighbor Bob Tegan to help me build the concrete forms and set the base fixture in the hole. We spent a hot sweaty morning completing this step. I am very grateful for Bob's help. Bob spent more than twenty years in the military doing various construction jobs and his expertise really showed. I called the local concrete batch plant and scheduled four yards of concrete for delivery. The night before the delivery we had a torrential downpour, and despite my careful preparations, the hole nearly filled with water from the storm! With the concrete due in about three hours, I was anxious, to be sure. I quickly jury-rigged an old sump pump and dropped it into the hole. Thankfully the hole pumped dry fairly quickly. The

concrete delivery was very smooth and the driver put the load right on target. Bob again helped get the concrete struck off and somewhat finished. It's nothing fancy, but it will do the job. Here is the finished base:



I have many tasks yet to accomplish before the weather turns. I need to trench and lay conduit about 100 feet from the house to the tower base for the feedlines and control cables. I need to mount the tower to the base and build and attach the beam. We have a raising party scheduled for September 14<sup>th</sup>.

There are also several other design details that need to be resolved, including what software and hardware will be used for remote operation. I also need to upgrade my internet service.

I hope someday, after the project goes live, to deliver a presentation to the club on the project. Regretfully, I struggle to make club meetings due to work conflicts.

Please stay tuned for Part 2 of my story.



## UPCOMING EVENTS

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

### Upcoming ORC Monthly Programs

*September – Chuck Curran W9KR, Direct Digital Synthesized VFO*

*October – Bill Shadid W9MXQ, The Hallicrafters Twins.*

### 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](mailto:w9ji@arrl.net) to discuss your idea for a program.

## Wisconsin Parks on the Air (WIPOTA) Contest



**Saturday, September 21, 2019**

**11:00 am – 6:00 pm CDT**

**16:00 – 23:00 UTC**

**Bands: 75, 40, 20, 15, 10 and 2 meters**

**Suggested Frequencies:**

**SSB: 3.860, 7.220, 14.260, 21.350,  
28.400 MHz**

**FM: 146.55 and 146.58 MHz**

**More information and contest rules: <http://wipota.com/>**

# Ozaukee Radio Club

## August 14, 2019 Meeting Minutes

de Ben Evans (K9UZ), Secretary



*Note: I lost both my hard notes and iPhone Voice Memo recording of the meeting. The following are the happenings to the best of my recollection.*

President Kevin Steers (K9VIN) called the meeting to order at 7:35 PM. All the attendees introduced themselves.

### **Program:**

The program of the evening was "Homebrew Night." Many members gave a short presentation on their own ham projects.

### **50/50 Drawing:**

Adam (KD9NRG) was the winner of the 50/50 drawing.

### **Auction:**

Stan (WB9RQR) conducted the auction. Many items were sold.

### **Officer Reports:**

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

Pat V. (W9JI), 1st VP – No report.

Tom T. (KC9ONY), Repeater VP – Tom reminded members about the upcoming International Lighthouse Lightship weekend on August 16-18. Members from ORC and LEFROG will collaborate on operating an event station at the 1860 Light Station & Museum in Port Washington.

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

Treasurer's Report – Ben (K9UZ) gave the treasurer's report in Robert's (K4WTH) absence. The financial report for July was handed out to members prior to the meeting. There were no unusual transactions for the month of July. Motion to accept the treasurer's report was made, seconded, and approved by the members.

### **Committee Reports:**

Ken B. (W9GA), Field Day Committee – Ken passed out copies of the official Field Day report for the ORC that was submitted to the ARRL.

There is no update on the storage shed issue.

Tom R. (W9IPR), Scholarship Committee – Tom reported that a \$34,000 check was mailed to the ARRL Endowment Fund. The money was drawn from Scholarship's two money market accounts.

### **Old Business:**

There was no old business.

**New Business:**

There was no new business.

**Adjournment**

A motion was made to adjourn the meeting, which was seconded and passed by the members. The meeting was adjourned at 9:20 PM.

**Attendance:**

There were 44 members and three 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](mailto:ben@evansengsolutions.com) for a copy.

Respectfully submitted,



B. Benjamin Evans, K9UZ  
Secretary

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## Kristian Moberg Award

Below is the citation on an award that has been given by Homestead High School each year starting with the 2017–2018 school year. Yes! This is our own Kristian, KC9TFP, who received the award for this year. You might want to send him a congrats – consult your ORC Roster or send it to [KAM53012@yahoo.com](mailto:KAM53012@yahoo.com). The award was given in 2017–2018 to Declan Ciurlik and Michael Kennedy, and in 2018–2019 to Declan Ciurlik.

“Kristian Moberg **IS** Homestead basketball. Known affectionately as “Moe” by all people who know him well, Moe has dedicated much of his life to Homestead athletics but an even greater amount of time to Homestead basketball. Regardless who was coaching Homestead basketball, Moe has always been a part of the program. Moe, a former student manager who graduated from Homestead in 1992, performs many duties for the program. His main duty is filming home and away games. Never one to miss the team dinner, Moe is a person who is always willing to help, and give advice either warranted or unwarranted to coaches when needed. In honor of Moe’s love of, dedication and loyalty to the program, a Homestead Boys Varsity Basketball player who shares the same passion for Homestead Basketball will be awarded the Kristian Moberg award each year.”

## ORC Meeting Agenda

September 11, 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: Chuck W9KR, *Direct Digital Synthesized VFO*
6. Fellowship Break
7. 50/50 Drawing
8. Auction – Stan Kaplan (WB9RQR)
9. President's Update – Kevin Steers (K9VIN)
10. 1<sup>st</sup> 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. 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 7<sup>th</sup> Avenue, Grafton, WI  
Wednesday, September 11<sup>th</sup>, 2019

7:00 PM – Doors Open

7:30 PM – Meeting Begins