



The *ORC* Newsletter

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Number 10

From the President

de Kevin Steers (K9VIN)



Not a lot to report on this month, as the weather is still too nice to do antenna repairs before winter. I like to wait until it is just above freezing with snow in the forecast. I am hopeful to get my Butternut Butterfly two-element beam moved up my mast, and install an 11-element 2-meter beam just below it. I am being coached that perfection is the enemy of 'good enough'. I was not able to work the WWV 100 Year Anniversary Special Event Station, what with my work schedule and the band conditions. Fred W9KEY and Bill AC9JV put in the effort to travel to Colo-

rado to cover portions of the operating schedule. Thank you both and I hope to hear the fruits of your labor at our meeting.

I have been trying to get on our Repeater around 5 or 5:30 pm, during my short drive time home. I have had nice conversations with a few, but hope more folks can jump on .97 during their drive time. Also be sure to join our Tuesday evening nets, at 8:00 PM. You can even join late, as they stop for late check-ins, like me.

Lastly, I was not able to help Jeff WV9X with his tower project up north, though I was in the neighborhood though I was entertaining guests. I promise to stop over to lend a hand sometime soon, since I am always looking for ideas, improvements, and advice. If anyone has projects or two-man tower chores to get done before the weather turns, now is your time to speak up.

Be sure to get on the air!

Cheers and 73,

K9VIN

Kevin

The 2019 Fall Swapfest Was a Success!

de Tom Ruhlmann, W9IPR



This photo was taken around 11 AM on September 7th at Firemen's Park, when many had already bought their treasures and left, but we had 165 paying attendees, so we figure about 180 in total (counting the volunteers) were there. The number of vendors was down somewhat but the number of browsers and buyers was up noticeably.

As a result, we volunteers had a great time and added about \$535 to the club treasury and \$449 to the Scholarship Fund. Not bad for a morning's worth of fun!

Many thanks to Jim Albrinck (our volunteer fireman) who was responsible for the grounds and all the volunteers who made this event a success. Special thanks to those who helped load and transport the scholarship fund inventory to and from the fairgrounds. We really missed Tower Electronics but we think the door prize of a gift certificate from Ham Radio Outlet helped with the attendance.

Again, thanks to all for making the 2019 Fall Swapfest a success!

DX'ing & Contesting

De Gary Sutcliffe (W9XT)



As you progress as a DXer, you keep track of how many countries you have worked and confirmed. You work hard to get the first 100 countries to earn the DXCC Award. Then you continue to keep trying to work ATNOs (All Time New One). The first 250 or so come in a few years if you are active. After that they come more slowly, and an ATNO is a reason to celebrate.

If you keep at it, you reach the DXCC Honor Roll, which is confirmed contact totals within 10 of all the current countries. There are currently 340 countries, so you need at least 331 to reach the Honor Roll. If you stick with it, you get them all and are in the #1 Honor Roll. It took me over 40 years to accomplish that.

When you get down towards the end, ATNOs come slowly. You need to wait until there is a DXpedition to some rare island, or some country like North Korea opens up and allows ham radio. The last ones can take a decade or more to show up.

So what do you do to keep the DX juices flowing while you wait for one of the last ones to show up or a new country to be created? You can go back and try to work each country on phone, CW, and a digital mode. There is the DX Challenge where you try to work each country on each band, 160M-6M, except for 60 Meters.

One thing I have been doing for a few years is to see how many countries I can work in each calendar year. There is an award called the DX Marathon that runs each year. Last week I worked #200 for 2019 and was looking through the countries I worked and the bands I worked them on. The one that stuck out was 10 Meters, my favorite band. Pickings are very slim there when we have sunspot counts like we have experienced the last few years.

I thought it would be interesting to plot the number of countries I worked on 10 Meters vs. the sunspot count each year of the last cycle or so. Figure 1 shows the totals. The solar data was from the World Data Center SILSO, Royal Observatory of Belgium, in Brussels. It is the mean sunspot number for each year except for 2019. We obviously don't have that number for all of 2019, so I used the average of the mean sunspots counts for each month, January-September 2019.

Since 2019 is not over, and we are just reaching the fall contest season, it is likely that a few countries will be worked. I have been on FT8 since mid-2017. Some of the countries I worked on 10M were only worked by FT8. Those countries have been deleted from the totals to be consistent with the previous years. As you can see, the 10M country totals correlate very well with the sunspot count.

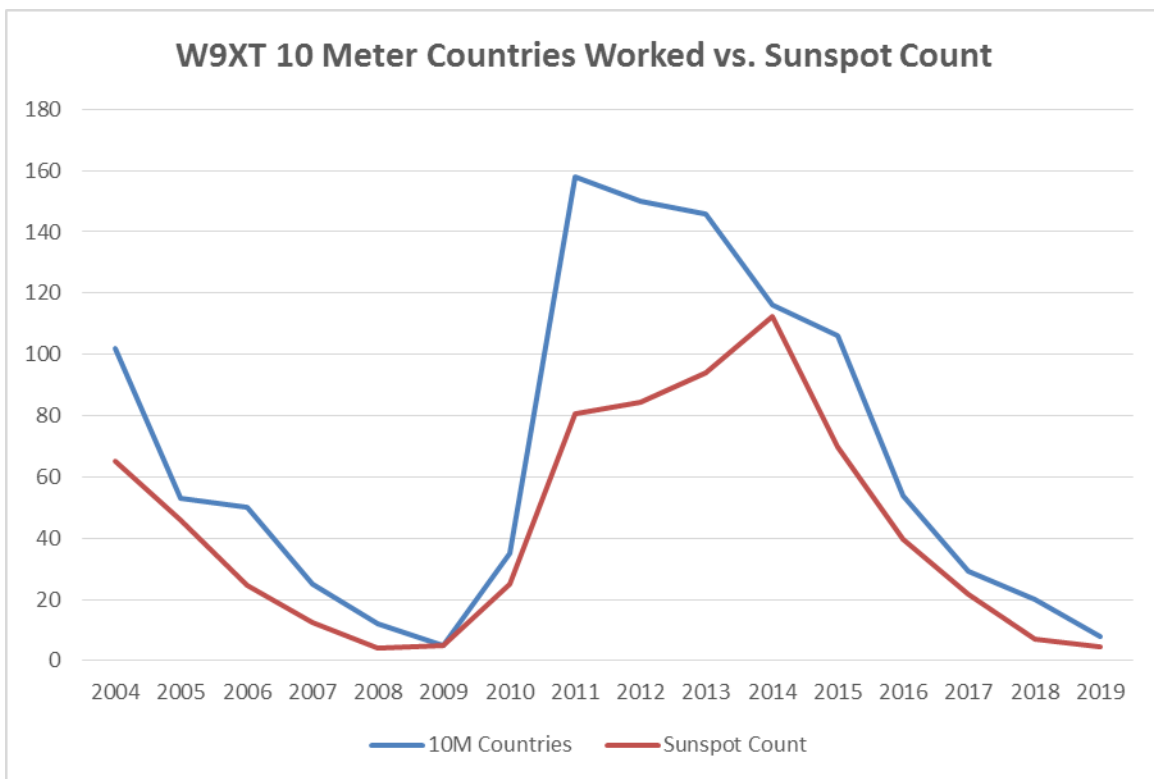


Figure 1

The country totals really went up fast in 2010-2012. I suspect this is because, after so many years of poor conditions, I was so happy to see good conditions after such a long drought, and was much more active.

The country totals probably could have been higher during good years because of DXpeditions. I try to work them on new bands and modes. I had collected a lot of countries on 10M over the years, so had many of them already confirmed. If a rare one showed up, but I already had it confirmed, I might not have bothered trying to work it if the pile up was big. I may not have wanted to spend the time to get through. Also, my QSO might have been at the expense of another DXer who really needed it. No need to be a hog.

So, when can we start expecting better conditions on the higher bands? That, of course, depends on when the sun starts producing sunspots again. Most estimates are that the minimum will occur this year or 2020, but we really don't know.

We have a much better handle on how the bands will behave for a given level of sunspots or solar flux. My rule of thumb is you can work western and southern Europe when the solar flux reaches 100 and the geomagnetic field is quiet for a couple of days. Stations further north and east require better conditions.

Spain is probably the easiest country on the European mainland to work being so far west and south. Looking at my logs, the last Spanish station I worked on 10M F2 skip was in February 2016. Japan is another area important for contesting but a more difficult path. My last 10M QSO with a JA was in March of 2015. That is over four years ago!

We are past the equinox, and conditions in the northern hemisphere are improving. Some believe October is the best month of the year for working DX from our area. Seasonal improvements are under way. I have been working and seeing more stations on 15 and 12 Meters.

These openings are typically to the south, and maybe to the southeast to South Africa, or southwest to some South Pacific islands. You just need to be there to catch the infrequent openings. I'm sure these bands are open more often than we think, but ops go up there, turn the knob, don't hear anything, and QSY to a different band. Everyone is listening and no one talking.

FT8 gives us a chance to avoid some of that. Besides enabling contacts during conditions too poor for SSB or even CW, the operations are confined to a small frequency range, so you know where to listen and transmit. I'm trying to encourage everyone to regularly listen on 15, 12, and 10 meters on the FT8 frequencies. If you don't see any signals, send some CQs. Let it run a few minutes. You might be surprised what shows up.

The big contest for October is the CQWW Phone event. This is the most popular radio contest based on participation. It runs October 26-27, 0000 UTC. That is 7:00 PM on Friday, local time. The exchange is a signal report and CQ zone. We are in Zone 4, so we give out 5904. Multipliers are zones and countries per band. QSOs with other continents are worth 3 points. Contacts with other North American countries are worth 2 points. US to US contacts are zero points but can be worked for zone and country multipliers.

There are lots of categories you can operate. Check out the rules and find the one best for you. <https://www.cqww.com/rules.htm>

The ARRL CW Sweepstakes takes place on the first weekend of November. The exchange is rather complicated, and rather than spelling it out here, check out the November newsletters from past years, or better yet, the ARRL page. <http://www.arrl.org/sweepstakes>

They have a lot of information and suggestions for operating. The ARRL CW SS is probably the best big contest for smaller stations. Back when I had a very limited station, it was one of my favorite contests. Unfortunately in recent years I have had a conflict which limited how many hours I was able to put into it.

The big DXpedition this month is to Pitcairn Island. It was made famous by the "Mutiny on the Bounty" incident. A large group of very experienced DXpedition ops will be on from October 18-November 1. They will be active in the CQWW contest. Apparently, this will be the first time the VP6 multiplier will be available in this contest. They are on all bands, including 6 Meter EME. Their web site is <https://pitcairndx.com/>.

Norfolk Island will be activated by a small group of Polish ops October 18-November 4. They will be on SSB, CW, and digital modes. This used to be put on regularly by VK9NS until he became a silent key about ten years ago. Now operation is sporadic.

A really rare DXpedition will be active October 19-31 from the Lakshadweep Islands. These Indian Islands are not on often, and we have a really tough path. The call is VU7RI. They will be on 80-6m, SSB, CW, and FT8. Our best shot may be on 40 Meters around sunset. We have a grey line path to that part of the world during those dates.

The “grey line” is the ring around the earth that is in twilight, either at sunset or sunrise. Low band signals often propagate along this path. FT8 might just provide the edge on this one.

There will also be a lot of CQWW contest DXpeditions. They often show up a week in advance and are active in testing equipment and learning propagation from their location.

Those are the highlights for October and early November. Now is the time to finish up on those last-minute antenna projects before the snow arrives.

Ham Radio & Real Estate

de Andy Bretl, W9ASB



Not only is this my first article published in the newsletter, it's also the first article I have ever written. So I'm hoping it will only get better. Right off the bat, I have to give some of the credit to Gary Drasch (K9DJT) for helping me come up with this idea. The hope is to provide you with some “food for thought” as to how real estate can impact ham radio when you make the decision to relocate. I am sure many of you at this point have awesome ham shacks, towers setup, wires run everywhere, neatly, but everywhere. Maybe some of you have even been allowed to move out of the basement, to the main level of the house. I personally was able to do that a few years ago. The nicer the shack, the more time you will want to spend with the hobby. Then you start to

think... This lawn mowing, weed whacking, trimming and snow removal are all getting in the way of my time on the air. If I would move to a condo, someone else would do that for me!! I could spend all that extra time rag chewing or working DX!!

Well, let's slow down there for a minute. While condo living sounds great, there is a lot that needs to be considered:

Will they allow you to put up a tower? What about wire antennas? Will the association permit a flagpole (to use as an antenna)? Are you able to put an antenna(s) in the attic?

What are you willing to give up in order to live in a condo? In many cases, not even TV antennas or satellite dishes are allowed. That means you are forced into using cable TV. On the ham radio side, the only alternative might be renting “air-time” on a remote station via the internet.

Most condo fees will range from \$150 - \$350 or higher. Now, most of the time, that fee covers all the outside maintenance and the roof, so no more mowing, weed whacking, trimming and snow removal. Remember that you might need to add remote “air-time” fees to that too.

Now, let's throw a very simple twist on that. If you would take the condo fee money, set it aside each month, and pay someone to do the mowing, weed whacking, trimming and snow removal, you now basically live in a condo with a great ham shack and the antennas you like. There should be enough money left to maintain your roof and other repairs too. Yes, it is as simple as it sounds. Why not look into the same lawn maintenance/snow removal companies that condo associations use? They would love to have you as a customer!

Stand by for some more hints next month!

THE COMPUTER CORNER

No. 259: When's The Last Time You Did Maintenance?

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I consider this a favor to you. Nancy (KC9FZK) did me a favor the other day. She said “your machine is getting pretty dusty ... when is the last time you cleaned it?” So, today I did. And you should, too. Nancy said my computer sounded quieter when it was all cleaned and back in service.

In April 2007, CC137, I reminded you to clean your devices with an article called Physical Maintenance. The article still applies, whether you have a desktop, laptop or even an iPad. Clean it up to the best of your ability to make sure it continues giving you good service. You can do it even if you are a beginner. You will need a vacuum cleaner with a hose (a Shop Vac is perfect, but your household vacuum will do the job, too, so long as it has a plastic “sucky” hose), a soft-bristle brush (a basting brush from the kitchen will do nicely, and you can replace it later or put it in the dishwasher for a cleaning), and (ideally) a can of compressed air. You can get the air at your hardware store. The aim is to remove the dust and dust bunnies. Why? Dust prevents air circulation inside your computer. If air circulation is impeded, the temperature will go up. High temperature is the most destructive factor in electronic devices in general, including computers of all kinds.

Unplug all the cables and move the box or laptop down to your workbench. If it is a laptop, find the vent area (the tiny grill, usually near a back corner). Put the vacuum hose up to it for a full minute and suck out what you can. Now use the air can to blow into that grill to dislodge whatever possible, and follow with another vacuum treatment. You might want to clean up the screen – use an old t-shirt moistened with plain water. A well-worn t-shirt is as good as microscope lens paper for non-scratch cleaning of soft microscope lens glass, so it is fine for a computer screen. Now clean the case as best you can, and blow the hair and dust out of the keyboard. You are done with the laptop.

If the computer is a tower or mini-tower, pop the removable cover (most often on the left side of the machine - your left as you face the front of the machine). Lay the machine on the covered side. Make sure your lighting is good, and examine the inside of the case. You will see a myriad of cables. Move them gently to the side as you examine each component. Identify the motherboard, the memory stick(s), the power cables that plug into the motherboard, the little twisted cables that fit on motherboard header pins for the speaker, power switch, power LED, hard drive LED, and so on. The connectors at the end of twisted cables usually have a printed label on the black plastic of the connector, and the motherboard usually has a (hard to see!) label by each set of pins that the connectors attach to. Right now! Make a sketch of the motherboard and, especially, those connectors and pins. If you inadvertently disconnect anything, that sketch will save you from grief. If you are lucky enough to have a manual for the motherboard, examine it for a nicely made road map of all these connectors.

Continue to examine. Note what is plugged in to any of the slots, and write it down or sketch it. You cannot record too much, though you certainly can write down too little! Document, document, document. Find the DVD and hard drive connectors. Follow them up to the device they control. When you have a pretty good idea of what goes where, it is time to clean.

Turn on the vacuum and carefully put the hose end inside the case. Use the paintbrush to dislodge any dust bunnies, and keep the vacuum hose end close to suck up the dirt you free up. Pay particular attention to the interior air slots in the power supply case, to the spaces between memory sticks, and to the fan on top of the CPU heat sink. If you have a can of compressed air, blow between the slots of that heat sink to get the dust out. Also give a blast or two of air in the slots of the power supply. Keep the vacuum going all the while, to suck up the dirt. Now set the machine on its bottom, and use the brush to clean up the inside bottom of the case. Suck it up, suck it up, and suck it up. Turn the case around so you can see the power supply fan blades on the back. Blow them clean from the back. This will likely blow dust into the case through the interior slots in the power supply, so go back inside and vacuum it all again. See if you can use the brush to dislodge dust from the fan blades of the power supply from the outside, keeping the vacuum hose nearby to suck the dirt up. Blow air into the corners of the inside of the case to release dust bunnies you may have missed. Suck everything up. When you are satisfied that the dirt is gone, it is time to renew contacts.

The easiest and safest way to renew the electrical contacts in a computer is to partially disconnect them, then re-seat them. This renews the contacts at the molecular level, as the metal contacts slide over each other. Start with the DVD cable. At the motherboard end, slightly raise the connector on the mating pins, then push it right back down until it is completely seated. Do the same with the hard drive connector. Now do the other ends of each cable, where the cable connects to the device. No need to completely remove the connectors. Just partially raise them, then re-seat them. This will significantly reduce the resistance of the metal-to-metal contacts. Now do the same for the power cable going to each device (one yellow, one red and two black wires, each). If you wish, you can completely remove these and then plug them back in. You cannot plug them in incorrectly, since they will only go in one way, and they are interchangeable.

Now apply the same procedure for the power supply connector on the motherboard. Use care here – modern systems have a little latch on this connector that you must depress to get it loose. Plug it back in, and make sure the latch is latched (you will likely hear an audible click when it seats properly). Use care not to flex the motherboard much. Motherboards can crack, in which case, they may well be rendered useless.

Now, move on to any video or other cards that may be present. PCI cards typically plug into those whitish slots on your motherboard, while AGP (video) cards plug into a dark-colored slot. Remove the retaining screws from any cards plugged in and raise them a bit (one at a time). Blow any dust out of the slot, then re-seat the card and replace the retaining screw. Use care not to touch any of the gold contacts on the card bottom. Oils in the fingerprints you leave will increase the resistance of the contact with its slot. Follow the same procedure for the memory stick(s). Be sure to keep fingers off those gold contacts! Do memory sticks one at a time to be sure you get them in the same slot.

Now renew the metal-to-metal contacts at the end of those twisted wires for the speaker, power-on cable and the like. Raise them just a tiny bit, then re-seat them. If your computer could talk, you would hear it say “Ooh, that feels good!”

Now give a blast or two of air to the top surface of the hard drive, and DVD. Dust bunnies like to hang out up there. Next, pay some attention to the front panel. Blast out any dust or dirt there, typically lurking in slots or vents. Sometimes, there is a big vent at the bottom of the front panel. Tip the computer up on its back to get to that one.

All done? Typically your workbench will be covered with dust and debris, including some bits of paper. Hopefully there will be no paper clips or other such conductive bits of flotsam and jetsam.

Save your notes and sketches! Put back the side panel and mount the computer in its proper place. Plug in all the cables, but before you power up, take a moment to clean your keyboard and mouse. Q-tips are great for both. Moisten the Q-tips with Sparkle (my favorite) or Windex to clean the dirt off of keys and in between. A blast of canned air will help, too. Power up! Maintenance is done!

Happy computing!

SILENT KEY

Tim Boppre (KA9EAK)



On August 6th, Tim KA9EAK, became a Silent Key after an 18-month battle with Non-Hodgkin's Lymphoma. He was 56.

Tim earned an electrical engineering degree from Marquette University and was hired by Allen Bradley in the drives division.

In 1987, Tim went to work for Square D, where he was an applications engineer. Later on, he joined the ICOM software company in West Allis in 1991, which was acquired by Rockwell Automation in 1994. Tim continued on with Rockwell Automation and became the software manager. While there, he took an interest in patent law, and as a result, he became a patent agent for Rockwell.

Always active in scouting, Tim became an Eagle Scout, as did his sons with his encouragement.

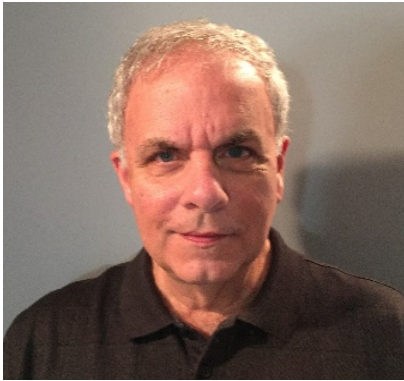
Tim enjoyed bluegrass music and taught himself to play the banjo, the guitar, the mandolin and the Dobro. This led him into instrument repair and building his own instruments. He chronicled these activities on his blog at outbackofbeyond.wordpress.com.

Among his many interests was amateur radio, and he earned his first amateur radio license at age 16. Tim was active in the Ozaukee Radio Club and gave several presentations on various topics. He will be missed by all who knew him.

Tim is survived by his wife Dawn and their children Danielle, Dominic (W9KKX), and Benjamin.

Vintage Amateur Radio

de Bill Shadid, W9MXQ



Always a mainstay in the ham radio business into the 1970's, Hallicrafters was certainly a market leader in a lot of areas. They were very close in timing to Collins Radio Company in the move to Single Sideband (SSB) equipment in the 1950's. In fact, they may have actually preceded Collins in an initial move to more compact radios with the 1954 introduction of their first tabletop SSB station – the HT-30 Transmitter and the short lived SX-96 Receiver. (The SX-96 Receiver was soon to be replaced with the now iconic SX-100.) Hallicrafters did incredible things in the 1950's with the introduction of the very first hybrid SSB Transceiver, the FPM-200¹. While introduced after the industry leading

Collins KWM-1, the FPM-200 included full HF coverage (80-10 meters) while the all vacuum tube KWM-1 included only 20, 15, and 10 meters. Hallicrafters was, as they said at the time, "The Radio Man's Radio"².



Hallicrafters HT-30 HF SSB/CW/AM Transmitter



Hallicrafters SX-100 HF SSB/CW/AM Receiver

Shown above is the Transmitter/Receiver pair most well known in the Hallicrafters line at the time. Shown below is the initial receiver that was introduced with the line in 1954, the Hallicrafters SX-96. The SX-96 was a fine receiver but not up to the performance levels of its successor, the SX-100. Perhaps Hallicrafters marketing was ready to go to market with the revolutionary HT-30 Transmitter but that the SX-100 Receiver was just not quite out of the laboratory and ready for production. The reasoning is lost in history.



Hallicrafters HT-30 HF SSB/CW/AM Transmitter



Hallicrafters SX-96 HF SSB/CW/AM Receiver

You can clearly see, in the above two station offerings, that the SX-96 was not an appearance match for the HT-30. Both the SX-96 and the SX-100 have been a part of the W9MXQ collection of Hallicrafters radios. Today, the SX-100 remains and the SX-96 resides with good friend, Bill,

AC9JV. While not a worthy partner in the SSB market with the HT-30, the SX-96 is a very fine receiver. In fact, the SX-96 mentioned here was owned initially by a now silent key friend in Quincy, Illinois. He had attempted to add the features to make the SX-96 perform like the SX-100. He later removed that modification, but to this day that SX-96 has a place in its chassis where an extra i-f tube and circuitry was added. The necessary opening for the tube socket was neatly done by my Quincy friend who was a fine technician.

Here is a look inside the HT-30 Transmitter (left) and the SX-100 Receiver.



**Top Inside View – HT-30 Transmitter
(Front at Bottom of Picture)**



**Top Inside View – SX-100 Receiver
(Front at Bottom of Picture)**

The small shielded cabinet at the top of the HT-30 picture is the enclosure for the two 6146 final amplifier tubes. The receiver was identical in overall front panel dimensions but not as deep – front to back. Shipping Weight of the two units was 34-1/2 pounds for the receiver and 51 pounds for the transmitter. The heavier power transformer, the added weight of the larger cabinet, and the addition of the synchronous motor fan in the transmitter made for the increased weight. The fan cooled the rather tightly enclosed final amplifier tubes. The enclosure similarly located in the SX-100 Receiver enclosed the Notch Filter circuitry. (That Notch Filter feature was not present in the SX-96 Receiver.)

Frequency coverage of the HT-30/SX-96 or the final HT-30/SX-100 package was somewhat different than the competition. The SX-96 and SX-100 Receivers covered the HF spectrum from 0.538 to 34.000 MHz. The HT-30 Transmitter covered the entire 80, 40, 20, and 10-meter bands – with no coverage provided for the 15-meter band. At the time, the 15-meter ham band had not been officially released for amateur use. Some manufacturers included it and some – like Hallicrafters – did not. Hallicrafters used a frequency quadrupling circuit to allow coverage of the entire 10-meter band with a single range VFO tuning range.

RF power in the HT-30 was certainly less than hams today would expect. The two 6146 amplifier tubes in the PA system provided an output power of just 35 watts – with a rated input of about 70 watts. Hallicrafters did not provide the expected 180 to 200 watts input in a transmitter until the later advent of the HT-44 Transmitter about ten years later. Even the much-touted HT-32 and HT-37 transmitters had an input power of only 144 watts that provided about 70 watts of output.

For these articles we do not generally get into deep technical discussions but the differences in the SX-96 and the SX-100³ are substantial. Just the added tubes in the SX-100 over the SX-96 (14 vs 12) suggests circuitry differences (because front end and audio circuits are little different

between the two radios. The addition of an i-f stage, a complete notch filter system, and antenna trim features made for better performance in the more evolved SX-100 receiver.

The HT-30 Transmitter was the first of several Hallicrafters Crystal Lattice Filter SSB Generation Transmitters that included the HT-30, the HT-32, the HT-32A, the HT-32B, and the HT-46. (The popular HT-37 and HT-44 Transmitters utilized Phasing SSB Generation that Hallicrafters perfected to an artform, in my opinion⁴.)

No mention of the HT-30 and SX-100 station would be complete without a mention of the linear amplifier that was part of the system. To compliment the HT-30 power amplifier Hallicrafters designed and introduced the HT-31 Linear Amplifier. True to its boatanchor heritage, the HT-31 weighs in at 92 pounds as it sits on the operating table. That is a lot of bulk (20" wide x 12-1/4" high x 17-1/4" deep) for an amplifier with a rated input power of just 510 watts. See the picture – on the left, below. The amplifier provides respectable power for the HT-30 station with a maximum output of 330 watts SSB/CW. Required driving from the exciter⁶ (HT-30 or any other transmitter) ranges from 8.5 watts at 80 meters to 20-25 watts at 10 meters. The amplifier used two 811A Triodes in the amplifier circuitry and a pair of 866A Mercury Vapor Rectifiers in the power supply. The HT-31 Linear Amplifier was not grounded-grid as we are used to seeing today. Instead it was grid-driven which explains the very low drive requirement from the exciter.



Hallicrafters HT-31 Linear Amplifier⁵



Hallicrafters SR-500 Console⁸

Above and to the right is a rather special product from Hallicrafters from the mid to late 1950's that was called the SR-500 Console⁷. Hallicrafters incorporated the HT-30, the SX-100, and the HT-31 into an assembly that also included interconnection wiring and other switching and accessories. This idea appeared again later with the HT-32 Transmitter, the SX-101 Receiver, and the HT-33 Linear Amplifier. In keeping with its higher power input, this assembly was called the SR-1000 Console.

Today it is easy to find the SX-100 Receiver but a bit harder to find the SX-96 Receiver because not many were made. However, good SX-100 Receivers, while plentiful, are in demand. Even though they are a lot of them around, good ones are expensive. This is a good example of rarity not necessarily determining value in today's market.

The HT-30 Transmitter is a bit rare but does appear from time to time. The HT-31 Linear Amplifier is extremely rare, and the SR-500 Console is almost, as we collectors say, "unobtainium."

Most of my articles on radios that you have read are written from my own experience with only a few examples otherwise – which are always identified. The article on the HT-30 is one of those

products that I have never owned. However, my collection currently includes an excellent SX-100 Receiver, has included the SX-96 Receiver mentioned herein, and I have had access to an HT-31 Amplifier in the past. I regret not having that experience with the HT-30 Transmitter. However, good friend and fellow collector, Pat Volkmann, W9JI, owned an HT-30 early in his ham radio career. Here is a short story, written by Pat, of his experience with the transmitter. And I quote:

In the summer of 1973, I was 16 and had been a ham for about a year. I had just passed my General exam and was looking for some better equipment, even though I had very little money. My main rig was a Heathkit HW-16 that I had purchased with the proceeds of my part time jobs. The transmitter was crystal-controlled and the receiver was so-so. Band coverage was limited to CW on 80, 40 and 15 meters. I wanted something with a VFO that covered all the bands.

A fellow member of the Wisconsin Valley Radio Association in Wausau, Wisconsin had some equipment for sale. I didn't know much of anything about the radios, but they met my criteria – VFO controlled transmitter and within my budget (cheap!). Ron Dickman K9EYA (now KT9W) was the owner of an RME 4530A⁹ receiver and a Hallicrafters HT-30 transmitter. A deal was made, and the radios moved into my shack. With my newly issued General class license, I made my first-ever sideband QSO using the HT-30 on August 31, 1973 when I checked into the Wisconsin Sideband Net as WB9JIC.

This was real radio equipment! The Hallicrafters HT-30 was a solidly built, heavy transmitter, weighing in at just over 50 pounds. Power output was about 30 watts from a pair of 6146 finals. The HT-30 covered all the HF pre-WARC bands except for 15 meters. The VFO was accurate and stable and was much nicer to use than the rock-bound Novice transmitters I had started with. During the 1970s, HF propagation was extremely good. The HT-30's modest power output was able to regularly work DX on 20 and 10 meters.

I don't know how many hours I put on the radio, but it was on pretty much any time I was at home. Fortunately, there was never any problem. The HT-30 was a pretty complicated device and I expect most repairs would have been beyond me. I used this pair for the next two years, until I left home for a stint in the US Air Force. At that time, I sold them to a friend who was interested in getting his ham license. I don't know where they ended up but hopefully they are still glowing today in someone's shack.¹⁰

Pat further comment on something that we both share regret over – the fact that neither of us took pictures of our equipment in those early days in ham radio.

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

A special note of thanks to my proofreader, Bob Bailey, W9DYQ.

Credits and Comments:

¹ Subject of a future article, the reference to the “hybrid” FPM-200 references its solid-state design except for the final amplifier and power supply regulator tubes.

² Reference Hallicrafters' advertising copy from the 1950's. Maybe a bit sexist but this was the 1950's.

³ The SX-100 in the W9MXQ collection is a Mark 1B model – and comparisons are to this model.

⁴ It is worth noting that all of Hallicrafters' SSB Transceivers utilized Crystal Lattice Filter SSB Generation.

⁵ The Hallicrafters HT-31 picture is from Hallicrafters publication 94X1403.

⁶ The term "exciter" is not so much used today (in ham radio) but it refers to a low power RF generator used to drive (or "excite") an amplifier. Research will show many such combinations such as the rather low power HT-30 Exciter used to drive the likes of an HT-31 Linear Amplifier.

⁷ The SR-500 Console uses a prefix ("SR") later used by Hallicrafters for Transceivers. This SR-500 console is not to be confused with the Hallicrafters SR-500 "Tornado," 80, 40 and 20-meter transceiver that dates from 1964 – many years after the short lived SR-500 Console. The SR-500 Console referenced this product as the HT-30, SX-100, and HT-31 mounted in a single, floor mounted cabinet.

⁸ The SR-500 Station Console shown here is the property of N9CQX.

⁹ The RME 4350A Receiver was a ham band only (160-10 meters) product of Radio Manufacturing Engineers of Peoria, Illinois. RME, as it was called has a very interesting history that will be the subject of a future article. I was once the proud owner of an RME-4350A as well as several other RME models.

¹⁰ Patrick (Pat) Volkmann, W9JI, frequently writes articles for the Ozaukee Radio Club. While, like this author, Pat has respect for many pre- and post-WWII amateur radio brands, he seems to look with special favor on vintage Collins Radio Equipment. I am proud to call Pat a friend and co-conspirator in this hobby!

W9MXQ

2019 Training Corner

de Tom Ruhlmann, W9IPR

The Extra Class training sessions have started (October 5th) at my home. There are six people taking the sessions, and we are following the ARRL Extra Class License Manual. The Power-Point presentations are interesting but we are learning just as much from the group discussions.

The individuals taking the sessions are:

Bill Church (KD9DRQ)
Roland Chaloupka (KB9WHV)
Michael Eibs (K9EMD)
Fred LeMere (KD9IOO)
Mark Heleniak (KD9NOO)
Bill Bischoff (KD9FGB)

Ozaukee Radio Club

September 11, 2019 Meeting Minutes

de Ben Evans K9UZ, Secretary



First Vice-President Pat Volkman (W9JI) presided over the meeting, as President Kevin Steers (K9VIN) could not attend. Pat called the meeting to order at 7:32 PM. All the attendees introduced themselves.

Announcements, Show-and-Tell, Bragging Rights:

Tom R. (W9IPR): Worked Italy tonight as he demonstrated ham radio to his grandson.

Gary S. (W9XT): Unified Microsystems is introducing a new low-band receive antenna that is an improvement over the latest Beverage antenna design. It's called the BevFlex-4X.

Program:

Chuck (W9KR) gave his presentation on the Direct Digital Synthesized VFO that he built.

Auction:

Stan (WB9RQR) conducted the auction. Many items were sold, including an HP Pavilion 400-224 desktop computer with Linux Mint 19.2 installed, a 500 MB external hard drive, a trans-match that Stan built, and two Linux Mint 19.2 installation CDs.

50/50 Drawing:

Bill Shadid (W9MXQ) was the winner of the 50/50 drawing.

Officer Reports:

Kevin S. (K9VIN), President's Update – Not at the meeting. No report.

Pat V. (W9JI), 1st VP – No report.

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

Ben E. (K9UZ), Secretary – The minutes from the August meeting are in the newsletter. Motion to accept the minutes was made by Stan (WB9RQR), seconded by Bill Shadid (W9MXQ) and approved by the members.

Robert E. (K4WTH), Treasurer – Robert was not at the meeting, so Ben (K9UZ) gave the financial report for August which was handed out to members during the meeting break. The only transaction of special note was a transfer of \$34,000 from the Scholarship accounts to the ARRL Endowment Fund. This transfer was announced by Tom R. (W9IPR) at the August meeting. Motion to accept the treasurer's report was made by Bill Shadid (W9MXQ), seconded by Stan (WB9RQR), and approved by the members.

Committee Reports:

Tom R. (W9IPR), Fall Swapfest – Tom gave a report on the outcome of the Fall Swapfest held the previous Saturday. He said it "overall went great", and acknowledged the individual members that helped with the event, from setup to tickets, parking, concessions, raffle tickets table, to tear-down.

The Swapfest put \$535.12 into the regular Club account, and the Scholarship table made \$449.50, for a net income of about \$984. Ticket sales were \$835, or 165 tickets at \$5.00 each, which represents a better attendance than in previous years. Advertisements for the Swapfest were sent to various email lists for ham radio clubs in Milwaukee and Madison.

A few members commented that the 6:00 AM start time is way too early. Tom responded that an early start time has always worked best all around. One member suggested giving away the door prize later in the morning so people would stick around.

Tom R. (W9IPR), Scholarship Committee – Tom commented on the first transfer of money, \$34,000, to the ARRL Endowment Fund. He acknowledged that the amount of the transfer was more than the amount specified in the motion that was approved by the members, but the end result will be the same as was approved, namely that the total donation to the Endowment Fund will be \$60,000. Under “New Business”, Tom will make a motion to approve, retroactively, the \$34,000 transfer to the ARRL Endowment Fund

Ken B. (W9GA), Field Day Committee – Ken said nothing yet is happening with the trailer storage issue.

Ken B. (W9GA), Nominations Committee – Ken reminded the members that the club has been without a Second Vice-President for many months. However, a member has been found who is willing to serve in that capacity until the end of the calendar year. Ken placed in nomination Bill Church (KD9DRQ) for 2nd VP, but will wait for “New Business” to make a motion.

Tom R. (W9IPR), Ham License Classes – Tom will be starting a class for FCC General and Extra Class ham licenses. It starts Saturday, October 5th and will run for approximately seven sessions, all on Saturday at 9:00 AM at Tom’s house. Those who intend to take the class should procure an ARRL study guide for either the General or Extra Class license, depending on the class they are working for.

Old Business:

There was no old business.

New Business:

Tom (W9IPR): Tom moved to approve the \$34,000 transfer from the Scholarship Fund to the ARRL Endowment Fund. Stan (WB9RQR) asked if this went through the Scholarship Committee and Tom said it did. Ben (K9UZ) seconded the motion, and the motion was approved by the members.

Ken (W9GA): Ken moved to approve the appointment of Bill Church (KD9DRQ) as Second Vice-President of the ORC, to serve until elections in January 2020. Motion was seconded by Tom (W9IPR) and approved by the members.

Stan (WB9RQR): Stan asked when the ORC roster will be coming out, pointed out that it is the job of the secretary, according to the By-Laws. Ben (K9UZ) responded that he’ll talk to Robert (K4WTH) and push to get it out. Pat (W9JI) said that a board meeting will be held hopefully in the next two weeks to deal with this and other issues.

Tom (W9IPR): We have to make sure that all our charge accounts are updated with the new mailing address. A bill from the Mequon printer was misdirected to Dave Barrow.

Nels (WA9JOB): Nels asked what the status is of the Field Day storage project. Ken (W9GA) responded that the new owner of the property hasn’t contacted him about possibly letting us use a space in the old barn to store the trailers. If we lose the property, then we’ll move the trailers to Big Nate’s property.

Tom (KC9ONY): Tom reminded members about the Wisconsin Parks on the Air event station on Lapham Peak near Delafield on September 21st. Either come to Lapham Peak to participate, or work some park stations from your mobile or home rig.

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 9:21 PM.

Attendance:

There were 29 members and no 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

UPCOMING EVENTS

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

Upcoming ORC Monthly Programs

October – Tom Ruhlmann W9IPR - *Station Grounding: What I Did & Should Have Done*

November - Vic WT9Q - *Vertical Antenna Project: Selecting & Installing a Vertical Antenna*

December - John Schrader W9NRG - *Emergency Communications for Firefighting*

January – *Elections*

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.

ORC Meeting Agenda

October 9, 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: Tom W9IPR, *Station Grounding: What I Did and Should Have Done*
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. 2nd VP Report – Bill Church (KD9DRQ)
12. Repeater VP Report – Tom Trethewey (KC9ONY)
13. Secretary's Report – Ben Evans (K9UZ)
14. Treasurer's Report – Robert Eskola (K4WTH)
15. Committee Reports:
 - a. Scholarship – Tom W9IPR
 - b. Ham License Classes – Tom W9IPR
 - c. Field Day Storage – Ken W9GA
 - d. Other
16. OLD BUSINESS
17. NEW BUSINESS
18. 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, October 9th, 2019

7:00 PM – Doors Open

7:30 PM – Meeting Begins