The ORC Newsletter

Official publication of the Ozaukee Radio Club, Inc. Mail all contributions to the editor, Tom Ruhlmann, W9IPR, 465 Beechwood Dr., Cedarburg WI 53012 (phone 262 377-6945). 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 XXX	February, 2018	Number 2

From the President

de Kevin Steers (K9VIN)

Thankfully the days are getting longer, and summer is not far off. For me, understanding what that means to each of the bands is still a work in progress. I suppose I will forever be a student of the airwaves.

Truthfully, I have not been on the air much this winter. I have been busy restoring two 1990's vintage snowmobiles, and between wrenching, test driving, and feeding wood into the fireplace, there isn't much time to operate. Granted, I do have 40M or 20M on in the house most of the day, tuned to a convenient frequency where I can eavesdrop on both sides of a conversation. Incidentally, my youngest daughter loves to cuddle up next to the radio and listen to voices piped in from afar, often times drifting off, like her father!

Recently disaster preparedness has come into the news, as it occasionally does. Recently, in Hawaii, an emergency alert went out warning citizens that ". . . a missile attack could hit land or sea within minutes". Interestingly, there was a group of reporters in Hawaii doing research on Ham Radio, etc, while this happened. It has become painfully clear what little communication would be available without power and without communications infrastructure. NBC news carried a story last week entitled "Hawaii's Communications Breakdown and How Going Ham Could Save Us".

Do a Google search on that title, or find the video on YouTube. It is well worth the watch, and it may just help us grow our Amateur Radio Community.

73,
K9VIN
Kevin

DX'ing & Contesting

De Gary Sutcliffe (W9XT)

Well, January was very interesting, and that will continue through February. Last month I dedicated a lot of space to the 3Y0Z Bouvet Island DXpedition. They had some delays due to weather and icebergs. They left port in Chile on January 19th. They arrived on January 31st. That is a long time to spend in high seas. They were on the air maritime mobile early on the trip but shut down because they were worried about damaging their rigs from the motion of the ship.

Just to make things interesting, there was a magnitude 6.6 earthquake near the island. There was concern of a tsunami, but that didn't occur. Apparently, earthquakes are quite common in that part of the world. We don't hear about them since nobody lives around there. There is concern that a strong earthquake could cause shifting or avalanches of the glaciers they will be staying on.

Once the ship arrived they had to wait for the weather to improve before landing. The 45 knot winds and the ship pitching 30° was more conducive to launching lunch than the helicopters. It was a waiting game. Then on Saturday, February 3rd the ship developed trouble in one of the engines. The captain declared it was unsafe to stay and aborted the DXpedition. They started heading back to port in Chile but after two days at reduced speed decided it would be better to head to South Africa instead. They are continuing to Cape Town as this is being written. Years of planning and work and hundreds of thousands of dollars were spent on this operation. As you can imagine the team is disappointed, but they are talking of another attempt in the future.

There was a shakeup at the ARRL board meeting in January following quite a controversy. One additional thing that came out of the meeting was a change of the DXCC rules. The change meant the Republic of Kosovo was eligible to be included as a DXCC country or more correctly a DXCC entity. Kosovo declared independence from Serbia in February 2008. Hams have been operating under the Z6 prefix for years but until January 21st it did not count for DXCC. Almost immediately the Amateur Radio Society of Kosovo club station Z60A was activated and Kosovo immediately jumped to the top of the DXCC needed list.

The pileups have been big. My first contact with them was on 20 phone and the operator called me by name. Boy, was I surprised! It turned out it was K9JF, who is an ARRL Honorary VP, at the microphone. Hams from 10 different countries went to Kosovo to help with the operation. They have been very active and DXers from the area have worked them on bands between 160 and 17M. Kosovo won't remain at the top of the list too long as it is easy to get to and the hams there have been active. With the new DXCC status there will be even more activity. With the addition of Kosovo there are now 340 countries on the DXCC active list.

Between an island being activated for the first time in 20 years, and a brand new one to work, everything else seems pretty boring. There are a few other stations to be looking for though.
The Comoros Islands in the Indian Ocean has been active under the call sign D68I. It is put on by a group of Italian hams who will be there until February 10. They are on 80-10 meters, SSB, CW and digital.

Gambia in West Africa will be active February 9-16 courtesy of a group of British hams as C5DX. This is interesting as it is part of a visit to a high school in Gambia. Four of the operators will be English students who are licensed hams. Part of the visit is to demonstrate ham radio to Gambian students. If you hear them on, remember these are not seasoned DXers and be patient.

Another British operation in February is to the Isle of Man. They will be active February 9-12 using the call MT0IXD. A focus of the trip will be to operate in the CQ WPX RTTY contest. The CQ WPX RTTY contest starts at 000-UTC on February 10 (6:00PM February 9 local time). It runs for 48 hours but you can only operate 30 hours. Off times must be at least 60 minutes. The exchange is signal report and serial number. The points per QSO is kind of complex and varies depending on the band and if the other station is in the same country, a different country in the same continent or from a different continent. Basically, just work everyone. Check the rules at https://www.cqwpxrtty.com/rules.htm. Multipliers are the different call sign prefixes. No one will get all that excited from my W9 prefix. There are a lot of categories you can pick from. You can go all band or a single band. Within those groups you can go high power, low power or QRP. They also have special overlay categories. One is for rookies, hams that have been licensed 3 years or less. Another is for modest stations. Basically, you can have a single tribander for 10, 15 and 20 meters, and single element wire antennas for 80 & 40.

The big contest this month is the ARRL DX CW contest. It will run on February 17-18. Basically, it is the world working the US. This is nice because you won't be fighting a wall of Europeans to work the rare African station. The DX stations will be looking for different states as multipliers, so you will send a signal report and your state. The DX stations send a signal report and their power. It is interesting when you get a call from someone running QRP. I once worked a Belgium station running 300 milliwatts in this contest.

Operating classes are QRP (5 watts or less), low power (150 watts maximum) and high power (1500 watts). You can operate in these classes as either limited (no DX spotting assistance) or unlimited which allows spotting assistance. You can also operate single band, but there are no power classes and you are not allowed to use spotting assistance. Full rules are posted at http://www.arrl.org/arrl-dx.

As usual there will be a lot of activity around the DX contest. There are about 20 different DX operations announced. They usually arrive a few days early to get set up, check out propagation, etc. They will be on the air, often concentrating on the WARC bands. One such operation will be from PJ2T, a big contest station on Curacao. One of the operators is a friend of mine, Rudy, NF9V. He will be on before and after the contest signing PJ2/NF9V. Work him if you hear him on.

Lots of stuff to get excited about on the radio this month. Make sure to get in on the action!

Vintage Amateur Radios

de Bill Shadid, W9MXQ

The new age of ham radio that began with the Collins S-Line (including the KWM-2) was not to go on forever as a Collins-only domain. In 1961, the competition began to step up to the challenge. Bill Halligan, W9AC (now re-assigned), led his successful amateur radio manufacturing company, the Hallicrafters Company, into the lighter weight, desktop world with the introduction of the ultimately very successful SR-150 HF SSB/CW Transceiver. For your reference, here is the Hallicrafters SR-150 Station that is in frequent operation at W9MXQ . . .

Hallicrafters SR-150 Transceiver and HA-1 'TO Keyer
Shown with Hallicrafters PS-150-120 AC Power Supply/Speaker
Also, Turner 254C Microphone and Vibroplex VibroKeyer (non-Iambic) Key
(W9MXQ Shack Photo)

Not to be a too much of a "me too" radio, Hallicrafters took the concept of the Collins KWM-2 and made significant changes in design to make the SR-150 a step in a somewhat different direction.

The SR-150 did not use traditional transmitting tubes, such as the popular RCA 6146 tetrode of the day. Indeed, Hallicrafters was, however, using the RCA 6146 tubes in their popular HT-32 Series and HT-37 desktop transmitters. The SR-150 final amplifier used a pair of 12DQ6B/12GW6 tetrodes originally designed to be horizontal oscillator (sweep) tubes in television sets. Hallicrafters was perhaps the first to understand that these sweep tubes had real merit, durability, and frequency performance, in some designs, well above the HF bands. To this day, the dedicated transmitting tube vs. sweep tube argument goes on. From a cost and performance standpoint, the sweep tubes were the equal of and perhaps superior to the 6146 and its successors. This is said from the point of view of the cost and performance perspective of the

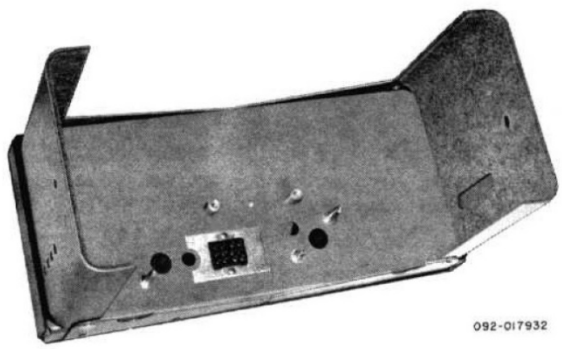
manufacturers. Ultimately, such very popular and market competitive products from Swan and Drake, as well as lesser volume producers such as Galaxy, National, as well as Hallicrafters itself thrived on sweep tubes and never returned to “real transmitting tubes.”

Hallicrafters, in its earlier days with SSB transmitters and transceivers, was never a producer of maximum power radios. The SR-150 was no exception with its 150 watts PEP input power and a resulting 80 watts PEP output. CW was rated at 125 watts input with an output of 65 to 70 watts. The receiver was not only very competitive, its dual conversion design was (and remains) one of the quietest designs on the market. To this day the SR-150 in my shack provides an eerily quiet receiver that on a dead band makes one wonder if it is working. But, working it is – when a signal is present it is every bit as sensitive as my Collins 75S-3B, Collins KWM-2A, or Hallicrafters SX-117 from the same era. A similarly quiet receiver design, the Drake R-4C, is not a match for the sound from the SR-150. Experience it if you can.

The identified competition, the Collins KWM-2, had significant, if not terminal issues with CW operators that were improved over the years but never fully corrected unless the user opted for a very expensive accessory, the 312B-5 External VFO and Console. Collins had ignored the need to provide for a proper offset allowing a tone to be heard (to copy the other station’s signal) and remove the need to keep retuning the receive frequency. Hallicrafters introduced a feature we use to this day – Receiver Incremental Tuning (RIT) that allowed a tunable offset of the receiver (only) so one could comfortably tune an SSB or CW signal. To take it another step, not only did Hallicrafters add this incredible (at the time) feature, they did so with a new technology device called a Varactor Diode. You can read about Varactors and they are not, as a device, the subject of this article – rather, their use is the subject. Suffice it to say, and very simply stated, Varactor Diodes provide an electrically variable capacitance to pull the SR-150 VFO receive frequency plus or minus about 2 kHz (2 kilocycles, back then!!).

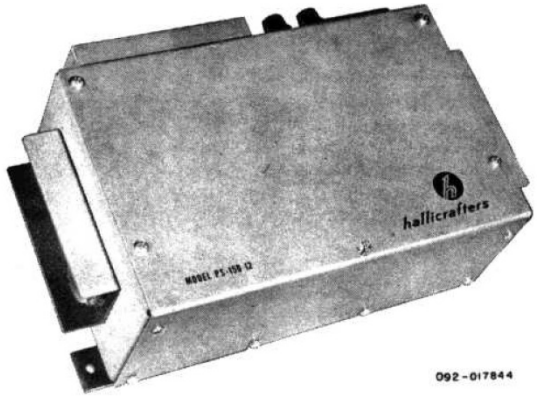
Hallicrafters followed the lead of Collins in providing no interference fighting circuitry on the SR-150. That was followed later with reasonable features on Hallicrafters competition for the Collins S-Line, the transceive capable separate Receiver and Transmitter and Linear Amplifier setup – the SX-117, HT-44, and HT-45, respectively. Those items are the subject of a future article – perhaps next month.

The SR-150 was offered with a variety of accessories to adapt it to home or mobile use. (All accessory pictures are from the Hallicrafters SR-150 Operations Manual.)



This is the MB-150 Mobile Mounting Bracket for the SR-150 Transceiver. The sides (left and right) were padded and they would fold away (toward the back) when not in use. The bracket was designed so that sliding the SR-150 into the mount would direct all rear connectors to quick disconnect sockets in the mobile mount. No hand connection/disconnection of wiring was required for installation.

The SR-150 Transceiver was compact for its day but not much different in size from its competitor, the Collins KWM-2. Hallicrafters and Collins tried hard in their designs to make the mobile mount as unobtrusive as possible when the radio was removed from the automobile.



This is the PS-150-12 DC Power Supply for the for the SR-150 Transceiver. This very nicely styled package was designed to be mounted in the trunk of the automobile. The power input required was nominal 12 VDC automotive electrical system power. There was no provision for 6VDC operation with this power supply so generally it required a vehicle made 1955 or later for operation.

This is the PS-150-120 AC Power Supply for the SR-150 Transceiver (and later Hallicrafters radios). You saw this in the intro photo in this article. But it is a rather elegant competitor to the Collins 516F-2 AC Power Supply that used two vacuum tubes. The PS-150-120 was all solid-state. The two PS-150-120 units in use at W9MXQ have shown 100% reliability over many years.

Hallicrafters used rather low plate voltages (and therefore higher current) in their radio power amplifier designs. The PS-150-12 and PS-150-120 provide 575 volts DC at about 260 ma (more current was available and used in later radios with the PS-150-120). There was also low HV (250 VDC) for lower level transmitter and receiver circuitry plus there was transmitter tube bias (-125 VDC) and filament voltage for the radio (12.6 VAC). The PS-150-120 even had provisions to easily read voltage and current on the HV line with a common Volt-Ohm-Meter (VOM).

One great feature of similar vintage Hallicrafters transmitters (and the transmitter within their transceivers) was ultra-simple tuning of the tank circuity, while many radios had a relative long procedure of tuning the grid for proper grid drive while adjusting Tune and Load controls for proper plate current to get rated power. Hallicrafters capitalized on the fact that many hams were using commercially available or home brew beam, vertical, and wire antennas that had a fixed impedance of 50-75 ohms. So, load became fixed at 50-75 ohms (with the resulting removal of the Load control from the radio). Tuning the SR-150 (or the HT-37, HT-32, and later HT-44 Transmitters) involved the use of an output meter peaked by the Preselector (Grid) and the Output (Tune) controls. No loading and “dipping” of the plate current meter on the competition’s radios. Tuning a Hallicrafters transmitter was virtually instantaneous when compared to the competition. Obviously, other antenna designs and impedances required an external antenna matching unit. The E. F. Johnson “Matchbox” tuners were popular for such applications in those days.

In closing, I must say that this radio is a favorite of mine. The entire Hallicrafters line into the 1970’s was, in my opinion, some of the finest, best performing, and long term dependable radios marketed to the ham radio community at a competitive price. And, returning to my previous comments on “Desk Presence,” Hallicrafters comes very close to Collins. The SR-150 Transceiver is difficult to find today with good appearance and operating condition. Most I see advertised are not working or have appearance issues. But the most important trait in vintage radio

collecting is patience in the search process. My SR-150 came from an estate perhaps five years ago. I am only the second owner of this radio.

And one more thing in this month's installment . . .

I would be remiss in not mentioning another Hallicrafters early SSB Transceiver that was introduced ahead of the Collins KWM-2, and more in keeping with the introduction of the original Collins S-Line. That would be the very advanced Hallicrafters FPM-200 HF SSB/CW/AM Transceiver that was produced more as an engineering exercise than a viable product, as it turned out. It was just too far ahead of its time

This FPM-200 is owned by fellow collector W8ZR. These radios were never fully marketed and it is felt that fewer than 200 of them were made and sold – less exist today. Hallicrafters sponsored DX-Peditions and other events with the FPM-200. There were even some events in cooperation with the United States Air Force with FPM-200 equipped cross-country flights.

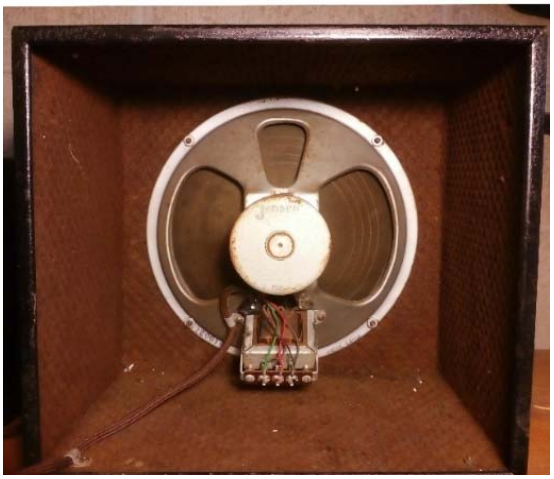
Perhaps more details on the FPM-200 can be in a future article. It was almost unbelievable as a solid-state radio in a vacuum tube world. It had dual VFO's and a high concentration of printed circuit board assembly. The only vacuum tubes were two 6146's in the Final Amplifier, a 12BY7A Driver, and two OB2 Voltage Regulators. This radio's finals produced about 70 watts SSB PEP output and about 45 watts on CW. Today these radios would be hard, if not impossible, to maintain with their high population of unobtainable Germanium transistors. Like the Germanium transistor equipped National HRO-500 Receiver in my radio collection, some of these radios are best displayed and perhaps rarely used!

Vintage Speaker Repair

By Pat Volkmann W9JI

Recently, I picked up a National HRO-W receiver. The HRO-W was made in 1946 and has an external speaker and power supply, along with the plug-in coils for band changing. After some work on the power supply I was ready to try out the radio. I could hear a slight buzzing noise, but that was it. Some investigation showed that the speaker wasn't working properly.

The speaker is mounted in an art deco style metal box, finished with black wrinkle paint. The audio transformer is mounted on the speaker frame rather than in the radio cabinet. Originally, the speaker was an optional purchase, so if you wanted to stick to headphones only, you could save the price of a speaker and transformer. After removing the speaker from the case, it was apparent that damage had occurred to the voice coil and cone. Repair was needed!



Speakers are relatively simple devices and all the parts can be repaired or replaced. The speaker cone is connected to the voice coil. The voice coil is connected to the output of the radio. The electrical signals from the radio cause a changing current in the voice coil. This changing current pushes against the magnetic field of the permanent magnet, causing the cone to move. The moving cone causes changes in air pressure, which is the sound that we hear. (See photo)

The date code on the speaker says that it was made in the first week of April 1946. The manufacturer is Jensen, a name that is still found on speakers. An internet search turned up hundreds of places promising to have repair parts for old speakers. This Jensen PM-10C, however, was too old or too unusual to find parts readily available.

I posted a request for help in finding speaker parts on the club email reflector and in a short time had a number or responses (Thanks, guys!). Most directed me to websites which, as it turned out, didn't have the parts that I needed. One reply said to contact a local guy who was "a master" at speaker repairs. That guy is Dave Roffer, in Post Washington. I met with Dave and he said that he could repair the speaker.

There were several things wrong with the speaker. The paper cone was creased and ripped in a number of places. The area where the voice coil connects to the speaker cone was torn and the voice coil itself was damaged.

Dave got the speaker repaired and at a reasonable price. He patched up the torn areas, reattached the voice coil and glued on a new dust cap. Dave pointed out that because of the age of the paper cone, it was brittle and would have a frequency response limited to the midrange of audio frequencies. That seemed like it would be OK for a communication speaker.

The repaired speaker works fine and sounds good. It looks good in that old speaker cabinet with the National logo in red and silver.

If you have a speaker that is in need of repair, you can contact Dave Roffer at 262-573-6124. If you are interested in the National HRO receiver line, you can look at the presentation I gave at the May 2017 club meeting. The presentation is on the Ozaukee Radio Club website here. Note: Old presentations are on the ORC website – About Us / Other Stuff / Downloads / Programs

Notable Members - W9YKR RECOGNIZED

By Stan Kaplan, WB9RQR

Gary Cohen, M.D. (W9YKR) can be seen across the table most Saturday mornings at Jim's Grill in Cedarburg, having breakfast with those ORC members assembled at this popular "unofficial" ORC happening. Gary is a pediatrician in the Division of Neonatology at Children's Hospital of Wisconsin, on the Medical College of Wisconsin campus. Gary and his colleagues take care of high-risk babies, and this Division is noted world-wide for managing newborns that often would not survive in general medical facilities.

Gary was just selected as one of the Best Doctors in America for 2017-2018. The list of 650 area Best Doctors was selected from among 40,000 US doctors in more than 40 medical specialties and 450 subspecialties. This list contains the most respected specialists and outstanding primary care physicians in the nation. These are the doctors that other doctors recognize as the best in their fields. They cannot pay a fee and are not paid to be listed and cannot nominate or vote for themselves, so the list is a good, unbiased, and respected source of information. The website is www.bestdoctors.com (though note that the list is not available on that site).

Next time you see Gary, give him your congratulations!

THE COMPUTER CORNER

No. 240: Uninstallers: Geek and HiBit.

Stan Kaplan, WB9RQR 715 N. Dries Street Saukville, WI 53080-1664
(262) 268-1949 wb9rqr@att.net

C:\Users\Owner\AppData\Local\Microsoft\Windows\Temporary Internet Files\Computer Corner\2018\Cc224.doc

Generally, uninstall programs are a nuisance. The one that comes with Windows (in the Control Panel) is terrible, and many of the third-party versions are not much better. They claim to do a good job in cleaning out a program, but many do not catch all the bits and pieces, such as references to the program left behind in the registry. No matter what version of Windows you run, if you uninstall programs from time to time, your registry, shortcuts, and other sites in your machine's software accumulate these bits and pieces. This can lead to anything from the "blue screen of death" to simple crashes to just slowing down your machine (and your work) because of invalid references left behind. When you uninstall a program, you want it gone, including every reference of any kind to it in your machine.

Back in June 2016, I wrote briefly about the then new Geek Uninstaller, mentioning that it is free, tiny, works beautifully, and really cleans out all the references to the program you are uninstalling. Nothing new here – it is still one of my two favorite tools for uninstalling software. You can get it at http://www.majorgeeks.com/ (the software bears no relationship to the website though both have geek in the title). Look for it under Site Info (left panel), then Top Freeware Picks.

Now a new kid is on the block. Also available at majorgeeks is HiBit Uninstaller (current version 1.1.20). This terrific uninstaller is also free, small (2.54 MB) and you don't even need to install it with this portable version! Just download the ZIP file, unzip it to a site of your choice (such as the desktop), and click it to start. It will quickly present you with a list of all your installed programs, and right clicking one will begin the uninstall process. There is a tutorial available on majorgeeks, directly in the program description that will make its use clear. I recommend you watch it to get an idea of the program's features. For example, there is a Tools menu in the upper right part of the panel that includes a drive cleaner, registry cleaner, applications manager, empty folder manager and much more. Majorgeeks rates it as 5-star and claims it is every bit as good, if not better than, the competition. I keep both the Geek and the HiBit Uninstallers on my machine, because I can't decide which is better! To me, Geek Uninstaller seems great when you just want to quickly dump a program, while HiBit seems perfect when you want to uninstall something and then do a little cleaning and maintenance. In the latter case, it seems to take the place of CCleaner, and it is a bit more aggressive (that is good because CCleaner is very conservative, sometimes too much so). Hey, try it. You'll like it!

Happy Computing!

Ozaukee Radio Club

January 10, 2018 Meeting Minutes

Ben Evans (K9UZ),), Secretary

President Kevin Steers (K9VIN) called the meeting to order at 7:31 PM. All the attendees introduced themselves.

Announcements, Show-and-Tell, Bragging Rights:
Gary (K9DJT) received a certificate for First Place in the Wisconsin Radio Roundup last year. Also, his ORZ.com page was hacked; someone substituted his email address with another one in order to sell things that didn't exist. QRZ.com is aware of the vulnerability and has changed the login procedure.

Stan (WB9RQR) showed the group a mini-CD that will completely erase everything on a computer's hard drive. It will be offered for sale at tonight's auction.

Elections for 2018 Officers:
Nominations Chair Ken (W9GA) conducted the officer elections, which was in place of a program.

The following members were running unopposed for their current offices:

President – Kevin Steers (K9VIN)
First Vice President – Pat Volkmann (W9JI)
Second Vice President – Robert Eskola (K4WTH)
Repeater Vice President – Tom Tretheway (KC9ONY)
Treasurer – David Barrow (N9UNR)
Secretary – Ben Evans (K9UZ)

There were no additional nominations from the floor. Dave (N9UNR) pointed out that anyone who hadn't paid their 2018 member dues could not vote.

A motion was made to accept the slate of candidates without a balloted vote. The motion was seconded and passed unanimously.

Ken pointed out that at the next meeting in February, there will be votes for Ham of the Year and Turkey of the Year. Ham of the Year may be awarded to a member more than once, but not so for Turkey of the Year. Ballots will be handed out at the February meeting for the awards which will include lists of past recipients. There are many other awards that members can vote on, particularly the presenter of the best program of the year. The awards traditionally had been given out at the annual awards banquet, but lately interest has languished for the banquet and is in doubt for this year, so the awards will likely be presented at the March meeting.

Auction:

Stan (WB9RQR) conducted the auction. About 11 items were sold, including a desktop computer with the latest version of Linux installed.

50/50 Drawing:
Bill S. (W9MXQ) won the 50/50 drawing.

Officer Reports:
Kevin S. (K9VIN) President – Reservations have been made for the venues for both

the Spring Swapfest (St. Mary's Curling Center) and Field Day (Pleasant Valley Park).

Pat V. (W9JI), 1st VP – No report.

Robert E. (K4WTH), 2nd VP – No report.

Tom T. (KC9ONY), Repeater VP – Tom had heard that the W.A.R. had sent out a letter for comment on the proposed ORC repeater antenna change. The letter was sent to possibly–affected repeaters in the area. The change is to directionalize the antenna away from the lake and toward the northwest.

Ben E. (K9UZ), Secretary – The minutes from December's meeting is in the newsletter. There was one mistake in the newsletter; the date given for the Spring Swapfest was wrong and should read May 5th, not September 5th. Motion to accept the minutes was made, seconded and passed.

Dave B. (N9UNR), Treasurer – Dave reports that the treasurer's reports were distributed and moved to accept them subject to audit. The motion was seconded and passed.

Committee Reports:
Club Historian, Robert (K4WTH) – Robert is making updates to the Facebook page with historical club photos. If anyone has photos or any other documents of historical significance, please share them with Robert.

Old Business:
Jim (K9QLP) turned the date of the Fall Swapfest over to the Cedarburg Fire Department (September 8th). There is still a question as to when the Belvidere swapfest will be. Tower Electronics may not be available to be at our swapfest on September 8th.

New Business:
Tom (KC9ONY) reports that Jerry (KC9WI), who was not at the meeting, is interested in writing book reports for the newsletter, but prefers not to buy new books to report on. If anyone wants a book reviewed by Jerry, he or she should give it to Jerry to read.

Adjournment:
A motion to adjourn the meeting was made, seconded and passed. The meeting was adjourned at 8:09 PM.

Attendance:
There were 28 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

AGENDA

February 14, 2018

1. 7:00 – 7:30 PM – Network & Rag Chew
2. Call to order: Introductions. Kevin Steers (K9VIN)
3. Announcements, Bragging Rights, Show & Tell, Upcoming Events, etc.
4. Program: Ben Evans, K9UZ, "RF Exposure"
5. 50/50 – Kristian Moberg, KC9TFP
6. Fellowship Break
7. Auction – Stan Kaplan (WB9RQR)
8. Presidents Report – Kevin Steers (K9VIN)
9. 1st VP Report – Pat Volkmann (W9JR)
10. 2nd VP Report – Robert Eskola (K4WTH)
11. Repeater VP report – Tom Trethewey, (KC9ONY)
12. Acceptance of Minutes : Ben Evans (K9UZ),
13. Treasurer's report – Dave Barrow (N9UNR)
14. Committee reports.
    A. Spring Swapfest
    B. 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 Senior Citizens Center

1665 7th Avenue, Grafton

Second Wednesday

7:00 PM – doors open

7:30 – Membership Meeting