



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

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Volume XXIX

September, 2017

Number 9

From the President

de Kevin Steers (K9VIN)



Wow, where did the summer go! It is hard to believe that the Spring Swapfest, Field Day, and Lighthouse day are behind us already, and the Fall Swapfest is just around the corner. September 23 from 6:00 am until 1:00 will be our outdoor event at Cedarburg's Fireman's Park.

Honestly, with the beautiful motorcycle weather and just being outside enjoying the summer, I haven't been on the airwaves much at all last month. So many projects on the honey-do list that need to be done before snow flies, has kept me busy. I am looking to re-prioritize my radio activities, very shortly, as the autumn winds begin to blow.

On the bench: I recently found a great deal on a spool of stainless steel welding wire (OK, two), so I will be experimenting with a fan dipole and other antenna designs. I probably have a couple of thousand feet of wire, but in doing some research after the purchase, I may be having some buyer's remorse. It appears that Stainless is NO WHERE near as good a conductor as copper, so I may be building dummy loads, after all. I will certainly report back with my findings. I also learned that soldering stainless steel is no walk in the park, so I may have to resort to wire nuts in my construction method. On a funny note, when I went to the welding supply shop to get liquid flux (which was supposed to improve my soldering chances), I accidentally asked him if they carried liquid solder, at which point he looked at me as though I asked him if they had Prince Albert in a can. 😊

Please consider volunteering to help keep this great club going. It is not too early to throw your hat in the ring as our elections draw near. We need fresh blood in the ranks to continually educate future generations on how to keep this well-oiled machine chugging. Lastly, please consider writing an article on a recent project, something you learned, or even something only remotely associated with this fine hobby. 73

DX'ing & Contesting

De Gary Sutcliffe (W9XT)



September is here and with it football and the start of the fall radio season. The W9DXCC convention in the Chicago area in the middle of September has traditionally been the fall kickoff for radio for me.

W9DXCC usually draws about 300 attendees, some coming from long distances, sometimes as far as Europe. It is a good time and coincides with improving propagation that improves as we approach the autumnal equinox.

The big question is what kind of band conditions can we expect during the cold weather months? We are heading down towards the bottom of the sunspot cycle, which most models predict will be in 2020. There is some evidence that the next cycle has already begun (there is some overlap between new and old cycles).

Sunspots at the start of the cycle occur at high latitudes. As the cycle progresses they move towards the solar equator. If you watched the August solar eclipse you may have seen some sunspots on pictures of the solar disk. They were near the equator, but there have been some spotted at higher latitudes in recent months.

An early solar minimum would be very welcome. The last one lasted much longer than usual and had lower minimums than usual. It was so low that we got more ionization from cosmic rays from deep space than from our own sun. Longer and lower minimums generally indicate that the next peak will be lower. The last one was nothing to write home about.

Last month I discussed the new digital mode FT8. Coincidentally Tim, KA9EAK, also wrote about FT8 in the same issue, a small indication of how popular it has become. One of the big advantages is the ability to pull our signals we can't hear with our ears.

One morning I went on 17 Meters and tuned up and down the band. Nothing heard. No spots on the DX cluster. Band must be dead. I tuned the rig down to about 20 watts and loaded up my 40 Meter beam with a tuner. Essentially it acts as a long dipole on 17M, with no real gain. I started calling CQ on FT8 and a few minutes later I got a call from a station in Sweden. He gave me a report of -14, that is 14 dB below the receiver noise level. Generally, you can't even detect a signal that is more than 10 dB below the noise level with your ears.

The amazing capabilities of FT8 and similar modes have gotten people wondering if there are propagation modes that we didn't know about. We don't hear anything on CW or SSB, and the propagation programs tell us the bands should not be open. What's up? Propagation guru Carl Leutzelschwab, K9LA, had a very interesting article on his website considering why we can make contacts with the digital modes on "dead" bands. http://www.k9la.us/Aug17_Bonus_-_What_Mode_of_Propagation_Enables_JT65-JT9-FT8_Revision_1.pdf. It is a very interesting read.

Contests pick up in September. The ARRL VHF contest starts Saturday September 9 at 1800 UTC (1 PM local) and runs through 0259 UTC Monday (9:59 PM Sunday night local). The chances for 6 Meter Es openings are not nearly as great as in the June version, but I expect

more interest with people using FT8 to work stations too weak with other modes. Rules at www.arrl.org/september-vhf.

Since you already have your station set up to run FT8, you might as well get on for the CQWW RTTY contest. You just need different software to run RTTY. I like MMTTY, but there are others, most are free. The contest starts at 0000 UTC on September 23 (Friday night 7:00 PM local) and running for 48 hours. Unlike the other CQWW contests you can work US stations, opening the opportunity for many more contacts. The exchange is also a bit different from the other CQWW events. You still send signal report and CQ zone (zone 4 for us) plus you add your state. This is a good way to pick up states and countries on digital for DXCC, WAS, etc. Full rules at <http://www.cqwwrtty.com/rules.htm>.

DXpeditions pick up in somewhat in September. The one I think is most interesting is to Cocos Keeling in the second half of the month by W7GJ. The exact dates are not set, but the call sign is VK9CGJ. There is one catch. This is a 6 Meter EME DXpedition. That's right, 6 Meter moon bounce. Increasingly often big DXpeditions are adding EME and some (like this one) are just for moon bounce. As far as I know, Ken, W9GA, is the only ORC member with 6M EME capabilities.

More down to earth (if you will excuse the pun) is an operation from Botswana by a group of Russian hams. They will be using A25 callsigns September 15-25. 160-6M, CW & SSB.

Further north on the African continent Mauritania will be activated September 16-28 by a group of Czech hams using the call 5T5OK. 160-6M, SSB, CW an RTTY. Amplifiers are not allowed there, so they will be running 100 watts.

The Galapagos Islands used to be very common, showing up for nearly every major contest, especially HC8N. It has not been heard often in recent years. Checking my log, I see that the last time I made a contact there was with HC2AOB/8 in 2014. Before that, the last time was in 2008. The next opportunity will be September 14-21 with the call HD8M. This international group will be on 160-6 Meters, CW, SSB & Digital.

A little closer to home, St. Pierre & Miquelon will be activated by a European group September 17-23. They will be using FP/home-callsign. 160-10M.

September brings cooler weather, football and better radio conditions.

Go Packers! Go Badgers!

THE COMPUTER CORNER

No. 235: *A Few Reasons Why Linux is Better than Windows*

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Firefox, Flash, Java, Skype, Thunderbird, Pidgin, Hexchat, Steam, Dropbox, Blender, Minecraft. **Audio:** Spotify, Rythembox, audio codecs. **Video:** VLC Media Player, video codecs. **Video Editing/Drawing Software:** Pix, Gimp, Inkscape. **Libre Office:** Writer, Calc, Impress, Draw.

Recognize any of the above? I bet you do. They are all programs you must download and install after you install Windows, to gain their intended use. However, they are all automatically installed with “Serena”, Linux Mint 18.2 Cinnamon. That is one big positive check mark in favor of the latest Linux (Linux is always **free**). By the way, you can open or save files that are completely compatible with Microsoft Word (*.doc or *.docx), using Libre Writer.

Same compatibility for Libre Impress and PowerPoint. Also by the way, the latest Linux installations also include software that will let you run Windows programs (Wine, Virtual Box).

Here is another reason. Typically, an update from Microsoft includes the installation of one or more files, followed by a request for immediate reboot. Sometimes, after the reboot, another set of updates is suggested, based upon the new set that you just installed. So, download and install again is your option, followed by yet another reboot. Sometimes this cycle of install and reboot takes several hours. Furthermore, it is not unheard of for an update to screw up some other program or function, because the dependencies between programs are not always worked out properly by Microsoft.

In Linux, steps have been taken to prevent such glitches. Linux contains an “Update Manager” that you can easily find and activate to check for needed updates. If it finds any, clicking its query will download and install the updates, plus any updates upon which the updates are dependent. All automatically. In Linux, dependencies between programs are sought out and quickly corrected or adjusted for. You are virtually guaranteed that everything will continue to work after the update. It is just plain slick!

Moreover, when you have installed the updates (and installation is commonly very quick), there is NO NEED TO REBOOT. The installation automatically writes the new software to its assigned slot, stops, and erases the old software, and starts the new version. They seem have broken the old install/reboot/ install/ reboot sequence that takes so much of your time in Windows.

There is also an Update Manager icon in the tray, should you want it. Sliding your pointer over it will reveal something like an “Updates Needed” or “Your Computer is Up-To-Date message. Indeed, if you look at the icon closely, a checkmark in its middle means you are all up-to-date. If the sliding the pointer over the icon shows Updates Needed, a double-click of the icon will start the update process. Almost always just a couple of minutes. And, no reboot needed. That really impresses me!

The word is that Microsoft wants to reorganize your computer, with your personal files off in the cloud somewhere, and not on your hard drive. Then it will charge you a yearly fee to access

your files, and a fee for the software (Office) to modify or update them. This is just what I have heard; it is not verified. But if true, why would anyone want Microsoft anymore? The new versions of Linux can do anything Microsoft can do, and Linux plus its programs are all free. Moreover, Linux respects your privacy, and the ownership of your machine by you! And your files stay on your machine.

What will you be using next year? Happy Computing!

Vintage Amateur Radios

de Bill Shadid, W9MXQ



This month we will be in the 1960's once again with a lower price entry from National Radio Company, Inc. National, by that time, in my opinion, had a difficult time staying in one segment or another of the amateur radio market. They had focused on what they thought was a premier radio, the NCX-5 HF Transceiver spotlighted in last month's column. But, The Heathkit Company was ruling the market with their very popular SB-Series Transceivers, Receivers, and Transmitters.

National decided to take aim at the popular Heathkit SB-100 Transceiver. They pushed the envelope in the marketplace by offering all the features of the kit-built Heathkit SB-100 in a factory assembled radio they called the National 200. It sold for the same price as the Heathkit.



Left to Right are the National NCX-A AC Power Supply/Speaker, the National 200 HF Transceiver, and an Eico 717 Electronic Keyer that shows well with this station. Also shown are the very popular, at the time, Turner 254C "Crystal SSB Microphone." At the lower right is the much later Bencher BY-1 Keying Mechanism.

The National 200 Transceiver covered the 80-10-meter bands with SSB, CW, and AM modes. The transceiver had a 200-watt input final power with an expected output of 100 watts. As with the NCX-5 Transceiver discussed last month, the radio included a pair of the very popular sweep tubes of the day, the 6JB6. That tube was used by National and the increasingly popular offerings in Transceivers and Transmitters from R. L. Drake Company. While cost cutting was evident in this radio, it was equipped with a very effective, very high quality, 8-pole crystal lattice

filter that provided a 2.8 kHz bandwidth at -6dB and a shape factor of 1:1.7. That design would be effective to this day.

Sadly, National felt it necessary to exclude the “Transceive Vernier” control from the NCX-5 that allowed a minimal separation of receive and transmit frequency. But, in defense of National, their competition, the Heathkit SB-100, and the various offerings from Swan, Collins, and Drake did not offer that feature.

National offered two AC Power Supplies for this radio – the deluxe National NCX-A AC Power Supply/Speaker Console (pictured above) and the economical AC-200 Power Supply (see left). The AC-200 offered no outer decorative enclosure or speaker. Speaker connections were available at the Power Connector on the back of the transceiver. Like all National Power Supplies of the time, its design included a choke in the HV circuit. This was likely tied to National’s long history with military radio and the design requirements for stable and dependable power. Read on for some problems with the low-cost AC-200.



The AC-200 Power Supply in this story is one that has been problematic since its first use. This has been as much due to a lack of time for this radio as to the obvious problem with the power supply. The original owner and I had ignored its problems with destroying rectifier diodes. In the end, the problem was simply a filter capacitor in the bias power supply circuit wired in reverse polarity. In defense of National’s staff of assemblers, the capacitor was shown incorrectly wired on the schematic, shown incorrectly mounted in pictorials, and therefore the assemblers simply followed directions. The moral of the story is that electrolytic capacitors do not like to be wired in reverse polarity! They *will* make themselves known! The issues found in this AC-200 Power Supply have been well documented on at least one Reflector for National Radio. So, National managed to do more than one of these.

The last item was added as a little extra for this article. Electronic Instrument Company (Eico) moved into the SSB business with the Eico 753 HF Transceiver and the Eico 717 Electronic Keyer in the same period. The Transceiver was by all accounts a technical failure but the matching Keyer was widely sold and many are still in use today. It was non-iambic, as were most of the day, and used six vacuum tubes to generate the dots and dashes. Like its competition of the time, it used a neon bulb oscillator to generate the rather “raspy” sidetone to monitor the code. Many pictures of vintage stations include this very good Electronic Keyer of the day.

National 200 Transceivers are very hard to find these days. I am not sure of the reason for their rarity as they are not particularly collectable. The fickle nature of collecting seems never to be logical. Of special interest is that this transceiver, throughout its product life cycle, was marketed by National both as the National 200 and as the National NCX-200. There was no timing on the names – it seemed to depend on the mood of their marketing department when advertisements were placed. I have product brochures for this radio shown as the 200 and the NCX-200 – brochures that are identical in every other way.

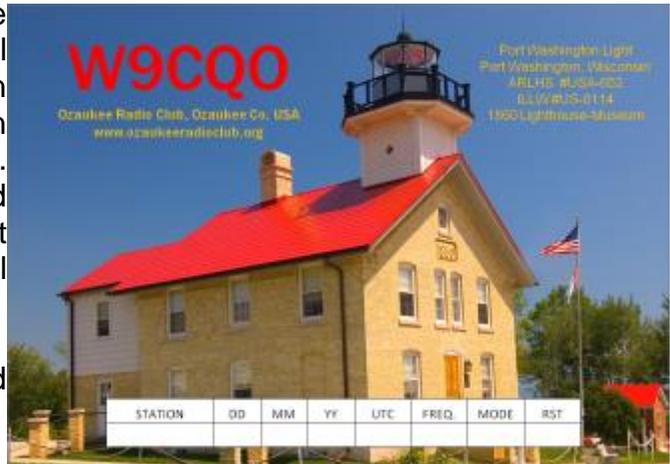
This National transceiver was in my personal collection – on loan from its original owner, Gary, WA9BJU, of Bloomington, Illinois. Gary and I have been friends for most of our lives. Today, the Transceiver and the AC-200 AC Power Supply have been sold and are awaiting pick-up by a ham in northern Wisconsin.

International Lighthouse Lightship Weekend 2017

de Tom Trethewey, KC9ONY

On Friday, August 18, 2017, members of the Ozaukee Radio Club and LeFrog (Local Emergency Field Operating Group) gathered on the property adjacent to the 1860 Light Station and Museum in Port Washington, Wisconsin. The purpose was to set up a 30 foot tower and tri-band beam for use with a special event station in preparation for the International Lighthouse Lightship Weekend.

We registered as lighthouse US0114 and used the W9CQO club call sign again this year.



Tom Murtaugh, W9VBQ took a picture of the 1860 Lighthouse and Gary Drasch, K9DJT created the QSL card for this year's event.



LeFrog supplied the 30 foot tower, tri-band beam, and Icom IC-9100 transceiver. In the past, we have tried different antennas, but found that using the tower and beam provided us with the best results.

The band conditions were up and down, but we made 100 contacts on Saturday and 97 contacts on Sunday. The QSL card requests are starting to come in now. We lucked out with the nice weather - not too hot and no rain, though we had dew in the mornings. due to the temperature drop.

We also set up some D-STAR equipment. We had an Icom ID-1 1.2 GHz radio to the LeFrog W9FRG data repeater in Grafton, WI, to access the internet and practice sending data. We had an Icom IC-2820H VHF/UHF radio accessing the Milwaukee KC9LKZ repeater system. We were fortunate to talk to Ron G0AWL in Cornwall, England, though he wasn't at a lighthouse.



Setup and tear down went well, and no one was hurt. Many thanks to those who helped setup, tear down, operate, observe, and encouraged us this year. They were: Mark AB9CD, Tony AB9PN, Steve W9MCU, Tom AA9XK, Gary K9DJT, Will K9OO, Loren N9ENR, John W9FAD, Bill AC9JV, Mike KD9GCN, Bill KD9HLN, Jon KD9GAE, Stan WB9RQR, Nancy KC9FZK, and Tom W9VBQ.



I hope I didn't miss anyone else that participated. If you'd like to participate next year, then mark your calendar for the third weekend in August. It's not a contest but a fun, non-pressure event.

The purpose of the special event station is "to expose amateur radio and the plight of lighthouses to the public." If you don't have HF experience, this is a good way to get some, so consider joining us next year!

More information about the event can be found at the website: <https://illw.net/>



Another Great Program

At the August meeting, we had a great program with a presentation by Bernard Barr, K9JAT (photo left), related to conductors, their material and size. Both Bernard and W9ZMR, Ken Piletic, made the trip from Illinois. His comments on conductor materials and insulation were much appreciated, and made members think somewhat differently about issues related to the conductivity of metals. Thanks again Bernard (and Ken) for coming all the way from a neighboring state to enlighten us!.

UPCOMING EVENTS

Membership meeting – September 13, 2017 - meeting program

Ham Radio Outlet has picked-up where AES left off and they are holding a SUPERFEST!
This event, on September 29th and 30th is also going to be
our Wisconsin Section ARRL Convention.

ARRL HQ is sending Bob Inderbitzen and the ARRL booth. Kermit Carlson W9XA our Regional Director will be there as will Patrick Moretti (KA1RB) our section manager. All ready to answer your questions, renew your membership and just plain say hello and exchange a handshake! Certainly hope to see you there!

The ORC Regional Fall Swapfest – Sept. 23

De Tom Ruhlmann (W9IPR)



Primarily, this swapfest is fun. That is reason enough to attend and volunteer to help. This one is pretty easy to host in that it is outside (unless you want to rent a table inside for \$10) at Fireman's Park on September 23 and really only involves setup, ticket sales and parking and then teardown. Volunteers are home by early afternoon after having a good time visiting and browsing vintage and current equipment that individual HAM's are selling from the trunk of their vehicles etc.

The food and refreshments are being handled by the high school robotics club with the profits to support their activities. Inside will be Tower Electronics if you need some new stuff.

The swapfest event profits go to the ORC operating fund to pay such things as repeater expenses, facilities rent and other financial obligations. More importantly its fun and you get to know the other members.

We will need membership participation with the following:

Setup Friday evening

Admissions & ticket sales Saturday – Jim Albrinck - 6 AM to Noon

Parking – Stan Kaplan - 6 AM to 8AM and 8 AM to 11AM

Sound system – Mike Harrington - 6 AM to Noon

Scholarship Sales – Tom Ruhlmann - Friday afternoon setup - Saturday sales and teardown

ORC equipment collection and return to the barn – Tom Ruhlmann - starting at about noon.

Assist Tower Electronics teardown starting at about noon

Assist Robotics Club concession teardown starting at about noon

Grounds restoration - Jim Albrinck - starting at about noon

A total of about 15 volunteers can get it done and have a good time while filling the club operating coffers. Naturally, the volunteers do not pay admission while all others do. If you wish only to browse and/or have a selling spot it only cost the price of admission, \$5.00 and you will also get a chance on the \$50 door prize.

We will have a meeting of the committee and those interested in helping immediately following the membership meeting.

Call me at 377-6945 to volunteer to help, or sign up at the meeting.

This Month in ORC History: 40 Years Ago

Edited by Ben Evans, K9UZ

(The following is an edited version of the minutes from the ORC meeting on September 14, 1977.)



Meeting was called to order [at] 1938 CDT. Minutes of the August 10, 1977 meeting were read and approved.

[The treasurer reported] \$1,082.20 accounted for. Motion for approval – WA9AWO / seconded WA9UJK. It was advised that the corn roast funds had to be settled.

W9LO advised of the overall success of Field Day.

WA9KFI introduced himself as a new member. QTH of Port Washington.

WA9UVK reported on the success of the corn roast despite constant rains.

WA9BMA commended WA9RPB on his article in the Hamateur Magazine.

WA9BMA received a letter from the Hamateur, [dated] July 11, 1977, which referred to their problems in preparation of a membership roster of all subscribers of the magazine. They recommend timely submittal of a complete club roster. It was felt that periodic receipt of membership dues from our club members hindered the completion of a complete roster to eliminate this problem. Discussion to follow.

WA9JOB complained of the Hamateur being received late due to the mailing by bulk rate method.

WA9UDZ made a motion for the club secretary to prepare an invoice for a December 1977 mailing, to advise members of the [upcoming] meeting and membership dues. WA9UVK seconded. Approved.

WA9BMA advised that WAD had been sold, and as a result sent a letter to the buyer requesting consideration for acquisition of excess equipment at the site be given to the club. WA9USA advised of the various pieces of equipment that may become available from WAD. WA9UJK motioned, amended by WA9AWO, and seconded by WA9VQD, that the board of directors use their discretion in acquiring WAD equipment. Expenditure not to exceed \$300.00. Motion approved.

WB9PAS advised that the repeater remains on low power of about ten watts. The bank split site project is still progressing. The solid-state COR has been built. It was requested that the old repeater parts be taken to Radio Expo to be sold.

A motion was made by WB9PAS that the repeater group be authorized to sell its surplus equipment – proceeds to go to the repeater group's treasury. Seconded by WA9USA. Approved.

[WB9PAS] requested more volunteers for the repeater shack insulation project.

[WB9PAS] advised that the interference problem on the repeater is being worked on with expected success. Advised that all 450 equipment is in hand for the autopatch project.

Repeater group meetings were called for Sept. 28th and October 26th, 1977.

WA9BMA requested feelings on the past programs and future program requests. WB9OHY suggested programs from local expertise, re: TTY, ATV, PC board construction, and OSCAR.

WA9BMA requested that WB9PAS establish a committee for the Post-Christmas/Pre-Valentine's Day Party. WB9PAS requested pre-registration for the party be made. Further discussion and committee formation to follow.

WA9AWO advised of the Walk-a-thon scheduled for October 15th, and requested volunteers to establish the required communication effort.

Motion to adjourn by WA9UVK / seconded by W9DQS.

Adjourned 2123.

Ozaukee Radio Club Meeting Minutes

August 9, 2017

Ben Evans (K9UZ), Secretary



President Kevin S. (K9VIN) called the meeting to order at 7:23 PM. All the attendees introduced themselves.

Announcements:

Curt S. (N9CBS) announced that the Racine Megacycle Hamfest at the Racine Kennel Club is this coming Saturday.

Nels H. (WA9JOB) said that during a recent 4562-mile road trip, he had a sign on his car window inviting other hams to contact him on 146.52. He got no calls.

Stan K. (WB9RQR) introduced Ken Poletic (W9ZMR), a guest from Illinois, who accompanied the night's speaker.

Program: Bernie Barr (K9JAT) made a presentation about the resistivity of various materials.

50/50 Drawing: Ed R. (AA9W) was the winner of the 50/50 drawing.

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

Officer Reports:

Kevin S. (K9VIN) President – The corn roast unfortunately had to be cancelled due to lack of interest. However, there are two Saturday morning breakfast get-togethers that members might consider joining. One is at the Prime Minister in Thiensville. Food orders are taken at 6:45 AM. The other gathering is at Jim's Grille in Cedarburg, which meets at 7:00 AM. Kevin thanked Tom R. (W9IPR) for doing a great job putting together the club newsletter.

Pat V. (W9JI), 1st VP – No report.

Tom T. (KC9ONY), Repeater VP – We are close to moving the repeater to the new rack.

Ben E. (K9UZ), Secretary – The minutes from July's meeting is in the newsletter. Motion to accept the minutes was made, seconded, and passed without debate.

Treasurer – Ben E. (K9UZ) gave the July treasurer's report in Treasurer Dave B.'s (N9UNR) absence. As of July 31st, current assets of the club (club and scholarship accounts plus undeposited funds) totaled \$84,113.16. Total fixed assets (club equipment) are \$4,331.37. Total assets therefore are \$88,444.53. Club income in July was \$21.49 for a donation plus 2017 dues plus interest. Expenses for the month totaled \$91.49 for field day and repeater electricity. The net income, then, was negative \$70.00. The income for scholarship was \$184.36 for equipment sales and interest. A motion to accept the report was made, seconded, and passed without debate.

Committee Reports: Scholarship – Tom R. (W9IPR) gave the report. Tom recognized all those who have contributed to the newsletter. Tom relayed his thoughts about possibly having the ARRL administer the scholarships. This topic will be taken up in an upcoming Scholarship Committee meeting. The Fall Swapfest will be September 23, 2017 at Fireman's Park in Cedarburg. As these conflicts with the

Chicago FM Club Expo, should the ORC Fall Swapfest be moved to August next year? The Cedarburg High School Robotics Club will manage the refreshments stand. The coffee will not be free.

Old Business: Tom T. (KC9ONY) reminded the members about the Lighthouse event on August 18th through 20th and that people are needed to set up the tower Friday afternoon and tear it down Sunday afternoon. Tom N. (AA9XK) remarked that the Historical Society, which is hosting the event, asked that participants of the event park their cars away from the museum so people touring the museum have places to park.

New Business: Tom T. (KC9ONY) mentioned that there were no Field Day 2017 pictures on the ORC Facebook page. Tom R. (W9IPR) said he has them and will send them to Brian S. (N9LOO) to post.

Stan told the members present to be sure to come to the September ORC meeting to hear Ed R.'s (AA9W) presentation on x-ray tubes.

Ted H. (N9LLT) told members to check out "Nut Net" on 3.985. It's on at 8:15 AM every day except Sunday.

Adjournment:

A motion to adjourn was made, seconded, and passed. The meeting was adjourned at 8:56 PM.

Attendance:

There were 40 members and 3 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

September 13, 2017

1. 7:00 – 7:30 PM – Networking, rag chew.
2. Call to order: Introductions. Kevin Steers (K9VIN).
3. Announcements, Bragging Rights, Show & Tell, upcoming events, etc.
4. Program: Ed Rate AA9W on TV tubes.
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:
11. Repeater VP report – Tom Trethewey, (KC9ONY).
12. Minutes: Ben Evans (K9UZ).
13. Treasurer's report – Dave Barrow (N9UNR).
14. Committee reports:
 - A. Fall Swapfest
 - B. Scholarship Fund
 - C. Recruitment Presentation & Education
15. OLD BUSINESS
16. NEW BUSINESS
17. Adjournment to John's Pizzeria.

Return undeliverable copies to

The ORC Newsletter

465 Beechwood Drive
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First Class

Next ORC Meeting

Grafton Senior Citizens Center

1665 7th Avenue, Grafton
Wednesday, September 13th, 2017

7:00 PM – doors open

7:30 – Membership Meeting