



The *ORC* Newsletter

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



ORC Repeaters on 146.97 (-127.3PL), 224.18 (-127.3PL), 443.75 MHz (+127.3PL) - Callsign W9CQO

Web site: www.ozaukeeradioclub.org

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Volume XXXI

November, 2019

Number 11

From the President

de Kevin Steers (K9VIN)



As my tenure as president draws to an end, I want to encourage you all to play a larger role in leading this club into the future. Certainly my awe-inspiring leadership has convinced you that even you have what it takes to be President, or Board Member. All joking aside, with such strong and seasoned Committee Chairs and fellow Board Members, it certainly makes running the club a breeze. It really takes very little time, and now is the time to see our younger members step into the ranks that so many of our elder members have already filled.

Most recently, the only RF or tower work I have done is installing a cellular signal repeater up at the cottage. I am in a hole, with virtually no cell reception, especially when trees are in full foliage. Thanks to Nels WA9JOB, who helped me to crimp a small SMA connector that I accidentally separated from the coax, I was able to increase my download speed from 5Mb to 17Mb. Backyard discussions have still not determined the best of three possible directions to aim the antenna, so I am sure I will be up and down some more.

On the Bench (asphalt) is my Wolf River HF antenna which had detached from my mobile rig. When a neighbor commented that the antenna wobbled, I assured him it was fine. Five minutes later, when I arrived at the recycling center, my Wolf River coil was gone. I raced back along the same route, and sure enough, there it laid on the ground at the only stop sign I had to stop at. With tail between legs, I pulled over and quietly slid the 8 foot antenna into my station wagon, and quietly parked elsewhere in the neighborhood that evening.

Lastly, I am using some of my electrical awareness in repairing my home's furnace (one of two, thankfully). With the help of Youtube, I removed the blower fan by removing two sheet metal screws, and pulling a few connectors. I believe the capacitor (4uf 370v) is bad, and ordered a \$12 replacement. I will be cleaning out 30 years of grime from the squirrel cage fan and motor while I wait for the capacitor to be delivered.

Cheers and 73,

K9VIN

Kevin

DX'ing & Contesting

De Gary Sutcliffe (W9XT)



Although the weather outside is more like January, we are still in the fall season, which many consider the best time to work DX on HF. Even though the solar flux has touched near record lows of 64 a few times, there have been times with interesting openings.

The recent VR6R DXpedition to Pitcairn Island shows what can happen when hams listen on the bands. The DXpedition made over 87,000 QSOs on 160-6 Meters. They only made a bit over 50 contacts on 6M, which was via EME. The rest were F2 ionospheric propagation. I was surprised to be able to work them on 10 and 12 Meters. I worked them on all bands 160-10M, running no more than 200 watts. Most were CW, followed by FT8 and a few phone contacts. Gary, K9DJT, missed them only on 10 Meters. Bill, W9MNX, got them on two bands. I don't know if other ORC members worked them. It was a very well-run DXpedition.

While the solar flux, a proxy for sunspot count, has been very low, from time to time it pops up to 70 or 71. If the A and K indices are also low for a few days, that often indicates possible openings the higher HF bands. When that happens, check 15 and 12 Meters. You might be surprised at what you hear.

This is an interesting time of year for grey line propagation. Grey line is the circle around the planet that is in twilight from either local sunset or sunrise. Signals on the lower bands (160M – 40M) often propagate along the grey line, offering short but interesting openings. Often these openings only last a few minutes. Right now, around our sunset, the grey line passes through Southeast Asia, a normally difficult path. Forty meters is especially interesting and often has longer openings. Using FT8 will certainly open this interesting propagation mode to smaller stations.

Some good news from the sun! SpaceWeather.com announced a sunspot from Cycle 25, the new one. It is pretty small, so it won't affect propagation much. The sunspot was identified as one from the new cycle because of its high latitude and opposite magnetic polarity than those from Cycle 24. Despite the new spot, Spaceweather.com said we have at least another year of very low sunspot activity.

There are a lot of contests between now and mid-December. The next one is the ARRL Phone Sweepstakes. The ARRL says this is the oldest domestic contest, with the first one held in 1930. It starts at 2100 UTC (3:00 PM local time) on Saturday, November 16 and runs for 30 hours, but you can only work 24 hours. This contest has a long exchange for a contest. It has been discussed many times in the past in this column. The ARRL has a package with rules and operating info at:

[http://www.arrl.org/files/file/ContestResults/2019/2019%20ARRL%20November%20Sweepstakes%20Package%20\(Rv%20A%20-%20December%202018\).pdf](http://www.arrl.org/files/file/ContestResults/2019/2019%20ARRL%20November%20Sweepstakes%20Package%20(Rv%20A%20-%20December%202018).pdf)

My favorite DX contest is the CQWW CW contest. Usually, it starts Friday night after Thanksgiving, but a quirk in the calendar has it the weekend before the holiday this year. It starts at 00:00 UTC on November 23 (6:00 PM Friday night local time) and runs for 48 hours. You are allowed to work for as many hours as you can stay awake. One reason I like this DX contest is that DX can work DX as opposed to just working one country or group of countries. That makes it more interesting for DX stations and generates more activity.

The exchange is the signal report and CQ Zone. We are in Zone 4, so we send 599 04. You can work everyone, but contacts with your own country have zero QSO points. So, only work US stations once per band to get the multiplier. Last year I placed #5 in the USA in my category and will see if I can duplicate that this year.

Rules are available at <https://www.cqww.com/rules.htm>.

Normally the weekend after CQWW CW is the ARRL 160 Meter Contest. The same calendar quirk that has CQWW CW before Thanksgiving gives us a week off. The 160 Meter contest starts at 2200 UTC (4:00 PM local) Friday, December 6 and runs 42 hours. You can work as many hours as you want, but the bands will be dead during the day, allowing you to catch up on sleep.

With our low sunspot count, this should be a good year with lots of activity. Work everyone. US and Canadian stations send a signal report and their ARRL section. KP4, KH6, KL7 are in ARRL sections. Contacts with stations in ARRL sections are worth two points. DX stations send just a signal report and are worth five points. Multipliers are sections and DXCC countries. This is a CW-only contest.

Rules are available at <http://www.arrl.org/160-meter>.

Many of the DXpeditions for November and early December are one-man operations, often operating around vacation or work activities. A big one that is on right now is to the Marquesas by a group of primarily US and Canadian hams. This is an island in the Pacific. They will be on until November 19 with 3-4 stations 160-6 Meters, CW, SSB, and FT8. I was able to work them easily on 20 CW so far. The call sign is TX7T.

Another Pacific Island, Cocos Keeling, will be activated by a couple of Scottish hams on November 12-29. They will be using the call VK9CZ November 12-20. The plan is to focus on the low bands but will be on 160-10M. CW, SSB, and FT8. They will also be on for the CQWW CW contest. This is high on my list for November. It has been a hard luck country for me, and I need it on a lot of bands for some reason.

An interesting operation will take place from Tanzania on November 16-28. This is being put on by a mostly Russian group. They will be on the HF bands CW, SSB, and digital as 5H3UA. They will also be on 6 and 2M EME using the call 5H3EME. They will be on for both the CQWW CW contest and ARRL EME contests.

That wraps up November and early December on the HF bands. I hope you can find some time to get on the air.

THE COMPUTER CORNER

No. 260: Libre Office for Windows, Revisited

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



It has not been long since I wrote about Libre Office. It was in Computer Corner No. 258, September 2019, in fact. But I thought I would expand a little on that past article to make it easier for you to get and install the package. The latest and greatest is Libre Office 6.3.2.2, and I recommend that you also get the Help Pack v.6.3 at the same time. You can download both at <https://www.libreoffice.org/>. Be prepared to take a bit of time in downloading – the Office installer, named LibreOffice_6.3.2_Win_x64.msi, is fairly large at 286 MB (300,670,976 bytes). You simply download that and double click it to begin the installation process. The Help Pack (LibreOffice_6.3.2_Win_x64_helppack_en-US.msi) is only 1.99 MB (2,093,056 bytes). To save some of you the trouble of downloading, I will have three copies on CD for sale at our next meeting on 13 November, with proceeds going to the usual pots (50% each to the Scholarship Program and to OZARES). The “burns” on CD are verified.

Once again, the copies of Libre Office do not just install Writer (the equivalent of Microsoft Word). They also install a spreadsheet just like Excel, a presentation program just like Power-Point, and a database program just like Access. Plus, there are two programs unlike anything included in Microsoft Office. One is a drawing program named Draw, and the other is a math manipulation program named Formula. The best part of all of these is that they can handle (open or edit and save) any preexisting Microsoft files and even write new ones in Microsoft-compatible formats. More or less complete interchangeability, and unlike Microsoft Office (about \$300 currently), Libre Office is totally free! How can you beat that?

Remember, this article is about Libre Office for **Windows**. The msi files you need to download or obtain otherwise listed above are for Windows, not Linux. The same Libre Office is also installed when you install Linux Mint Cinnamon (the latest is 19.2, “Tina”), but the installation files are different so as to work with the very different operating systems, and the programs are different for the same reason. But, the programs in the Windows suite and the Linux suite will accomplish the same things, and files created with one can be edited and saved with the other. To make that clearer, create and start a letter in Writer on a Windows machine, then save it on a thumb drive. Put the thumb drive in a Linux machine and copy the letter to the Linux machine. Finish the letter using Writer in the Linux machine, save it and print it. All that will work just fine.

The really neat thing is it will work between Word and Writer in pretty much the same way! Take a letter started in Microsoft word and transfer it to a Linux Machine. Open it with Writer and finish it. Then save the completed letter to the thumb drive, put the thumb drive in a Windows machine, and copy the letter to the Windows machine. Then use the Windows machine to print the

letter, and that will work. All you have to do is to be sure and save the letter as a .doc file whenever saving it in Writer. Try it. It's easy to figure out.

Have fun, and happy computing!

UPCOMING EVENTS

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

**January 4, 2020 – 48th Annual Midwinter Swapfest
Waukesha County Expo Center, 8 AM to 1 PM**

Upcoming ORC Monthly Programs

November - Fred W9KEY – WWV Centennial Special Event Station Recap

December - John Schrader W9NRG - Emergency Communications for Firefighting

January – Elections

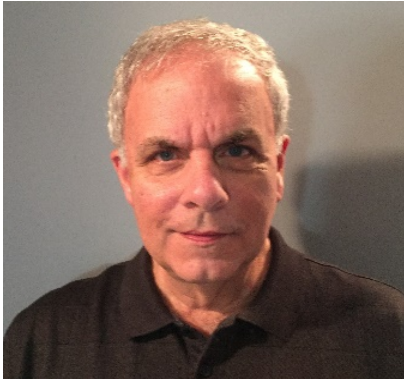
Presenters Needed!

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.

Vintage Amateur Radio

de Bill Shadid, W9MXQ



This is the final (for now!) installment on the last of the Drake High Frequency Amateur Radio Transceivers and Accessories – the TR7 and TR7A. It is interesting to note that nearly to the end of the product life cycle of these radios, they both remained in production. Perhaps this is supported with the knowledge that with some small exceptions the TR7A was a TR7 with most options installed as standard equipment. The previous article in this series also included information on the never produced TR8 Transceiver. We pick up this discussion with information about the final disposition of TR7/TR7A production units and some information about at least one accessory that would have accompanied the TR8 to

market. And then, a complete surprise. A surprise that could have been one further amateur radio opportunity.

Let us not forget where we left off – with Drake’s last major players in the market.



**Drake TR7A Transceiver – Equipped with All Options
Collection of W9MXQ**



**Drake TR7 Transceiver – Equipped with All Options
Collection of W9MXQ**

The beautiful Drake TR7 – shown above as it began and in its final TR7A form – finally came to a rather inglorious end when Drake found itself with a very high number of both TR7's and TR7A's in inventory that were seemingly overtaken by the Japanese competition. According to John Loughmiller, KB9AT², the end came with TR7 and TR7A inventory stacked in every corner of the plant. Loughmiller further notes that total production of TR7 Transceivers was about 10,300 and the TR7A accounting for another 2,500, or so. Loughmiller noted that Drake, by that time, was making Satellite Downlink Receivers at a rate of 15,000 per month.

So, how did Drake dispose of these radios that by then were taking a lot of inventory space? According to Ray Grenier, K9KHA³, who at the time was leading sales and marketing for Milwaukee based, Amateur Electronic Supply (AES), the inventory was purchased by Terry Sterman, W9DIA, the founder and then owner of the AES stores. AES catalogs of the day show sales of both transceivers and all accessories for some time after this bulk purchase⁴.

One very nearly forgotten, never produced radio from Drake was the L85 Linear Amplifier. Based heavily on the L75 Linear Amplifier, the L85 was styled to match the TR8 Transceiver, in many ways. In other ways it seemed to be a product that could have stood on its own in terms of styling.



Drake L85 HF Linear Amplifier

Note the missing Plate Tune Knob – and presence of L7 / L75 Style Knobs on the Band Switch and Load Controls. These were perhaps not the final planned style.

LA60P

This amplifier used a single 3-500z triode in the final amplifier that implied it was able to run about 600 to 700 watts output – just like the similarly equipped L75 Linear Amplifier. There was never any mention that I can find that indicated a closer to full power product such as an “L8” – in keeping with the L7 and L75 model numbers that matched the TR7, TR7A, and TR5 Transceivers.

It is interesting to note that the tank coil in the final amplifier of the L85 was not a round coil – it was wound as a square with four equal sides on an assembly of Phenolic sheet. This was a unique approach that allowed Drake to manufacture the coil without rather sophisticated coil winder tooling. My good friend, Bob, W9DYQ, fellow collector for most of our lives, (and proof-reader of my articles) surmises that Drake used the square coil design as a fast way to fabricate

a physically stable prototype. Bob may well have a point. His engineering development background earns him respect for understanding that process very well.



Drake L85 HF Linear Amplifier

This interior view shows the square wound tank coil. Was the convenience for making a prototype or a design to avoid coil winding tools?

LA60P

The L85 Linear Amplifier seems to be in a gray area of Drake design. The prototype shown here exists and so does at least one prototype of the TR8 Transceiver. But, even with the careful watching that I do for such things, I had missed the L85 until relatively recent times. To my way of thinking it did, in fact, match a lot of radios on the market and could well have stood alone as a single product to succeed the well-respected L7 and L75 products. Likely we will never know the answer to that thought.

We already know from a previous installment that Drake had nearly finished development of the significantly upgraded TR8 HF Transceiver. But, by that time it appears that Drake had lost interest in the idea of continuing in that market. Many of you reading this know of the successful line of shortwave receivers that Drake manufactured after TR7/TR7A production ceased. I refer to the Drake R8, R8A, and R8B Receivers. These were sophisticated designs that went further than the receivers in the excellent TR7, TR7A, and TR8 designs. (Not to be forgotten are the very capable R7 and R7A Receivers that were marketed at the same time as the TR7 and TR7A Transceivers.)

While not a topic at this time, Drake apparently wanted to exit the amateur radio market, but they were not ready to abandon world band radio receivers. Drake went on to produce some very fine receivers for the HF spectrum. These radios, however, did not match the styling concepts seemingly developed for the TR8 Transceiver.

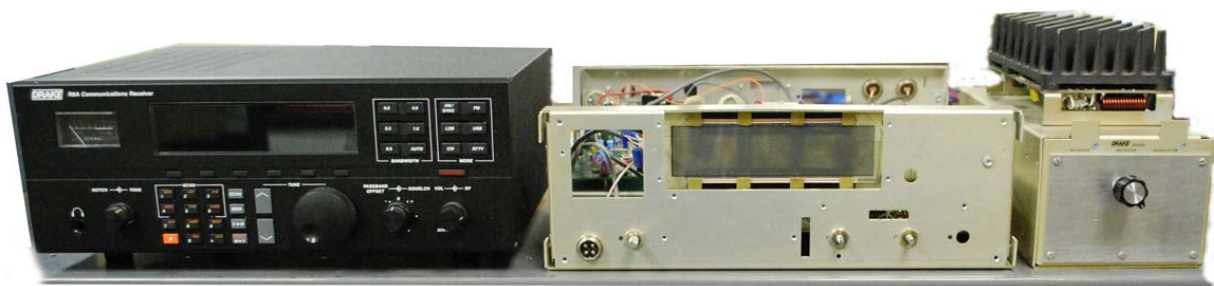
Those world band receivers were led by the R8 series radios⁵. They were excellent performers. Unlike many such radios, these were competitive and could hold their own against the best available transceivers in the amateur radio market at the time. (Reference here is to receiver performance – the R8 was a receiver only.)



**Drake R8B HF Communications Receiver
R. L. Drake Advertising Literature**

Of interest to us is that somewhere in the life cycle of the R8 series radios, Drake made an engineering attempt to re-enter the amateur radio transmitter/transceiver market using the R8 Receiver as the basis. Enter here the T8 Transmitter – but keep in mind that this is my name assumption and not necessarily a model number released by Drake. Like the days of the T-4 and T-4B Receiver that could transceive with the R-4A and R-4B, respectively, the T8 would have become a transceiver with the R8 Receiver. (So, my naming convention it means that the prototype would have been a T8 or a T8X, depending on if it had its own VFO.

As far as we know, these pictures¹ show the prototype of the T8 Transmitter, or perhaps Transceive Adapter, for use with the R8, R8A, or R8B Receiver.



**Drake R8A Receiver, Prototype T8 Transceiver, and TR7 PA Unit
LA60P**

The picture above shows a production R8A Receiver with a Prototype T8 Transmitter to its right (center, above). The T8 is meant ultimately to match the R8 Series Receiver. The PA unit shown to the right was taken stock from a TR7 Transceiver but would have been incorporated into the T8 cabinet in production. Alas, this was never to be, But what a nice concept. Timing had to be roughly 1995 to 1997 since the receiver pictured here is the R8A, which started production in 1995 and ran until the R8B was introduced in 1997. It could, however, have been somewhat later.

It is nice to think about what could have been with Drake radios. Suffice it to say that I thoroughly enjoy the Drake TR-3 Transceiver, TR-4 and TR-4C Transceivers, B-Line and C-Line Separates, and the TR7 and TR7A Transceivers (along with all the important accessories) here in the W9MXQ Collection. Drake was, and is, a high-water mark in American-Made Amateur Radio Equipment. But, gee, so are Collins, Hallicrafters, Hammarlund, National, and all the rest – other stories for another time!

As with the last installment about post 7-Line Drakes, I draw heavily on the established collection and documentation of a Norwegian collector and his connections with former Drake staff¹.

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

Reference Notes:

1. Sindre Torp, LA6OP – who further credits Bill Frost, former Drake Service Manager. Mr. Torp is credited with his call sign, LA6OP, where applicable.
2. Reference: “A Family Affair – The R. L. Drake Story” John Loughmiller, KB9AT, © 2000
3. Ray Grenier, K9KHA³, interview with W9MXQ in November of 2019, and other occasions. This writer is proud to call Ray a friend.
4. Source is a W9MXQ collection of Amateur Electronic Supply catalogs for the period.
5. There were less costly (and lower level performance equipped) radios in the “8” line of radios. Those included the SW8, for instance. Drake, at the time, also produced short wave receivers under contract to others – some of which were totally different design concepts.

W9MXQ

Ozaukee Radio Club

October 9, 2019 Meeting Minutes

de Ben Evans K9UZ, Secretary



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

Announcements, Show-and-Tell, Bragging Rights:

Nels (WA9JOB): Nels announced that someone with nearly the same call as the repeater was present at the meeting. It was Bob Hoffman (K4CQO), and he told the story of how his father, George Hoffman (W9CQO, SK), gave his call sign to the club. Last year, Bob decided to get back into ham radio and he took a call sign that was similar to his dad's. The "4" in the call sign is because Bob resides in the Atlanta area which is in Region 4.

Bill Shadid (W9MXQ): Bill got an offer from the editor of CQ Magazine to be the "vintage radio editor" for the magazine to write a monthly article, and it was because of someone sending the editor an article from the ORC Newsletter that Bill wrote.

Stan (WB9RQR): Stan worked WWV during the Centennial Special Event. Kevin called on Fred S. (W9KEY), who worked the event with Bill Schnell (AC9JV), to tell the group all about their experiences in Colorado.

Ben (K9UZ): The ORC Club Roster is finally coming. Ben passed around a prototype with all current members' information.

Program:

Tom R. (W9IPR) gave his presentation on "Station Grounding: What I did and should have done."

50/50 Drawing:

There was no 50/50 drawing.

Auction:

Stan (WB9RQR) conducted the auction. Many items were sold, including a Yaesu FT-8800 2M/440 transceiver that doesn't power on, an Electro-Voice microphone, an Acer Aspire notebook computer with Linux (needing a new battery), a new Milwaukee PC computer with Linux including monitor, mouse and printer, and an amplifier.

Officer Reports:

Kevin S. (K9VIN), President's Update – A board meeting is planned for Tuesday, October 22nd in the Community Room of the Cedarburg Public Library.

Pat V. (W9JI), 1st VP – No report.

Bill C. (KD9DRQ), 2nd VP – No report.

Tom T. (KC9ONY), Repeater VP – Not present, no report.

Ben E. (K9UZ), Secretary – The minutes from the September meeting were distributed to members by email. The newsletter isn't finished yet. Motion to accept the minutes was made by Stan (WB9RQR), seconded by Bill Shadid (W9MXQ) and approved by the members.

The upcoming Club Roster was discussed. It was decided to have the short list in the front of the book be alphabetical by last and first name and the back part be alphabetical by the last letters of the call sign, as was done in previous years.

Robert E. (K4WTH), Treasurer – Robert was not at the meeting, so Ben (K9UZ) gave the financial report for September which was handed out to members during the meeting. The only things of note were credits and debits from the Fall Swapfest. Bill Shadid (W9MXQ) reported that a \$95 check sent to us by the Wisconsin Amateur Radio Club for tickets and tables for the last Spring Swapfest was never cashed. Ben said he would contact the treasurer and Kristian (KC9TFP) about it. Motion to accept the treasurer's report was made by Bill Shadid (W9MXQ), seconded by Ken B. (W9GA), and approved by the members.

Committee Reports:

Tom R. (W9IPR), Ham License Classes – Extra Class license training started last Saturday, and Tom will try to do it in seven sessions but it will probably be eight. He made PowerPoint presentations for the classes.

Ken B. (W9GA), Field Day Committee – Ken spoke to the buyer of the property where the club trailers are stored. He says that the closing date has been pushed back past January 1st. The buyer is willing to rent us another area, but nothing on that will be known until after the property is sold. Ken has been cleaning stuff out from the shed and one of the trailers.

Old Business:

There was no old business.

New Business:

There was no new business.

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 9:32 PM.

Attendance:

There were 29 members and one guest present at the meeting.

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

Respectfully submitted,



B. Benjamin Evans, K9UZ
Secretary

ORC Meeting Agenda

November 13, 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: Fred W9KEY, *WWV Centennial Special Event Station Recap*
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. Field Day Storage – Ken W9GA
 - c. Other
16. OLD BUSINESS
17. NEW BUSINESS
18. Adjournment to ?

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The ORC Newsletter

465 Beechwood Drive
Cedarburg WI* 53012

First Class

Next ORC Meeting:

Grafton Multipurpose Senior Center

1665 7th Avenue, Grafton, WI
Wednesday, November 13th, 2019

7:00 PM – Doors Open

7:30 PM – Meeting Begins