



# 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  
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Volume XXXIII

September, 2015

Number 9

## From the President

*de Chuck Curran, W9KR*



This month it appears we will have a Team effort for the September meetings program. I am really looking forward to seeing another video on that big Cincinnati area WLW 500,000 watt AM broadcast station from the mid 1930's time frame. I have seen several video's and each time it is really amazing to see what a young group of Engineer's put together in the 1930's, from several different companies working together. I think this is one you will not want to miss, so hope to see you there for the meeting! It is amazing what the station owner accomplished, along with several bucketful's of money.

We have the upcoming ORC Fall Swapfest on September 26<sup>th</sup> at the Cedarburg Fireman's Park in Cedarburg. This has been a very successful Swapfest and again we will have Tower Electronics present with all their wonderful electronics items for sale. My idea for this year is to start clearing a few "TREASURES" out of my basement. Over the years I seem to have collected a variety of transformers, tube sockets and Eico and Heathkit VTVM's that I quite frankly hardly ever use. This year some will leave our house and be donated to the Scholarship fund for sale. What a great way to make room for more acquisitions!

My operating during August seems to have slowed down a bit. With band conditions somewhat difficult on many days, and the lawn growing like crazy, I seem to be cutting the lawn and ditches as much as I am operating. With the rain coming on a consistent manner, at least I know the ground rods are staying moist. The old Collins Gold Dust Twins remain 100% operational, with 800 watts output on 75 meters and around 700 on 20 meters. I just need to let the KWS-1 transmitter warm up for awhile and all is good! I have had no problems with it since completing the rebuild last October so I feel quite good about its future capabilities. I have somehow gotten to the point where running the Yaesu FT-5000 is almost too easy, since it works perfectly all the time!

73's

Chuck W9KR

## DX'ing & Contesting



September is here which means the kids are going back to school and we can start looking forward to successful Badger and Packer football seasons, although the pre-season injuries to the Packers give concern.

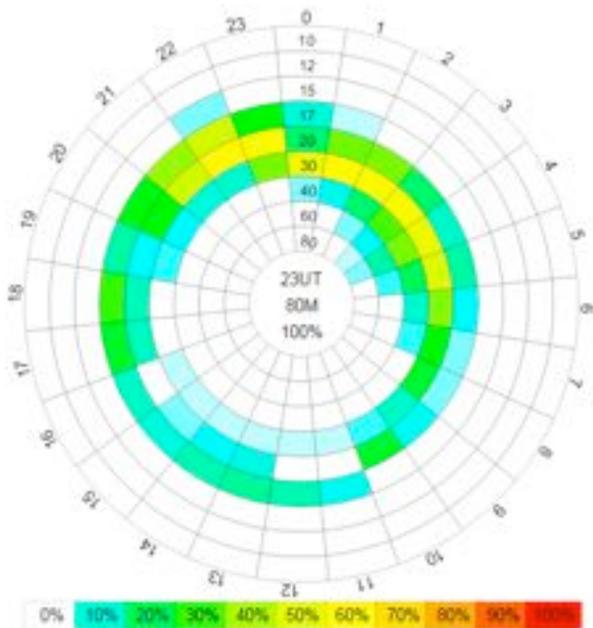
Radio conditions also start to improve this month as the days get shorter. We are at the time of the year when the daylight period changes the quickest. Labor Day is almost 3 minutes shorter than the day before as we head towards the Autumnal Equinox on September 23 when the day and night periods are the same length.

Actually the day is still a bit longer than night on that day because the equinox is based on the center of the sun on the horizon at sunrise to the center of the sun on the horizon at sunset. Because the sun is about  $1/2^\circ$  in apparent diameter, the leading edge is above the horizon a couple of minutes before the center at sunrise, and the trailing edge is still above at sunset. Day is defined as when the leading edge goes above the horizon at dawn until the trailing edge disappears at dusk. But, that is a minor technicality.

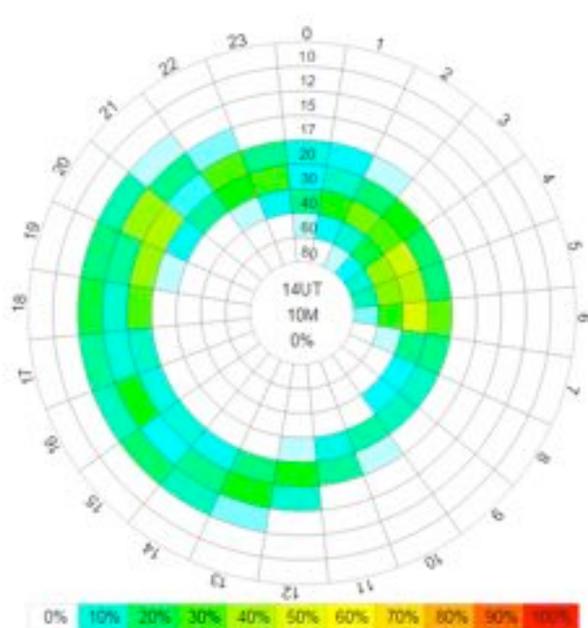
The longer nights help HF propagation. The charts below show propagation predictions for SE Wisconsin to Central Europe from the <http://www.voacap.com/> website. The chart on the left shows July 2015 and the one on the right shows September 2015 at current solar activity.

The circles are sliced into 24 pieces showing the hour on the outer ring. The times are UTC. The concentric circles are each band from 80 through 10 Meters. The color shows the probability of an opening for each band and hour. As can be seen, the chance for an opening on 15 is almost nonexistent in July, but quite likely in September. It will be even better next month.

July 2015



September 2015



The low bands also benefit from the longer nights. The chances of an opening on 80 is pretty slim in July, but much better in September.

Contests start to pick up this month. The ARRL September VHF contest starts Saturday the 12<sup>th</sup> at 1800UTC. It ends at 0259 UTC on Monday (10:00 PM Sunday local). Bands are 6 meters and up. The exchange is your grid square. There are a lot of categories for this one, so it is best to look at the rules at <http://www.arrl.org/september-vhf>.

The ARRL has VHF contests in January, June and September. Each offers potential special conditions. In June everyone hopes for sporadic E (Es) openings which can make 6 meters sound like 20 meters with a lot of domestic contacts and loud signals. The hope for September is for tropospheric ducting or "tropo" for short. It can happen if a cold front hits a warm front and forms an inversion layer. This acts sort of like a wave guide and you can get paths hundreds of miles long on 2 meters and potentially up to the lower microwave frequencies. The January event is known for being darn cold.

The other big contest is the CQWW RTTY contest. This starts at 0000 UTC on September 26 and runs for 48 hours. Like the CQWW DX contests you send a signal report (normal 599) plus your CQ zone, which is zone 8 around here. Unlike the DX versions you can also work US stations. This is a good contest to get on if you want to work on your digital WAS and/or digital DXCC awards. Rules can be found at [http://cq-amateur-radio.com/cq\\_contests/cq\\_ww\\_rtty\\_dx\\_contest/cq\\_ww\\_rtty\\_dx\\_contest\\_rules/2015\\_cq\\_ww\\_rtty\\_dx\\_contest\\_rules.pdf](http://cq-amateur-radio.com/cq_contests/cq_ww_rtty_dx_contest/cq_ww_rtty_dx_contest_rules/2015_cq_ww_rtty_dx_contest_rules.pdf)

DXpeditions start getting more common this month. There are a lot of single operator vacation style efforts planned from some semi-rare locations. There are two that seem to be more serious. The first is to Svalbard up in the Arctic Circle. This is being put on by some hams from Greenland and Denmark. They are scheduled to be on from September 16-23. Bands were not specified but they will be on CW, SSB and digital.

The other is from Zimbabwe operating as Z21MG. Three Czech hams are putting this on from September 18-30. They will be on 160-10M, CW, SSB and digital. They will also be operating the CQWW RTTY contest.

Another big event is the annual W9DXCC Convention in Schamburg, IL. They are having Contest and DX University sessions on Friday the 11<sup>th</sup>. These are great for those who want to learn from the experts. The main conference is Saturday the 12<sup>th</sup>. It is a day filled with presentations related to DXing. A banquet in the evening features speaker Riley Hollingsworth, K4ZDH who was the FCC Special Counsel for Spectrum Enforcement before he retired. You may remember him for his efforts to clean up the ham bands from miscreants. Finishing off the night (and usually lasting into Sunday morning) is a hospitality suite sponsored by the Greater Milwaukee DX Assoc. which a number of ORC members also belong.

W9DXCC always is the event that kicks off the fall radio season for me. More info at [www.w9dxcc.com](http://www.w9dxcc.com)

That wraps up the September on the air.

# Computer Corner

## No. 211: LEAVE 'EM ON ALL THE TIME

By Stan Kaplan, WB9RQR

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There has been a long-standing debate among computer gurus concerning whether or not to shut a machine down when you are done with it for the day. These debates, among leaders in the industry, seem to pretty much split between those advocating “OFF” and those who say leave them “ON”, 24/7. I won’t go into all the pros and cons of that argument in this article, but there are cogent points on both sides of the debate.

In the past, I have been among the “OFF”ers. I figured that the savings in electricity and the time that the machine was not a target of malware (when off) made it a bit more desirable than leaving it on all the time. However, that has changed, owing to changes in Microsoft policy with regard to updates.

In the past, Microsoft had an update day on the second Tuesday of each month. As new updates were written and approved, they would save them up until that day of the month, when they would be released for manual or automatic downloading and installing. “Microsoft Tuesday” became a habit for all those who downloaded and installed updates manually. Most of those updates were security changes.

Recently, Microsoft abandoned that practice. My guess is that they thought the practice inserted too long a delay to wait for newly written security updates to be placed and activated, especially in the rapid-fire malware environment we live in today. They announced that all updates (security and others) would be released as soon as they are written and approved. They did not give the reasons I have guessed at above, but it surely makes a lot of sense that it was what they were thinking. And it is a good thing to reduce the delay in installing and activating security fixes.

Therein lies my change to keeping machines on all the time. A security update that is released by Microsoft at 2:00 a.m. can “find” your machine and get installed, but only if your machine is on. If it is not – if you just turn on your machine at 8:00 a.m. and turn it off at 5:00 a.m. – there may be a several hour (or even several day) delay before you get the update. That is a window of opportunity (no pun intended) for malware to strike.

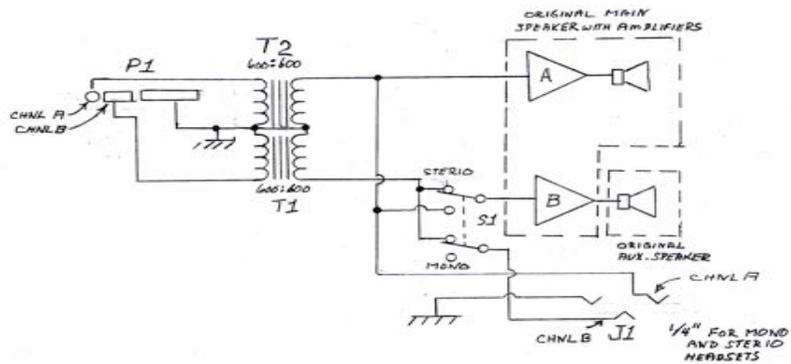
Laptops especially consume very little power when left on 24/7. And both laptops and desktops consume relatively little power if you have the screen blank after 15 minutes. Don’t, however, have your machine go to sleep or have it turn off the hard drive. Keep it awake 24/7. It does not need to sleep like we humans do.

One caveat. Do turn the machine off when going on vacation, or if you will otherwise be gone for several days. You can carry this “24/7 – on” thing too far! Happy Computing!

P.S. I just installed Windows 10 on my primary laptop, which sits on my desk next to my main machine. Looks pretty good! And, I was able to write an article and install backups from other machines to it, exactly the same way as I did before installation. I am encouraged. Stand by for more reports.

# Junk Box Projects

de Tom Ruhlmann, W9IPR



Remember the audio splitting powered speakers from last edition? Below is the schematic for wiring the speakers to provide monaural audio if listening to only one receiver output or stereo audio if listening to a transceiver with two receive channels. Transceivers with two receive channels allow “split” operation where the other station is transmitting on one frequency and listening on another that is up or down 5 or 10 kc.

The only parts required are the two 600 ohm isolation transformers, a DPDT switch, the cord and 1/4” stereo phone plug, a 1/4” stereo phone jack and of course, the set of amplified PC speakers. It’s a fun useful project.

I finished remodeling the master bathroom and finally had time to check out a back up Alliance --73 rotator I had bought at the May swapfest in 2014 – the seller didn’t know if it worked or not which is code for “I don’t know how to fix it”. For \$20 I took a chance and am now glad I did. This is the same model which I have on my 5 element TA-53 beam and it’s rated for 10 square ft. which is marginal for my beam but it works.



Naturally, when I connected the rotor to the control and attempted to rotate, it grunted but would not rotate. Upon disassembling the rotator I noted that the 100 ball bearings were stalled in solidified grease and the motor was stuck as well. A real good cleaning with mineral spirits, a brush and compressed air solved that problem. A word to the wise, when disassembling these rotators be sure to retain the ball bearings during dis-assembly and count them so as to be sure you have them all when reassembling. Also, you can operate the unit to check out the motor operation and the position indicating potentiometer with the top housing removed. I suggest you do this as it may save considerable time if there is a problem.

The next problem involved the position indicating meter calibration. I noted that the voltage to the position potentiometer seemed a bit high and further investigation indicated a 15 ohm resistor in a voltage divider of the control unit had risen in value to 29 ohms. Upon replacement of the resistor that problem was solved. With the unit operating it seemed appropriate to give it a coat of gloss gray paint. It no longer resides in my junk box but now has a place of prominence below my bench.

Then I noticed I had another Alliance control unit for backup. Upon checkout I found that it had intermittent output AC voltage to the rotor motor. Disassembly of the control switch and a good cleaning of grease from the contacts corrected that problem. Now, what’s next?

# Upcoming Events

September 8 – Fall Swapfest committee meeting at W9IPR's  
September – 9 – Membership meeting at Grafton Senior Center  
September 26 – Fall Swapfest at Fireman's Park in Cedarburg

## Test Equipment

De Chuck Curran (W9KR)

Most of you have already picked up on the fact that I enjoy the older vacuum tube Amateur Radio Equipment from the 1950-1970 time period. I have been repairing both amateur and broadcast band radios since about 1967 and enjoy it very much. Having the correct test gear makes a big difference, that is what I hope to share with you in this write-up.

I have been fixing many pieces of Collins gear, both the Gold Dust Twins and many S-Line radio's. I love using my modern Fluke DVM's with the Type 85 RF probe, but it can only handle a maximum RF voltage of 30 Volts AC. Most vacuum tube transmitters require a grid voltage of 60-80 volts for either the 6146 series or the many sweep tubes employed in transmitters from that era. So, I turn to the Hewlett-Packard Model 410B RF Voltmeter for these repair efforts.



700 MHz! Ya, this was back in about 1958!

So now I have the ability to measure RF well beyond a 300 VAC signal level. That is what was needed for the repair of both my Collins gear and also an old Yaesu Transceiver fixed this spring for a friend in Algoma.

Those two spare tubes shown above are extremely rare. I figure my gear will be functional until I am about 187 years old with those as spares, too bad I won't be there to see it! Someone placed an ad on eBay for the tubes, just calling it HP Parts. I looked and bid, got them for \$18.00 as NOS, others who listed the exact part number were selling them for \$75-\$90 each.

Still having fun,

Chuck W9KR

It is really a wonderful piece of test equipment, if you are working on vacuum tube gear. It is first a RF Voltmeter and second a VTVM, capable of standard AC/DC voltage and also resistance checks. The one shown in the picture I rebuilt this summer. Please note the large silver cylindrical RF probe. Hewlett-Packard designed and manufactured one of three pieces of equipment worldwide with an ACTIVE probe. See those little white boxes there in the picture? They contain brand new high frequency diode tubes, made by both Eimac and Amperex for this application. The tube is inside the silver probe to the left of the white boxes and provide a frequency response up to



# Annual ORC Scholarship Award



The \$2000 ORC scholarship has been awarded to Christopher Palm (KC9JTL) as selected again by the Foundation for Amateur Radio committee. Christopher is a chemistry student at St. Benedicts collage in Atchison Kansas and this is the third year in a row in which he has been selected by FAR. Following is his letter of appreciation.

Dear Ed,

Thank you for awarding me the Ozaukee Radio Club scholarship. I have been active in ham radio for many years now. My favorite part is competing in UHF/VHF contests with my dad. This summer, I was down in Illinois on Field Day and participated with the McHenry County Wireless Association. I did some HF operation and got a great demo of their new satellite tracking program. My dad and I also participated in the June ARRL VHF contest.

I am a rising junior returning to Benedictine College in Atchison, Kansas this fall. I am studying chemical engineering, successfully completing my sophomore year with an overall 3.0 GPA. My ideas for my field of study are working in water treatment or possibly designing and maintaining oil refineries.

I really appreciate this scholarship, which helps me to stay at Benedictine College while managing my debt load. I love being here, and I love my course of study. Thanks again and 73,  
Christopher KC9JTL

## Lighthouse Weekend

de Bill Howe (KA9WRL)



First, let me thank everyone who helped out at this year's International Lighthouse/Lightship Weekend at the Kevich Light in Grafton!

The biting flies, temperature and humidity tried to shut us down, but we prevailed.

This year we had a total of 262 QSOs. Last year we had 168 QSOs, so we did good with almost 100 more than last year! (In 2013 we had 230 QSOs)

We contacted over 25 Lighthouses and Lightships plus our DX Contacts included Puerto

Rico, Chile, Cuba, Canada, Nova Scotia & the Netherlands.

The software, this year, was N3FJP's "Amateur Contact Log". Our internet connection wasn't fast enough to "auto-fill" a lot of the info like "73 Log" did on my iPad, but it was easier to use.



I'd STILL like to find the perfect logging software for the ILLW Special Event, one that is intuitive and can access QRZ for name, location, beam heading and etc. If anyone has any ideas, please let me know.

Next year we have to choose which light we want to set up at . . . the 1860 Historical Light Station in Port Washington, the Kevich Light in Grafton or the 1888 North Point Light in Milwaukee. If we choose the North Point Light, we probably would be able to operate inside

and either erect the Tower & Beam on the lake side or on the Wahl Street side. The advantage is that we wouldn't have to erect the tent and our equipment can stay set up inside the museum overnight. The disadvantage is, security for the Tower itself and the printing of new QSL cards.

Anyway, thanks again to everyone involved in setting up, operating and taking down all the equipment.



## ORC Field Day 2015 Report

De Ken W9GA, and Gary W9XT (Chair and co-chair)

The annual Ozaukee Radio club FD operation has now faded into the summer of 2015 and another Field Day is in the books. I wish to thank all of you who participated and helped in the organization and running of another successful outing. This was a year where we changed over to a new site, at Hawthorne Hills Park, north of Grafton on county I, next to Pioneer village. This site was very roomy, as compared to our Lazy Days site that was used for 2014. We had plenty of area to set up antennas, with a few trees to string dipoles and provide shade. This being said, we did not have as much shade as we have had in previous years, and are considering pitching additional shade pavilions at the station locations in the future.

We ran this year in the 4A category and had a repeat performance from Gary K9DJT, Tom W9IPR, Vic WT9Q, and Gary W9XT, who served as band captains for the four stations. Ed AA9W managed the GOTA station again, and we also placed that station on the air for a short time as a digital mode station operating on 15 meters. This has been a positive development, as we can now consider returning to 5A in the future, and with the newer members who show a distinct skill in the digital modes, this looks to be a good direction to move into in the future outings at Field Day. We were also glad to see the return of Jeananne and Gary as our VHF station operators, and did manage to gather several hundred QSOs on 6 meters with the sporadic E openings. We also had a return of the satellite QSO capability and message handling abilities.

I was particularly happy to see that we had a pretty good turnout of people to help in setup and teardown of the operation, and we were able to set up the BIG tent on Thursday at the new site very handily. Nate KC9TSO built a wood box that fit nicely into our new trailer, and helped us transport the tent and the

stakes back and forth from the shed. We have cleaned out the shed, and can fit both antenna trailers and the new box trailer into our allotted area, which is nonetheless a very tight fit. The box trailer allows us to keep the field day equipment contained, and this will keep load out and packing much more efficient in the future.

Once again, we had Turkeys on the grille on Friday evening, with a potluck dinner and a good turnout. There was some panic when it was discovered there were no beverages, but Jim K9QLP grabbed soda and beer on his way out, and the day was saved. I missed the feed fest this year, as I had a family obligation, but heard that all enjoyed Stan's succulent turkey and potatoes.

The effort this year in 4A yielded about 3400 QSOs, which was a significant increase to last year's QSO volume of about 2800 contacts. This was due to a decent amount of sporadic E propagation, particularly on Sunday morning, and some coaxing to move the 40 meter and 20 meter stations up to the higher HF bands to improve their QSO rates. We did miss out on the 75 meter phone operation due to a scheduling slipup, and will address that in the future. As it turns out, we had more operators available to make QSOs and with the new members beginning to make their presence known, I am optimistic about the future for our club.

The field Day committee is evaluating other sites for use in the future, and feels that the Hawthorne site was also a decent location. All options are open, although a commitment will be made for 2016 in the next couple weeks.

Thanks to all who participated, and please consider joining in again for 2016. All your comments tips and critiques are welcome, and solicited; please let me and Gary know your thoughts.

Ken W9GA, and Gary W9XT (Chair and co-chair)



## Ozaukee Radio Club Meeting Minutes August 12, 2015

Zach Yatso (KC9ZNR), Secretary



Chuck Curran (W9KR), President, called the meeting to order at 1929. Introductions followed.

### **Announcements:**

Gary (K9DJT) *finally* got on 6m, after overcoming lots of equipment challenges.

### **Program:**

Brian Jansen (KC9GMW) presented on Amateur Radio Direction Finding, demonstrating several transmitters, antennas, and techniques.

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

The 50/50 drawing was held by Kristian (KC9TFP) and the winning ticket #037 was held by Ken (W9GA).

### **Auction:**

Stan Kaplan (WB9RQR) conducted the auction and numerous items were sold.

### **Officer Reports:**

Chuck Curran (W9KR), President – No report.

Kevin Steers (K9VIN), 1st VP – No report.

John Strachota (W9FAD), 2nd VP – No report.

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

Zach Yatso (KC9ZNR), Secretary – Provided Board Actions Report for July 8 to August 12, 2015. Motion to accept July minutes was made by Ken (W9GA), seconded by Bill (W9MXQ), and carried without debate.

Dave Barrow (N9UNR), Treasurer – motion to accept Treasurer's report was made by Dave, seconded by Nancy (KC9FZK), and carried without debate.

**Committee Reports:**

Tom (W9IPR) reminded the club about the Fall Swapfest; volunteers are needed and should contact Tom. Also, if there is enough interest, classes for the Technician license exam can be scheduled.

Tom (KC9ONY) invited members to attend the International Lighthouse/Lightship event this weekend (Aug 15-16) at Kevich Light in Grafton.

**Old Business:**

N/A.

**New Business:**

A brief discussion was held about issuing “triple tickets” for the Spring Swapfest. It was resolved that the membership did not need to vote on this issue, and Stan (WB9RQR) moved that the decision be the responsibility of the Spring Swapfest board. The motion was seconded by Mark (AB9CD) and carried without debate.

**Adjournment:**

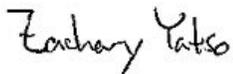
Dave (N9UNR) made the motion to adjourn at 2122. The motion was seconded by Kristian (KC9TFP) and the motion carried.

**Attendance:**

There were 38 members present and 5 guests.

A copy of the attendance sheet is available upon request in PDF format. Please contact Zach Yatso via email at: [kc9znr@arrl.net](mailto:kc9znr@arrl.net) for a copy.

Respectfully submitted,



Zachary Yatso, KC9ZNR  
Secretary

## AGENDA

September 9, 2015

1. 7:00 – 7:30 PM – Network & Rag Chew
2. Call to order: Introductions. Chuck Curran, W9KR
3. Announcements, Bragging Rights, Show & Tell, Upcoming events, Etc.,
4. Program:
5. 50/50 – Kristian Moberg, KC9TFP
6. Fellowship Break
7. Auction – Stan Kaplan (WB9RQR)
8. Presidents Report – Chuck Curran, W9KR
  
9. 1<sup>st</sup> VP Report – Kevin Steers, K9VIN

10. 2<sup>nd</sup> VP Report – John Strachota, W9FAD
11. Repeater VP report – Tom Trethewey, KC9ONY
12. Acceptance of Minutes : Zach Yatso, KC9ZNR
13. Treasurer's report – Dave Barrow, N9UNR
14. Committee reports.
  - a. Fall Swapfest
  - b. Scholarship Award
- Other:
15. OLD BUSINESS
16. NEW BUSINESS
17. Adjournment to ?

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### The ORC Newsletter

465 Beechwood Drive  
Cedarburg WI\* 53012

### First Class

Next ORC Meeting

#### Grafton Senior Citizens Center

1665 7<sup>th</sup> Avenue, Grafton  
Wednesday, Sept. 9<sup>th</sup>

7:00 PM – doors open

7:30 – Membership Meeting