



# 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.



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Volume XXVVI

November, 2013

Number 11

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## From the President

De Ken Boston (W9GA)



We are now firmly entrenched in the fall season. If you have not noticed, the band conditions on 10, 12 and 15 meters have been extremely good lately. I have only done some listening, as I have gotten somewhat busy this fall with my little EMC consulting business, having 2 or 3 projects going on at one time. This has been in contrast with this past summer, where my business was very slow. I do watch the various DX clusters and blog pages so that I don't miss any goodies, but have not had much reason to get excited, as the MUF has not reached 50 MHz yet this fall. Normally, in the fall months of a sunspot cycle peak year or years, I have been treated

to long haul six meter DX contacts, but due to the wimpy cycle 24 performance, that has yet to materialize. Thankfully though, the cycle peak has been quite kind to the HF operators, especially on 10 and 12 meters.

I have also been busy with the fall yard work effort, where I have noticed that my big hardwoods seem to be hanging on to their leaves a little later this year. I hope you have been able to keep up with the home projects as well, but watch yourself, we aren't getting any younger. I mention this as we reflect on yet another big loss to our club membership, with the passing (unexpectedly) of Gary Sharbuno, WI9M, who was an active member. He will be missed!

Again, think carefully about jumping into a leadership position with our group, we have a large membership, and I am sure there are a few newer members who have been considering what they might be able to bring to the table, with fresh ideas and energy. Please make yourselves known, and let me or other club officers know you are available.

I will be your humble presenter this next meeting, with a short talk on antenna matches, with a particular message on tuning the dreaded gamma match. Several of the older single band yagi antennas (2, 6, 10, 15, 20 Meters) use this match, and I figured out a few tricks after spending some time on the internet trying to get past the general instructions which went along the lines of; "attach SWR meter and move things around until you get a low SWR".

See you at the Grafton Senior Center on Wednesday November 13, 2013; starting at 7:30 PM, although doors open at 7:00 PM for general assembly and chatter.

## Gary Sharbuno, WI9M, SK



Gary Sharbuno (WI9M), a long time member and past president of the ORC died October 20<sup>th</sup> at the age of 65. He was active not only in the ORC but also in the ELKS where he was a ranking officer.

Gary was born in Beaver Dam but grew up in Port Washington where he graduated from High School and then joined the US Coast Guard. It was in the Coast Guard that Gary became a radioman and high speed CW operator. Gary earned his broadcast engineering degree at MATC and worked for Channel 10 (WMVS) for 33 years as a recording and sound engineer until retiring in 2007.

Gary enjoyed amateur radio and as such influenced his wife Barbara to get a license (KA9PZH) as well a son-in-law. Gary was an avid ham radio operator on CW and was a regular on the informal morning 3.860 local net. At field day we always counted on Gary to operate CW in the 20 meter tent as he could make more contacts per hour and got twice as many points per contact as the Phone guys.



Gary, we will miss you at our Saturday morning breakfast, on 3860 and at field day.

# Remembering Gary

De Nels Harvey ( )

I first met Gary Sharbuno right after I started working at Ch. 10/36 in 1970. He, along with Russ Schreiner WB9PAS, were Television Engineering students assigned to operate Ch. 36 as a part of their lab assignments. I remember both of them going over details of proper video levels with me, and answering plenty of questions I had about TV in general, because I was only a radio guy!

I soon learned Gary was recently married, and lived on the pricey east side. Since I had a vacancy in one of my rentals, Gary and Barbara moved in across the street from me. The first question he had was "Can I put up an antenna there?" I said "Sure, no problem!" Since it was a cold January, going up on the roof was on hold. Gary expressed frustration with waiting, so I suggested hooking up to the rain gutters.

The rain gutters on that building were unusual in that the second story wrapped around the house, totally isolated from the lower rain gutter that ran around at the first floor level. We put the center conductor of the coax on the downspout from the upper level and the shield to the lower level. Gary's tuner tuned right up on twenty meters, and Gary made his first contact, with someone in Arizona, and when Gary said he was using a rain gutter for an antenna, the guy in Arizona said "Very fine Gary, but tell me, What's a rain gutter!"

After Gary graduated from college, he took a job with Midwest Microwave, located in Rubicon, WI. Gary literally wore out his big Mercury driving back and forth from that job. A position opened up in about 1973 at the TV station, and I told Gary to go after it. He did, and that began his career at WMVS/MMVT.

Joyce and I came home late one night, and noticed lights, music and people partying in Gary's back yard. I walked over, concerned about the neighbors. I mentioned my concern to Gary, and he brought me a beer, smiled, and said "Don't worry Nelsie, (He always called me Nelsie!) All of the neighbors are here!"

My tenant in the small house I owned next door on 38<sup>th</sup> St. was moving, and I decided to sell the house. I sent the real estate agent over to Gary and Barb, across the street, and told the agent that Gary doesn't know it but he needs to buy that house! The agent did his job, and Gary moved in next door to us.

I encouraged Gary to go to the Dayton Hamvention several years ago. I remember the look on his face when we first pulled in to the grounds. It didn't take Gary long before he made friends with most of the neighbors in close proximity to our space. Even this last visit, some of the people asked about Gary, who hadn't gone back in the last few years.

Gary retired from the station about 2 and a half years ago. He enjoyed Field Day, and his place up near the WI Dells. Last week, two of the people we both worked with at the TV station had a retirement party. A large number of current and former employees were there for the party, and I'm sure Gary would have been one of the first to cheer them on their way. I'm happy that Gary and Barb were able to enjoy at least a bit of retirement. It's too bad it couldn't have been longer. R.I.P Gary!

# DX'ing & Contesting

De Gary Sutcliffe (W9XT)



Last month I told you about the Wake Island DXpedition that was aborted at the last minute because of the government shutdown in early October. They had the all the permissions from the base commander and other authorities. They just needed the signature of some general in Washington, but he could not sign it because of the shutdown.

There is a flight from Hawaii to Wake every two weeks. Because the flight to Wake was essential for other supplies it took off on schedule. There was a screw up and they took the DXpedition's equipment to Wake. It was not supposed to ship, but it did. Because the flight didn't have the signature authorizing passengers, all the seats were empty. The team had to pay the government \$22/lb to ship the gear. I don't know what it cost per passenger, but basically they left without paying passengers. Typical case of the government "saving" money.

The good news is that they were able catch the flight last week and have been on the air starting about the 3<sup>rd</sup> of November. Because of the change in schedule a few members of the team had to drop out and get replaced by others. There are at least 3 W9 ops. That is great because they hear 9 calls better. I know many of the team members and they are excellent operators.

I have not had much time to check them out, but they have been very active. Once or twice I heard them they had huge pile ups. Early Tuesday evening I got them first call on 17 meter CW running 100 watts into a 40 meter antenna with a tuner. By the end of the two week operation they should be very easy to work.

The 5J0R DXpedition to San Andres Island is now on the air. I picked them up easily on 17 and 30 meter CW, running low power. They will be there until November 10.

There are a lot of other DXpeditions this month. Many of them are associated with the CQ WW CW DX contest later this month, and will be on the air before the contest. A couple DXpeditions look especially interesting. One is to Bangladesh, and is scheduled November 17-26. This is a tough one because it is not on the air all that often, and it is kind of a tough path. It is one you want to get when you get a chance. No call has been announced, but it will probably use the "S2" prefix.

Another operation from a low activity/tough path location is the Laccadive Islands near India. There will be an international group there November 20-December 10, 160-10 Meters, CW, SSB & RTTY. The call sign is VU7AG. Combined with infrequent operations, tough propagation from North America, and (in my opinion) not very well run operations in the past, this is pretty high on the all time need lists for DXers. I only have it on 20 and 15 SSB. Those are probably the best bands to get them, but this time of the year we have grey line path to that area, and we might have a shot on the low bands around sunset our time.

November is the heart of "Hell Month" in the contest season. It starts at the end of October with the CQWW phone and ends in mid-December with the ARRL 10 Meter Contest. The big contests this month are the ARRL Sweepstake and the CQWW CW DX contest. The ARRL 160 Meter contest is also in there the first full weekend of December.

This is the 80<sup>th</sup> running of Sweepstakes. They have some special awards you can win by making a certain numbers of contacts, etc. The details are at the ARRL Sweepstakes web page. <http://www.arrl.org/sweepstakes> Looking at the wall, I have a couple of awards for earlier big anniversary runnings of SS. At the 50<sup>th</sup> running they gave out a button and a wisk broom for a "clean sweep",

working all of the ARRL sections. In 2008 at the 75<sup>th</sup> running you could get a medallion for the same feat.

The CW weekend has already occurred, but the phone event starts 3:00 PM local time on Saturday November 16 and runs to 9:00PM on Sunday. The exchange and rules are a bit involved so I suggest you check out the rules at the above site.

The other big contest this weekend is the CQ World Wide CW DX Contest. Normally it starts Friday night (local time) on Thanksgiving weekend. By a quirk of the calendar it is the weekend before this year. Conditions for this one could be pretty good.

The phone version was at the end of October. After months in the 100 range, the solar flux jumped up to the 150-160 level. It looks like the sunspot cycle is having a double peak. New theories on this say that differences in timing in the northern and southern hemisphere's of the sun can cause this. Anyway, conditions were very good in the phone weekend.

I had not planned on operating the CQWW phone weekend because I had too much to do, but could not pass up the best conditions for a contest I may ever see again, if some solar scientist's predictions are accurate. I did a single band 10 Meter effort. My main beam had rotor problems so I climbed the tower before the contest and fixed towards Europe. I also had S7 line noise most of Saturday. I decided to spend Sunday afternoon working on the tower fixing the rotor. Despite this, I made nearly 1200 contact in about 130 countries on just 10 meters. When the band was open to Europe, it was wall to wall stations from 28.300 MHz up to over 29,100 MHz. It was pretty amazing.

The phone and CW weekends are a month apart. The sun is not a solid and different latitudes have different rotational periods, but on the average it is about a month. That means sunspot clusters that live long enough will return about a month later. The conditions of the phone weekend could repeat during the CW weekend.

Between good solar conditions, lots of DXpeditions and a big line up of contests, November will be a good month to be on the HF bands.



There are special awards for making contacts in this year's ARRL Sweepstakes. These are from the 50<sup>th</sup> and 75<sup>th</sup> anniversary Sweepstakes.

# The Computer Corner

## No. 188: exFAT and Your Flash Drives

Stan Kaplan, WB9RQR



The exFAT (Extended File Allocation Table) is a Microsoft file system that has been optimized for flash drives, and you might consider using it with your dongles. Why? 1. It is optimized for flash drives, as mentioned. 2. It allows for larger flash drives (256 times as large) than FAT32 (FAT32 or FAT are often used to format flash drives). 3. It allows for larger files (four times as large as standard FAT32) on a flash drive. Free space and deletion performance is also improved. 4. It sports more or less seamless use between Apple and Microsoft computers (Mac users, take note). Mac OSX Snow Leopard 10.6.5 and later can create, read, write, verify and repair exFAT files systems (including not just flash drives, but also external hard drives using exFAT). 5.

exFAT is also supported by a number of media devices such as modern flat panel TVs, media centers and portable media players. In summary, it is just a more versatile and portable OS for flash drives. Oh yes, exFAT formatted dongles can be defragged using good software such as Defraggler. Note that defragging is not recommended for flash drives formatted in FAT or FAT32 – they can be damaged by it.

There are a few disadvantages. Although Windows 7 and 8 have support for exFAT built in, your current copy of XP probably does not. However, Microsoft has a quick and easy update (KB955704), that you can download at this URL: [www.microsoft.com/en-us/download/details.aspx?id=19364](http://www.microsoft.com/en-us/download/details.aspx?id=19364). Run it, reboot, and thereafter your XP machine will format, read and write to flash drives using exFAT, if you so choose.



If you have a new flash drive (or an old one that you wish to redo), plug it into a USB port, right click it in My Computer and select format, as shown to the left. Select exFAT as shown, Quick Format, click Start and the drive will be prepared in a couple of seconds. **NOTE THAT THIS PROCEDURE WILL DELETE EVERYTHING ON THE FLASH DRIVE.** If you have files that you want to save, copy them first to your computer, then back when you have finished formatting the flash drive.

Keep this in mind. If you are going to a meeting to give a presentation stored on your flash drive, there is no guarantee that the XP computer you encounter can do exFAT (no problem, though, with Windows 7 or 8, as mentioned above). To avoid the panic of having to install the XP update at the meeting on someone else's computer in order to give your presentation, keep one flash drive formatted with FAT or FAT32, or always bring your own laptop for presentations. Pre-planning for the unexpected is a good thing! Also, if you ever have Windows report that a flash drive is not formatted and it offers to format it for you, think before you accept the offer. If it is an exFAT flash drive and the machine is XP, the flash drive may well have files on it that are not seen by the XP machine. Formatting the flash drive will, of course, destroy those files. Make sure the XP machine has been updated.

Progress marches on! Now you can use your old XP machine to transfer files back and forth between it and your Mac! It won't be long, though, before XP is no longer supported (but that does not mean you can't use it anymore!). Happy Computing!

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*"The wireless music box has no imaginable commercial value. Who would pay for a message to be sent to nobody in particular?"* David Sarnoff's associates in response to his urgings for investment in the radio in the 1920s.

## Test Equipment Corner

Gary Drasch (K9DJT)



Last month I touched on how most digital multimeters (DMM) will "Auto-range", meaning they will choose the correct range for the most accurate reading for the value you're measuring.

So why would you want to manually range the instrument? Well, actually there are two reasons. The first would be to increase the response time; meaning it will provide you a value faster. The second would be to better utilize the "Analog Bar Graph" as a peaking or nulling tool. What happens when "Auto-ranging" is engaged, the DMM needs to take a moment for it to think. It needs to look at the value you are measuring and make a decision on what range it should select for you. We are not talking about a real long time. It usually takes only a second or two depending on the brand but that might be too slow to capture an intermittent or let's say a momentary switch closure. I once met a customer who carried a DMM and an old analog meter with him. I asked him why he still bothered to carry the analog with him? He explained he serviced a piece of equipment where one of the tests was to momentarily see 120 VAC on the fly. It presented itself for maybe a second or two and the DMM was trying to figure out what it was going to display...and by the time it was done, it was gone...in other words, he couldn't tell if it had been there or not. He said, "with the analog meter, I can see the needle swing up and back down." I asked him how the DMM reacted when he manually ranged it? He said, "what do you mean, manually range it?" I showed him the manual range button on the DMM, and chose the 600 volt range. He then conducted the same test, and the DMM numbers not only came up immediately, but the "Analog Bar Graph" display went up and back down just as fast as the old analog meter. In some cases, it might even be faster. Guess what...he only carries one meter with him now.

As I mentioned at the beginning, the bar graph can be used for peaking and nulling. You are able to make adjustments using the bar graph just as you would an analog meter. The thing to remember though is to manually range the DMM first. Depending on the brand, the bar graph should respond within all functions of the DMM, i.e., voltage, current and resistance. Just for fun, measure the resistance of a potentiometer sometime and watch how the bar graph changes as the shaft is turned.



Now with all this being said about a DMM "Analog Bar Graph", and being a senior citizen myself, there is still something to be said for the "Feel of watching a needle swing." Just as all of us have test probes, and even hand tools, which have a certain feel to them, we will all have a preference or feel for a certain type of meter for a particular measurement or adjustment.

Next month I would like to discuss the application/use of "Min-Max" and "Auto-Touch." You are welcome to ask any questions on the "ORC Radio Chatter" forum board. I look forward to hearing from you.

73, Gary  
K9DJT

# Building the Oak Hills Research WM-2 QRP Wattmeter

De Tim Boppre (KA9EAK)

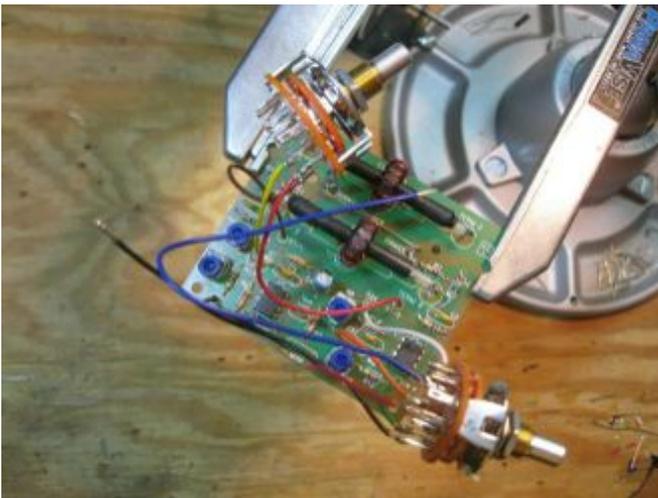


Well I finally ordered an Oak Hills Research WM-2 (<http://www.ohr.com/wattmeter.htm>). I've looked at them for awhile and with the recent demise of Small Wonder Labs I decided that I'd better get one before I end up adding it to my "woulda, coulda, shoulda" list like so many other great QRP kits. The kit gets great reviews on eHam and is one of the nicest analog QRP power level wattmeters around.

The kit was shipped lightning fast and I had it within the week that I ordered it. It includes everything you need for a successful build including a very nicely done case with labels for all the controls and connectors. It's a pretty straightforward build with a small circuit board with 24 components and two toroids that are wound to sense RF and then all of

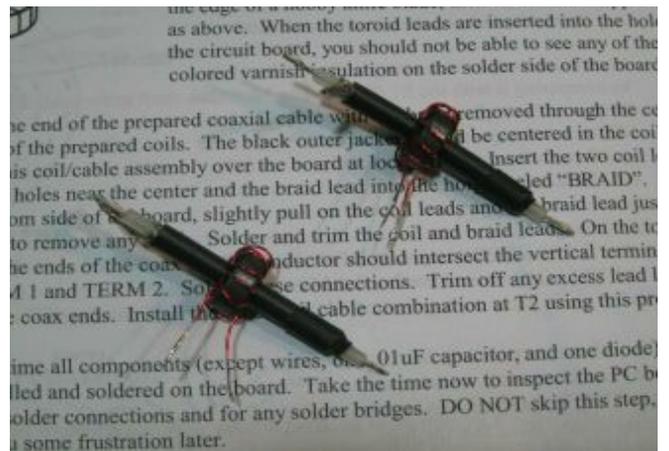


the interconnect parts and of course the meter.



The toroids are 12 turns of #24 wire on FT50-43 ferrite cores and they are easy to wind. OHR offers the option to purchase a set of pre-wound toroids if you wish.

Here are a couple of good tutorials on winding toroids: [Genesis Radio](http://www.genesisradio.com.au/help/toroid_winding.html) ([http://www.genesisradio.com.au/help/toroid\\_winding.html](http://www.genesisradio.com.au/help/toroid_winding.html)) and [Kits and Parts](http://www.kitsandparts.com/howtowindtoroidswithoutpain.php) (<http://www.kitsandparts.com/howtowindtoroidswithoutpain.php>). Here are the completed toroids on the bits of coax that are placed on the circuit board to sense both forward and reflected RF.



Once the board is completed the work turns to preparing the rotary switches that connect to the board to select the power ranges and forward\reflected power. Here's the board with the rotary switches connected:



Once the circuit board and selector switches are completed the last step is to prepare the case for their installation. This involves installing and wiring the SO-239 connectors for RF in and out as well as the battery holder, power selector switch, and external power jack. Once this is all finished the meter will look like this inside:

And this is the completed meter:



The WM-2 has three power ranges of 100mW, 1W, or 10W with a claimed accuracy of 5% of full scale. It is powered from either an internal 9V battery or an external power supply. The meter measures both forward and reflected power so you can use the readings that you make to calculate SWR if you wish.

The only mod that I made to the kit was the addition of a Power On LED. OHR offers an option for this but it's easy to do yourself. Pick your favorite size and color of LED, carefully drill a hole in the front panel where you'd like to place the Power On LED, and then place it and a dropping resistor between pin 4 of rotary switch S2 and ground. I chose a green 3mm LED and a 2.2K Ohm dropping resistor.

The complete build took maybe 3-4 hours with no issues along the way. Calibration is easy with the use of a DVM. Overall it is a very nice meter. It appears to perform very well and will make a nice addition to your QRP shack. If QRP is all about caring enough to send the very least this meter will easily help you determine just how much you care.

## Tips, Tails & Tools

If you look closely you will note there is a golf ball on the end of Chucks fishing line. He has found it works great for getting a line up high in a tree without the worry of "will it come down to where I can reach it". The golf ball weighs more than a "nut" but some may be more accurate with a sling shot that with a cast.



# Club Static

De Tom (W9IPR)

Glad to hear that Leon (K9GCF) is out of the hospital and recovering.

Wow! It really pays to go to area swapfests. I went to the MRC one at the Elks across from AES and wasn't there 30 minutes and won a digital multimeter donated by the RF Connector Guy. After perusing the area I went to AES where they were closing out their service department and bought some stuff for twenty five and fifty cents. But the big buy was an Astron RM-20A power supply that didn't work for \$20 but it looks like I was deceived and it really does work. Then I got a phone call later in the day and I had won a \$50 door prize at the swapfest. Wow! I will be going there again.

Don't forget, we have elections in January, 2014.

## Minutes– October 9th, 2013

*Gary L. Drasch (K9DJT) - Secretary*

President Ken Boston, W9GA, called the meeting to order at 7:30 p.m.

Stan Kaplan, WB9RQR, reported on Leon Rediske, K9GCF, health status. Leon was diagnosed with a tumor and is presently at Froedtert Memorial Hospital in Milwaukee.

Ed Rate AA9W, said he had fliers on various area swapfests for those interested.

### **Announcements/Show-and-Tell:**

Stan Kaplan, WB9RQR, proudly showed off an old Hallicrafters radio which he bought at the clubs swapfest.

### **Program:**

Tom Ruhlmann, W9IPR, who was a battery engineer at Johnson Controls in Milwaukee, made an excellent presentation on electrochemical batteries. In addition, he provided a refresher course relating to arithmetic and lunch boxes! Thank you Tom!!!

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

Nancy Stecker, KC9FZK, ran the drawing and Tom Trethewey, KC9ONY, won it.

### **Auction:**

As usual, Stan Kaplan, WB9RQR, our resident auctioneer, ran another outstanding event.

### **Business Meeting:**

Ken Boston, W9GA, asked members to step up to the plate and help out by serving the club in some capacity this coming year. He reminded everyone of the election at the end of the year.

### **Committee Reports:**

**1<sup>st</sup> VP Report:** Art Davidson, AC9CD, was not in attendance. No report.

**2<sup>nd</sup> VP Report:** Brian Skrentny, N9LOO, didn't have anything to report other than highlighting the swapfest.

**Repeater VP Report:** Tom Trethewey, KC9ONY, reported that both the 2 meter and 440 MHz machines are working fine. He commented that the 440 MHz machine isn't used much though. Jim Albrinck, K9QLP, provided the status on the troublesome 220 MHz machine. He and Nels Harvey, WA9JOB, determined the antenna system is in need of replacement and will be going to the board to ask for a replacement.

**Secretary's Report/Minutes:** Gary Drasch, K9DJT, Secretary, said the board made an email motion, seconded, and passed on paying several bill submitted by the club treasurer. Stan Kaplan, WB9RQR, motioned to accept last month's meeting minutes and Jim Albrinck, K9QLP, seconded the motion. The motion passed.

**Treasurer's Report:** Dave Barrow, N9UNR, motioned to accept the treasurer's report, Nancy Stecker, KC9FZK, seconded. The motion passed. Dave Barrow, N9UNR, requested the approval of the 2014 budget. Stan Kaplan, WB9RQR, made the motion to accept and Bill Howe, KA9WRL, provided the second. The motion was passed. Dave Barrow, N9UNR, also requested the approval of the Income & Expense report. Nancy Stecker, KC9FZK, made the motion which was seconded by Tom Trethewey, KC9ONY. The motion passed.

**Fall Swapfest:**

Tom Ruhlmann, W9IPR, reported on the Fall Swapfest. He said there were more tickets sold than deposited. There was a comment that it is not unusual for that to happen. Overall the event was a success and he thanked everyone for their help.

**Old Business:**

Bill Howe, KA9WRL, quickly commented on a nice article in the Milwaukee Journal Newspaper relating to ham radio. Our own Tom Ruhlmann, W9IPR, was mentioned in it.

**New Business:**

There was none.

**Adjournment:**

Stan Kaplan, WB9RQR, moved to adjourn and Bernie Golownia, AA9CI, seconded the motion. Passed. The meeting adjourned at 9:43 PM.

**Member Attendance:**

There were 30 members present along with 3 guests.

Actual attendance sheet is available upon request in a PDF format. Please contact Gary via email at: [k9dj@sbqglobal.net](mailto:k9dj@sbqglobal.net)

Respectfully submitted,

Gary Drasch, K9DJT  
Secretary

## **AGENDA**

*November 13<sup>th</sup>, 2013*

1. 7:00 – 7:30 PM – Network & Rag Chew
2. Call to order: Ken Boston (W9GA)
3. Introductions.
4. Announcements, Bragging Rights, Show & Tell, Upcoming events, Etc.,
5. Program: Ken Boston (W9GA) – Antenna Matching
6. 50/50 – Kristian Moberg (KC9TFP)
7. Fellowship Break
8. Auction – Stan Kaplan (WB9RQR)
9. Presidents Report – Ken Boston (W9GA)
10. 1<sup>st</sup> VP Report – Art Davidson (AC9CD)
11. 2<sup>nd</sup> VP Report – Bryan Skrentny (N9LOO)
12. Repeater VP report – Tom Trethewey ( KC9ONY)
13. Acceptance of Minutes Gary L. Drasch, K9DJT
14. Treasurer's report – Dave Barrow (N9UNR)
15. Committee reports.  
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 Senior Citizens Center**

**1665 7<sup>th</sup> Avenue, Grafton**  
Wednesday, November 13<sup>th</sup>

7:00 PM – doors open

7:30 – Membership Meeting