



# The ORC News -

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: <http://www.qsl.net/orc/>

Volume XXII

December 2003

Number 12

## The Prez Sez

de Vic Shier (KB9UKE)

This is the last newsletter for 2003, which makes it an appropriate time to review our accomplishments and consider some future goals. The Ozaukee Radio Club had a good year. We had: a successful swapfest, a great Field Day, substantial contributions to the Scholarship Fund, a new 10 meter/220 link, and we provided communications for several community service events. The ORC is a healthy and vibrant amateur radio club.

There have also been several suggestions for next year. Tom W9IPR will be taking over the technician classes and he and Ray W9BUJ will be working on additional ideas for introducing kids to ham radio. Jim KA4UPW and Gary WI9M will be working together on Field Day improvements. Nels WA9JOB and the techies of the club have plans for the repeater systems including adding a 2meter/220 link for nets. If you have some additional ideas for the club, share them with a board member. New ideas keep the hobby fresh.

Elections will be held at the January meeting and any member of the club can run for office. The responsibilities vary with each office and require several additional meetings. Contact me if you would like to learn more of what would be involved as a club officer.

Don't forget about some of the lighter issues, the Ham-Of-The-Year award for the member who has made a significant contribution to the club and Turkey-Of-The-Year for a member who has made things fun. There is not a limit on the number of times a member can receive the Ham-of-the-Year award but the Turkey-of-the-Year award can only be received once. There

is, however, one notable exception. Gabe received it twice, once as WI9GC and once as N9QQA. He is the one and only ORC double turkey recipient.

73's and remember...It's a hobby!

## ORC ASSISTS GRAFTON CHRISTMAS PARADE

de Jim Albrinck (K9QLP)

Twelve hardy members of the ORC assisted the Grafton Chamber of Commerce in their staging of one of the "smoothest Christmas Parades ever" said one of the Grafton Chamber leaders, despite the chilly weather.



Bernie, AA9CI, is seen here making a final check of Santa's list to make sure he is noted as having been "nice".

Assisted by the communications van of Cedarburg Emergency Government, the ORC kept communications flowing, found lost units, and minimized gaps in the line of March.



Note the Emergency Government Communications Van on the parade route

The following ORC members participated:

Gene, KB9VJP; Ed, AA9GT; Gary, WI9M; Jon, KB9RHZ; Nels, WA9JOB; Jim, K9QLP; Gabe, WI9GC; Bernie, AA9CI; Kent, N9WH; Ed, AA9W; Ted, N9LLT; and Vince, KB9ZOT. Thanks again to all of you for representing the Ozaukee Radio Club with true professionalism.



It is only fitting that a morning of communicating be followed by pizza and warming refreshments as the event is discussed.

## ARF! ARF! - WHO SAYS YOU CAN'T TEACH AN OLD DOG NEW TRICKS?

De Bob Truscott (W9LO)

This old dog just learned one. I called CQ in a phone contest a couple of weeks ago. I've never done that before because if I barked into the microphone like some of the younger pups in the club do on Field Day my voice would dis-

solve into mush in about 15 minutes, and I'd miss the rest of the contest. But not this year—I've discovered the wonderful world of the voice keyer. Santa Claus gave me an IOU for one last Christmas, and one of his elves delivered it at the swapfest last May. You all know what it is—it's that little gray box with all the buttons on it that W9XT demonstrated to the club about a year ago. The one that allows you to program your CW messages and certain parameters, and then tells you (in CW) what adjustments you just made. Pretty neat for CW people, but you don't have to know the code to use it on phone—you just push the buttons and record your messages. I suspect that most phone ops use it mainly for CQing, but I also used it for the entire sweepstakes message, minus the number. That way, when answering a call I simply speak the number, and punch the button. That's the lazy man's way of doing it, but it saves the voice for another QSO. Who knows? It might even allow a CW hound to enjoy phone contesting.

Now, if I could just get that phonetic alphabet thing straightened out in my mind. I know WHISKEY, LIMA and OSCAR, but those WW-II phonetics just don't seem to do the job anymore—ABLE, BAKER, CHARLIE, DOG, FOX. How about ALPHA, BETA, GAMMA, DELTA, EPSILON, ZETA, ETA, THETA—that doesn't sound right either, but my high school Latin teacher would be proud of me for just remembering it. No, that doesn't sound like Latin—maybe it's Greek. But I never studied Greek. (Actually, I never studied Latin either—I just went to the classes.) Oh, well, maybe one of my phone buddies will help me out with this problem one of these days.

Reported Scores:

CW November Sweepstakes

	QSO's	Sections
N9FH	1072	79
W9LO	730	79
W9XT	395	73
WI9M	375	62
W9KHH	202	61
WB9UKE	151	58

## SSB November Sweepstakes

N9FH	702	74
W9XT	631	78
W9LO	203	59

## Coming up in December:

Dec. 5-7 ARRL 160-Meter Contest  
Rules in Nov. QST, page 112.

Dec. 13-14 ARRL 10-Meter Contest  
Rules in Nov. QST., page 112

Dec. 12-15 North American Meteor Scatter  
Contest. Rules in Dec. QST, page 84

Dec. 27-28 Stew Perry Top Band Distance  
Challenge. Rules in Dec. QST, page 84

Dec. 31 ARRL Straight-Key Night  
Rules in Dec. QST, page 96

WOOF ! Phydro, W9LO

## Next Meeting – Dec. 10, 2003 – Same time & place

## Just Another Shack

De Todd Sprinkmann (KC9BQA)

This month's Just Another Shack visit is with Stan Kaplan - WB9RQR. Stan is definitely one of the more visible members of ORC. He's been an ORC member since 1975 and he's always helping with the monthly meetings and Field Day. His prowess with a turkey is well documented.

Stan discovered his interest in radio via SWL'ing (Short-wave Listening) in his teenage years. He recalls having a Lafayette rig and being very fascinated with the concept of simply hitting a key or talking into a mic and having it heard halfway around the world.

Stan decided to get his ticket in the 70's and his original novice call was WN9RQR. Stan upgraded to Extra before the code requirement went away and as a result, needed to pass the 20-wpm mark. Even though he had to use CW as a novice, he found getting up to 20 wpm quite difficult.

Stan enjoys 2 and 440 FM in his car. He also enjoys a little bit of HF work and uses PSK31 to make QSO's in places like Austria, with only 25-30 watts. Stan is very excited about all the digital modes that are being developed.

On HF, Stan uses an NVIS antenna. This stands for Near Vertical Incident Skywave propagation. He explained that this type of antenna essentially pumps your signal straight up, where it hits the ionosphere and the comes back to earth in a shower-type pattern, much like a garden hose would. In this way, the signal is sprinkled evenly in a 200-400 mile diameter.

Having this kind of pattern is important for Stan because he is actively involved in emergency communications for Wisconsin.



Stan, WB9RQR, here demonstrates the effectiveness of his "clothesline" antenna on 40 meters. Note the "key" in the background on which Stan is also proficient.

For the past 5 years, Stan has been the head of Emergency Communications in Wisconsin for both ARES (Amateur Radio Emergency Service) and RACES (Radio Amateur Civil Emergency Service). In this role, Stan makes all appointments for Emergency Coordinators in the 72 Wisconsin counties and for the 9 District EC's in Wisconsin. He also maintains the database for all 1,350 ARES/RACES members in our state.

ARES/RACES members can be activated for any type of natural or manmade disaster or incident. Most of us are familiar with the severe weather nets on the Ozaukee 147.33 machine. There is also a weekly RACES net. It meets on 3.996 MHz at 7:45am every Sunday morning. Members from around the state check in for news and announcements.

Most of you are familiar with Stan's computer articles in the newsletter. What I also learned from Stan is that for several years now, he has conducted a computer class in his home for ORC members. He accepts up to six students and they meet for eight Wednesday evenings. The emphasis is on hardware and installing OS's (Operating Systems such as Windows). One student started from scratch 3-4 years ago and her interest blossomed from there. She is now Head of Computer Security for a major corporation.

Stan is a native of Miami, FL, and a retired biomedical scientist. He is an Emeritus Professor at the Medical College of Wisconsin and his specialty is in birth defects. He has 3 grown children and 3 grandchildren. Wayne is married and has lived in Israel for 16 years. Wayne is an engineering professor. Lisa is married and a TV anchor in Lexington, KY. Dean is also married and is a State Department officer currently stationed in Kathmandu, Nepal.

## Voice Keyers

De Gary Sutcliffe, W9XT

I designed and built my first digital voice keyer in the mid-1980's. It used a couple of hundred dollars worth of memory chips, and didn't sound that good. I was lucky that I was able to get the memory chips as free samples left over from a computer project at work.

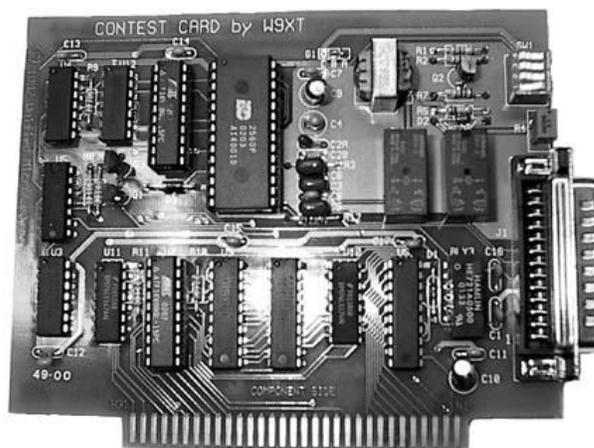
In the early 1990s a company called Information Storage Devices introduced a series of ICs that included most of the key components for storing and playing back voice messages. They were perfect for voice keyers, and a number of articles appeared in the ham magazines with de-

signs using them.

I learned about the ISD chips in a *QST* article. Like most project articles I find interesting, I find things I think could be improved. In this case, it was basically a good design, but was not designed with the contest in mind. For one thing, it was essential that mine would work with the main contest logging software.

K8CC in his NA program introduced a scheme to control voice keyers through the printer port. The other major program at the time, CT, soon adopted the K8CC standard. I started my design with an interface to the printer port, then realized I could make the keyer itself look like a printer port and put it right inside the PC. I also included the circuitry to add a CW interface so the PC could send CW. This was all done by wire wrap on a prototype board. I called it the Contest Card.

I showed it to some local hams and they were interested in getting one. Bruce Herrick, WW1M, offered to lay out a circuit board for it. Before long we had a few boards made up. A few months later Bruce went to Dayton. I had to skip it that year. He was talking to the editor at *QST*. He told them about my voice keyer, but they were not particularly interested because they did a voice keyer article a few months earlier. Then Bruce mentioned it was a plug in card for the PC. It turned out they were looking for a project for building a board that went into the PC, and they wanted me to write the article.



This "keyer" by W9XT plugs into the PC

As the time approached for the article to be published, the ARRL asked if I could sell kits. Project articles are more popular if the readers can get the parts from one place. I was an independent electronics engineering consultant at the time, so decided to do it. I was in the keyer business. The article appeared in the September 1993 issue.

Voice keyers all work on pretty much the same principle. Audio is sampled at regular intervals and stored in memory. At playback, the samples are retrieved from memory at the same rate, converted to a voltage, and put through filtering and an amplifier to reproduce the message. This same principle audio CDs work on.

There are two things to look for regarding voice keyers. First is the recording time, and the second is the sample rate. Recording time is pretty obvious. The longer the recording time, the longer your message can be, or the more messages you can store.

Sample rate is really more important because that affects the quality of your recorded message. The audio has to be sampled at a rate at least two times the highest frequency present in the signal you want to record. A front end filter is used to remove signals more than half the sample rate before the audio is sampled. The audio in an SSB signal is cut off at about 3.5 kHz. You don't want your audio to be limited by the voice keyer. To match the SSB signal you need a top end cut off 3.5 kHz and a sample rate of at least 7 kHz. In practice you want the sample rate higher than the minimum.

The memory to store your messages is proportional to the sample rate times the maximum recording time. Some keyer manufacturers will use a lower sample rate for a given amount of memory so the record time is longer. Unwary buyers think they are getting a better deal because the recording time is longer than a competitor's model.

In reality, you don't need all that much record time. A CQ should never be more than 10 seconds, and 5 or 6 seconds is usually better. Giving the Field Day exchange of "5A Wisconsin"

takes less than 2 seconds.

Like any tool, keyers can be used incorrectly. I use CW keyers and computer generated CW very extensively in my contesting work. The biggest advantage is that you don't make mistakes sending the other guy's call or the exchange. Another advantage is that if you are calling CQ and working stations quickly you keep sending the exact sequence for each QSO. This makes it easier for stations listening in to know what is going on.

One mistake some operators make is sending the wrong speed, usually too fast. On some keyers or PC keyers changing the speed is not a smooth operation. You get a situation similar to the bug where the operator does not want to go through the hassle of slowing down for a slower operator. I like to wire a CW keyer in parallel to the computer CW. That way I can just reach for the paddle and turn a knob to the desired speed. I can slow down if needed, or maybe speed up if I want to say something to an operator I know can copy faster.

The purpose of a voice keyer is different than that of a CW keyer. With a voice keyer the main purpose is not so much for accuracy, but to save your voice. A long contest can really be tough on the old vocal cords. There are a couple of things to remember when using a voice keyer.

The first thing is that you want the audio from the keyer to sound the same as your natural audio. The other guy should be asking himself "Is it live or is it Memorex?" Some of the stations you work don't want to talk to a machine, and will not give you a call if you sound too mechanical.

About 10 years ago, K1EA, best known for his CT logging program, introduced a PC plug in voice keyer card known as the DVP. One interesting feature is that it would allow you to record the alphabet and numbers on the PC's hard drive. You would record "Alpha", "Bravo", "Charlie", etc. Then you could type the other guy's call in, and press a button, and the PC would piece the letters together and transmit the call sign and exchange.

The problem was that unless you spent a long time editing your audio snippets, the call sign would be very choppy, sort of like when you get a phone number from directory assistance. After a while the general consensus was that the choppy sound actually limited your contacts. The DVP is no longer in production, but was a fine keyer, and many are still in use. It is very rare to hear them used to send the other guy's call though.



This console "keyer" by W9XT can be interfaced with the PC for ease in "contesting"

I tend to use the voice keyer much less than CW keyers. One reason is that it tends to keep me mentally out of the contest if used too much. I like to adapt to the current situation. For example, if I am calling CQ and working stations quickly I will try to streamline my operation to work stations faster. If things are slow and there is a lot of QRM I might use a longer CQ to keep the frequency clear. I use the voice keyer primarily to CQ when things are slow.

If I get two responses to a CQ I might do the following: "W6 Zebra station standby, W1ABC you are 59 Wisconsin ... QSL W6 Zebra station you are 59 Wisconsin. I could not do that with canned messages.

One time I use the voice keyer a lot is when I am eating. It is hard to talk with a mouthful of food. I can have my call, and exchange in memory and tune up and down the band working stations. I hear a station call CQ and press

the button for the message with my call sign. After he comes back I press the button for the exchange. I make the contact without getting any mashed potatoes on the microphone. The voice keyer is also nice for big DX pileups in the middle of the night. I can call and call without disturbing the rest of the family.

Voice and CW keyers are nice accessories to the ham shack. I hope you have learned a few things to select the best one for you and for using it effectively.

## The Christmas "Wish List"

We all tend to look through the QST magazine or AES catalog and think to ourselves "some-day I am going to have one of those". However, perhaps we may feel guilty actually spending that kind of money so we secretly hope our family or spouse will somehow recognize the "need" and gift the item to us thus relieving us of any guilt feelings and making us forever grateful and indebted. I still remember the Christmas (1953) that my parents gave me a microphone I "needed" to improve my contact ratio as I got my General Class license.

The following list is intended as an aid to those spouses and family members who are looking for the perfect gift for their beloved "Ham".

\$2,000 to \$1,000

Yaesu FT-1000MP Mk V Field HF transceiver  
 Kenwood TS-2000 HF/VHF Transceiver  
 Ameritron AL-572 Amplifier  
 Yaesu FT-847 HF/VHF/ Satellite transceiver  
 ICOM 746PRO HF/VHF transceiver  
 TX-455 Crank up 50' Tower

\$999 to \$500

ICOM 706 100 watt HF/VHF mobile/fixed Xceiver  
 ICOM 703 10 watt HF transceiver  
 Yaesu FT-100D mobile/fixed HF VHF Xceiver  
 Kenwood RS-50S compact HF Xceiver

\$499 to \$250

High Sierra Motorized Mobil Antenna  
 Butternut HF-9VX all band vertical antenna

Garman Street Pilot GPS  
MFJ 986 Antenna Tuner  
Yaesu G-550 Antenna Rotor  
Vibroplex 125 Iambic Presentation Paddle  
Uni-Solar USF-32 32 watt solar panel

\$249 to \$100

MFJ #259 SWR Analyzer  
Yaesu FT-50 HT VHF/UHF  
Alinco DJ-596T HT VHF/UHF  
Astron RS-35M 12 volt power supply  
Unified Microsystems VK-64 CW/Voice Keyer  
W9XT contest card for IBM PC  
Bencher BY-2 Iambic Keyer Paddle

\$99 - \$50

MFJ #890 DX Beacon Monitor  
Diamond D-130J Discone Antenna  
Van Gorden Engineering G5RV-M HF antenna  
W2AU 5 Band HF Antenna  
Delta Coaxial Antenna Switch  
PolyPhaser Rotor Control Cable Lightning Protector  
Buckmaster "HamCall" CD listing of "hams"

Under \$50

Coaxial lightning surge protectors  
Shack Clocks  
Microphones  
Mobil dual band antenna  
Mag mount  
Headphones  
Headset Mics  
Code Practice Oscillator  
Battery Chargers  
Weather Radio  
SWR Bridge

## Club Static

My special thanks to all who helped me exchange my TA-53 beam for the TA-33 on my tower. It has a very low SWR on all 5 bands and works great – first contact was Malta on 17 meters – thanks again.

## Climbing Shields

Climbing shields are easy to make for your tower and are essential if there are curious kids in the neighborhood or coming to visit.

The climbing shields shown above are on a Rohn "25" tower. They are simply 1" X 8" planks of pine six feet long. Each of the three shields has a wood bracket near the top which hangs around a horizontal member of the tower frame and a "hook bolt" near the bottom to secure the panel to a lower horizontal member. All that remains is to paint my call sign on the panel.



Climbing shields installed on W9IPR's tower. They are recommended if you have a tower and there are curious "kids" in the area.

## Minutes of Nov. 12, 2003

De Carol Szudrowitz (KB9CBC)

Meeting was called to order at 7:30 PM by Nels WA9JOB. Leon K9GCF was out of town and Vic

KB9UKE was attending his mother's funeral. He and his family have our deepest sympathy for the loss of Mrs. Shier.

Reminder was given about Grafton Christmas Parade, Sat. Nov. 29 and a signup list was passed around and given to Jim K9QLP.

Sus,KB9OC, and Grace were present at the meeting.

Gregg W9DHI announced that he needs 1 to 3 more people to build the kit radio. There will be 2 sessions, starting in January. Cost is \$25.50. Give him a call if interested.

#### Program:

Ken Boston W9GA presented an interesting program on "VHF-UHF Weak Signal Operating"

He gave helpful information on modes of propagation. Summer seems to have a greater range in tropospheric bending due to more "temperature inversions". Meteor scatter, Aurora (northern lights) and Earth-Moon-Earth offer challenges to a radio operator and CW is most effective here.

The ultimate prize or challenge is getting a contact with E-M-E. Digital modes like JT 44 really help here. A handout was available for more information.

#### Break:

#### Auction:

Stan WB9RQR announced that his computer class starts next week Wed. Nov 19. It is filled.

#### Business Meeting:

Secretary's minutes were accepted as printed.

#### Treasurer's Report:

Tom AA9XK said that phone bill is now taken care of by club.

#### Repeater Report:

Nels WA9JOB reported that the 2-meter is working. The 220 was working well until he tried interfacing it for the NET. He will be working on it again. More issues arose during a discussion with We energies so the board will have to weigh if it is a good idea to locate on WE's new tower.

Jim K9QLP gave a NET report said there are usually 5 - 6 check ins. The acoustical link is not steady. He and Nels are working on that. He also encouraged more to check in and volunteer for NET control. It is good practice for an emergency.

#### ORARES Report:

Jon KB9RHZ said that 63 people attended the conference. Stan WB9RQR is stepping down as EM Coordinator for the state after 5 years on the job. Bill Nemuth will take the position. Meeting is scheduled for the 3rd Thurs. Nov 20 (note this was canceled)

#### Donations:

Ed AA9W stated he has a pool table full of vacuum tubes in perfect condition. Call him. Also has 2 meter rigs, HF rigs with minimum bid prices. We have the tripod tower in the barn for Field Days.

#### Old Business: None

#### New Business:

Gabe,WI9GC, opened a discussion on dues and cut-off dates. Motion was made and seconded by Gregg W9DHI that everyone pay \$15 with a cutoff date of 3/15. There was also a discussion on reduced rate if someone joins after July 1 (cost \$7.50). Jim K9QLP noted that you do not have to be paid by election night to vote. That is in the by laws.

A motion was finally made by Tom W9IPR to refer dues motion - dues and compatibility to bylaws - to a board committee for study. This was seconded by Stan WB9RQR. Nels WA9JOB questioned if this was out of order. The board should meet before the next meeting and publish the findings in the newsletter.

#### Communications:

We received a poster from AARL as a thank you for the club's support donation.

Also thank you to Sus \_\_\_ and Grace for giving the club pictures of past Post Everything Parties. This is an interesting history of members past and present. Stan 'RQR made motion to close the meeting Greg 'DHI seconded it.

#### Attendance:

Carol KC9CBC, Cindy KA9PZG, Ed AA9GT, Jon KB9RHZ, Kent N9WH, Ed AA9W, Dave N9UNR, Gabe, WI9GC, Gene KB9VJP, Gregg W9DHI, Jim K9QLP, Ray WD9HOD, Dean K3GGN, Ken W9GA, Gary W9XT, W9BCK, Gary W9IM, Bob W9LO, Joe AA9HR, Ray W9KHH, Ron KC9DKQ, Bernie AA9CI, Gay KB9OBR, Sky N9XRU, Jane KB9SYI, Mark AB9CD, Tom W9IPR, Terry KA9RFM, Ed AA9WW, Jake KB9ZOR, Jim N9WIU, Herb WA9UVK, Ben K9UZ, Stan WB9RQR, Mike WJ9O, Nels WA9JOB, Don W9VSC, Tom AA9XK.

Ozaukee Radio Club, Inc.  
2004 Membership Application / Renewal Form

Callsign \_\_\_\_\_

Date \_\_\_\_\_

Name \_\_\_\_\_

Street Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_ Zip \_\_\_\_\_

Home phone \_\_\_\_\_ Speed dial number \_\_\_\_\_

Email Address to post on ORC web page ( optional )

\_\_\_\_\_ PRINT CLEARLY

I need a copy of the newsletter sent by U.S. Mail            NO            YES

( New and archived ORC newsletters are posted at the ORC WEB site <http://www.qsl.net/orc>. Members with adequate Internet access are encouraged to decline a newsletter by U.S. Mail )

Membership Class Desired (check one)

REGULAR membership <sup>(1)</sup>            \$15.00

CLUB membership <sup>(2)</sup>            \$ 7.50

Make check payable to Ozaukee Radio Club

Return to Tom Nawrot - AA9XK  
10335 N. Grasslyn Road  
Mequon, WI 53092

<sup>(1)</sup> REGULAR: Regular members hold membership in the club, and also have repeater privileges.

<sup>(2)</sup> CLUB: Club members have all rights of membership, including voting rights, but have no repeater privileges. Graduates of ORC sponsored amateur radio courses are eligible for full Club membership for one calendar year after graduation, without dues charge.

## AGENDA

*Dec. 10, 2003*

1. Call to order.
2. Introductions.
3. Announcements, Upcoming events, Etc.,
4. Program:
5. Fellowship Break
6. Auction.
7. Acceptance of Minutes as printed.
8. Treasurer's report – Tom (AA9XK).
9. Repeater report – Nels (WA9JOB)
10. OZARES report – Jon (KB9RHZ).
11. Committee reports.
12. OLD BUSINESS
13. NEW BUSINESS.
14. Adjournment to ?

Return undeliverable copies to

The ORC Newsletter  
465 Beechwood Drive  
Cedarburg WI\* 53012

First Class

## Next ORC Meeting

Grafton Senior Citizens Center

1665 7<sup>th</sup> Avenue, Grafton

Wednesday, Dec. 10<sup>th</sup>

7:30 PM