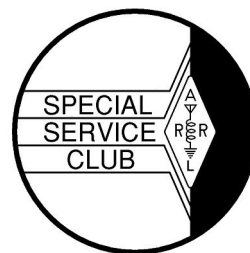




The ORC News -

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: www.ozaukeeradioclub.org

Volume XXVIII

February, 2009

Number 2

From the President

De Bill Howe II (KA9WRL)

This is going to be an exciting experience for me. As President of the LeFrog Amateur Radio Club and now the new President of the Ozaukee Radio Club, I'll be involved in more activities than ever over the next few years. It's a privilege to be working with so many dedicated and experienced hams from such interesting and diverse backgrounds.

The ORC is dedicated to serving our community, our country, and the world as well, experts, not amateurs, in the art of communication. We take pride in our ability to quickly set up working radio stations capable of communicating around the world with the minimum of power, equipment, and effort.

With that in mind, my focus for the future of this club will be in public service. I hope to expand on our efforts in the schools, in Scouting, and in the public eye in general. Serving the community through involvement in various parades, safety days, lighthouse events, and career days in the schools will benefit both our community and our club on many levels.

If you have any ideas on how we can further improve our image in the community and be more involved with improving ourselves as a club, please do not hesitate to contact me or any member of the Board of Directors.

Don't forget the "P.E.P." (Post Everything Party) on March 14th. Treat your XYL to a nice, catered dinner and exchange those gag gifts, cleverly wrapped with only the finest holiday paper. I know I've got some unusual Amateur Radio gear that's looking for a new home.

We'll gather at 5:30 at the Rose Harms American Legion Post 355, located at 1530 13th Avenue in Grafton (see the notice in this newsletter). There will be an open bar and the family style dinner is slated for 6:30. The cost is just \$20 per person.

Send your checks as soon as possible (we quickly need a head count for the caterer) to Nels Harvey, WA9JOB, 2104 West County Line Road, Mequon, Wisconsin 53092.

I hope everyone can make it. Who knows, you may be receiving an award!

73!

Bill Howe, KA9WRL
whowe@wi.rr.com
262.377.8591

The ORC officers elected for 2009 are (from the left) Tom Nawrot (AA9XK, First VP),



Chuck Curran (WA9POU, Secretary), Bill Howe (KA9WRL, President), John Schrader (W9NRG, Repeater VP), Nels Harvey (WA9JOB, Treasurer) and Doug Burghardt (N9KG, Second VP). Not shown is Mike Yuhas (AB9ON, Past President).

Contesting: The Wisconsin QSO Party

De Bob Truscott (W9LO)

The ORC Post Everything Party is March 14. It's always a great party and I hope to see many of you there, but the REAL party that ORC contesters have been waiting for starts about 12 hours later. It's the Wisconsin QSO Party on March 15 from 1:00 PM to 8:00 PM (CDST). ORC won the club competition decisively in 2007, but missed first place just as decisively in 08. The reason? Not enough logs. We only submitted 14 logs last year, while the winner had 27. So what's to do about that? To start with, we're expecting a maximum effort from the "usual suspects", the folks who begin operating when the starting bell rings and stick with it for the full 8 hours. But that's not enough. What we'd like to do is move more people closer to that category. If you worked 2 hours last year, try for 3 or 4 this year, etc., etc. And if you didn't operate at all last year, try it for a few hours this year. You don't have to be an experienced or skilled operator to do it. If we get enough people involved we just might recapture the plaque.

Having said these things, let me tell you of a plan we have been kicking around for a while which would heavily involve the V/UHF club members. I don't believe it's been tried before and it would be a big challenge to make it work, but if it does it would be very productive. It would require a minimum of 13 V/U operators who would like to become part of a group activity on party day. More than 13 ops would be a bonus. And you don't have to have V/U experience either. All you need is an HT. If you don't have one, borrow one. Let's get together for a short meeting to discuss it immediately following the ORC club meeting on Feb. 11 (at the meeting place, NOT at the bar around the corner).

Bob, W9LO

VHF & UHF

De Todd Sprinkmann (KC9BQA)

It really was a historic January ARRL VHF Sweepstakes in Southern WI, two weekends ago. ORC played a strong part in a larger turnout of several dozen new VHF contesters.

I personally heard ORC members KB9UKE, K9QLP, N9KG, KC9NZR, W9IPR, W9GA, KC9NHD, N9JIY, KA9EAK and KM4G. I probably have missed a few, and if so, I apologize.

There were similarly strong turnouts of new stations in the Sheboygan and Milwaukee areas, and the SW WI and La Crosse/Winona MN areas had at least two dozen new calls banging away. If you are unfamiliar with VHF contesting, to have this many new ops on at one time from one area is an amazing accomplishment. Congrats to all who came out and played.

Not only did the new contesters give it a try, some were downright enthusiastic. I heard plenty of new guys still CQ'ing on Sunday, right up 'til the closing bell. Also received many favorable comments via email and on the nets afterward, talking about how they really enjoyed the challenge and look forward to improving in future contests. The turnout surpassed my wildest hopes. Thanks again.

There is another VHF/UHF contesting opportunity next Sunday, Feb. 8th. This is strictly an FM contest, and it's a sprint format, so you need to read the rules. Here's the link to the MRAC FM Simplex contest:

http://www.w9rh.org/fm_simplex_contest.htm

Note that it kicks off right away from 1-2pm with 2 meter (only) activity. So you want to be on board at 1pm. I look forward to working a number of you again in the MRAC FM contest.

We continue to have weekly nets on 2 meters. These nets are personally hosted by me, and are for anyone interested in activity on either 2 meter SSB or FM simplex. They are very casual, stay as long or as little as you like. At 8:30pm on WED, we're on 144.250, USB mode. Horizontal polarization is the norm, but if you hear us on your vertical, feel free to check in and say hello. At 8:30pm on Thursday, we're on 146.43 FM, vertical polarization.

Finally, some of you may be wanting to get more involved in VHF/UHF. There is only one club in Wisconsin that caters to this niche, and it's the Badger Contesters. W9GA, N9UUR, N9VSV, W9XT, N9FH, W9KHH and myself all are BC'ers, and we're looking for new members. The website is at www.badgercontesters.org. Once there, be sure to click on the link at the bottom middle. This represents the 175-mile radius that is BC territory. We have members from all across this region, and we pool our talents and energy in the VHF/UHF contests.

The BC'ers is a low-key, low-stress group and there are no dues. If you'd like to join, please email Dave at k9dq@hotmail.com.

If you played in this month's contest, and you'd like your log to be submitted for credit to "Badger Contesters", we'd love to have you. I will personally help anyone who has questions about how to do this. It's something I enjoy, so it's no bother at all.

Hope to hear you on the nets, until next month, 73, Todd KC9BQA

For Sale (ORC Scholarship Fund)

KENWOOD TH-K2AT 2meter handi \$100
ICOM IC-2AT 2meter handi \$50
Antenna Tower (pictures available) \$80
Contact Ed Rate etrade@milwpc.com

New Members

Mark Fielkow (KB9PXE) is one of our newer members and holds an Extra class FCC license. Mark is a lifelong Milwaukee resident and graduated from his neighborhood Washington High School. While Mark was first licensed in 2003 he became originally interested through CB in the 70's. His "Elmer" has been Todd Fast (N9DRY) who then encouraged Mark to get his General in 2006 and his Extra the following year in 2007.



Mark Fielkow, KB9PXE

Currently you will find Mark on UHF/VHF using his FT8100 dual bander or either his VX-1 or FT-51 HT. His goal is to get on HF with an FT897D and an attic antenna. He already has the LM400 coax installed.

If you are a VW beetle fan Mark is a great source of mechanical information. He worked a day job as a VW engine mechanic for 15 years while he developed his sideline business as a locksmith.

Eventually Mark's locksmith business grew to the point where he had to give up his day job and take the plunge into the world of the self employed. Currently Mark specializes security systems, high security locks and as a special interest, antique locks which often requires that he fabricate new parts.

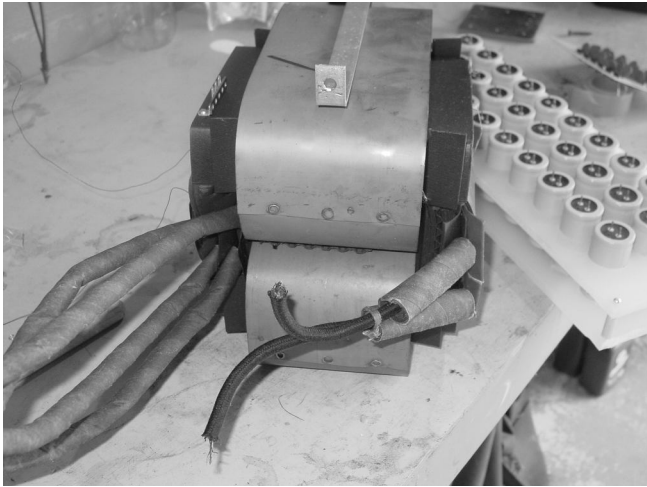
Mark, welcome to the Ozaukee Radio Club.

A Grounded Grid Linear Amplifier Project

De Chuck Curran (WA9POU)

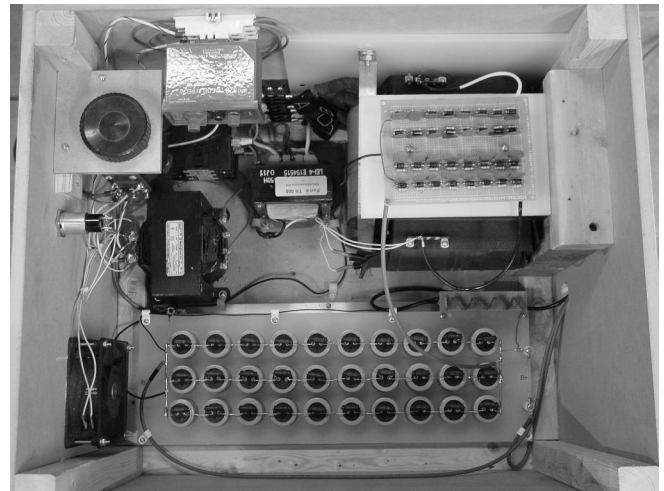
Way back in 1969 I received 3 new 3-400Z and 3 new 4-400A Eimac tubes. I was in an Engineering Fraternity and a graduate from the fraternity went to work for Eimac, sending these samples to our fraternity house. When they arrived, I was the only Ham living at the fraternity and no one had any interest except me. The 3-400Z's were carted around with me since 1969, and in late 2006 I started a series of purchases to obtain the needed parts to complete this linear.

I created a set of goals or project milestones, and used that list as my guide. First on the construction list was the plate voltage power supply.



The “power pole” (an electric utility transformer) transformer shown removed from its original case and with the group of filter capacitors.

I had a 5 Kw pole transformer, still in the case and submerged in transformer oil, PCB free. This transformer was originally used on a 14,400 VAC distribution line, the most common in residential areas. It actually had two 7,200 VAC windings on its primary and two 120 VAC windings on the secondary. I started unwinding the 7,200 VAC primaries, layer by layer, until each 7,200 VAC winding produced 1950 VAC. They were then paralleled and I had a transformer that I would not hesitate to pull 1 amp at 3,000 VDC if needed. Ah, the tubes would go up in smoke at about 2200 watts input, so this test has never been performed! I use a full wave bridge rectifier, using eight 1N5408, 1000PIV @ 3 amp diodes in each of the four legs of the bridge.

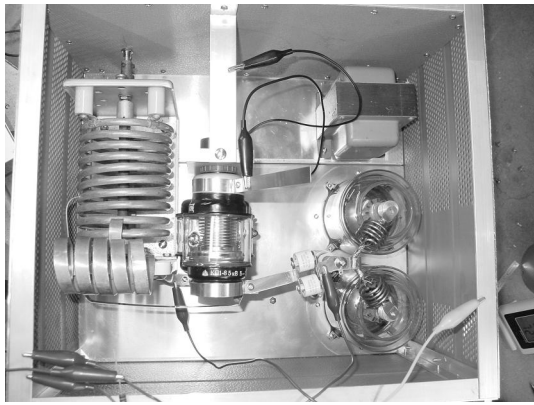


This is a top view of the power supply section constructed in a separate “base” box for the amplifier.

The plate supply was constructed with a 168 mfd electrolytic filter. It uses a series resistor in the transformer 240VAC primary to allow the voltage to build up slowly over about 5 seconds. Then a timing relay picks and the resistor is out of the circuit. I also installed a boost/buck transformer in the primary circuit, driven by an autotransformer. This allows a plate voltage range of 2600-3300 VDC. I run it at 2900 VDC.



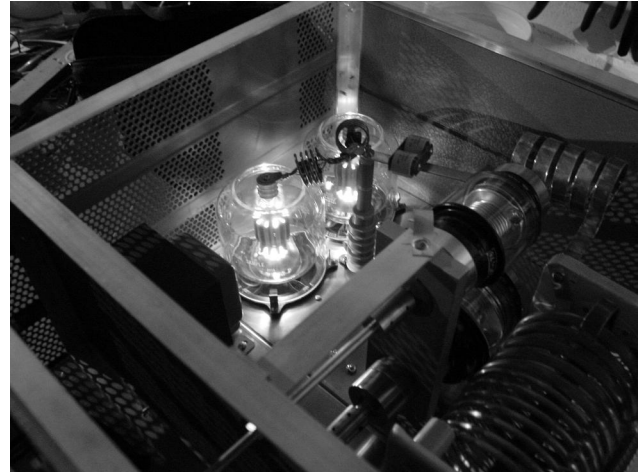
Shown is the basic amplifier panel and case prior to fabrication of the circuitry.



Shown here is the RF “cage” with its pair of 3-400Z tubes, filament transformer, vacuum variable capacitor and coil.

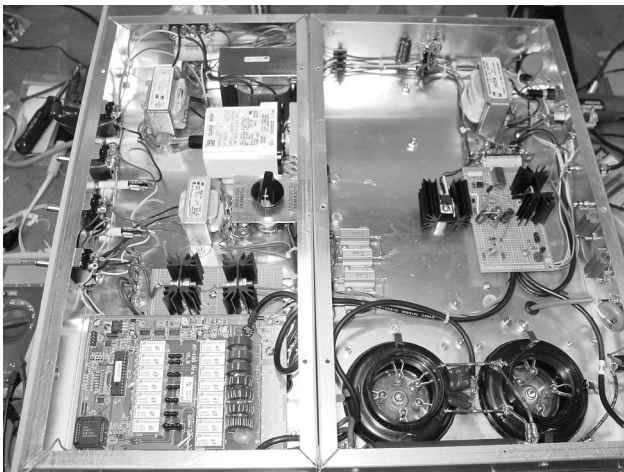
The RF deck uses a tuned input, with a LDG Electronics AT-100AMP input tuner. It provides a 1:1 SWR on the input, so I have no drive problems. The filament voltage circuit is built with an adjustable output, so I can provide exactly 5.0 VAC to the filaments of the two 3-400Z tubes used. Many commercial amps have been found with way out of spec filament voltage for the 3-400Z or the newer 3-500Z tubes. The result is a dramatic reduction in tube life. The Drake L-4B is the classic with a 5.7 VAC filament voltage. I felt this was an important item, so I made sure to provide an adjustment feature.

my specific plate load impedance. I use Jennings vacuum relays for antenna switching and an older National R-175A plate choke, bought new in the box. I also built an ALC circuit and have it ready to connect with one cable to the transceiver, but to date I simply have not gotten to it.



Awww! The warm glow of filaments on a cold winter night. A beautiful sight to behold.

Upon firing it up, I had some trouble with the available capacitance on the load capacitor for good efficiency. I had to add a door knob capacitor in the 80 meter band, but I eventually got to 63% efficiency in SSB, which is right on the money. I do have a switchable bias using zener diodes, one for SSB with 7 volts running AB₂, and a second in series for Class C in CW with a total of 27 volts bias.



The chassis underside showing a truly professional job of layout, mounting and wiring.

The output side of the amp uses Russian vacuum variables for the tune and load caps, with a B&W 850 series tank coil with taps tweaked for



I can drive the amp to 1300-1400 watts output, and the plate transformer never even gets warm.

A Letter From The ARRL ***ARRL The national association for AMATEUR RADIO***

January 22, 2009

OZAUKEE RADIO CLUB, INC.
2104 W County Line Rd

Mequon, WI 53092-5616

Dear Friends,

On behalf of ARRL thank you so much for your generous contribution of \$75.00 received on 01/15/2009 to the 2009 Spectrum Defense Fund. Your contribution makes an important statement about your commitment to protecting our valuable radio frequencies.

As you know, defending and enhancing amateurs' access to the radio spectrum is the most important mission of the ARRL. As contributor to the Fund for the Defense of Amateur Radio Frequencies you are a key player on our spectrum defense team.

Together we have enjoyed many successes over the years. Despite exponential growth in the variety and number of radio frequency devices in the hands of consumers and businesses, we have managed to protect our bands and to add several new ones.

Our battle to give the Broadband of Power Lines problem the attention it deserves has been going on for six years. Last year the ARRL went to court to challenge the FCC. Guess what — we won!

The Court's decision was a tremendous victory for radio amateurs and other licensed users of the radio spectrum. Yet, we face another round of technical arguments. When the FCC reopens the BPL proceeding as the Court has ordered, we must leave no room for these technical issues to be settled on anything other than technical grounds. There's more work to do!

It is only through the support of thousands of ARRL members and friends that we have managed to come this far. Together we can celebrate all that we have accomplished on the BPL front!

The future will certainly hold challenges for Amateur Radio. As we remain vigilant and lay plans to work on your behalf to protect our frequencies both at home and abroad, I am grate-

ful that you stepped up and made a contribution to the Spectrum Defense Fund.

73, Mary M. Hobart, KIMMH, Chief Development Officer

Peace Corps Station

de Tom Nawrot - AA9XK

As many of you know, I was a Peace Corps Volunteer in the early 1970s in South America. This year marks the 48th anniversary of JFK's grand experiment. Every year in March, an ex-volunteer in Illinois runs a special event Peace Corps anniversary station. This year I'll be operating from my Wisconsin QTH as time permits on one of the bands. Give one of us a call. Here are the details:

Mar 1-Mar 4, 1600Z-2100Z, Arlington Heights, IL. Peace Corps Amateur Radio Club, KA9NLX. To honor Peace Corps volunteers, their service and sacrifice. 21.375 14.290 10.133 7.275. Certificate. John Paskevicz, 1423 North Ridge Ave, Arlington Heights, IL 60004. Dig MT63 on 10.133.65 and 2 m simplex in the Chicago area. jpaskev@aol.com

For Sale

Wavetek Model 2100 Communications Service Monitor, 400 KHz to 999.9999 MHz (Useable range from 100 KHz). New Battery installed, internal load, accessory kit, two carrying cases. I purchased this new in 1997. It has not seen any abuse and has not been used for over 5 years. I paid over \$4000.00 for it, and will consider any and all offers. It is still in like new condition. Pictures are available. Contact Dan Bolander, wb9tyt at cybrzn.com.

Upcoming Events

February

7th – 8th TEN TEN Intl. Phone QSO Party

8th North American Sprint – SSB Contest

9th School Club Roundup

11th **Membership Meeting**

14th FISTS CW Winter Sprint

14th – 15th CQ World Wide RTTY WPX Contest

15th North American Sprint – CW Contest

21th – 22nd ARRL International CW DX Contest

21st – 22nd CQ 160 Mtr. SSB Contest

- 26th OZARES
- 28rd North American QSO Party – RTTY

March

- 7th – 8th ARRL International Phone DX Contest
- 11th **Membership Meeting**
- 14th **Post Everything Party**
- 15th Hamfest – Jefferson, WI
- 15 – 16 **Wisconsin QSO Party**
- 26th OZARES
- 28th – 29th CQ World Wide DX SSB Contest

April

- 3rd – 4th **AES Superfest**
- 8th **Membership Meeting**
- 18th Madison Swapfest @ Stoughton
- 23rd OZARES

The  Column

By Stan Kaplan (WB9RQR), Column Editor

At the meeting of 22 Jan, our new EC, Mike (AB9ON) talked about his plans concerning the future direction of OZARES. He talked about new AEC appointments or renewal of old ones and training activities including Thursday nets, and the possibility of adding Winlink to the ECC and MCT. A future meeting night will be devoted to Winlink, including how it works and what it might do for OZARES capabilities. Ways of increasing membership was also mentioned. Following that, a discussion was held on frequency assignments to channels, and Mike and Skip will soon come up with a final scheme. When that is done, all of us will need to check our HTs and home and mobile rigs to ensure that they are properly programmed.

Gary Payne (N9VE), our new Section Emergency Coordinator, talked about training in Wisconsin on the ARES/RACES HF net of 25 Jan (8:00 a.m. each Sunday, should you wish to monitor or check in). He likened training to growth, and reflected that a person or organization must grow. If growth does not occur, stagnation sets in and that is a scenario leading to death. He urged all leadership positions in the state to be sure that they included a training

component in every activity, so that constant learning, growth and health will continue.

NET CONTROL SCHEDULE: OZARES nets are held each Thursday at 8:00 p.m., except on meeting nights (4th Thursdays). Both a net script and check-in list can be obtained on the OZARES web site, www.ozares.org. If you are scheduled for NCO duty and cannot make it, it is your responsibility to find a substitute. Check the complete schedule on the web site for possible hams to trade dates with, and keep the net manager (WB9RQR) informed of confirmed trades. Guests are welcome after the OZARES check-ins are complete, *most especially ORC members!* By the way, if you see a difference between the schedule on the website and this column, this column will always be correct, since it reflects last minute changes and substitutions. Such changes and substitutions to the website version will be in bold print here if known at the time of printing.

- 05 Feb KC9FZK
- 12 Feb W9KHH
- 19 Feb WJ9O
- 26 Feb **Meeting**
- 05 Mar AB9ON
- 12 Mar N9PBY
- 19 Mar KB9RHZ
- 26 Mar **Meeting**
- 02 Apr KA9PZG
- 09 Apr W9IPR
- 15 Apr **Annual Severe WX Meeting**
- 16 Apr WI9GC
- 23 Apr **Meeting**
- 30 Apr K9GCF

Minutes– Jan. 14th, 2008

de Tim Boppre, KA9EAK

First Vice-President Bill Howe, KA9WRL, called the meeting to order at 7:33 PM. President Mike Yuhas, AB9ON was out sick. Attendees introduced themselves and responded to Bill's question of why they joined the ORC. Answers were typically in the area of meeting others with similar interests in order to learn and advance the hobby.

Announcements and bragging rights

Tom, W9IPR announced that he has his "new" Hallicrafters SX-28 working again. He re-capped the entire rig.

Nels, WA9JOB announced that Larry, WA9JMO had given him information on a QCWA cruise next fall. Those interested should contact Nels or Larry.

Jim, K9QLP announced that Ted, N9LLT has an ADI 220 handheld for sale. Those interested should contact Ted.

Tom, W9IPR showed his junk box ammeter project that was featured in the recent newsletter.

Program:

There wasn't any program in order to save the time for the 2009 elections.

Fellowship break:

Dave, N9UNR ran the 50/50.

Auction:

Stan, WB9RQR, assisted by Jon, KB9RHZ and Ed, AA9W held the auction.

Acceptance of minutes

A motion was made by Stan, WB9RQR to approve the minutes of the last meeting. The motion was seconded by Terry, KA9RFM. The motion was carried.

Treasurer's report

Nels, WA9JOB, gave the treasurer's report. Nels thanked Tom, W9IPR and Ed, AA9W for taking a bunch of equipment to the Hamfest in Waukesha. They sold \$800 worth of equipment for the club. A motion was made by Dave, N9UNR to accept the treasurer's report as read (subject to audit.) Jim, K9QLP seconded the motion. The motion was carried.

Committee Reports

Repeater report

John, W9NRG got called out to a fire.

Tom, AA9XK announced that the PEP date is 14 March. It will be held at Rose-Harms Legion hall in Grafton. Cocktails are at 5:30pm and dinner is at 6:30pm.

Tom, W9IPR announced that we have obtained ARRL approval for the May and September swapfests. Fliers are at AES and were distributed at the most recent swapfest in Waukesha. He also announced that articles for the Febru-

ary and March newsletters should be sent to Stan, WB9RQR.

Bill, KA9WRL made a suggestion to add email addresses to the published roster. Dave, N9UNR will send out a message to the club regarding inclusion of a members email address. If you wish to have your email address included simply respond in the affirmative to Dave's inquiry.

Old Business: None

New Business

The slate of candidates for 2009 were are follows: Bill Howe, KA9WRL – President, Tom Nawrot, AA9XK – 1st Vice-President, Doug Burghardt, N9KG – 2nd Vice-President, John Schrader, W9NRG – Repeater Vice-President, Nels Harvey, WA9JOB – Treasurer, Charles Curran, WA9POU – Secretary.

Dave, N9UNR made a motion to cast a unanimous vote for the entire slate. Stan, WB9RQR seconded the motion and the motion carried.

Stan, WB9RQR passed out the ballots for the Ham and Turkey awards that will be announced at the upcoming PEP party.

Ken, W9GA announced that Todd, KC9BQA was offering an award in the upcoming ARRL VHF contest and encouraged ORC participation.

Bill, KA9WRL announced that the program for the February meeting will be Larry, WA9JMO speaking about QCWA and that the March program will be Dr. George Steber speaking on spectral analysis.

Attendance: 27 attendees - 26 members, and one guest.

Stan WB9RQR, Ed AA9W, Kent N9WH, Nels WA9JOB, Tom W9IPR, Mark AB9CD, Jim K9QLP, Tim KA9EAK, Bill KA9WRL, Ken W9GA, Nancy KC9FZK, Patrick KC9LRK, Gary W9XT, Ray W9KHH, Chuck WA9POU, Dave N9UNR, Todd N9DRY, Mark KB9PXE, Terry KA9RFM, Doug N9KG, Tom W9VBQ, Dominic W9KKX, Jon KB9RHZ, John W9NRG, John W9FAD, Julia KB9WBQ, Ron W9BCK,

Kent, N9WH made a motion to adjourn. Stan, WB9RQR, seconded the motion. The meeting adjourned at 8:55 pm.

Post Everything Party

March 14, 2009

**American Legion Hall in
Grafton, WI
(Rose Harms Legion Post 355)
1540 13th Avenue Ave**

**Cocktails 5:30
Dinner 7:00**

*complete buffet dinner
recognition for spouses
presentation of annual awards*

\$20.00 per person

Don't forget to bring your usual gag gift
Of ham radio or computer "junque"

and a nice, but not expensive, gift for the ladies exchange too !

!!!!!! Reservations required by March 7th !!!!!

2009 ORC Post Everything Party Reservation Form

Callsign _____ Number attending ____ X \$20.00 = _____

Names of those attending _____

Make check out to **ORC** and send to:

**Nels Harvey - Treasurer
2104 W County Line Rd. Road
Mequon, WI 53092**

AGENDA

February 11, 2009

1. Call to order – Bill Howe (KA9WRL)
2. Introductions.
3. Announcements, Bragging Rights, Show & Tell, Upcoming events, Etc.,
4. Program:
5. Fellowship Break
6. Auction.
7. Voting – Ham of 2008
Honorable Turkey of 2008
8. Acceptance of Minutes as printed.
9. Treasurer's report – Nels (WA0JOB).
10. Repeater report – John (W9NRG)
11. Committee reports.
Post Everything Party –
Spring Swapfest -
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 7th Avenue, Grafton

Wednesday, Feb. 11th

7:30 PM