



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.



AMATEUR RADIO

ORC Repeaters on 146.97, 224.18 and 443.750 MHz -
Callsign W9CQO Web site: www.ozaukeeradioclub.org

Volume XXIV

January 2005

Number 1

The Prez Sez

By Vic Shier (KB9UKE)

This is my last entry for the Prez Sez column; the club will have a new president next month. I must also use this as my opportunity to bid farewell because I will not be at the January meeting, our annual meeting. My business requires me to be out of town.

I want to thank the ORC for trusting in me to serve as an officer of the club for these last 3 years, first as Vice President and then as President. I have learned much about ham radio, club history, and teamwork. It has been a good experience for me and I hope it has also been a good experience for the club. Of course, as past president, I will still be a member of the board and I'll be attending most of the meetings, but I'll be sitting at a different table.

Now it is time to move on. There will be some new leadership starting out this year, which is an important ingredient for any organization to stay fresh and healthy.

This club is successful because of all those who contribute to the organization; your efforts are greatly appreciated. I want to thank those who took the time to listen when I needed some advice and especially to each of you who from time to time would say, "Hey Vic, just remember...It's a hobby!"

73's
Vic
KB9UKE

Jan 13th Elections

The nominating committee of President Vic Shier (KB9UKE) and Stan Kaplan (WB9RQR) have announced the nomination of the following members as officers for the 2005 year.

President - Tom Ruhlmann, W9IPR
Vice President - Leon Rediske, K9GCF
Repeater Vice President - Nels Harvey,
WA9JOB
Treasurer - Tom Nawrot, AA9XK
Secretary - Nancy Stecker, KC9FZK

Nominations from the floor will be accepted for each office just prior to that election.

Stan will be conducting the elections and remember that you need to be a paid up "Regular" member to vote. Tom Nawrot will be accepting payment for 2005 dues prior to the meeting.

During the elections, while the ballots are being counted, we will be having a "show and tell" so bring your latest project or "find" and share it with the group.

Contesting

De Bob Truscott (W9LO)

Most contests are fun. But not the recent 10-Meter Contest. At least from my point of view. I can't ever remember worse conditions on that band during a contest. I could hear DX stations giving out QSO numbers well above 1000, but could not work them. My vertical antenna probably had something to do with that, but it worked like a charm other years. Guess the

sunspot cycle bit us real good that weekend. My computer says I worked 3:06 hours, but it seemed more like 20-30. Time passes much faster when other stations talk to you. On the plus side of contesting for the month, I thought the conditions for the 160-meter contest were outstanding.

Reported Scores:

ARRL 160 Meter Contest

W9LO 210 Qs 54 Sections
W9XT 167 Qs 50 Sections

ARRL 10 Meter Contest

W9XT CW 523 Qs 51 Sec. 24 DX
SSB 409 Qs 42 Sec. 25 DX
W9LO CW 91 Qs 23 Sec.

Stew Perry Distance Challenge (160 M)

W9XT 322 Qs 1738 pts.

Coming Up In Jan.

- Jan. 8-9 ARRL RTTY Roundup—Rules in QST, Dec., 2004, page 105
- Jan. 8-9 North American QSO Party—CW-- Rules in QST, Jan 2004, page 102
- Jan. 15-16 North American QSO Party—SSB Rules in QST, Jan 2004, page 102
- Jan. 2-24 ARRL January VHF Sweepstakes— Rules in QST, Dec, 2004, page 104
- Jan. 29-30 CQ WW 160 Meter Contest—Rules in QST, Jan, 2004, page 102

Scholarships

The Foundation For Amateur Radio, Inc., a non-profit organization with headquarters in Washington, DC, plans to administer fifty-five (55) scholarships (including the ORC's) for the academic year 2005-2006 to assist licensed Radio Amateurs. The Foundation, composed of over seventy-five local area Amateur Radio Clubs, fully funds three of these scholarships. Ten are funded with the income from grants. The remaining forty-two (42) are administered by the Foundation without cost to the various donors.

Licensed Radio Amateurs may compete for these awards if they plan to pursue full-time course of studies beyond high school and are enrolled in or have been accepted for enrollment at an accredited university, college or technical school. The awards range from \$500 to \$2500 with preference given in some cases to residents of specified geographical areas or the pursuit of certain study programs. Clubs, especially those in Delaware, Florida, Maryland, Ohio, Pennsylvania, Texas, Virginia and Wisconsin, are encouraged to announce these opportunities at their meetings, in their club newsletters, during training classes, on their nets and on their world wide web home pages.

Additional information and an application form may be requested by letter or QSL card, post-marked prior to April 30, 2005 from:

FAR Scholarships
PO Box 831
Riverdale, MD 20738

Copies of this information can be obtained at aa3of@arrl.net.

Receive Antennas for the Low Bands

De Gary Sutcliffe, W9XT

Receiving on the low bands (40, 80, and 160M) is much more difficult than it is on the higher HF bands. Directive antennas such as Yagis are difficult to impossible on these bands. Static is much more of an issue on these bands. On top of all that, the transmit antennas on the other end are usually less effective resulting in lower signal strengths.

Because of these difficulties a number of receive only antennas have been devised. The most famous is the Beverage antenna. This antenna is simple a long horizontal wire about 5'-10' off the ground. Ideally these are very long, 850' or so is a good length. An impedance transformer is usually used to transform the 600 or so impedance to the 50 ohm feed line. The

far end is usually terminated to result in a highly directive antenna in the direction towards the far end.

I'm fortunate to have a lot of land. Even so, the best I can do towards Europe and Japan are 350' Beverage antennas. These work quite well but are much shorter than they should be on 80M, and especially 160M. I have been looking for an antenna that would help in other directions. A few years ago, Gary Breed, K9AY, published an article in QST on some receive loops he had been working with. ARRL members can download the complete article by going to the ARRL web site.

The K9AY loop is roughly diamond shaped. The peak is about 25' high and the end points are about 15' each side of center. One end of the loop goes to ground through a terminating resistor. The other is fed through an impedance matching transformer. Directivity is in the direction of the feed end. By using two loops at right angles, and using a switch box to change which loop is selected and which ends are used as the feed point and termination, you can get an antenna that can be instantly switched to 4 different directions.



The loop size is a compromise between fitting in a reasonable space and good signal reception. A single support 25' tall does the job holding the loops up. The wires fit in a 30' diameter circle.

The pole should be non-metallic. I made mine from PVC pipe with sections of 2X2 reinforcing the joints. It is a bit floppy, but the wires act as guys to hold it in place. It has weathered some

pretty high winds in the last few months without any apparent trouble. Other hams with tall trees have hung their loops from a branch.

The switching circuitry at the base is in aluminum die cast box. Inside are a couple of DPDT relays to do the switching. I wound a 9:1 toroid transformer to couple the loop to the feed line. For that, I used RG-6. This is 75-ohm TV line. It is very inexpensive, have very low loss and the slight mis-match between the feed and receiver is not a problem.



I have been quite happy with the K9AY array. On 40 meters my 2 element Yagi has been better on receive than the K9AY array except in a couple of cases. I would expect that to be the case since the Yagi has gain.

On 80 and 160 the Beverage to Europe works better than the K9AY array unless it is snowing, and snow static is bad on the Beverage. In other directions the K9AY array is almost always better than my transmit antennas, which are a shunt fed tower for 80M, and a dipole for 160M. The signal strength is often down from the transmit antenna, but the noise is down even more, and S/N (signal/noise) is the important thing.

Part of the reason for putting this antenna up was because I decided to participate in this season's award program run by the Low Band Monitor, a monthly newsletter dedicated to DXing on the low bands. The awards start new each season on September 1 and run until the end of March. Each band has its own award. I

finished the 160 meter award (worked all continents) in November and the 40 meter award (150 countries) in December. As of January 1, I have 76 of the 100 countries required on 80 meters. I credit a lot of this success to the K9AY array.

There are a couple of things I am thinking about doing to improve my array. One is to add a pre-amp. The other is a remote controlled variable termination. The optimum terminating resistance varies with the band. Also, the termination will affect the take off angle. By varying the termination I should be able to optimize the antenna for the signal I am interested in. My current thinking is to make something called a vactrol which is essentially a photo cell with an LED. By varying the current through the LED, the amount of light on the photocell will change, affecting its resistance.

The low bands are improving as we move down in the sunspot cycle. If you are interested in the challenge of working DX on these bands the next few years are the time to give it a try. Hearing is just about everything down there, and if you don't have the space for big receive antennas, the K9AY array is a great way to go.

For Sale, Trade or ?

Leon (K9GCF) has two copies of the 16th volume of the "Hints & Kinks" book and would like to trade for any volume of 1 through 10 or an antenna manual.

Upcoming Events

January 13th - Meeting

February 26th – Post Everything Party

April 16th – NS9RC Swapfest at Grayslake fairgrounds

May 7th – ORC Swapfest at Circle B

July 9th – South Milwaukee Swapfest

Meeting January 13th

Election of officers and "show & tell".

Bring one of your more unique projects or "finds" and share it with the group during the counting of ballots. Should be fun and educational.

Post Everything Party

It's a great time – good food and good friends. Like last year, it will be at the American Legion Clubhouse in Cedarburg. Folks start to arrive at 6:00 PM for beverages and appetizers. A nice buffet is set out about 7:00. Plan on being there! You new members should talk to one of the old timers for details and take advantage of the opportunity to clean out the shack. See the sign up flyer at the back of this newsletter for reservation details. The co-chairmen again this year are Tom and Julia Nawrot.

Club Static

Whose wife had a baby? Kevin Steers (K9VIN) and his wife Colleen gave birth to a little girl, Erin, on November 7th and she weighed in at 9 lb.'s 4 oz. – all are doing well and we expect to see Kevin back at our meetings soon.

Guess who I talked to on the "Geritol" net a couple of weeks ago – Ernie Swanson, K9LO. He is doing very well and enjoys his new employer and job keeping commercial radio stations on the air. He indicated we would see him at Dayton so that is another reason to go. He can be reached at 1009 Goldrock Road, Rocky Mount, NC 27804-9626 or on the Geritol net.

How Low Can You Go?

De Gary Sutcliffe, W9XT

A number of ORC members are quite active in QRP (low power operating). QRP is usually defined as less than 5 watts and can be an interesting challenge and is increasing in popularity. I myself have worked stations in the Indian Ocean while running 5 Watts and worked Europe numerous times while running only 2 watts. I have worked stations in Japan and Europe who themselves were running less than

a watt. Under the proper conditions it is amazing what just a little power can do.

Just how low can you go and still be heard? John Ceccherelli, N2XE, has been running some interesting experiments on 40 and 80 meters the last few weeks. John sets up his QRP rig as a beacon on either 40 (7235.5 kHz) or 80 (3545.5 kHz) meters and has been asking for reports. He has been posting his schedule and the results of stations that copied him the night before on the QRP Internet mailing list.

John picks a band and how much power he is running and puts it out on the reflector. His beacon runs from sunset to sunrise and gives his call, his power level and a "code word". The code word has usually been some city. When you email your report you have to tell him what the code word was to prove you actually copied the beacon.

So, how much power has his beacon been running? Sometimes he runs a big signal, 100mw (1/10 of a watt). When he does, quite a number of stations have been able to hear the beacon. Sometimes he runs quite a bit less with fewer stations making the grade. The lowest power I have been able to copy was 0.020 Watts. At a distance of about 470 miles to the transmitter in New Jersey, that comes out to something like 23,500 miles per watt! Other stations have done much better.

I am listening for him as I write this (1/2/05). The beacon is on 80 meters and running 0.00004 watts (40 microwatts). I'm not holding my breath on this one, but you never know!

Special Events Station

De Leon Rediske, K9GCF

Folks making contact with the special event station celebrating Thomas Alva Edison's birthday will receive a nice picture postcard & a beautiful certificate suitable for framing. One needs to send a self addressed stamped envelope, & the QSO number, or if he/she doesn't want the certificate folded, then an 81/2 by 11 envelope.

K9GCF will probably be operating W4LX on 14 Feb. Look for us on 14 or 21 MHz. Seldom do we switch to 28 MHz. We use a 100-Watt rig to a 3-element beam on a tower trailer. That's where I got the idea of the tower trailer. The rig is set up on the grounds of the Ford mansion, a neighbor of Edison. Tours including both the Edison & Ford homes are conducted about every 10 minutes, so we get to see a lot of folks from around the nation.

Fort Myers, FL: Fort Myers Amateur Radio Club, Inc., W4LX. 1500Z **Feb 14**-2100Z **Feb 18**. The Edison Festival of Light and Thomas Edison's birthday. 28.430 21.330 14.250. Certificate. Ft Myers Amateur Radio Club, PO Box 61183, Ft Myers, FL 33906. <http://fmarc.net>.

Minutes – Dec. 8th, 2004

De Carol Szudrowitz, KC9CBC

Announcements – Elmering is important to encourage hams to continue growing their interest in ham radios and their uses/fun. Jim K9QLP commented on how important it is to encourage hams. At the Christmas Parade, 3 hams, who had not been on the air for years were encouraged to do it. They enjoyed the opportunity to be back during the parade.

Herb KC9GJB was introduced as a new member

Chris N9VKC announced he is moving to Sydney, Australia. He made a point of telling how special the ORC is. Walter WA9KFR led him to our club and he enjoyed it tremendously because of the congeniality he found and no bickering. All within the club welcomed him. All seem to enjoy radio as a hobby and promote that aspect. That makes our club special and he encouraged us to keep it that way, also to visit him if we go to Australia.

Program – Jim KA4UPW presented the official results of the Field Day 2004. We were third in 2003 and now second in 2004. Only a club in Huntsville, Alabama beat us. We were number one in improvement with 116% improvement over last year. Jim gave kudos to everyone involved including setups, power supply, operators, publicity, cooks and tear downs. It took everyone's efforts to create such good results. Jim and crew are already tweaking things to see where to improve for next year. Vic KB9UKE said there is a tower available near 80th and Good Hope Rd. that needs to come down. Plans

were made to do that when the weather is cooperative.

Auction – by Chris N9VKC

Business Meeting

Minutes – Approved as printed in the newsletter.

Treasurer's Report – Approved by Nels WA9JOB and seconded by Ed AA9W as presented by Tom AA9XK.

Repeater Report – Nels WA9JOB reported that the work party completed the preliminary installation of antennas and cabling at the Grafton Fire House. Some electrical work is needed but it is ready if the barn is sold. Everything will remain the same until that happens. Then KK&LL will no longer be the receive site. It will be the transmit site and there will be no autopatch after the move. Everything is in good order at this time. Gregg W9DHI presented a bill for previous work.

OZARES – The Drake equipment was sold per Ed AA9W and half of proceeds were donated to the Scholarship Fund.

Scholarship Fund – This is doing well even after it donated the \$1000 Scholarship. Available now 1924 radios and some rare 1940 tubes (3 National SW3), 3 power supplies and pre-selectors - donated by Michael WJ9O and another ham. Check with Ed AA9W for exact information.

Audit Committee – Kent N9WH is chairing that and it should be done by early January.

Nominating Committee – Stan WB9RQR is chairing that. Elections are at the January meeting. Dues must be paid up.

Awards Committee – Jim K9QLP and Gregg W9DHI are taking care of that.

New Business

By-Laws Committee – Tom W9IPR is chairing that. Reminder Elmers are needed for 13 new Tech Class hams. Changes for by-laws are published on the web; new suggestions are in red. So far trustee's duties will remain as they are. Policies and procedures – Suggestion was made that duties be described in another area so that they can be changed easier when necessary.

Comment on extended membership – these members have repeater privileges, auto patch, etc., club membership, the right to hold office, but no voting rights. Also check on secretary duties as it reads that

membership dues are submitted to secretary but we give them directly to the treasurer at this time.

Other comments – **P.E.P. Party** – Chaired by Julia KB9WBQ and Tom AA9XK. The date is set as **Saturday, February 26, 2005** at the Cedarburg American Legion Hall, Peter Wollner Post. Cost is **\$20.00 per person** with the catering done by Klug's Creekside Inn. **Sign up ASAP.**

Meeting Adjourned by Leon K9GCF and seconded by Jim KA4UPW.

Attendance – Vic KB9UKE, Jim KA4UPW, Gary WI9M, Ed AA9W, Jeff KB9QQE, Dave N9UNR, Kent N9WH, Peter KB9URH, Nels WA9JOB, Bernie AA9CI, Gene KB9VJP, Joe AA9HR, Jim K9QLP, Paul KA9RPR, Gary W9XT, Mike KC9GDV, Chris N9VKC, Ed AA9WW, Paul KD9FM, Tom AA9XK, Ray W9KHH, Terry KA9RFM, Roger W9UVV, Mark AB9CD, Bob N9NRK, Julia KB9WBQ, Carol KC9CBC, Tom W9IPR, Paul, KB9WCC, Don AA9WP, Herb WA9UVK, Jim N9WIU, Joe KB9URC, Leon K9GCF, Naomi KC9GSS, Mark KC9GST, Herb KC9GJB, Phil W9PAH, Ben K9UZ, Gregg W9DHI .

Post Everything Party

February 26, 2005

**American Legion Clubhouse
Peter Wollner Post 228
W57 N481 Hilbert Ave.
Cedarburg**

**Cocktails 6:00
Dinner 7:00**

hors d'oeuvres before complete buffet dinner

recognition for spouses

entertainment after dinner

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 February 18th !!!!!

2004 ORC Post Everything Party Reservation Form

Callsign _____ Number attending ____ X \$20.00 = _____

Names of those attending _____

Make your check out to Ozaukee Radio Club and send to -

Julia Nawrot KB9WBQ 10335 N. Grasslyn Road Mequon, WI 53092

Ozaukee Radio Club, Inc

2005 Membership Application/Renewal Form

Call Sign _____ Year first licensed _____ Age _____

Novice No-Code Tech Tech Plus General Advanced Extra

Name: _____ ARRL Member? Yes No

Address: _____

City: _____ State: _____ Zip: _____

Phone No. (day) _____ (evening) _____ Speed # _____

E-Mail _____ (if you want to be listed on ORC Web page)

Areas of interest:

HF UHF-VHF Construction Projects Antenna Computers Satellites APRS CW
 SSB AM FM Digital Modes Portable Mobil Fixed Fox Hunt Ground
Systems Software QRP Contesting ARES Community Service Collections
 WAS & DXCC Boat Anchors Linears Newsletter "Elmer'ing" Presenting Programs
 Photography Club Magement Community Service Test Equipment Equipment
Repair & Restoration Surfing the net

Full Membership (supports club and repeaters) \$15.00 OR

Club Membership (supports club only) \$7.00

Make check payable to:

Ozaukee Radio Club c/o Tom Nawrot (AA9XK)

10335 North Grasslyn Road, Mequon, WI 53092

The newsletter is available at <http://www.qsl.net/orc/>. (web site version encouraged)

Do you also require a hard copy through the snail mail? Yes No

Spouce's Name: _____ & call sign: _____

Comments: _____

AGENDA

January 13th, 2004

1. Call to order – Vic (KB9UKE)
2. Introductions.
3. Announcements, Upcoming events, Etc.,
4. Election of Officers - “Show & Tell”
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 7th Avenue, Grafton

Wednesday, Jan. 13th

7:30 PM