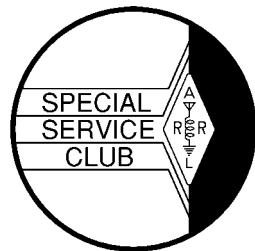




The ORC Newsletter

Official publication of the Ozaukee Radio Club, Inc. Mail all contributions to the editor, Tom Ruhlmann, W9IPR, 465 Beechwood Dr., Cedarburg WI 53012 (phone 262 377-6945). Permission to reprint articles published in any issue is granted provided the author and the Ozaukee Radio Club Newsletter are credited.



**ORC Repeaters on 146.97, 224.18 and 443.750 MHz -
Callsign W9CQO Web site:
<http://www.qsl.net/orc/>**

Volume XXI

January 2002

Number 1

The Prez Sez

By Leon Rediske, K9GCF

As I reflect on the accomplishments of this last year, I have come up with the following: We, as the good old ORC, have made OUR CLUB #1 in Field Day scoring (5A) in Wisconsin. It was a team effort, and all of you who participated should know you helped to make it happen!!

We have added staggering amounts (\$2000) to our scholarship fund, something we put a priority to last year. Thanks again to those that helped get donations, processed the equipment, and helped sell and deliver it so that others may improve their education via our efforts.

We have lost several noteworthy hams this last year: Among them are Jack Mc Leland, W9ATK, an ORC club member and staunch supporter. Jack's key went silent on Jan 2, 2001. Smoke Signals Editor Jim Romelfanger, K9ZZ, became a silent key on Saturday, December 22, 2001. He edited the Badger State Smoke Signals, a ham radio publication, which all hams should subscribe to, especially for the article that ORC's Stan Kaplan, WB9RQR, writes for every issue.

We got a major manufacturer, ICOM, to participate in our Field Day efforts by donating the state-of-the-art radios we used. Also, ICOM participated in our hamfest, adding credibility to our hamfest. Pretty impressive "never before" accomplishments for the ORC, and ICOM! We endeavor to continue this unique relationship for a long time to come. May it benefit both of us.

We have had a wonderful set of programs this year. Thank everyone that participated in each one. We are going to start 2002 with a "bang" of a program on Early Radio/TV. If it is well re-

ceived, this program will be one of a series, and can be "steered" by our questions.

Just a reminder: Elections are coming, January 9th. If there is someone you might like to nominate, be sure your nominee is willing to accept the position, and has the time available to do a great job for our club. As our Club moves forward into another year, we want officers who are willing to take on their positions wholeheartedly, and really wish to contribute to our club. Does your candidate have the "Right-Stuff?"

The VPs Corner

By Jim Albrinck, K9QLP

Many folks were wondering if this year's Grafton Christmas Parade would be a "washout" as the sky opened up on Downtown Grafton the morning of November 24. The hardy souls of the Ozaukee Radio Club were not deterred, however, and showed up in the grand tradition of Amateur Radio to do their part, if and when, the parade happened. At 10:45 the "GO" signal was given and the first units stepped off at 11:10 AM. The following members donated their time to assist the Grafton Chamber of Commerce in making the most out of a wet and uncomfortable situation:

Ed AA9W, Cindy WA9PZG, Gabe WI9GC, Dave N9UNR, Gene KB9VJP, Jim K9QLP, Bernie AA9CI, Rick N9PMR, Nels WA9JOB, Gary WI9M, Jon KB9RHZ, Ed AA9GT, Gary N9SQA Peter KB9URH and Skip KA9DDN.

As a final note, I have had some members wonder why the nominating committee did not nominate me for an office in 2002. The reason is

that due to my involvement with the Cedarburg Fire Department as the Treasurer and the extra meeting time that office requires, I need to cut back on my outside activities. I told Leon that I'll continue to help on the sidelines, but do not have the time to serve as a club officer at this time. In other words, please do not put my name into nomination at the January meeting.

Thanks again for the opportunity to serve as your Vice President during the past year.

Field day 2001

Gary Sharbuno WI9M

Well this year we had a good group, verses only me planning the Ozaukee radio club field day exercise. We had several meetings at Leon's, and all the little, and some big kinks were worked out. The Thursday evening group was well organized, and we got the essential equipment on the site. Thanks much for such a good turnout. Things went up Friday afternoon and evening, and the great culinary delights of Dr. Stan were tremendous. We had two tables of sheep's head players going while the beverages and munches, were flying all over the place. That evening tents and antenna supports were erected until sundown. It was nice to have lots of help. The weather for Saturday morning was just great, and the rest of the fine-tuning was accomplished. The start of field day went off very well, but I guess the PSK guys had a few last minute glitches to iron out.

The sound of (CQ field day) rang out on both phone and CW, and the pulse of generators singing was just great. Ed's portable power station worked flawlessly. The evening hours approached and contacts were rolling in, thanks to the wonderful rigs that were lent to us from ICOM. Thanks much to Rick (N9PMR). We had lots of operator and logging help. Even though there was some discussion about the operating and logging could have been better, we did an OK job. We may have to have a little mini class, on how to operate during a phone contest. Sunday morning we had a wonderful breakfast, and hats off to the chefs and the other help in the kitchen department. The 1PM finish deadline came fast, and all in all, things went well. There

was adequate help at strike time, and we had all the stuff stowed back at the barn in good time. I do not want to go into thanking individuals, for I do not want to leave anyone out, and hurt some feelings. It was a great effort on the club's part, and with being 6th in our transmitter group out of the seventy plus entered, We did (FANTASTIC)!!!! I am looking forward to next year, and if we have the same effort, WE WILL DEFINATLY BLOW THE REST OFF THE BAND. Thanks again one and all. Until next Field Day.

73's

Web Sites of Interest

http://www.sphere.bc.ca/test/nixies.html	Nixie tubes
http://www.radau5.ch/start/html	Vacuum tubes
http://www.aade.com/tubepe dia/1collection/tubepedia2.htm	Vacuum tubes
http://www.QRZ.com	Links to Everything "ham"

Starting the Day

By: John R. Welty

If you can start the day without caffeine or pep pills,
If you can be cheerful, ignoring aches and pains, If you can resist complaining and boring people with your troubles,
If you can eat the same food everyday and be grateful for it,
If you can understand when loved ones are too busy to give you time,
If you can overlook when people take things out on you when, through no fault of yours, something goes wrong,
If you can take criticism and blame without resentment,
If you can face the world without lies and deceit,
If you can conquer tension without medical help,
If you can relax without liquor,
If you can sleep without the aid of drugs,
Then you are probably a cat or a dog.

The Post Everything Party

It is coming March 2, 2002! Mark your calendars, and plan to bring your significant other. The party is at the same American Legion Peter Wollner Post (Cedarburg) as in the past, known for their good food, service and nice facilities. See you there. Price and time to be announced. Begin stocking up on those "stocking stuffers" for the "gift" exchange. The heavier, the better! Hah!



6 Meters at 3 meters

Granted, it's only 10 feet high but it got me on 6, the "magic band". Glad I went this route before I invested in another tower etc. I am yet to discover the "magic" although I hear others talking of great openings – 40 states in 3 hours etc.

Quarter Century Club

By Ron Yokes, W9BCK

Considering the possibility that members of the ORC that were first licensed by the FCC twenty five years or more ago may be interested in becoming a QCWA member, I offer this brief explanation of how to get the job done.

The way it works is this: first, one must in to National QCWA an application for membership. Membership in the National outfit is a pre-requisite to joining local

Wisconsin Chapter 55 chaired by Vern Teske W9RYA, one of the founders of ORC. When National acknowledges your membership and issues a member number and date of enrollment, put this information on the local Wisconsin Chapter 55 application form and send it to the address indicated. Dues for the National are \$20 annually plus Initial Registration fee of \$3. Wisconsin Chapter 55 dues are \$5/year plus \$1 sign-up fee. The \$5 just covers the cost of Ch. 55 newsletters (4 or 5 per year). The National sends quarterly newsletters (50-60 page booklet) of interest to the National membership with local inserts of the various Chapters throughout the USA and O'Seas...a way to learn about long lost Ham buddies, etc....and keep up with our aging world of Ham radio "Greats".

Chapter 55 holds two dinner meetings a year on the first Saturdays of June and October. Our last meeting was at the Machine Shed Restaurant in Waukesha, WI. Fred Linn W9NFZ, author of the Vibroplex article in the August newsletter, brought 25 of his "automatic key" collection for a "Show and Tell" program...this to let you know a bit about our low-"key" activities. We move the semi-annual meetings around to accommodate the far-flung members. For example the last few meeting were held in Beaver Dam, Winneconne and Green Bay, and plans are in the works for a meet next June in Watertown. All hams are invited to our meetings, members or not...gives us a shot at twisting an arm or two for membership. Our oldest member is 96 and still whacking off 45 wpm regularly in CW QSO's with his buddies from the radio broadcast profession. Several members have been licensed since 1932 and earlier. Each has stories to tell that have not been heard before, a ritual that seems to take place during the cocktail period preceding our dinners.

Chapter 55 runs a more or less informal net each Sunday morning at 8:30 am on 3985 kilocycles. Some of us use "phonetics" not heard since WWII. The net control station assignment rotates among us and 15 to 20 of our sixty members check in before charging off for their weekly "Halo" straightening. Awards for "longevity" in the hobby are available from National.

Works for me, how about you? Contact me and I'll send you the necessary applications.

Best personal regards,
The "Cheery Curmudgeon,
Ron Yokes W9BCK,
Secretary Wisconsin Chapter 55 QCWA

Upcoming Events

January 5, 2002 Waukesha Swapfest
March 2, 2002 Post Everything Party
March 3, 2002 Waukesha SEWFARS - Swapfest
May 4, - ORC Hamfest @ Circle B
May 17, 18 & 19 – Dayton Hamfest

The Examiner

By: Gary Sharbuno wi9m

After the weekly "early group" breakfast, several club members helped me at the December 15th test session. They were: Nels WA9JOB, Tom W9LNL, Kent N9WH, and Ed AA9W.

We started at 9:30 am, and had 4 people upgrade, John Palesle Sr. (WB9JLF) from Milwaukee, got his General class after being a Technician class since 1984, and his son John Palese Jr., (WB9JPH) of Fox Point, upgraded to Extra class, passing Element 4. David Hendrickson, (KC9AOU) from Fox Point, came in to take the code test, which he passed. Then we talked him into taking the General exam, and he passed that also. So he walked out as a General class ham. Then young Eric Felland (KC9AGT) from Whitefish bay, came in with credit for the General written (Element 3) and passed the code exam so he upgraded to General class. So it was a successful exam session. Every one that came in got something.

Next session in on January 19th, 2002 at 9:30am at AES.

In the future applicants must have their social security number registered with the FCC. Go to the FCC website, WWW.FCC.org/uls, and go the CORES register and follow the prompts. Then on all communication with the FCC you must use this FSN (Federal Registration Number) verses the SSN. Well that's all the poop on the last test session of 2001, see ya next time.

73, happy New Year

Sex, Lies, and PSK31

de John Welty, W9ISC

OK. Here we go PSK cowboys. The mean old newsletter editor said that I had to keep my titles RELEVANT to the Amateur Radio content of the articles. YOU get to decide how relevant this title is ..I thought it was just deceptive enough to get guys like N9PMR to actually READ it. One "heads up", cowboys: If, at any time, you read that a particular aspect of this technology is "beyond the scope of this discussion" You may assume two things:

#1: The answer is far beyond what an "OPERATOR" needs to know in order to enjoy the mode

AND

#2: I have no clue.

Last pass through this PSK morass, we talked about some of the "ancestor" modes. CW, RTTY, AMTOR, PACTOR, GTOR etc. al. in one way or another, all of them were able to take an RF carrier and manipulate it so that a receiving station could identify a character / numeral / prosign.

CW = ON/OFF

RTTY = 5 bits/HI or LO

AMTOR = 7 bits/HI or LO with HANDSHAKE

How does PSK-31 go about creating, coding, and decoding characters / numerals / prosigns? For WI9GC and any other "CW is my Life" types - no need to put on your cup, this isn't going to be that tough!

Varicode is what the originator, Peter Martinez, G3PLX, calls his coding structure. It is a simple (Binary) string of "1's" and "0's" - to achieve a unique pattern, which relates to a particular character

(to save me some keystrokes, you may read that as "character / numeral / prosign").

FFFFF instance:

Numerical 3 = "11111111" (eight - "1" bits), Character o = "111" (three - "1" bits), and the question Mark "?" = "1010101111". Your

PSK-31 software NEEDS to know this, the operator DOES NOT.

Remember that discussion we had a couple of articles ago about the "technology march" taking the "HEAD intensive" things and giving them to the "machines"? This is one of those.

In RTTY/AMTOR/PACTOR/GTOR....et.al., every character is the same length - 5 bits, 7 bits, whatever. You MIGHT have noticed (assuming that you are NOT WI9GC), that the "3", "o", and "?" are different LENGTHS !!! HOW, you might ask, does PSK-31 know where one Varicode string ends and the next one begins ? GREAT QUESTION !!

If you take a look at the Varicode character list, you will see that in NO CASE, NEVER, NAUGHT TIMES will you find two ZERO's in a row. Mr. Martinez uses "00" as the "end of word" symbol - neat huh ?? So, If I wanted to transmit the message: "3o?", PSK-31 would transmit: "1111111001100101010101111" Yes ??? Yes !!! Mr. Martinez set the Varicode up FOR the English language. As a result, vowels are short (3 bits in lower case) and Zs and Qs and everything else (depending on their frequency of use in the English language), are LONGER. Note also, that there are different Varicodes for upper and lower case letters. This is why you may hear some of the High-Priest-of-PSK-31 types sermonizing that you should be PARTICULARLY careful not to send PSK-31 with "Caps Lock" engaged because it will take LONGER ya, ya, ya, If you want to transmit faster try RTTY !!

Varicode is neat, but how do I get those "1" and "0" bits into and out of my "NEW / ALMOST NEW / WAS NEW WHEN W9LO WAS A KID" HF/SSB rig?? This is as "technical" as we are going to get, Cowboys, so hang on - close your eyes if you have to - it'll be over quick.

Sine Wave:	bump - dip - bump
- dip	
Phase Reversed Sine Wave:	dip - bump
- dip - bump	
2nd Reversal of Sine Wave:	bump - dip -
bump - dip	

With me so far ?????? OK !! Pretty HIGH TECH, huh ???

Your PSK-31 software is sitting there listening to a signal coming in through the XCVR. It is getting a steady sine wave signal with NO phase reversals (bump - dip - bump - dip is just humming along). The RX software is getting in "SYNC" with the signal so that it knows how long a signal should be at one phase state before it MIGHT change. I don't know what Mr. Martinez calls this, but I call it a "TIME SLOT"

As a starting point, PSK-31 reads this as a series of "0"s. A string of "0" bits is the "idle" signal. During this "idle" string, the PSK-31 display is printing NOTHING.

WHOOPS ! PHASE REVERSAL (now: dip - bump - dip - bump). Phase reversal = "1" and the character that is "1" is "SPACE". How do we know that "1" is the only bit in the "word"? We DON'T - until we get "00" - remember that end-of-word flag (which happens to be two consecutive time slots WITHOUT phase reversals).

Sooooo, we have something like this :

time slot 1	bump - dip - bump - dip ...}	"Idle"
sequence	= "0"	
time slot 2	bump - dip - bump - dip ...}	"Idle"
sequence	= "0"	
time slot 3	bump - dip - bump - dip ...}	"Idle"
sequence	= "0"	
time slot 4	bump - dip - bump - dip ...}	"Idle"
sequence	= "0"	
time slot 5	dip - bump - dip - bump ...}	Phase
Reversal	= "1"	
time slot 6	dip - bump - dip - bump ...}	No Ph.
Reversal	= "0"	
time slot 7	dip - bump - dip - bump ...}	No Ph.
Reversal	= "0"	

two sequential ZERO bits is the "end of word" flag- print the word - in this case: "SPACE" "0000100" - time slots 1-7

Duck Soup !!!!

In order to accomplish this little set of tricks, Mr. Martinez had to deal with the reality of harmonic generation from phase switching at a 31.25 Hz rate. This is where software filtering and the

DSP capabilities of a 16 bit sound card come into play. You might ask, How's that work? I might answer: GREAT QUESTION! But beyond the scope of this discussion !!

Contrary to the title of this article, I have NOT told you any lies in this article. We have gone well beyond the "technical understanding" point most PSK-31 operators ever reach. As fully fledged PSK-31 TECH COWBOYS, you can now walk around Dayton talking about the work you are doing developing Varicode for the Farsi language. See if THAT doesn't make some jaws drop!

Next time we will talk about the FUN STUFF -- PSK-31 OPERATING.

BE AMAZED - HAVE FUN - Try PSK-31

Nets of Interest

MHz	DAY	CDT	Net Control	Topic
3.985	Daily	0600	W9RCW	General
4.650	Daily	2100		ARES
1.895	Daily	1800		General
144.25	Tues.	2000	Badger	Con-testers
146.91	Thur.	2100		Com-puters

Announcement

The "late morning" breakfast group is now meeting at 8 AM at the Grafton Family Restrauent (Grafton Bowl) in Grafton. If you can't come early, come late.

Is the Floppy Dead?

By Stan Kaplan WB9RQR

Well, not quite, but it is on its way out. Floppies have some disadvantages. They hold limited amounts of data and today's common version holds only 1.44 Mb. Another disadvantage is that they are only temporary storage media. Anyone who trusts the integrity of a critical file on a floppy placed there more than a year ago is playing with fire. Oh, your files might be just fine after even three years, but don't bet on it. The

microscopic magnetic domains tend to weaken with age and even bleed into adjacent tracks, so it is not a way to store critical files unless you refresh them (write them again) every year or so. That will remagnetize the domains. However, the magnetic properties of a floppy can themselves be a pitfall. Stick one up on your refrigerator with a magnet and you are sure to instantly destroy the data. Place one too near an active wall wart (one of those little plug-in transformers that power everything these days) and the data will go poof. Place a floppy closer than 6 inches away from your computer monitor for any length of time and the data will go poof. On the other hand, they are quick and easy to use. Sneaker Net is the nickname for

Copied from and continued in the Badger Smoke Signals at <http://www.bsss.org>.

Jim Romelfanger K9ZZ

Smoke Signals Editor Jim Romelfanger, K9ZZ, became a silent key on Saturday, December 22, 2001, according to his long time friend and *Smoke Signals* Publisher, Ken Ebneter, K9EN. He suffered an apparent heart attack at his home. Jim was 60 years old.

Just Another Shack



Since we can't all visit each other's shack, I thought it might be fun and instructional to feature the stations of various members. Above is the operating station of Tom (W9IPR) who has been licensed since 1952 and enjoys chasing DX on 20 meters. The station consists of an FT1000MP, SB201 linear, FT847, FT201 & TNC along with various home brew antenna tuners and switching networks. PSK and logging are done on an older Compac "486" laptop. Notice also the fire extinguisher hanging on the wall in case 20 meters gets too hot. Antennas consist of a tri-bander at 40 ft., multi-band dipole, G5RV, 18AVT vertical and a discone for the scanner.

OK, so who is next? Let's take a look at that new mobil installation of Gabe's.(WI9GC) or how about that new FT100 in Nels's new car – they both have an auto tune antenna .

Elections

The next meeting is Wednesday, January 9th, at the Senior Citizens hall in Grafton. An important part of that meeting will be the election of officers for the CY 2002. The nominating committee has nominated the following:

Pres.	Leon Rediske	(K9GCF)
Vice President	Vic Shier	(KB9UKE)
Secretary	Nels Harvey	(WA9JOB)
Treasurer	Gabe Chido	(WI9GC)
Repeater VP	Rick _____	(W9PMR)

Remember, nominations will be open to the floor and if you would like to nominate someone for one of the above offices, you may do so at that time.

Minutes

of the December 12, 2001 Ozaukee Radio Club Meeting

By Nels Harvey, WA9JOB, Secretary.

Call to order and introductions: President Leon Rediske, K9GCF, called The meeting to order at 7:31 PM at the Grafton Senior Center. Introduction of members and guests followed. Leon then reminded everyone that a meteor shower was due this coming Friday morning. He asked if anyone was interested in meteor scatter, and thought it might be a good topic for a future program.

Minutes: The minutes of the last meeting were accepted.

Treasurer's report: Gabe, WI9GC, distributed copies of the Treasurer's report, and noted there were some transfers of money in the Scholarship account from a CD that expired, to a different CD that provides for additions, and a check type service.

The Treasurer's report was moved to accept subject to audit by Jane, KB9SYI, and seconded by Stan, WB9RQR. It passed by voice vote.

Repeater Report: The repeater Vice President, Rick, N9PMR, was not present. Nels, WA9JOB, explained that the 146.97 MHz. Repeater had failed. The problem was in the amplifier. An apparent arc, or power surge, had disabled the repeater's controller. A burned trace in the controller was jumpered, and operation is now restored with the exciter radio, at 15 Watts, until the amplifier can be repaired.

OZARES Report: Jon, KB9RHZ, reported he, Stan, WB9RQR, and other EC's from around the state attended an Emergency Coordinator's meeting on December 1, 2001, at Plover, WI. In January's meeting, Dennis Rybicki, K9LGU, will discuss traffic handling. An emergency communication course will be starting next February at the Justice Center on the regular meeting night. The March OZARES meeting

will be held on the third Thursday, to avoid conflicts with the religious holidays.

Newsletter: Tom Ruhlmann, W9IPR, reminds everyone to send him more articles for the Newsletter. Send your articles to him at "teruhlmann@cs.com".

Old Business: Gene, KB9VJP, gave a report on the Swapfest, and has flyers for anyone going to a swapfest, to distribute. He asked for our help to cover the January 5, 2002 West Allis Radio Club Swapfest in Waukesha, and other upcoming swapfests.

New Business: Stan, WB9RQR, moved, and Kent, N9WH, seconded a motion for the Club President, with help from the Board of Directors, set up a schedule to regularly audit the Club's finances, in 2002, to continue into perpetuity. The motion passed by voice vote.

Communications: Letters to Heil Sound, Lazy Days Campground, and Icom Radio were read to the group. A Christmas card from the Maybe family was also read.

Comments: Gary, WI9M wants the computer guru's in the club to come up with a good, but easy to use logging program, to facilitate logging at Field Day, 2002. Leon, K9GCF, thanked the Field Day Committee and everyone who helped, to make the 2001 Field Day effort so successful.

The Club assisted once again in the Grafton Christmas Parade November 24. After heavy rain in the morning, the parade started almost on time, and dodged most of the raindrops. A Pizza Party at Ferrante's Restaurant helped warm and dry out the chilled communicators that assisted.

Ron, W9BCK, dropped off several magazines for distribution to anyone who wanted them.

One of the disbanded Club Library items is a Hammerlund HQ-170 Receiver. It is offered for sale to Club members and if there are no takers, it will be auctioned off on E-bay. Its estimated value is about \$200.00, but Club members will be offered a discounted price.

Adjournment: The business meeting was adjourned at 8:35 P.M.

Program: Jeff, KB9QQE, demonstrated wireless networking. Using a computer and modem setup to operate the link, he set up a full sized computer, and a laptop, with RF link cards employed, and demonstrated how they were able to access the Internet with no wires attached. He handed out another, very informative, information sheet, using information he had found on the Internet, and discussed the different protocols with us.

Auction: Stan, WB9RQR, then held his OZARES auction, to benefit OZARES finances.

Next Meeting: The next meeting will be held on January 9, 2002, at the Grafton Senior Center.

Attendance: Nels, WA9JOB, Jane, KB9SYI, Leon, K9GCF, Cindy, KA9PZG, Dave, N9UNR, Stan, WB9RQR, Bernie, AA9CI, Jon, KB9RHZ, Tom, W9IPR, Vince, KB9ZOT, Gene, KB9VJP, Bob, W9LO, Paul, KB9ZNA, Ted, N9LLT, Ed, AA9W, Ted, KA9UCD, Bob, N9NRK, Brian, N9LOO, Ron, W9BCK, Joe, KB9URC, Joe, AA9HR, Tom, W9LNL, Gabe, WI9GC, Kent, N9WH, Gary, WI9M, Kevin, K9VIN, Terry, KA9RFM, Jeff, KB9QQE, Ray, W9KHH, and Don, W9VSC.

Dues are Due – Now.

Below is the dues form for the 2002 CY. Please complete the form and return with a check to our treasurer, Gabriel Chido, WI9GC @ W58 N985 Essex Drive, Cedarburg WI 53012-1439.

Ozaukee Radio Club, Inc

2002 Membership Application /Renewal Form

Call Sign _____

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)

Programs of interest:

HF UHF-VHF Construction Projects Antenna Computers satalites APS
CW SSB AM FM Digital Modes Portable Mobil Fixed Fox Hunt
Ground System Software Batteries QRP Contesting ARES
Community Service Frequency Co-ordination collections WAS & DXCC

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

Club Membership (supports club only) \$7.00

The newsletter is available at <http://www.qsl.net/orc/>.

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

Spouce's Name: _____ & call sign: _____

Comments: _____

AGENDA

January 9, 2002

1. Call to order.
2. Introductions.
3. Call for acceptance of minutes.
4. Treasurer's report – Gabe (WI9GC).
5. Repeater report – Rick (N9PMR).
6. OZARES report – Jon (KB9RHZ).
7. Committee reports.
8. OLD BUSINESS
 - a.
 - b. Open to the floor.
9. NEW BUSINESS.
 - a. Elections
 - b. Open to the floor.
10. Auction.
11. Program – Radio and TV, as it was.
12. Adjournment.

Return undeliverable copies to

The ORC Newsletter

465 Beechwood Drive
Cedarburg WI* 53012

First Class

Next ORC Meeting

**Wednesday, 9 Jan.
7:30 PM**