



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

March 2003

Number 3

The Prez Sez

By Vic Shier KB9UKE

The Post Everything Party proved to be a festive evening with delicious food. The party gives our spouses an opportunity to meet club members whose voices they often hear on the radio but seldom see their faces. The Ham of the Year and the Turkey of the Year will be announced at the next club meeting. Thanks to Ted, KB9RLI for chairing this event. By the way, someone mistakenly left his or her present at the hall. Don't worry; I'll bring it to the next club meeting so the rightful owner can claim it.

Gary Sutcliffe, W9XT gave a professional presentation on contesting at the last meeting getting the entire club involved in a contest for demonstration. Stan, WB9RQR gathered the most points even making a contact that originated in Chile. Gary writes a regular column for the National Contest Journal titled Contest Tips, Tricks and Techniques. Look for him there

What is one of the best ways to meet some ham friends you haven't seen for a while? Spend some time at the ORC booth during Superfest at AES. It will be on the first weekend in April. The ORC booth will again be adjoining the OZARES booth, which makes scheduling easier. This is an important event giving us the opportunity to invite many hams to our swapfest and to join our club. We will need people on April 4th from 2 P.M. to 7 P.M. and on April 5th from 9 A.M. to 3 P.M. Please let me know what times you can help.

The ORC may be sponsoring a contact with the International Space Station (ISS). The space station has a ham shack on board and NASA frequently schedules 2-meter contacts with kids from schools around the world. You may have heard about these contacts on the ARRL Audio

News. The students are given an opportunity to ask the astronauts questions about life on the ISS. Ed Eckhardt the superintendent of the Grafton School District and Lee Wiskirshen the principle of the middle school believe that contacting the ISS via ham radio would be an exciting project for their students and Gary, N9UUR has agreed to be the coordinating amateur radio operator. What a great way to get some publicity for the club, possibly pick up some new members and have a lot of fun too. You can learn more about contacting the ISS by searching for Amateur Radio on the International Space Station (ARISS) on the web. The ORC may be the first club in over 10 years to help some kids from Wisconsin talk to an astronaut! Contact Gary if you want to help on this exciting project.

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

Upcoming Events

- 9 March – Wisconsin QSO Party
- 12 March – ORC Meeting
- 23 March – Grayslake IL
- 27 March – ARES Meeting
- 4-5 April – AES Superfest
- 13 April – Stoughton WI
- 3 May – ORC @ Circle B**
- 12 July – South Milwaukee WI
- 27 –28 Sept. – Grayslake IL

Post Everything Party

As it has been in past years, it was another great Post Everything Party with a great meal and much socializing. Many thanks to the party Chairman Ted Schweitzer (KB9RLI).

President Vic (KB9UKE) headed the program with an entertaining monologue on how spouses might

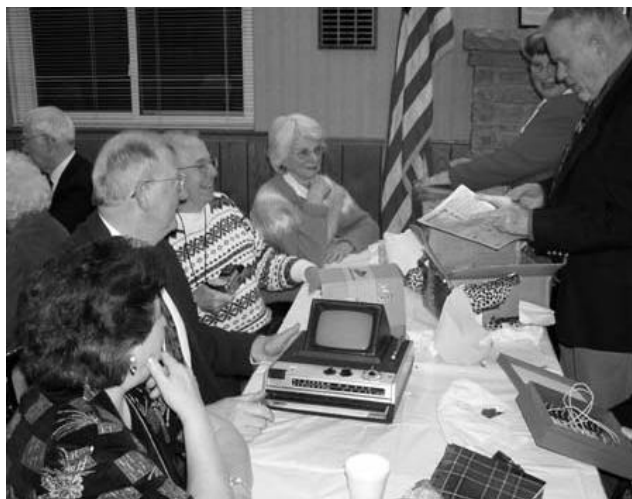
cope with the various idiosyncrocies of their “Ham” including their reclusive nature during contests and their annual desire to make the pilgrimage to Dayton.



This was followed by the “Computer Nut” award being given to Jeff Kane (KB9QQE) for the terrific Field Day Logging software he developed and the Viagra award to Tom Ruhlmann (W9IPR) for having erected so many antenna and keeping them up.



Gary (WI9M) shows the 1959 ARRL Handbook he received as a “gift” at the party.



Tom Nawrot (AA9XK) displays his “gift” of a vintage portable TV as the group becomes interested in Dr. Stan’s (WBRQR) “gift” of vintage computer parts.

ARES Portable Repeater

By Nels Harvey WA9JOB

Maybe you missed it at last year’s Field Day. Along with the generators, cables, computers, cook tent stuff, and antennas, it sat there, a collection of PVC pipes, silvery tanks, a hand truck, and a radio. That, my friends, was the portable, 147.33 repeater! Where did this come from? Whose is it? What is its purpose? Why did it get assembled? Well, you’re just about to find out!

Several years ago, when the Ozaukee County Justice Center was being built, provisions were made for the radios for the Communications Center and antennas for the 147.33 MHz. and 443.525 MHz. repeaters. Funds were budgeted and two Uniden repeaters were purchased. The antennas were installed, and the repeaters were placed in service.

When the County developed the 800 MHz. County Trunking Radio System later, the contractor donated two new GE repeaters to Emergency Government. These were placed in service, and the Uniden repeaters were placed on a shelf in the back room. It was decided to try to build up a small, portable repeater for emergency incidents with these repeaters. All the parts were there, but some modifications were necessary.

Since I had been the person to interface the radios with the S-com MRC-100 controller, I volunteered to restore the radio to it's own built-in repeater function. The 147.33 MHz. Uniden repeater had a power output problem, but I was able to repair the damage, and set the output for a conservative 10 Watts.



OZARES 147.33 portable repeater at Field Day. Access it with your PL turned off to prevent enabling the "33" repeater at the Justice Center

Gregg, W9DHI, tuned up the spare set of duplexer cavities that were at the Emergency Communications Center, and Stan, WB9RQR, built the antenna, using PVC piping, along with a protective cage for the cavities. Viola, OZARES now has a portable repeater, capable of 12V. Battery operation, or 120V. Power.

This repeater is set up on 147.33 MHz. just like the coordinated repeater at the ECC. This portable repeater does not need P.L. tone to access it, and can be accessed without bringing up the ECC repeater if the tone encode is turned off on the user's radios. There is no automatic ID'er, so

proper station identification by each user is accomplished by the ID'ing of their own transmitter.

This small repeater can be deployed at any incident that needs enhanced coverage, virtually anywhere! It is not coordinated, but in the case of emergency communications, such operation would take precedence anyhow. If the users don't turn off their transmit P.L. (encode), the ECC repeater will respond, if within range. Remember, this is an OZARES tool. Now you know what to expect if you assist at an incident and this repeater is employed.

CONTESTING AND HI-FI IT'S A MATTER OF OPINION, BUT -----!

By Bob Truscott W9LO

Yes, it IS a matter of opinion, and because I have this platform from which to express an opinion, I am going to pass along the opinion of someone whose opinion I regard highly, namely my own. (I bet you thought I was going to say "BCK's", didn't you?—No way! He is sometimes one of the perpetrators, depending upon which of his many rigs he happens to be using when he perpetrates.) The subject is speech processing. Do whatever you want to in the receive mode, but don't infect your transmitter with it. The goal of every phone operator should be to make his audio as readable as possible. In other words, make it sound as much like a commercial FM broadcast station as the rules allow. A "Hi-Fi" signal is much easier to copy, even in a crowd, than a louder processed signal. (In my opinion.) Improperly adjusted speech processing is just like deliberately introducing a chirp into an otherwise clean CW signal—it makes it stand out from the crowd, but harder to copy.

This little ranting was brought on by a recent SSB QSO on 3860 KC, and it relates to contesting in that most testers want to have their transmissions understood by the guy they are trying to work. When I joined the QSO, I tuned in W9BCK (I normally use him as a reference when I set my own frequency), and tried to make him sound as natural as possible. This then usually makes everyone else in the group sound OK. But on this particular day, no setting of my tuning knob would do the job—there was a noticeable lack of low frequencies in his signal (in my opinion). So I

had to compromise, and set the knob as best I could. This resulted in one of the stations in the group telling me I was 1,000 cycles off. (Actually, it was about 140 cycles relative to his particular frequency---he had his decimal point misplaced.) Obviously, what I had done was tune to a slightly different frequency than the other stations in an effort to make Ron sound normal, but instead it made me sound abnormal to the group.

Now, this was a minor incident--it happens every day on every band, and was hardly worth a rant. However, it touched on a pet peeve of mine, namely speech processing, so I took a look around 75 meters to see how other groups sounded. The results were mixed. Most groups sounded good, some were excellent, and then there was the occasional individual who sounded louder than the others, but had about 50% distortion on his signal. This guy, I figured, was probably a DX hound who had pumped about 10 pounds of speech processing into his signal in an effort to raise the average level of his audio, and make him sound louder. (That's why TV commercials are louder than program segments, you know.) And he probably also had a so called "DX" mike, which according to the manufacturers, shapes the audio response in such a way as to eliminate all the frequencies that they deem unnecessary for communication. They claim that this adds "punch" to a signal. Perhaps it does, but what good is "punch" if the price is distortion? Get yourself a mike with a flat frequency response, and turn the speech processor off in the transmitter. Your audio will be more intelligible, and you will work more people. (In my opinion.) And in the case of 3860 KC, we would all be on the same frequency.

Having said these things, I must confess that I don't know what the frequency response of my own hand mike is, because I haven't been able to find any technical literature on it. I hope someone will tell me if I am one of the unknowing perpetrators that I have ranted about. Or is bad audio just like bad breath--even your best friend won't tell you?

Upcoming in March:

Mar. 1-2--ARRL International DX Contest-Phone. Rules in Dec. QST, page 95.

Mar. 9—North American RTTY Sprint---0000Z-0400Z. That's 6-10 PM CST on Mar 8. Rules in Mar. QST, page 99.

Mar. 9 – Wisconsin QSO Party – QST, page 99
Have fun contesting.

“Master Contester”

Gary (W9XT) writes a column in the ARRL NCJ (National Contest Journal) and at our February meeting he gave a number of pointers related to effective contesting and pointed out several contesting resources. A really informative and effective program.



The attendees were all given a log page and told to get the call sign of everyone in the room.



It was interesting to see the total count of those who just sat at their position (calling CQ) compared to those who would S&P (seek and pounce) and those who employed both practices

March 12 Meeting Program

Mr. Nels Harvey (WA9JOB) will do a demonstration with two pieces of equipment he owns:

1. The MFJ "Beacon Locator" or "Propagation Locator" if you prefer to call it that. This is rapidly becoming a very popular device in HF ham-shacks.

2. The Clear Speech Speaker which has an automatic & active heterodyne filter & Digital Speech Processing. Come and Hear what you are missing!!

Leon, K9GCF, Program Chairman

Tips, Tails & Tools

Would you like to like to log your contacts while operating mobile but find it too distracting to hold the note pad, find a pencil, make notes and talk all at the same time? An easy solution is to go to a pilot's shop and buy a "knee board".



It is simply a small clipboard, to hold a steno pad, with leg strap having Velcro tape ends so the board can be secured to the thigh. Works great. You can clip your pin on the board and take notes

as the opportunity arises at stoplights etc. Better yet, the idea is pretty simple, make your own.

For Sale, Trade or ?

Microphones – New and unused – YAESU MH-31B8 AND ICOM HM-103 hand microphones - \$25 each – Contact Tom Ruhlmann W9IPR @ 377-6945

Need some solid copper wire or transformers? Contact Herb (WA9UVK) @ 377-3307

Wanted

B&W Air Inductor 80 TVH (500 watt plug in coil)

Three associate editors – one each for the "Projects" column, "Club Static" column and the "equipment and software review" column. Contact Tom (W9IPR).

Gabe (WI9GC) was looking for a tower.

Just Another Shack

By Todd Sprinkmann KC9BQA

This month's Just Another Shack visit features Ron Yokes - W9BCK. Ron is a founding member of ORC. Born in 1926, Ron was raised in Chicago. He enjoyed fiddling around with portable crystal sets as a youngster. He was a Navy radio operator during WW II in both the Atlantic and Pacific. Maintaining radio silence, he never sent a single dit or dah. Instead, he copied 5-letter groups from various global installations, 4 hours on and 4 hours off. Back from the war in 1946, Ron met a ham at the University of Illinois, and got his own ticket. Ron retains his original call to this day.

Ron is a retired broadcast technician. For 40-some years, he worked in an amazing variety of television related broadcast and production capacities. An interesting article or two could be written about each of the various jobs Ron has held. One radio-related venture of note is that Ron and another fellow, working for RCA, put into use the first 42 mc (Ron urged me to say mc and kc!) FM mobile police radio system in the US -- in Iowa, in 1951. He worked with Bob Truscott - W9LO, for several years at Channel 6, in the mid-1950's. (In fact, I learned from Ron that a precu-

sor of the ORC was a Channel 6 club of ham operators.)

Because Ron was moving all across the country between 1949 and 1976 (he mentioned that he and XYL bought and sold 14 different homes), he had little time for ham radio. Once he was permanently back in Wisconsin, he got more active in the hobby. Ron has done packet, VHF, a very small amount of DX'ing and he has evolved into an SSB phone operator. His "hangout" is on 75M -- specifically on 3860 "kc". Ron says 3860 is where like-minded hams called the "Ticaro's" hang out. Anybody who can decipher what Ticaro stands for shall receive a year's subscription to the ORC newsletter, free! (3860 guys not eligible).



Ron (W9BCK) is shown here at his Number 1 (of 5) operating locations. To his back is a workbench with a complete array of vintage test equipment.

Ron's main rig is the Kenwood TS-850 S/AT (automatic antenna tuner) with the DSP-100 option (digital signal processing). The TS-850 drives a Dentron MLA-2500 legal limit amplifier whose output is switched to the input of either a Viking Johnson kW link-coupled Antenna Matchbox or a Dentron AT-3000 Tuner. These respective outputs are "knife" switched to the input (shack) end of 120' feed of openwire 450 Ohm ladder transmission line terminating at the dual-dipole feedpoint of a 75/20M antenna approximately 35' above ground supported by trees. A Mosley CL-33 20/15/10M beam mounted on a rotatable cylindrical tower is available for distance

communication. Switchable dummy load, SWR and power metering are also system integrated.

Ron enjoys the hobby very much nowadays. He is never far from a rig, and he prides himself on having the kind of setup that he refers to as his "permanent" Field Day setup. He has been married for 54 years "to the same woman" and they have 7 children. I asked Ron if any of his kids are hams and he said, "No, thank God. I don't have to share my toys with them."

Ron is also the current Chapter 55 (Wisconsin) secretary for the QCWA. Ron was kind enough to explain to a ham radio newcomer like me what the QCWA stands for. It stands for Quarter Century Wireless Association. Membership is open to any radio amateur who had a license at least 25 years ago. Even if your license lapsed in the interim, you are still eligible if you had a license at least 25 years ago. I only have 24 years to go!



Here Ron is in the rag-chewing mode from his Number 3 operating position at the easy chair.

We Energies AWARD TO ARES/RACES GROUPS

From the Badger State Smoke Signals

We Energies, a Wisconsin gas and electric utility, has given ARES/RACES organizations in 17 Wisconsin counties a total of \$39,000 to enhance their emergency communication capabilities. A ceremonial check presentation was held January 21.

"We are excited about this timely award, which will bring needed equipment to several of our counties," said Wisconsin Section Emergency

Coordinator Dr. Stan Kaplan, WB9RQR, who also serves as RACES Chief Radio Officer in the Badger State. "We thank We Energies for their forethought and generosity."

Kaplan said the grant would help to build an effective statewide packet network for use during emergencies. He also said he hopes the idea will "snowball" and inspire other companies to follow suit.

(Extracted from the Badger State Smoke Signals at www.bsos.org)

Club Static

You just can't start them too young according to Kevin as he showed up for breakfast with the Early Group at Prime Ministers in Thiensville.



Kevin (K9VIN) and daughter Abby make it to breakfast with the Early Breakfast Group at Prime Ministers in Thiensville

No. 105 - The Numbers Game, Revisited

By Stan Kaplan, WB9RQR

Back in May 1998 (#54, The Numbers Game), the column covered the disparity in reporting numbers by hard drive manufacturers who were trying to make their products look good. For example, if they made a drive that held exactly 40,000,000 bytes after formatting, they would call it a 40 Mb drive, when in fact it needed to hold 41,943,040 bytes to be called that. This stems from the fact that a kilobyte is 1,024 bytes, not 1,000, because in the computer world, binary notation is the standard, and $2^{10} = 1,024$.

Well, in an effort to clear up terminology, an international committee (the International Electrotechnical Commission) set a new series of standard abbreviations and meanings. They ac-

tually did this way back at the end of 1998, and the standards should have become uniformly used and widespread by now. Change is slow; and they have not. Nevertheless, you will see these standards used more and more as time goes on, and they do help clear up the mess that existed before it was clear whether a notation was in decimal or binary.

Basically, the scheme is to add a lowercase letter "i" to any prefix to indicate it is in binary notation, while absence of the letter "i" indicates the old decimal system we are all familiar with. Thus, 1K = 1,000 (just like resistors), while 1Ki = 1,024 bytes. The new binary term is called kibibyte, while the old decimal is kilobyte. Look at the table below to see how this plays out.

NAME	ABBREVIATION	VALUE
Kilo	K	1,000
Kibi	Ki	1,024
Mega	M	1,000,000
Mebi	Mi	1,048,576
Giga	G	1,000,000,000
Gibi	Gi	1,073,741,824
Tera	T	1,000,000,000,000
Tebi	Ti	1,099,511,627,776
Peta	P	1,000,000,000,000,000
Pebi	Pi	1,125,899,906,842,624

Before this new standard, some folks called 1,048,576 bytes a "binary meGabyte". Now, just "mebibyte" is the correct term. Before the standard, 1,000,000 bytes was sometimes called a "decimal meGabyte", while now, just "meGabyte" is correct.

So, is that new drive you are about to buy 40 giGabytes (40G), or is it 40 gibibytes (40Gi)? There is no way to tell, because the standards shown in the table are not yet used on an industry-wide basis. You can probably assume that the drive holds the lesser number, because 40 sounds bigger than 37.2G. Yes, there is a big difference – copied from and continued in the Badger State Smoke Signals at www.bsos.org

Upgrade to General?

The following sample questions were copied from the ARRL's General Q&A manual available at AES.

G9D05

What must be done to prevent standing waves of voltage and current on an antenna feed-line?

- A. The antenna feed point must be at DC ground potential.
- B. The feed line must be cut to an odd number of electrical quarter wavelengths long
- C. The feed line must be cut to an even number of physical half wavelengths long
- D. The antenna feed-point impedance must be matched to the characteristic impedance of the feed-line

D Power reflected back from the antenna returns to the transmitter, which in turn reflects the power back towards the antenna. This creates a standing wave. The problem with high SWR really is not the efficiency of the rig (power in/power out). When the transmitter and antenna impedances are not matched, less power is transferred to the antenna. Modern solid state transmitters usually have protection circuitry that reduces the power output (and input) in the presence of high SWR. (When the SWR is high there are high voltages present that can damage components.) In order to avoid this situation, the antenna feed point impedance must be matched to the characteristic impedance of the feed line.

G9D03

What is the characteristic impedance of flat-ribbon TV type twin lead?

- A. 50 Ohms
- B. 75 Ohms
- C. 100 Ohms
- D. 300 Ohms

D The flat ribbon type of feed line often used with TV antennas has characteristic impedance of 300 Ohms. This feed line is called twin lead.

Who Does What

Brian Skrentny, N9LOO plays the ARRL Audio News prior to the net on Tuesday evenings. Brian has also been in charge of one of the phone tents during field day for the last few years. His wife, Angie, is also a ham (KC9BTF)

and they live in West Bend with their new daughter Chloe.

Minutes - the January 8th, 2003 Ozaukee Radio Club

Minutes of the February 5, 2003 Ozaukee Radio Club Meeting

By Carol Szudrowitz, KC9CBC, Secretary

Call to Order and Introductions:

The meeting was called to order at 7:30 PM at the Grafton Senior Center by President Vic Shier, KB9UKE. Introductions of members and guests were made. Paul, KB9WCC, brought magazines (CQ & QST) to share with whoever wanted them.

Program: Gary Sutcliffe, W9XT, presented an interesting program about Contest Tips, Tricks & Techniques. He had a great handout and encouraged all to have fun with contesting and not to give up. Some hints included; designing your station layout for efficient motion, having good equipment, and setting goals. Knowing what bands allow you best coverage, and at what times you are the loudest aids making contacts quickly. Other resources included ARRL Web site (www.arrl.org), www.contesting.com and www.qth.com as well as the National Contest Journal. One subscription was presented and auctioned off by Stan, WB9RQR.

Auction: Stan held his usual auction and then came the break.

Business Meeting:

Minutes: Minutes of the last meeting were accepted as in the newsletter.

Audit Report: Kent Christiansen, N9WH, Chairman of Audit Committee reported that the books balanced. No problems; however, we spent \$100 more than we took in.

Treasurer's Report: Dave, N9UNR, moved, and Stan, WB9RQR, seconded a motion to accept the Treasurers report. Gabe, WI9GC, reminded all to **have dues paid by March 1** in order to be in the Roster. Stan, WB9RQR made a motion that after two years of non-paid membership, due in February, a person's speed dial number would be withdrawn from the Speed Dial list. This was

seconded and voted on. The yeas carried it unanimously. An exception for this year is an extension till March as Gabe will out of town and will not print roster until March. The board has the right to waive dues in some instances. Gabe also informed all that he is retiring from UWM in September. Then a discussion was held regarding the Repeater Improvement Fund and Repeater Maintenance Fund. Dave, N9UNR, made a motion and Jim, K9QLP, seconded that telephone and electric bills should be a general fund expense; however, after discussion, the motion was amended by Stan, WB9RQR, and seconded by Jane, KB9SYI, that this be referred to the board of directors for further review. The amended motion passed verbally with 20 yeas and 7 no then the initial motion was voted on verbally, and the yeas carried it. According to Gabe's records \$250 is placed into the Maintenance Fund annually from Swap Fest proceeds. Ed Rate, AA9W, mentioned that the amount should be set each year at the board's discretion, depending upon the needs of the repeater and/or the club.

Repeater Report: Nels, WA9JOB, reported that \$200 was spent on new tubes for the repeater. The Telephone Interface Module (TIM) was replaced, and the Auto Patch is repaired. The 220 band is off the air for service. It is being worked on with the ultimate goal of improved usage and coverage on 10-meter interface capability. The 440 system is up and waiting for someone to use it. The Belgium site is still being tested in Nels' home. The control voter needs adjustments; however, it needs activity and a warmer day for doing the adjustments. Also if one has problems with unauthorized users, it is best to ignore them so that they go away. If a persistent problem arises than get in touch with Ed Rate, AA9W, or Nels, WA9JOB.

OZARES Report: None

Swap Fest: May 3, 2003 - Gene, KB9VJP, needs help with publicity and advertising. If any member is going to a swapfest please take handbill applications along for distribution. Call Gene to get them.

Old Business: Ted, KB9RLI, reminded everyone that the Post Everything Party is to be held on February 15, 2003. He needs the sign-up ASAP by February 8th.

New Business: Brian, N9L00, is now doing ARRL Audio News on Tuesdays. We still need a volunteer for the NET. Tom, W9IPR, encourages members to send him articles for the newsletter. They don't have to be long. Share a great memory about hams throughout the years. Share an idea or a project that you found intriguing. Share a website or contest idea. Share an author that inspired you. Share with your fellow hams to make the newsletter something you can look forward to.

Adjournment: Meeting was adjourned at 9:15 PM

Next Meeting: The next meeting is at the usual date- the second Wednesday, March 12, 20:00 at the Grafton Senior Center.

Attendance: Stan WB9RQR, Gene KB9VJP, Ralph N9UNR, Ed AA9W, Nels WA9JOB, Gabe WI9GC, Kent N9WH, Joe AA9HR, Bernie AA9CI, Tom W9LNL, Herb WA9UUK, Bob WG9N, Bob W9LO, Ron W9BCK, Bill W9VLL, Gary W9XT, Brian N9LOO, Paul KB9WCC, Keith KY9P, Tom W9IPR, John WA9KNY, Terry KA9RFM, Bob N9NRK, Julia KB9WBQ, Carol KC9CBC, Dan AA9QR, Jim N9NNA, Jim N9WIU, Ed AA9WCU, Rex W9CRQ, Jake KB9ZOR, Vic KB9UKE, Jane KB9SYI, Jim K9QLP

AGENDA

March 12, 2003

1. Call to order.
2. Introductions.
3. Announcements, Upcoming events, Etc.,
4. Program: New equipment demonstrations
5. Fellowship Break
6. Auction.
7. Acceptance of Minutes as printed.
8. Treasurer's report – Gabe (WI9GC).
9. Repeater report – Nels Harvey (WA9JOB)
10. OZARES report – Jon (KB9RHZ).
11. Committee reports.
12. OLD BUSINESS
13. NEW BUSINESS.
14. Adjournment to ?

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The ORC Newsletter

465 Beechwood Drive
Cedarburg WI* 53012

First Class

Next ORC Meeting

Grafton Senior Citizens Center

1665 7th Avenue, Grafton

Wednesday, March 12th

7:30 PM