



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

Volume XXIII

July 2004

Number 7

The Prez Sez

By Vic Shier (KB9UKE)

Field Day 2004 is over and we will have to wait for several months to see our official score but we already know that we had a good Field Day. Planning, teamwork, and technical expertise helped us to get a very respectable score and again prove that the ORC is a top quality club. There were also a lot of people having fun and making new friends. Congratulations to the ORC for another job well done.

We have a couple of special events coming up. The 40th annual Fish Day is on Saturday **July 17**. Kathy Pohl will be at our July meeting to make a request for about 10 club members to help with communications starting at about 8:30 that morning and ending when the parade ends. This is a great opportunity to provide a service to the community and to be involved in the operations of a big parade.

There is also a request for some communications help at the end of the month. The Saukville River Fest is on **August 31** and operators are needed to provide communications for the volunteers who are cleaning up a portion of the Milwaukee River. Cindy, KA9PZG will be at the next meeting to tell us more.

Our annual corn roast will be in August. We will be making the plans and selecting the date next week. Does anyone know when the corn will be ripe?

Did you know we have a 440 repeater? Chris, N9VCK is running a net and a CW training session on it. The frequency is 443.750 and the net starts right after the regular Tuesday night 2 meter. Here is an opportunity to get some good CW instruction.

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

Contesting

De Bob Truscott (W9LO)

Another Field Day has come and gone. Indications are that it could turn out to be our best effort ever. I don't know what numbers the phone and VHF stations ended up with, but I do know that the two CW stations increased their number of contacts by about 700, as compared to last year. The CW total, not counting the 15-meter contribution was about 1800.

A really fun contest is coming up on July 10-11. It's the IARU HF Championship Contest. CW Only, Phone Only, or Mixed Mode. 160 meters through 10 meters (except for the WARC bands). A 24-hour contest beginning **at 7:00 AM local time on July 10**. Work anybody anywhere, once on phone and once on CW on each band. A great opportunity to use the skills you've just practiced on Field Day. Rules in April QST, page 109.

For you RTTY people, we have The North American RTTY QSO Party on **July 17**. And, for the VHF'ers we have the CQ WW VHF Contest, also on **July 17**. Rules for each in July QST, page 98.

Have fun contesting.

Just Another Shack

De Tom Ruhlmann (W9IPR)

Ray Brunette, W9BUJ, dates back to 1947 as an amateur radio operator. He was encouraged to electronics by his brother in law, W9QYH, and earned his "Class B" license at the age of

16. This was followed by earning his “Advanced class license and then his “Class A” license which required 20 wpm of Morse code. Ray’s first rig was a single tube 6L6 CW transmitter and a Hallicrafter’s S20R receiver for “ears”. At the time 10 meters was hot so Ray built an AM transmitter using a pair of 807’s in the output and modulated by a pair of 809’s. His dad encouraged the hobby and bought an old windmill tower for Ray so he could have an elevated dipole with an “armstrong” rotator.

Following graduation from high school in Green Bay he played Class B baseball for the Cleveland Indians on the “Green Bay Blue Jay’s” and currently plays in the “Seniors” slow pitch softball league. Since he didn’t make it to the “Pro’s” he joined the Navy. This resulted in his going to flight school and eventually flying the F9F Phantom jet off the Ticonderoga in Korea.



Here Ray is shown in about 1957 with his SX96 Hallicrafters receiver and his “home brew” AM transmitter using an 813 tube in the final. Oh for the glow of those filaments – transistors just aren’t the same.

Following his exploits in the Navy, Ray earned his Electrical Engineering degree at UW Madison and initially operated the ship to shore radio station at Port Washington. This was followed by his joining Bob Truscott and Ron Yokes at Channel 6. Then the “sales bug” bit Ray and he started selling for Allied Electronics and then established the Newark Electronics Distribution. He liked the business so well that he founded

Lakeview Electronics in Grafton which is currently operated by his son.

Ray and his wife Renee have a 42’ Zephyr motor home and spend some of the winter months in NM, TX and FL. In the rig he runs a Ten-Tec Corsair transceiver and AL-80 amplifier and is active on the FMCA (motor coach association) net which meets at 2 PM daily on 14.263 MHz.



At home Ray runs a Ten-Tec Paragon transceiver and a Titan amplifier in addition to a Kenwood TS430 to a Henry amplifier. For antenna he has a KLM 6 element tribander at 100 ft and folded dipoles.



So that’s the shack and Ray Brunette, W9 “Big Ugly John” - but his name really isn’t John.

New Members

De Tom Ruhlmann (W9IPR)

One of our newer members, although not new to amateur radio, is Chris Jacobs (N9VKC). Chris earned his Novice license in 1992. This was followed by his Technician license the following month and his General class license a month after that. He just earned his Extra class license this past May.



Chris is shown here operating 15 meters CW at the ORC field day tent.

While he was born in Oregon, Chris has lived in a variety of places including Ireland and Germany. Chris works as a Demolition Engineer, a skill he learned in the military, for Badger Wrecking. He also serves as their computer guru, a self taught skill. He recalled that his first computer was a Sinclair and that he worked all summer in the tobacco fields for the money to buy it – no, he didn't smoke it.

Chris is active on our 2 meter net and has started a 70 cm net for technical discussions followed by code practice for those wishing to upgrade to Technician +. Welcome to the ORC and thanks to Walter Stasiowski (WA9KFR) for bringing you to our meetings.

Welcome to Chris Jacobs as a new member of ORC.

Lightning Protection

De Gregg Lengling, W9DHI

(Part 4 of 6)

Towers, Supports, Locations, Magnetic Energy and Coax Grounding

Towers:

If you are constructing a new tower remember that concrete is a fair conductor and can be used safely to augment the tower grounding system. Because concrete can absorb moisture from the ground and release it slowly over a period of time makes this possible. In addition the released moisture enhances the conductivity of the surrounding soil. It's a common misconception that a lightning strike will cause the concrete pad to explode, this is only possible on a tower with no real grounding and the strike tries to dissipate through the tower materials in the pad. If during construction you tie all the rebar in the pad to the tower and the grounding system, the pad becomes an integral part of the grounding system and the pad will not crack.

To successfully implement an Ufer ground system it is necessary to bond each of the independent pieces of rebar together, preferably by an exothermic process such as Cad Welding. Failure to do this could create a case for a spark gap between the unconnected pieces. The electrically unified rebar is connected to the tower leg and the buried ground radial system and becomes a total system to dissipate the stroke charge. The better the ground system the better the charge of a strike flows from the leg of the tower to the ground system. Ufer ground system should never be used alone and should always be used in conjunction with a ground rod system.

Non-conductive structures should not be considered for an antenna support, as the only path to ground becomes the coaxial cables. If it is a sliding structure such as a crank-up tower, the joints should be bonded using short sec-

tions of copper strap with transitional metal clamps. Normal self-supported and guyed towers will not need such jumpers. Guyed towers are better from a lightning protection perspective if the guy anchors are grounded properly. Because the anchors are located away from the tower base, some of the strike energy will traverse the guy wires and the more energy diverted away the less that can travel toward your gear.

Magnetic Energy:

Lightning has a large magnetic field associated with it. This is typical of any high current pulse. The field will couple to all nearby conductive materials. Two ways to minimize the amount of coupling of magnetic energy are: Shield your gear or place it some distance away from the likely strike location. A galvanized steel sheet may be used as a shield to attenuate the magnetic pulse coupling by 10dB. The steel should be at least 30 gauge (0.41mm) and connected to the ground system. Using distance to minimize helps as the field diminishes at the rate of 1/distance squared. In addition the added length of coax by locating a distance from the tower is that the inductive nature of the coax will minimize the conductance of the pulse field. Typically this means locating the equipment at least 6 meters or more from the tower.

Antenna Location:

A ground mounted vertical antenna is very similar to a ground-mounted tower. Both have a low impedance connection to the ground system. However if you are mounting antennas on a roof structure the inductance inherent in the conductors to the ground system will be very significant. So much so that you could have voltages in the hundreds of thousands of volts present during a strike. To reduce the inductance, increase the surface area of the conductor and the number of ground conductors. Remember that we are talking skin effect so Copper Strap is a much better conductor for the size and cost. You can route multiple conductors spread over the roof and brought down to the ground system at multiple locations. This will require that the ground system be run completely around the structure making it a perime-

ter ground. An added benefit with multiple conductors is that it will reduce the mutual coupling between down conductors and provide an unsaturated perimeter ground to absorb the surge. In theory the fields will be divided and should cancel out in the middle of the building and limit the coupling effect to wiring inside the building.

Coax Grounding:

Since the tower is a conductor and is well grounded, all the coax lines should be grounded also, using a grounding kit, at the top of the tower close to the antenna and again at the base of the tower before they led to your gear. During a strike event, the tower and the coax lines will mutually share the strike energy. If the coax lines are not grounded as they leave the tower or are isolated from the tower, more energy could be conducted toward your gear than is conducted to the ground system of the tower. Such a large inductive voltage drop could arc between the coax and the tower and cause pinholes and deterioration or destruction of the coax lines. Notice I said ground at the bottom of the tower, if you take you lines off the tower at say, 15' above ground on a 100' tower you will allow some of the surge to still continue on the coax. Remember even though the tower is all metal it is still like a resistor network and if there is 100,000 volts at the top and 0 at the bottom, you will have 15,000 at 15 feet off the ground. So even if you are running your coaxes off the tower at 15 feet you'll still want to decouple them to ground again at an entrance panel. Also make sure you leave the tower at right angles to the magnetic field surrounding the tower.

Next month we'll cover Control and Coax line protection and Power and Telco entrance protection.

Upcoming Events

July 10th – South Milwaukee Swapfest

July 17th – Fish Days at Port Washington – need 10 volunteers for parade communications – contact Kathy Pohl

August – ORC Corn Roast

August 31st – Saukville River Fest – need volunteers for communications – contact Cindy (KA9PZG).

FIELD DAY TRIVIA

De Bob Truscott (W9LO)

BREAKFAST IN BED:

Well, not exactly, but close. At breakfast time on Sunday morning 40 & 20 were both hot. W9XT was scheduled to relieve me on 40, but had to go to 20 instead because WA9AWO, who had been on duty there all night was simply “out of it”, and had to rest for a while. You can’t let a hot band go unattended so I continued operating on 40. About a half-hour later the Field Day chairman showed up with a big plate of hot cakes, scrambled eggs, and sausage. That was better than breakfast in bed, and we kept the station operating. I worked about 15 stations while enjoying the culinary efforts of the folks in the cook tent. Thanks Jim.

THE POWER FAILURE

Didn’t know we had a power failure, did you? Well, “we” didn’t, but “I” did. My hearing aid battery died in the middle of a good run on a hot band, and I didn’t have a spare handy. By the time I found one I had lost the frequency. This little malfunction probably cost us about 10 contacts. Does anyone know where I can get batteries as reliable as Ed’s generator?

GOALS

Before the contest started W9XT and I agreed on a goal of 1,000 contacts on 40 CW. We reached that number at about noon on Sunday, and set a secondary goal at that time. It was to reach a total of 1036 contacts. We chose that number as a tribute to WI9M (long time employee of channels 10/36) for his many years of FD leadership. Thanks, Gary—we appreciate your efforts over the years. Sorry we didn’t make it—missed it by 3 Qs.

THE SKUNK

After the sheepshead party ended on Friday night I set up my cot and sleeping bag in the 40 meter CW tent. (You know, that’s the one with all the holes in the roof & the wide door, which cannot be closed.) Along about 3:00 AM I felt the need to get up briefly, and in the process of putting my shoes on I saw a skunk stroll casually up to the door and stop to look in. He apparently saw nothing of interest because he left after about 10 seconds. Needless to say I was very careful not to provoke him. This happened 3 years ago, but I forgot to mention it earlier. It’s good for you campers to know who your neighbors are.

THE COLD

Back about 1973, or so, it was very cold on FD weekend. I showed up for the sheepshead party wearing a couple of sweatshirts and a parka, for which I was mercilessly ridiculed. After that I decided to never again expose myself to such abuse. Oh, how I wish I had—my fingers were so cold about 3:00 AM on Sunday that I thought they were going to freeze to the keyboard. I’d have gladly taken a whole bunch of ridicule just to have my parka that night. What was the temperature in the motor homes, you phone ops?

ANTENNAS & STUFF

Did you get a good look at Leon’s “tower on a trailer”? A masterpiece—good job, Leon. It was fun to watch the entire VHF crew trying to mate up the sections of their tower—they finally got it done, but it was a comedy act for a while. The 40 meter CW tent was erected with its “inside in”, as opposed to its “inside out”, as it was erected last year. Someone must have patched the holes because it didn’t leak at all this year. 40 CW had another experimental antenna this year—it was intended to give us a lower angle of radiation than our dipole, and thus give us a better signal into California and places like that. Turns out the angle was too low and we skipped right over all those places. That was W9XT’s brainchild. KA9RPR will be back next year, and I can hardly wait to see what those guys come up with when they get their heads together. Should be a humdinger.

Field Day – 2004

De Tom Ruhlmann (W9IPR)

Field Day 2004 was a really great time as all who were there can attest. The bands were favorable and we had a great group of dedicated operators who turned in the best scores yet. Even 6 and 10 meters opened up to add some excitement to the GOTA and Gary & Jeananne Bargholz stations. Following are a few of the photo's taken this year that give a flavor of the event and more are to be found on the ORC web site.



OK, now you guys pull while we walk it up. Gabe is directing the “pulling” while it appears that Jim is running for cover.



A view of the area shows various of the station tents and antenna.

There were a total of 6 towers, 4 beams, 5 dipoles and one half square loop erected this year. There was no shortage of antenna. Two of the towers were unique “crank-up” systems mounted on trailers while the others were erected via the armstrong method.



Gary (N9UUR) and Jeananne (N9VSV) Bargholz are shown here aligning their satellite antenna. They were also very active on SSTV and 6 meters.

We were again fortunate to have Gary and Jeananne in our group in that they were able to contribute the technology and effort to gain the satellite, SSTV and 6 meter contact points. It was a great lesson for the rest of us to see how it is done.



Julia (KB9WBQ) did a great job with the “ORC Amateur Radio” information display and tent. The event and display also resulted in another new member.



The GOTA station was very active this year resulting in over 125 contacts. Here it is being operated by Athea Jacobs, daughter of Chris (N9VKC) shown in the background.



As the sun went down the eating and drinking continued until the tables were required for the sheephead card games.



Stan Kaplan (WB9RQR), our master turkey chef, is again showing off a turkey cooked to perfection. This is only one of the four prepared by Stan.



Gabe Chido (WI9GC) is shown explaining some of the finer points of 40 meter phone competition to our Ozaukee County Board Chairman, Robert Brooks of Saukville.



Our Field Day Chairman, Jim Hillins (KA4UPW) makes a few last minute contacts at the 20-meter phone "camper".

Club Static

In the past couple of months we have gained 5 new members. Do we have 5 more volunteers to act as Elmer's? Contact Tom Ruhlmann (W9IPR) to volunteer.

Recent New Members:

John Laske (KC9FJX) - Technician
Rex Nielson (W9CRQ) - Extra
Gary Becker (N9SBG) - Technician
Mike Yuhas (KC9GDV) – Technician

No. 115 - Uninstall Those Programs Correctly

De Stan Kaplan (WB9RQR)

Almost all computer users have discovered that you cannot simply transfer a program from one computer to another. Rather, most programs need to be installed on each machine they are used on. There are several reasons why this is true. First, when we speak of a "program", we are actually describing a group of files that work together to do whatever the program is supposed to do. Let me construct an illustration. Let us suppose you have a "program" called MyEditor, a word processor. You use it to type documents, save them and print them, much like Microsoft Word. MyEditor is really a suite of

many files that work together to do the job. You might find MYEDIT.EXE in the main MYEDIT folder. MYEDIT.EXE is the main program that starts the whole works when you click on the icon. The icon itself might be a separate file, MYEDIT.ICO. For sure the "program" has several DLL files (MYEDIT.DLL, SCRMSG.DLL, etc.) that were placed in the C:\Windows\System folder during the installation process. These DLL (Dynamic Link Library) files contain programming routines to do things like showing a dialog box on the screen or sending a document to Windows so it can be printed or opening a file needed when you invoke the spell checker. The spell checker's dictionary itself might be in a file called MYWORDS.DIC. There might also be an uninstall program, typically called UNWISE.EXE, residing in the main MYEDIT folder. But don't invoke it to uninstall the program. Its name alone should warn you!

The point is, MyEditor is really a bunch of files, perhaps several dozen or more, installed in various places all over the hard drive. And to top it all off, when the program was first installed, several entries were written about it in the Windows Registry, a database containing information about all the hardware and software in your machine. Complicated? You bet. It would take at least several hours of careful hand sleuthing by a human to discover all of the files and their locations associated with MyEditor. In the old days of DOS, a program might consist of three or four files, all in one folder. To uninstall the program, one just erased the folder and all of its contents. Those days are long gone!

So then, how does one properly get rid of a program? Click on the Control Panel, then Add/Remove Programs, then find MyEditor and highlight it and click the Add/Remove button. What you are doing this way is letting Windows be the umpire. Windows will look in its Registry and perhaps the program's installation log and find (hopefully) all the files associated with MyEditor. It will remove the entries in the Registry, and perhaps some of the program files, then close. MyEditor will no longer be in the list of programs shown when you invoke Add/Remove programs.

You are not quite done, though. The icon for MyEditor may (or may not) still be on your desktop. If Windows did not remove it, right click it and select Delete. Now, use Explorer to find the MyEditor folder. If you cannot find it, click Start, Find, Files or Folders and type MyEditor in the dialog box (which, by the way, is shown by Windows by opening one of its own DLLs). That will tell you where the folder is. Now navigate to it using Explorer, right click it and select Delete. That should do it. At least 90% of the files associated with MyEditor are gone. Forget about any remaining ones - you will probably never detect them.

During the Add/Remove Programs process, you may see a message that Windows has found a shared DLL (possibly shared by other programs), and it wants to know if you want to delete it. Just for safety's sake, don't. Some other program may well need it to operate properly, and you don't want to bollix up anything but MyEditor.

Some people think they are uninstalling programs when they delete from the desktop the icon for that program. Wrong! The only thing they have deleted is the icon. All of the program files are still on the hard drive, and even the icon itself can be restored. And they wonder why, after a couple of years, no more space is left on the hard drive. If you don't clean your closet out, you can bet that it will eventually get full!

Next time we will have some words on installing programs correctly. Happy computing!

The above is reprinted from the Badger State Smoke Signals.

Minutes – June 8th, 2004

De Carol Szudrowitz, KC9CBC

Meeting was called to order at 7:33 PM

Announcements – Saukville River Fest and Cleanup is July 31. There is no rain date. Meet at Grady Park for Breakfast at 7:30 AM and assignments at 8:15. 6 to 10 Radio Operators are needed and the event should be over by Noon. Contact person is Cindy KA9PZG.

Veterans Fish Outing was held June 16 in Port Washington.

Fish Day is July 17 so mark you calendar if you can help.

In lieu of program, **Field Day** was discussed by Jim KA4UPW and Leon K9GCF. Dates are Thursday June 24 to Sunday June 27. Setup is Friday night with a Pot Luck Turkey Supper and Competition is 1 PM Saturday until 1 PM Sunday at Lazy Day Camp Grounds near West Bend.

Auction was help by Stan WB9RQR

Business Meeting

Minutes were accepted as published in newspaper.

Treasurer's Report was accepted as printed on report.

Repeater Report – Everything seems to be working well. 2 meter net is fine. 220 had some background noise on the audio until Nels WA9 JOB unplugged the 440 MHz. link receiver. The noise went away. Terry KA9RFM made a wonderful metal box to be used at the barn to house the 220 MHz. amplifier.

OZARES – Jon KB9RHZ reported that there were 3 call-ups for help during the flooding of Milwaukee River during the past month. OZARES is now officially incorporated.

Old Business – Gene KB9VJP was commended and thanked for running the Swap Fest so well.

Tom W9IPR encouraged members to be an Elmer to others. Help assist members who want to move up or new hams to encourage them to become more familiar with radio work. This keeps members interested. He also reminded members of Air Show in West Bend on the 19th & 20th of June. Meeting ended when Stan WB9RQR made the motion and Ed AA9W seconded it.

Attendance: Ed AA9GT, Jon KB9RHZ, Dave N9UNR, Gabe WI9GC, Ed AA9W, Nels WA9JOB, Barb KC9GDZ, Jeananne N9VSV, Gary N9UUR, Jim K9QLP, Bernie AA9CI, Ron KC9DKQ, Herb WA9UVK, Ted KB9RLI, Jim W9JRX, Leon K9GCF, Jim KA4UPW, Carol KC9CBC, Julia KB9WBQ, Paul KD9FM, Jake KB9ZOR, Mark AB9CD, Ed AA9WW, Ron W9BCK, Ray W9BUJ, Bob W9LO, Chris N9VKC, Paul KB9WCC, Gary W9XT, Roger W9UVV, Tom W9IPR, Steve K9DXT, Terry KA9RFM, Bob N9NRK, Stan WB9RQR, Nancy KC9FZK, Ben K9UZ, Don W9VSC, Tom AA9XK, Vic KB9UKE, Jane KB9SYI.

AGENDA

July 14th, 2004

1. Call to order – Vic (KB9UKE)
 2. Introductions.
 3. Announcements, Upcoming events, Etc.,
 4. Program:
 5. Fellowship Break
 6. Auction.
7. Acceptance of Minutes as printed.
 8. Treasurer's report – Tom (AA9XK).
 9. Repeater report – Nels (WA9JOB)
 10. OZARES report – Jon (KB9RHZ).
 11. Committee reports.
 12. OLD BUSINESS
 13. NEW BUSINESS.
 14. Adjournment to ?

Return undeliverable copies to

The ORC Newsletter

465 Beechwood Drive
Cedarburg WI* 53012

First Class

Next ORC Meeting

Grafton Senior Citizens Center

1665 7th Avenue, Grafton

Wednesday, July 14th

7:30 PM