



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.



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Number 4

From the President

De Ken Boston , W9GA

I am sure all of you are basking in the excellent warm spring sunshine that we here in WI have been experiencing this spring. March was sure 'above average' with warm temperatures, and April seems to be coming in with plenty of spring-like conditions and much greening of lawns and shrubbery. This means antenna weather is just about here, and I certainly need to begin my new HAM radio projects soon. Since I recently retired from my full time pursuit of Electrical Engineering at L S Research here in Cedarburg, I have more time to devote to these activities. Truth be told, I am as busy as ever, but do have more control of my time, which was the warning that several of my contemporaries gave to me. Even though I left my full time position at LSR, I continue to perform consulting and contracting projects part time in the Electromagnetic Compatibility arena, for a few customers in Industry. This hopefully will allow me to stretch the \$\$\$ a little farther, as I kid my wife Steffi; "Retirement is twice the husband on half the money!!"

As is the general case every spring, AES held their annual superfest this past weekend. ORC and OZ-ARES had a table in the club area, and this served as a gathering spot for a few of the membership, who came and went over the weekend. I was personally involved with sponsoring a table for the Badger Contesters, which is a very low key club involved with weak signal VHF and UHF, and contesting above 50 MHz. I, along with ORC member Gary, W9XT, and with Bruce W9FZ held the first of the Saturday AM presentations, which was a VHF 'forum' featuring the topics: VHF propagation, using WSJT, and 10 GIG in the upper Midwest. The turnout for the forum was nice, and we had fun doing the presentation.

I want to remind the membership of the upcoming spring swapmeet at the Circle B in early May, which is one of the primary funding sources for the club, and for our scholarship fund. As usual, we need a nice crew of ORC members to volunteer to help man this event. Also, we will be ramping up our preparations for the annual Field Day event in late June, which should be concurrent with the return of our Florida 'snowbird' contingent. I can report that the damaged crank up tower has been repaired, and contingent on a few details getting completed, will be back in service again this summer. There are a few new ideas regarding our field day planning, so please join in with the planning sessions as they are announced. We can use the help!

As a repeat item from last month, we have reinstated a question and answer period for dealing with questions from the newer members and guests as to ham radio operations and our club operations. I look for questions from the floor during the upcoming meeting, and see who can answer them. If you are a bit shy, please write out your question on a slip of paper or index card, hand it to me before the meeting, and I will 'ask' that question of the group at large.

I hope you join us this next Wednesday (4/11) at the Grafton Senior Center. 73 Ken W9GA

Computer Corner

No. 169: What I Do To Wipe a Drive

De Stan Kaplan, WB9RQR
skaplan@mcw.edu

I rebuild and distribute computers (free) to ARES/RACES units around Wisconsin. When a donated desktop or laptop comes in, how can I insure that I am not distributing viruses or other malware, or even distributing confidential data left over from the person or institution that donated the machine? Let me give you some background to illustrate why the answer to this question is so vitally important.

When you delete a file in a modern Windows installation (or even ancient DOS), the contents of the file are not removed from the hard disk (the same is true for a floppy). On deletion, all that happens is that a reference to the file is removed from a hidden table that lists all the files on your hard drive. That means that the OS (Operating System: Windows or DOS or whatever you are using) is free to write new data in the space occupied by that file, overwriting the original data. But until that happens, all of the data contained in that file is still there (and accessible by those who know how)! So, files that you believe are gone forever are really not. Proper application of a file-undelete or recovery program can get them back. Even if they have been partially overwritten, the remaining snippets of information can be read using certain tools. So, deleting files in this conventional way is not a secure option.

What about reformatting a hard drive? In the old days, a process called "low-level formatting" could be applied which would truly wipe the data. But, since the late 1980's, true low level formatting became impractical for the end user to accomplish without destroying the drive. Indeed, in most cases, it is not even possible anymore once the drive leaves the hard drive factory. So, when you format a hard drive today, it is really a "high level format", a format at the file system level. A file system level format works exactly like deleting a file (with regard to the data). The contents of all the files are still there, though the space becomes available to be overwritten with new data. So, formatting a hard drive is also not a secure option. Give me a freshly formatted hard drive and I promise you I can still read the files!

What about malware (viruses, spyware, etc.)? Erasing malware files, even if you can identify and locate them, just removes the reference to them in a table, as we saw above. Formatting the hard drive does essentially the same thing. Furthermore, malware writers often put in a "back door", wherein an erased malware file may be un-erased. Malware may also be planted in areas on the hard drive that are not accessible to the OS and therefore cannot be "seen" by it (or you). Or, malware may cloak itself by telling lies to the OS about what is contained in a particular spot on the hard drive. That is why virus scanners sometimes fail to clean infections. They rely on the OS' file system to find out where files are. A cloaked malware file may not be visible at all to a scanner.

So, to be truly secure, the only way to go is to completely wipe the entire hard drive. This destroys the files, the formatting, the partitions (C: , D: , E:, etc.) and leaves the hard drive in a state virtually exactly the same as the day it left the hard drive factory (except for subsequent wear and tear). That is what I do to all ARES/RACES rebuilds.

I use Webroot System Eraser, a utility that came free with product I bought from Webroot years ago. Put a bootable CD in a machine with System Eraser on it, and one is presented with a number of possible wiping schemes. I use the Department of Defense approved method, which consists of changing the first bit on the hard drive to a 1, then a 0. Then it does the next bit. When it has finished the entire drive (all 800 gigabits on a small 100 gigabyte drive), it goes back and does it again, from front to back. After the second pass, it does it a third time. This means that a small 100 gigabyte drive has 4,800 gigabits changed after the three passes are done. It takes several hours to completely wipe a drive in this

way. But, when done, even a government forensic laboratory would not be able to recover data from the drive, notwithstanding their very sophisticated methods. The drive is really clean!

There are a bunch of free drive wipers out there. Here are just a couple, and all of them are available on the Ultimate Boot CD (UBCD; Google any of these titles for more info):

1. Darik's Boot and Nuke
2. Active KillDisk Free Edition
3. CopyWipe
4. HDDErase
5. HDS shredder

You can also consult majorgeeks.com to find these or other wiping programs. They will even give you recommendations.

Be careful if you play with any of these! They do exactly what they were designed to do – they completely wipe your hard drive! Be sure that is what you want to happen, because everything will be gone, *permanently*.

When done wiping, the hard drive is blank. It will not boot. You cannot put files on it.

I then partition the drive, typically into a C:, D:, and E: partition. C: is for Windows, D: is for programs and E: is for user creations (documents, pictures, etc.). My partitioning software also high-level formats each partition, making it able to receive files. Then I add an Operating System. Now it will boot, and user files and programs can be added. And, it is squeaky clean of old data and malware! Happy Computing!

The Trailer Tower - It will rise again

De Nels Harvey (WA9JOB)

It was Sunday, June 26, 2011. Field Day activities had ended, and crews were working to wind up, fold up and secure tents, wires, and equipment. Everyone within earshot heard the frantic warning, and many turned to see the bright yellow tower on the bright blue trailer coming down much too fast. It was frightening to see the tri-band beam antenna crash into the ground, and the tower, with the two sections nested together, fold over the front trailer support, hopelessly damaged.

Many people ran over to the trailer, to try to help. Thankfully, there were no injuries! The damaged tower was assessed, and the broken tri-band antenna was detached from its mount. Preliminary inspection showed that damage to the antenna was not severe. It appeared the antenna elements that were broken could be replaced, or repaired, and the antenna would serve Field Day again.

The tower however, was severely damaged, and many people expressed doubt that it could ever work again. It seemed that we had lost the trailer's services. How could the Club ever be able to use the tower trailer again? With heavy heart, the shed crew gingerly parked the tower trailer back into its spot in



the shed. After the rest of the tents, stakes, ropes, coolers and other equipment were stored, the weary Field Day workers closed, and locked the shed. They all pulled out of the driveway, and while saddened about the days event, thoughts of home, a hot shower, and dinner took over, and the broken tower trailer sat, out of sight, and out of mind, behind the locked door.

At one of the Fall Club meetings, someone was curious about whether anything was being done about the damaged trailer. The answer they received was no! Anyway, Winter was upon us, and Field Day was a long way away. Who could work on the tower trailer in the middle of winter? Anyhow, who in the Club could work on the project at anytime? Mark, KC9GST, had retired to Florida, and he was the last member that had the wherewithal to do such work.



Last year, I came to know a fellow ham from Calumet County. He is Brian Turkiewicz, KC9LFR, who lives in New Holstein, WI. He is the Calumet County ARES EC, and is very active with radios, towers, and weather activities. Brian spearheaded the crew who removed the Dick Scarvaci (SK) tower. He also purchased several surplus tower sections that had been stored in the shed. I approached Brian with the problem of the tower trailer, and he said he would be able to get it repaired, and very reasonably.

Saturday, March 17, 2012, Tom Trethewey KC9ONY, and I met Brian at the shed, intent on pulling the damaged tower trailer out. Well, it took much effort because the cook tent was on the front of the trailer. That is at least a five man job, but we managed to roll the tent onto some coolers without damaging it. A bit of lifting and tugging, and the reluctant trailer finally rolled out of the shed. Brian hooked it to his SUV, and we saw it go down the road, to somewhere unknown!



Sunday, March 18, Brian returned the tower trailer, and parked it in front of the shed door. I found a modest bill for their services, and an SD card with some photos. The lower section was replaced with a better, stronger, used Universal tower, properly mounted on the base plate, and with some painting. The tower trailer will once again serve us at Field Day this year.

Club Static

The Florida Air Museum is located here at Sun-N-Fun and receives partial support from the fly-in event. At a docents meeting we started a discussion of having an exhibit of aviation communications and amateur radio. This led to discussion of having a museum sponsored club and station. This led to three of us HAM's giving a presentation to the Civil Air Patrol group at the charter high school on the grounds. Twenty one of the 59 signed up to participate in a Technician License training program. This followed previous discussions with members of the Lakeland FL and Lake Wales FL amateur radio clubs who volunteered to run the training program should there be a need. These students will probably form the core of the museum club but we are currently recruiting from the local volunteer and pilot population. At this point there seems to be great interest and enthusiasm. It is fun to be a part of it all.



Here at the Sun-N-Fun fly-in they also have an education center. During the fly-in they have a variety of activities set up in the new "Piedmont Hanger" building that interest youth. While it was not originally planned, Jim Riverside, a HAM from Michigan and I set up an HF station using an ICOM 706 and a vertical on 40 and 20 meters. We also had a 2 meter station in a box loaned to us by the Polk County Emergency Management group. The HF and VHF stations were manned by Jim and Patrick O'Neil (KI4CDY), president of the Lakeland FL amateur radio club. These stations appealed mostly to the older kids and adults.



The really big hit was the Morse code demonstration table. Ren Monllor (KG4BAS) and his son (Ansel, KJ4ZRU) and daughter (Gabrielle, KK4ASD) of the Lakeland amateur radio club assembled 6 code oscillators and created a game using Morse code. It was really a hit with the younger visitors. The kids were really excited when they could send and receive their name in code. Perhaps "code" is the way to get kids interested in amateur radio.

We also had air traffic control simulators and airplanes in which they could set and "fly".

Among the various other exhibits/demonstrations were paper rockets, small engines, wing rib building, weather experiments and sound wave experiments. For the very young there was face painting, paper airplanes, paper parachutes and coloring.

It was a really great time.

Membership Meeting Minutes– March 14th, 2011

By Janice Hoettels, KA9VVQ, Secretary

President Ken Boston, W9GA, called the meeting to order at 7:30 pm Members present then introduced themselves.

Announcements/Show-and-Tell:

Stan Kaplan, WB9RQR, mentioned that club member Cindy Douglas, KA9PZG, will be asking for ORC members to help with the Saukville River Clean-up that's coming up in May. Further info from Cindy soon via the club's re-mailer.

Tom Trethewey, KC9ONY, reminded the club about the upcoming hamfest at the Jefferson County Fairgrounds March 18.

Bill Howe, KA9WRL, discussed the recent party held by LeFrog members at the Machine Shed. He noted that the club had a new banner made. At the party, club members had their picture taken with the new banner and Bill submitted the picture to the ARRL for possible inclusion in QST. Bill said that the ARRL responded that they will print it in a future edition of QST. Bill also mentioned that LeFrog will be the AES Superfest March 30 and 31 at Amateur Electronic Supply in Milwaukee. The LeFrog table will have a display of home-brew radios.

Ken Boston, W9GA, mentioned that the Badger Contesters will also be at the AES Superfest, and that he might be giving a talk relevant to VHF weak signal operating. He encouraged ORC members to stop by.

Nels Harvey, WA9JOB, asked about the ORC's representation at the AES Superfest. It was noted that the club will have its usual table at the event staffed by club members.

Program: Terry Koller, KA9RFM, gave a presentation about his experiences building his uniquely constructed antenna tower.

50/50 Raffle: Dick Holt, AB0VF, won the 50/50 raffle.

Auction:

Stan Kaplan, WB9RQR, played the role of auctioneer once again during the meeting. With a great list of goodies to bid on, Stan got a number of members to part with a good amount of their hard earned money. Stan even bid against himself twice on one item! Proceeds go to the club's scholarship fund.

Business Meeting:

President's report: Ken Boston, W9GA, asked members to vote on a change in the meeting's order, moving the auction from its current position early in the meeting, to the end of the meeting. This change was originally brought up by Brian Skrentney, N9LOO, to allow those members who would like to attend the business meeting, but not the auction, leave a little earlier in the evening. Brian and a few other members have to get up very early the next morning for work, so they'd like to leave the meeting earlier, but still attend the business meeting. The vote was as follows: 12 members voted to leave the meeting order as is; 7 voted to change the order; and 13 voted that it made no difference to them what order was

followed. It was therefore decided to keep the meeting sequence the way it presently is, although Ken noted the club could revisit the issue again later in the year.

Ken noted that the audit committee is now formed and that the audit will soon be scheduled.

Ken again reviewed various committee and appointed positions that remain open and asked for volunteers. See Ken if you're interested in helping out.

Ken conducted a new member/new ham Q&A session.

- Dave Carpenter, KC9REP, asked if the club had considered creating and sending out a "new member packet" with useful information about the club and amateur radio. Dave Barrow, N9UNR, noted that he does this, although he's fallen behind the last few months while taking over as club treasurer. He hopes to get back on track with this task soon.
- Nathan Scheunemann, KC9SMP, asked whether there was much DSTAR activity in the area. Tom Trethewey, KC9ONY, provided a brief overview of what's available locally and in southern Wisconsin. He also noted that DSTAR can be quite challenging to learn to use, but once you get the hang of it, it's quite fun. Tom's happy to answer further details outside of the meeting for those who are interested in trying out this mode.
- Jeff Alper, WB9PZD, asked about the difference between IRLP and Echolink and the availability of each on local repeaters. A discussion about IRLP and Echolink among various members ensued. Briefly, Stan Kaplan, WB9RQR, noted that Jim Albrink's (K9QLP) repeater has Echolink available, as does the Oz/ARES repeater (147.33). IRLP is more complicated to use, while Echolink is much simpler...it can even be used with just a computer (no radio). The ORC 2m repeater does not have Echolink because getting an Internet connection to the repeater site would be cost prohibitive, according to Dave Barrow, N9UNR.

1st VP Report: Art Davidson, KC9PXR, noted that the PEP had 40 attendees this year. There was good food, conversation, and entertainment. However, the event ran a loss financially.

2nd VP Report: Brian Skrentny, N9LOO, mentioned that John Schrader, W9NRG, will act as club liaison with the Grafton Fire Dept. for the fall swapfest at Fireman's park. Brian also said that everything appears to be in order for the spring swapfest May 5, but he would like to touch base with Tom Ruhlman, W9IPR, to confirm the table count.

Repeater VP Report: Tom Trethewey, KC9ONY, noted that all repeaters have been working over the past month. However, the Germantown node has been temporarily turned off to deal with some voting issues. Tom again encouraged members to try out the 440 machine and to join him Tuesday nights at 8 pm for an informal net in the club's 2m repeater.

Secretary's Report/Minutes: A motion to accept the minutes as reported in the last (March) newsletter was made by Dave Barrow, N9UNR. Stan Kaplan, W9RQR, seconded the motion and the motion passed.

Treasurer's Report: Dave Barrow, N9UNR, noted that the financial report appears in this month's newsletter. Dave provided a brief summary, noting that the PEP's expenses exceeded its revenues. If any members would like a more detailed financial report than that listed in the newsletter, email Dave and he will send it to you.

Gary Sharbuno, WI9M, made a motion to accept the treasurer's report. Bill Howe, KA9WRL, seconded the motion and the motion passed.

Old/New Business: None

Adjournment:

Jon Sanfillippo, WW9JON, moved and Tom Trethewey, KC9ONY, seconded the motion to adjourn the meeting.

At 9:00 PM. the meeting was adjourned.

Members signing the attendance sheet:

Kate Holt, KB0SIO; Dick Holt, AB0VF; Mark Tellier, AB9CD; Rick Whitehead, AB9XI; Nathan Scheunemann, KC9SMP; Dave Carpenter, KC9REP; Mark Fielkow, KB9PXE; Todd Fast, N9DRY; James Zevalkink, KM6X; Nate Seidlow, KC9TSO; Glenn Classey, KC9UHP; Jon Sanfilippo, WW9JON; Ben Smith, KC9TZM; Brian Skrentny, N9LOO; Tom Murtaugh, W9VBQ; Tom Trethewey, KC9ONY; Art Davidson, KC9PXR; Dave Barrow, N9UNR; Stan Kaplan, WB9RQR; Kristian Moberg, KC9TFP; Bill Howe, KA9WRL; Gary Sharbuno, WI9M; Kent Christiansen, N9WH; Ray Totzke, W9KHH; Nels Harvey, WA9-JOB; John Strachota, W9FAD; Bob Krubsack, WQ9N; Gary Klupper, KC9EOV; Ron Yokes, W9BCK; Lori Ann Parkinson, N9PCA; David Parkinson, KA9RNU; Michael York, KB9YHF; Paul Given, N9PG; Gary Klupper, KC9EOV; Janice Hoettels, KA9VVQ; Jeff Alper, WB9PZD; Ken Boston, W9GA; Ed Rate, AA9W; Bob Frank, N9NRK; Terry Koller, KA9RFM.

Visitors: Kimbel Nap, W9NAP; David Zima, KJ7JG

AGENDA

April 11, 2012

6. 7:00 – 7:30 PM – Network & Rag Chew
7. Call to order – Ken Boston (W9GA)
8. Introductions.
9. Announcements, Bragging Rights, Show & Tell, Upcoming events, Etc.,
10. Q & A
11. Program:
12. 50/50 – Kent Christianson (W9WH)
13. Fellowship Break
14. Auction – Stan Kaplan (WB9RQR)
15. Presidents Report – Ken Boston (W9GA)
16. 1st VP Report – Art Davidson (KC9PXR)
17. 2nd VP Report – Brian Skrentny (N9LOO)
18. Repeater VP report – Tom Trethewey (KC9ONY)
19. Acceptance of Minutes – Janice Hoettels (KA9VVQ)
20. Treasurer's report – Dave Barrow (N9UNR)
21. Committee reports.
 - May 4th opportunity Days at Parkview
 - May 5th Swapfest
 - Other:
22. OLD BUSINESS
23. NEW BUSINESS
24. Adjourn 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, April 11th

7:00 PM – doors open

7:30 – Membership Meeting