



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: www.ozaukeeradioclub.org

Facebook: facebook.com/orcwi

Volume XXXV

February, 2016

Number 2

From the President

de De Chuck Curran, W9KR



I am planning our first ORC Board meeting in 2016 for 6:30 PM on February 10th, just prior to our first club meeting. We have several topics on the agenda to review. The first topic will be going over the draft of the 2016 Budget, already prepared and submitted by Dave Barrow. Thank You Dave!

We do hope that anyone with a budget recommendation will contact myself or any Board member prior to next week Wednesday, with their ideas. It can then be reviewed and acted on.

Another topic at the Board meeting will be the Appointed Positions in the club. Actually, we have had very good results in contacting people who were active in 2015, with almost all willing to handle their past appointment in 2016 again. A big Thank You to Kate Holt and Nancy Stecker, new volunteers, who have agreed to handle the 2016 Corn Roast. We will be needing another 2-3 people to also support their effort, that being helping to pick up supplies and unloading them at the picnic sight and other activities delegated by Kate & Nancy. Please keep this in mind and consider volunteering right away! We also have another 18 people who are handling other Appointed positions, a Big Thank You to the entire group!

As always I seem to rattle on about different things occurring in the basement workshop. This month I want to share my Battle a Collins KWS-1 Transmitter owned by Bill Shadid, W9MXQ. Bill acquired a group of Collins S-Line gear and chose to get started on their repairs first. This left his KWS-1 1000 watt transmitter to collect dust. I asked if I could work on it, an item not on the air for at least 30 years. After many bumps in the road I finally, with help, discovered the main fault and the rig is now back on the air with no remaining issues. It turned out to be a factory assembly line soldering fault that created an intermittent failure. It was so unique that the Collins Collectors Association magazine, "The Signal", asked me to write up the entire repair effort and it will be published later in 2016.

So now on to the repair of my Collins KWM2-A vacuum Tube Transceiver. It last worked in the 1980's. Time to go to Costco and get another BIG bottle of Excedrin, I ran out during the KWS-1 project mentioned above! Everyone needs to know that our Awards Banquet is set for February 20th at "The Hub" in Cedarburg. So far we have only had about 18 reservations made. For me this is turning out like a vote, for or against an Awards Banquet. We need a minimum of 30 people to make this a practical event. If you are planning on attending, please make your reservation by 5:00 PM on February 10th. Or, do we cancel it? Your thoughts and comments are important, please send your ideas.

73's, Chuck W9KR

No. 216: How to Recycle a Desktop Computer and Monitor

Stan Kaplan, WB9RQR
715 N. Dries Street
Saukville, WI 53080-1664
(262) 268-1949
skaplan@mcw.edu



One hundred and sixty one Computer Corner articles ago (#55, Jun 98), I wrote on this subject, and also again in Nov 11 (#165, over 5 years ago). The process continues to be important, as computers become cheaper and easier to replace, and today many are being replaced by smart phones, iPads and the like. It is a bad thing (and illegal, too) to just put an old computer in the trash. So, here is how to approach it today, including recycling of flat screen monitors.

So you have an old desktop you want to get rid of. Start by taking off the covers by removing every screw you can find on the outside of the case. Look inside at the motherboard and find the button cell battery (about the size of a quarter), and use a small screwdriver or knife to pop it out of its holder. Wrap it with

masking or clear tape – both sides – and put it into the trash (there is currently no operational recycling program for these batteries). You can put them into your hardware store's battery recycling box (there is no charge for this), but the recycling company will probably trash them. The tape will prevent accidental shorting of the battery and a potential fire. This cell kept in memory any alterations to the CMOS made when the computer was set up, including the BIOS (Basic Input Output System) settings.

Now, remove all the cables going to the hard drive, CD-ROM drive and floppy drive, if present. Put them in the trash, or if you want to save them for some future building project, neatly coil them up and wrap with a piece of tape. Disconnect every plug you can find on the motherboard – speaker, power connectors, connectors going to the front panel, and so on.

Next, remove every screw you can find inside the case. Remove those holding the video and other adapter cards, the CD-ROM, floppy and hard drives. Don't forget the screws holding the motherboard. Now pull out all those components, including the motherboard and power supply. Put the plastic front panel in your household recycling after removing all the metal components. Set the disemboweled case and covers aside. If your community has a steel recycling program, drop them off when you have a chance. I take mine to a nearby recycling company – they are more than happy to have clean steel to add to their tonnage. Actually, they will take the circuit boards, too since there is gold and other valuable metals on them. Alternatively, you might take the circuit boards to the next swapfest and put them on a table with a FREE sign attached. Or, maybe a science teacher in a nearby school could use them with a unit on electronics.

If you are handy, the power supply can be made into a fine supply for an HT, QRP rig or other small radio. Search the Internet for guides on converting PC supplies – there are a ton of them. Hint: the yellow wires are +12 VDC, regulated. Just be sure to use care, and remember that there are lethal voltages in there! If you don't want to use the power supply, open it and get the fuse (for your junk box) and fan. The fan is a 12 VDC unit and is virtually identical to the fans used to cool many modern ham rigs. If you come across a fan that works on 110 VAC (the computer is REALLY old if you do), hang it from the rafters in your basement to keep the air circulating (I have four doing just that right now). They pull very little current. If you are a builder, you might want to unsolder and save any transistors or 3-terminal regulators that you find in the power supply. And, there is some nice wire for other projects in there, too.

Disassemble the CD-ROM, floppy and hard drive, for a lesson in how these devices work. You may well need some small Torxx bits for the hard drive, but the effort is worth it. Hard drives are the most complex mass-produced electromechanical devices on the planet, and it is really interesting to see how these precision devices are assembled. Also, they have one or two extremely powerful permanent magnets in

them, which are handy to use around the shop. Watch yourself, though!. Don't get a finger between one of these magnets and a piece of steel! When you have cleaned everything out of the hard drive case, put the case in with your aluminum cans ... it is a machined, solid chunk of aluminum. Check it out with a magnet. Turn it into soda cans. Oh yes, hang those shiny aluminum platters on your trees to keep the deer from eating the branches. Aren't they beautiful?

Monitors: If they are the old CRT type (the tube is made of heavy, leaded glass), don't even think about opening the case. They are dangerous, owing to the high vacuum in the tube (the front of the tube is the screen), and high voltage that can persist for many months after the unit is unplugged. You definitely cannot put these in the trash, either, since they are considered hazardous materials (the leaded glass will etch and leak lead into the water table below the landfill). Take it to a place that recycles these old beasts. It may cost you a fee. Start by calling Best Buy to see if they will take it.

On the other hand, newer flat screens can be opened and their components can be reused by you or recycled. Find and remove the screws that hold them together, and carefully pry off the halves that comprise the case. Sometimes those screws are hidden under little adhesive circles, so you may have to study the case a bit. After removing all metal from the case halves, put the halves into your household recycling bin along with other plastics. Yes, the recyclers will take them. What is left is a "sandwich" of a number of interesting pieces of plastic, and one bonded sheet of glass. You will have to remove some very small Phillips head screws to get all this apart, but again, it is worth it. For example, you will find one very thick piece of acrylic plastic that might serve you in an upcoming project. There are also some interesting thin sheets of plastic – some bone white and opaque, some transparent and some translucent showing Moiré patterns when held to the light. I suspect these are used to polarize the light generated by the screen. All these sheets and layers, including the thick acrylic one, are as large as the screen, and the thin ones can be cut with scissors for a project. Put that bonded glass sandwich in the trash, and wonder at the fact that you are throwing out several million transistors when you do it.

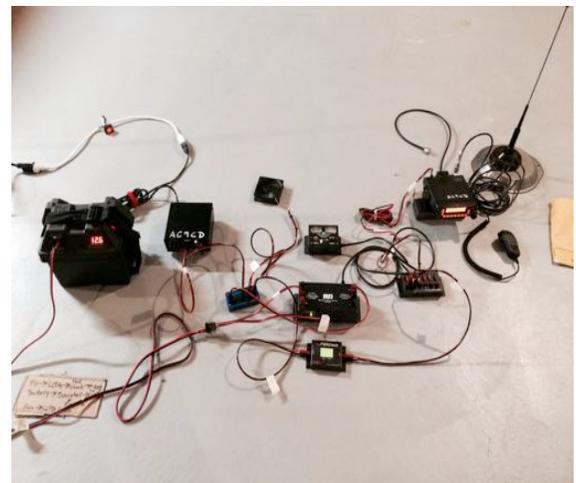
All done! But what have you gained? Lots of screws and wire and other stuff for your junk box, plus some goodies to be recycled and kept out of a landfill. And I hope you have taken the time to study each device you removed during disassembly. If so, you have probably learned quite a bit about how each works. The hard drives are especially amazing. While their mechanical assembly is merely akin to a very high precision phonograph record machine, the electronic control of reading and writing the magnetically recorded bits on those shiny platters is very, very complex. All that control is centered on the small circuit board on the bottom of the hard drive!

Happy Computing!

Project of the Month – The Go-Kit

As the leader of the Ozaukee County Amateur Radio Emergency Services group (OZARES) which would be called upon in the event of a failure in commercial communications systems such as cell phones etc. Art Davidson, AB9CD, felt the need to have a GO-KIT. A GO-KIT includes a communications system that is always ready when the call comes. Art started with a case and then identified the parts he needed to create a complete portable emergency communications station. The result is impressive and he shared it with us at the December meeting.

His station in a case contains the FT8800 VHF/UHF transceiver and



all the power accessories to power it .

State-wide Emergency Exercise

de Art Davidson, AC9CD

In August of 2015 there was a Full Scale Disaster Exercise and the central command post was at the Waukesha County expo center. OZARES was there and getting the experience to perform should a real emergency arise. That's Skip Sharpe W9REL in the foreground, Chief RACES Radio Officer, with me in the adjacent operating position as net control for ARES. Don Zank AA9WP also acted as net control for the exercise.



Upcoming Events

What: The Ozaukee Radio Club Annual Awards Banquet **Where:** The Hub at Cedar Creek
1814 Washington Avenue, Cedarburg, WI 53012
(262) 618-4751

<http://www.thehubatcedarcreek.com/>
(intersection of Washington Avenue and Horns Corners Road)

Directions: <http://tinyurl.com/TheHubatCedarCreek> **When:** Saturday, February 20, 2016
Cocktails: 6:00 pm (cash bar), Dinner: 6:45 pm

Cost: \$19.00 per person

Please send RSVP and payment **before February 10, 2016** to:
Dave Barrow, 1894 Elm Drive, West Bend, WI 53095

Pay via **Paypal:** <http://www.ozaukeeradioclub.org/index.php/awards-banquet>

Menu: Angus Beef Tips in Gravy, Southern Fried Chicken, Sour Cream Mashed Potatoes, Steamed Buttered Corn, Chopped Salad with Ranch & Italian Dressing, Rolls with Butter, Glazed Apple Pie Squares

Our Awards Banquet is set for the evening of February 20th, at "The Hub" in Cedarburg. We need to have all reservations by February 10th at 5:00 PM.

CHECK OUT THE CLUB WEB SITE FOR THE DINNER DETAILS AND ADDRESS!!

Please consider going to the ORC web site and making your payment ASAP! Don't delay, do it today!

Thanks, Chuck W9KR

The Board of 2016



Elections were held at the January meeting and your board for 2016 is pictured above.

Back Row standing L to R:

Gary Drasch, K9DJT (Past President), Tom Trethewey, KC9ONY (Repeater V.P.),
David Carpenter, Sr., KC9REP (2nd Vice President), Chuck Curran, W9KR (President), Kevin Steers,
K8VIN (1st Vice President)

Front Row seated L. to R:

David Barrow, N9UUR (Treasurer), Ed Rate, AA9W (Trustee)

Not Present:

Zack Yatso, KC9ZNR (Secretary)

Minutes– January 13th, 2016

by Nancy Stecker, KC9FZK

Meeting called to order at 7:28 p.m. by President Chuck Curran (W9KR). Introductions followed.

Announcements:

Bob Schatzman (KD9AAD) passed the extra exam.

Vic Shier (WT9Q) changed to Charter cable and got rid of interference on his TV.

Nels Harvey (WA9JOB) has rooms available for Dayton, 1st weekend in May.

Jim Albrinck (K9QLP) said Bernie Golownia (AA9CI) is undergoing surgery.

Gary Drasch (K9DJT) received a "Worked All States Triple Play Award" and participated in a 24 hour RTTY contest with 615 contacts.

Art Davidson (AC9CD) has a Yaesu H F transceiver for sale.

Gary Sutcliff (W9XT) is developing a product and is looking for input.

Ed Rate (AA9W) said a \$2000 scholarship is being offered for college students.

50/50

No drawing this month.

Auction

Stan Kaplan (WB9RQR) held an auction.

Officer Reports

Chuck Curran (W9KR) President: The choice of menus for the Awards Banquet was presented. The membership chose the beef/chicken option. The club has three new grills for use at club activities. The Town of Cedarburg approved the club's use of the Pleasant Valley Park for Field Day.

Kevin Steers (K9VIN) 1st VP: No report

John Strachota (W9FAD) 2nd VP: No report

Tom Trethewey (KC9ONY) Repeater VP: Problems with 2-meter repeater are still occurring. He is looking at a replacement for the amplifier.

A motion to accept the December minutes was made by Dave (N9UNR), seconded by Art (AC9CD) and carried without debate.

Dave Barrow (N9UNR) Treasurer: Dave (N9UNR) made the motion to accept the Treasurer's report, subject to audit. Ted (N9LLT) seconded the motion. The motion carried without debate.

Committee Reports: No reports.

Old Business: Ken (W9GA) is looking for candidates for awards to be given at the Awards Banquet. He is also looking for donations of prizes for the banquet.

New Business: Ken (W9GA) read the names on the ballot for the officers nominated for 2016. Stan (WB9RQR) moved to accept the ballot as written. Jerry (KC9WUI) seconded the motion. Discussion followed and the motion was defeated. Stan (WB9RQR) made a motion to accept the slate without the Treasurer's position. Jerry (KC9WUI) seconded the motion, and the motion passed. Chuck (KC9YEP) nominated Nels (WA9JOB) for the Treasurer's position. Ballots were handed out and the reverse side was used for members to vote for the two nominees for the Treasurer's position, Dave (N9UNR) and Nels (WA9JOB). Ken (W9GA) and Chuck (W9KR) counted the ballots. The final count, with one abstention, showed Dave (N9UNR) had the most votes. Chuck (W9KR) announced the audit committee would consist of Sandy (W9BTN), Ed (AA9W) and Jim (K9QLP) with a meeting date to be decided by the committee.

Adjournment: Stan (WB9RQR) made a motion to adjourn at 8:15p.m. Seconded by Ken (W9GA), the motion passed.

Attendance:

38

members

present.

AGENDA
February 10, 2016

1. 7:00 – 7:30 PM – Network & Rag Chew
2. Call to order: Chuck Curran (W9KR)
3. Introductions.
4. Announcements, Bragging Rights, Show & Tell, Upcoming events, Etc.,
5. Program:
6. 50/50 – Kristian Moberg, KC9TFP
7. Fellowship Break
8. Auction – Stan Kaplan (WB9RQR)
9. Presidents Report – Chuck Curran (W9KR)
10. 1st VP Report – Kevin Steers (K9VIN), First Vice-President
11. 2nd VP Report – David Carpenter, Sr., KC9REP
12. Repeater VP report – Tom Trethewey, KC9ONY
13. Acceptance of Minutes : Zach Yatso (KC9ZNR), Secretary
14. Treasurer’s report – Dave Barrow, N9UNR
15. Committee reports.
Other:
16. OLD BUSINESS
17. NEW BUSINESS
ByLaw proposed changes to #7 and #9
18. 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, Feb. 10th

7:00 PM – doors open

7:30 – Membership Meeting