



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:**

Volume XXII

September 2003

Number

9

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

The Prez Sez

By Vic Shier (KB9UKE)

The last meeting gave us two interesting programs. Mark, N0OKS did a Show 'N Tell on his Elecraft K2, a small transceiver that comes with assembly instructions and a bag of parts. It was obvious that Mark not only enjoyed building it but also enjoys using it. It seems that many hams are excited about these little rigs with big features.

Then Ted, W9NHE gave an enthusiastic demonstration of meteor scatter operation. Using a computer and an all-mode 2 meter rig, he has made contacts all over the States. Some of them with high speed CW that only a computer could copy.

Thanks to both of them for the informative and entertaining presentations.

Fall is coming and with it is an annual event called JOTA or Jamboree On The Air. JOTA started in 1958 and runs the third full weekend in October. Scouts from around the world are given an opportunity to operate ham radio and talk to scouts in other lands. About 500,000 Scouts and Guides participate each year. This is a wonderful opportunity to introduce children of all ages to ham radio.

Bill, KA9WRL will tell us more about it at the next meeting.

Look forward to seeing you there.

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

Upcoming Events

4 Sept. - Badgerland Amateur Television Society - 7:00 PM at Space Place in Madison. Tentative launch date for the balloon flight is Sept. 27 with Oct. 4 as rain date

6 Sept. - Eau Claire Hamfest
- KG9RA@ecarc.org

20 -21 Sept. - Grayslake IL - Swapfest
Disregard previously published and flyer published dates for Grayslake - the correct date is Sept. 20 & 21.

20 Sept - fifty first **W9DXCC Convention** at Holiday Inn in Rolling Meadows, Illinois - looks really quite interesting - check it out on the web.

Contesting

De Bob Truscott (W9LO)

One of the better state QSO parties is coming up on Oct. 4-5. It's the California QSO Party, commonly called CQP. CW/Phone on all bands (except for 12, 17 & 30) from 160 through 2 meters. Work CW only, phone only, or a combination of the two. It starts at 1600Z on Oct. 4, and ends at 2200Z on Oct. 5. Complete rules at <http://www.cqp.org/>, and probably in Oct. QST. Free logging software at <http://www.cqp.org/Software.html/>. I used an earlier version of that software a few years back, and it worked very well, but plan to use NA because it's my favorite, and it also supports that party, as do a number of other programs. This is not the old "dog eat dog" contest that November Sweepstakes and Field Day sometimes are, but rather it has a more leisurely pace like the Wisconsin party. It's also a good opportunity for you county hunters to pick up a bunch of California counties—should be able to get them all if you

put your mind to it. And for you “gung-ho” contesters, it is a good warm up for the fall/winter contest season. Try it—you’ll like it.

Now a word about co-existence with non-contesters. Sometimes it’s like the NRA and the gun control advocates butting heads—each thinks the other has, or should have, no rights whatsoever. Those guys don’t have frequencies, but we do, and too often some of us think we own the one we happen to be using, no matter that a net happens to use it at the same time every day. And then there is the rag chewer who attempts to clear “his frequency” of contesters because it is his schedule time, even though the contester has been using it for the last hour. These kinds of incidences often lead to verbal confrontations where things are said which should never be said on our air, and, to malicious interference. And you contesters, don’t bug the rag chewers for contacts—if they want to participate, they will tell you so. You’ll probably miss a couple other contacts during the time you’re trying to pry the contact info out of them.

And don’t forget the contester who puts his keyer on automatic repeat (so that it sends CQ repeatedly) and “holds” the frequency while he takes a break for a brew and a burger (or whatever he does for 15-20 minutes). The first time I heard someone do that I thought his receiver had died or he had a noise level of S-9 +40 dB, and just couldn’t hear all of us calling him. I thought that, until a guy bragged about using that technique on the Internet after one of the contests last year—Sometimes I’m slow to catch on to the crummy operating practices that some of our selfish brethren use from time to time. Fortunately those guys are in the minority.

With the fall contest season about to start, it’s time for us all to clean up our acts, regardless of which side of the fence we operate from, and be more considerate and tolerant of others. Try it—it will lower your blood pressure.

Coming up in September:

Sept. 7 North American Sprint----CW
- Rules in Feb. QST, page 103

Sept 13-15 ARRL September VHF QSO
Party - Rules in Aug. QST, page 103

Sept. 20-21 QRP Afield - Rules in Sept. QST,
page 106 - This looks like a good one.

Sept. 27-28 CQ WW RTTY DX Contest
-Rules in Sept. QST, page 106

Oct. 4-5 California QSO Party -
See details above.

Official Scores:

ARRL 2003 Int. DX Contest – CW

| | Score | QSO's | Mults |
|-------|---------|-------|-------|
| W9XT | 114,144 | 464 | 82 |
| K9CAN | 71,910 | 282 | 85 |

ARRL 2003 Int. DX Contest–Phone

| | | | |
|-------|---------|-----|----|
| W9XT | 154,008 | 552 | 93 |
| K9CAN | 66,555 | 261 | 85 |
| WI9M | 32,193 | 147 | 73 |
| K9LO | 8,256 | 64 | 43 |

Have fun contesting.

For Sale, Trade or ?

A complete station: Kenwood TS520, microphone, headset, SWR-1 meter, straight key, speaker, 80 – 10 Mtr. Trap dipole etc. - \$450 OBO.

Contact Don Belstner (W9VSC) @ 377-0426

Old Time Radio – Part 5

De Jim Hilins (KA4UPW)

This is the final installment in the process of restoration of an antique radio. Up to this point we have:

1. Removed the chassis from the cabinet
 2. Cleaned the chassis and components
 3. Determined the model number and obtained related information
 4. Assessed the condition of the chassis
 5. Tested the radio to determine if operational
 6. Replaced the filter capacitors.
 7. Perform resistance tolerance checks
 8. Make speaker cone repairs
 9. Perform operational checks
 10. Complete final troubleshooting and repairs
 11. Complete cabinet preparation for refinishing
- Now it’s time to stain and “finish” the cabinet so it looks like new.



This is the 1936 Zenith that Jim started with

1. Application of stain

The solid wood portions of radio cabinets usually need darkening to duplicate the original color. Oil based stains work well for achieving the proper color. I usually use Minwax brand stains since they are good stains and reasonably priced. I use the Special walnut color most frequently. I also use Dark Walnut, Mahogany, and ebony. You must brush the stain evenly to achieve good even coverage. Mix the stain thoroughly before application. Practice on a scrap piece of wood. I do not normally wipe the stain after application because the color would be too light if any stain is removed. If there are drips or uneven coverage, the stain must be wiped after application to even it out. If this happens, an additional coat of stain may be necessary (depending on the color desired).

I don't recommend oil-based stains on the veneered portions of the cabinet. These stains hide the highlights in the grain and give the finish a muddy appearance. Transparent stains mixed with the lacquer work best if you need to color the veneered wood. Solar-Lux makes a variety of colors that work well with lacquer. Sometimes, the wood will not take enough stain. When this occurs, tinting of the finish is required. I will cover tinting in a later section.

2. Lacquer Sealer and Sanding

When the stain is dry, it's time to seal the cabinet. Remove any dust with a tack cloth. These sticky pieces of cheesecloth are sold just for this purpose and are available at your local paint store. Before continuing, I'll take a minute to explain why we need a sealer.

The purpose of the sealer is to seal the wood (and the wood filler) in preparation for building the lacquer finish. If we were to use the lacquer finish for the seal coat, the finish would soak into some parts of the wood more than others, producing an uneven finish. Since the sealer is thin, it soaks in and leaves little buildup of finish on the wood.

Once the cabinet is clean and dust-free, spray an even coat of sealer over the entire cabinet. Overlap the spray patterns by 50% as pictured. Since the sealer dries quickly, you can sand the cabinet within 10 or 15 minutes. The purpose of the sanding is to smooth the surface before the next coat. Sand the sealer with 250 or finer grit paper. Dry sanding works well, but make sure you change paper often. Wet sanding uses less paper, but requires more cleanup. When wet sanding cabinets, I apply water to the sandpaper, not the cabinet. Wet sanding requires paper made especially for wet use. Sand carefully or you will sand through the sealer. I use sandpaper on the flat surfaces only to keep from sanding through the finish. I use steel wool on the remainder of the surface. If the surface is quite smooth already, you can skip the sandpaper and use 000-grade steel wool on the entire cabinet. After sanding the sealer, remove any residue with a tack cloth.

3. Gloss lacquer application and rubbing

The purpose of the gloss lacquer is to build a clear smooth protective finish over the wood. The number of coats of gloss lacquer required depends on the type of lacquer, the type of spray equipment and the desired smoothness. A high build acrylic lacquer requires fewer coats than a nitrocellulose lacquer. High-pressure spray equipment normally requires more coats than High Volume Low-Pressure (HVLP) equipment. I prefer using high build acrylic lacquer and HVLP spray equipment. This combination gives good results with only 3 coats of gloss lacquer. I mix the lacquer as follows: thinner - 10%, fish eye killer - several drops per quart, retarder - 0 to 20% depending on temperature (none for cool weather, lots for very hot weather). When the lacquer is mixed, it's time to spray!

As with the sealer, apply an even coat to the entire radio and let it dry. When the finish is dry you need to prepare for the next coat. If the finish is

smooth, rub it down thoroughly with 000-grade steel wool. Rub the surface until all the gloss is gone. Do not rub hard enough to remove the finish! If the finish is textured, wet sand the flat parts with 320 grit wet paper. Make sure you use the black sandpaper made for wet sanding. Use extra elbow grease and steel wool on the parts that can't be wet sanded easily. Wet sanding will cut all the finish off the high spots if used on the areas that are not flat (routed edges, moldings, etc.) Once the finish is smooth, remove all dust with a tack cloth. You can apply another clear coat or a colored (shaded) coat.

4. Application of colored coats

Colored Lacquer darkens or tints the finish to reproduce the original cabinet color. Many radios came with colored lacquer when new. Some radio cabinets were shaded all over, others were shaded only on trim pieces or the sides. When applying a colored coat, my goal is to duplicate the original color scheme. Masking is necessary where the colored coat is in sharp contrast to other parts of the cabinet. Often, the original finish was not masked, and the colored portion has a soft edge. Duplicating the soft edge is quick, but requires skill and accuracy when spraying. **Before spraying a color coat, practice on a scrap piece of wood!** A cabinet may even have two different colored coats of finish, one sprayed over the entire cabinet, and another darker one just on the trim.

I use Behlen Solar-Lux stains in my lacquer. These stains dissolve easily in lacquer and produce a beautiful transparent color. Normal oil based stains tend to give a muddy look to veneers. For this reason, I use colored lacquer on the veneered portions instead of staining the wood before finishing. The colors I use are: Medium Walnut, Dark Walnut, Mahogany, and Black. I use the black to darken the walnut for very dark trim. I add 10% to 20% stain (by volume) to my mixed lacquer. I spray the color coats a bit more carefully than the gloss coats (runs are harder to fix in a colored coat). I am not as concerned that every nook and cranny get a full wet coat of finish when using a colored coat. Altering the spray pattern to cover difficult to reach areas (as done with a normal coat) increases the risk of runs. If the color coat is not quite as smooth as I want, I gently rub it with steel wool (not too much or the color goes away) and apply another coat of gloss lacquer to smooth the finish.

5. Satin Finish Coat

When the finish is smooth enough, you are ready for the final satin lacquer coat. Make sure the finish is smooth before spraying. Steel wool as

needed. The final coat must be smooth, and even. I thin the lacquer just a little bit more on the final coat and add a little extra retarder, especially if the weather is warm. I spray the sides and front before the top to minimize overspray. The satin coat will look very glossy until it dries. If the finish is perfect, you are done!

6. Buffing the Finish

Sometimes, the final coat is not perfect so a little more work is needed. If the finish is rough, wet sand it with 1500 or 2000 grit wet paper. Don't sand the satin coat off, just smooth it. When the finish is smooth, you are ready to buff out the sanding marks. You can use rottenstone or some other fine buffing compound. I buff the cabinet by hand using a sponge. Electric buffers may cut through the finish. After buffing, remove the excess buffing compound. Now wipe the cabinet down with a soft cloth, install the radio and speaker, and prepare for many years of enjoyment of the "old time radio".



This is the 1936 Zenith after Jim worked his magic

JOTA

De Bill Howe, KA9WRL, President "LeFrog"

I would like to invite the Ozaukee Radio Club to join the LeFrog club in J.O.T.A. this year! As you may or may not know, the Local Emergency Field Radio Operating Group (L.E.F.R.O.G.) has been sponsoring Jamboree On The Air (J.O.T.A.) locally since 1987. Boy Scouts, Cub Scouts, Tiger Cubs, Girl Scouts, Brownies, leaders and parents from all over the area talk to other Scouts around the world. The problem is, the Scout attendance has been growing, but our club's participation has, pretty much, remained the same. Frankly, we could use the help!

The dates for this year's J.O.T.A. event are October 17th, 18th & 19th. We have the shelter at Horicon Ledge Campground reserved, at no charge to the club, and the only cost to us is for camping in club or personal tents. This year we'll have two (2) aluminum towers, one 30' and the other 50'. We'll have a tribander (10m, 15m & 20m) atop the 30' tower, UHF & VHF antennas atop the 50' tower and a 40m di-pole, fed with coax, between the 2 towers. We basically set up & play Friday night, operate with the Scouts all day Saturday and, after breakfast and some playing around Sunday morning, take everything down and vacate the premises. The club owns a Kenwood 2m all-mode, but the other radios come from members in attendance. I'll bring a couple of HF radios w/tuners plus various other equipment for the weekend. Steve, WB9UEN will provide all the food for the event, for a nominal fee. We do eat good!

I don't know if the Ozaukee Radio Club has ever done J.O.T.A., but it is a lot of fun...and it gives us another excuse to do some camping and play with our radios!

wghowe@netzero.net

Who Does What

@ Fish Day

By Vic Shier (KB9UKE)

Community service is an important aspect of amateur radio and members of the Ozaukee Radio Club have provided communications for the Port Washington Fish Day Parade for many

years.



There is royalty in every parade and "Fish Days" is no exception

This years hams included; Gabe WI9GC, Jim K9QLP, Gene KB9VJP, Carol KC9CBC, Jon KB9RHZ, Gary WI9M, Skip KA9DDN and Cindy KA9PZG.



Gabe, WI9GC, and other ORC members were on hand to help organize the parade and "shadow" the various dignitaries

These ham radio operators help by shadowing parade officials, providing scheduling for participants, and contacting emergency personnel when assistance is needed (they also get the best parking spots in the city.) Their 4-hour commitment helps to make a great parade even better.



What's a parade without a band and the music was great – makes you want to march

It was Aug. 16th

The annual Corn Roast was again held at Waubedonia Park and as in the past, it was great.



There was plenty of time to set by the river and “just visit” while the corn cooked and others prepared the vittles

It was again a group effort with Ed (AA9W) supplying the corn and Stan (WB9RQR), Gary (WI9M), Jane (KB9SYI), Leon (K9GCF), Carol (KC9CBC), Bob (N9NRK), Kent (N9WH), Tom (W9IPR), Herb (WA9UVK) and Jim (W9WIU) doing everything from hauling the equipment to bringing the refreshments and food to the cooking itself.



Our scholarship winner, Jayson Kempinger (KB9VGF) and his parents were also at the Cornroast where Jayson accepted the ORC \$1000 scholarship award

We also had the opportunity to introduce a local Girl Scout troop who was camping in the area to ham radio and get them started on their way toward a communications merit badge.

Next Meeting – Sept. 10th

Jim Hilins, KA4UPW, will present the final results of his antique radio restoration efforts and will display the completed radio in the refinished cabinet.

More Freebies

by Stan Kaplan, WB9RQR

Here is a tip sent to me by Paul Nelles, K9DB, of Mosinee, Wisconsin, that will provide you with a free copy of TurboCad, a 2-dimensional drafting program. Go to <http://www.imsisoft.com/free/> to download a copy of the program (16-Mb), a very nice Quick Tour (6.2-Mb) and a complete documentation file (4.1 Mb). Now get this. The package is fully functional and has no expiration date! It is powerful enough to create 2D drawings, yet easy enough to learn even by occasional users (especially with the Quick Tour, which is really quite well done and very useful). Drawings you make with it can be ported into Microsoft Office products (as well as other application programs). According to the company, "IMSI is making its Learning Edition available for free, with the firm belief that users will love the TurboCad product and will want to upgrade to our latest 2D/3D ver-

sions." The only caveat is that you furnish them with contact information so they can advise you of upgrades (and, if you choose, you can opt out of the email contacts later). That's pretty reasonable for a useful tool! Who can't use a good drawing program? I downloaded it and found it really excellent. Thanks for that tip, Paul.

And, that is not all that Paul sent. Here are some more interesting tidbits. Go to http://www.rmra.ws/rmra_WotM.html, which is the Rib Mountain Repeater Association's past "Websites of the Month" page. Each site should be self explanatory. You might want to pay particular attention to:

- Celestia = A super astronomy program that lets you fly through the solar system and galaxy and view things in from any vantage point and time.
- Sky and Telescope's Interactive Sky chart = Java applet that will display how the sky will appear from any location and time.
- Interactive Smith Chart = Java applet that demonstrates how a Smith Chart works.
- Spacecraft models = A list of sites that have downloadable printable spacecraft models. Pay special attention to the shuttle and ISS models available from the MARS center in Italy. Also note we have an RMRA designed printable model of AO-40 at http://www.rmra.ws/rmra_AO40_model.html.
- W7MD AZ-PROJ = This site will print a polar projection map of the world centered on your QTH.
- Wisconsin DOT = Maps of all 72 Wisconsin counties in .pdf format.

Happy computing!

©2003 Stan Kaplan, WB9RQR

(Copied from the Badger State Smoke Signals at [Http://www.bsss.org](http://www.bsss.org))

Minutes

De Carol Szudrowitz

ORC Meeting August 13, 2003

Call to Order and Introductions: Mark Teller AB9CD Newest member.

Announcements:

-Jayson J. Kempinger, KB9VGF of Milwaukee, the scholarship winner, will be at the corn roast.

-Bill KA9WRL will be at the September meeting looking for volunteers to help with JOTA (Jamboree On The Air) October 17, 18 & 19. This program allows Scouts to use the radio under ham supervision.

-Hamfest in Eau Claire September 6

Program:

Mark Kachel N0OKS presented the HF rig that he built. The manual makes it easy as long as you follow directions. It is a quiet rig and a joy to put together. Everything you need is on the Internet. Check www.Ellecraft.com. A magnifier is useful to tell the parts apart when building the kit.

Ted W9NHE presented information on Meteor Scatter Operations. When you've done everything else, this is fun. You use a computer program that "reads" and "sends" information. The computer clock needs to be in-sink with real time. It finds meteors, which are dense; 12 Billion hit the earth daily. Best time is just before daybreak. It uses high speed CW - 1200 words per second 12,000 letters per second. One can register on line with another ham for a meeting during a meteor shower. You can use a choice of at least 4 different programs including one for moon bounce. Ted had handouts for more detailed information.

Corn Roast August 16, 2003

Corn Provider - Ed AA9W

Save the Place - Stan WB9RQR and Gary WI9M
Food - Jane KB9SYI and Carol KC9CBC Note:

All bring a dish to pass.

Beverages - Bob, N9NRK

Pick up from Barn and take back - Kent N9WH plus others

Cook/ Roast - Stan WB9RQR and Tom W9IPR

Wood - will be taken care of as last year by Herb, WA9UVK.

Break and then Auction:

Stan WB9RQR set a record, over \$200 taken in.

Business meeting

Secretary notes approved as published in newsletter.

Treasurer's report approved as written. It included breakdown of Field Day.

Repeater report:

2 meter repeater is OK. The Mequon site wasn't voting properly. This has been adjusted. The 220 repeater is in barn with 10-meter link being hooked up to it. Some problems need to be taken care of before we can make it available. The 440 repeater at KK & LL is running fine. There will be a board meeting to discuss new tower at We energies site. Next, Jim K9QLP's repeater has been linked to Ted, N9LLT's Echolink equipment. With the Echolink program running, one can use any radio on the 442.100 MHz. repeater and go over the Internet. It needs a control operator so Ted, N9LLT, will deactivate it, if he is not available. Ted demonstrated

on Echolink by contacting Ken in Sturgeon Bay. If Jim's repeater 442.100 isn't connected, Ted's Echolink interface might be running at Ted's house on simplex 147.42. Use 127.3PL to access either system.

All the information you need to set up your own Echolink connection is on the website, www.echolink.org. It is another mode of operation to increase ham radio fun. You can talk to New Zealand for example. No hard wiring is needed, just an IBM type computer with a sound card and a microphone, and your own Internet connection. It works like a phone patch, and uses VOIP (Voice Over Internet Protocol).

OZARES Report:

New membership ID cards are available.

Scholarship Report:

Jayson Kempinger, KB9VGF of Milwaukee, will be at corn roast.

Committee Reports: Jim KA4UPW will go over Field Day report next meeting. Ed AA9W mentioned that due to a donation we will have another aluminum tower for Field Day. Club member Sus Musashi, KB9OC, who is a WWII hero and veteran, is unable to operate his ham radio any more, and donated his things to the club.

New Business:

Comment from a few members, newsletters coming to homes by mail are destroyed. Suggestion from Tom W9IPR, he will ask Peter N9NOZ to put two sticky dots on newsletter from now on. Tom also asked if anyone would be interested in helping edit the newsletter as he is hoping to take a vacation. Talk to him about it.

Tom W9IRP, asked if anyone would be interested in working with local scouts to participate in JOTA. Greg W9DHI and Mark AB9CD would work with him.

Meeting adjourned at 9:43.

Attendance: Ted W9NHE, Ted N9LLT, Jim K9QLP, Stan WB9RQR, Nels WA9JOB, Mark N0OKS, Keith KY9P, Vic KB9UKE, Jon KB9RHZ, Ed AA9GT, Leon K9GCF, Bob W9RNA, Bob W9LO, Jeananne N9VSV, Gary N9UUR, Ron KC9DKQ, Don W9VSC, Dave N9UNR, Ed AA9W, Gabe WI9GC, Kent N9WH, Charlie WA9CPE, Greg W9DHI, Bernie AA9CI, Jim N9WIU, Herb WA9UVK, Roger W9UVV, Joseph KB9URC, Jane KB9SYI, Tom W9IPR, Tom AA9XK, Mark AB9CD, Terry KA9RFM, Carol KC9CBC, Julia KB9WBQ, Leon K9GCF, James KA4UPW, Gary WI9M, Ray W9BUJ, Ray W9KHH, Ron W9BCK, Gary W9XT, Paul KB9WCC.

AGENDA

September 10, 2003

1. Call to order.
2. Introductions.
3. Announcements, Upcoming events, Etc.,
4. Program: Jim Hillins and "Refinishing the Cabinet"
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 ?

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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, Sept. 10th

7:30 PM