



The *ORC* Newsletter

Official publication of the Ozaukee Radio Club, Inc. Email all contributions to the editor, Bill Shadid, W9MXQ (newsletter@ozaukeeradioclub.org). Permission to reprint articles published in any issue is granted provided the Author (as shown in the article) and the Ozaukee Radio Club Newsletter are fully credited in any publication.



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May 2024

Number 5

From the President

de: Bill Greaves, K9GN



As of press time for the newsletter, a flurry of activity and plans are being set for another successful Swapfest on Saturday, April 27th, with results reported at the May 8th club meeting. The Swapfest Chair, Tom Trethewey KC9ONY, has put in tremendous efforts for the club's event. I hope you all had a chance to come out and participate.

Congrats to all of the award recipients at the April club meeting. Three I'll mention are "Ham of the Year" Nancy Stecker KC9FZK for her long service on the Sunshine Committee as well as other efforts, "Turkey of the Year" Nate Seidler KC9TSO for obvious reasons (!) [I received this last year so that explains a lot], and "Project of the Year" Gregg Lengling W9DHI and Tom Trethewey KC9ONY for the upgrading of the club's repeaters as well as the addition of 220 MHz.

Time to get ready for Field Day. The ARRL has swag available now with the catchy slogan of "Be Radio Active" – not to imply you need to change your personal atomic number to enjoy Field Day! New ORC Field Day Chair, Nate KC9TSO leads the club's efforts and held a planning meeting April 25th to lay the groundwork for this year's event. As you know, Ken Boston W9GA has been the FD Chair for many successful years. We applaud his dedicated efforts. Thank you very much, Ken!

As always, Field Day is the 4th weekend in June, the 21-23 this year. You can make plans to participate with the club or even in your own shack. Please do list "Ozaukee Radio Club," spelled out, in your log that you submit so the club as well as yourself receive credit for your entries.

I recommend to you the ARRL CEO's column in the May QST. David Minster focuses on ARRL transformational issues for the membership. For ORC, I see the focus being on what we can do for the broader community to enhance amateur radio and encourage more youth to join and participate. This is the focus of the STEM Committee efforts with the West Bend library. As STEM Chair Pat Volkmann W9JI has stated, this effort could potentially be a model for working with other libraries in our broader community. Franky, I first learned about ham radio while browsing in a library as a 15 year old.

The Club membership will gather on Wednesday, May 8th both in-person and on zoom at 7:30pm, with meet-and-greet at 7:00pm, at the Grafton Senior Center or on zoom. The program for the meeting will be "**Batteries for Ham Radio: Comparison and Applications**" by Paul Martis W9PEM. Jeananne looks forward to seeing you at the meeting, as I will be out of town and Jeananne will run the meeting.

73,
Bill K9GN



[Blogspot.com](https://www.blogspot.com)

A Message from the Editor

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de: Bill Shadid, W9MXQ, Newsletter Editor



Please note Club President, Bill Greaves, K9GN, on Page 1 for his monthly message. In addition, to the left, check K9GN doing an analysis on the mounting hardware for a sign being installed pointing the way to the 2024 Ozaukee Radio Club Spring Swapfest. Bill was just one of many helpers available to make the Swapfest a success. Stay tuned to the Newsletter in June for more details and pictures of the Swapfest.

Speaking of events, check Ray Totzke, K9RHH, in his annual message on the coming if Field Day, in June. Time to Prepare!

Tom Ruhlmann, W9IPR, is back with more Projects, Tools, and Tips on Page 6.

Don Zank, AA9WP, and Stan Kaplan, WB9RQR, present us with their columns on Ozaukee County ARES and Computer Corner Columns, respectively. Learn more about the Storm Spotting and EmComm with Don and Byte into some Bits with Stan in his very interesting column.

Gary Sutcliffe, W9XT, Page 14, gives us some great ideas for May and early June. And, not to be outdone, let's go back in years with Bill Shadid, your Editor, on page 22, for a updated view of the radio that set the stage for today's operating – the Collins KWM-2 High Frequency SSB/CW Transceiver.

Want a bargain?? Check the Classifieds Column on Page 30.

Tom Trethewey advises us of regional Upcoming Events. Take a look at Page 31!

Who said what at the April Meeting, you ask? Well, go to Page 32. Ken Boston, W9GA, Ozaukee Radio Club Secretary, provides the minutes of the April Ozaukee Radio Club meeting for your review.

Jeananne Bargholz, N9VSV, our Program Committee Chair, with information on this month's program and what's ahead. See Page 34.

Check the new monthly Swag Spot, starting on Page 37. Want an ORC Drink Tumbler, ORC Badge, or ORC Cap – here is how to get them!

Need help to get your thoughts on paper for an article? That is what the Editor does!! Let me know how I can help you. newsletter@ozaukeeradioclub.org

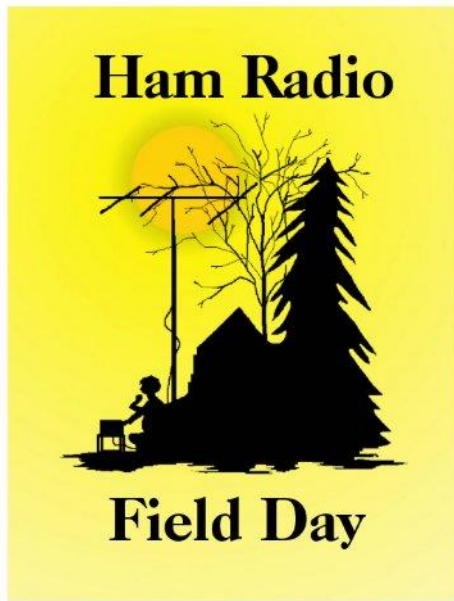
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Onward To the Newsletter

Time to Prepare!!!

de: Ray Totzke, W9KHH



Thanksgiving, Christmas, New Years, Groundhog Day, and a Solar Eclipse have been observed. Good memories of family and friends will stay with us.

The Winter Solstice has also come and gone. Spring is with us. What does that mean to the dedicated ham? It means the days are finally getting longer. Nights shorter. That means "Time To Prepare."

Prepare for what? For the greatest event in the realm of amateur radio. FIELD DAY. Only two months until "CQ FIELD DAY" or 'CQ FD" on CW or the buzz and tones of Digital modes fill the amateur radio spectrum. Watch those band edges.

Whether you plan to participate with The Club or are able, due to family, business, work, medical, or other obligations, to only give a short time to on-the-air ecstasy, do it. Contribute your efforts at home (1E or 1D) to the club score.

Radios, antennas, power sources, accessories are all a part of your plan. Do you plan to be on the air - Phone, CW, Digital?

There is never a real shortage of phone operators. The club is now in need of CW ops ready "to pound brass half the night." Years ago, there were always enough brass pounders to keep The Club on the air for 24 hours. Now, not so many. Moving away, silent keys, and lack of interest have taken their toll on the CW pool in The Club.

Technician hams have CW privileges on 80m, 40m, 15m, and 10m. Phone on 10m also. They are not limited to 2m handhelds.

So!!! Now is the time to prepare!!! You have two months to sharpen your CW skills. Two months to get to 13 words per minute. 15 or 18 is better and sufficient. This is not a DX contest with keyboard CW at 35-40 WPM. This is an Emergency Preparedness Exercise. Even if you cannot approach 13 WPM at least approach the key and use it regularly before the fourth weekend in June. You'll be surprised how well you can handle 4A WI or 2B SCV or 23A EPA.

Prepare now!!! Field Day Cometh!!!

Swapfests and Good Stuff

de: Tom Ruhlmann, W9IPR

Usually when we go to a SwapFest we are looking for all the good stuff like antenna tuners, mobile rigs, antennas, head sets, etc. etc. etc. . . . But all too often we over look some incidental good stuff that is cheap and with only slight effort can be very useful. For example, computer data switching units.

Notice that below my FT5000 there are 3 switching box's. The unit in the center is the control for my Ameritron antenna switching unit. It controls 5 relays in a box outside the house allowing selection of any of the connected 5 antenna to my FT5000. It is a unit that I highly recommend. Did I mention that the relays ground the antenna when they are not selected?



To the right of the antenna control unit in a SwapFest find: a 9 pin serial cable

data switch. The Yaesu equipment can be computer controlled via a 9 pin serial cable input from the computer and my HRD software provides "rig control" as well as logging, digital operations such as FT8 and several other functions. The serial data switch is perfect since I have 3 different Yaesu rigs connected, and they can be controlled via this unmodified switch with my one computer. Well, I did modify the switch panel with labels indicating which transceiver was being controlled.



The switch box on the left was extensively modified. The box was used to house 2 junk box 2 position switches and indicating LED's to control the directionality of a K9AY receiving antenna and its terminating impedance. Notice that it is about the same size as the other two switches.

Sometimes it is nice to use a desk microphone MD100 if in a “Rag Chew” and at other times as when chasing DX I prefer to use a hand microphone MH31 for faster, shorter communications.

Again, a computer 2 position 29 pin data switch to the rescue with only minor modifications.

Since the microphone connectors are only 8 pin the 29 pin male connectors were removed and replaced with the 8 pin microphone male connectors. Using continuity checks the 1-8 output contacts were identified and connected to a microphone cable and female plug to my Yaesu transceiver. The 2 sets of corresponding 8 output contacts on the switch were then identified and connected to the respective male connectors to accept the MH-31 and MD-100 microphones.



As you can see a few “over looked” treasures found at a SwapFest with a stop at Tower Electronics for a couple of connectors along with a few hours with a soldering iron and ohm meter can economically add to your operating convenience.



Jackson got some great deals at the ORC Spring Swapfest.

OZARES: Ozaukee Amateur Radio Emergency Services

de: Don Zank AA9WP, OZARES Emergency Coordinator, aa9wp@arrl.net

Storm Spotting and EmComm



On Thursday, April 18 the Milwaukee Office of the National Weather Service (NWS) presented the 2024 Storm Spotter training session for Ozaukee County at Concordia University. Attendance at the meeting was sparse at 30 participants. It was a rainy evening which may have had something to do with the low turnout, but it is disappointing that more people don't avail themselves of the great program the Milwaukee Weather Office presents.

Opportunities for future training sessions can be found at:

<https://www.weather.gov/mkx/spotter-schedule>

An online presentation is scheduled for May 9 at 1 pm however registration is required. Check the above website for further details.

Taylor Patterson, a meteorologist at the Milwaukee Office, was our presenter and she did a wonderful job. In the past, the presentations could be a little dry but now, with everyone recording and sharing incidents on their phones, the presentations become more interesting as we can watch people placing themselves in dangerous situations during severe weather.

Storm spotting and severe weather reporting are very important to the NWS Office and the public. Their radar sites cannot see the weather at ground level, and it becomes more difficult with distance. The storm spotters and reporters can assist in verifying the ground-truth weather conditions needed by the office and, in turn, may protect lives and property. It would be helpful if during severe weather, say a hail storm, instead of just recording the event of hail stones crashing into and through the windows, a severe weather report, easily done from their website, would be sent to the Office:

<https://www.weather.gov/crh/stormreports?sid=mkx>

Severe weather reporting is a field where amateur radio has and continues to have a very important role. OZARES, along with local ARES groups from Washington, Milwaukee, Racine/Kenosha, Waukesha, Jefferson, and Walworth counties, belong to the Sullivan Committee. (Sullivan, Wisconsin being the township where the office is located). The Sullivan Committee maintains a ham radio station in the office, operated by volunteers, who receive incoming severe weather reports and pass the reports to the meteorologists.

At the county level, individual operators in each organization will provide severe weather reports to their respective relay station. The relay station is responsible for receiving the individual reports and then sending that information to the office. Because time is of the essence, as summer severe weather moves fast, reports have a structured format: Who, What, Where, and When, which makes the reporting process very efficient. The check-in process is streamlined for quickness and accuracy and is aided by the use of tactical call signs. The tactical call signs help the office operator to determine which region, East, West, or Central, the report is coming from.

During the severe weather season monthly training sessions are held by the Sullivan Committee. The training sessions provide a benefit in keeping the office and field stations in shape for reporting. If you don't use it, you lose it. Which happened during the pandemic and a year or two of very limited severe weather activity.

In Wisconsin, storm spotting and severe weather reporting is a part of Emergency Communications, or EmComm, where amateur radio operators have an active role. Unfortunately, for some operators, it is also their only interest in Emergency Communications.

It is always interesting reading on the Emergency Communications group sites where everyone is wondering how and when they be activated. Many communication tools and techniques have been created through a great deal of investment of time, money, and energy.

Some of the developed technologies for EmComm include WINLINK, email over the radio; Narrow Band Emergency Services or NBEMS, which includes the digital modes of Olivia, Thor, or MT63 modes; the Amateur Radio Emergency Data Network or AREDN, computer mesh networks.

Amateur radio operators have committed a great deal of investment of time, money, and energy to learn the skills needed for EmComm and the procedures required by the FEMA NIMS program. The ARRL EmComm training programs can be included as well.

Many EmComm technical solutions and individual capabilities have been developed and are busy looking for problems to solve. But if the cell towers and/or power grids go out of commission, are a handful of ham operators going to be available and sufficiently trained to provide the immediate communication needs?

The EmComm community of amateur radio is not the only organization working to provide solutions. All of the cell phone companies have created and have ready Cells on Wheels, or COWS. They provide the infrastructure for wireless communications that includes cellular antennas, and microwave and satellite transceivers.

When hurricanes are approaching the COWS will be set up and ready to go into an impacted area. Their goal is to be set up in 48 to 72 hours, and it is in this period that amateur radio Emergency Communications are to be available. Is that realistic?

To see a rather impressive response to a hurricane check out the YouTube link below. It is from the Information Technology Disaster Resource Center, or ITDRC, and their response in Fort Myers Beach, Florida after Hurricane Ian in 2022:

<https://www.youtube.com/watch?v=KgbzRiqHnvE>

It will be interesting to see where amateur radio communications can evolve in the 21st Century. How will the smaller numbers and more expensive solutions be able to keep up?





OZARES Repeaters:

- **147.330 MHz (+ Shift) (127.3 PL)**
 - **FM Mode Only**
- **443.525 MHz (+ Shift) (114.8 PL)**
 - **FM Mode Only**

ORC Repeaters are On the Air Awaiting Your Call:

- **146.97 MHz (- Shift) (127.3 PL)**
 - **FM Mode Only**
- **224.18 MHz (- Shift) (127.3 PL)**
 - **FM Mode Only**
- **443.75 MHz (+ Shift) (127.3 PL)**
 - **FM & Fusion (C4FM) Modes**

THE COMPUTER CORNER

No. 314: = 1 byte

de Stan Kaplan, WB9RQR, 715 N. Dries Street, Saukville, WI 53080-1664
wb9rqr@gmail.com



Well, it's a stretch, but if you take the number in this series (314) and add up the three digits (3 plus 1 plus 4), it adds up to 8. Eight is the number of digital bits it takes to add up to one digital byte, abbreviated B (sometimes). But you must use, instead, KiB, MiB, GiB, TiB, etc., (kibibyte, mebibyte, gibibyte, tebibyte) when talking about multiples in the powers of 2 system. And I want to explore the number of bytes found in a typical hard drive these days, which we and manufacturers often sloppily call terabytes when they should be called tebibytes. Yes, it does make a difference. A

power-of-ten-based terabyte is about 9% smaller than a power-of-2-based tebibyte. And there have been a number of lawsuits over definitions! For an introduction to legal fights, ctrl-click this hyperlink to take you to an article in Wikipedia: <https://en.wikipedia.org/wiki/Byte> (and look for "Lawsuits over definition").

Anyway, **while strictly incorrect**, in the present article I will define a power-of-2-based kilobyte (KB) as 1,024 bytes, a power-of-2-based megabyte (MB) as 1,024² bytes and a power-of-2-based gigabyte (GB) as 1,024³ bytes, and so on, as follows:

Power-of-2-based	Number of bytes
KB	1,024
MB	1,024,000
GB	1,024,000,000
TB	1,024,000,000,000

So, let's jump to what you will find in a modern 1 TB hard drive, which seems to be a run-of-the-mill size at the present time. Presumably, it will have space equal to 1,024,000,000,000 bytes (or thereabout, depending upon what the manufacturer defined as a gigabyte when that company manufactured your drive), and all those bytes are accessible to you, the user. Some of those bytes were undoubtedly taken up in partitioning (C: drive) and other necessary stuff (boot sector, so the Operating System (OS) starts up

when powered up). There is also the space that Windows or other OS takes. But most of that huge number of bytes is ready for you to use.

Remember, though, that each of those bytes is really 8 bits, akin to 8 on-or-off individual switches just like those used to turn on a ceiling light in your home. So, the real number of switches in your one terabyte drive is 8,192,000,000,000. How do you say that number? Eight trillion, one hundred ninety two billion bits? What a huge number! I have several of those drives on the shelf, ready to pop into a new rebuild, that I have completely wiped using software that goes to the start of the drive, changes the first bit to a one, then to a zero. Then it does the next bit, and the next, until it has finished the first *byte*. Then it does the rest of the bytes, up to 8,192,000,000,000. When completed, it starts the whole process over, beginning with the very first bit. When all done, it starts again for a third time. Only then does it report to me that it has finished. To finish, it has manipulated 24,576,000,000,000 subatomic switches to 2 states – on, then off. That drive really is wiped! It takes at least overnight for those three passes, and that is on a fast machine. Slower machines may take the greater part of 24 hours. And, when finished, the drive will still not boot! It must first be partitioned, and boot sectors added, along with an operating system. Just think about that next time you are replacing a hard drive or wiping an old one!!! Happy Computing!



**Some of us learned early!!
Three young men listening to radio in the 1930's.**

On The Air Activities!

de: Gary Sutcliffe, W9XT



April was a pretty good month to be on the air. We had a period where solar flares wiped us out for a few days, and we had a week where the solar flux dropped to around 100, but overall, it was a good month.

DXpeditions to the Austral islands, Easter Island, Chad, and Bhutan kept the band busy. I picked up several new band countries. I was thrilled to get Bhutan on 10 and 12 meters. We need some good propagation to get there on those bands.

Gary, **N9UUR**, reported that he didn't log anything new earlier this year but said, "the dam has broken!" Gary reports getting Temotu Province, Nauru, Lesotho, Galapagos Island, Chad, Easter Island, Bhutan, and Viet Nam for ANTOs (All Time New Ones). Congratulations Gary! Propagation between the northern and southern hemispheres often improves around the equinoxes.

Fred, **W9KEY**, reports he had an enjoyable April.

Fred picked up Austral Islands (TX7W) on five bands, Chad (TT8XX) and Easter Islands (3G0YA) on three bands, along with Bhutan (A52CI) and Liberia A8OK on a single band. That is a lot of band countries. Congratulations Fred!

Vic, **WT9Q**, passed on the following note:

Propagation has been spotty these last several weeks. I have often sit down at the radio, spin the dial, change bands and antennas, only to go back upstairs without making a single contact. However, on Wednesday night, April 25 I picked up three nice DX stations within 25 minutes. At 01:21Z (8:21 PM CDT) I heard 9K2NO from Kuwait on 20 meters. That would be a new one for me on 20 meters. I called and he answered with a 599 signal report. At 01:38 I heard 3G0YA on Easter Is. on 17 meters, called and logged another contact for a new band. At 01:46 I heard SV5TH on Dodecanese Island and got that one in the log for an all-time new one. That was three new ones in 25 minutes.

The next night, at about the same time, I picked up JD1BMH on Ogasawara Is. on 10 meters and Easter Island again but this time on 20 meters both for new band DXCC.

Sometimes a random check of conditions really pays off.

Getting on at different times and bands is an effective way to find new countries. The path to different areas happens at other times. Some DX stations get on at the same time and band each day. They are easy at that time, but if few stations are active from that country,

it may be tough to find one. Also, some parts of the world will be sleeping if you only operate select times yourself.

Solar Eclipse

Did anyone get on for the Solar Eclipses QSO Party? I was planning to put in time to help the HamSCI group collect data for ionospheric research. But we had a death in the family, and the funeral was on eclipse day.

Not home to operate, I just left my radio on, monitoring the 30 meter FT8 frequency and reporting every station decode to the PSKReporter server. Hopefully, there will be some data they can use. I picked 30 meters since the Solar Eclipse QSO Party did not include 30 meters because contesting on the WARC bands is not permitted by a gentlemen's agreement, and I have a vertical on 30 meters. That would give a better comparison of all signals heard because a beam would favor some directions over others, possibly skewing the data.

I brought along a pair of eclipse glasses to the funeral. We were outside about the time of the maximum totality. I was very popular, letting everyone look through them! Then I looked down and saw hundreds of little crescent shaped light patterns on the ground. The pine tree needles produced hundreds of pinhole cameras, and the images were projected on the ground.

Fred, **W9KEY**, operated the Solar Eclipse QSO Party and sent along the following report:

I also worked the HamSCI Solar Eclipse QSO Party on Monday, April 8, 2024. It was my first "digital" contest, where the more detailed FT8/FT4 signal reports seemed to offer better value for future scientific propagation analysis. The contest ran for a total of 10 hours, as explained on the HamSCI rules page: *Participants are encouraged to operate before, during and after the eclipse passes over the continental US. Doing so will create baseline data (pre- and post-eclipse), and eclipse influenced data (during annularity or totality) for the research team.*

As will certainly be summarized in future months, there were noticeable propagation changes as the eclipse path crossed the USA. Between running outside to watch the local eclipse progress, I managed to make 180 digital contacts. Hopefully, my tiny addition to the reported data will be of some scientific value.



This high-res processed image of the 8 April 2024 eclipse shows the Sun's corona, its outermost atmosphere, in artificial colors that indicate the polarization or orientation of the light. Citizen scientists in Dallas collected these data through the SwRI-led Citizen Continental-America Telescopic Eclipse (CATE) 2024 experiment.

COURTESY OF SWRI / CITIZEN CATE 2024 / RITESH PATEL / DAN SEATON

Worked All Continents

One of the first awards newly minted DXers work on is the Worked All Continents (WAC) award. You achieve it by providing proof of contacting the continents North America, South America, Europe, Asia, and Oceania. Working Antarctica is not required for this award. The IARU sponsors the WAC award, and applications are via the ARRL.

A few months ago, in this column, I mused about how quickly one could work WAC. More specifically, I was interested in how quickly it could be done on a single band. My guess was that the best bands to do it would be 30, 20, or 17 meters. Propagation on the bands above and below these bands tends to closely follow the sun, either sunlight or darkness, so getting an opening to all the areas around the same time would be unlikely.

I got on the morning of April 11. Ten meters was open via the long path to Asia. We usually work Asia on 10M in the afternoon and early evening and beam northwest after their sunrise. Sometimes, we get long path propagation, and the path is 180 degrees off the short path direction.

This was fun, and I started calling CQ. I started getting calls from China, Hong Kong, and Japan, and decoding other Asian countries. I also got some replies from South America, which was not a surprise since the beam heading is southeast, about the same as Asia via long path. Then, I got a call from EA8Y in the Canary Islands, which is in the African zone. Would a quick WAC on 10M be possible?

Europe comes in strong in the morning, so I turned the beam north and quickly worked YO4NA for that continent. Some US stations called me between the DX QSOs so that only left Oceania.

Hawaii, Australia, and New Zealand are the usual suspects for getting Oceania, but I didn't see any of those. However, Indonesia is part of Oceania, and there were several on. So,



Crescent light images from the eclipse projected through openings in a pine tree.

I started calling them. Unfortunately, most of them seemed more interested in working Europe, so it took me a while to get one to come back to me. I finally got a reply from YC7ONI and completed the QSO.

The EA8Y contact was at 12:30 UTC, and the one with YC7ONI was at 12:53, so I worked WAC on 10 meter FT8 in 23 minutes. So, the stake has been pounded into the ground! Can anyone beat 23 minutes on a single band or using multiple bands? Let me know.

173514	W1JMA	20M	CW	US-1647		09 Apr 24	18:41:21
173515	VR2VAZ	10M	FT8		OL72	11 Apr 24	12:22:45
173516	CX5AE	10M	FT8		GF15	11 Apr 24	12:23:45
173517	BA7LVI	10M	FT8		OL63	11 Apr 24	12:24:45
173518	LU2DIG	10M	FT8		GF05	11 Apr 24	12:25:45
173519	VR2YKM	10M	FT8		OL72	11 Apr 24	12:26:45
173520	N1PHR	10M	FT8			11 Apr 24	12:28:15
173521	JA1GPN	10M	FT8		PM96	11 Apr 24	12:29:15
173522	EA8Y	10M	FT8		IL39	11 Apr 24	12:30:45
173523	PY4ZDC	10M	FT8			11 Apr 24	12:34:15
173524	W1OP	10M	FT8		FN41	11 Apr 24	12:35:15
173525	JG1SYK	10M	FT8		PM95	11 Apr 24	12:38:15
173526	JA3VGL	10M	FT8		PM74	11 Apr 24	12:39:15
173527	YO4NA	10M	FT8		KN44	11 Apr 24	12:45:45
173528	N2UCY	10M	FT8			11 Apr 24	12:48:15
173529	YC7ONI	10M	FT8			11 Apr 24	12:53:30

Fast 10M worked all continents (WAC) on April 11, 2024

Armed Forces Day Cross-band Test

As radio amateurs, we are only authorized to contact other licensed hams except in the case of an emergency. The one exception is working US military stations as part of Armed Forces Day. This is a fun event. Impress your non-ham friends by casually telling them you talked to the Pentagon on your radio by working WAR.

The military stations will be operating outside our ham bands and announce the frequency they are listening inside the ham band. We transmit on our allocated frequencies.

Most stations will transmit on SSB, but some will be on CW or RTTY. The activities calendar page's website lists stations, the times they will be active, their frequencies, and modes. If you try to work one, double check what frequency your transmit VFO is set for, so you don't transmit out of the band!

The actual Armed Forces Day is Saturday, May 18. But the cross-band test is a week earlier, on Saturday, May 11. I think this is to avoid the Dayton weekend.

Hamvention®

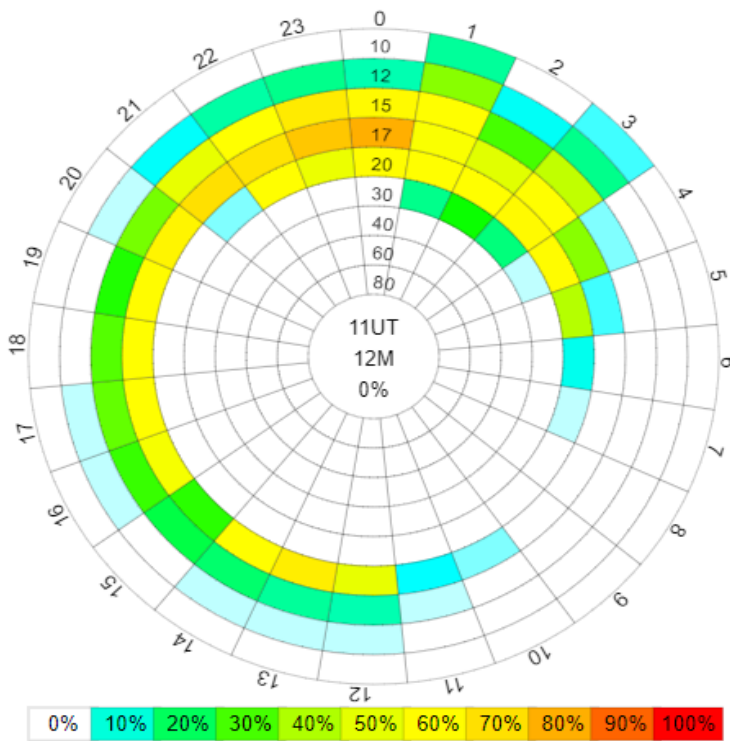
May is the month for the biggest in person ham radio event of the year, the Hamvention, which is held in Xenia, near Dayton, Ohio. Over 20,000 hams will be in town the weekend of May 17-19 to see the commercial exhibits, flea market, presentations, and banquets for just about every interest in the hobby.

It is also a great time to see old friends, meet those who maybe you have had many QSOs but never met in person, and meet others who share your particular interests within the hobby. The manufacturers often release their new products and sometimes have special pricing for the weekend. I especially like the talks where I learn so much.

Every ham needs to attend the Hamvention at least once. It is quite an experience.

DX

We have an exciting DXpedition scheduled for this month. Marek, FH4VVK, will be on from the Glorioso Islands using the call sign FT4GL. He plans to work two stations simultaneously, one SSB and one FT8. No CW on this one.



The Glorioso Islands are in a remote location in the Indian Ocean. It is a French protectorate. Few people are permitted to go there, and propagation from the US Midwest is a bit difficult. It is no wonder that it is number seven on the world's needed list and number four for the US. If you chase DX, you won't want to miss it.

The last operation was in 2009. The last time it was on 10M SSB was 1994, and it has never been on 6 meters. I'm not holding my breath for us to have a chance for six. There has never been digital operation on 160-40, 17, or 10 meters.

Propagation prediction for the FT4GL DXpedition. Centered on June 1. <https://www.voacap.com/hf/>

based on June 1, about the middle of the DXpedition, between us in southeastern Wisconsin and Glorioso.

As you can see, no bands really stand out. The best shot for us seems to be about 0000 UTC (7:00 PM local) on 17 meters, with propagation about 80% of the days. I want to get them on 10 meters, but our best time is at 0100 UTC, with only a 20% chance of the band opening on any particular day.

This prediction is based on 100 Watt transmitters, two element Yagis on both ends, and FT8 mode. Your chances improve if you run more power and/or have a larger antenna. Lower power or a less effective antenna reduces the probability of an open path. I am not aware of what antennas he will be using.

The other DXpedition on my list is Market Reef. A group of Norwegian hams will be there from April 27 to May 4. The call sign is OJ0T. Market Reef is not extremely rare, but you don't hear it every day. They will operate 160-6 meters, CW, SSB, and FT8. This might be an excellent opportunity to fill in some blank band or mode slots. You might get a chance if you read the newsletter when it comes out.

Conway Reef in the Pacific will be operated by two operators using the call sign 3D2CCC from April 28 through May 7.

There are other operations planned by single operators in May and early July to places like Rwanda (9X2AW), Maldives (8Q7KR), Ogasawara (JD1BQW), and Mozambique (C9AAHV). I don't generally highlight the single op ones since they often operate vacation style with limited time on the radio, but sometimes they are very active. Just be on the air and watch the DX clusters and you might run across them.

Contests

After a lull in major contests from mid-March through April, it will start to pick up at the end of May. The first one is the CQ World-Wide WPX CW contest on May 25-26. The SSB version was covered in this column in March, so if you want to operate it, I suggest checking that issue. Also, check out the rules. The point assignments are more complex than most contests.

The downside of the CW weekend is that it usually falls on the Memorial Day weekend. I have a tough time spending a weekend indoors if the weather is nice, especially in early spring. Maybe I will operate it if the weather is cold and rainy.

CQ Magazine sponsored many popular radio contests. The CQWW DX contests are the most popular ones on a world-wide basis. The 160 meter and WPX contests are also popular, and they have a VHF contest. As you probably know, CQ Magazine had financial problems, and its issues were often late. Recently, they ceased operations.

The World Wide Radio Operators Foundation has taken over the administration of the CQ contests. The WWROF was founded as an independent organization dedicated to advancing operating skills and technology. <https://wwrof.org>

Digital operators will want to make note of the ARRL Digital Contest the first weekend in June. Originally, the ARRL had the RTTY Roundup. After digital modes became popular, they allowed modes like FT8 to be used. That turned out to be unpopular with the RTTY crowd, so they decided to have separate contests for RTTY and another for the other digital modes. That was a good move, in my opinion.

Severe Weather Training

Here is a picture of participants in the Washington County Severe WX Training Session, in Slinger, WI, on 16 April 2024. Look for some familiar faces.



Left to Right:

Steve Sunquist, N9FSE, Rob Schmid, and Vic Shier, WT9Q

Rob is Emergency Management Coordinator for Washington County, WI, and

Vic is ARRL ARES Emergency Coordinator for Washington County, WI.

That wraps up April! It was good seeing everyone at the ORC Spring Swapfest. It was a great job by Tom, **KC9ONY**, and everyone who helped! It is now time to set our sights on Field Day in June.



See Next Page for . . .

W9XT's DXpeditions, Contests, and Events for May and early June 2024

W9XT's DXpeditions, Contests, and Events for May and early June 2024

W9XT's DXpedition picks for May and early June 2024					
QTH	Dates	Call	Bands	Mode	Link/notes
Conway Reef	Apr 27 - May 7	3D2CCC	160-6	C/S/D	
Glorioso Island	May 24 - June 19	FT4GL	160-6	S/D	Rare one! Don't miss it.

Modes: C = CW, S = SSB, D = Digital (may include RTTY)

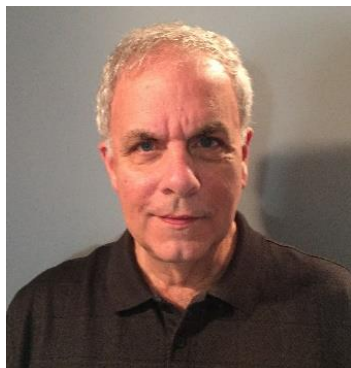
W9XT's contest picks for May and early June 2024					
Name	Start	Length	Bands	Mode	Link
CQ WW WPX CW	May 25 0000Z	40, work 36 max	HF	CW	www.cqwp.com
ARRL Digital	June 1		HF	Digital (no RTTY)	https://www.arrl.org/arrl-digital-contest
ARRL VHF	Jun 8, 1800Z	33	6M and up	Any	www.arrl.org/june-vhf

Dates/Times in UTC. Subtract 6 hours from UTC to get local (CST). HF = 80, 40, 20, 15, 10 Meters

W9XT's operating & event picks for May and early June 2024			
Event	Dates	Comments	Link/notes
Armed Forces Cross Band Test	May 11	Check the website for stations and times	https://www.dodmars.org/mars-comex-information-website/armed-forces-day
Hamvention®	May 17-19		https://hamvention.org

Vintage Amateur Radio

de Bill Shadid, W9MXQ



Collins Radio Company was certainly on a mission to reinvent the ham station back in the 1950's and 1960's. A big step for Collins came in 1959 with the introduction of the KWM-2 and KWM-2A Transceivers. These models (identical other than potential frequency coverage options) followed a year after the introduction of the Collins 75S-1 Receiver and 32S-1 Transmitter. These all had the same compact footprint. We will also see the Collins 30S-1 and the Collins 30L-1 companion Linear Amplifiers. So popular was the 30L-1 Desktop Linear Amplifier that it is still often seen in a modern ham station.

Here is the KWM-2 Station that is in operation at W9MXQ:



Collins KWM-2 Transceiver (Center), 312B-5 Remote VFO (Right), and 516F-2 AC Power Supply (Left)

W9MXQ Shack Photo

This KWM-2 was manufactured in 1960, according to its serial number. Accessories, bought at the same time, were made the same year. Note that the earliest units did not have finger holes in the main tuning knob (compared with the picture of the 1963 vintage KWM-2A, below).

And here is the KWM-2A Station in operation at W9MXQ:



Collins KWM-2A Transceiver, 312B-5 Remote VFO, and 30L-1 Linear Amplifier

**Also, Electro Voice 638 Microphone and Heathkit HD-1410 Keyer
(Not shown is the Collins 516F-2 AC Power Supply – installed out of this view)**

W9MXQ Shack Photo

This KWM-2A was manufactured in 1963, according to its serial number.

The KWM-2 (and its extended frequency range sister, the KWM-2A, both pictured above), took the KWM-1 Triband Transceiver concept (20-15-10 meters) and added 80 and 40 meters. Back in 1959, the design basis for the KWM-2/KWM-2A was changed to the recently introduced 75S-1 Receiver and 32S-1 Transmitter rather than the earlier Collins KWM-1 Transceiver. The basis for the KWM-1 was technology coming from the 1950's Collins 75A-4 Receiver and Collins KWS-1 Transmitter.

Side note: Many consider the KWM-2 as a 75S-1 Receiver and 32S-1 Transmitter (the original S-Line units) in a single cabinet. That is a very nice thought and perhaps based on some truth as to design concepts, but it is not literally so. While many elements were part of the separate units, a true transceiver is the combination of shared components and circuits – not separates residing in a single box.

For reference, here is the 195x vintage predecessor to the Collins KWM-2 – the Collins KWM-1:



**Collins KWM-1 SSB/CW Transceiver from 1957
Shown with the 516F-1 AC Power Supply on the left.**

W9DYQ Shack Photo

I would draw your attention to my previous installment on the S-Line separate Receiver and Transmitter for an explanation of the Standard and Expanded Coverage radio differences. In this case the KWM-2 was the Standard Coverage and the KWM-2A was the one with Expanded Coverage. (For this article, unless addressing a specific difference, I will refer simply to KWM-2.)

The KWM-2 lacked any sort of interference fighting tools other than the very selective Collins Mechanical Filter in the i-f section of the radio. The excellent -6 dB @ 2.1 kHz and -60 dB @ 4.2 kHz bandwidth (for a slope factor of 2:1) does a good job of keeping out of bandwidth interference from the receive audio. This performance is in keeping with what we expect from i-f filter performance today.

Some operators, however, felt they needed more interference rejection for their use of the transceiver. Waters Manufacturing, Inc. came to their assistance with a cleverly designed Q-Multiplier add-on that installed a circuit module with controls that were mounted

piggyback to the Power/Function Switch. As if that was not enough, there is a factory wired phono jack on the chassis of the KWM-2 that is a direct input for a Heathkit (or another brand) Q-Multiplier. I have a Heathkit GD-125 Q-Multiplier that works perfectly with my KWM-2A and even matches the Collins radio in color, if not styling. A Bing™ or Google™ search on “Q-Multiplier” will provide more information on this remarkable device. National, Heathkit, Drake, and others made external Q-Multipliers in some form.

The 312B-5 Remote VFO is shown on the first page (with an integrated Wattmeter, Speaker, and Phone Patch). The KWM-2 with the 312B-5 together allowed:

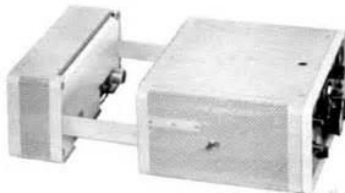
- Transceive with the KWM-2 VFO
- Receive with the KWM-2 VFO and Transmit with the 312B-5 Remote VFO.
- Receive with the 312B-5 Remote VFO and Transmit with the KWM-2 VFO.

The separation between receive and transmit was essential with the KWM-2 on CW. Due to a design flaw (or perhaps design focus) in the KWM-2, the offset to allow one to hear the other station was absent and was never fully corrected as long as the KWM-2 was manufactured.

Side Notes:

1. The offset on CW mode was improved over the lifetime of the KWM-2 product but to the avid operator, it was never right. The original owner of the KWM-2, pictured above, was primarily a CW operator and made sure he had the 312B-5 Remote VFO as a part of his original purchase.
2. For age reference, check the 312B-5 Remote VFO in the two pictures on the first page of the article. The 312B-5 Remote VFO shown with the KWM-2A has a round Collins emblem just above the escutcheon that included the main tuning knob. That was a later manufactured unit that had a round Collins emblem. The 312B-5 Remote VFO shown with the KWM-2 has a Collins emblem with “wings,” as you can see. The “Winged Emblem” units were manufactured earlier than the “Round Emblem” units.

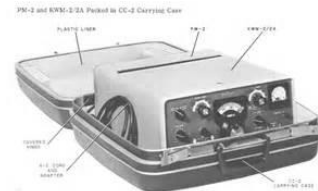
Collins also offered a PM-2 compact portable AC Power Supply for the KWM-2. It clamped to the back of the radio and provided for a self-contained unit that could merely be plugged into an AC outlet for operation. There was even a CC-2 Carrying Case for a road trip:



PM-2 Sliding into KWM-2 (CCA)



PM-2 (left) on KWM-2 (CCA)



PM-2 and KWM-2 in a Collins CC-2 Case (CCA)

The KWM-2 design focused on mobile operation with a 351D-2 Mobile Mount that allowed for “slide-in” connections to the radio – no hand connection of power, speaker, or antenna

leads were required. The mobile mount folded away when not in use thus making for minimal intrusion onto the riding area of the front seat when the radio was not installed.

For power while driving, the KWM-2 used the MP-1 Mobile Power Supply – designed to be mounted on the engine side of the fire wall and provided a cable that went through the firewall and into the cockpit area of the car to the 351D-2 Mobile Mount.

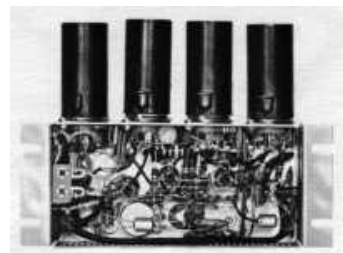
Also, for mobile use, Collins offered the 136B-2 Noise Blanker that mounted under the top cover of the radio using screws that came through the ventilation holes in the cover. It was a rather inglorious mounting. I have a 136B-2 that I have tried but have learned that its primary noise target was the ignition noise prevalent in automotive ignition systems of the day. I did not permanently mount the 136B-2 in my KWM-2A. One interesting design parameter of the 136B-2 was based on Collins' engineering research that showed noise to peak at approximately 40 Mhz. To the end, the 136B-2 had a connection to attach the automobile's broadcast radio to a noise sensor terminal connector on the Noise Blanker. That antenna was to "see" the noise signal and use it for a trigger for blanking operation.



**MP-1 Mobile DC
Power Supply (CCA)**



**351D-2 Mobile
Mounting Bracket (CCA)**



**136B-2 Noise Blanker
W9MXQ**

Another interesting accessory for the KWM-2 was the 399B Novice Adapter. Those of you in ham radio long enough will remember that Novices on HF were limited to 75 watts input power on CW only. Power was easy enough to set during the CW tune-up process, but another requirement was that the transmitter had to be crystal controlled. This device accommodated crystal control on up to four different crystals.

To compliment portable operations, Collins offered a Tape Reel Dipole Antenna, the model TD-1. It would extend a metal ribbon tape on both legs that were calibrated to show proper length for a resonant installation. The product included nylon rope for attaching each end to a support point as well as a length of RG-58 coaxial cable feedline.

For an installation not requiring a separate VFO – as the 312B-5 shown above – there was a 312B-4 Station Console shared with the separate S-Line stations. Like the 312B-5 it includes a wattmeter, speaker, and phone patch – but not the External VFO function.



**399B-2 Novice Adapter
(CCA)**



**TD-1 Portable
Dipole Antenna (CCA)**



**312B-4 Station Console
W9MXQ**

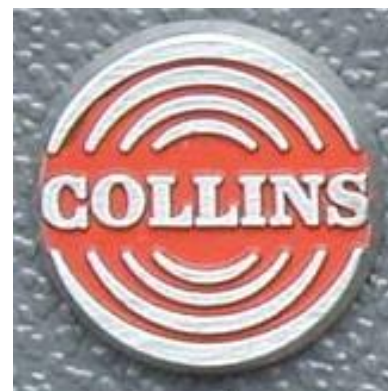
Other accessories as diverse as Mounting Plates for aircraft use (351E) and Rack Mounting Adapters (351R). A wide range of microphones were available in the SM-1, SM-2, and AM-3 Desk Microphones as well as the MM-1 Mobile Microphone and the MM-2 Headset were ready for any installation reality. Also, there were several custom-made Samsonite™ Carrying Cases for KWM-2 and S-Line portable use (CC-1, CC-2, and CC-3). To permit complete 3.5 to 30 MHz spectrum coverage, a set of crystals for every 200 kHz range were included in the CP-1 Crystal Packet. That CP-1 Crystal Packet is a part of the of the W9MXQ station using the KWM-2A here.

Two major accessory items for the KWM-2 Transceiver (as well as the other S-Line Receiver-Transmitter Stations) were some excellent Linear Amplifiers. Those included the very popular 30L-1 Desktop Linear Amplifier and the somewhat less available 30S-1 Floor Mount Linear Amplifier as shown here . . .



W9MXQ Shack Photo

The Desktop 30L-1 Linear Amplifier had an input of 1,000 watts (DC and PEP) with a CW and SSB output of 500 to 600 watts. It had a solid-state power supply rectifier system and used four 811A Triode final amplifier tubes.





(CCA)

The Floor Mounted 30S-1 Linear Amplifier had an official input of 1,000 watts (DX and PEP). At about the time of the introduction of this amplifier there began an understanding that PEP input was generally “twice average DC,” so amplifiers of the time were tuned up at a lower plate voltage to allow for legal DC tuning at 1,000 watts. After the tuning procedure was done, the amplifier was switched to a higher voltage to run an actual peak input of 2,000 watts. (Therefore, older amplifiers, including the 30S-1, have a CW and SSB switch position.) The 30S-1 had a solid-state lower voltage system, high-vacuum 3B28 high-voltage rectifiers, and an Eimac 4CX1000A Ceramic Power Tetrode in its amplifier circuit. What this amplifier lacked in desktop compactness it made up for in having a fantastic station presence!

There are a few more points about the KWM-2 Transceiver’s history. One of these may be due to inventory supply issues tied to discrepant material received at the factory (or one of many other reasons). The front escutcheon of the radio could have some different model numbers other than the official KWM-2 or KWM-2A model names. Note below a picture of the escutcheon and some variations I have noted over the years.



(W9MXQ Shack Photo)

Shown is the front panel escutcheon for the KWM-2A at W9MXQ. For a Standard Coverage unit this would be marked as KWM-2. However, over the years I have noted the following variations:

- KWM2
- KWM2A
- KWM2-A

No one has ever offered any good explanation for this but, to the disappointment of the collector, the appearance of one of these deviations does not seem to impact value – up or down. I have never seen this kind of variation on other S-Line components.

The other change shows a Dial Brake added to the radio near the end of production. This picture below shows the minimal appearance changes over time compared to the picture at the beginning of this article . . .



(CCA)

Very late production KWM-2A

First, see the late version Rockwell Collins logo over the escutcheon. The Dial Brake is visible at the lower left side of the main tuning knob. The product remained all vacuum tube design right down to the accessory 516F-2 AC Power Supply that included tube rectifiers. The KWM-2 was manufactured in nearly original form, with few technology upgrades into the 1970's and was perhaps the very last of the S-Line radios to be available.

The KWM-2 was even more of a "game-changer" than the S-Line Receivers and Transmitters. Think about the impact of a single package with a complete station – the "Transceiver," as we like to call it. What one of us does not use this concept today? The sophisticated, ubiquitous SSB/CW station transceiver owes its existence to the KWM-2. That could go as far as saying it began with the KWM-1, but that radio did not cover all of the traditional high frequency short wave bands (80, 40, 20, 15, and 10 meters). Anyway, suffice it to say that popularization of the concept is certainly owed to Collins Radio Company.

One additional note has to do with Collins' offering of speakers for the KWM-2. Unlike how Drake, Hallicrafters, and National, Collins did not offer an AC power supply that included the station speaker. Check these pictures . . .



Collins 516F-2 AC Power Supply
W9MXQ Shack Photo



Collins 312B-3 Speaker Console
W9MXQ Shack Photo

The 516F-2 AC Power Supply (above, left) had room for a speaker with some modification to the panel that was behind the perforated, visible, front panel. Many hams did just that. The 312B-3 Speaker Console (above, right) was Collins' answer to the need for a station speaker. As mentioned previously, if the KWM-2 was set up with the 312B-4 Station Console or the 312B-5 Station Console with Remote VFO, those units provided an internal speaker.

One very rare (nearly impossible to find) option for the KWM-2 was a lower cost Remote VFO that excluded the Power Meter and Phone Patch included in the model 312B-5. This was the 399C-1 Remote VFO, with Speaker. Due to its scarcity today, the 399C-1 sells for two to three times the selling price of the more feature rich 312B-5.



KE9PQ

I want to thank my long-time friend, Phil Rebensburg, KC9CI, for helping add the KWM-2A and accessories to my collection. Phil is a long time local resident that I met in the first week that I lived in Wisconsin in the 1990's. We have been fast friends ever since.

The KWM-2 and its accessories are from Paul Ripple, W9SIZ (SK), whom I met several years ago. Paul was an avid CW operator and was the original owner of this set back in 1961. He also was a US Army Veteran who landed in France on D-Day, 1944.

A special thanks to my long time proof-reader and content provider, Bob Bailey, W9DYQ, Bob is a friend from my home town, in Illinois – so many years ago.

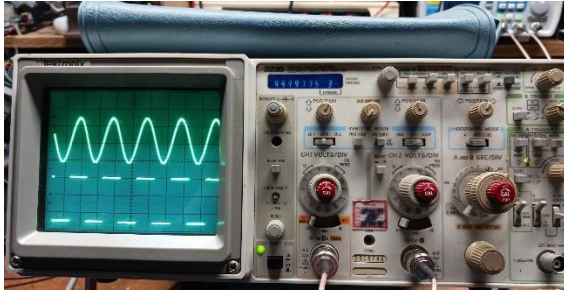
I appreciate that you read my articles. Contact me with questions and comments at my email address:, W9MXQ@TWC.com

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Classified Advertising For Sale & Wanted Items Ozaukee Radio Club Members

de: Bill Shadid, W9MXQ



For Sale: Tektronix 2236 Oscilloscope

- Dual trace, 100MHz
- Built in 100MHz frequency counter and DVM
- Two 100MHz probes, DVM probes
- Manuals, scope hood included.

I paid \$3,000 for this when new. Asking price \$250. That is about what “parts only” condition Tek 2236 scopes are going for on eBay when you add shipping.

I can bring to the next ORC Meeting

Gary, W9XT

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Advertisements will be accepted up to the 10th of the month before Newsletter publication.

Advertising is for one month, only. Ads much be submitted each month by the deadline to be published.



Upcoming Events

de: Tom Trethewey, KC9ONY

6/01/2024 – Green Bay, WI – Green Bay Mike & Key Club Hamfest
<https://www.k9eam.org/>

6/15/2024 – Neenah, WI – Fox Cities Amateur Radio Club Hamfest
<https://www.fcarc.club/>

8/24/2024 – Baraboo, WI – Circus City Amateur Radio Club Swapfest
<http://yellowthunder.org/>

9/07/2024 – Cedarburg, WI – ORC Annual Regional Fall Swapfest
<https://www.ozaukeeradioclub.org/>

9/20/2024 – Milwaukee – HRO Superfest, ARRL Wisconsin State Convention
September 20th and 21st
<https://www.hamradio.com/>



Ozaukee Radio Club Minutes of Membership Meeting, 4/10/2024

de: Ken Boston W9GA, Secretary

The monthly ORC meeting occurred at the senior center as we have returned to live in-person meetings, along with a streaming version held via Zoom. ORC President Bill K9GN began the meeting at 7:30 PM, , a go-around was conducted. Zoom attendees were also in attendance and were also introduced.

Program:

N9VSV introduced our program; which was given by Vic WT9Q on his latest antenna project, a fan dipole for operations on 160 and 80 meters. He described his earlier antenna for low band operation, an OCF dipole which was erected in 2014. He gave details of that antenna, its orientation, wire lengths and operating results. Recently, he replaced that antenna with a fan dipole, to get better results on the low bands. He laid out the design details and new orientation, and how the new antenna performed.

50/50 Raffle: This was won by W9IPR; winning an award of \$15.50

Scholarship Auction: W9XT auctioned off –a Bud cabinet, and a VGA monitor.

Committee reports: [no report from 1st VP]

Pres: Bill K9GN managed the installation of Nate KC9TSO as FD chairman, replacing Ken W9GA. A FD planning meeting will take place soon, plus a bylaws review is needed.

RPT VP: TECH: Tom KC9ONY: mentioned a few minor technical issues where work is in progress; 222 RPT noise, antenna at highway LL location, 10 meter link.

Treasurer: Gary N9UUR: Reports laid out on tables for inspection, Funding remains solvent, nearly \$41K in the bank; now at 100 members so have reached goal.. Motion to accept made by WB9RQR, 2nd by KC9TSO and carried.

Secretary: Ken W9GA: reported that the March 2024 minutes have been posted, a motion to accept was made by KC9TSO; 2nd by W9DHI and carried.

STEM: Pat W9JI: reports that the ARRL materials for the West Bend library are coming and include easy snap-together kits for an FM radio. ORC demo of Ham Radio at the library still on for August 15, and the library also received a \$1400 grant from ARDC.

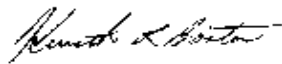
TECH: Gregg W9DHI is still doing repairs.

OLD business: Bill W9MXQ indicated a wide readership of our newsletter, as he had 342 replies to a question of what articles readers would like to see. Stan WB9RQR noted that he will have some more laptop computers available soon. .

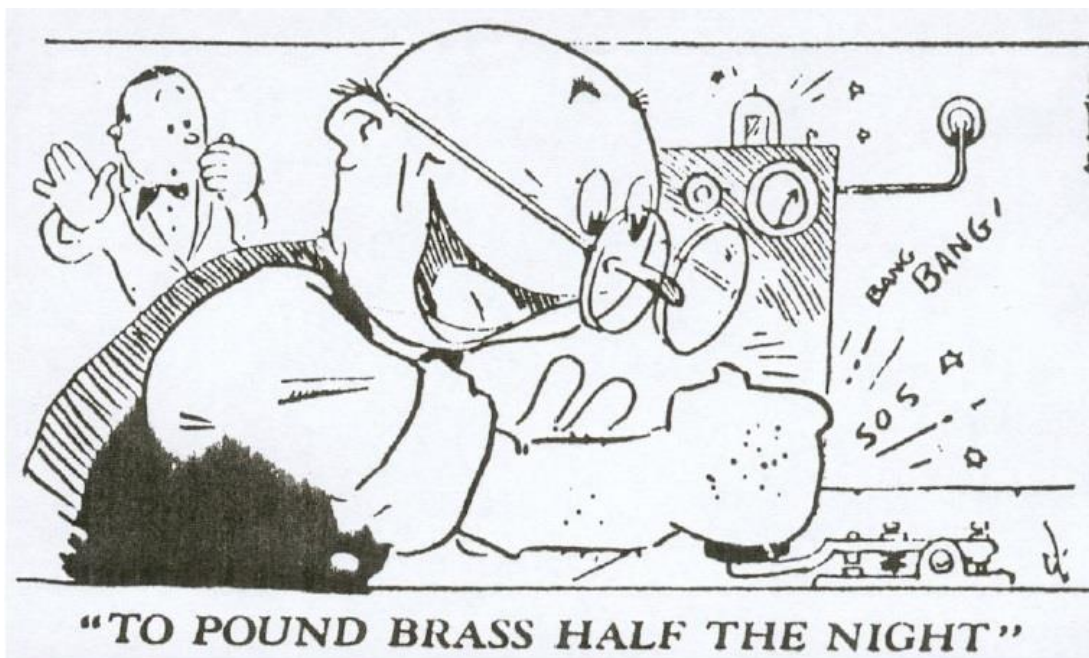
NEW business: N9VSV will conduct ORC meeting in May. Tom W9IPT is looking for help with hamfest items on Friday 4/26 and at the fest on the 27th. Ken W9GA presented Ham of the year to Nancy KC9FZK; Turkey of the year to Nate KC9TSO; Program of the year to Bruce AC4G [V73CW DX] and Project of the year to Tom KC9ONY and Gregg W9DHI for Repeater projects. Tom W9IPR mentioned a source for Kenwood repairs located in Green Bay, WI. {notable because of the huge shipping cost to regional repair centers.}

Adjournment: WB9RQR moved to adjourn, motion carried; time end was 9:20 PM. There were 21 in-person attendees, 18 zoom attendees.

Respectfully submitted:



Kenneth Boston W9GA, Secretary



This Month's Meeting: May 8, 2024 - 7:30 PM

**Program: Program: Battery Technologies
Comparison and Applications for Ham Radio**

Presented by: ORC member, Paul Martis, W9PEM

and guest, David Siegler, NE9N

de: Jeananne Bargholz, N9VSV



Paul Martis, W9PEM



David Siegler, NE9N

This presentation will explore battery chemistries, battery safety, power measurement and calculations, and examples of battery products and projects for ham radio operations.

Paul Martis is an Extra Class Amateur Radio operator with the callsign W9PEM (his initials) and has been licensed since 2001. He dabbled on and off with Ham Radio as a technician (involved mainly with repeater work, APRS, and SKYWARN) until 2018 when he upgraded to General and started exploring HF. He upgraded to Extra in 2023 and is mainly interested in digital modes of all flavors, antenna theory and design, QRP radio, and working on related projects in general. Beyond ham radio his interests include meteorology, electronics and firmware, Internet of Things, everything wireless, and machine learning. Professionally he is an Electrical Engineer and Field Application Engineer in Brookfield, Wisconsin with a focus on embedded systems components.

David Siegler is an Extra Class Amateur Radio operator with the callsign NE9N and has been licensed since 2018. He is currently active on VHF, UHF, and DMR and operates mobile and portable QRP radios. His interests include portable operations, POTA, microprocessors, and communication systems. Other hobbies include model aircraft of all types, building 6 meter conversion for RC systems, bicycling (including operating while cycling), and building antenna and radio-related electronics. He is an EAA and AMA member and volunteers at EAA AirVenture each year. Professionally he is an electrical Engineer in Milwaukee, Wisconsin with a current focus on rechargeable battery systems.

Upcoming Meeting Programs:

June: Gary Sutcliffe, W9XT and Pat Volkmann, W9JI – Contesting
July: Gregg Lengling, W9DHI – Repeater Receiver Voting Process/Operation
August: Bill Shadid, W9MXQ – The End of the Line – the Drake TR5 Transceiver
September: TBD
October: Project Night **
November: Stan Kaplan, WB9RQR – Building a Crystal Radio
December: Gary Sutcliffe, W9XT – Digital Modes

****Project Night**

Sign up for Project Night! This is a round-robin of 5 minute “Show and Tells” of some of our members’ latest amateur radio-related projects! This is a way to showcase your antenna work, home brews, problem solving and even kit-building or modifications. It can be a work in progress or complete. The real trick is to summarize your project in a 5-minute (or so) presentation with a few photographs. This is open to all members regardless of how you attend meetings (in person or via Zoom). If this generates only a handful of responses, the time allotted for each project will, of course, be a bit longer. Contact Jeananne, N9VSV 1stvp@ozaukeeclub.org if you would like to be on the list!

Not to put anyone on the spot but I’m pretty sure these fine gentlemen have already signed up!

Paul Martis, W9PEM
Bill Shadid, W9MXQ
Pat Volkmann, W9JI
Gary Sutcliffe, W9XT

Call for Programs

The monthly program is the highlight of the Ozaukee Radio Club meeting. We are fortunate to have many talented people in our club, many of whom have shared their knowledge through a presentation. Programs can be on any ham radio-related topic.

This year’s Program Calendar is almost full and I’m already working on next year. Please consider sharing some of your experiences with the rest of us. If you have an idea and would like some help putting a program together, contact me or anyone on the board.

ORC Meeting Agenda

8 May 2024

1. 7:15 – 7:30 PM
Check-In and Introductions
2. 7:30 PM Call to Order:
President Bill Greaves (K9GN)
3. Announcements, Bragging Rights, Show & Tell, Upcoming Events, etc.
4. Paul Martis, W9PEM & David Seigler, NE9N
Battery Technologies, Comparison & Applications for Ham Radio
5. President's Update:
Bill Greaves (K9GN)
6. 1st VP Report:
Jeananne Bargholz (N9VSV)
7. Repeater VP Report:
Tom Trethewey (KC9ONY)
8. Secretary's Report:
Ken Boston (W9GA)
9. Treasurer's Report:
Gary Bargholz (N9UUR)
10. Committee Reports
11. OLD BUSINESS
12. NEW BUSINESS
13. Adjournment



Ozaukee Radio Club Swag Spot

de: Jeananne Bargholz, N9VSV

Our Newsletter Editor had the brilliant idea to include space for our club merchandise and contacted me about making it so. Starting with this issue, and continuing without commentary unless needed, you will find our club merchandise listed in every newsletter.



Tumbler – Front



Tumbler - Back



Tumbler Caps

Personalized Polar Camel 20oz Tumbler

\$33.00 (with standard cap) \$36.00 (with slider cap)

9 colors available: black, red, royal blue, teal, purple, dark gray navy blue, maroon, and green. The font is standard; all you need to decide is “just callsign” or “name and callsign.” If “name and callsign,” then name on line one or on line two?



Name Badge

\$10.00

Magnetic “clasp;” one size fits all
The font is standard.

Personalized Cap

Khaki cap is 100% Cotton w/Velcro closure: \$33.00

Navy Blue cap is 65%/35% Polyester/Cotton w/plastic snap closure: \$30.00

(When limited stock of the blue hat is gone, we will offer a blue that is identical to the Khaki style.) Font is standard; all you need to decide is name on line one or on line two?



We have an ordering option on our Webpage that includes PayPal costs:

<https://www.ozaukeeradioclub.org/index.php/orc-gear>

This is a great option if you don't attend meetings regularly – or just contact me and save those costs. If you DO attend meetings somewhat regularly, just contact me at and let me know what you want. You can pay me for your items at the next meeting.

Questions? Ready to order? Contact me at:

1stvp@ozaukeeradioclub.org

I'm also in the roster.



The Back Page

**This Month's ORC Meeting
Hybrid In-Person/Zoom Meeting
8 MAY 2024**

**Program:
Paul Martis, W9PEM
David Siegler, NE9N
Batteries for Ham Radio
Comparison and Applications**

**7:00 PM – Doors Open
7:15-7:30 PM – Zoom Check-In
7:30 PM – Meeting Begins**

**NEXT MONTH
Hybrid In-Person/Zoom Meeting
12 June 2024**

**Program:
Gary Sutcliffe, W9XT and Pat Volkmann, W9JI
Contesting**