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.

ORC Repeaters on 146.97 (-127.3PL), 224.18 (-127.3PL), 443.75 MHz (+127.3PL or C4FM) - Callsign W9CQO
Web site: www.ozaukeeradioclub.org **Facebook: facebook.com/orcwi**

Volume XLII	June 2024	Number 6

From the President

de: Bill Greaves, K9GN

It's happening THIS month, the 4th full weekend, June 22-23. **FIELD DAY!** Come out to the Pleasant Valley Nature Park, 4301 Pleasant Valley Road, Grafton, and participate with your club. The ORC will again have a GOTA station (Get On The Air) for relatively new hams or hams who have not operated on HF. Even non-hams can operate with one of our control operators. You can get your feet wet by dipping your toes in the cool water of new ham bands while being refreshed by the excitement of operating in a relaxed setting just for you. It will be fun! Just contact Field Day chair Nate Seidler KC9TSO or me at president@ozaukeeradioclub.org for information.

Saturday morning, June 22, we will be setting up the Yagi antennas, shooting lines over trees for dipole and wire antennas, laying out the power and coax lines, placing safety flags, and doing all of the necessary pre-work for a safe and enjoyable FD experience. We can use your extra help and it is a great learning experience for everyone. Bring your family to enjoy GOTA!

The Spring ORC Swapfest was another great success, chaired by Tom Trethewey KC9ONY who reports on the event in this month's newsletter. Speaking of Swapfests, The ORC Fall Swapfest will be Saturday, September 7th at Firemen's Park in Cedarburg, chaired by Tom Ruhlmann W9IPR. An item for your calendar.

I was not able to travel to Hamvention in Dayton OH this year, so I was pleased to learn the forum presentations from the ARRL National Convention hosted at Hamvention have been made available on YouTube. Go to http://www.arrl.com and click on "2024 National Convention Kicks Off at Dayton Hamvention."

The Programming Committee has a “Project Night” scheduled for the October meeting. This will be a series of 5 minute “show and tells” of some of our member’s latest amateur radio related projects. From the ORC website at ozaukeeradioclub.org, “This is a way to showcase your antenna work, homebrews, 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 [only] a few photographs. This is open to all club members regardless of how you attend meetings (in person or via Zoom).” Contact Jeananne N9VSV at 1stvp@ozaukeeradioclub.org if interested or questions.

The Club membership will gather on Wednesday, June 12th 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 **“Field Day Operations”** by Gary Sutcliffe W9XT and Pat Volkmann W9JI. See you at the meeting.

73,

Bill K9GN

Axnent.com

A Message from the Editor
Newsletter Table of Contents

de: Bill Shadid, W9MXQ, Newsletter Editor

Please note Club President, Bill Greaves, K9GN, on Page 1 for his monthly message. Especially note K9GN's comment on the success of the 2024 Spring SwapFest.

Speaking of recent events, check updates from Tom, KC9ONY, and Gary, W9XT, on their Dayton Hamvention experience.

Tom Ruhlmann, W9IPR, is back with his increasingly popular Projects, Tools, and Tips series, beginning on Page 18. In fact, I am so pleased this month with the first 19 pages of this Newsletter being first person experience articles. The Newsletter is our window to open up the Ozaukee Radio Club for view by a much wider audience than Southeastern Wisconsin.

Don Zank, AA9WP, and Stan Kaplan, WB9RQR, present us with their columns on Ozaukee County ARES and Computer Corner Columns, respectively. AA9WP gives us information on communication with less than great radio propagation conditions. WB9RQR extends the lessons learned in a recent club presentation with some real world solutions.

What is happening in the next month on the bands, you ask? Gary Sutcliffe, W9XT, gives us a look at "One the Air Activities!" for the coming 30-45 days. Be sure to note the last page of his article that – as in every month – where he provides a handy shack information sheet for your operating sessions.

Going back to his early ears as a ham, Bill Shadid, W9MXQ, your Newsletter Editor, discusses an early 1960's HF radio product line from Gonset. While an HF line, many fellow vintage licensees will remember that if you were doing emergency communications on VHF and UHF, you were probably using Gonset radios.

Want a bargain?? Check the many listings in this month's Classifieds Column.

Tom Trethewey advises us of regional Upcoming Events. Going to the Fox Cities Amateur Radio Club Hamfest next weekend? Watch for Tom's info on its new location.

Check out Ken Boston, W9GA, and his Secretarial report or the Ozaukee Radio Club May 2024 meeting for your review.

Finally, check out information on next week's meeting, and more, from Jeananne Bargholz, N9VSV. Jeananne also gives us a window on upcoming programs. Check out the Swag page as well!!

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

Ozaukee Radio Club Newsletter
June 2024 – Table of Contents

PAGE	DESCRIPTION
1	**Bill Greaves, K9GN: From the President** Monthly Update
3	**Bill Shadid, W9MXQ: A Message from the Editor** This Month's Table of Contents & Comments
5	**Jeananne Bargholz, N9VSV: 2023 Service Awards** Annual Awards Presented at April 2024 Meeting
7	**Tom Trethewey, KC9ONY: 2024 ORC Spring Swapfest** Another ORC Spring SwapFest in The Records
15	**Tom Trethewey, KC9ONY** My Dayton Hamvention 2024 Experience
17	**Gary Sutcliffe, W9XT** Dayton Pictures
18	**Tom Ruhlmann, W9IPR: Projects, Tools, and Tips** Swapfest Finds
20	**Don Zank, AA9WP: OZARES – Ozaukee County ARES** When All Else Fails….Including the Ionosphere?
23	**Stan Kaplan, WB9RQR: Computer Corner** No. 315: An All-Metal Power Strip
24	**Gary Sutcliffe, W9XT: On the Air Activities!** May solar activity, Field Day, DX Info sources, Armed Forces Day recap, Thirteen Colonies Special Event, DX, Contests.
31	**Bill Shadid, W9MXQ: Vintage Amateur Radio** Big Iron Gonset High Frequency Station from the 1960's
40	**Classified Advertisement** Member Items For Sale or Wanted
41	**Tom Trethewey, KC9ONY** Upcoming Events
42	**Ken Boston, W9GA** Secretary's Report – 8 May 2024 Meeting
44	**Jeananne Bargholz, N9VSV: Upcoming Meeting Programs** This Month's Program, Making a Presentation, & Meeting Agenda
47	**Jeananne Bargholz, N9VSV:** The Swag Spot: Ozaukee Radio Club Gear to Wear and Use.
49	**The Back Page – Quick Notes about Meeting Programs** Details on the Current and Following Month Programs

Onward To the Newsletter

Ozaukee Radio Club
Member Awards Presented
at the April 2024 ORC Meeting

de: Jeananne Bargholz, N9VSV

Ham of the Year:
Nancy Stecker, KC9FZK

Turkey of the Year:
Nate Seidler, KC9TSO

Project of the Year:
Tom Trethewey, KC9ONY
and
Gregg Lengling, W9DHI.

(Gregg was not present at the in person meeting to receive his award first hand.)

These awards celebrate activities from 2023. They are the result of a poll taken by the membership. Ken Boston, K9GA, is the Awards Chairperson. Please remember the hard work done by the members that makes the Ozaukee Radio Club what it is.

Another ORC Spring SwapFest in The Records

de: Tom Trethewey, KC9ONY

Saturday, April 27, 2024, was the date of the Ozaukee Radio Club, Inc. 44th Annual Spring Indoor SwapFest. It was held at the Ascension Columbia St. Mary's Expo Center on the Ozaukee County Fairgrounds, which we have been using since 2014.

The weather was good. Interesting to note that I'm told if it's raining, that will keep some vendors from coming as they don't want to unload or load in the rain.
If the weather is nice, some attendees opt to do yard work or chores. Really?!

We did have some rain late Friday afternoon, which really only affected the setting up of the various outdoor signs and banners. Thank you to Jeananne N9VSV and Bill K9GN for braving the elements for this important duty.

Our commercial vendor Tower Electronics returned again, and we were joined this year by Cable X-Perts, and Hamtubes.com. Of course, we can't forget Unifiedmicro.com was there as well.

Door prizes donated were gift certificates from the ARRL, DX Engineering, and N3FJP Software. Bioenno Power provided several batteries again this year, and we will have two more to give away at the ORC Fall Swapfest in September.

- Jeananne N9VSV and Gary N9UUR generously donated a 100th Anniversary ARRL softcover handbook as one of the three grand prizes.
- As part of our club's 60th anniversary year, we also gave away a brand new Yaesu FT-70DR handheld transceiver, which was won by ORC member Fred W9KEY.
- Food and refreshments were provided by the Cub Scouts from Pack 516 in West Allis, WI. They merged with Pack 586, whom we had last year, and were excited about the possibility of working with us. They had hot dogs, sloppy joes, chips, cookies, brownies, donuts, as well as coffee, water, and sodas.

The Cub Scouts did not give me specific figures but indicated that they were happy with sales and would love to return next Spring. I also suggested that they possibly sell food and refreshments at the upcoming Fall Swapfest and put them in touch with Tom W9IPR. Also, I talked to them about needing the coffee to be available much earlier than this year. I had Scouts draw the door prize tickets.

A total of 292 tickets were sold, of which 83 were in advance. 86 out of 90 tables were occupied. I also had 10 tables available in storage.

We met our budgetary income goal again this year, which is always good.
There is plenty of room in the facility for expansion, and I hope we can attract more vendors in the coming years. If you have any ideas or suggestions for improving and/or growing our Swapfests, please feel free to email me at swapfest@ozaukeeradioclub.org and we can discuss them.

Thank you to all the volunteers that helped with setup, tear down, and operations during the SwapFest. Tower Electronics appreciated the help as well.

Don’t forget to help out Tom W9IPR with the ORC Fall Swapfest, too.

Save the Date for next year! Saturday, April 26, 2025

W9MXQ

Yaesu FT-70DR winner Fred W9KEY and ORC President Bill K9GN

No, it was not rigged!

Other ORC member winners were Ray W9KHH and Bill AC9JV. Both won gift certificates. Congratulations to all!!.

Following are pictures from around the hall . . .

Pack 516 Scouts selling Brownies and Cookies.

W9MXQ

Tower Electronics area setup.

KC9OMY

1

Curt N9CBS selling.

W9MXQ

ARRL Section Manager Jason KC9FXE, Gregg W9DHI, and Richard N6NKO, ARRL Official Emergency Station, Technical Specialist

W9MXQ

Larry KD9RMX – selling.

W9MXQ

Bill K9GN and Todd N9DRY

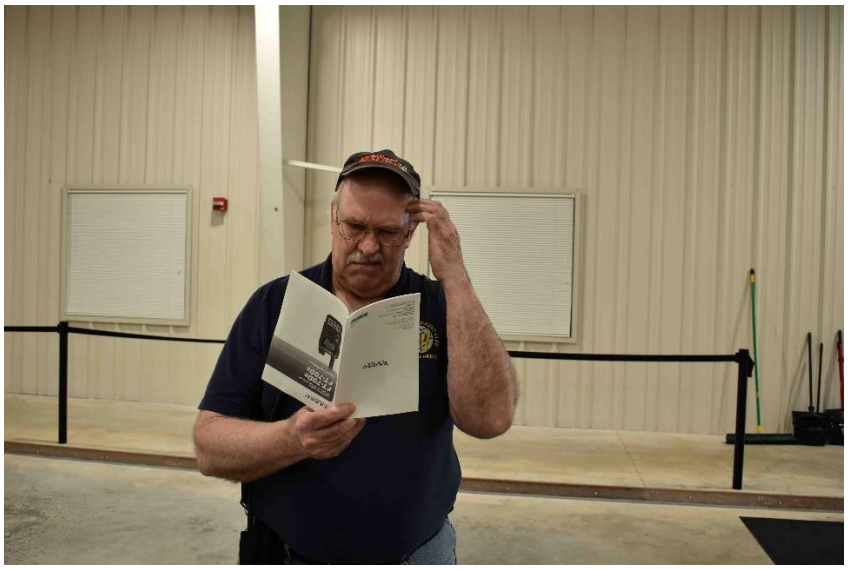
W9MXQ

Sales Floor

KC9ONY

Tom KC9ONY with Scouts pulling door prize winning tickets.

KC9ONY



Fred W9KEY looking over the manual for his new HT.

W9MXQ

Bill AC9JV accepts a prize just drawn from Tom KC9ONY

W9MXQ

Look for more pictures on Facebook: https://www.facebook.com/orcwi

My Dayton Hamvention 2024 Experience

de: Tom Trethewey, KC9ONY

This year I attended the Dayton Hamvention in Xenia, Ohio. I was working for Tower Electronics at their now inside only booth. In past years, they had a small booth inside, and a large tent outside the race track. Due to R&L and MFJ dropping out, they were able to expand the inside setup.

I was picked up in Cedarburg and rode down with a crew from Green Bay. It was nice having someone else do all the driving! Wednesday was just a travel day.

Thursday was setup day in Building #3, the Marconi building. During non-Hamvention days, it's called Livestock #3. No air conditioning, but they did have some large overhead fans. Much of the indoor setup was already complete, but there were many last minute checks that needed to be performed.

Thursday afternoon, we had time to walk around inside of the racetrack where quite a few vendors had already set up. It was rather warm. Temperatures in the mid-70's. Three of us from the Tower Electronics crew all walked together.
We got to one tent, and the man asked us if we were exhibitionists. We all looked at each other and said "what?" Then it dawned on us. We were all wearing our Hamvention vendor badges that said Exhibitor on them. I didn't see anything I wanted to purchase in the flea market area.

Friday, we had rain in the morning and a good part of the day. I was sure glad I wasn't outside. With a tent, there is shelter, but one has to worry about wind and rain, as well as the slightly uneven ground. Inside, it can get a little sticky at times. Of course, business was booming, as many attendees ventured in out of the rain.

Saturday's weather was good. Cool in the morning and sunny later. We still had a good amount of foot traffic and were kept busy with sales most of the day.

I don't work for Tower Electronics too often, so I can't say how business compared to previous years.

Sunday was pretty busy as well, which was sort of surprising to me. A lot of the flea market vendors leave on Saturday afternoon, but it sounded like there were still quite a few left. One of our crew had to leave on Saturday morning, so I did not have as much chance to walk around as I thought. I had also downloaded the ARRL app but did not spend too much time searching what forums were being presented. I did hear that the POTA forum was packed!

Several ORC members stopped by the Tower Electronics booth. I remember seeing Kevin K9VIN, Dan K0DSC, Loren N9ENR, Steve W9MCU, Fred W9KEY, and Gary K9DJT. Did I forget anyone? I also saw a few non-ORC Wisconsin hams including Tony AB9OI from the Fox Cities club.

Overall, it was a fun experience. They've asked me to work for them again next year. I'm considering it but will request some time to walk around or go to a forum if I see one that interests me.

Unfortunately, I did not take any pictures. There are quite a few YouTube videos out there, with at least one or two that walked by the Tower Electronics booth, if you want an idea of the crowds.

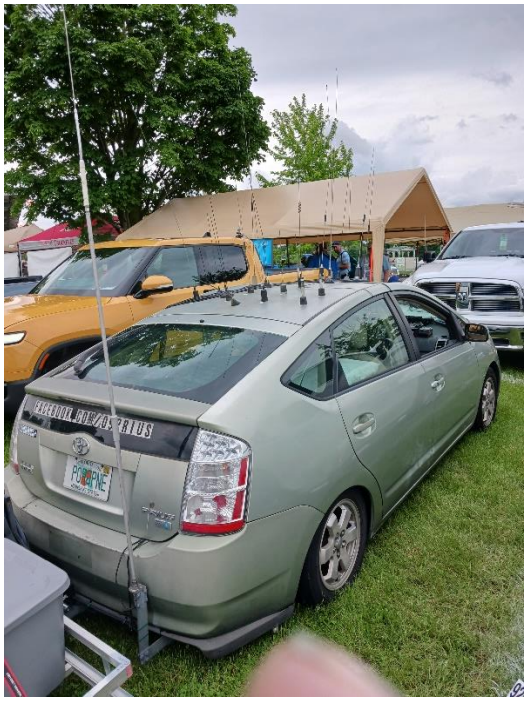
Arial View of Dayton Hamvention – 2024 – Xenia, Ohio

Dayton Hamvention

Dayton Pictures from Gary Sutcliffe, W9XT

Dan, K0DSC, Loren N9ENR

Dinner (L-R) Lyle WE9R, Steve K9WO, Kent K9EZ, Gary W9XT, Gary K9DJT



Does this guy have enough antennas on his car?

Fred, W9KEY

Projects, Tools, and Tips

de: Tom Ruhlmann (W9IPR)

The Madison Club SwapFest held in Stoughton was fun and indeed there were some good deals there. As I was walking down an isle a vendor called to me with “here, take this home with you” and he placed an attenuator module in my hand. It was interesting so I said “thanks” and continued walking to the next isle. In the next isle I noted a Sencore voltage, load, current, and power meter with a defect tag on it. The vendor assured me it was an easy fix and then he noticed the attenuator module I was holding. He said “I could use that module. Why don’t we trade?” Well, I couldn’t pass that up and we traded. When I got home, I checked it out and the Sencore works just fine, and it now sets on my work bench.

As I continued down the aisle, I spotted a Heathkit IT-1 isolation transformer. It appeared quite dirty, but the vendor said it worked. It was good for only up to 1 amp continuously and 2 amps for a short duration and it was fused. It also had the capability to adjust the output voltage from about 100 to 140 volts. A true isolation transformer has two primary functions. Fundamentally it will electrically isolate the 120 VAC load from the primary AC power source. This is especially important when initially testing an AC/DC appliance that has no power transformer and is powered directly from the facility AC power CB panel which is typically protected with a 15- or 20-amp circuit breaker (CB). The isolation transformer provides personal and facility safety in that its low current (3 amp) fuse would blow first preventing a full 15- or 20-amp current having to flow through the short (or you) to trip the main CB.

Secondly, the 1:1 turns ratio isolation transformer is built on an iron core with a primary and a secondary winding. The AC current flowing through the primary winding has both a magnetic and electric field surrounding the primary winding wire. This magnetic field will pass through the secondary winding wires inducing the AC output voltage on its windings.

However, if there is any “noise” on the AC voltage from the facility source, such as motor brush noise, switching power supply noise or RF in some form, it exists only in the electric field surrounding the primary winding wire and would appear on the transformer secondary winding wire turns and any powered appliance or test equipment. This line noise would typically appear as audio distortion or erratic readings of sensitive test instruments. In an isolation transformer such as used in medical instruments the electric field of the primary winding is shielded from the secondary winding by a non-ferrous foil such as a thin aluminum or copper wrap between the two windings that passes the magnetic field but blocks the electric field and noise resulting in a clean 120 VAC source for the appliance.

It was for these two reasons that I was interested in the isolation transformer; safety and clean power.

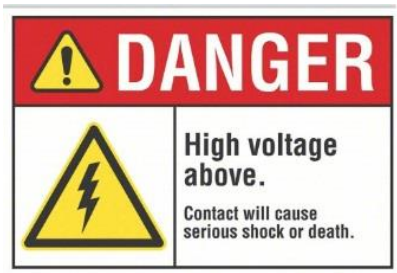
In the interest of safety, I also replaced the line cord with a 3-wire cord with the cord green ground wire connected to the case. That assures that should there be a short to the case it would be immediately grounded and blow the fuse. Secondly, I replaced the intermittent power switch.

The cleaning of the front panel was a bit more difficult requiring use of a mechanics hand cleaner followed by use of some paint thinner. It is still a bit cloudy but quite acceptable. I then cleaned the case and painted it a pewter gray from a spray can from a previous project. Note that I also included a conversion receptacle

plug to allow use of loads with a 3-prong safety plug.

Now I can safely test my AC/DC S-38 receiver that has no transformer using my refurbished Heathkit isolation transformer.

So that's about it for my April SwapFest and May project. So, what are you doing that we can read about?



This article involves exposed high voltages. Beware!!!

OZARES: Ozaukee Amateur Radio Emergency Services

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

When All Else Fails….Including the Ionosphere?

Most ARES exercise scenarios are guaranteed to include no cell phone service, the repeaters are all down, the electric grid has collapsed, and various other types of obstacles that would call for the activation of Emergency Communications. Everyone has heard the slogan: "When all else fails." However, nobody has ever included the ionosphere going down in a scenario. But that is what happened during the first weeks of May. There is that old saying "May you live in interesting times," well I think we just have.

The geomagnetic storm that reached G4 and G5 levels created havoc, or should I say silence, on the amateur bands.

On Saturday, May 11, the Armed Forces Day Crossband Test was scheduled. The Department of Defense invites Amateur radio operators to join the exercise with Military stations. Amateur radio operators were instructed to listen to assigned frequencies from the military installations for instructions on the mode and amateur radio frequency the station would be using and monitoring. The military stations would transmit on the military frequency, monitored by the hams, and the hams would transmit on the amateur band frequencies, monitored by the military.

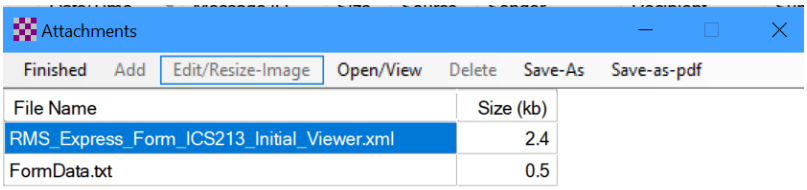
The results were less than impressive. This was one typical report: "*Battleship IOWA's NEPM Activation For Armed Forces Day Crossband Test 2024 Have Concluded After Enduring Probably The Worst Radio Conditions Since 2003!" https://biara.org/ T*he NSS/ US Naval Academy station in Annapolis, MD reported less than 300 contacts for the day.

Even the digital modes, such as FT8 and Olivia, experienced strange behavior during the storms. Signals had a "watery" sound and would fade in and out. The Transcontinental NBEMS net, which uses the digital Olivia mode, had a connectivity test on May 14. I was not able to participate, I think there were storms that evening, but looking at the reports the net was successful for the most part. They have moved the net to 20 meters and the East Coast and Mid-West stations were able to copy many of the transmissions, but the West Coast stations were shut out.

WINLINK on the FM bands worked just fine. However, on the HF bands, there were mixed results, mostly dependent upon the frequency and distance between stations. When operating conditions are very good, sending any type of message form on WINLINK HF may be difficult

The bit-per-second rates can vary, sometimes dropping below 100 bps. In the snip below is the information about an attachment to a WINLINK email. The form information is 2.4

kb in size and at 100 bps it requires 24 minutes to send. During difficult conditions including fading and noise, there is a higher probability of loss of connections between the two stations.



One recommendation to overcome this slow transmission is to create the form and submit it to the WINLINK program. An email with the FormData text is created in the email. Copy this text create another email and paste the information. Now send the email without the form information and it will transmit much quicker with less chance of the connection being lost.

WINLINK VARA HF is not a low signal communication mode. But VARA HF does have some propagation aids to help decide frequencies to use. However, they are only estimates based on VOACAP propagation models. The forecast for the W6IDS Vara HF Gateways located in Richmond IN at 284 miles. See the chart listing below for W6IDS. The station has four Gateways and their corresponding frequencies. At 1900 hours local, 0000 UTC, the 80 and 40-meter channels are good, but the 30-meter channel is closed.

Propagation Forecast for W6IDS

Hour Local	Hour UTC	3584.500	7061.500	7084.500	10131.500
19	00	50	52	52	0
20	01	51	53	53	0
21	02	52	54	54	0
22	03	51	55	55	0
23	04	48	53	53	0
00	05	48	51	51	0
01	06	48	48	48	0
02	07	49	45	44	0
03	08	50	38	38	0
04	09	53	32	32	0
05	10	54	34	34	0
06	11	56	43	43	0
07	12	54	50	50	0
08	13	44	51	51	0
09	14	29	51	51	30
10	15	16	50	50	30
11	16	6	52	52	32
12	17	0	50	50	35
13	18	0	49	49	38
14	19	0	50	50	41
15	20	6	51	51	41
16	21	19	51	51	43
17	22	32	51	51	44
18	23	45	52	52	44

The difficult band conditions provided a good training ground and reminder for all operators of how dependent we are on the ionosphere.

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. 315: An All-Metal Power Strip

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

On 13 March, our Ozaukee Radio Club meeting speaker (Dave Ellison, W7UUU), talked about "Rebuilding The Shack After It Burned Down). He showed that ordinary 110 volt **plastic** power strips can be a source of inordinate fire danger to our stations, and even to our homes. In keeping with his message to use nothing but metal power strips in our stations and shops, I went looking for strips with metal housings to replace a couple of plastic units in my digs. Not easy! After searching Amazon.com I thought I had found several units, only to discover when reading user comments that while the housing was indeed metal as advertised, the end cap housing was plastic! Clearly, that was not the aim. As Dave Ellison reported, fire investigators indicated that heat-buckled plastic allowed flames to escape his strip, spreading the fire to the rest of the shack. An all-metal housing was the target for my purchase.

I found what I thought from the description was the target and ordered one. It came and I held my breath as I shucked it out of the carton. Yep, the main housing of the unit was an aluminum channel, but the end caps were a puzzle from simple inspection. However, probing them with a small magnet showed they were indeed sheet steel.

So, here is what I ordered from Amazon:

BTU 6 Outlet Power Strip, Metal Mountable Power Strip Non Surge Protector, Heavy Duty Wall Mount Power Outlet for Commercial, Industrial, Workshop, 6FT Power Cord, 15A/125V 1875W (Yellow 6FT) $16.99

With tax, my total came to $17.92 as of 30Mar2024. Shipping could be extra, depending upon your relationship with Amazon or another seller; my shipping was free. The unit is black, with yellow sockets, as suggested in the illustration. It is not surge protected, but many folks today have whole house surge protection at the power entrance. If you do not and surge protection is important, plug any surge protected device into a socket on the strip, and the remainder of the sockets will share that protection. An indicator-light switch near the power cord turns all 6 outlets on or off. The unit comes with a bag of mounting hardware that will work under most any mounting circumstances.

Not too bad for $18.00. Let me know if you find one cheaper. Happy Computing!

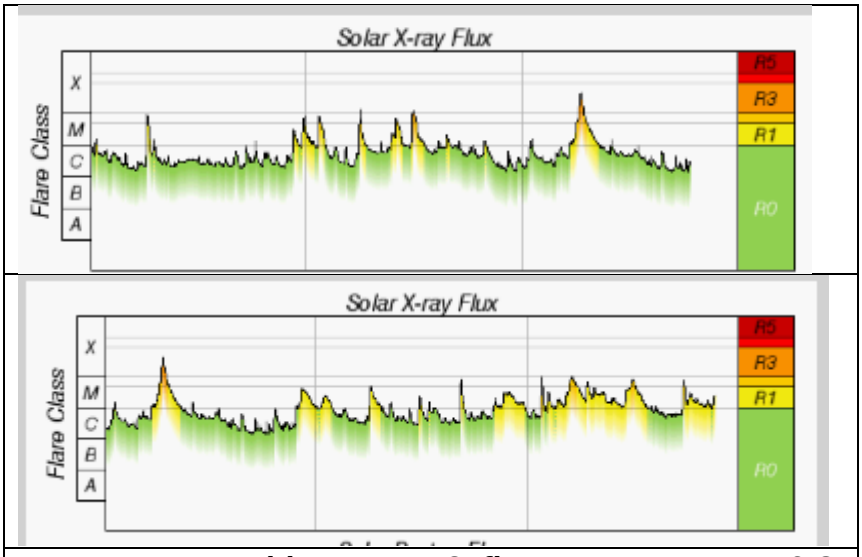
On The Air Activities!

de Gary Sutcliffe, W9XT

May was a month with a lot of solar flares. We had two active regions that were putting out a couple of large solar flares a day. It was pretty frustrating with all the radio blackouts caused by the flares' X-rays.

Solar flares eject charged particles called Coronal Mass Ejections (CME). If these particles are directed towards Earth, we get a disturbed geomagnetic field. This will disrupt polar path communications, and if it is strong enough, we can get aurora. Note that solar flares are not the only source of CMEs.

Most of the flares during this period missed the Earth. But on May 10th we got hit. I was working stations on the East Coast on 2 meter CW via aurora in the afternoon. Most aurora activity is at night because the solar wind pushes the ionization back to the dark side of the Earth. Then we got a 6 meter opening to Central America. I worked a station on 6 meter CW in Costa Rica, which was a solid 599. Then I moved up the band and worked another on SSB, which was 59 +25 on the S-meter. Turning the beam north to work aurora and south to work strong DX was bizarre.



Top May 5-7 with an X4.52 flare. Bottom May 6-8. Credit: Space Weather Prediction Center.

After the south opening closed, I returned to work more aurora but didn't work anything interesting.

On CW, aurora sounds like a buzz. On SSB it distorts the voice, so it sounds like Donald Duck. Sometimes, the distortion is so bad that voice communication is impossible.

Then, I decided to try Q65. Although FT8 is popular on VHF as it is on HF and offers the same advantages, FT8 will not work with aurora. The phase and frequency shift from the active ionized gas in an aurora distorts the signal too much.

I heard Q65 works with aurora, so I tried it for the first time with this propagation mode. Q65 is a good mode but not the best for an active band. The bandwidth used is wide, and only a few stations will fit in the SSB bandwidth used by the digital modes.

Another problem is that there is a variety of sub-modes for Q65. The first is the sequence timing, which can be set to values between 15 and 300 seconds. Usually, it is not too hard to figure out if you see a reasonably strong signal. If you set it for 60 seconds and the signal is only 30 seconds, it will only fill half the frame. There are also sub-modes A, B, and C.

Another thing to watch out for is the frequency tolerance setting. If you keep the tolerance tight, you can decode signals deeper into the noise. But you can also miss stations outside the tolerance range. Keeping the frequency tolerance narrow is the best choice if you are trying to work a tough path with a schedule or otherwise know the other station's transmit frequency. Otherwise, set it wide. By trial and error, I found the other stations used 30 seconds and sub-mode C. I also saw Gary, **K9DJT**, calling CQ with Q65. I don't know if he made any QSOs.

Then, a thunderstorm came through around 7:30 PM local time, so I shut down. I had a busy day, was tired, and went to bed early.

Then, at about 2:00 AM, an app on my cellphone went off, waking me up. It is an aurora alert app. It is slanted towards visual observation of auroras, so it does not alert me if it is cloudy. So, I got up and went outside. The storm was over, and it had cleared up. I could see the aurora from the northern horizon all the way to about 30° off the southern horizon.

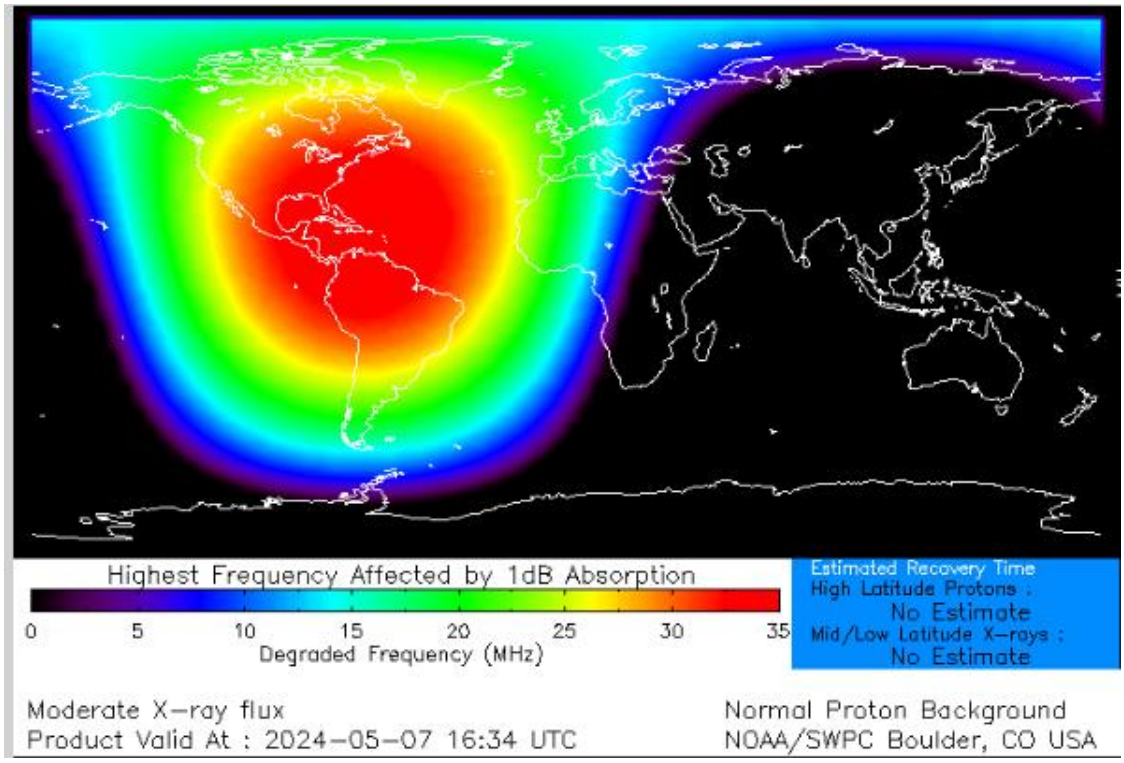
I didn't see much color, and there were only a few spikes that moved around. It looked like gray fog over most of the sky. So, I went down to play on the radio.

A couple of 2 meters CW QSOs made it into the log, but there were not a lot of others on at that time of the night.

Then, I made a half dozen Q65 QSOs around the country on 6 meters. I decoded some signals from western Oregon. The furthest west I worked was Montana. I worked as far south as Missouri but decoded some further south.

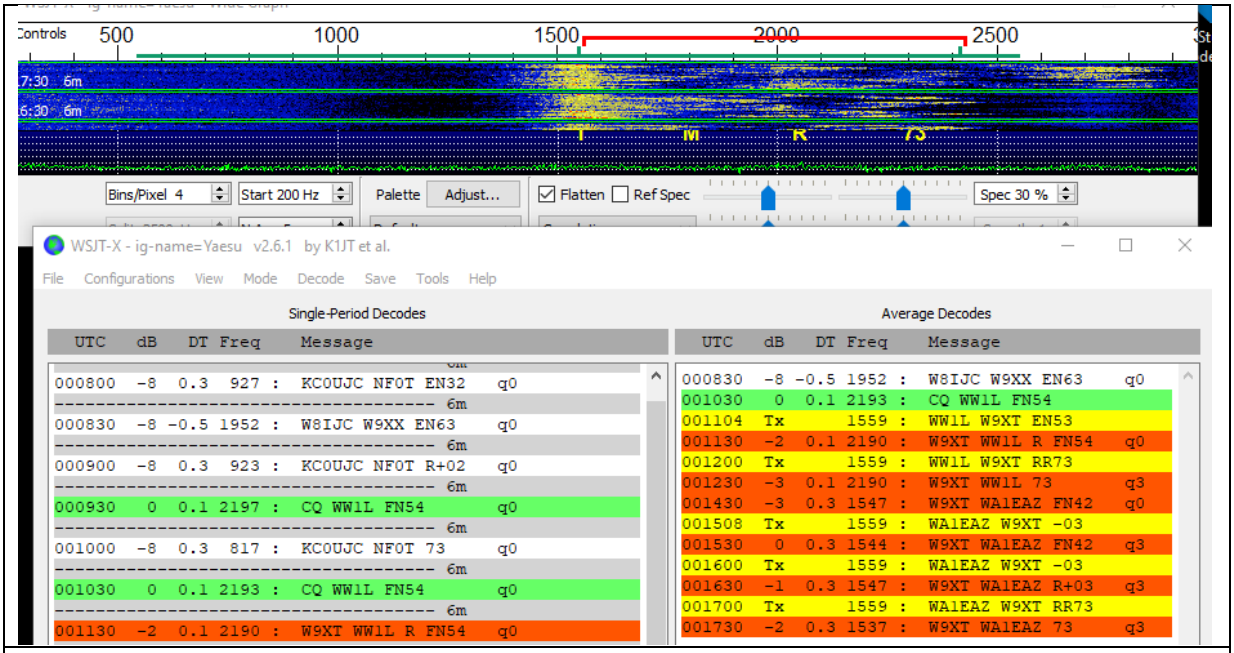
PSKReporter started showing W7 and W0 stations working Alaska. The map showed stations in W7 and W0 were working Alaskan stations. I turned the beam that way and monitored for about a half hour. I got one decode. That is too far for a single aurora hop. Some complex combination of hops was at play. Alaska is a tough one from Wisconsin, and I know a lot of guys who need only a KL7 for 6M WAS. Hawaii is the other tough one.

It was quite a night of aurora activity. I don't think I caught one like that in about 20 years. The sun rotates, and it takes about 28 days for a spot on the sun near the equator to make a full rotation. The sunspot regions that caused the flares are still alive



Radio blackout from the May 7 flare.

and have reappeared at the end of May, causing many high M-class flares and some X-class ones.



Screenshot of two Q65 6 meter aurora contacts.

Field Day

Field Day is coming on the weekend of June 22-23. This is the biggest ORC event of the year. We will start setting up on Friday, the 21st. As the club ages, we are losing operators and members coming down to help set up. If you can, please stop by and put in some operating time and help setting up and tearing down before and after FD. On the air operation starts at 1800Z (1:00 PM local) and runs for 24 hours.

Field Day will be discussed at the June meeting. Pat, W9JI, and I will be putting on the program. We will cover operating techniques and station considerations.

DX Info Sources

Fred, **W9KEY**, wrote saying that he likes the printable DXpedition page posted after my column each month. After he prints it out, Fred adds other interesting DX announcements from DXnews.com. I was not aware that DXnews had a calendar. Thanks for the tip, Fred! https://dxnews.com/calendar/ Another good calendar is the one at DXworld. https://www.dx-world.net/

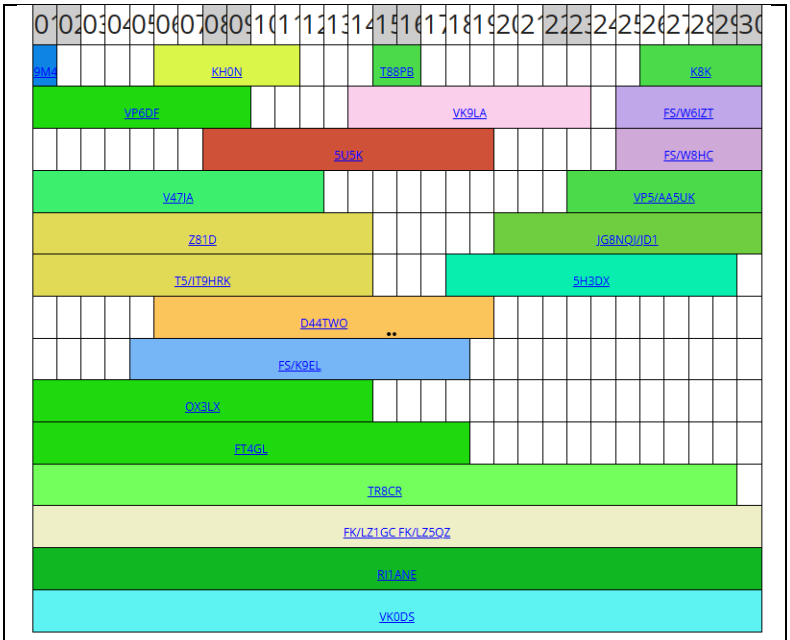
It is good to check sites like this every week or so, as some DXpeditions are not announced very far in advance. I only cover the ones that I think are the most interesting and ones you should note if you are getting into DXing since they are the rarer ones, and you might have to wait a long time for another chance. More than once, I sent my column to Bill, W9MXQ, our newsletter editor, and then asked him if I could send in an update because an announcement came out a few hours later.

Fred mentions other things he does.

In addition to printing Gary's page to sit beside my radio, I also "load" those desired call signs into **My DX Summit** at: http://www.dxsummit.fi/#/.

It only takes a minute or two to type each wanted call sign into the DX Summit "Search" field. Additional filters can be set – for example, you may only want to see spot reports for CW or Phone modes. Once all your desired call signs are loaded, simply click on the page URL (at the top) and drag that web location onto your desktop. The resulting desktop icon can then be quickly selected (perhaps after a reboot) to reload that page with all your saved call signs.

DXSummit is a good site. I connect my logging program to the full DX cluster. That gives a lot of spots but can mean digging through many spots to find a particular station. The DXSummit filtering is good for selecting only stations in which you are interested. I also keep location filters on the DX cluster fairly narrow. I don't need to know what hams are working outside our propagation area. But sometimes, it is nice to see what other more distant stations are hearing your target so you can be ready if propagation shifts. It is also better for finding DXpedition digital frequencies. DXpeditions often use non-standard FT4/8 frequencies, and the regular cluster frequently misses them.



DXnews.com Calendar for June 2024. https://dxnews.com/calendar/

My issue with DXSummit is that a few people always seem to complain about every DXpedition. I guess they feel every DXpedition is terrible until they get in the log. Hams going on DXpeditions put in a lot of time and money putting rare ones on the air. They often have to endure really hot, cold, buggy, or other personal discomforts. I sometimes get a bit frustrated, but they put up the money and effort, so they have the right to operate however they want. I get the impression most of the nasty remarks come out of Europe.

Armed Forces Day Cross Band Test

This event was on Saturday, May 11. It was kind of a washout with all the solar flares and resulting HF blackouts that day. I managed to contact NSS at the US Naval Academy in Annapolis, MD. I transmitted in the 20 meter CW band, and they were transmitting on 14.487 MHz, way above the top of our band. Did anyone else make any contacts?

Thirteen Colonies Special Event

One event I have gotten into is the Thirteen Colonies Special Event, which runs from July 1 to July 7 each year. The idea is to contact stations in each of the original colonies that became states after we became an independent country. The stations will all use special 1X1 call signs, K2A through K2M. Check the website to see what call is used in each state.

There is a special station from Great Britain, GB13COL. TM13COL will be on from France, a crucial ally in winning our independence. Finally, there is WM3PEN in honor of William Penn, the first European to settle in what is now Pennsylvania.

The goal, of course, is to work them all. You can get a certificate if you do. You don't need to work the bonus stations to get the certificate.

Several ORC members have chased this one in the past, including Bill, **AC9JV**, Fred **W9KEY**, and Dave, **KB9PRF**. Bill, **W9MXQ**, usually tries to get a sweep on each mode, CW, SSB, and Digital. Some for the states are pretty hard to find, especially the European ones, and getting each one on each mode can be quite a job.

DX

FT4GL on Glorioso Island started up on schedule. Despite being a one man operation, many QSOS are being made. I got him for a new mode country (digital) and later for a new band country. Gary, **K9DJT**, has him on several bands, including an All Time New ONE (ATNO). Gary, **N9UUR**, also reported getting an ATNO on this station.

He has been spending a lot of time on the air, but the pile ups have been big. You can expect the pile ups to thin out as the operation progresses. He will leave the island about June 18 when the next boat arrives. The last time this location in the Indian Ocean was on the air was in 2009. At the start of the DXpedition, it was listed as the 7th most needed country on ClubLog.

KV1J will be on from St. Pierre & Miquelon Islands off the east coast of Canada as FP/KV1J. It is a French possession. This island is activated relatively often, but this year, he will focus on 60 meters and the higher bands 12, 10, and 6 meters. Last year, I spent a lot of time trying to work him for a new 6 meters DXCC country, but we never had propagation.

Six meter Es skip last year was very disappointing, and this season has also been abysmal so far. I will probably spend a lot of time in July unless we get lucky and get propagation early in the operation. The stated dates are July 2-12.

There are other single operator DXpeditions in June and early July. I don't usually list single operator events unless they are special, or I know the operators will be active.

Contests

If you read this the day the newsletter comes out, you will get the notice for the ARRL VHF contest. The ARRL has VHF contests in June, September, and January. The June one is the most active because of the possibility of great 6 meter openings. I'm a bit pessimistic about that this year. But you never know and with so many stations on, if we do get an opening, there will be someone there. This starts Saturday afternoon and runs through Sunday night.

That wraps up June. See you at the meeting and Field Day.

See W9XT's DXpeditions, Contests, and Events for June and early July 2024, beginning on the next page . . .

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

W9XT's DXpedition picks for June and early July 2024					
QTH	**Dates**	**Call**	**Bands**	**Mode**	**Link/notes**
Glorioso Island	Until June 18	FT4GL	HF	S/D	No CW

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

W9XT's contest picks for June and early July 2024					
Name	**Start**	**Length**	**Bands**	**Mode**	**Link**
ARRL VHF	Jun 8, 1800Z	33	6M and up	Any	www.arrl.org/june-vhf
ARRL FD	June 22, 1800Z	24	All	All	https://www.arrl.org/files/file/Field-Day/2024/2024%20Field%20Day%20Packet%20v1.pdf

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 June and early July 2024			
Event	**Dates**	**Details**	**Link/notes**
Thirteen Colonies	July 1-7		http://13colonies.us/
South Milwaukee Hamfest	July 6	American Legion Post 434, 9327 S Sheppard Ave Oak Creek, WI	https://southmilwaukeearc.org/2024/05/15/wi9sm-2024-swapfest/

Vintage Amateur Radio

de: Bill Shadid, W9MXQ

Admit it or not, we all like glitz. Hams are no different – we just find glitz is different than the average person on the street. What older ham does not remember the look of a:

>> The Collins 75A-4/KWS-1 Gold Dust Twins
>> The Collins 75S-1/32S-1/30L-1
>> The Hallicrafters SX-101/HT-32/HT-33
>> The Hallicrafters SX-111/HT-37/HT-41
>> The Hallicrafters SX-117/HT-44/HT-45
>> The Hammarlund HQ-170/HX-50/HXL-1
>> The Heathkit Mohawk/Marauder/Warrior
>> The Heathkit SB-300/SB-400/SB-200

With the exception of the Hammarlund setup shown, all of the above could be re-created today with perhaps six months to a year of searching. That Hammarlund setup would take a bit more to find an HX-50 Transmitter and an HXL-1 Linear Amplifier. The Hammarlund HQ-170 is easily obtained. One other complete setup from a well-established (at the time) manufacturer was the Gonset G-63 Receiver, the GSB-100 Transmitter, and GSB-101 Linear Amplifier. Most vintage radio collectors have certainly heard of Gonset. But how many know about the major attempt to catch up with the above listed market leaders of the 1950's and 1960's for high frequency radios?

All of these relatively large desktop stations focused on SSB/CW operation. My fellow collectors of this vintage, and earlier, refer to this as "Big Iron." That is, big in size, heavy from their steel, and a reference to what we all call, "boatanchors." I make mention of this because at the time there were efforts by leaders in the market to offer top performing AM Transmitters and Transceivers. While the handwriting was on the wall for SSB to be the future of Phone operation, there was still a substantial market for AM equipment[1].

> **Side Note:** To be sure, the Collins 75S-1/32S-1/30L-1, the Hallicrafters SX-117/HT-44/HT-45, and the Heathkit SB-300/SB-400/SB-200 were part of the move to the lighter weight, physically smaller gear we experience today – but this group is still considered in the boatanchor category by collectors today. (As one in the older age group of boatanchor collectors, these pieces represent items I can still lift and move about without assistance!!)

My Gonset adventure was from the late 1960's when I acquired a GSB-100 Transmitter, These very large footprint transmitters approached 100 pounds in weight. They were unique in that they were probably the last of the Phasing SSB Modulation radios on the market. Phasing SSB Modulation offered some advantages in that it required no expensive crystal filters. It suffered, however, from carrier suppression instability. Hallicrafters had long supported Phasing SSB Generation and made it an art form with much better

than average carrier suppression (for the process) by the time of their last SSB Transmitter using the process – the Hallicrafters HT-44 Transmitter from 1964.

An advantage of the process, however, allowed for the easy generation of Phase Modulation (PM)[2] – simply stated, a very good imitation of NBFM (Narrow Band Frequency Modulation) that had gained ground in the 1950's but was falling it of favor by the mid-1960's. The GSB-100 offered SSB, AM, PM (FM), and CW.

So, here is a picture of the beautiful Gonset GSB-100 as used at WA9MXQ (my call at that time) from the late 1960's:

Gonset GSB-100 HF (80-10 Meters) SSB/AM/PM/CW Transmitter

Picture Credit: https://oldtuberadio.com/electronic-type/tube-set/gonset-gsb-100/

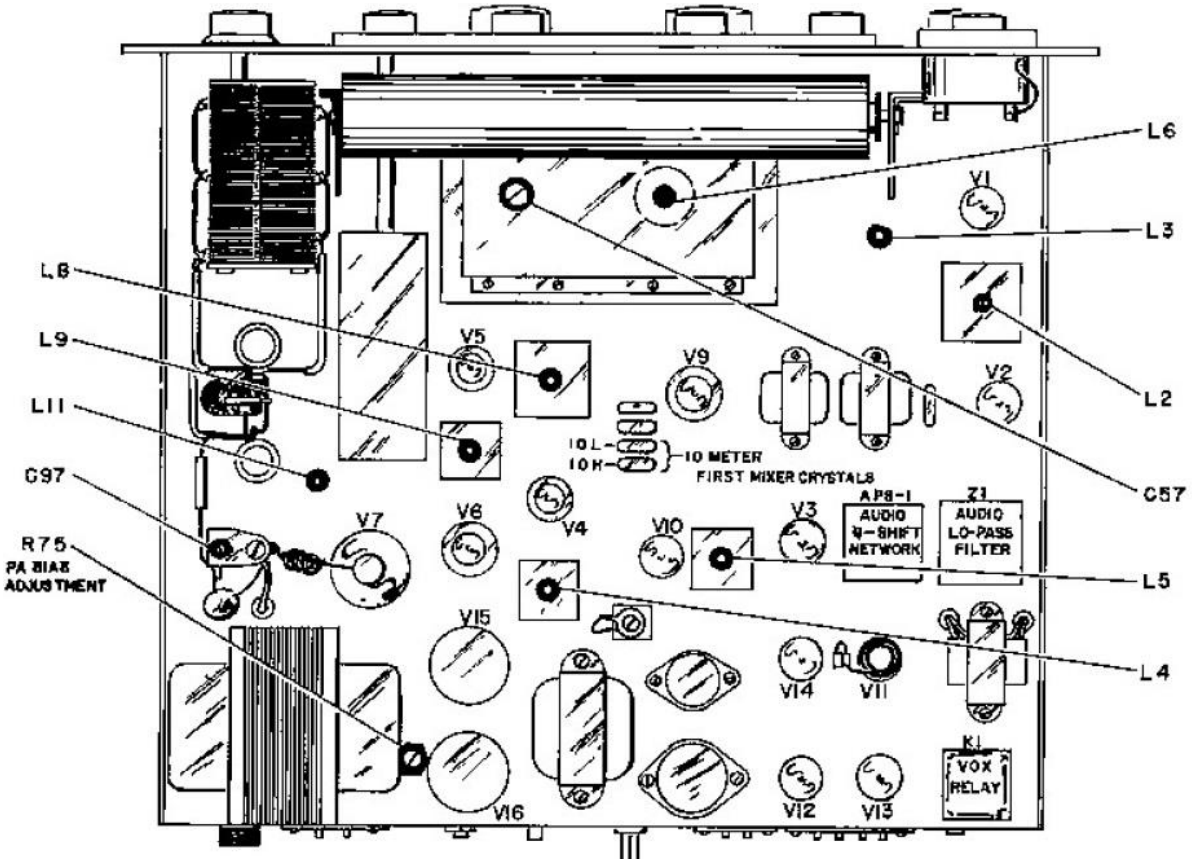
The GSB-100 was an acquired taste – one I never developed. But I credit it with forcing me to learn about generating SSB with the phasing method along with learning to trouble shoot HF PA circuits. This radio was modest with only about 65 watts PEP output on SSB and CW. There are a lot of interesting stories about this radio. Modest in power but not in weight. Hmmmm, fond memories do come back to me - maybe I should try to find another one!

Here are some specifications on the Gonset GSB-100: (Per Gonset Product Manual)

- Power Input to the Final Amplifier – by Mode
  - SSB – 100 Watts
  - CW – 100 Watts
  - PM – 75 Watts
  - AM – 50 Watts (This is both sidebands with carrier.)
- Coverage of 80-10 meters with limited coverage with 10-meters 28.5 to 29.7 MHz
  - Six Ranges
  - 10-meter coverage could substitute 28.0 to 28.6 as an option[3].
- Transmit/Receive Switching
  - PTT and VOX

- Carrier Suppression (SSB)
  - Better than -60 dB
    - **Author's Note:** This is quite good for Phase Modulation.
- Antenna Impedance Matching Range
  - 30-200 Ohms – up to 4:1 SWR
- Vacuum Tubes
  - 16 Tubes – including rectifier and regulator tubes
  - Final Amplifier – single 6DQ5 driven by a single 12BY7A.
- Frequency Stability
  - 250 Hz Maximum – over two hours from a cold start.
- VFO Operating Range – and Frequency Selection
  - VFO Range is 5.0 to 5.6 MHz for 600 kHz span on each band position.
  - Dial Mechanism uses a 100:1 Vernier Drive
  - Notice on the front panel picture that the band in use is shown by itself via the rotating drum dial
  - Frequency range on 40, 20, and 15 Meters covered MARS frequencies.

See chassis Top View of the Transmitter, below. Front of radio is at the top of the picture.



Gonset GSB-100 – Chassis Top View

GSB-100 Operating Manual

Take note of V7 – the 6DQ5 Final Amplifier Tube – left side above, just above the Power Transformer. That exposed tube cap had +600 VDC present. It was dangerously exposed. I brushed that plate cap in moving my hand across the area. In good practice, my other hand was in my pocket, I was wearing insulated sole shoes, and the floor was dry. Even so, I received a jolt that I can remember to this day!!!!

The GSB-100 Transmitter setup at WA9MXQ in those days included the matching Gonset GSB-101 Linear Amplifier – manufactured at the same time.

Gonset GSB-101 HF (80-10 Meters) Linear Amplifier

Picture Credit: eBay

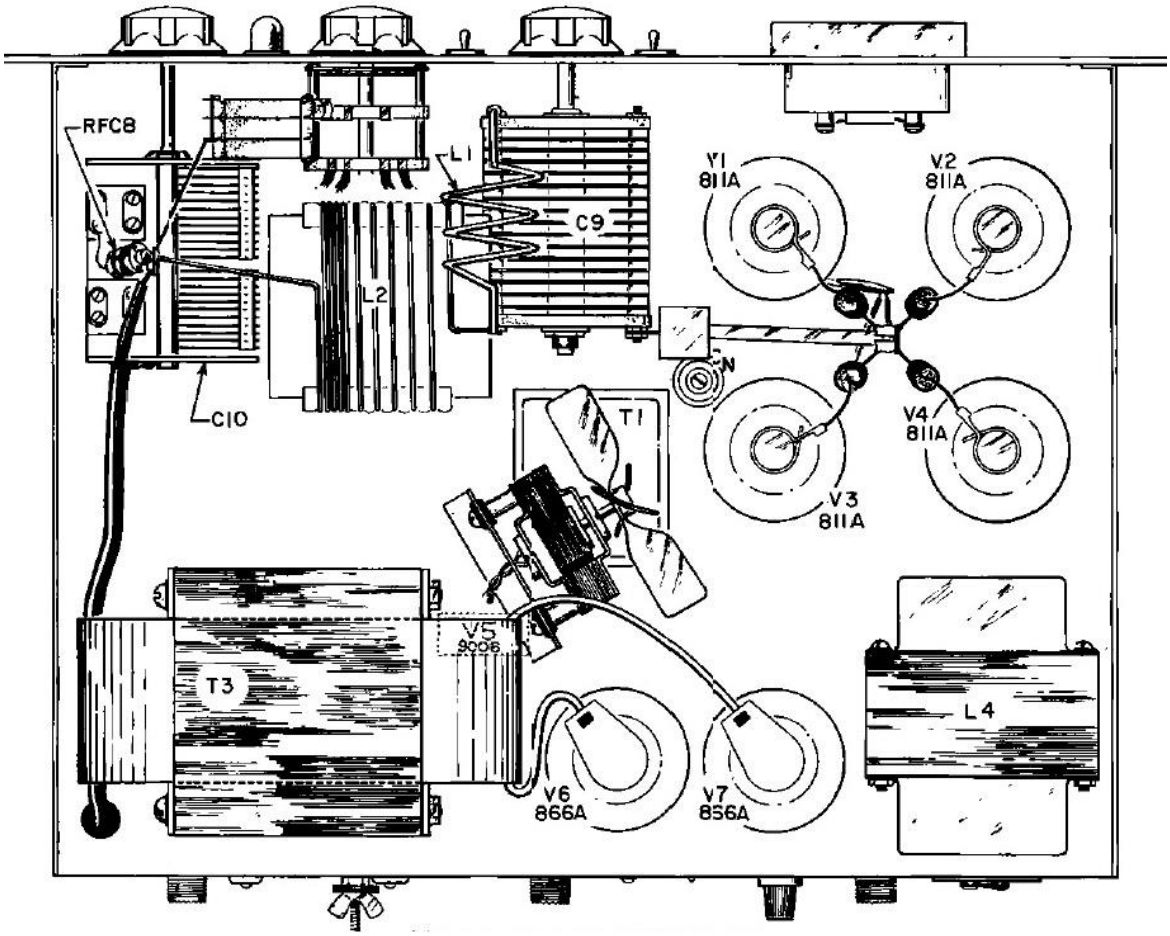
The GSB-100 and GSB-101 were in matching cabinets. If anything, the GSB-101 weighed more, due to the very heavy plate and filament transformers plus the power supply filter choke. The design was a classic grounded grid design with four 811A Triode Power Amplifier tubes. The amplifier also used two more tubes, Mercury Vapor 866A Rectifiers in a full wave rectifier circuit producing just under 2,000 VDC. The design also included a 9006 Rectifier tube for feeding a sample voltage to the Relative Output range of the meter.

Here are some specifications on the Gonset GSB-101: (Per Gonset Product Manual)

- Power Input to the Final Amplifier – by Mode
  - 1200 Watts PEP SSB
  - 900 Watts CW
  - 400 Watts AM
- Power output to the Antenna – by Mode
  - 800 Watts PEP SSB
  - 700 Watts CW
  - 160 Watts Carrier AM
- Output Impedance
  - 50 Ohms nominal with 3:1, or less, SWR
- Input Impedance
  - 50 Ohms nominal

Like many amplifiers of the day, the GSB-101 was either powered on and in line with the transmitter, or it was powered off. There was no Standby. This kind of operation was inconvenient for hams that preferred only to use the amplifier when conditions warranted its use – as was (and is) the law, as enforced by the Federal Communications Commission (in the United States). I modified my GSB-101 by removing its internal antenna output switching – to accommodate a station receiver antenna – and replacing it with a relay system that would engage the amplifier only when the Plate Switch was in the ON position. With the Plate Switch in OFF position but power supplied to the amplifier, the GSB-101 was out of the circuit. You may contact me for details, if desired.

See chassis Top View of the Linear Amplifier, below. Front is at the top of the picture.



Gonset GSB-101 – Chassis Top View

GSB-101 Operating Manual

The amplifier, when open, is an absolute death trap with ~2000 VDC exposed on the plate caps of the four 811A Power Amplifier Triodes. High RF voltages are present on the RF components in the upper right hand area of the chassis, as viewed. Plate caps on the 866A Rectifiers were ceramic – a small safety thought in an otherwise very dangerous design.

Gonset provided a receiver for this package. While competent, it was not a physical match for the GSB-100 and GSB-101.

Gonset G-63 HF + 6 (80-6 Meters) Receiver

Picture Credit: RigPix

I have seen these receivers but never had the chance to use one. The very attractive cabinet was actually showing the next generation of cabinet design that was used in Gonset's HF, VHF, and UHF equipment. The die cast front panel bezel design became, to my way of thinking, a Gonset trademark.

The G-63 paired with the GSB-100 and GSB-101 was rarely shown in Gonset advertising. In fact, Gonset rarely showed the GSB-100 and GSB-101 together. I recall at the time that I did not understand that marketing misstep. It was a topic of conversation at my local, central Illinois ham radio store, Klaus Radio and Electric, in Peoria, Illinois.

Here are some specifications on the Gonset G-63: (Per Gonset Product Manual)

- Frequency Ranges
  - Band 1 – 80 Meters: 3.5 to 4.0 MHz
  - Band 2 – 40 Meters: 7.0 to 7.3 MHz
  - Band 3 – 20 Meters: 14.0 to 14.35 MHz
  - Band 4 – 15 Meters: 21.0 to 14.35 MHz
  - Band 5 – 10 Meters: 28.0 to 29.7 MHz
  - Band 6 – 6 Meters: 50.0 70 54.0 MHz
- Sensitivity
  - Approximately 1 microvolt at 50 ohms for signal-plus-noise to noise ratio of 6 db.

- Selectivity

	Q-Multiplier Off	Q-Multiplier On Near Threshold
-6 db	3.3 kHz	200 Hz
-20 db	7.3 kHz	3.5 kHz
-40 db	12.1 kHz	8.5 kHz
-60 db	17.0 kHz	13 kHz

- Stability
  - Temperature compensated on all bands. Warmup drift is approximately 0.01% of frequency tuned.
  - Negligible frequency shift due to mechanical shock or vibration.
  - Muting circuits designed to produce no frequency shift during transmit periods. (That is, no drift while receiver is muted.)
- Antenna Input
  - 50 to 100 ohms unbalanced line (coaxial cable).
  - Satisfactory operation with balanced or unbalanced line from 25 to 300 ohms impedance.
- Intermediate Frequencies
  - First I.F. – 2065 kHz
  - Second I.F. – 262 kHz
  - Second Oscillator Frequency – 2327 kHz
- Detectors
  - Vacuum Tube Diode Detector for AM
  - Product Detector for SSB and CW
    - Receiver AGC does not operate during SSB or CW reception. That meant that there was no S-Meter operation on those modes. (Modifications were done in the field to allow for AGC – with S-Meter operation on SSB and CW.)
- Noise Limiter
  - Automatic type limiter. Front Panel switched.

Several Options were offered for use with the G-63 Receiver:

- In keeping with the PM (FM equivalent) mode being present on the GSB-100 Transmitter, Gonset offered a plug-in 148C-1 NBFM Adapter.
- The G-63 receiver did not have an internal speaker. Gonset covered that need with a matching Model 3285 Speaker Console.
- For frequency calibration, Gonset offered a plug-in Model 3269 100 kHz Calibrator.

The G-63 was a reasonable receiver for the times. It lacked some sensitivity on 15 and 10 meters, but that deficiency was common in vacuum tube era radios. Using older radios like the G-63 can show sensitivity on the 80, 40, and 20 meter bands similar to what you might experience with modern receivers (or the receiver in a transceiver). Where the

difference today is evident is in what you can hear on 15, 10, and certainly 6 meters on modern radios in comparison with the likes of the Gonset G-63 (or its contemporaries).

These Gonset radios were at popular price levels for the time. The equivalent today could be as much as ten times the amount shown.

Radio	1961
Gonset GSB-100 Transmitter	$479.50
Gonset GSB-101 Linear Amplifier	$439.50
Gonset G-63 Receiver	$234.95

Original prices are from Gonset Advertising in CQ Magazine in 1961

As mentioned above, Gonset did not heavily market the three radios in this article as a package – a complete station. As such, it is hard to find pictures or advertising copy to show the three together. I did find a fellow collector – K9SUL, in Champaign, IL – with a complete 1960's vintage Gonset station.

Left to Right:

Gonset GSB-101 Linear Amplifier
Gonset GSB-100 Transmitter
Gonset G-63 Receiver

Other items include SWR Bridge, Microphone, plus
Heathkit HM-102 Wattmeter and Hallicrafters R-46B Speaker Console

Kihwal Lee, K9SUL

You can watch this superb station in action in K9SUL's shack at:
https://www.youtube.com/watch?v=Fnt8wnrXvhs

My experience with the GSB-100/GSB-101/G-63 was very early in my ham radio career, and I certainly had a lot to learn. But I recall finding the GSB-100 somewhat difficult to

tune up and get ready to get on the air. I suspect my experience on the air over the years, always with vintage vacuum tube gear as a part of my life, would show me different feelings in operating that same transmitter today.

I want to remind readers that the Gonset Company was founded by Faust Gonsett in the 1950's. Mr. Gonsett used a slightly shortened spelling of his name in the Gonset company name. He went on in the marketplace and his name appears in many different companies and products. He was a major factor, later in his life, with the development of the Sideband Engineers SBE SB-33 and SB-34 Transceivers – the first of the long lived hybrid radio design where a solid state transceiver used a vacuum tube driver and final amplifier. You saw those in several designs, including extensive product lines from Yaesu and Kenwood. And, also from Hallicrafters in their hybrid FPM-200 and FPM-300. Actually, the very limited production Hallicrafters FPM-200 probably predates Mr. Gonsett's work – but that point perhaps is due a bit more study.

A special thanks go to Bob, W9DYQ, for his proof reading and his assistance in article development.

I offer my appreciation in this installment to Kihwal Lee, K9SUL, who graciously allowed the use of his shack picture and the link to his YouTube video of his fine Gonset station in use. A search on YouTube under "K9SUL" leads you to his YouTube Channel and other vintage radio videos – including others about the Gonset setup in this article.

Thank you for reading my articles. Remember that I am open to questions and comments at my email address, W9MXQ@TWC.com.

Notes:

[1] I wired a complete E. F. Johnson Viking Valiant II AM/CW Transmitter Kit in the mid-1960's – purchased, brand new, from Johnson, via Amateur Electronic Supply, Milwaukee, WI, in about 1965. Amateur Electronic Supply had these in stock at the time.

[2] PM is Phase Modulation. For now, think of it as FM – it is perfectly compatible with FM. It varies the instantaneous phase of the of the carrier wave – and is recognized by the demodulator in a receiver the same as frequency modulation.

[3] For 28.0 to 28.6 MHz coverage, the crystal for 29.1 to 29.7 MHz is replaced.

W9MXQ

Classified Advertising
For Sale & Wanted Items
Ozaukee Radio Club Members
de: Bill Shadid, W9MXQ

We recently received a donation from Bob Johnson following the spring SwapFest and some of the items are very nice with some being new. I thought we should give the membership the first chance on these prior to the Fall Swapfest. Here it is! You must pick up your selections at my home and leave the payment for our Treasurer, Gary Bargholtz.

1. **Heathkit** CM1073 Automotive Tune-up meter. New & unopened ($40)
2. Signal Generator, square and sine wave, 0.1 to 10 volt output, 20 to 200K output, no brand ($10)
3. **VIZ** audio generator, square and sine wave, 0.01 to 10 volt output. 20 to 20K outputs. ($20)
4. **Simpson** model 1329 0-100 microampere 4”x5” panel meter, (2 each) NEW ($5 ea.)
5. Charger for 3 AAA NiCd batteries w/3 cells. New & unopened ($3)
6. **Black & Decker** 400 watt 12 VDC to 120 VAC inverter New & unopened ($10)
7. **Schmacher** 200 watt 12 VDC to 120 VAC inverter New & unopened ($7)
8. **CenTech** small digital VOM New & unopened ($5)
9. **CenTech** complete VOM with temperature probe mdl 37772 New & unopened ($18)
10. **RCA** RF signal generator, solid state,wr-50B, with crystal oscillator and sweep functions as well. ($25)
11. Also, there is a complete **Cleveland Institute** solid state circuits course from the 80’s including the various lessons, experiments, parts, and an oscilloscope in good condition and in the original box. Complete ($30)

Classified Advertising for Ozaukee Radio Club Members is a members only feature. (Members may post for non-member friends, however.) Contact advertiser for details. The Newsletter Editor has no knowledge of any sale items (unless he is the seller!!)..

Ozaukee Radio Club is not responsible for any purchases and cannot be involved in any buyer/seller agreements or disagreements – all sales are final other than what you work out between the buyer or seller.

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

Upcoming Events

de: Tom Trethewey, KC9ONY

6/08/2024 – Lyons, WI – Lakes Area Amateur Radio Club Free Fest
https://tinyurl.com/LAARC-Free-Fest-2024

6/15/2024 – Appleton, WI – Fox Cities Amateur Radio Club Hamfest
https://www.fcarc.club/sunshineswap.php
(Note New Location!)

7/06/2024 – Oak Creek, WI – South Milwaukee ARC Swapfest
https://southmilwaukeearc.org/2024/05/15/wi9sm-2024-swapfest/

8/10/2024 – Racine, WI – Racine Megacycle Club FreeFest
http://w9udu.org/

8/24/2024 – Baraboo, WI – Circus City Amateur Radio Club Swapfest
http://yellowthunder.org/?page_id=66

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/

9/22/2024 – Belvidere, IL – Chicago FM Club Radio Expo 2024
https://chicagofmclub.org/cfmc-radio-expo-2024/

10/19/2024 – Lancaster, WI – Hidden Valleys Amateur Radio Club Hamfest
1st Annual FREE Hamfest
https://www.kc9kq.net/hamfest/

Ozaukee Radio Club Minutes of Membership Meeting, 5/8/2024

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 V.P. Jeananne N9VSV began the meeting at 7:30 PM, a go-around was conducted. Zoom attendees were also in attendance and were also introduced. Mention was made that Nancy, KC9FZK had suffered a stroke, but was recovering, cards would be appreciated

Program:

N9VSV introduced our program; which was given by Paul W9PEM, with Dave NE9N also participating. Topic was the science behind rechargeable batteries. Both described some battery basics and moved on to the specifics behind the lithium based rechargeable products, with applications for Ham Radio use. LiFePO4 battery chemistry was covered in more detail; both design and use.

50/50 Raffle: This was won by NE9N; winning an award of $10.50

Scholarship Auction: W9XT auctioned off a small parts cabinet

Committee reports: [no report from Pres, and Tech]

1st VP: Jean Anne tells us that there is a 'swag spot' column now in the newsletter; programs for most of 2024 are set; and she is looking for old photographs regarding ORC activities.

RPT VP: TECH: Tom KC9ONY: is researching finding a tower climber to perform some antenna replacement for one of the ORC sites. Spring SwapFest results; about 90 tables sold, 292 tickets sold, and the scouts sold food and drinks, even though they arrived late, and had some minor problems.

Treasurer: Gary N9UUR: provided statements, the club is solvent. Motion to accept made by K9QLP, 2nd by W9GA and carried. Gary then proposed to move money around to consolidate more funds in the Money Market funds. [so, to avoid a fee, and increase the return.] The motion to do this funds move was made by Gregg W9DHI and 2nd by WB9RQR. Discussion then stalled because of dissent with a fear of co-mingling the funds, which led to a motion made by W9IPR and 2nd by AD9BR to send the previous motion back to the finance committee. This led to a 'call of the question' wherein the W9IPR motion was defeated 2-Aye to 12 Nay. Subsequently the initial W9DHI motion was passed with all Ayes except for one 'abstain'.

STEM: Pat W9JI: Has been to the West Bend library, along with other committee members, to deliver the ARRL items we purchased; Ham radio event with ORC involvement is scheduled for August 15. Another event in October is proposed, where ORC can help students build a radio kit.

Secretary: Ken W9GA: posted the April 2024 minutes, a motion to accept was made by N9VSV; 2nd by K9QLP and carried.

Newsletter: W9MXQ mentioned that he received several nice comments while present at the recent SwapFest.

OLD business: W9IPR [who had proposed that new members receive a free name badge, as a one-time offer] placed that idea into a motion, which was 2nd by W9MXQ, and motion carried. New member Steve W9MCU has qualified for this 'perk'.

NEW business: No new business.

Adjournment: WB9RQR moved to adjourn, motion carried; time end was 9:25 PM. There were 16 in-person attendees, 16 zoom attendees.

Respectfully submitted:

Kenneth Boston W9GA, Secretary

This Month's Meeting: June 12, 2024 - 7:30 PM

Program: Field Day Operations

Presented by: ORC member, Gary Sutcliffe, W9XT, and Pat Volkmann, W9JI

de: Jeananne Bargholz, N9VSV

Gary Sutcliffe, W9XT

Pat Volkmann, W9JI

Gary and Pat will cover several aspects of operating Field Day including strategies, expected propagation, equipment, and logging. They will give examples of how to make QSOs efficiently.

Upcoming Meeting Programs:

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@ozaukeeradioclub.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
John Livingston, WE9F
Fred Schwierske, W9KEY

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

12 June 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. Gary Sutcliffe, W9XT, with Pat Volkmann, W9JI – Field Day Operations
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
12 JUNE 2024

Program:
Gary Sutcliffe, W9XT and Pat Volkmann, W9JI
Field Day Operations

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
10 JULY 2024

Program:
Gregg Lengling, W9DHI
Repeater Receiver Voting Process/Operation