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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Web site: www.ozaukeeradioclub.org **Facebook: facebook.com/orcwi**

Volume XLI	July 2023	Number 7

From the President

de: Bill Greaves, K9GN

The ORC Field Day this year became another success with the volunteer efforts of many members. While the points are being totaled, the success was in the participation of longtime Field Day participants and new members as well. Members like Gary W9XT Sutcliffe and Vic WT9Q Shier on 20m CW, Ken W9GA Boston on 20m phone, and Nate KC9TSO Seidler with Tom W9IPR Ruhlmann, Nancy KC9FZK Stecker, and Stan WB9RQR Kaplan on 40-meter phone. Jeananne N9VSV and Gary N9UUR Bargholz worked 6m phone and satellite. The GOTA tent (Get On The Air) for new ham operators and guests saw increased activity, especially with young guest operators, with leadership by Mike AE9MY York and Paul W9PEM Martis.

I always learn much by participating in the setup of the towers, antennas, and transceivers on Friday afternoon and Saturday morning. And I get some needed exercise pounding in those guy line anchors. Some tutelage by the more experienced operators is welcomed during the 24-hour time period until 1:00pm on Sunday. The rain early Sunday morning slowed the QSO rate down, but everyone “weathered” it well. Mike AE9MY provided a tasty pancake breakfast for everyone before the final push. Take down on Sunday afternoon was quick with the many volunteers helping. More volunteers are always welcomed. Of course, the whole idea of Field Day is to build emergency capabilities. This was amply demonstrated over the weekend.

Kudos to Nate KC9TSO for his many efforts with setup, operating, and take down throughout the weekend. The trailer improvements worked very well, including the operating position in the ORC trailer.

For your calendar, the Lighthouse weekend is August 18-20 in Port Washington and is led by Fred W9KEY Schwierske. Fred will present more on this effort at the ORC club meeting next week. Thank you , Fred.

The club membership will gather on Wednesday, July 12th, both in-person and on Zoom, at 7:30pm, with meet-n-greet at 7:00pm, at the Grafton Senior Center or on Zoom. I look forward to seeing you there.

73,

Bill, K9GN

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.

Gary Bargholz, N9UUR, kicks off this issue with a preliminary report on the Ozaukee Radio Club 2023 Field Day Event. He tells about Bonus Points earned. Stay tuned for further Field Day Results Information.

Right after the Table of Contents (Next Page), see info on submitting information for next month's ORC Meeting Program about 2023 Field Day. This will be presented by Ken Boston, W9GA, Field Day Chairperson at the August 2023 Meeting..

Check out regular columnists, Dan Zank, AA9WP, and Stan Kaplan, WB9RQR, interesting updates on ARES and Personal Computers, as always..

Gary Sutcliffe, W9XT, brings us the July and early August On The Air activities. Midsummer doldrums you say for operating events? Maybe so, but if they are there, Gary knows about them. Seems he has quite a bit to tell us.

Your Editor, Bill Shadid, W9MXQ, begins to go through Heathkit's major selection of products to compete with the Collins S-Line radios – beginning in the 1960's. Check out Vintage Amateur Radio and the Heathkit SB-300 Receiver..

Looking for ham radio things to do and places to go in the area? Check out Tom Trethewey, KC9ONY, as he tells us all about Upcoming Events.

Right after you see the minutes of the June ORC meeting, you will see a new "Classified Advertisements" column started by your Editor, Bill Shadid, W9MXQ. This is a members only Selling and Buying column for ham radio equipment.

Pat Volkmann, W9JI, tells us about coming Programs and an invitation to make a presentation at a club meeting.

Check out the Flyer for the Ozaukee Radio Club Fall Swapfest on the final page.

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

Check out the Table of Contents on the very next page.

At the August ORC Meeting, Field Day Chairperson, Ken Boston, W9GA, is presenting the complete 2023 Field Day Results from the Club Event and Members operating elsewhere. Please send Ken your pictures, preferably already cropped, and with minimal file size, for the presentation. If you use an iPhone, you can determine file size when exporting the pictures. Due by end of July to: kboston6@wi.rr.com.

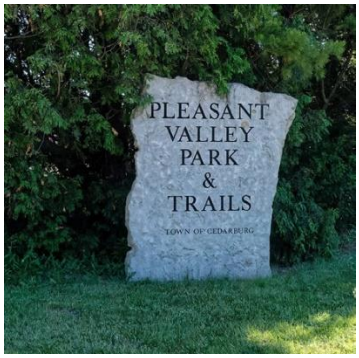
Onward To the Newsletter

2023 Ozaukee Radio Club Field Day
PRELIMINARY REPORT

de: Gary Bargholtz, N9UUR

Some of the QSO Numbers are still in flux but I can report that we did well at our 2023 Field Day endeavor – comparable to years past. Herein are some of the highlights from the Bonus Points we made.

Set-up in Public Place - Our Field Day location was at the ***Pleasant Valley Park and Trails***, 4301 Pleasant Valley Road, near the City of Cedarburg Wisconsin.

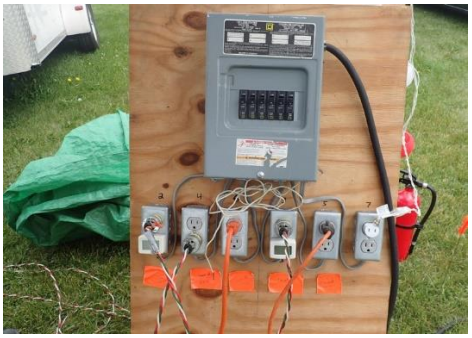


We welcomed 49 visitors to our site, gave tours, and answered many, many questions.

Among our visitors was an Ozaukee County Deputy Sheriff and our Assistant ARRL Section Manger, Tom Czaja, KG9EE.

I'm hoping for an extra bonus for the K9!

Our operation ran on **100% Generator Power**, thanks to Mike, AE9MY.



Satellite QSO completed: Gary, N9UUR, made 3 Satellite QSO's.
Educational Activity Bonus: Gary, N9UUR, also did several Satellite Demos, covering AMSAT NA info, tracking software, station automation, Orbits, Kepler elements and Doppler shift. The Satellite operation is very popular with visitors and HAMS.

GOTA Station: Mike, AE9MY, was our GOTA Coach, and set up the GOTA Station. That QOTA station made 36 Phone and 42 Digital (FT8) contacts.

Youth Element Achieved: People under 18 made GOTA contacts.
Natural Power QSO Bonus - GOTA Phone Contacts were made using Solar Power.

What about the **Media**?

Media Publicity Bonus - The ***Ozaukee Press***, to the right and just below…..

Amateur radio field day is June 24, 25

The Ozaukee Radio Club and Ozaukee Amateur Radio Emergency Services groups will hold a field day Saturday and Sunday, June 24 and 25.

The groups will set up emergency communication stations at Pleasant Valley Nature Park in Cedarburg.

The field day is considered a national emergency preparedness event and is intended to demonstrate the role of amateur, or ham, radio operators during an emergency, such as a tornado, that takes down internet, cell phone and email communications.

The park is off Pleasant Valley Road east of Highway I two miles north of Cedarburg.

For more information, visit ozaukeeradioclub.org or ARRL.org.

And, right below, the ***West Bend Daily News***:

Ozaukee Radio Club to host field day

MEQUON — The Ozaukee Radio Club, Inc. and Ozaukee Amateur Radio Emergency Services groups announced that they will be holding national emergency preparedness field days in Pleasant Valley Nature Park, 4301 Pleasant Valley Road #4301 in Grafton, to demonstrate how they help with emergency communications via the radio waves, on Saturday and Sunday.

The two field days are free and open to the public to stop by the park and see how the organizations help out various agencies with communications via radio waves, according to the release. Members will be operating their radio cluster from 1 p.m. Saturday through 1 p.m. Sunday.

"Despite the Internet, cell phones, email and modern communications, every year whole regions find themselves in the dark and without communications due to tornadoes, fires, storms and other natural and man made disasters. In these situations, one consistent service has never failed; that being Amateur Radio," said the release. "These operators, often called 'HAMs', using their own equipment provide backup communications for everything from local parades to the American Red Cross, FEMA and even the International Space Station."

The "HAMs" also use these radios to communicate with friends across town and the world. According to the release, the Ozaukee Radio Club also sponsors a $2,000 college scholarship each year for a Wisconsin HAM.

Ozaukee PRESS
Wisconsin's Largest Paid Circulation Community Weekly

HOME NEWS SPORTS OP-ED GOOD LIVING OBITUARIES CLASSIFIEDS

Home » Amateur radio field day is June 24, 25

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June 21, 2023

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Next Page is the Social Media Bonus Update: Jeananne, N9VSV, and others were posting to social media outlets throughout the event.

http://www.ozaukeeradioclub.org

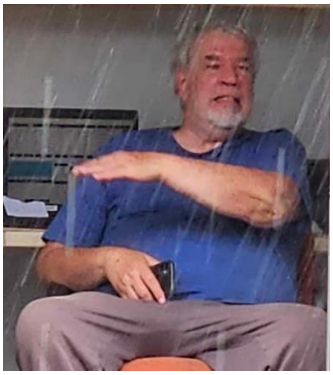
https://www.facebook.com/orcwi

W1AW Field Day Message Bonus: Ray, W9KHH, copied the 2023 ARRL Field Day Message.

Message to ARRL SM/SEC Bonus: Paul, W9PEM, sent an ICS 213 message via WIN-LINK to our ARRL Section Manager, Jason Spetz, KC9FXE. Paul also sent 12 ICS 213 Messages via WINLINK for the **Message Handling Bonus**.

Despite the heat, humidity, RAIN, and smoke in the air from Canadian wild fires, we all had a very good time. QSO's were made, stories were told, and new ones made.

It was great "Sequestering" Kenny, W9GA, out in the Club Trailer! Especially in the rain.



See you there next year!

Gary, N9UUR

OZARES: Ozaukee Amateur Radio Emergency Services

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

ARES© Redundant Communications with Packet BBS

Earlier this year we looked at the communication requirements provided by the National Incident Management Services or NIMS. The components of resiliency, the ability to work despite infrastructure that has been damaged or lost and redundancy; having alternative methods of communication when primary and other backup systems fail.

Today we have the normal phone method of communication between or among operators and locations. While phone is great for tactical information, short and quick messages, it is not good for distributing strategic information or lists and spreadsheets. For the strategic and spreadsheet information ARES depends upon WINLINK as the proven method of communication. While WINLINK is versatile, easy to use, and robust it does have the liability of depending on local internet connections. Of course, a connection to a distant internet connection is possible via WINLINK on HF as a backup mode. But band conditions are always a concern with WINLINK HF.

Last month we reviewed two other possible backup modes of communication. They are the chat applications, or keyboard-to-keyboard, such as VARA Chat, or WINLINK peer-to-peer mode. While both provide an operator-to-operator interface and allow for the transmission of spreadsheets, forms, and pictures, the problem is that they are only operator-to-operator. If information needs to be more widely distributed another communication mode needs to be available.

The packet radio bulletin board services (bbs) could provide a more robust and valuable method of providing redundant and reliable communications. While bbs had been popular in the past and lost some of its allure with the arrival of the internet and cell phones, it still has been a workhorse with several ARES organizations.

One such group is the Mecklenburg Amateur Radio Society, W4BFB-MARS, https://w4bfb.org/ located in Charlotte, NC. Information about their packet system can be found at: https://w4bfb.org/mars-info/packet-radio/packet-radio-information/

Another is the Santa Clara County California ARES/RACES organization:
https://www.scc-ares-races.org/aresraces.htm
Information about their bbs service is available at:
https://www.scc-ares-races.org/data/packet/packet-service.html

Both systems provide the redundancy and resiliency needed in emergencies as noted on their websites: The W4BFB comments:

****NOTE: MARS-W4BFB prides itself in ensuring that "RF redundancy" is in place, and active at all times, in the event that the internet were to fail. During emergency situations, RF packet radio may be used to reliably deliver messages such as NTS traffic, ARES bulletins, and other messages to authorities. Although the internet is available for partial links to our backbone, the RF network is always in place and ready for operation.*

The Santa Clara County group describes its system as such:

The service is specifically designed to survive and be available during emergency scenarios when other systems may be down or unreachable. It is primarily intended for use by Santa Clara County ARES/RACES/ACS members. But It is available for use by any amateur radio operator at any time. The service is provided by five BBSs located at five different sites in the county. Most locations in the county can reach at least two of the sites via amateur radio. Therefore, even if a BBS site suffers a catastrophic failure, users that normally connect to that site can still get packet service from the other sites.

Now, normally the summertime is not a great time to tackle new projects, with vacations and all, but I think now would be a good time to start reviewing the basics of packet radio and bbs. Because it is an older technology there is a good amount of information available. And I may be tapping the shoulders of a few ORC members when I get stuck.

Recently there has been a good deal of talk, speculation, worry and amazement at the application of Artificial Intelligence. So, *I began looking into AI and Emergency Management/Communications*. *Next month I will review what I have found.*

OZARES 147.330 Repeater
Nets: First and second Thursday of the month at 8 pm

WINLINK Gateways WI9OZ-10 and WI9OZ-11; 145.610

73, Don

OZARES Repeaters . . .

- 147.330 MHz (+ Shift) (127.3 PL)
- 443.525 MHz (+ Shift) (114.8 PL)

ORC Repeaters are On the Air Awaiting Your Call . . .

- 146.97 MHz (- Shift) (127.3 PL)
- 224.18 MHz (- Shift) (127.3 PL)
- 443.75 MHz (+ Shift) (127.3 PL)

THE COMPUTER CORNER
No. 304 Time To Do Maintenance!

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

This article is a favor to you. If you follow it, you will extend the life of whatever laptop or desktop you apply it to. I reminded you to do maintenance way back in April 2007 with Cc137 on Physical Maintenance, and again in October 2019 with Cc259. Those articles still apply, for a desktop, laptop or even an iPad. Clean your unit to the best of your ability, even if you are a beginner. You will need a vacuum cleaner with a hose (a Shop Vac is perfect, but your household vacuum will do the job, too, so long as it has a plastic “sucky” hose). Use a soft-bristle brush (a basting brush from the kitchen will do nicely, and you can replace it later or put it in the dishwasher for a cleaning). You will also need a can of compressed air. You can get one at your hardware store. The aim is to remove the dust and dust bunnies. Why? Dust prevents air circulation inside a computer. If air circulation is impeded, the temperature will go up. High temperature is the most destructive factor in electronic devices in general, including computers of all kinds.

Here are the steps to take. Unplug all the external cables and move the box or laptop to your workbench. If it is a laptop, find the vent area (the tiny grill, usually near a back corner). Put the vacuum hose up to it for a full minute and suck out what you can by moving the hose end around over the grill. Now use the air-can to blow into that grill to dislodge whatever possible and follow with another vacuum treatment. You might want to also clean up the s+creen – use an old t-shirt moistened with plain water. A well-worn cotton t-shirt is as good as microscope lens paper for non-scratch cleaning of soft microscope lens glass, so it will also do for a computer screen. Now clean the case as best you can and blow the hair and dust out of the keyboard. You are done with the laptop.

If the computer is a tower or mini-tower, pop the removable cover (most often on the left side of the machine; your left as you face the front of the machine). Lay the machine flat on the covered side. Make sure your lighting is good and examine the inside of the case. You will see a myriad of cables. Move them gently to the side as you examine each component. Identify the motherboard, the memory stick(s), the power cables that plug into the motherboard, the little twisted cables that fit on header pins for the speaker, power switch, power LED, hard drive LED, and so on. The connectors at the end of twisted cables usually have a printed label on the black plastic of the connector, and the motherboard usually has a (hard to see!) label by each set of pins that the connectors attach to. Right now! Make a sketch of the motherboard and, especially, those connectors and pins. If you inadvertently disconnect anything, that sketch will save you from grief. If

you are lucky enough to have a manual for the motherboard, examine it for a nicely made road map of all these connectors.

Continue to examine. Note what is plugged in to any of the slots and write it down or sketch it. You cannot record too much, though you certainly can write down too little! Document, document, document. Find the DVD connectors (if present) and hard drive connectors. Follow them up to the device they control. When you have a pretty good idea of what goes where, it is time to clean.

Turn on the vacuum and carefully put the hose end inside the case. Use the paintbrush to dislodge any dust bunnies and keep the vacuum hose end close to the paintbrush to suck up the dirt you free up. Pay particular attention to the interior air slots in the power supply case, to the spaces between memory sticks, and to the fan on top of the CPU heat sink. If you have a can of compressed air, blow between the slots of that heat sink to get the dust out, but use care not to spin any fan blades too fast (you can burn out the fan motor that way because driving the fan with air will actually generate current in the fan motor). Also give a blast or two of air in the slots of the power supply. Keep the vacuum going all the while, to suck up the dirt. Now, set the machine on its bottom, and use the brush to clean up the inside bottom of the case. Suck it up, suck it up, and suck it up. Turn the case around so you can see the power supply fan blades on the back. Blow them clean from the back. This will likely blow dust into the case through the interior slots in the power supply, so go back inside and vacuum it all again. See if you can use the brush to dislodge dust from the fan blades of the power supply from the outside, keeping the vacuum hose nearby to suck the dirt up. Blow air into the corners of the inside of the case to release dust bunnies you may have missed. Suck everything up. When you are satisfied that the dirt is gone, it is time to renew contacts.

The easiest and safest way to renew the electrical contacts in a computer is to ***partially*** disconnect them, then re-seat them. This renews the contacts at the molecular level when the metal contacts slide over each other. Start with the DVD cable. At the motherboard end, slightly raise the connector on the mating pins, then push it right back down until it is completely seated. Do the same with the hard drive connector. Now do the other ends of each cable, where the cable connects to the device. No need to completely remove the connectors. Just partially raise them, then re-seat them. This will significantly reduce the resistance of the metal-to-metal contacts. Now do the same for the power cable going to each device (one yellow, one red and two black wires, each). If you wish, you can completely remove these power connectors and then plug them back in. You cannot plug them in incorrectly since they will only go in one way. Plus, they are interchangeable.

Now apply the same procedure for the power supply connector on the motherboard. Use care here – modern systems have a little latch on this connector that you must depress to get it loose. Plug it back in, and make sure the latch is latched (you will likely hear an audible click when it seats properly). Use care not to flex the motherboard much. Motherboards can crack, especially old ones exposed to years of baking by heat, in which case, they may well be rendered useless.

Now, move on to any video or other cards that may be present. PCI cards typically plug into those whitish slots on your motherboard, while AGP (video) cards plug into a dark-colored slot. Remove the retaining screws from any cards plugged in and raise them a bit (one at a time). Blow any dust out of the slot, then re-seat the card and replace the retaining screw. Use care not to touch any of the gold contacts on the card bottom. Oils in the fingerprints you leave will increase the resistance of the contact with its slot. Follow the same procedure for the memory stick(s). Be sure to keep fingers off those gold contacts! Do memory sticks one at a time to be sure you get them in the same slot.

Now, renew the metal-to-metal contacts at the end of those twisted wires for the speaker, power-on cable, and the like. Raise them just a tiny bit, then re-seat them. If your computer could talk, you would hear it say “ooh, that feels good!”

Now, give a blast or two of air to the top surface of the hard drive, and any DVDs. Dust bunnies like to hang out up there. Next, pay some attention to the front panel. Blast out any dust or dirt there, typically lurking in slots or vents. Sometimes, there is a big vent at the bottom of the front panel. Tip the computer up on its back to get to that one.

All done? Typically, your workbench will be covered with dust and debris, including some bits of paper. Hopefully, there will be no paper clips or other such conductive bits of flotsam and jetsam. Vacuum this detritus up right now.

One more thing. Desktops have a coin cell battery, shiny discs about the size of a quarter. You might want to change it. Get a replacement – make it a Mallory brand because those are the best. Get one at Walgreens or your favorite electronics source, one whose battery stock is quite fresh because of lots of customers. When you have it in hand, pop the old one out and the new one in, making sure that you follow the correct + and – polarity. Be aware, though, if you change the battery you may need to reset the date, time, and other data in the CMOS setup screens after the machine is up and running again. On the other hand, if your machine was not used for a long time and will not start, a replacement of the motherboard’s coin cell battery may well be the answer to that problem. Now, save your notes, sketches, and tape them securely inside the case bottom! Put back the side panel and mount the computer in its proper place. Plug in all the cables, but before you power up, take a moment to clean your keyboard and mouse. Q-tips are great for both. Moisten the Q-tips with Sparkle (my favorite) or Windex to clean the dirt off of keys and in between. A blast of canned air will help, too. Power up! Maintenance is done!

On the other hand, if you don’t want to do maintenance, buy a new machine. Don’t put the old one in the closet! Pass it on to me (along with any others that are in the closet right now) for data-destructive wiping and refurbishing for another life as an amazingly useful Linux-based machine, for use by you or other hams. More on that in the next article. Happy computing!

On The Air Activities!

de Gary Sutcliffe, W9XT

Another successful Field Day is in the books! Mother Nature was not as cooperative as we might have hoped though. It was hot, making the setup a bit tougher than we might have hoped for. Then rain and thunderstorms made the low bands noisy and forced an early shutdown.

The sun was not cooperative either. We had solar flares a few days before the event. The charged particles arrived just in time to hurt propagation. I didn't find out until later, but we had an aurora Saturday night. With the haze caused by the fires in Canada, we would never have been able to see one. If the geomagnetic field is disturbed enough to cause an aurora, it is bad enough to cause HF propagation disruption.

Another hit was the lack of sporadic E (Es) propagation. As discussed later, this has been a lousy year for Es. Es can be very effective for communications on 10 and 6 meters. Jeananne, N9VSV, suffered the most with the complete lack of 6-meter propagation. I know it hurt the CW tent with few 15 meter and almost no 10-meter propagation.

Vic, WT9Q, operates CW while Mark, KD9NOO, observes.

Ken, W9GA, operates 20 meter phone from the newly renovated ORC van.

But there were some very good things. The improvements to the trailer and antenna trailers by Nate, KC9TSO, and others were apparent. Set up and tear down seemed to have been smoother than usual, in part to these improvements. Another great thing is that we had some new, younger members show up for their first Field Days. I hope they are hooked on the event like I was at my first FD in 1971 and will be back next year.

Another big plus was the GOTA operation. An important part of FD is showing who we are to the public. GOTA allows the public to see us in action and participate in making contacts. The big story making the rounds that weekend was an eight-year-old making two phone contacts with a couple of stations in Texas. I hope that is a future ham in the making.

Congratulations to everyone who helped make the ORC Field Day a success!

Six Meters

Unfortunately, the poor conditions during FD were just a small part of the poor 6-meter Es season so far this year. Some of the band's longtime fans say it is the worst one in years.

Es propagation is good out to about 1300 miles or so. Getting further than that requires multiple hops. Es is named sporadic because it can pop up and disappear quickly in just about any location. As the number of hops increases, so does the probability that the path is open. Double hopping to the western states has been pretty common in past years, but not this year.

Research has shown that Es is caused by metal molecules from meteors burning up in the upper atmosphere. Wind shear ionizes them and herds the ions into concentrated areas when conditions are right. If there are enough concentrated ions, they can reflect radio waves back to Earth. The wind patterns in late May through late July are the optimum time for forming ionized patches.

The scientific theories say that solar conditions should not affect Es. Yet some longtime 6-meter experts are saying that, in their experience, sporadic E is poor during high sunspot times. The solar flux levels have significantly increased in the last year. Is that the reason for the poor conditions this year?

Gary, K9DJT, and I are working on the FFMA award, which requires working all 488 grids that comprise the lower 48 states. Most of the grids I need are the western ones. Most of the needed ones have no hams on the band. It requires a portable operation, much like a DXpedition for DXCC. I need several operations to grids out that way, but the openings have been mostly nonexistent. Some of these ops have spent days in the field with near 100° temperatures and only a few close in contacts. Some are getting pretty discouraged, and the number of grid rover operation attempts has declined.

We had two DX openings across the pond in June and early July. Gary, K9DJT, cleaned up by working new countries Kuwait, Qatar, Greece, Romania, Antigua, and Saint Barthelemy.

I managed to pick up a few new DXCC countries in the last month, Antigua, and Saint Barthelemy, in the Caribbean. I also got Sardinia, IS0, off the coast of Italy, during the only decent European opening so far this year.

Most of the 6M activity is on FT8 on 50.313 MHz. If the band is really open to Europe, much of the activity shifts to 50.323 MHz. There are protocols on 50.323 MHz. First of all, don't make contacts with other North American stations on this frequency. We will only transmit (or are supposed to) during the "odd" periods, starting at 15 and 45 seconds. Europeans transmit on the even segments.

This standard prevents loud local stations from stomping on weak DX stations. Sometimes openings to Japan and the Far East result in moving to the higher frequency.

So, while the first half of the 2023 Es season has been disappointing, we are at about the halfway point. Hopefully, it will improve.

Besides Gary, K9DJT, and Ken, W9GA, are any other ORC members actively chasing FFMA or DXCC on the Magic Band? If so, let me know.

WSJT Vs. JTDX

FT8 and most of the other popular digital modes we use are part of the WSJT suite. Probably most ORC members use WSJT, but there are a few alternatives. The most common one is JTDX. WSJT is open source, and some European hams modified and repackaged it as JTDX. While it seems most US hams use WSJT, many DX stations use JTDX.

The look and feel are similar since the JTDX base code is derived from WSJT. There are a few changes that I don't like, probably because I am used to WSJT.

The big advantage of JTDX is that it uses a different decoding algorithm. Some signals decode better on JTDX, and some on WSJT. That makes running both at the same time a good tactic. I do this when conditions are marginal, or I am trying to work some rare station with many callers.

The first step is to download JTDX. Install it and set it up for the same sound card ports you use with WSJT. Open WSJT, then open JTDX. Most of the time, every station heard will appear on both programs. But sometimes you will get a decode on one or the other but not both.

I have never actually transmitted with JTDX. If I am working a station, all my transmissions are on WSJT, but there is no reason you have to do it the same. If I get a decode during

a QSO on JTDX but not on WSJT, I manually select the next transmit sequence on WSJT to continue the QSO.

13 Colonies Wrap Up

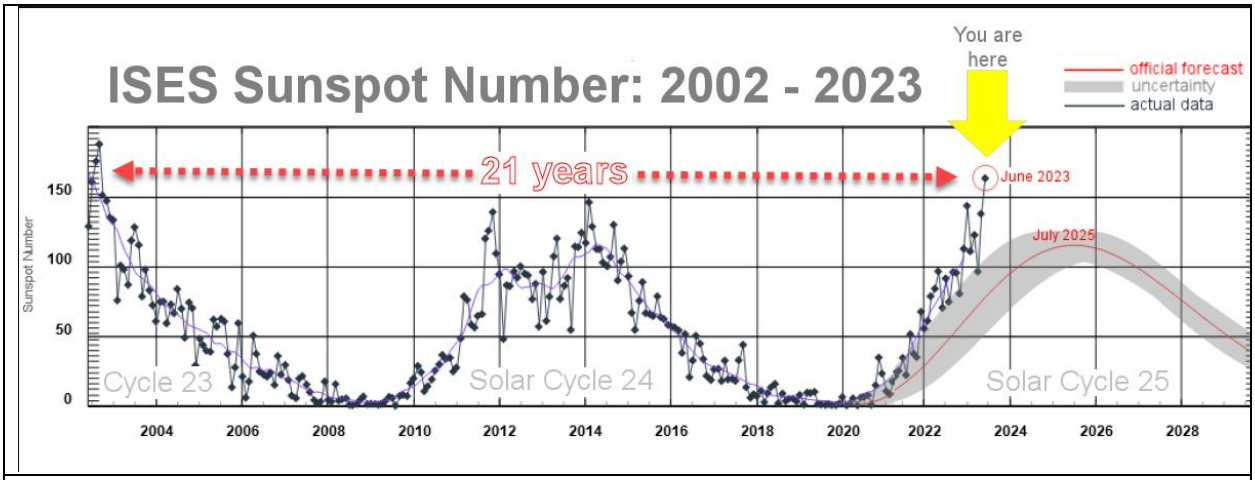
As usual, I played around with the 13 Colonies event mentioned last month. It didn't take me long to do it, pretty much splitting them between CW, SSB, and FT8. As of the deadline, I only worked the colony states but none of the bonus stations.

Bill, W9MXQ, took it to the next level and worked them all on each mode, CW, SSB, and FT4/8. He also got a clean sweep of the special stations on all modes.

Working the 13 colonies event has become a part of my 4th of July ritual that includes re-reading the Declaration of Independence.

Cycle 25 Update

The sunspot cycle continues to improve. According to Space Weather, we have already surpassed the peak of the last one, and the trajectory indicates further improvements. While conditions for DX are currently in the summer doldrums, we are really looking to great things in the upcoming fall and winter.



Sunspot data. www.spaceweather.com

If you are not on the band, put something, at least a dipole or beam, for 10 meters. During good sunspot number conditions, you can work the world with a few watts and a wire. I have worked countless stations in Europe and Japan on 10 meters, running 5 watts. Years ago, I was visiting my parents, and my dad, W9FRF (SK), showed me a 5W converted CB radio he put in the car. We sat in the driveway, talking to Japan through a mobile whip. One time I remember working a station in Belgium running 0.300 watts on SSB! Ten meters is an incredible band when conditions are good.

The big hope for VHF enthusiasts is that conditions might get good enough for 6 meters to open up for DX with F2 layer ionospheric propagation. That would certainly make up

for a poor Es season this year. The last time we had F2 DX propagation with any regularity was 2000-2001. I am looking at upgrading my 6M station to take advantage of it.

Contests

July is a quiet month for contests. The IARU HF World Championship starts Saturday, July 8. If you read the newsletter soon after publication, you might still have time to make contacts. This year is unique because it is also the World Radio Team Competition (WRTC) completion. Details appeared in the last month's column.

If you make contacts during the IARU contest, please submit your logs within a few hours of the end of the contest. The WRTC judges will use them to help score their competition.

The CQ World Wide VHF Contest is July 15 and 16. It is only 6 and 2 meters. There are several categories, and if you are interested, check the rules. www.cqww-vhf.com/rules.htm

Radio Related Events

The South Milwaukee hamfest is Saturday, July 8. It was covered last month, but this is a reminder if you read the newsletter right after publication.

The Society of Midwest Contesters annual SMC Fest is August 12 in Naperville, IL. This is the premiere event in the Midwest for contesters. I will speak about the status of SMC awards, including a new one starting this month. If you are interested in attending, the group rate for a hotel ends July 21. www.w9smc.com/smc-fest

The ARRL Volunteers On The Air (VOTA) continues. W1AW/n is on from two different states each week. The first Wisconsin week was in February. Wisconsin's second week starts July 12 (UTC) and runs for a week. If you hear W1AW/9 during that period, it will be a station from Wisconsin. I might be one of them. Work us if you hear us. We will be on CW, SSB, and Digital. Use the HF plus VHF bands but not the WARC bands.

I know Fred, W9KEY, has been actively chasing VOTA stations. At the time of publication, Fred is #8 in the state, and Vic, WT9Q, is #14. Did I miss anyone? Besides the W1AW portable stations, contacts with any ARRL members are worth points. More details were in the January issue.

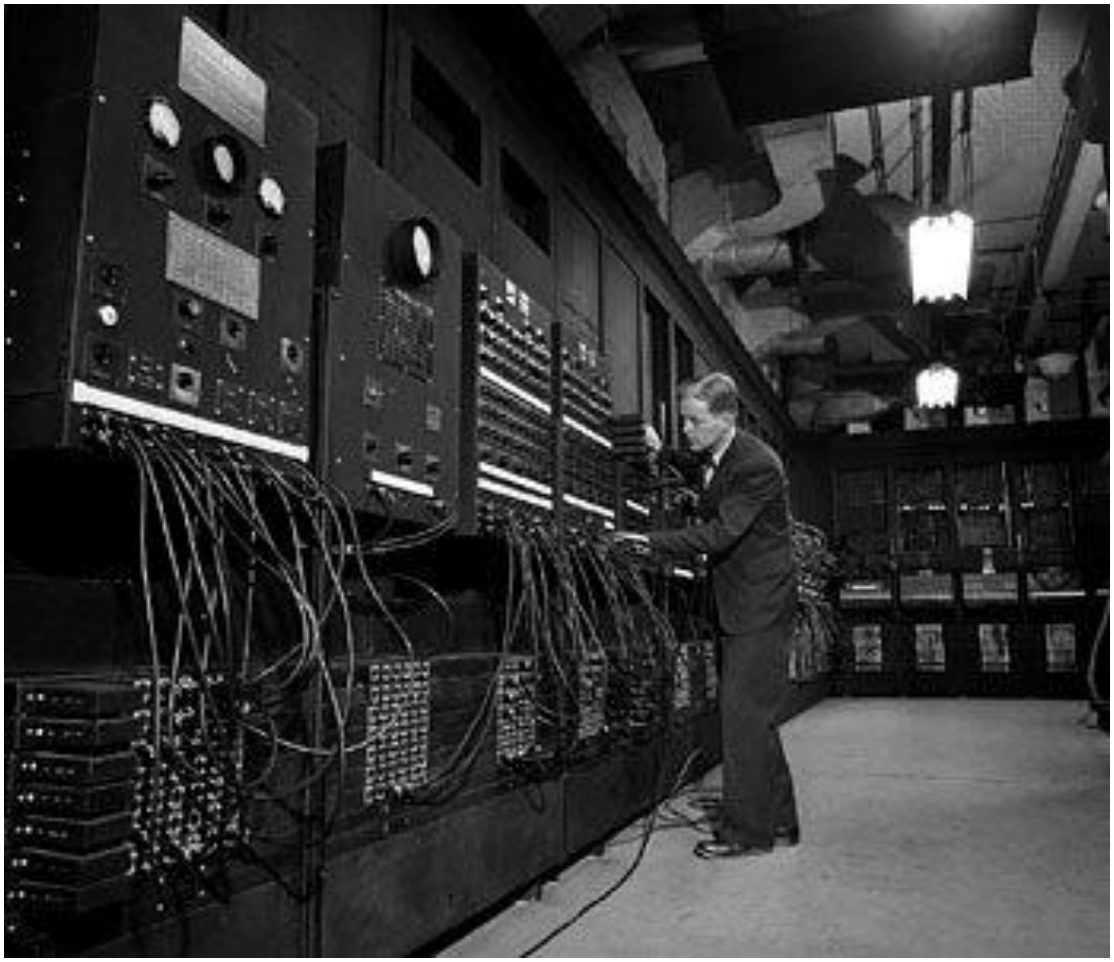
DX

As usual, the summer months are pretty light on DX activities. Two Russian hams are activating Timor Leste in the Western Pacific through July 28. The callsign is 4W6RU, and they seem to be pretty active. Band and mode information has been sketchy, but so far, they have been reported on FT8 and CW.

American Samoa is currently on until July 18. The callsign is KH8RRC.

That wraps up July! I hope you are surviving the heat!

See my Worksheet for July and Early August 2023, on the next page.



A young Gary Sutcliffe, now W9XT, examines a logging system computer he was getting ready to connect to his Hammarlund HQ-170C Receiver, Johnson Ranger Transmitter, and Johnson Desk Kilowatt. In this scene, he is kind of mumbling under his breath, “I wonder if Pat (now W9JI) or Bill (now W9MXQ) could loan me 3,438 6SN7 Dual Triodes!! Hell, they both have good stashes – they’d never miss them.” Surplus Electronics in 1957 – it was a good year.

W9XT's Contest, Operating, DXpedition, and Special Event Picks for July and Early August 2023

DX

W9XT's DXpedition picks for July and early August 2023					
QTH	**Dates**	**Call**	**Bands**	**Mode**	**Link/notes**
Timor Leste	June 28 – July 28	4W6RU	HF	FT8, CW, SSB?	

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

W9XT's contest picks for July and early August 2023					
Name	**Start**	**Length**	**Bands**	**Mode**	**Link**
IARU/WRTC	1200Z Jul 8	24 hours	HF + 160	CW SSB	https://contests.arrl.org/ContestRules/IARU-HF-Rules.pdf
CQ World Wide VHF Contest	1800Z July 15	27 hours	6 & 2	CW, SSB, Digital	www.cqww-vhf.com/rules.htm

Dates/Times in UTC. Subtract 5 hours from UTC to get local (CDT). HF = 80, 40, 20, 15, 10 Meters

W9XT's operating & event picks for July and early August 2023			
Event	**Dates**	**Details**	**Link/notes**
South Milwaukee Hamfest	July 8		https://southmilwaukeearc.org/event/south-milwaukee-swapfest-2023
ARRL VOTA	July 12-18	W1AW/9 from WI	www.arrl.org/volunteers-on-the-air
SMC Fest	Aug 12		www.w9smc.com/smc-fest

Vintage Amateur Radio

de Bill Shadid, W9MXQ

In the long past, I covered the Heathkit SB Series Receivers, Transmitters, and Transceivers as a group of products. While quite popular in their time, the SB Series radios are forgotten today – except for collectors. They deserve better attention and as such, we revisit in this installment the SB-300 Receiver. The SB-300 was the first in a line of Ham Band and General Coverage Receivers that included the original SB-300 and then onward to the SB-310, SB-301, the SB-303, and the SB-313.

In 1963, Heathkit released the first of the series to the market, the SB-300 HF Receiver. Right along with it came the matching SB-400 HF Transmitter (in 1964) and the SB-200 Linear Amplifier (also 1964). These radios squared off in the marketplace with the Collins second generation S-Line, the 75S-3 Receiver and 32S-3 Transmitter. That said, the Heathkit SB series had more of a feature-set matching the original S-Line with the 75S-1 Receiver and the 32S-1 Transmitter (from about 1959). More on this, with respect to the SB-300 Receiver, follows in this article.

Here is an excellent example of the very capable SB-300 HF Receiver:

Heathkit SB-300 HF CW-SSB-AM Receiver[1]

Shown with Heathkit SB-600 Speaker Console

W9MXQ Photo

Before going further, we need to look at the field of receivers available to the amateur radio operator at the time the SB-300 was released to the marketplace. Collins let the market at the time, but it was only shortly after that the major players of the time offered directly competitive radios to meet Collins' market challenge. Here are the top four competitors, including our subject, the Heathkit SB-300.

Collins 75S-1 (1958) (Collins S-Line)

The first of a new generation of compact receivers using i-f mechanical or crystal filters. Plus, a new capability to Transceive with an equally new generation of Transmitters, like the model 32S-1.

Drake R-4 (1964)

Drake and its excellent 1A, 2A, and 2B Receivers even preceded the Collins S-Line with their introduction beginning in 1957. But this lacked a matching transmitter. The R-4 works with the Drake T-4X.

Hallicrafters SX-117 (1962)

The SX-117 was the first to come to the table with a direct competitor to the Collins 75S-1. It provided tuned circuit filters (no crystal filters) and had as matching transceive capable Transmitter, the HT-44.

Heathkit SB-300 (1963)
(Subject of this article.)

The SB-300 was the first of many matching components to effectively compete with the Collins S-Line products. For transceiving with the SB-300 Heathkit offered the SB-400 Transmitter

All Pictures – W9MXQ

Other well-known players in the market included National (with the NC-303 Receiver) and Hammarlund (with the HQ-170A Receiver). Only the small group, Collins, Drake, Heathkit, and Hallicrafters properly read the market. Others were in the market but stayed with their older design products. These are subjects for future articles.

Heathkit must have carefully studied the concept of the Collins S-Line Transmitters and Receivers and the associated KWM-2 series Transceivers to plan the SB-Line of

Receivers, Transmitters, Transceivers, and accessories. They were effective, too, with products that equaled and even exceeded the Collins products they competed with.

Focusing on the SB-300 and it target product, it is to look at a selected group of feature comparisons:

Feature Comparisons – Collins 75S-1 and Heathkit SB-300[2]		
	Collins 75S-1	**Heathkit SB-300**
Frequency Coverage	3.5-30 MHz with fourteen selectable 200 kHz Segments (Any 200 kHz, 3.5–30 MHz)	80-10-meter ham bands only in eight selectable 500 kHz segments
Sensitivity (SSB)	1 microvolt for 15dB signal plus signal to noise ratio.	<1 microvolt for 15dB signal plus signal to noise ratio.
Selectivity (SSB)	2.1 kHz at 6 dB down with 4.2 kHz at 60 dB down. (2.0:1 Shape Factor) Mechanical Filter	2.1 kHz at 6 dB down with 5.0 kHz at 60 dB down. (2.4:1 Shape Factor) Crystal Filter
Selectivity Options	500 Hz CW	400 Hz CW
Calibration	100 kHz Calibrator	100 kHz Calibrator
Frequency Stability	After warmup, stable to 100 Hz	<100 Hz per hour after 20-minute warmup. Less than 100 Hz for 10%-line voltage variation.
Transceive Engagement	Front Panel Switch on Transmitter	Internal Swap of Injection Cables was Required[3]
Modes of Operation	LSB, USB, AM, CW	LSB, USB, AM, CW

Both the Heathkit SB-300 and the Collins 75S-1 share several traits – along with the mentioned Hallicrafters SX-117 and Drake R-4. That is, they have transceive capable transmitter partners, and use a conversion scheme like said transmitter[4].

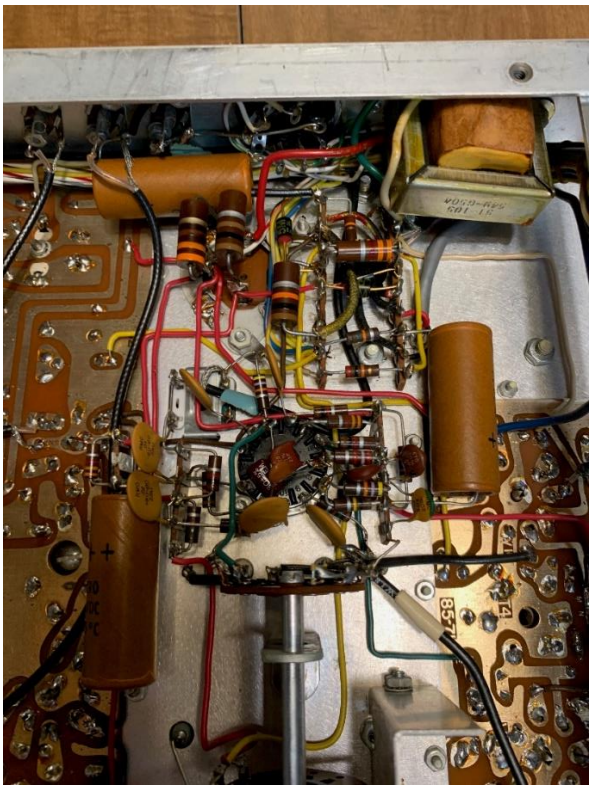
A measure of the quality of any Heathkit product is the effort and quality of the workmanship of the original assembler of the kit. The fellow who had this receiver before me was not that assembler. His or her name is lost to history. What I can say is that the work was that of a true professional. I look for things like neat and proper solder joints. That is the primary issue with Heathkit builds – was the correct solder used and was it properly applied?

> *Note for Information: Those of us who remember assembling Heathkits recall that all the solder you needed, and more, was supplied with the kit. Was that feature generated out of kindness? No, it was a business decision. What better way to*

ensure the proper solder was used than to supply it with the kit? Heathkit will tell you that one of the primary failures in getting a Heathkit to work and thrive after assembly was to use the right solder chemistry.

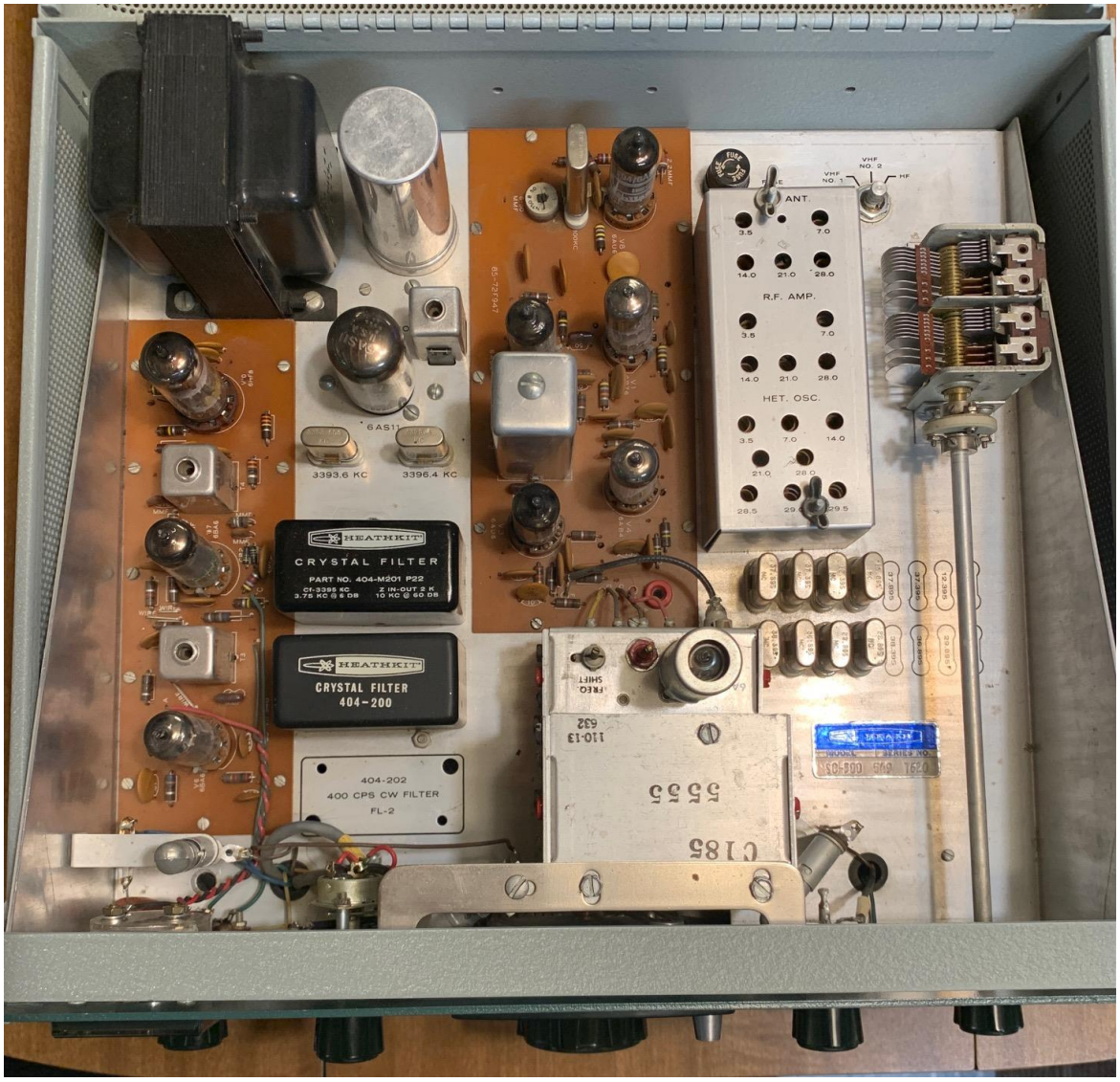
I also look for any physical damage to the metal work. Was the product damaged because of being mishandled during assembly? Are there scratches and dents in the sheet metal? Are any of the satin or polished surfaces visibly damaged? Is stray solder present on the radio away from expected solder joints?

Look at this close photograph of the Carrier Oscillator portion of the receiver to get an idea of the workmanship of the builder in an area away from the printed circuit boards in the radio . . .



This is the BFO Oscillator area of the SB-300 Receiver.
(The rear of the radio is toward the top of the picture. The left picture is under the chassis and the right picture shows the same area from the top of the chassis.)
Note clean solder joints, clean areas where soldering has been completed, and nice component layout of the resistors, capacitors, and diodes visible.
This circuitry is centered around V9, a 6AS11 Compactron Tube in the BFO Circuit.
W9MXQ

Now let us look at the top of the chassis of the SB-300 Receiver. I draw your attention to the simplicity of the design and the pleasing layout of components. No crowding.

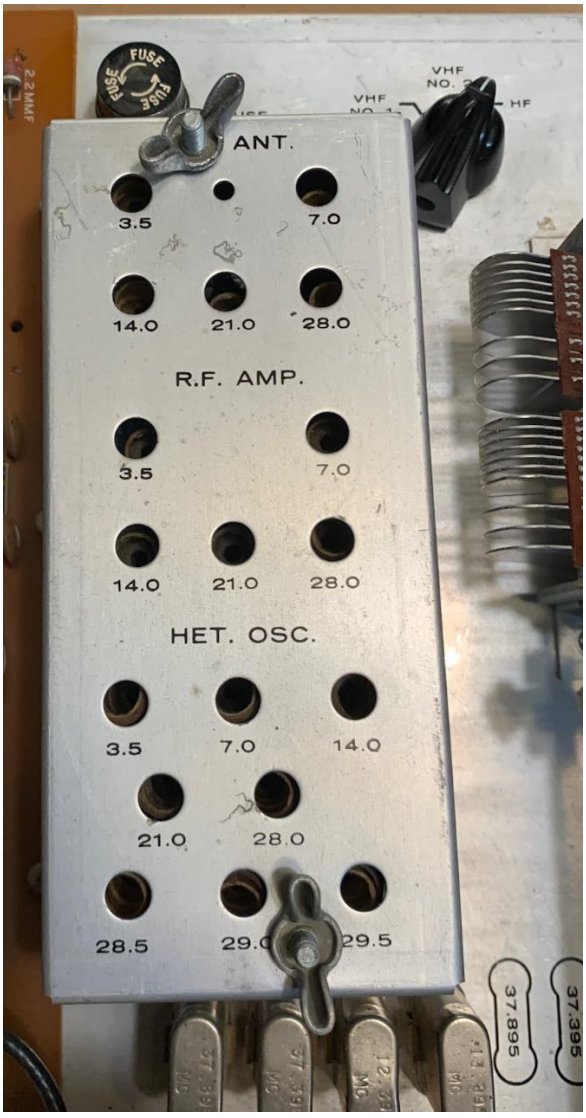


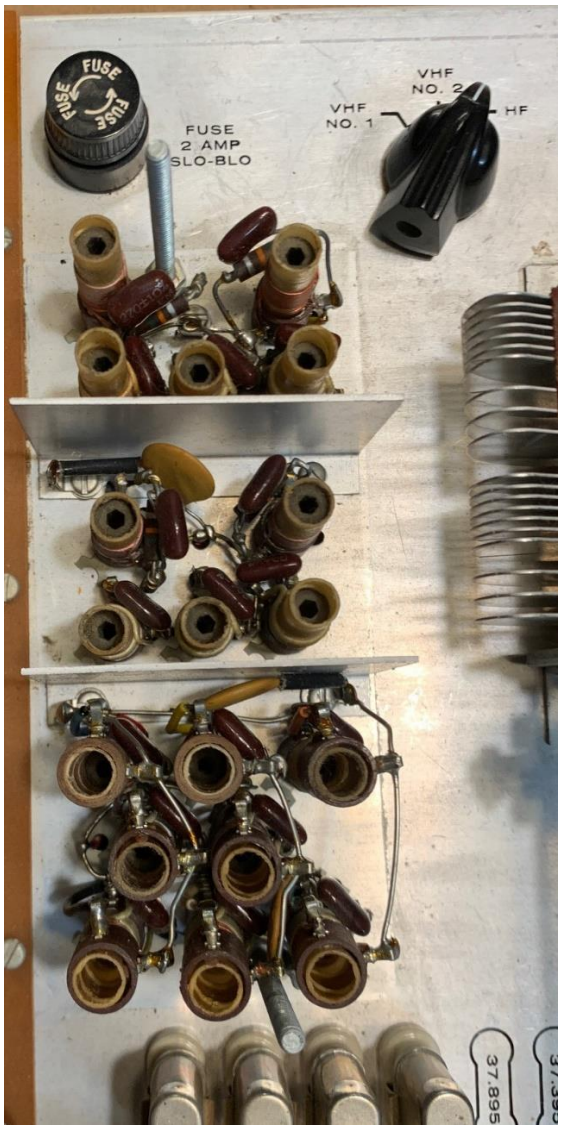
Top View of the Heathkit SB-300 Receiver.

(The rear of the radio is toward the top of the picture.)

On the left, below the Power Transformer, is the I-F Amplifier Board. To the right is the chassis area containing the BFO Oscillator and the Crystal Bandwidth Filters, To the right of the BFO area is the RF Amplifier Board – showing the 100 kHz Crystal Calibrator at the rear edge (top of this picture). To the right of the RF Amplifier Board is a chassis area for the tuned circuit coils for the Antenna, RF Amplifier, and Heterodyne Oscillator circuitry. Those are pictured elsewhere in this article. Below those coils are the Heterodyne Crystals with a compete layout of their location silk screened on the chassis. There is one crystal for each 500 kHz tuning range in the receiver. In the front of the chassis (just to the right of center in the picture, is a top view of the pre-assembled PTO Oscillator (VFO).

W9MXQ





Alignment Coils – With Shield Cover **Alignment Coils – Without Shield Cover**

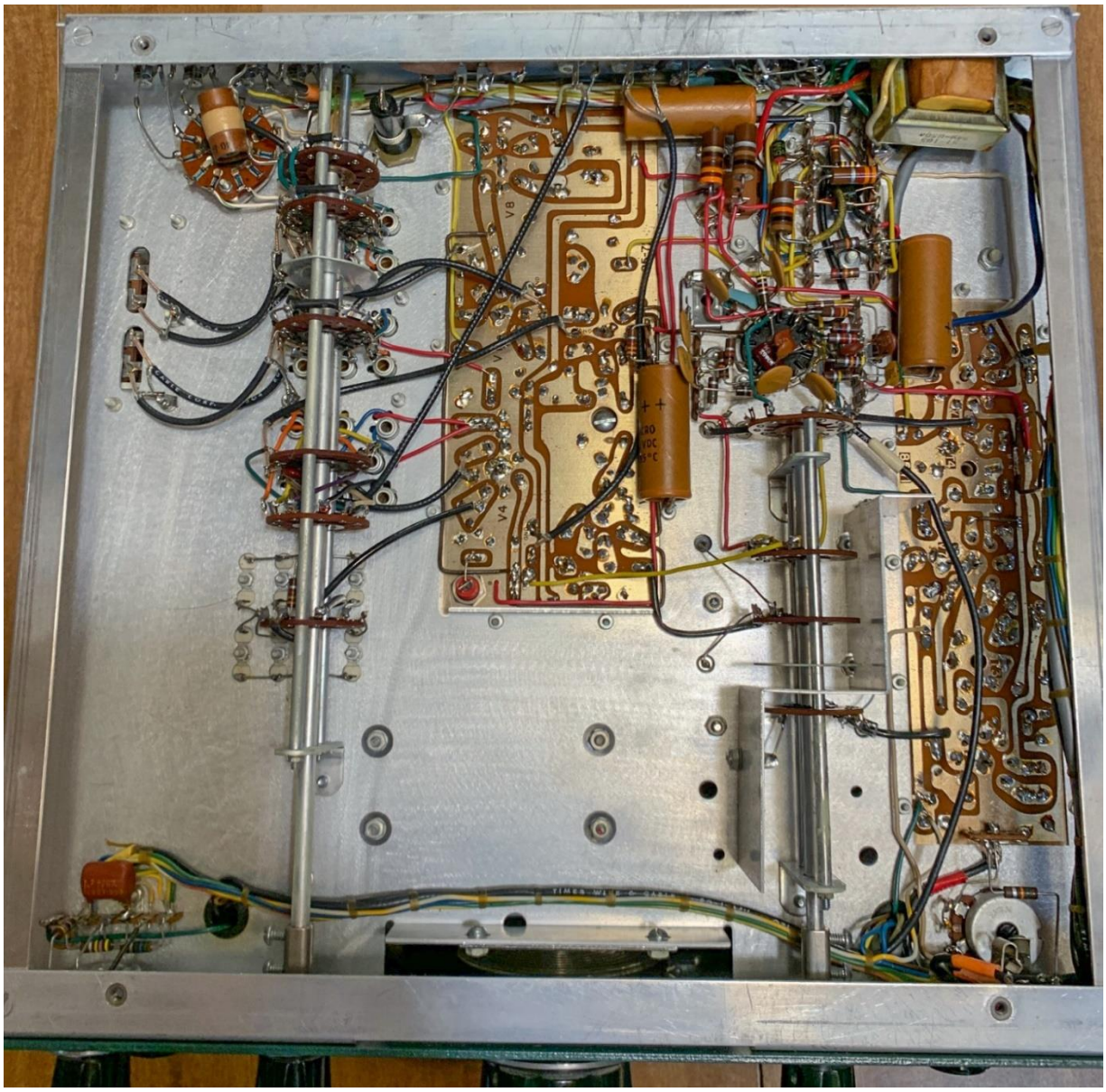
Alignment Coils Area of the Chassis – See Top View for Location

W9MXQ

This is a picture from the right front looking at the PTO chassis with its single tube. The red marks on two of the assembly screws indicate assembly at Heathkit for best stability. This was why sophisticated test equipment was not required to align this radio after assembly. Requirements were for a Vacuum Tube Voltmeter, the Calibrator in the SB-300, and another receiver used to align the calibrator.

W9MXQ

Now we should get an unobstructed view of the chassis bottom. We can see here the integration of printed circuit board technology and the simplicity it allowed in what would be a complex assembly in all point-to-point wiring. Heathkit was at the time of its game at this time.



Bottom View of the Heathkit SB-300 Receiver.

(The rear of the radio is toward the top of the picture.)

You can see the circuit boards as shown in the top view with the I-F Amplifier Board to the right side of the chassis and the RF Amplifier Board at upper (rear) center. Note that the area around the BFO Oscillator is chassis wired and was in a previous picture, but close. See very neat wiring layout and care in soldering.

W9MXQ

Like all designs, the SB-300 has a few shortcomings. Let us discuss a few:

1. Mated with its partner SB-400 Transmitter, the pair was less than stellar at being selectable at operating separately or in transceive off the SB-300's PTO. To be fair, that was not, as mentioned, a problem with the SB-300 but with the SB-400. Users of this receiver with the later model transmitter had no problems with the operation.
2. The SB-300 lacked a receiving segment to listen to WWV and to calibrate the internal 100 kHz Crystal Calibrator. This was a major addition to the later SB-301 version of the receiver that added a band position for 15.0 to 15.5 MHz to allow coverage of 15.0 MHz WWV Transmissions.
3. The SB-300 lacked the sensitivity of its later versions, the SB-301 and SB-303 (there was not a SB-302 model). This was accomplished by a change in the tube layout. This was paralleled in the upgrade of the SB-100 Transceiver and the SB-101 with similar sensitivity improvements paralleling the SB-300 to SB-301 model update.
4. Heathkit in this time was immensely popular and a high proportion of the stations worked on the bands would have a Heathkit hearing, transmitting, or amplifying the signal. Barring that, there would be a Heathkit device monitoring or measuring the output!! For that reason, many improvement articles, addressing the mentioned shortcomings, appeared in ham radio publications and newsletters.
5. Not an original design flaw but the filters in the SB-300 are not compatible with any other Heathkit Receivers or Transceivers. As such, it seems impossible to find a CW filter for the SB-300 that is reviewed here. The filters in the SB-301, the model following the SB-300, work in all other models of Heathkit SB series receivers and transceivers. The original SB-100 Transceiver did not accommodate a CW filter, but its filter architecture is the same as the SB-300, too.

If you have any of the SB series radios, I urge you to locate and purchase an excellent book by Chuck Penson, WA7ZZE, entitled "Heathkit Guide to the Amateur Radio Products," Third Edition. The earlier editions are good (great, actually), but the Third Edition adds an incredible amount of detail about this fine equipment[5].

Just so you know the look of the "Green Machines" as we Heathkit collectors call them, here is the Heathkit Separates at W9MXQ . . .

Left to Right (All Heathkit)
SB-401 Transmitter, SB-600 Speaker, HDP-121 Microphone,
SB-303 Receiver, SB-200 Linear Amplifier, & HA-1410 Electronic Keyer
W9MXQ

The SB-300 regularly stands in for the SB-303 in this setup. Notice the microphone and its beige color? It is a later Heathkit HDP-121 where the green color had been replaced by Heathkit's turn to beige radio colors in later years. (And, for the record, the HDP-121 was a private label and color Electro-Voice 621H.) Further to mention, in A-B tests, I have found that the fidelity and listening comfort of the SB-300 exceeds that of the SB-303. I do not want to get into a 6HF8 Audio PA (in the Heathkit SB-300) vs a Motorola Matched Pair Push-Pull MJE-371/MJE-512 (in the Heathkit SB-303) argument. On the other hand, I do know what sounds great, and what just sounds good. I guess you will have to judge for yourself.

I appreciate that you read my articles. A special thanks go to Bob, W9DYQ, for his proof reading. Remember that I am open to questions and comments at my email address, W9MXQ@TWC.com.

Notes:

[1] This is my third SB-300 Receiver and comes from fellow collector, W9DYQ. I have a bit of fascination for this series of radios – with an SB-300 and several SB-303's in my collection. I have never had the middle model, the SB-301.
[2] From the Specifications in the respective Operating Manuals of the noted models.
[3] This was a major flaw with the SB-300 operating with the matching SB-400 Transmitter. It was corrected with the SB-401 Transmitter. This was an SB-400 issue, not the fault of the SB-300 Receiver. (My Heathkit separate Receiver and Transmitter is a later SB-303 Receiver and SB-401 Transmitter. However, my SB-300 integrates flawlessly with that same SB-401.)
[4] Hallicrafters seemed to ignore this idea of a conversion scheme like the transmitter in the SX-117. While successful due to similar conversion frequencies, the SX-117 owes more in its design to traditional conversion systems than the players from Drake, Heathkit, and Collins. Note also that while the Heathkit SB-300 and Collins 75S-1 used Crystal and Mechanical i-f filters, respectively, the Drake R-4 and Hallicrafters SX-117 used tuned circuit i-f filters typical of other radios of the day. Drake, however, used a front-end crystal filter – what we would refer to today as a Roofing Filter.
[5] Chuck Penson's Heathkit related books are available from his website, https://wa7zze.com/. I also recommend his other Heathkit related books, "Heathkit Test Equipment Products," and "Heathkit H-Fi and Stereo Products." I have all three, plus early editions of the "Heathkit, A Guide to the Amateur Radio Products" books.

W9MXQ ©2023

©Heathkit

Upcoming Events

de: Tom Trethewey, KC9ONY

7/08/2023 – Milwaukee - South Milwaukee Amateur Radio Club Swapfest
https://southmilwaukeearc.org/event/south-milwaukee-swapfest-2023/

8/07/2023 – USA National Lighthouse Day
https://uslhs.org/fun/lighthouse-festivals-events/national-lighthouse-day

8/12/2023 – Racine Free Fest
http://www.w9udu.org/

8/19/2023 – Port Washington - International Lighthouse Lightship Weekend
https://illw.net/

8/26/2023 – Baraboo - Circus City Swapfest
http://yellowthunder.org/?page_id=66

9/09/2023 – Cedarburg – ORC Annual Regional Fall Swapfest
https://www.ozaukeeradioclub.org/

9/22/2023 – Milwaukee – HRO Superfest, ARRL Wisconsin State Convention – September 22nd and 23rd
https://www.hamradio.com/

9/24/2023 – Belvidere, IL – Chicago FM Club Hamfest - 2023 Radio Expo
http://chicagofmclub.org/radioexpo/radioexpo2023.html

Ozaukee Radio Club Minutes of Membership Meeting. 06/14/2023
de: Ken 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, with actual members attending, a go-around was conducted. Zoom attendees were also in attendance and were also introduced. Nancy KC9FZK reminds us that she is heading the 'sunshine' committee, and requests we let her know about potential happenings; Loren N9ENR has hamfest fliers to distribute; Fred W9KEY reminding the members of the upcoming lighthouse event this August.

Program:
Ken W9GA led the membership in a review of tasks outstanding for this year's annual outing for Field Day, to be held in Pleasant Valley Nature park, June 24-25. Ken gave a quick overview, and then covered several outstanding tasks necessary for FD success. He listed the available logging programs, keys to the park, public materials, and other items. Also covered was the list of 17 efforts needed to garnish the bonus points.

50/50 Raffle: This was won by Todd N9DRY ; winning an award of $18.00
Scholarship Auction: No auction held.

Committee reports: [there were no Tech, and no RPT VP reports.]
1st VP: Jeananne N9VSV is still taking orders for member badges, also has mugs for $33. She is also checking the embroidered items and prices, to be determined.

Treasurer: Gary N9UUR provided reports on the tables. We have $5561 in checking, recent bills include FD expenses like the materials for the FD trailer The May treasurers' report was accepted; motion by W9JI; 2nd by WB9AZH & carried.

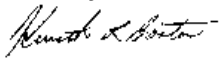
Secretary: W9GA reported that the May 2023 minutes are posted, a motion to accept was made by N9VSV; 2nd by W9IPR & carried.

W9IPR did mention that he gave Sandy W9BTN his lifetime achievement award at the Saturday breakfast at PJ Pipers but took no picture of the event.

OLD business: There was no old business.
NEW business: There was no new business.

Adjournment: WB9RQR moved to adjourn, KC9TSO 2nd, motion carried; time end was 8:45 PM. There were 20 in-person attendees, 11 Zoom attendees.

Respectfully submitted;



Kenneth Boston W9GA, Secretary

Classified Advertising
For Sale & Wanted Items
Ozaukee Radio Club Members

de: Bill Shadid, W9MXQ

For Sale: Kenwood TS-450S HF Transceiver in Good Condition. Only $400. I am moving into an apartment, and you know what that means.
https://www.rigpix.com/kenwood/ts450s.htm
Contact Richard Holt, ABØVF, at 262-665-2918 (Cell Phone)
or Contact Tom Ruhlmann, W9IPR, at 262-844-6331 (Cell Phone)

For Sale: Heathkit SB-104A HF Transceiver in Excellent Cosmetic Condition. Works on all HF-Bands with full power. Needs further alignment and further electronic restoration. Erratic digital readout – but an uninstalled Heathkit Shop Retrofit Readout Kit is included with this sale. $350. (Most recent contact was a MidCARS check-in a week ago.)
https://www.rigpix.com/heathkit/sb104a.htm
Also for sale, package including Heathkit SB-604 Matching Speaker for the SB-104A with the internally installed Heathkit HP-1144 AC Power Supply for the SB-104A. Sold only with the SB-104A. Price is $150 for Speaker and Power Supply, together.
Other matching accessories also available – contact me for details.
Contact Bill Shadid, W9MXQ, at 262-352-7304 (Cell Phone) or W9MXQ@TWC.com

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Classified Advertising for Ozaukee Radio Club Members is a new feature. Only contact advertiser for details – 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.

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

Advertising from non-ORC Members not accepted at this time.

Upcoming ORC Monthly Meeting Programs

de: Pat Volkmann, W9JI

July – Fred W9KEY – Lighthouse Event
August – Field Day Reports from the Club and Members
September – Bruce AC4G – Report on a DXpedition
October – Janice KA9VVQ and Bruce W9FZ – "Getting on the Air and Having Fun with Roving!"
November - Jeananne N9VSV – Collecting Amateur Radio Themed Stamps

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 let me know at orc_pat_w9ji@outlook.com.

Creating a Presentation

We are fortunate to have a number of very talented people in our club, many of whom have shared their knowledge through a presentation. Share your expertise and experience with the club. Programs can be on any topic that is ham radio related.

Not sure how to approach talking about a subject? Never used PowerPoint? No problem, I would be happy to help you getting your talk ready for the club.

Contact Pat Volkmann, W9JI, at orc_pat_w9ji@outlook.com to discuss your idea for a program.

ORC Meeting Agenda

July 12, 2023

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. Fred Key, W9KEY
   Lighthouse Event
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

This Month's ORC Meeting
Hybrid In-Person/Zoom Meeting
12 July 2023

Program:
Fred Key
Lighthouse Event

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
9 August 2023

Program:
Field Day Reports
from the Club and Members

ORC 17th Annual Regional Fall Swapfest

Test Equipment, Radios, Antennas, Accessories, Tools, Hobby Stuff & More

Saturday, September 9th, 2023

Firemen's Park (W65 N796) on Washington Avenue in Cedarburg WI 53012

N 43° 18.283' W 087° 59.500'

Setup and general admission from 6am to noon – Door prizes

Refreshments available inside the exhibit hall

$5 admission at the gate – buyers and sellers – 12 & under free

Just park on the grounds and sell your stuff or just browse & buy their stuff

Inside tables $10 as available (5 for $40) – ARRL and any Commercial Vendors are typically inside.

Go to www.ozaukeeradioclub.org or

Facebook.com/orcwi

For more information call

262-377-6945 (h) (W9IPR)

262-844-6331 (c)

Talk-in @ 146.97 PL