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) - Callsign W9CQO
Web site: www.ozaukeeradioclub.org **Facebook: facebook.com/orcwi**

Volume XLI	June 2023	Number 6

From the President

de: Bill Greaves, K9GN

June is Field Day month. The fourth weekend of June, the 24th and 25th, the ORC will be at Pleasant Valley Nature Park as in recent past years. The ORC Field Day leader is Ken W9GA Boston who has been a stalwart member and leader of Field Day for several years. He has championed our club's efforts and leads a strong group of volunteers, like Nate KC9TSO Seidler and Mike AE9MY York. The past couple of weekends, a group of volunteers helped outfit the club's field day trailer with a new axle (thank you Nate) and built shelving in the trailer to better organize equipment and for an operating position, as Nate described in a recent post on the club's reflector. These improvements will support an excellent Field Day experience this year.

I have mentioned before my first outing with the club was Field Day in 2021. It is a perfect opportunity for members to spend an hour (or a day!) with other club members – you will meet friends, current and future, learn about the setup of operating outside, and savor the enjoyment of ham radio.

Several club members attended Hamvention in Dayton OH last month. Attendance was just over 33,300 this year. I personally enjoyed several of the presentations as well as the four buildings of vendor displays and the seemingly miles and miles of outdoor vendor table displays of equipment from around the country. The day before the Hamvention on Thursday, the Contest University provided a daylong series of top-notch presentations from noted experts. I found these very practical with an almost this-is-how-you-do-it flavor. You might consider attending Hamvention next year.

My pic this month shows me enjoying the summer and soaking up some sun, albeit with my sunscreen properly applied. Time to get back to those antenna and station projects.

The club membership will gather on Wednesday, June 14, 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. See his special welcome to ORC Field Day 2023. And his thanks for all the volunteers.

Gary Bargholz, N9UUR, tells about the 2022 President's Award recipients in his multi-pictured article from the May 2023 Meeting. Congratulations all winners!!

Ken Boston, W9GA, 2023 Field Day Chairperson, gives us the lowdown on the event. Also watch for other Field Day related articles from several other members – including Gary Sutcliffe, W9XT, relates more in his On The Air Activities Column. Take a look. Gary also suggested a location map of the event – which is clearly shown – with a link to get your own copy onto your phone or computer.

Tom Trethewey, KC9ONY, updates us on the 2023 Ozaukee Radio Club Spring Swap-fest. And check the last page of the Newsletter for info on the Fall Swapfest. Fall Swapfest Chairperson, Tom Ruhlmann, W9IPR, will have more on that event in a future issue.

Info on the late summer International Lighthouse / Lightship Special event is described in an excellent from ORC Event Leader, Fred Schwierske, W9KEY.

Check out regular columnists, Dan Zank, AA9WP, and Stan Kaplan, WB9RQR, are back with new information on Ozaukee County ARES and Computer Corner, respectively.

What else? Well regular columnists, Gary Sutcliffe, W9XT, and Bill Shadid, W9MXQ are back with operating events and a radio rescue and repair adventure. There is a second Vintage Amateur Radio article as well that gives some focus on what is to come in that column.

Tom Trethewey, KC9ONY, talks about a special gift to the club, courtesy of Jeananne Bargholz, N9VSV. "Sew What?" you might ask!! And, as if not enough, your Editor, has taken up a friendship with a fellow appreciator of old radios, a new ham, and a new ORC member, John Livingston, KD9WOY, of Hartford.

Ken Boston, W9GA, brings you the Minutes of the May meeting on Page 49 followed by Pat Volkmann, W9JI, to talk about coming Programs. .

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.

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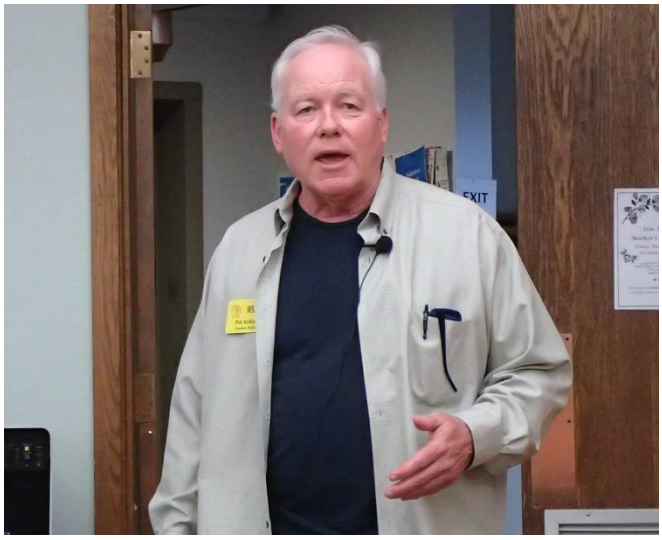
June 2023 – Table of Contents

Onward To the Newsletter

Presidents Awards – for 2022

de: Gary Bargholz, K9UUR

At the May 12th Club meeting, Past President Patrick Volkmann W9JI, made some award presentations to recognize various Club members past contributions to the Ozaukee Radio Club.



Pat Volkmann, W9JI, was our Club President from 2019 through 2022.

Photo by N9UUR

The Following people were honored during the meeting:

President's Lifetime Achievement Awards for Success to ORC were presented to Ed Rate, AA9W, Tom Ruhlmann, W9IPR, and Stan Kaplan, WB9RQR.

Photo by N9UUR – Pictures of WB9RQR and AA9W shown elsewhere.

President's Award for Excellence in Actions and Service to the ORC was presented to Nancy Stecker, KC9FZK.

Photo by N9UUR

President's Award for Excellence in Being the Club Auctioneer, and Providing Service to the ORC to Stan Kaplan, WB9RQR.

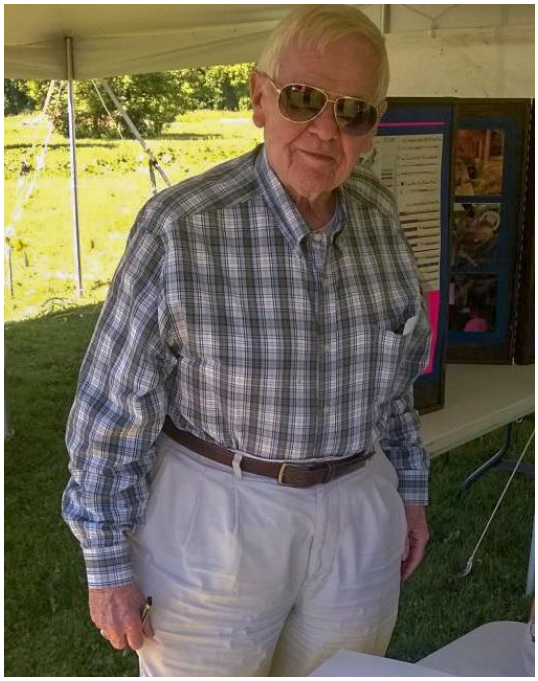
Photo by N9UUR

President's Award for Distinguished Newsletter Editor to Bill Shadid.

Photo by N9UUR

President's Award for Committee of the Year presented to the Technical Committee. Members, Tom Trethewey, KC9ONY, Gary Bargholz, N9UUR, and Gregg Lengling, W9DHI, were honored for their work.

Photo by N9UUR – Pictures of N9UUR and W9DHI not available.



Here is Sandy Wirth, W9BTN
Sandy was not present to receive the President's Award for "Numerous Contributions to the Success of the ORC."

Picture Supplied by N9UUR

Here is Ed Rate, AA9W, at Field Day in 2007
Ed was mentioned earlier as being awarded the President's Lifetime Achievement Awards for Success to ORC.

Picture Supplied by N9UUR

The club members present and on Zoom provided a round of applause!!

ANNOUNCING!!!!!!!

Ozaukee Radio Club Annual Field Day Exercise
June 24-25, 2022

de: Ken Boston, W9GA

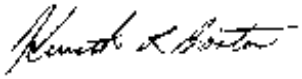
Pleasant Valley Nature Park
[Pleasant Valley road; just east of county I]

Once again the intrepid operators and interested members of ORC will convene for this popular radio activity promoted by the ARRL, to promote Amateur Radio and the ability to operate a station or stations from a temporary location.

We will be running 3 stations on HF, a station on VHF [50mhz +], and a GOTA station, and will need operators, helpers to set up and tear down, and any interested guests and members to join in the effort. We plan on arriving at the park site on Friday morning, June 23 at 10 AM to set up, although no Friday evening dinner is planned, there will be water, soda, and beer beverages available. Saturday morning at 9 AM, or earlier, we will finish setup, and get on the air at 1 PM. Operation ceases at 1 PM on Sunday, and then we tear down and head home!

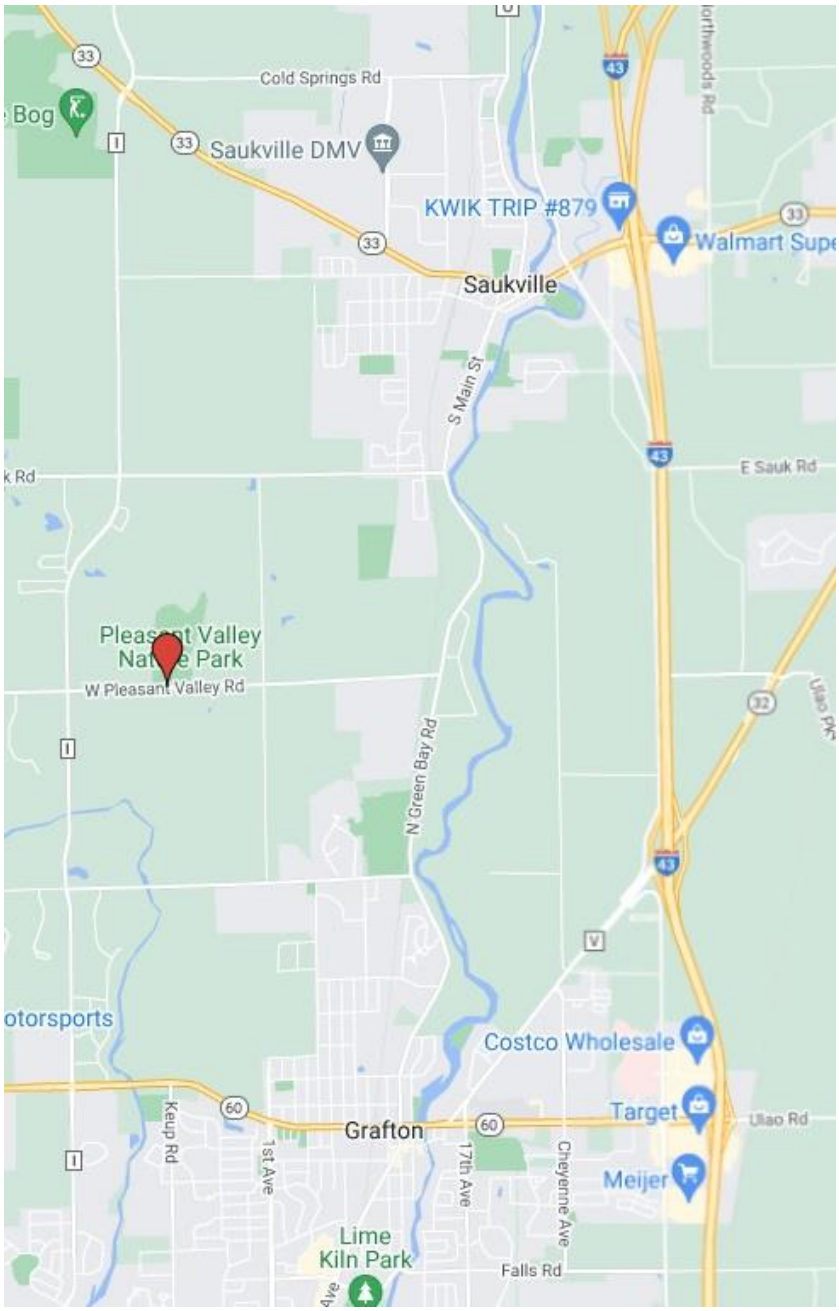
ORC members, as well as other area hams and friends, are all invited to participate, and enjoy the camaraderie of this event; details to be presented at the June meeting on Wednesday the 14th.

Ken Boston, W9GA,



Field Day Chairperson

Where is 2023 Field Day?



Pleasant Valley Nature Park – 2023 ORC Field Day Site

East of Ozaukee County Route I on Pleasant Valley Road

https://www.google.com/maps/d/viewer?mid=17lmT2yeRQ7yu30PKuuUJr_XDlGo&ll=43.36986180327884%2C-87.96788095906606&z=14

The ORC Spring Swapfest 2023 is in the books!

de: Tom Trethewey, KC9ONY
Chairperson, Spring SwapFest 2023
swapfest@ozaukeeradioclub.org

The ORC Spring Swapfest occurred on Saturday, May 6, 2023, at the Ascension Columbia St. Mary's Expo Center, also known as the Milwaukee Curling Club. We've been holding the Spring Swapfest there since 2014.

SwapFest Attendees checking out buys on a nice Saturday morning.
2023 Ozaukee Radio Club Spring SwapFest
Unknown ORC Member Photo

Tower Electronics joined us once again as the only commercial vendor, though we did get door prizes from other commercial sponsors. Bioenno Power gave us two LiFePO4 batteries and chargers, which we called Grand Prize #2 and #3, along with the $100 cash Grand Prize #1. We also had prizes from the ARRL, DX Engineering, EasyWayHamBooks.com, N3FJP Logging Software, and United Microsystems to give away.

Cub Scout Pack 586 from West Allis returned for a second year to provide food and refreshments. We had a Cub Scout come over and draw tickets for the door prizes, which I think they enjoyed. The leaders said they were happy with the sales and would love to come back again in 2024.

Overall attendance was down from last year for whatever reason. The live coronation of King Charles III was going on in the UK, but that shouldn't have stopped a SwapFest aficionado from attending, right? The number of vendors was also down. Those I talked to after the SwapFest thought it was another good event, especially the ones that sold all their stuff!

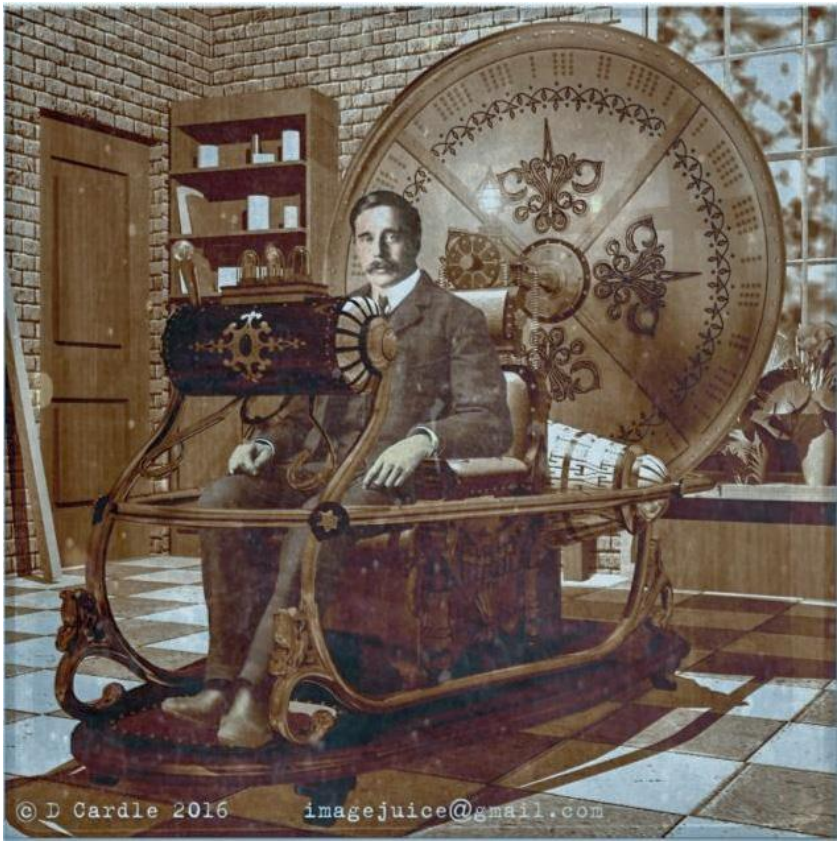
The Milwaukee School of Engineering's Amateur Radio Club W9HHX had a table, showing their Pico balloon. They launched the balloon on Sunday, May 7th from Lakeshore State Park. A Racine middle school WLS ARC KD9GRG also launched their Pico balloon shortly after.

The OZARES also had a table demonstrating various things and received good responses to their attendance as well. Hope to get more groups next year.

I would like to thank all the volunteers that helped to make this a successful SwapFest, as we did indeed make money for the club. Thank you to:

JeananneN9VSV, Gary N9UUR, John WA9KNY, Loren N9ENR, Jim K9QLP, John W9FAD, Chuck KC9YEP, Todd N9DRY, Rod WB9AZH, Pat W9JI, Fred W9KEY, Tom W9IPR, Gregg W9DHI, and of course our President Bill K9GN.

I can still use some more volunteers for next year!



Tom, KC9ONY, setup on his Time Machine (courtesy of Jules Verne) for a quick look at ORC SwapFest 2024. Are you in that picture when he arrives?

© D Cardle 2016

International Lighthouse / Lightship Weekend
Mark the Date!! – August 18-20, 2023

de: Fred Schwierske, W9KEY

Plans are underway for the Ozaukee Radio Club and LEFROG organizations to again team up to participate in the International Lighthouse Lightship weekend. Always held on the 3rd full weekend in August, this worldwide amateur radio event typically includes over 400 special event lighthouse stations in 50+ countries. Last year, we were one of 47 stations operating in the United States.

Read about the event at: https://illw.net/

Special event stations are not contests. Rather, we have the opportunity to promote our local lighthouse with distant hams, work other worldwide lighthouses, and explain amateur radio to museum visitors. It's a low key, fun event in a beautiful setting – overlooking Port Washington's marina.

Setup starts Friday Noon, August 18 at the 1860 Light Station Museum – 311 Johnson Street, Port Washington, Wisconsin. On-air operations begin early Saturday morning, through mid-day Sunday. We will be operating on museum property (outdoors) in typical Field Day conditions - so dress accordingly, bring a chair and refreshments.

We have considerable flexibility regarding station setup. Last year 3 transmitters were in operation using a tri-band tower mounted beam, 40-meter dipole, and frequency agile vertical. But to make such efforts worthwhile – we need operators!

So please advise if you can help with Friday, August 18 setup and/or tear down on Sunday mid-afternoon, August 20, 2023. And of course, also advise if you are interested in being an operator, and your preferred shift-time, by sending an email to: w9key@arrl.net.

To complete a great weekend, the 1860 Light Station museum is open to visitors Saturday & Sunday, 11:30am to 4:00pm. Consider bringing the family

and scheduling a museum tour – details & prices* are available on their website:
https://www.pwhistory.org/1860-light-station

* Tickets are not required to participate in our Event Station, only to enter the Light Station Museum.

You know, sometimes "His Master's Voice" was heard on a Zenith.

OZARES: Ozaukee Amateur Radio Emergency Services

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

Chat Modes for ARES continued

Last month the OZARES group set up a table at the ORC Swapfest. It was a very busy table this year. Of course, being near the Boy Scouts and the food area is a big help.

Our setup included a VARA Chat demo between two computers using two vhf radios. The software required is the VARA FM TNC modem software. Both radios used a Signalink as the sound card. A Yaesu FT-8900 mobile rig, with a dummy load, was on one end and a Yaesu FT-270 2-meter FM handheld was on the other. Since most of the visitors were not familiar with the Chat program, there was a good deal of time spent explaining the setup and the VARA FM software.

We also answered many questions regarding WINLINK. The good news is that many of the questions were about setting up WINLINK gateways. One that I remember would be installed in the New Berlin area and it would be a combination of packet and VARA.

Recently I received a phone call from Mike, AC9DE, who was testing WINLINK station at Ham Radio Outlet in Milwaukee. Mike has obtained sysop permission for the call sign WI9HRO. They have a donated radio and are busy setting up a dedicated antenna for the station. So, look forward to another gateway at HRO.

Now that we have operated the VARA Chat software in some controlled conditions, we need to take it into the field. I am looking forward to testing our connections within Ozaukee County.

It is funny how we can start discussing and reviewing one mode of digital operation and several others will appear. In the May 2023 CQ issue, the *digital connection* column, by Don Rotolo, N2IRZ, has a very interesting discussion about Bulletin Boards Systems, (BBS). Don talks about the advantages and disadvantages of having a BBS. In the late 1980s BBS nodes were very common but have faded in popularity with the rise of the internet.

He also discusses a Chat program, available from G8BPQ called BPQChat. More information is available at: https://www.cantab.net/users/john.wiseman/Documents/

Chat is also included in the Terrestrial Amateur Radio Packet Network (TARPN) Home application. The intriguing capability of this mode is that multi-operators can participate in the Chat. In the VARA Chat listed above, and in the WINLINK peer-to-peer mode,

communication is only one-to-one. This puts a severe crimp into sharing information among a group.

The G8BPQ Chat program and TARPN Home application can be installed on a Raspberry Pi.

The TARPN Home network page does contain a warning:

We recommend you work with other hams and arrange to have a network of five operators, where each station is within 2m HT simplex of the next station, who could each host a node in their homes (maybe with a 6th at a mid-site?) to fully test and demonstrate the network. You should try to have all five hams signed-on to the project before installing this system else your labors are likely to lead to disappointment and frustration. Five active participants may be the magic number where the killer app (chat) is interesting enough to lead to grassroots network growth. The proximity required for simplex HT connectivity makes it very easy to get the system installed and working. This is of high value to new network builders. Furthermore, the cost of antennas when stations are local is much less than will be required for longer links.

I guess this will require some thought before jumping into the fire.

One other note about OZARES is that we move into our summer hours. Our Thursday night nets will start at 8 pm on the first and second Thursday of the month. If there are five Thursdays in the month, there will be a third net on the fourth Thursday. The fifth, or last Thursday of the month, is the statewide VHF net held on the WECOMM linked repeater system.

Looks like summer is off to a good start, except for the lack of rain.

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. 303: Don’t Feel Pressed to Purchase Antivirus Software

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

This article (first partially addressed in #245, July 2018) was suggested by recent conversations with Tom Trethewey, KC9ONY. Thanks, Tom!

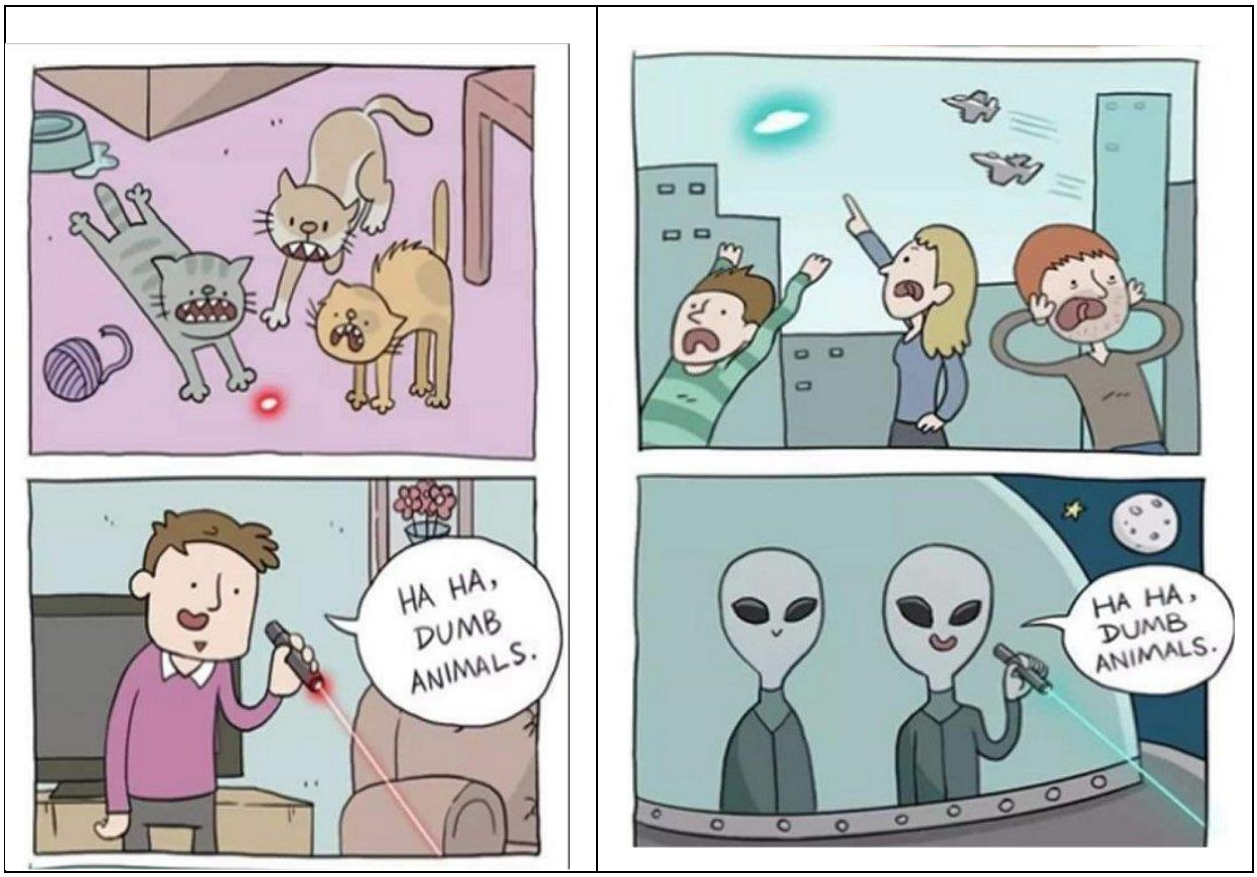
At the current writing, we are in mid-2023. As long as 5 years ago, it became pretty clear to many of the gurus who keep tabs on the trends of virus attacks and antivirus software, that the antivirus software that comes with Windows 10 and 11 is *adequate protection for most users of Windows*. Elegantly said by Majorgeeks, “While we wouldn't recommend Windows Security just a few years ago, it is an excellent choice, and you already have it included with Windows 10 [and also 11, ed.]. So, with Win10 or 11, you are already protected with the built-in *Windows Security* (it used to be called Windows Defender).

So, what if some other antivirus package, or several, were previously installed? They might be using up needed resources and slowing your machine down. Whatever might be there, all you need do is to uninstall them (properly), and Windows security should automatically take over after a reboot. You don’t want to just leave running pieces of unused programs there, because antivirus programs have a propensity for interfering with each other and may cause you grief if they run at the same time. Stick with Windows Security and uninstall everything else. If you want a little extra “oomph” in your protection, you can safely install the free version of Malwarebytes (downloaded over 16 million times from https://www.majorgeeks.com/). Run this once a month or more often as you wish. If it finds bad stuff, it will disable it at no charge, just for the asking. Or, if you wish to pay a yearly fee (about $45), it will watch your back full time and prevent all kinds of attacks from ever taking hold, such as ransomware. And it will work quite happily at the same time Windows Security is running. It is known that you can install Malwarebytes and have Windows Security also running in the background and simultaneously protecting your machine, without interfering with each other or the normal operation of your computer.

By the way, to properly uninstall any program (including heavy duty antiviral programs like Avast, Avira, McAfee, Bitdefender, Norton, etc.), go to Majorgeeks (hyperlink in the previous paragraph). In the left column under **Files**, select **System Tools**, then **Uninstallers** and download **HiBit Uninstaller** (either the .exe or the portable version – your choice). Run that, including the **Advanced Scan** with **Automatic Cleanup**, and

whatever you selected will be gone for good. The Uninstaller program by HiBit is probably the best uninstaller available anywhere, and it is free. Happy Computing!

“Dumb Animals” --- Courtesy of MajorGeeks



The Field Day Trailer

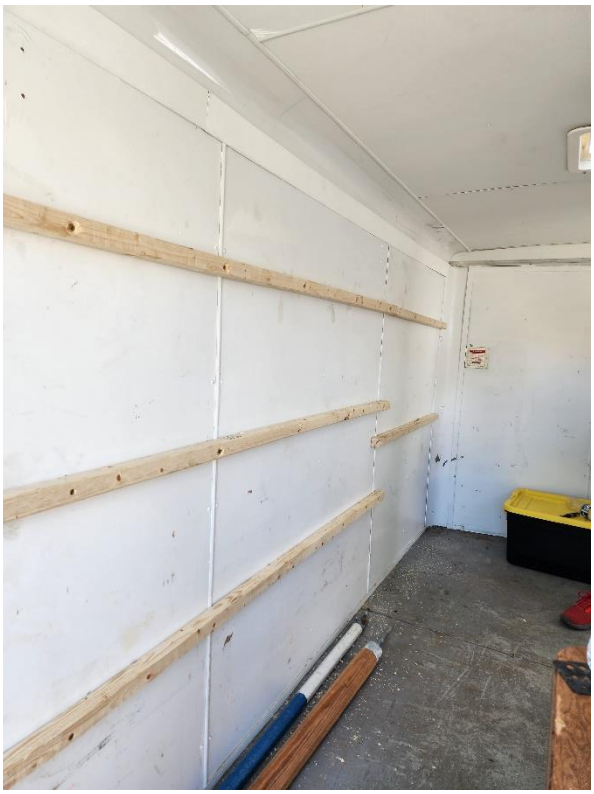
Edited by: Bill Shadid, W9MXQ

With input from Nate Seidler, KC9TSO, Matt Myszka, KD9QLS, Bill Greaves, K9GN, Mike York, AE9MY, and Ken Boston, W9GA

In emails received by this editor on the work completed on the Ozaukee Radio Club Field Day Trailer, I wanted to bring the membership up to date with this fine work and also to thank Bill Greaves, K9GN, for providing the included pictures.

In an email via the ORC Reflector, it was related that the Trailer was taken to Nate Seidler, KC9TSO's home QTH for the upgrades and repairs. Nate wanted to give a special thanks to Bill, K9GN, Mike, AE9MY, and Ken, W9GA for coming to his QTH to build the new shelves inside the trailer. Later, Nate, and Matt, KD9QLS, finished putting everything back in the trailer. The net result was a lot more open floor space. Everything is quickly accessible without leaving "stuff" piled on the trailer floor. As you can see in the pictures, the modifications to one of the shelves to be an operating station also turned out well. Take a look at the pictures:

Trailer – Left, Rear, Interior
K9GN



Trailer – View Toward Left Front
K9GN

Trailer – Left Front Area

K9GN

Trailer – Shelving Boards Added

K9GN

K9GN

Nate, KC9TSO, at the Operating Position at the Left Front of the Trailer.

“Okay, Nate, quit checking out the camera and make some contacts!!!”

Okay, from this point it is just the “little stuff,” like checking operation of the trailer lighting and making sure things are properly stocked in the other trailers. At that point, we will be ready for another successful Field Day.

Nate relates, as in his posting to the ORC Reflector, the only thing I ask is that those who are bringing out radios and other gear, please inspect and operate them within the next week or so. Give them a 30-minute jog just to make sure we have no surprises on Field Day Saturday morning!

Thanks again everyone. And please come out to see the club operate even if you aren't a normal operator. We have a GOTA station that anyone (licensed or not) can get on air. It helps with our score and it's good company. Nothing is required of you but to show up.

Sew What?

de: Tom Trethewey, KC9ONY

As you may know, the Technical Committee has acquired several pieces of equipment to enable an in-person and Zoom meeting. This includes several wireless microphones. These were all in separate boxes, which took up space and were time consuming to remove.

Well Jeananne, N9VSV, provided a solution. She created a bag with pouches for the microphones! It currently holds 4 wireless microphones and their receivers, as well as the two headsets. It also has room for some manuals or instruction sheets. Jeananne made this all out of some material she had.

Not only that, but she embroidered “Ozaukee Radio Club, Inc.” on the outside!

Thank you, Jeananne!!

A New Ham Connects to The Ether

de: Bill Shadid, W9MXQ
(Edited from Conversations with John Livingston, KD9WOY)

New Ham – and new Ozaukee Radio Club member – John Livingston, KD9WOY, has been getting started in HF with his new Hustler 4-BTV Vertical Antenna. In conversations with John over the past few weeks, John graciously sent pictures of the process as it went along.

I felt it would be nice for all of us to share John's excitement (is that the right word?) with ripping up the lawn and digging out an opening in Mother Earth for that first few feet of radials – knowing all along that you have hundreds of feet more to go!!

Center Pole Set – Radials Connected to Copper Tubing Base

Note the base with his copper tubing assembly to be the connection point for the many radials he decided to make a part of his assembly.

John reports a visit from friend and fellow ham, John Kobishop, W9ABI, (another ORC Member) who wanted to help with the radial installation. KD9WOY did express some concern for the mental health of anyone volunteering to help with installing radials!! (Editor's note – sounds remarkably like a Huck Finn story from childhood when Huck would get his friends to experience the pleasure of painting a fence.)

KD9WOY did report that he got down to 32 minutes for each radial installation. We may never know how that could have been improved by installing another 50 of the darn things.

Here is the family cat inspecting the finished base after the radials were buried.

Seems, according to KD9WOY, that the feline family member was disappointed with the new litter box.

In a final supplied picture of the overall project, KD9WOY sent the following which shows some of the maintenance required for proper operation of the antenna:

John, KD9WOY, laboring intensely at watering in the radials for better performance.

All Pictures – KD9WOY

On The Air Activities!

De: Gary Sutcliffe, W9XT

Field Day is the big event for June and is one of the big ORC club events of the year.

The ORC will again hold Field Day at the Pleasant Valley Nature Park near Grafton. There have been a couple of Zoom meetings and a meeting at the site. The station locations were determined. There is a bit of a change from last year. We now have a very tall cell tower at the site near where 40 meter phone sets up. Too bad we can't use it for antenna supports!

We will be 3A again with two phone stations and one CW station. There will also be a VHF station for 6M and satellites, plus a Get On The Air (GOTA) station. The GOTA station is to encourage hams who are not active and unlicensed members of the public to make some contacts. If you have not operated HF for a while or are not licensed. Stop by, and an experienced operator will help you make some contacts. We get extra points for that, so we encourage members and the public to participate.

We will start setting up on Friday, June 23, at 10:00 AM. Help is always appreciated. Final set up will happen Saturday morning, with Field Day beginning at 1:00. Field Day runs for 24 hours. Help is especially welcomed on Sunday afternoon tear down when the operators are tired.

Vic, WT9Q, setting up the CW station in the 2022 ORC Field Day.

One reason ham radio exists is because of the communication service we can provide to the public during emergencies and public events. One of the primary purposes of Field Day is as an exercise for emergency communications.

We set up at a location and operate with portable shelters, antennas, and emergency power. We learn to make contacts under adverse conditions, including heat, cold, mosquitos, etc. Perhaps the most important thing we learn is where the weak spots are in our equipment. Gear breaks down over time, and FD gives us an excuse to test everything.

Field Day occurs as we get into summertime propagation. The DX openings are not as good as during the colder months. That in itself is not a real problem since we generally only work US and Canadian stations in FD. The bread and butter bands are 40 and 20 meters. You can usually depend on those. The higher bands, 15 and 10 meters, are kind of iffy. They can be really productive if we get a good sporadic E (Es) opening. On

average, we get one of these about every three years. You have to prepare for it, but you can not depend on it.

Sporadic E is important to other bands. Six meters depends on it. We can make hundreds of contacts on the band if we get a good, sustained opening. If we don't, maybe we only get a couple of dozen. Sometimes we will get Es on 20 meters in the evening, and the band stays open very late, and maybe all night. That is critical to having a top score from the Midwest. Again, it only happens in some years.
The activity moves down at night, and 40 and 80 meters become the big bands. That is assuming the thunderstorm activity is low out for 1000 miles or so. The static can make those bands miserable, especially on phone. And, of course, if the storm gets near us, we need to shut down. There is no point in risking lives and equipment to a lightning strike. Many years I have had to shut down for a couple of hours.
If you are interested in more details on summer and Field Day propagation, Ward, N0AX, has an excellent article you can read.

https://www.onallbands.com/hf-summertime-propagationwith-propagation-advice-for-field-day/?fbclid=IwAR3Tk8JSjTWriGFCcBcUcMUoFAQaLEQpj5jjdNdQh28vzNjjzcSe6w5cPxQ

I operated my first Field Day in 1971. I was a Novice, and FD rules allowed a separate station set up and operated by Novice class licensees. After the Novice license was eliminated, the ARRL replaced it with the GOTA stations. One of my high school buddies ran the Novice station for the local club. He asked me to come help set up and operate.

Operating didn't sound exciting to me then, but I agreed to stop by and help set up. I told my parents I would be home for dinner. Well, I was home for dinner, but on Sunday night, not Saturday. I really got into it and was awake for over 24 hours to set up, operate, and tear down.

Ken, K9GA, operatig 20M phone, 2022 FD.

Sunset FD 2022. 6M beam on the left, and CW station's antennas in the center and to the right.

Field Day is often the introduction to contesting. As you know, contesting is one of my big activities in the hobby. This will be my 52nd consecutive year participating in FD. I'm only a bit over halfway to my FD operating streak goal!

Big Solar Flare and Radio Blackout

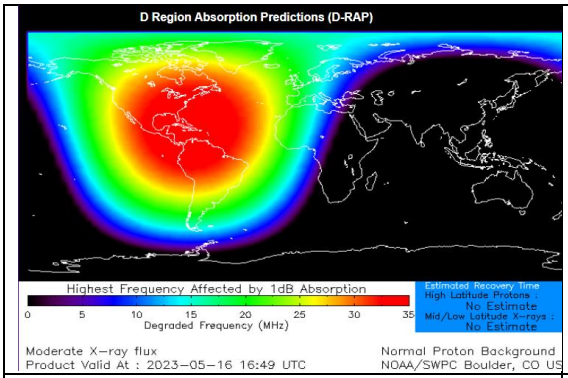
Steve, K9WO, is a friend of mine who lives up near Portage. In May, he and his wife took a long trip to the southeastern states in their camper. Steve likes to hike and participates in the Summits On The Air (SOTA) program. The SOTA program designates a number of hill or mountain summits. Operators can go there and give out contacts. They have awards for activating summits as well as working them from home.

Steve, K9WO operating from a SOTA summit. Eva Dubberstein photo.

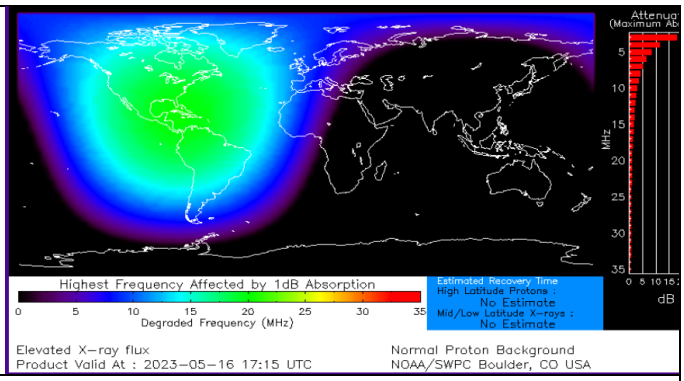
Some summits are pretty easy to get to. One popular one in this area is Holy Hill. You can drive up and operate from the parking lot. SOTA does not allow mobile operating, so you would need to set up an antenna and station from there.

Steve likes activating the more remote ones, where you have to hike a mile or more, often in locations without trails. For those operations, lightweight gear, batteries, and antennas are critical, meaning compromise antennas and low power. It can be challenging to make contacts.

On May 16, Steve notified me that he was leaving on a hike to a peak in North Carolina and would be on in an hour or so. I tried to work him whenever I was around and had pretty good success, mostly on 20 and 30 meter CW. On that day, he was on 30 meters. I tuned to his frequency and didn't hear him. I tuned around a bit and didn't hear anything else, including on the FT8 frequency, which usually has some signals. So I went to 20 meters and didn't hear much there either. Was there something wrong with my rig? No, we had a Sudden Ionospheric Disturbance, or SID for short. I went to the solarham.net site, which gathers solar and ionospheric information from several sources and puts it in one place. One of the graphics showed the D-lay absorption. The D-layer is the ionosphere layer that absorbs the lower frequencies during the day. That is why we only hear local AM broadcast stations and local hams on the lower HF bands during the day. However, the D-layer ionization dissipates after dark, and we get more distant stations via F-layer propagation.



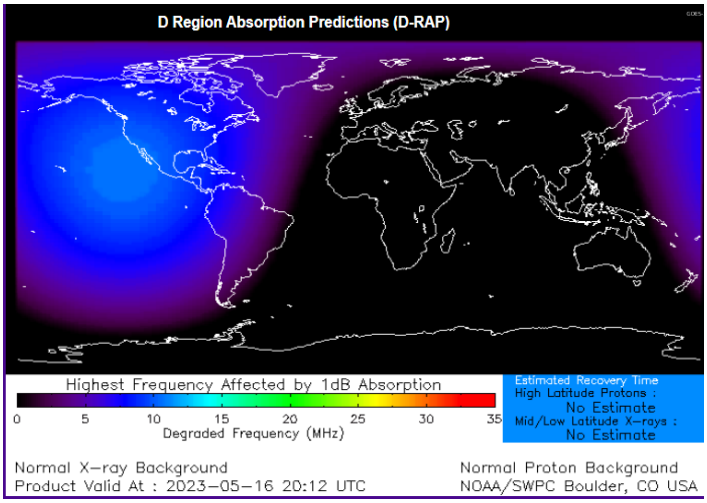
D layer absorbtion May 16, 16:49Z. The red area had an HF radio blackout through 10 meters.



After about a half hour, much of the D layer absorption had dissipated. Courtesy NOAA/SWPC

We get a big burst of X-rays from a solar flare. These X-rays head to Earth at the speed of light and ionize the D-layer. The intensity of the X-rays can be high enough so not only the lower frequencies become affected but also well into the HF bands. On May 16, the X-ray burst was very strong, and the blackout area covered most of the continental US, most of Canada, and down through Central and the northern half of South America. And this was just the most intense region, where the absorption went up to at least 35 MHz. Lower frequency absorption affected much larger areas.

The flare X-ray burst is short, and without a source of further ionization, the ions in the D-layer recombine, and conditions return to normal after a couple of hours. The accompanying graphics show the affected area over time.

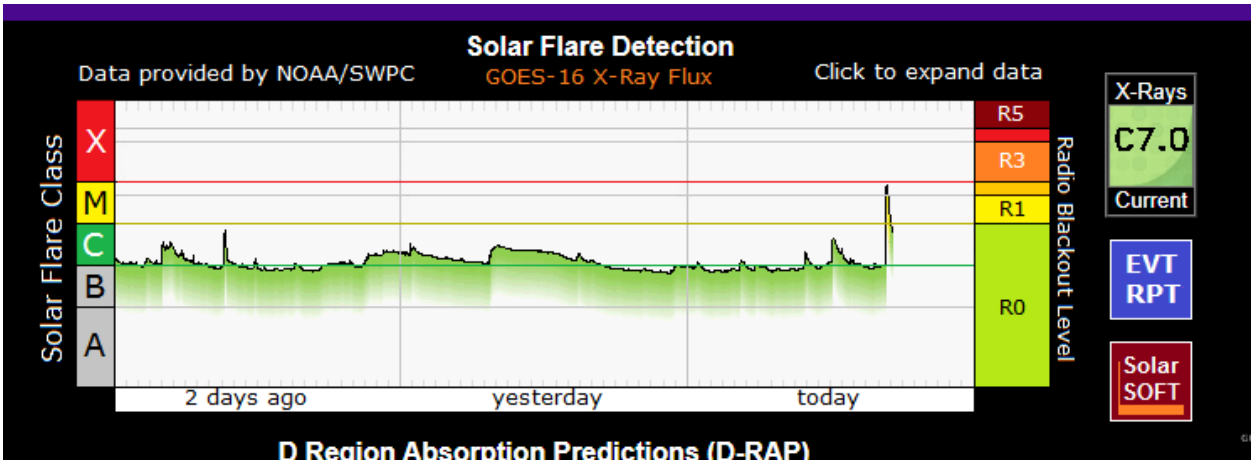


After a few hours conditions returned to normal. Courtesy NOAA/SWPC

The flare that caused this blackout was just beyond the sun's visible portion. It was so big that it cleared the limb of the sun. It was rated as a 9.6 M class flare. Some say it would have been an X class flare if we had seen the whole thing. X class flares are enormous, and we just missed that.

Because the flare was on the other side of the sun, the charged particles that follow a flare a few day layer were not directed toward Earth. Large solar flares cause auroras that are beautiful to watch, and we can bounce VHF signals off, but they cause problems for satellites and, in extreme conditions, can cause power blackouts as well.

Steve reported that he was operating at the time of the solar flare. He was running stations at a good rate. Then Steve had a high noise level but didn't think too much about it. He only made about four more contacts in the next half hour.



The spike on the left is the big solar flare on May 16. It just missed becoming an X-Class flare. Courtesy NOAA/SWPC

6 Meters

June is a great month for working sporadic E (Es) on 6 meters. We have had a few excellent days with the band open all over the US in the first few days of June. One of the popular activities on the band is to work for the VUCC award. You get it for working grids on VHF and UHF bands. You need to work 100 grids on 6 meters and 2 meters. Higher bands require fewer grids. Each band is a separate award. Right now, most of the 6-meter activity is on FT8, but don't forget to check SSB and CW if the band is really open, especially in contests.

Another award being chased is the Fred Fish Memorial Award, FFMA. Fred was the first ham to work and confirm all 488 grids that include land from the lower 48 states on 6 meters. This is a tough award. Some grids have no active hams on the band. Some have just a tiny amount of land.

Only 41 hams have gotten the FFMA award. The latest is Lloyd Berg, N9LB, who qualified on June 5. Lloyd lives near Madison. The last one he needed was on the west coast with just a sliver of land in Oregon. Most of it is a beach looking into a cliff, so good operating spots are hard to find. Es is only good out to about 1200 miles, so to work it from here, we need two patches of ionization in just the right places, making it even more challenging.

Gary, K9DJT, Ken, W9GA, and I are actively chasing the award. I just passed the 450 confirmed FFMA grid mark. The new ones are getting harder and harder to find. Usually, they happen when someone goes to a rare grid and operates. Gary outfitted a trailer with

a short tower and beam. He gave it a test last fall, and I look forward to him hitting a few grids I need to my north this season.

If you have never tried 6 meters, you are missing out on a lot of fun. Most newer HF rigs have the band. Antennas are small, and a dipole for the band is just over 9 ft long. They don't have to be high. With a lot of 6-meter Es contacts, my antenna at 19' outperforms the one at 55'. Es signals arrive at relatively high angles, so you don't need high antennas.

My last new FFMA grid was a new ham in Montana. He was using a vertical and 100 watts. Check out the VHF tent if you are visiting the ORC Field Day. Jeananne, N9VSV, will be running 6-meter phone. Hopefully, we will have some good openings to keep her busy!

Dayton

I was not planning on going to the Hamvention® near Dayton this year, but Lyle, WE9R, convinced me to go. I'm glad I did. I had a lot of fun. I think I have been to it at least 35 times.

The weather was good for a change. We had a bit of rain on Saturday morning, but it cleared up by the time it opened. It was not a heavy rain, and we didn't have the mud pit in the flea market we usually see. It might have been the best weather since they moved it from April to May many years ago.

Several ORC members made the trip this year. I tried to take pictures of them when I saw them. My apologies if I missed you or forgot to take a picture.

Tom, KC9ONY

Fred, W9KEY

	
Rod, WB9AZH	**Kevin, K9VIN**

One of the highlights of this year was that a friend of mine, Ken Claerbout, K4ZW, was inducted into the CQ Contest Hall of Fame. Ken grew up in Wisconsin. Lyle was one of his mentors. Ken works for a government branch that deals with transmitters for the US, such as Voice of America.

Ken travels around the world for work. Between work and personal travel, he often operates from rare areas. He has made several trips in the last year or so to Ethiopia to help get the technical college station ET3AA up and running and train students to get their licenses and improve their operating skills. He will be returning to Ethiopia later this month.

Two others were inducted into the CQ Contest Hall of Fame. One is Kirk Pickering, K4RO. I worked with Kirk when I wrote a column for the NCJ; he was editor for a few years. The other inductee was Bernhard Buettner, DL6RAI. Tragically, Ben was killed a few days before the official induction when a tower he was on collapsed.

End of the AM Broadcast Band?

There has been a lot of talk recently on car manufacturers not installing radios in new electric vehicles. They argue that AM broadcast is dead, and no one uses it anymore. While all over-the-air broadcasts are declining as technology provides alternatives, AM radio offers some advantages over the alternatives.

You will not hear SiriusXM break in and say there is a tornado headed toward Grafton, WI. (Unless tuned one on of the SiriusXM specific metro channels.) The local/regional aspect of the coverage of local stations is important for spreading important information.

In rural areas, they provide local news coverage that would otherwise be ignored. Many small AM stations play music and programming to ethnic groups in their native languages.

The AM band is good for local and regional coverage. It usually has a better range than the FM broadcast band. An AM (band and mode) radio is pretty simple. You can even use a crystal set. At one time, new cars were required to have an AM radio because it was part of the Civil Defense efforts during the Cold War.

Streaming is fine from home but not so great in the car. You need special equipment, a subscription, and be in range.

Nor am I convinced by the argument that the AM BC frequency band would provide economic improvements for another purpose. The FCC indeed generates billions of dollars auctioning off spectrum space. But those are in the UHF and microwave frequencies. Those frequencies are needed for high bandwidth and small area coverage.

I often listen to AM broadcast radio from my car and when working in the yard with an old boom box. I listen to ball games and talk radio. Maybe part of it is nostalgia from my youth when I had a lot of connections to AM radio. The neighbor across the street was the news guy on a local AM station. I was once the "anonymous source" of a news story he did explaining the strange moving lights in the night sky everyone was seeing were not alien spacecraft, but actually small hot air balloons made from dry cleaning bags, balsa wood, and birthday candles. I can neither confirm nor deny that I was personally involved in any of the balloon launches.

My uncle (W9FJ – SK) moonlighted as an engineer at a local AM station, and I would sometimes visit him there. I took tests for the FCC Commercial license in high school to work part time while in college as a station engineer, but fate moved me in a different direction. FM had not taken off, so I listened to rock music on a local AM station. My favorite DJ was a ham, by the way. So, I do have a soft spot for the AM broadcast band.

The effort by the car companies to eliminate AM radios is purely an unethical economic one. It is cheaper to pollute the airwaves with RFI from the electrical system than to fix it. Even if they don't want to put AM radios in their cars, they should be required to clean up generated RFI. Maybe you don't listen to the AM band, but do you want your QSO on one of the HF ham bands covered up every time an EV drives by?

13 Colonies Special Event

A regular event for a few ORC members around our Independence Day celebration in early July is the 13 Colonies Event. There will be special stations from each of the 13 original colonies. They will be using special 1X1 call signs starting with K2. There are also bonus stations GB13COL (England), TM13COL (France), and WM3PEN.

Oddly enough, the website has not been updated for 2023 as of this writing. But it usually runs from July 1- July 7. If you work them all, you can get a certificate.

Hamfests

Two hamfests are coming up. The first is the LAARC FreeFest in Burlington on June 10. The other is the South Milwaukee Swapfest on July 8. This is probably the biggest outdoor hamfest in Wisconsin and one of my favorites.

Contests

The first big contest is the ARRL June VHF contest on June 10-12. (Note the dates on the ARRL website are wrong.) It starts at 1:00 PM on Saturday afternoon and ends Sunday night local time. Work anyone once per band on 6 meters and above.

The June VHF contest is the biggest of the ARRL VHF events because we usually have some good sporadic E openings, and 6 meters can be really wild. You send your grid square. Signal reports are optional.

I think FT8 and other digital modes have made VHF contesting more fun. There will be periods when the band is not open, but you need to be present in case it opens. FT8 often lets you make contacts during otherwise slow periods.

The problem is that far too many stations never get off FT8, even when the band is wide open. You can make 3-4 times more QSOs/hour on SSB or CW than on FT8. In practice, it might be much more. If the band is really open, it gets too crowded, and it often takes many retries to complete a QSO. So, if it opens up, at least switch to FT4, which is faster and less crowded than FT8, but you really should be on SSB or CW if the band is open.

The ARRL put in new classes this year to encourage SSB and CW contacts. There is an analog-only for CW and phone contacts and a mixed mode that allows digital, CW, and phone modes.

If you are using FT8 during the contest, remember to set the "NA Contest" box in the Advanced Settings tab.

Field Day, June 24-25, is officially not a contest. But if you make contacts, keep score, etc., it is a contest in my book.

The IARU HF World Championship is on July 8-9, starting at 1:00 PM Saturday, and runs for 24 hours. It is sponsored by the IARU and administered by the ARRL. You send a signal report and your IARU zone, which is zone 8 for us.

Work everyone on 160-10 meters (no WARC bands). The modes are CW and SSB. You can work other stations once per band/mode.

This year is special because the World Radio Team Championship (WRTC) will be held during the IARU contest. This event is sort of the Olympics of ham radio. It was supposed

to be held in 2022 but was delayed a year due to COVID, so it is still being called the WRTC 2022 even though it is this year. It will be in Italy this year.

Ham radio contesting is an uneven playing field. Some stations are better than others or may have better locations. Did one win because they are better operators or have a better station? WRTC aims to level the playing field. They put in a lot of effort to ensure that all the stations use identical antennas and locations are picked to be as similar as possible.

The teams are assigned locations randomly a couple of days early to set up. Antennas and shelters are provided, but they bring their own equipment. They all have special callsigns to hide their identity. You can't just work your friends because you won't know what call signs they will use. They learn their call sign about an hour before the contest starts. Each station has a referee to ensure all the rules are followed.

A group of something like 50 two-operator teams will compete against each other. To qualify, they have to operate many contests over the period of a year or so and gain points depending on how highly they score. Becoming eligible requires a lot of dedication because there are so many contests.

The team leader representing Team USA NA4 (which includes W9) is Scott Jasper, NE9U, from Menomonie, WI. Team leaders get to pick their partners, and Scott picked Craig Thompson, K9CT. Craig has a super station in Trivoli, IL. Good luck, guys!

DXpeditions

The Rebel DX Group is currently in Central Kiribati in the Pacific. They are using the callsign T31TT and will be there through June 12

Ducie Island will be activated with the callsign VP6A June 11-24. This is an interesting operation. They will be using RIB (Rig in a Box) stations. These are self-contained stations in a case. The idea is that they minimize the environmental impact of a DXpedition. It only takes a small crew a few hours to take them to the island and set up the station. They only need to return once a day to refuel the generators. There is no need for tents and other infrastructure to house and feed the operators.

The operators use RF links from a yacht anchored near the island to operate the RIBs. This operation will also have about a dozen remote operators worldwide using the Starlink satellites to connect to the RIBs.

That wraps up June. Don't forget the ORC Field Day on June 24-25. See you there!

See W9XT's Operating Picks for June and Early July 2023 on the next page.

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

DX

W9XT's DXpedition picks for June and early July 2023					
QTH	**Dates**	**Call**	**Bands**	**Mode**	**Link/notes**
Central Kiribati	Through June 12	T31TT	160-10	C/S/D	
Ducie Island	June 11-24	VP6A	160-6	C/S/D	https://www.qrz.com/db/VP6A

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

W9XT's contest picks for June and early July 2023					
Name	**Start**	**Length**	**Bands**	**Mode**	**Link**
ARRL June VHF	1800Z		6M and up	C/S/D	http://arrl.org/june-vhf
ARRL FD	1800Z	24	All	C/S/D	
IARU/WRTC	1800Z Jul 8	24	HF + 160	CW SSB	https://contests.arrl.org/ContestRules/IARU-HF-Rules.pdf

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 June and early July 2023			
Event	**Dates**	**Details**	**Link/notes**
Burlington LAARC Hamfest	June 10		http://www.arrl.org/hamfests/laarc-wi9elk-lra-kr9rk-freefest
13 Colonies	July 1-7	K2B through K2M calls	http://www.13colonies.us
South Milwaukee Hamfest	July 8		https://southmilwaukeearc.org/event/south-milwaukee-swapfest-2023

Vintage Amateur Radio

de Bill Shadid, W9MXQ

For the most part, articles in this series have been about radios I have collected in the past and/or exist within my current collection. Occasionally, however, I have written on a particular unit that has been the object of a restoration or odd and sundry rescue from a fate that could have led to its ultimate destruction.

I need to be clear in my feeling about vintage radios. To me, altering or changing a vintage radio is something just not done. At the very least, every effort should be made to provide for reversal of the process. These old radios are, to my way of thinking, a window on radio history in terms of physical appearance and electrical design. It is always a shame when examples are lost – especially those as rare as the Drake TR5.

Back in the 1980's, the R. L. Drake Company introduced their Drake TR5 HF Transceiver. While carrying the appearance of the late 1970's Drake TR7 HF Transceiver, the looks and size of the TR5 only resembled the TR7 in very minor ways.

Restored and Repaired Drake TR5
Subject of This Article

W9MXQ Picture

This radio came to W9MXQ from a friend in the western United States who bought it, along with a matching Drake PS7 AC Power Supply in a configuration built like a go-box[1]. I do not have a picture of how the "Go-Box" arrived at my friend's QTH, but he had a good description and a picture of one that was sold years ago on eBay. I will show a picture of that one here with the note that, according to my friend this is exactly what his looked like.

He bought this assembly for “under $200.00 on the off chance it could again be made into a proper TR5 and PS7.” As of this writing, good TR5 Transceivers are valued at close to $800.00[2] and good PS7 Power Supplies are valued at around $170.00[2].

Likely due to their very limited production life – only about 500 units[3] – the value of a very nice TR5 exceeds the value of a similar condition TR7 – but this can be variable, depending on the condition of each.

Drake TR5 HF Transceivers were an attempt to cost reduce the feature-set of the TR7 HF Transceiver. The TR5 resembles a solid-state version of the TR-4CW-RIT Transceiver as far as included design features. Most likely, however, it closely resembled the ill-fated Drake TR-5[4] Hybrid Transceiver that supposedly was designed to replace the TR-4 series.

Some months ago, my friend bought the previously mentioned “Go-Box” set that included the TR5 and PS7. While I had no regrets at the time (and only a few now that I decided to author this article), no pictures were taken of the unit at receipt, and I took no pictures of the separate units when I received them. However, my friend did find a picture of a nearly identical unit for sale sometime in the past on eBay. Check this picture:

This is the “Go-Box” configuration as shown in an eBay ad from the past. The unit in this article was similarly configured. This is NOT the package that supplied the pieces that I received. It looked nearly identical to this, however..

W9MXQ – taken from eBay

Some notes on what I found upon receipt of the units.

On the TR5 Transceiver:

- The Outer Wrapper (Drake’s term for the wrap around top and sides you see on a complete radio) was missing.
- The feet were missing. (But the owner provided me with four generic feet.)
- The radio included the following Drake options:
  - Optional SL1500 Drake Narrow SSB I-F Filter.
  - Optional NB5 Noise Blanker
  - Optional FA7 Cooling Fan
- The exposed extruded aluminum areas were spray painted a color that was a somewhat lightly tinted Olive Drab color.

- The Name Strip appeared missing. See the radio picture on the first page of the article – the Name Strip has the wording TR5 TRANSCEIVER and the DRAKE name and logo. The strip was painted the lightly tinted Olive Drab color of the extrusion and was covered by the original equipment clear plastic strip. There was some lettering between the meter and the readout that later turned out to be applied from press-on lettering. See details of that lettering, later.

On the PS7 Power Supply:

- The Top Cover for the Power Supply was missing. But my friend did supply a Top Cover. I think he may have received it from the original seller – not sure. The Top Cover supplied was bent and had paint missing in several areas.
- The stock AC Power, High Current DC, and Low Current DC/Control cables were full length and supplied still hard wired to the PS7 – and were in good condition.
- The feet were missing. (But the owner provided me with four generic feet.)
- The power supply included the following Drake options:
    - Optional FA7 Cooling Fan
- The exposed extruded aluminum areas were spray painted a color that was a somewhat lightly tinted Olive Drab color. In addition, the entire front panel of the power supply was also painted the same color – as evidences by the picture.
- The handle was in good condition – not distorted like the picture.

The outer surround was 0.125” cold rolled steel, bent to fit tightly around the TR5 as it sat very close to the PS7 (TR5 over PS7). It was painted the same lightly tinted Olive Drab finish. That cover, along with some bracketing to hold the radios in place, were scrapped by the owner. He said that the cover had been repurposed from another use. It has been used as a sign with the original lettering left painted on the inside of the fabricated cover. The same was true of the thinner gauge brackets – they had been cut up from a previously printed (on one side) steel item. I can relate to that process in making home brew gear.

I first had to take stock of what was needed and get the agreement from the owner about what could be bought on the market and/or sold to him from personal inventory. Here is a list of what parts were needed and how they were sourced:

- Wrapper for TR5 – completely missing. These are now nearly “unobtainium.” I sold the owner one of my two NOS spares.
    - TR5 and TR7/TR7A Wrappers are nearly identical. The TR7/TR7A Wrapper has slots on the left side to accommodate the side mounted speaker in the radios. The speaker in the TR5 is on the bottom of the radio so a true TR5 Wrapper has no holes in the side.
- Feet for the TR5 and the PS7 were completely missing. The feet supplied by the owner were completely incorrect – so much so that the difference was noticeable. With his agreement, I supplied feet, bumper inserts, and mounting screws that were in my inventory and correct to Drake OEM specifications.
- The knobs on the TR5 to control VOX ON/OFF/GAIN and DELAY were incorrect. They were larger 0.250” shaft knobs that were yellow (UGH!!). Since they were

0.250” knobs on an 0.125”shaft, they wobbled and were never quite tight. I replaced them with OEM Drake knobs with the agreement of the owner.

- This occurred on one of my two personal TR5 Transceivers. In that case, the mounting of the larger knobs involved replacing the pots with 0.250” shaft units. While the appearance was fine – larger matching Drake knobs were used – the result was non-standard, so I returned the design to original Drake specification.

The critical task was to reverse the non-standard color. The picture below (a larger version of the one shown above) shows the accent exposed satin brushed aluminum strips that appear between areas on the front panels with blue arrows. Then, with the orange arrows you can see the areas where there were black (TR5) areas and dark gray (PS7) areas.

Picture here and get an idea of what I saw when opening the shipping boxes. (Remember, I only saw the individual TR5 and PS7 – the outer housing was gone.

Areas with Color Damage

That is, non-standard paint – off shade Olive Drab in the owners case.

W9MXQ – edited from eBay

Paint removal has not typically been a main task for me in recent years. Right or wrong – and unlike many of my fellow collectors – I have graduated to finding very good condition vintage radios that do not need paint or paint removal. I just do not do that anymore. That is much more evidence of my age than it is anything else. My hat is off to those of you that do that kind of work.

My plan and initial tests with removing paint was on the bottom (out of view) part of the front panel extrusion of the TR5 Transceiver. Just so you know, the original modifier of the equipment did not just paint the exposed areas of the extrusions – he/she removed and painted the whole extrusion – front, back, top, and bottom – on both the TR5 and PS7. My first tests were done using a gel, non-toxic paint remover, "Smart 'n Easy™ Citrus Paint & Varnish Remover Gel." I found this at a local hardware store some time ago and had it here for various projects. Read on, however, as it was not my final choice.

I made sure the area on the bottom of the panel was clean – actually, I carefully cleaned the entire panel with Fantastic™ Spray Cleaner before starting any work. I let the panel sit and dry for about an hour after cleaning.

Applying a small amount of the gel across the bottom edge of the extrusion and letting it sit for about five minutes produced excellent results – the paint was gone onto my wiping cloth and the extrusion looked brand new. I liked the results with the Smart 'n Easy™ product but it scared me, and I did not like the smell – even out of doors where I used it. At the suggestion of my long-time friend, fellow radio collector and restorer, and article proofreader, Bob, W9DYQ, I next tried a popular cleaner product we both use, Goof Off™ Cleaner – available at your local hardware store. Bob suggested that Goof Off™ might remove the paint from the extrusion. He was right – and a lot cheaper alternative as well.

I applied my process to both the TR5 and the PS7 Extrusions with no problem. I even removed the paint that would be covered by trim panels and/or be otherwise invisible. I would know that darned olive drab was in there somewhere. I advanced to the point of spraying the Goof Off™ on the panel then standing them on end for about ten minutes before wiping them off. I then cleaned them with clear water and finally a round of Fantastic™ cleaner. Following that (which totally removed the sight odor left by the Goof Off™) I again rinsed the panels with clear water and then towel dried them.

Be very careful with this process on aluminum. I was afraid that it might just turn the aluminum black – a point supported when I first had talked to customer service for the "Smart 'n Easy™ chemical. In my case, it did not – but your experience may not be the same. Test and re-test in an inconspicuous area before going further.

Do the same when you shift to another part – you do not know when some change in the part specifications could have been made by the part's supplier that may be more, or less, susceptible to the chemicals.

Below are pictures of the two chemicals as they came packaged. I actually have Goof Off™ in a container line the Smart 'n Easy and keep re-filling the first spray bottle I bought.

After all of the above we still had not completed the refurbishing of the Name Strip on the TR5 and the Front Panel on the PS7. The Name Strip was a worry, so I left myself some time by doing the PS7 Front Panel, first.

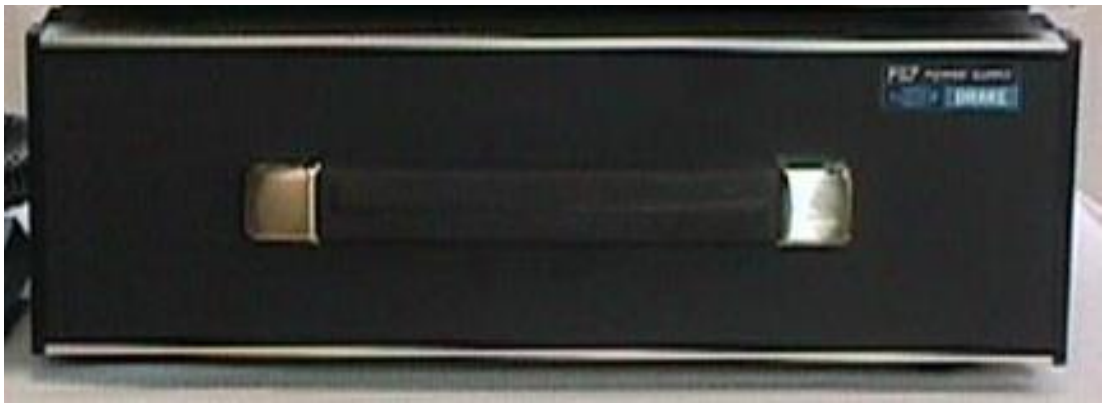
Since now we were working with the painted front panel of the PS7 Power Supply – and not an extruded part, it meant that we were removing a layer of paint – but did not want to remove the correct dark gray Drake paint. I had already removed the handle and the panel from the front of the power supply in preparation for removing paint from the front extrusion. As I started to plan my process, I remembered that the Smart 'n Easy™ product proudly says it can "remove up to 12 layers of paint." Well, this is not a goal since I only want to remove one layer!! So, I decided to use the less aggressive Goof Off™ chemical. Initial tries with using a cotton swab to apply Goof-Off™ was pretty successful, if slow.

The olive drab paint mostly came off after letting the chemical sit for about two minutes. I decided that discretion is the better part of valor, as we say, and continued the process in one small area after another. planned then to go back over the panel when the small areas were completed and make sure the panel was completely free of the olive drab paint. But wait – there was more – not good!! In removing the olive drab paint with no damage, I had also removed most of the product model information from the upper right-hand corner of the panel. Major parts are still there, and I believe I can match the colors and repair the voids. A story for another day.

Drake PS7 Power Supply and Logo callout. Upper right-hand corner of the front panel. Gone but not forgotten!!

W9MXQ

I replaced the PS7 Front Panel with a spare in my inventory. In the end, however, the original owner said that he plans to put the PS7 on the floor – as I always do with them. He said that he was more than happy leaving the panel as it is.



Drake PS7 Power Supply – Restored and Back Together

W9MXQ

The rather poor condition Top Cover for the PS7 was corrected by removing the paint first with the Smart 'n Easy™ product – since this was factory paint and more difficult to remove. It took a soaking of about 15 minutes but then it was easily removed, outdoors, I repainted it with Black Wrinkle Spray Paint. It was a no longer available Krylon™ product that has been used out of the same spray can for years. It looks just like the original.

The remaining issue is the Name Strip on the TR5 – not a lot of room for compromise solutions here but not outwardly looking too good. The name strip is very thin (0.012" thick) aluminum that is punched out to see the frequency readout – to the right of center – and another punch out to allow viewing of the meter. That Name Strip is a critical appearance item:

Notice that the strip is black with a silk-screened surround encircling the frequency readout window and a two-color silk-screened area to the right of the frequency readout calling out the radio's model number and the Drake name and logo. This appeared all to be covered with olive drab paint. This is critical here because I had already discovered on the PS7 panel that the silk-screened area was vulnerable to the paint remover.

Actually, to end the suspense here, I have to say that when I was removing that strip and the plastic strip that is in front of it I pulled it straight out and then put it out is sight for a while during my paint removal process on the main extrusion. I had not noticed that the guy doing the modification in the first place had merely turned the strip over and painted the backside green and put on the white lettering you can just see in the pictures. I never

turned the part over and noticed that the original part face was staring right at me in perfect condition! What a stroke of luck. Unlike the TR7 Name Strip, the one on the TR5 has all features on the center line – so flipping it over leaves an identical part.

But not being happy with such a great turnout, I decided to go after the darned green paint on the back of the panel. Besides, the paint was almost as thick as the strip, and it made the Name Strip and clear strip over it a tight fit in the extrusion. It had already scraped the Name Strip just a bit. I decided to use the gel chemical Smart 'n Easy™ product since I felt I could control the flow of the gel better than the watery Goof Off™ product. I put the Name Strip with the screened side down on a layer of paper towels and slowly removed the paint on the back with a cotton swab – and they another swab to remove it about a minute behind. It worked perfectly. That was the last of the olive drab!!

> *Note: When removing the green paint from the back side of the clear strip, the lettering placed there at modification came off as complete single letters and number. This confirmed to me that they were hand lettered using a press-on vinyl letters. Those letters were not damaged by the paint remover. Silk screen lettering would have dissolved along with the green paint.*

Finally, after the radios looked like proper representatives of Bob Drake's expertise, it was time to take care of a few alignment issues. The radio received well and checking into MidCARS and eCARS netted excellent reports. QSO's with local hams confirmed that I sounded like myself when using the radio, I felt pretty good about it. I had returned all the crystals to their proper locations and tested all bands for proper operation. The TR5, as Drake marketed it, shipped without the crystals for 160, 17, 12, and only had the 28.5 to 29.0 position on the 10-meter band. The 30-meter band – already open to hams by the time the radio was marketed – was included.

In spite of good operation, I checked receiver alignment and found it bit off here and there, but likely not enough to notice on the air. I did re-calibrate the frequency readout, which was a tad low. One item, RF output power, was a problem. The PA was putting out well over 100 watts. My two TR5's strain to get to 90, let alone the 150 watts this radio put out. I adjusted that back into reality. Beware of the TR5 – it does NOT share its PA with the TR7, and such high power will eventually destroy the PA transistors – and produce distortion in the process. Think of the TR5 as a 50 to 80-watt output radio and you will be in the right territory to allow the radio to live a long life.

Two things are, in my opinion, regrettable in the TR5 original power amplifier design:

1. Drake was in error (hindsight is always 20-20!!) in not supplying a 100-watt output power amplifier in the radio. Today's hams will complain at length about one particular Japanese manufacturer whose 100-watt nominal power amplifier produces only 95 watts on some bands. Think then how they reacted to the TR5.
2. The error was further aggravated by Drake using a lower power amplifier but using the same unique heat sink as used by the much higher powered TR7 and TR7A[5].

This fooled “golden screwdriver hams[6]” into thinking it was the same power amplifier circuit as the more powerful radio. It wasn’t.

In closing, I want to emphasize one caution in my process outlined here to remove paint. Read what comments made, above. Your experience most certainly can vary from mine. A lot of repainting uses cheap “rattle can” paints and a lack of surface preparation. Those two things lead to the paint being easy to remove. If the surface work uses even minimal preparation, the removal may be more difficult. I was perhaps fortunate in what I found with this TR5 and PS7. I recommend that you have alternatives in mind for any step you take in the areas that I have described. As an alternative – which I would do only in an extreme situation – is to use the system used by Ten-Tec in the Omni V, VI, and VI+ Transceivers (and accessories) that used an identical design. They painted the exposed areas in a metallic looking light gray paint.

Drake TR7 sitting atop a Ten-Tec Omni VI at W9MXQ

Note the same exposed extrusion area on both radios. On the Drake, the exposed area is that of anodized satin brush finished aluminum. The Ten-Tec is anodized aluminum but is painted a light metallic looking gray.

As you can see, this can look just fine[7].

W9MXQ

I appreciate that you read my articles. I add a special note of thanks to Bob, W9DYQ, for his proof reading. Bob is much more than a proof-reader and is actively involved in the history of the radios that are the subject of my articles. Remember that I am open to questions and comments at my email address, W9MXQ@TWC.com.

Notes:

[1] The concept of a “Go-Box” as it relates to ham radio is an enclosure that can be easily moved from place to place and carries all necessary radios, antenna metering, speakers, and other items – plus sometimes even power supplies or batteries – for setting up emergency or portable operations.

[2] The prices shown are eBay and Nationwide Radio & Eq. Sales LLC, respectively. Prices certainly can vary by a wide margin.
[3] The widely respected http://www.wb4hfn.com website acknowledges around 514 TR5 Transceivers and over 12,000 TR7 and TR7A models.
[4] The TR-5, admittedly, may have been a myth but it seems widely documented. At the time of the TR-4 and the supposed TR-5, Drake used a dash ("-") in the model numbers. That changed with the TR7 and the later TR5 as we saw it, did not have the dash in the product nomenclature.
[5] The TR7A was mentioned several times in this article. The TR7 and TR7A were identical except that the TR7A added the NB7 Noise Blanker and the SL500 CW Filter as standard equipment. Also, the TR7A included a bypass of the AM filter position (in the absence of the optional SL4000 or SL6000 AM filter) to allow AM reception using the Roofing Filter for relatively wide (9000 Hz) bandwidth control – ideal for Shortwave and Broadcast Band Listening. Other added features included the addition of front-end surge protection for the receiver circuitry and an added rear panel connector for microphone audio input. It should be noted that a very early TR7 and the very latest TR7A differed only in minor ways. The TR7 line was a very stable design
[6] The concept of a "golden screwdriver hams" is used often in reference to undocumented modifications of circuits or settings that may be in defiance to what the original engineer intended. In days past, this was many times quite innovative – and in rare occasions it still can be, today. However, as a collector, I find many times such modifications are not in the best interests of the radios. One of these – excessive drive and output from the final amplifier – not only produces stress on the circuit, but also tends to produce distortion and otherwise poor output. Other alignment "adjustments" or modifications in my experience have led to key clicks, poor i-f filter response on receive, and/or receive audio distortion.
[7] The Ten-Tec Omni VI shown here has shiny surface electrical tape on the outer edges of the front panel assembly. I had been working on the Omni VI when this picture was taken – and when doing so I always tape that area to prevent damage to the extruded (and this case, painted) aluminum trim.

Vintage Amateur Radio – News and Thoughts

de Bill Shadid, W9MXQ

This month marks the 71st consecutive Vintage Amateur Radio Article in this series. As I have said before, thus far all the articles have been on radios that I own or have owned. The only exception was an article on the Collins KWM-1 Transceiver of 1957. Even then, the radio was from the collection of my proofreader and long-time ally in these articles, Bob Bailey, W9DYQ.

While the number of available models of radios to be reviewed are still numerous, you will find that recent movement into use of vintage radios and specifics of restoration will become more a part of the content. Again, these will focus on radios that I have, or have had. Also, it will include radios in or included in the past collection of Bob, W9DYQ. On occasion, others may also be involved.

This month was to have been the first of this kind of article – actually a follow-on of last month's article on the refurbishing of a Kenwood TS-900S (the version with the 4X150 final amplifier tube). This article was to have included the details of what my friend Jan Servaites, N8CBX, of Kettering, OH, did in restoring the TS-900S Transceiver owned by another friend, Rusty Cline, N9DRC, of Rio, Wisconsin. You many see examples of the excellent restoration work done by Jan, N8CBX, by checking his QRZ page.

Instead of the TS-900S article follow-up this month, you will find a restoration I did on a very rare Drake TR5 Transceiver that had been partially repainted and remounted in a very ventilation restricted homebrew "go-box" enclosure. In the same enclosure was also a modified and partially repainted Drake PS7 AC Power Supply. Both units now look and operate like new. I think you will find it interesting.

The TS-900S follow-up article will appear in the near future. Included will be the process detailed by Jan, N8CBX, and also my addition of specific location details and illustrations on where to find specific items involved in the repair and restoration. I think you will like the results. Future such articles will chronicle restoration activities on Drake, Collins, Hallicrafters, National, Hammarlund, Swan, Cubic, and others as outlined above.

Finally, this year will see a focus on a more "recent Vintage Amateur Radio." What is that?" For many hams licensed in the past forty or fifty years, Vintage Amateur Radio are the hybrid radios. That is, radios using driver and final amplifier tubes with the rest of the radio being solid state. Did I say forty or fifty years. The first hybrid transceiver was the

American made, Sideband Engineers SB-33 Transceiver. The SB-33 was introduced sixty years ago, in 1963.

So, please read and enjoy these Vintage Amateur Radio articles going forward. As always, please let me know your comments and suggestions. W9MXQ@TWC.com

W9MXQ

We all know that Gary, W9XT, has been experimenting in the VLF Frequencies using the latest FCC frequency allocations. Here is Gary preparing for a contest in the SuperVLF allocaion being proposed as this Newsletter goes to press.

Note the wires progressing from his ears to a direct feed from a VHF HT in his shirt pocket so he can monitor the ORC 2M Repeater at the same time.

Ozaukee Radio Club Minutes of Membership Meeting. 05/10/2023

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 7:29 PM, with actual members attending, a go-around was conducted. Zoom attendees were also in attendance and were also introduced. ORC is in need of members to help in several areas, including technical committee, meeting programs manager, auctioneer and as 2nd VP.

Program:

Pat W9JI and Bill W9MXQ jointly presented a program on the early days of Collins Radio, with an emphasis on some of the pre-W.W. II transmitters that they produced. Most notable was the advanced features and safety measures introduced in these transmitters, and the design features that were often based on the available vacuum tubes produced in the era. A few specific TX models were shown and discussed. [4A, 45A, 30J, 30K, and others]

50/50 Raffle: This was won by Ken W9GA ; winning an award of $11.50

Scholarship Auction:
Ben KC9TZM [who stepped in as auctioneer] held a short auction; included: cables, meters, lamp, and a 'bell' !!

Committee reports:

[there were no second VP, Tech, and no RPT VP reports.]

1st VP: Jeananne N9VSV is now taking orders for member badges, price now $10, from a new vendor. She is also checking over the embroidered items, like our club shirts. The planned survey is still 'under construction.' Jeananne has given credit to Pat, W9JI for is efforts as programs chairperson.

Treasurer: Gary N9UUR provided reports on the tables. Recent paid bills include Swap-Fest expenses. ORC has also added 3 new members, and Gary will update the roster. The April treasurers' report was accepted; motion by W9JI; 2nd by WB9RQR & carried.

Swapfest: Tom KC9ONY noted that vendor attendance was down, attendance was 270 persons total, with overall revenue coming to $1510.67.

Secretary: W9GA reported that the May 2023 minutes are posted, a motion to accept was made by N9VSV; 2nd by K9QLP & carried.

Scholarship/STEM: W9JI reported that the draft charter is almost ready, needs final editing.

OLD business: W9JI, as recent president, presented several 'presidents' awards for 2022:

W9MXQ – Newsletter
KC9FZK – Servicing the SK Memorials
W9IPR – "Lifetime Achievement Award"
WB9RQR – Recycling Computers and Longtime Column Writer.
KC9ONY – Tech Committee
N9UUR -- Tech Committee
W9DHI -- Tech Committee
AA9W -- "Lifetime Achievement Award"
W9BTN -- Numerous Contributions to the Success of the Ozaukee Radio Club

W9GA called for an on-site FD meeting for Saturday June 3, for upcoming planning of stations.

NEW business: W9IPR thanked the club members for stepping up and helping with the spring SwapFest, K9QLP for help with the use of H.T.s, and for help with transport of the equipment. The scholarship table sold over $1000 of the items brought to the fest.

Adjournment: WB9RQR moved to adjourn, W9MXQ 2nd, motion carried; time end was 9:10 PM. There were 16 in-person attendees, 15 Zoom attendees.

Respectfully submitted,

Kenneth Boston W9GA, Secretary

Upcoming ORC Monthly Meeting Programs

de: Pat Volkmann, W9JI

June – Ken W9GA Field Day
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.

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

June 14, 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. Ken Boston, W9GA
   2023 Field Day Discussion
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
14 June 2023

Program:
Ken Boston, W9GA
ORC Field Day Discussion

7:00 PM – Doors Open

7:15-7:30 PM – Zoom Check-In

7:30 PM – Meeting Begins

NEXT MONTH
Hybrid In-Person/Zoom Meeting
12 July 2023

Program:
Fred Schwierske, W9KEY
Lighthouse Event

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