



The *ORC* Newsletter

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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 XXXIII

July, 2021

Number 7

From the President

de Pat Volkman, W9JI



Another Field Day has come and gone. Judging from the many pictures that have received from ORC members, the club outing was successful. Field Day always presents some challenges, but we overcome them and move forward. It will be interesting to hear the ORC results along with the Field Day stories of the rest of the group at the July meeting.

The Grafton Senior Center has reopened, so we are able to resume in-person meetings. I don't know yet what restrictions, if any, there will be. I expect that we will have a hybrid meeting, using Zoom along with the live meeting. Before starting up at the Center again there a few things in the way of tests and equipment that need to be done. I'm expecting that we can go "live" again by the

September meeting.

We are going to need a few items to run Zoom from the Senior Center, namely a camera and a microphone. There may be some additional equipment which we will figure out as we get into this new venue. We are also going to need a person who is willing to run the equipment, sort of an "AV" person. The AV person will need to set up and run the gear, work the microphone and the camera and run the computer. If you are interested in volunteering for this position, please contact me and we can talk about it.

Club membership has been going great this year, with well over 100 people signed up. Our newest member is Sullivan, KD9TAI. Please say hello and welcome Sullivan into the club. We encourage new members to join the groups.io email reflector but that also applies to all members. The reflector is easy to use and is an important part of communications in the club. If you haven't signed up yet, you can do so by sending an email to ozaukeeradioclub+subscribe@groups.io

Ten meters open all day Saturday and Sunday this past weekend. Worked a number of stateside hams and had some very good signal reports while running less than 20 watts. Very little DX heard but it was fun to be on 10 with lots of other folks.

All of my contacts are confirmed through Logbook of the World these days but I still receive a handful of requests each month for a QSL card. Recently, I received this beautiful fold-out card from Jim, SV1LHZ (next page). This four-page card is more like a brochure than a postcard and is a very nicely-done QSL. Jim was also thoughtful enough to include a return envelope.

See you at the meeting.

Pat Volkman, W9JI



THE COMPUTER CORNER

No. 280: Protecting Against Ransomware

Guest Author: Gregg Lengling, W9DHI w9dhi@att.net

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(This is really good advice from Gregg concerning Windows Defender, which I have noted before is a fine and adequate antivirus package that comes with Windows 10. Here, Gregg gets specific about its ransomware protection, which I did not know about prior to his writing about it in this article. He also outlines how to make sure this ransomware protection is enabled and working. Thanks, Gregg! Stan)

Windows 10 comes with its own antivirus solution called Windows Defender, and it is enabled by default when setting up a new PC. This provides some good basic malware and virus protection. However a lesser known feature is “Ransom Ware” protection, keeping folders secure from being modified or encrypted by nefarious players.

It’s actually called “Controlled Folder Access”. However it is not enabled by default; you have to turn it on. Go to Settings > Update & Security, click on Open Windows Security, click on Virus & threat protection, then scroll down and click on Manage ransomware protection.

The Controlled folder access toggle is set to 'off' by default. Turning it on designates specific folders that only trusted apps have permission to access, and you can add folders beyond the ones that are selected by default. There's also a section to grant specific applications permission to access your protected folders. This is required when the computer is being used for “gaming” as most games require continued access to specific files and folders.

However if you are using another company’s protection program it won’t allow you to turn this feature on because Windows Defender needs to be the primary Virus/Malware program for the feature to be enabled. Other software packages may also have this feature to protect against ransomware, however they are sometimes separate add on features and tend to be pricey.

All in all Microsoft’s Windows Defender is actually a pretty good program. It is among the top 5 virus/malware protection programs listed by PC Magazine and Gamer Magazine. So if you feel you could be exposed to a ransomware attack on your Windows 10 computer, just a few clicks to make sure this feature is enabled and you will be protected – at no additional cost.

Vintage Amateur Radio

de Bill Shadid, W9MXQ



In an earlier article, I discussed the Ten-Tec Corsair and later analog Omni Series. Those included the Corsair, Corsair II, the Omni V, the Omni VI, and the Omni VI Plus radios marketed from about 1982 until 2002. After that, and to this day, Ten-Tec produces the well-respected Omni VII and the very latest Omni VII Plus¹.

Back at a time when the Japanese were producing hybrid radios, American companies, such as Ten-Tec, Drake, Swan, and Heathkit, were producing good quality all solid-state transceivers². The new offering from Ten-Tec in 1978 was the first radio in the long running Omni series – the Omni A 160-10-meter solid state HF Transceiver. These were competitive radios – but perhaps lacked in the physical charm exuded by the more “stereo equipment” looks of the popular Kenwood and Yaesu hybrid Transceivers. These included the Kenwood TS-820S and the Yaesu FT-101E. Here is the model 545 Omni A – as introduced in 1978:



Ten-Tec Omni A HF Transceiver – Model 545

Ten-Tec Wiki Website

The Omni A (the “A” was for “Analog Readout” and was not a reference to this being the first of its kind) was marketed in parallel with the digital frequency readout Omni D HF Transceiver. (A picture of the Omni D appears further along in the article.) The Ten-Tec model numbers for the two radios was different – the Analog Readout Omni A was the model 545 and the Digital Readout Omni D was the model 546.

The Omni A (and Omni D) covered the 160 to 10-meter bands in 500 kHz segments. Four of those segments covered the 10-meter band. There was no transmit coverage of the WARC bands which came along a bit later.

Power input for the Omni A and D was 200 watts with an output on SSB and CW of 85-100 watts, depending on band³.

The Omni A and D were designed with solid-state final amplifiers that required no tuning other than to set frequency of the VFO and peak the receiver sensitivity with the DRIVE control. Early solid-state radios did not yet have broadband front ends and/or low-level driver circuitry and need to be tuned to maximum receive signal to allow for full power transmit and maximum sensitivity.

Below see the Omni D that was merely an Omni A with a digital readout.



Ten-Tec Omni D HF Transceiver – Model 546

RigPix Photo

In comparing these two otherwise identical radios we can see the only difference in the two – aside from the readout. The Omni D has no access to a typical 100 kHz calibrator to use in correcting linearity errors in the mechanical readout used on the Omni A. On the Omni A, note the push-button to the right of the main tuning knob – and that it is absent from the digital readout Omni D, above.

The Omni A and D had an excellent SSB Crystal filter but did not allow for additional CW bandwidth crystal filters. Instead, it has a three-position audio filter system. These can be seen on the SELECTIVITY control that allowed for audio filters 1, 2, and 3 plus a “SB” position for the single sideband crystal filter. These radios had no provision for general coverage or AM (other than to zero beat the carrier in SSB to tune an AM signal). Like most Ten-Tec radios, past and present, these Omni models had excellent QSK available for CW.

The original Omni A and D transceivers could receive on 10 MHz for WWV reception. None of the WARC bands were accommodated as they were not yet available to hams. There was an AUX bandswitch position that was essentially able to be used for any additional coverage within the range of the radio.

An exceptionally good friend of mine in my Illinois days had an original version Omni D⁴. On many occasions I would assist in maintenance of this radio when any issue occurred over the many years my elderly friend owned this fine radio. As far as I know it continues to operate today. It was paired at the time with a Heathkit SB-220 Linear Amplifier and a home brew Quad antenna at about 40 feet – an installation one had to see to be believed!!

About two years after the introduction of the Omni A and Omni D, Ten-Tec did an update of this radio model and introduced the Omni A, Series B, and the Omni D, Series B. Major changes included the addition of a board holding two additional crystal filters – used for optional crystal filters for CW. Also, the rather useless SQUELCH control on the original Omni was replaced by NOTCH filter control – a very handy accessory. The Series B radios had an option to add transmit capability to the 10 MHz (30-meter) band as well as transceive capability on the 24 MHz (12-meter) band.

Here is a picture of the Omni A, Series B, showing a clear view of the analog readout. As explained above on the original Omni A, see the calibrator (CAL) button at the right of the main tuning knob.



Ten-Tec Omni A HF Transceiver – Model 545B

RigPix Photo

The only inconvenience I have noted in this model is the filter switching. It did not allow for separate switching of the audio and crystal filters. One could switch the appropriate (in Ten-Tec's decision) audio filter to complement the closest crystal filter. This issue would have to wait for the final version of the radio for a final, and proper, correction.

The final version of this original Omni series transceiver was the Omni C. The nomenclature changed a bit as the analog version was dropped so the old term "Omni D" seemed to no longer fit. In the original model lineup this new radio would have been called the Omni D, Series C – but it was just shortened to Omni C.

With the Omni C, the band availability was complete with the 30, 17, and 12-meter bands being included and working – and properly marked on the bandswitch. The biggest ergonomic improvement was the convenience of the separate switching of the crystal and audio filters. Now the flexibility of the two kinds of filtering were separately selectable for maximum flexibility.



Ten-Tec Omni C HF Transceiver – Model 546C

RigPix Photo

Although my own experience with this radio was tied to the original Omni D (Model 546) owned by my friend, I can say that these radios were very capable with good filtering and a very pleasing audio sound. This has always been typical of Ten-Tec radios. Although my friend never used it on CW, I ran the rig many times on that mode. As you have perhaps often heard, Ten-Tec was and is a master at providing superior QSK CW performance. Not so well known was the fine SSB performance these radios exhibited. In my humble opinion, SSB performance with Ten-Tec radios seems to be a closely guarded secret!

All the Omni, Omni Series B, and Omni Series C radios had a full complement of accessories to go along with them. Ten-Tec was an early player with a solid-state linear amplifier with the Ten-Tec Model 444 Hercules:



Ten-Tec Model 444 Hercules Linear Amplifier

Ten-Tec Documentation

That is faded picture of the Hercules but the best available that I have found so far. This amplifier provided 1,000 watts input on CW and 1,200 watts input on SSB for an estimated power output of 500 and 600 watts, respectively. Here is a second picture with another view of the radio but with the amplifier sitting atop its matching power supply:



Ten-Tec Model 444 Hercules Linear Amplifier (sitting on top of matching AC Power Supply)

Ten-Tec

There was also a Model 243 Omni Remote Analog VFO. The Remote VFO worked with all three series of the original Omni HF Transceivers. However, it was only available with an analog readout. When engaged, its frequency would show on the digital readout on the host transceiver (if a digital model). The Remote VFO is shown here:



Ten-Tec Model 243 Remote VFO.

Ten-Tec

Ten-Tec was quite focused on radios with CW as the primary mode. That perhaps did not sell products then and it likely would not do so today other than a very few true CW aficionados. (Try to find a rag chew QSO on CW on the bands, today.) What was perhaps unfortunate was that Ten-Tec tended to ignore selling the fine SSB performance present in all their radios. Their transmit audio and receiver bandwidth control were exemplary. And, in many cases it was ahead of their competition. If one adds that omission to the radio's humble appearance (mentioned earlier in this article) and that almost surely limited their sales!

Many of these early Omni radios, the Corsair and Corsair II models⁵, the Omni V, VI, and VI Plus⁵, the now discontinued Orion and Orion II, and onward to today's Omni VII and Omni VII Plus radios still grace many stations operated by serious ham radio operators. These operators run the gamut – from DX operators to those of us that just want to get on the air and talk to someone.

A special thanks to Bob, W9DYQ, for his proof reading and our discussions of vintage radio and a million other topics from BBQ to politics. Bob, and XYL, Deb, KAØPBV, live in the Minneapolis-St. Paul area.

I appreciate that you read my articles. I am always open to questions and comments at my email address, W9MXQ@TWC.com.

Notes:

¹ Reference <http://www.tectec.com> for Ten-Tec's complete line, including the current Omni VII Plus and other items. That site also includes links to documentation on earlier Ten-Tec radios.

² The reference here is to the Drake TR7, the Heathkit SB-104, the Swan SS Series, and the Ten-Tec radios in this article. At the time, there was only Icom, from Japan, who was in the market with an all-solid-state radio, the IC-701. I tried one of these at the time – in my opinion, it did not compete well with the other radios mentioned in this note!

³ The specifications given – unless otherwise noted – come from the Ten-Tec Operating Manual for the mentioned radio.

⁴ That friend was Floyd (Pappy) Sakemiller, W9PRV. Pappy is now a SK. He and his XYL, Ruth, were close family friends in those days.

⁵ The Corsair, Corsair II, Omni V, VI, and VI Plus were the subject of a previous article.

© **W9MXQ**

On The Air!

De Gary Sutcliffe (W9XT)



Another Field Day is in the books, my 51st consecutive participation. While muted compared to past years, it was great to see some normality compared to last year. There were two highlights for me. One was getting to use Vic, WT9Q's Flex 6600. This is the first time I got to play with a Flex other than a brief period at the Flex Radio booth at the Hamvention® in 2019. The SDR technology is amazing.

The other highlight was seeing the excitement of Mark, KD9NOO getting his first exposure to CW contesting. I hope Mark follows through and becomes another CW op in the club.

Six meters has been the focus of several ORC members during this year's Sporadic E (Es) season. There have been a few DX openings to Europe and Africa, some lasting hours. Openings to the Caribbean are reasonably common. I have managed to pick up a few new countries on the band.

Between DX openings, Ken, W9GA, Gary, K9DJT, and I have been chasing new grids for VUCC and the FFMA award. I have talked about the FFMA award before. It requires working every grid that includes land from the lower 48 states, all 488 on 6M. Last year several stations made the grade to increasing the class to 12 since the program was started in 2010. So far, at least nine more have claimed completion.

June was filled with grid rovers operating from rare grids. Some of these operations lasted for as long as two weeks. One spent a week each in two grids in Maine, the two most needed grids in the country. They had big beams and full power and used all sorts of modes, including moon bounce. Others spent a day or so in rare grids before moving to the next. This activity allowed many with only a few needed grids to complete the award. It has been a lot of fun tracking these rovers on their travels and working them as often as conditions allowed.

The Es on 6M will continue through the end of the month, with occasional openings in August. So there is still time to get into the fun. Most of the grid chasing and DX has been on FT8.

The longer days and a bit of increase in sunspots have made some interesting propagation on some of the higher bands late at night. The action has been on 15, 17, and 20M. First, these bands have been staying open very late, at least to midnight local time. The higher bands will close first. I don't know how late 20 stays open, maybe all night on some nights. I didn't stay up any longer.

The second thing is that these bands are often open to many locations at the same time. It has not been uncommon to hear four continents within a short period. As I write this at 10:00 PM in late June, I currently see 17M FT8 decodes from Kazakhstan, Sri Lanka, China, Afghanistan, New Zealand, and a bunch of more common countries all on the screen at the same time.

A little earlier, I was decoding Europe on 15M. When the solar flux is high enough, Europe usually opens after local sunrise and will close an hour or two after sunset in Europe, which is the early afternoon for us. Openings to Europe at night on 15M are rare. Or are they?

One thing to keep in mind is that digital modes let us dig out signals around 10 dB lower than can be copied on CW. This allows us to communicate on bands that would be dead to other modes. In addition, we are discovering a lot about propagation because of the digital modes.

While we are making our contacts, systems like WPSRNet and PSKReporter are recording when stations hear and work each other. Scientists studying the ionosphere are tapping into this data as part of their research. Who would have guessed that just by operating our radios we are aiding science better understand our planet?

The most interesting DXpedition this month is to Svalbard. This is an island way up in the Arctic Circle and is somewhat rare. A group of five Norwegian stations will be operating JW0W from July 21-26. They will concentrate on 30, 40, and 20 meters. The antennas are verticals near saltwater. These antennas are proving to be highly effective, and more and more DXpeditions are using them in favor of conventional towers and Yagis, along with the hassles and expense of shipping and setting them up.

There are a few interesting contests in July. The IARU HF World Championship starts at 7:00 local on Saturday, July 10, and runs for 24 hours. Work everyone. The exchange is a signal report and IARU zone. That is 08 for us, not the one four we use for CQ contests. There are points for working IARU headquarter stations and some other things, so check out the website if you plan to operate it. www.arrl.org/iaru-hf-world-championship

The CQWW VHF contest is July 18-19. This is not as popular as the ARRL VHF contests but still has a good amount of activity. Exchange grid square. This is 6M and 2M only. <https://www.cqww-vhf.com/>

The RTTY NAQP is also on July 18. It starts at 1:00 PM local and runs for 12 hours. The exchange is name and state.

That wraps up July. Enjoy the summer, but don't forget the radio!

Hickok 539C Tube Tester

De Chuck Curran, W9KR



I recently acquired a Hickok 539C Tube Tester, in mid-June, and have been working on it to bring it up to full operational status. As always, I'm having fun and making progress. I failed to take pictures of this unit when received; I just thought of sharing this project after receiving Ben's reminder email about newsletter articles.

Okay, no pictures available as purchased, but below show results of a cabinet refurbishment, using the products found available on-line and shown here. Cabinets from the 50's and 60's commonly used a product called Tolex, a fabric impregnated with vinyl. It was used on suitcases, briefcases, and many other enclosures, including Hickok tube testers. You can still buy it today from Antique Radio Supply in Arizona. The pictures below show a complete multicoat recoat using a product I found, picture shown below. It was applied with no issues and I'm happy with the results. There were several deep cuts and holes, but a presentation on YouTube showed a method of using Super Glue to fix these defects. It worked very well.



This piece of equipment, the Hickok 539C, was described by the seller as faulty. I ended up as the only bidder. I wanted this unit for the last 15 years, and owned a manual for it for at least 14 years!



It turned out that the fault described was simply a misunderstanding by the seller; the fault didn't exist. Being familiar with its operating characteristics, I knew his description wasn't correct, so I made an offer and bought it. I found a few other issues, still resolving last one with a bias circuit, a small issue.

Below shows the unit set up and ready to test my Collins KWM-2 tubes.

I'm very happy with the results!



Vintage Magazine Cover Art

By Pat Volkman, W9JI

Our cover this month, "Alone At Last", is from the July 1926 issue of Radio News. Radio News was Hugo Gernsback publication with "Circulation larger than that of any other radio publication". The picture shows a tearful young woman on her honeymoon sitting next to a young man who is, of course, setting up his radio.

Portable radios were a big item in the 1920s, just as they are today. A radio that would fit in a suitcase was something of a technical marvel at the time. This cover also illustrates the incredible attraction of a technical hobby like ham radio. She should have asked him about his radios before they got married!



"Alone at Last" Radio News, July 1926

Ozaukee Radio Club

June 9, 2021 Meeting Minutes

de Ken Boston W9GA



This ORC meeting was conducted via an online (internet) connection using the ZOOM app. Prior to the meeting start, those members who were able to access the 'waiting room' via phone or computer/webcam were then introduced into the meeting space hosted by Pat W9JI. At that time various audio and video connection issues were addressed for the members before the meeting began.

ORC President Pat W9JI officially initiated the meeting at 7:33 PM. As introductions were recognized when members checked into the meeting, a go-around was not conducted. Pat W9JI will be setting up breakout rooms for the post-meeting, and also recognized Fred W9KEY for his top finish in the rookie category in the WiQP this spring.

Program:

This meeting was devoted to planning issues for the upcoming ARRL Field Day event scheduled to occur on June 26-27, which is the fourth weekend of June. An overview of what Field day is, and means to the hobby was shown with a few slides, and then plans were discussed; such as the use of multiple logging programs [no network], N3FJP update to version 6.6; how to handle the 24 hour setup window [can be broken into segments]; and scheduling issues. Further discussion and questions were then referred to be handled at the end of the meeting in a breakout room.

Committee reports:

Repeater – Tom KC9ONY reports that all systems are OK; some minor remote issues to address in the future. The Tuesday night net sounded good.

Gary N9UUR [treasurer] did not have much activity; some dues were received, paid RPT electric bill, details released to BOD. Ask if you need more info. WB9RQR moved, W9GA seconded, to accept treasurer report; motion carried.

Ken W9GA [secretary] distributed minutes; WB9RQR moved, WT9Q 2nd, motion carried to accept.

Tom W9IPR read a letter from the 2021 recipient of the ORC Scholarship Award [\$2000], who is Nesya Graupe, KD9JNT {family are club members!!} Congrats to one of our own!

OLD business: No old business

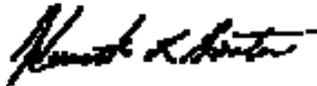
NEW business: No new business

Adjournment:

A total of 29 members (unique callsigns) were recorded. Contact Ken W9GA to obtain the list. W9IPR moved to adjourn, AC9WL 2nd, motion carried. Meeting ended at 8:26 PM.

Following the meeting, breakout rooms for the Field Day discussion were opened.

Respectfully submitted,



Kenneth Boston, W9GA
Secretary

Upcoming ORC Monthly Meeting Programs

July – Pat Volkmann, W9JI – Members' Field Day Reports

August – Tim Duffy K3LR – K3LR Talks About Contesting

September – Open

Creating a Presentation

Almost all of our presenters use Microsoft's PowerPoint to organize and present their information. If you don't have access to or aren't familiar with Power Point there is an alternative. The Open Office package contains Impress, which is similar to PowerPoint. Impress is easy to use and available at no charge. You can check out OpenOffice here: <http://www.openoffice.us.com/>

The monthly program is the highlight of the Ozaukee Radio Club meeting. 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. Contact Pat Volkmann W9JI at orc_pat_w9ji@outlook.com (underscores between the words left of the "@") to discuss your idea for a program.

ORC Meeting Agenda

July 14, 2021

1. 7:15 – 7:30 PM – Check-In and Introductions
2. 7:30 PM Call to Order – President Pat Volkmann (W9JI)
3. Announcements, Bragging Rights, Show & Tell, Upcoming Events, etc.
4. Presentation: Pat W9JI, Members' Field Day Reports
5. President's Update – Pat Volkmann (W9JI)
6. 1st VP Report – Ben Evans (K9UZ)
7. 2nd VP Report – Bill Church (KD9DRQ)
8. Repeater VP Report – Gregg Lengling (W9DHI)
9. Secretary's Report – Ken Boston (W9GA)
10. Treasurer's Report – Gary Bargholz (N9UUR)
11. Committee Reports
12. OLD BUSINESS
13. NEW BUSINESS
14. Adjournment

Meeting Note:

Until the club decides it's safe to hold in-person meetings again, we will be holding the meetings via the Zoom Videoconferencing platform on the same evening and time as we had the in-person meetings. Sign-in info will be emailed by President Pat Volkmann, W9JI via the ORC remailer usually about an hour before the start of the meeting.

Return undeliverable copies to:

The ORC Newsletter

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First Class

Next ORC Meeting via Zoom
July 14, 2021

7:15-7:30 PM – Check-In
7:30 PM – Meeting Begins