



THE HAMSTER

April 2023

Official Monthly Newsletter of the Rochester Amateur Radio Club

*Founded In 1932 * 50+ Years Of ARRL Affiliation*

EDITOR'S NOTES

Rochester Amateur Radio Club meets the second Tuesday of each month at 6:30 PM in the EOC of Rochester Fire Station #2 (lower level) at 2185 Wheelock Drive NE, Rochester, MN

- ♦ **April's meeting program features a presentation by Dan Stroh (N0SPN) on Parks On The Air (POTA)** See the info on **page 3**.
- ♦ **If you can't attend the RARC meeting in person an online ZOOM broadcast is available.** See **page 4** for login information.
- ♦ **Niel (W0VLZ)** contributes a very special article "*Ham Radio—Yesterday & Today*" starting on **page 5**.
- ♦ Check out the special **RARC SkyWarn Storm Spotter** article in **W0STV's ARES section** on **page 8**.
- ♦ **Bob (KE0EXE)** reports on Hamster Hints that will help you with your Amateur Radio hobby. Check out his article beginning on **page 12**.
- ♦ **Contest season is in full swing.** Be sure to check out **Fred's (K4IU)** comprehensive April contesting lineup report and operating proficiency tips beginning on **page 14**.



PRESIDENT'S MESSAGE

Steve (W0STV) - President w0stv@yahoo.com

The RARC has a strong membership, and the club needs to support you with more than once a month meetings and social activities.

With spring here and summer coming soon, it's time to get out, get together and operating radios. The question is what day and time of the week works best for most of you. Do you want to schedule these in advance or do them on a short time notice of a day or two? Is there something you want the club to try? Let us know. Most of these will be come and operate events with the equipment being supplied. I would recommend a signup sheet to better coordinating and scheduling. The use of the [RARC email reflector](#) will be the main way of informing people of the event time, location, and purpose. Let me know your thoughts during nets, at meetings, by the email reflector, and on our Facebook page.

125 Live updates: The cabinet will be done and ready to receive equipment by April 15th, but they need to replace an HVAC unit on the roof using a crane. They are requesting we hold off setting up the roof antennas until after the replacement to avoid any damage. When this will happen has not been determined.

Field Day is June 24th and 25th. We have the location at **Chester Woods Park**, transportation of equipment is tentatively arranged. We have the means this year to use battery with solar power for one or more stations. Imagine not hearing any generators running, something new to try out.

Take the time to turn on that radio when you are able to, and put out that call, if no one replies just listen for that other station that just happens to put out their call sign later, when they are by their radio. Remember timing is everything. Let's get and stay active, the more that play the better is gets.

A reminder that any station activating any analog repeater for any reason needs to ID themselves preferably at the beginning but for sure at the end of their last transmission. This is happening too often to be ignored.

The more you know! 73

Steve-W0STV
RARC president.



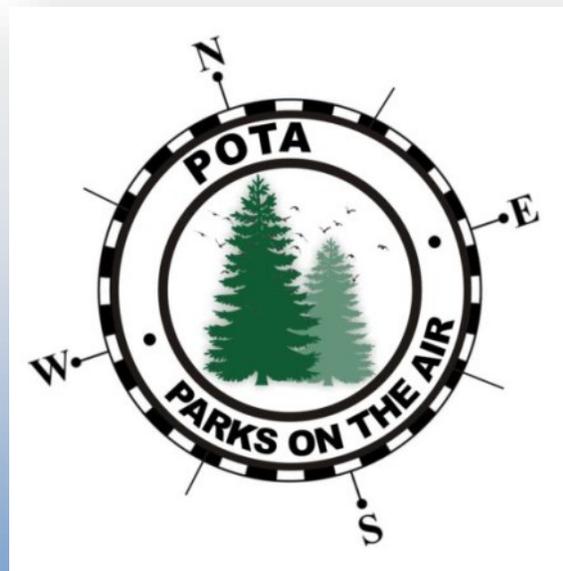
RARC MEETING PROGRAMS

Taylor (WB0RSJ) - Vice President

April 2023 Meeting Program

Parks On The Air (POTA)[®]

Presented by Dan Stroh (N0SPN)





April 2023 RARC ZOOM Online Login Info

OPTIONAL FOR THOSE NOT ABLE TO ATTEND IN-PERSON



Here is the information for the April 11, 2023, 6:30 PM CDT RARC ZOOM monthly club meeting. The ZOOM login info is also posted via the [RARC email reflector](#) prior to the meeting.

- ◆ **When:** April 11, 2023 @ 06:30 PM CDT (US and Canada)
- ◆ **Join Zoom Meeting (click on the link below):**
<https://us06web.zoom.us/j/9876548873?pwd=T0JBWEFzSctBYzhiazA1NTdDb2Rkdz09>
- ◆ **Meeting ID:** 987 654 8873
- ◆ **Passcode:** : #####

- ◆ **For audio only from a mobile phone:**
Call: (312) 626-6799 US (Chicago) **Meeting ID:** 987 654 8873 **Passcode:** #####



Ham Radio

Yesterday & Today

Niel Wiegand (W0VLZ)

When our Tuesday night RARC 10 meter net “meets” a topic of discussion is suggested. One week recently we were asked to comment on our favorite digital mode...which is it and why. Along with others I mentioned CW, the original digital mode. I also highlighted the fact that CW has been around for over a century and that I had old and new examples of CW transmitters in my shack.

On January 1, 1929 new US communications regulations took effect that supported the outcome of the 1927 International Radio Conference. Hams now had only a small percent-age of the HF spectrum. In order to avoid interference their signals had to be harmonic free and clean with little FMing, drift or AC note. The ARRL estimated that only about 10% of the existing ham stations could meet these new standards. Obviously, King Spark, while not explicitly outlawed, could not meet these new standards. Many other rigs failed due to sloppy construction or marginal designs. A lot of pages of QST had to be devoted to helping hams get ready for January 1, 1929. By the early '30s good designs and construction practices had led to several typical transmitter configurations.

I duplicated one of these early '30s designs that I found described in the January 1934 issue of QST. Like many simple transmitters of the time, it is a multiwatt variable frequency oscillator coupled directly to the antenna system. Specifically, it is a **Push-Pull Colpitts Oscillator**. Read more details about this transmitter at <https://w0vlz.blogspot.com/search/label/1934%20Colpitts>





Ham Radio

Yesterday & Today

Niel Wiegand (W0VLZ)

Transmitters like this have personality and lack many of the operating conveniences that we've come to appreciate but they met FCC requirements and could be built on a budget, another common 1930s design requirement.

Putting a transmitter like this on the air was a multistep process. See <https://www.prismnet.com/~nielw/1929Stn/1929Station.htm> as I walk through these steps using a similar transmitter and an early 1930s receiver. This includes an actual QSO with **Mel, KC0P**.

Fast forward 80 years to the early 2010s. Computers are everywhere including inside ham rigs. Rig function can be defined and implemented in software. The **Elecraft KX3** is an example of one of these "software defined radios". What a comparison to the 1934 design that I have sitting across the shack from my KX3: digital frequency readout, transceiver operation, automatic antenna tuner, power on frequency stability, built in SSB, PSK31 and RTTY, battery operation, lightweight, the list goes on...but CW, the original digital mode, is still there.

I enjoy sitting down at my 1934 station to experience our ham radio design roots or, on another day, grabbing my KX3 and heading for operating time in a park. Two rigs, 80 years, one mode: CW.



73,
Niel, W0VLZ



Parks On The Air® (POTA)

Mark (K0GMK) gmkelm@charter.net Hamster Editor

Perhaps you've heard talk on the repeaters or on one of the Nets about [Parks On The Air \(POTA\)](#) You might be interested and think that it could be **fun to operate your rig and antenna remotely in a beautiful outdoor setting.**

In a nutshell it's all about operating in a state or national park, state trail, national monument, historical location or battlefield and making at least 10 QSOs to "activate" the entity. It's as simple as that, but there are a few [rules](#).

Take a look at the [Parks On The Air](#) website, view the [FAQ page](#), the [Help/Getting Started](#) section and perhaps view some of the getting started [videos](#) by seasoned POTA operators. If you are interested in becoming an Activator fill out the [sign-up](#) to become a member and get started.

Did you know that there is a [POTA entity in Rochester?](#)

Take a look at the [map of entities](#) to see the wealth of entities to activate close to Rochester as well.

POTA is a great way to enjoy Ham radio and enjoy the bonus of being outdoors!

Be sure to watch this page for upcoming spring and summer RARC POTA get-togethers.





ARES

AMATEUR RADIO EMERGENCY SERVICE

Steve (WØSTV) w0stv@yahoo.com
Olmsted County ARES-EC

You attended the SkyWarn training in March, and you learned how to be an effective SkyWarn spotter. Let's review how to be an effective SkyWarn spotter communicator. We will discuss the do's and don'ts for SkyWarn from the start to the finish. **A big don't is telling net control you will be able to deploy later.** Only check into the net when you are ready to deploy or home report, "AT" that time, not before. **Gas up your vehicle when you know you may be storm spotting in 12 to 24 hours.** Taking time off while actively in the field storm spotting to gas up is an issue.

When first checking into the net, give your call sign, then wait to be contacted by NCS. Then give your call phonetically, with your general starting location. Example: I am in NW, NE, SE, or SW Rochester, or Olmsted County. Do not give your address, or your area landmarks. We only want a general compass location to know where you are starting from. Indicate if you will be reporting stationary or mobile. Then stand by for instructions. NCS needs to match the radar information to the spotter's location to determine the best way to deploy them, so be patient.

Items to bring with when you storm spot: The most important one is your **Olmsted County spotter grid map.** **The La Crosse NWS requests grid locations with severe weather reports.** Followed by your safety vest, rain gear, pen and paper, binoculars, compass, umbrella, etc.

When reporting your severe weather, give your call sign and wait for NCS to acknowledge you. Then give your call phonetically with your grid location, your report, and the observed compass heading from your location, and the time it happened. **Always use high power transmitter settings.** Remember we use this P.A.C.E. system for SkyWarn events. **The Primary frequency is 147.255. The Alternate frequency is 146.820.** The Contingency is the EchoLink node 420993 through cell phone. For Emergencies call 911. **Never leave a net at any time without notifying and receiving NCS approval. APRS stations are monitored during SkyWarn activation.** Both RF transmitter stations and cellular phone programs like APRS TX (iPhone) and APRSDROID (Android) transmissions. **Remember scanner land is listening, including the TV stations so be professional.**

Steve-WØSTV
Olmsted ARES-EC

The more preparation, the less confusion.



ARES COMMUNITY SERVICE

Steve (WØSTV) w0stv@yahoo.com
Olmsted County ARES-EC

- **Med City Marathon: May 13th**
 - **Rochester Fest parade: June 25th**
 - **Scheels Healthy Human Race: August 26th**
- *Events will updated when more information becomes available **

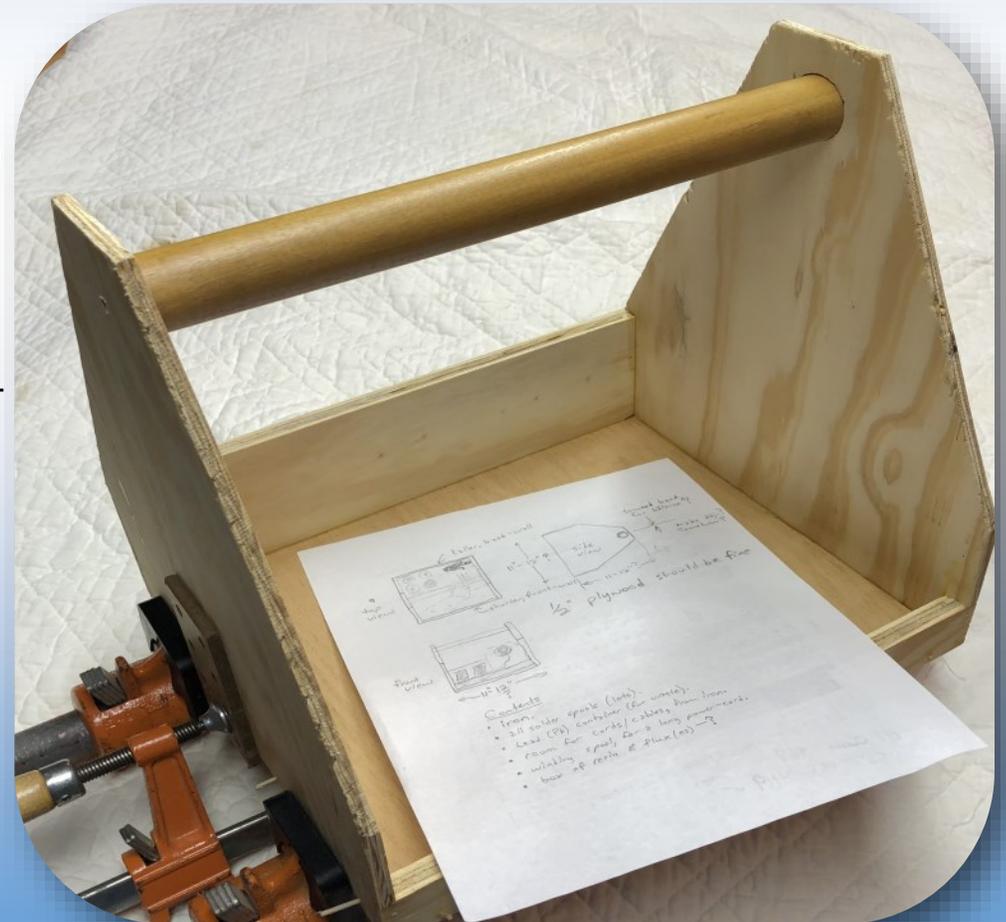


HAMSTER HINTS

Bob (KEØEXE) gettuit@charter.net

I did a lot of soldering as a kid, in my basement workshop. My wise mother made me wash my hands before eating, and I do also remember that "I didn't inhale"... Still, as I begin to consider my Golden Years, and the fact that lead (Pb) accumulates in the body over time, I try to be very safe, nowadays, when I solder.

One way I do this is by employing a small, battery-powered "smoke fan", to suck the smoke in the other direction--away from my face--and to disperse the fumes. Another way is by taking my soldering work outdoors, whenever possible, to the picnic table on the back patio. This is a bit inconvenient (and cold, sometimes!), so I've determined to make the process easier by creating a "soldering tool-kit." It's a specialized, wooden tool-box I am currently building. It has a handle and enough room inside it to accommodate my temperature-controlled iron, all my reels of various sizes of soldering wire, and a container for waste-solder. I might put some cleats on the outside, for winding up the iron's power cord. I think the kit will also be nice for those times when I need to solder something "away from the bench"--such as a joint in an antenna wire, outdoors.





HAMSTER HINTS

Bob (KEØEXE) gettuit@charter.net

Maybe I'm being too careful. One Elmer-friend has joked with me, saying: "A little solder fumes never hurt anyone. Just don't chew on the solder!" He's probably right, but I like to be as safe as possible, if it doesn't cost me too much. I try to frame such experiences (like taking the work outdoors) as "adventures," rather than "inconveniences!"





CONTEST CORNER

Fred (K4IU) k4iu@me.com

April brings an abundance of QSO parties throughout the month. These are always fun and a good way to catch up on those missing states for your ARRL [WAS award](#). I counted at least 10 QSO parties for April.

You can find the dates of each and every one on the [ARRL](#) and [WA7BNM](#) calendars.

But how about the logging, submission and scoring of each one? Many of you use N3FJP's excellent suite of logging software (paid) or N1MM+ (free). So, I thought I would highlight these invaluable tools this month.

[N3FJP's logger](#) has a list of supported QSO parties. If you have paid for Scott's main logger then you have access to these additional, state specific, logging supplements [here](#).

[N1MM+](#) also has an extensive list of supported State QSO parties. [Setup templates](#) are straightforward. Start a QSO Party Log from the drop-down tab >File >New Log in Database. From there just select the state QSO party you are looking for.

wb8bgo.s3db

New log For: QSO Parties (US and Canada)

Log Type: QSOPARTY

Start Date: 2020-05-02 00:00:00

Use Up/Down cursor keys to see long description above.

Total number of contacts in database: 10017

Contest: Associated Files

Category: Show Setup Show Rules

Operator: SINGLE-OP

Band: ALL

Power: HIGH

Mode: SSB+CW

Overlay: N/A

Station: FIXED

Assisted: ASSISTED

Transmitter: ONE

Sent Exchange: MYCOUNTRY?

Operators: N1MM

Soapbox:

Note - the program does not validate categories. Check the contest rules for valid categories.

State for Log Type QSOPARTY: IN7QPNE

Import Section List

Edit Section List

Omit RST: E.g. CQWW: 05 SS: A 56 EMA

Update Ops from Log

OK Help Cancel



CONTEST CORNER

Rookie roundup 16 April If you are a new ham and licensed for three years or less, here's something just for you! In this six-hour event Rookies can contact anybody, while "Old Timers, OTs" make contact with only a "Rookie". The primary objective in this event is to encourage new hams to get on the HF bands and OTs to be good mentors.

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Over the last month I heard several RARC hams report that improving their CW proficiency was a current or future goal. This is surprising because 34 years ago sending and receiving CW was removed as a licensing requirement. Beginning on February 14, 1991, demonstration of proficiency in Morse code telegraphy was removed from the Technician license requirements by the FCC. Despite dire predictions, the hobby did not die! In fact, the quality of new licensees increased and the use of the CW mode remains popular.

Improving proficiency in CW transmission requires practice and dedication. Here are some ways a ham radio operator can improve their CW skills:

- **Regular Practice:** Consistent practice is important to improving CW proficiency. Try to allocate some time every day for CW practice. Start with a comfortable speed and gradually increase the speed as you get better. Regular practice will help build muscle memory and improve speed and accuracy.
- **Use a Keyer:** A CW keyer is a device that generates CW signals from a computer or electronic device. Using a keyer allows you to focus on listening and improving your copy skills without worrying about sending.
- **Join a CW Club:** Joining a CW club or group like [CW ops](#), [Long Island CW Club](#) provides an opportunity to practice and interact with other operators. Both of the above offer training and mentoring programs to help new operators improve their skills.
- **Attend CW Training Sessions:** Many ham radio conventions offer CW training sessions. These sessions provide an opportunity to learn from experienced operators and improve your CW proficiency.



CONTEST CORNER

- **Participate in CW Contests:** CW contests provide an opportunity to practice copying code under pressure. Contests also provide an opportunity to work on increasing your speed. Many hams use CW tools like [CWget](#) to help when they are starting out.
- **Learn from Mistakes:** Recording and listening to your own CW transmissions can help you identify areas for improvement. Analyze your mistakes and work on improving those areas.
- **Read CW Articles and Books:** There are many articles and books available on CW operating. Reading about different techniques and strategies can help you improve your CW proficiency.

Overall, improving CW proficiency requires consistent practice, dedication, and a willingness to learn from mistakes. By implementing these tips, you can work towards improving your CW skills and becoming a proficient CW operator and have fun in the process.

73 for now Fred (K4IU)



JM **ROCKET** RADIO CLUB

Melissa (KE0WNH) - Mentor melissa.ke0wnh@gmail.com



**Melissa with Astronaut
Fred Haise**



Mel (KCOP) Rover





JM **ROCKET** RADIO CLUB

Melissa (KE0WNH) - Mentor melissa.ke0wnh@gmail.com





125 LIVE RADIO PROJECT

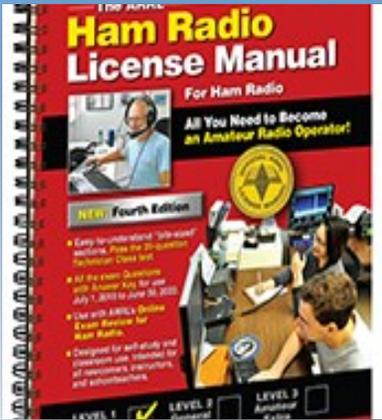
Dave Naatz (KOVH) dчнаatz@gmail.com

Steve (WOSTV) reports that the radio cabinet is nearly completed and radio equipment will be installed when we are notified of its completion on or about April 15th. The HVAC unit on the building roof is going to be replaced and we have been asked to delay installing antennas until that is completed. The installation of the HVAC unit is a big project and will require a crane to move the equipment. When completed we will notify club members via our [RARC groups.io reflector](#) of a date for help for antenna installation. Coax has been run from the roof via conduit to the area where the radio cabinet will be located.



EDUCATION

Dave (KØVH) dcnaatz@gmail.com



- **Education:** A local church group (20 individuals) wants an overview "what is amateur radio" which KØVH can do unless there is other interest.
- Check out the **YouTube videos** for **new license training** from [ARRL](#) and [Dave Casler \(KE0OG\)](#) There are a LOT of videos, but we do have something to point new hams at along with the License Manual. <https://learn.arrl.org/courses/?pathPage=%2Farrl%2Fcourses>

73 **Dave Naatz** (KØVH)



TECHNICAL COMMITTEE

Eric (KF0S) - kf0s@yahoo.com

Tech Committee Meeting Notes - 3/13/23

Attendees: Eric, Mark, Steve, Taylor, Eric B, George, Dave N, John D

443.85 D-Star repeater:

- David, N3ZUK, and Taylor, WB0RSJ, both volunteered to help.
- We were pointed to a YouTube video on setting up the Icom repeater and gateway server. If anyone wants a link, let me know (if it wasn't on groups.io). After watching the video, I understand how the gateway server is used with the repeater and the complexity of getting it setup.
- Brian recommended that we scratch install the gateway server (CentOS 7) getting it back to better defaults.
- I am working with John, N0HZN, to get the gateway server from Mayo. We failed to get to the site on 3/10 (badge reader issues). Will try again this weekend or hopefully Monday.
- *I did get the computer from John.*
- Need to confirm what add-on software is needed for connecting to XREF reflectors: g2_link add on as I Googled can be used and should be compatible with the g3 gateway software. Also, what can we install to make this somewhat remotely maintainable (vnc server?) Can we also control the repeater with software from the gateway server?
- Hoping that the router has ports open as needed. Hey, it worked once, but I'm not sure what was wrong last summer.
- *It was also recommended to talk with Erik Westgard with MN ARES to see if they had any recommendations. They would provide us a Raspberry Pi with the software to act as the gateway server, however the repeater will have a timeout fallback to the MN ARES, XLX632A, reflector. Talking with various individuals, the consensus is we want to put the repeater back on the 30C reflector and use our own hardware.*



TECHNICAL COMMITTEE

Eric (KF0S) kf0s@yahoo.com

- There was some discussion if we should use a Raspberry Pi and Pi-Star or other software instead of the Icom software. The Icom software does use CentOS7 for an OS which goes out of service in June 2024. There are rumblings of a beta of the Icom software with a newer OS, but didn't find anything concrete. I did not find anyone who had good instructions on setting up the software on a Raspberry Pi, and to save time/education/trips to Mayo to verify things, it was decided to stay with the Icom gateway server software.
- I also talked with John Scott and Robert Andrews and we want to make sure there is a solid state drive in the gateway server. I need to open it up and see what's there.
- We will put the repeater back on toe 30C reflector after the install.

147.255 repeater:

- Steve or John will check if any maintenance has been done, or are we just lucky it's working again.
- Steve reports that no service was done.

146.820 repeater:

- No known issues. I have asked John Scott if he would like to transfer admin items (like updating the time, etc) to someone else. Or at least make sure that there is some documentation if someone needs to take this over.

146.625 Fusion repeater:

- No known issues.

Mayo repeaters and access:

- The issues of late have been getting data for the computers as well as getting access to them.



TECHNICAL COMMITTEE

Eric (KF0S) kf0s@yahoo.com

- I have emailed John and BJ about their desires with the Mayo repeaters and getting us access to them. I did ask if they know anyone they can point us to if they would like to step down. BJ has yet to respond, but I did talk with John (and getting access through him for the D-Star update). John is likely out from a repeater maintenance standpoint, he doesn't have anything digital, but is getting me up there right now.
- Taylor, WB0RSJ, is also getting access to the repeaters in Mayo so we have another person to fall back on.

Rochester EOC facility and computers:

- We need more learning on the Crestron system.
- Ryan is checking which outlets are generator connected.
- John Dahlin has requested a UPS and provided a prioritized list of requirements for the EOC and trailer. Not sure how much money we may receive, but it is not a big pot. At this point we are not sure of the UPS.
- #1 priority for the trailer is batteries. Steve to work with Ryan.

125 Live:

- Antennas assembled on saw horses.
- Two runs of coax have been run. Some excess on the roof to cover for elevation of antennas.
- Steve checked with Tony on the cabinet and it is still being worked. Cabinet location has been cleaned up. April planned for antenna work (maybe a Saturday).

APRS iGate:

- Steve is now running an one-way iGate: radio->internet only. Will digipeat the packet if it not heard from one of the other local digipeaters (fill in). Messaging is two-way.



TECHNICAL COMMITTEE

Eric (KF0S) kf0s@yahoo.com

Other Items:

- DJI Phantom 3 Professional Drone: Sold for \$430.81.
- Cans: I believe we still have two sets of cans at the 82 site we can keep for backup or sell. Steve to work with selling these cans, possibly with Amconn. Maybe John would like a set for his repeater.
- Website: Nothing new. Pat has made some changes and looking for feedback. See groups.io.

Next Technical Committee Meeting tentatively scheduled on ZOOM Monday, April 10th at 6:30 PM CDT



RARC BUY OR SELL



I'm **looking for a Heathkit DX35 or 40** to go with it. Do any of you have one squirreled away some where? If so, please email me at the address below.

Niel (W0VLZ) - nielwiegand@aggienetwork.com



For Sale: KB9VBR - Copper J-Pole for 2 meters. Well made-heavy duty. Never mounted or used. Can't use it with the mount I have on the house currently. \$40 Taylor (WB0RSJ) - tbbauman@gmail.com



FT-991A ALL-BAND, MULTIMODE PORTABLE TRANSCEIVER The FT-991A is the next generation in all mode, all band MF/HF/VHF/UHF transceiver with C4FM (System Fusion) Digital capability. The FT-991A includes multi-mode operation on CW, AM, FM, SSB, and Digital Modes (Packet, PSK31, RTTY and C4FM), with 100 Watts of HF/50mhz Capability (50 Watts VHF/UHF). This transceiver is owned by a ham radio friend of mine. Please contact me directly. Price: \$975.00

Bob Dubke (K0SIR) red@bobdubke.com (507) 398-5964

If you have any Ham related items that you want to sell or are looking for locally, email the Hamster at RARC Buy or Sell or Trade.



WEEKLY NETS

- ◆ **Monday 8 p.m. Elmer's Net** 146.820 repeater (PL Tone 100)
- ◆ **Tuesday 7 p.m.** (except on Club Meeting Nights) **RARC 10 Meter Net** meets on 28.325 Mhz. USB. The Net is cancelled without notice if lightning in the area or SkyWarn activation.
- ◆ **Thursday 6:30 p.m.** 146.820 Repeater. The first Net of each month is a voice net, and it's the **SE MN District ARES 2 Meter Digital Net**. The other weeks, it is an informal digital net, using the digital protocol announced for the week on the Net and NBEMS.

Most of us use [FLDIGI](#) and the rest of the [NBEMS](#) suite of programs, all of which are free. MT63 is a very forgiving mode. You can do MT63 on VHF without a soundcard modem - 'acoustic coupling' works fine. meaning you can hold your HT up to the mic on your computer and copy it very well and do the reverse to transmit.

- ◆ **Thursday 8 p.m. ARES 80 Meter HF Digital Net**, 3583.5 kHz, Olivia 8/500
- ◆ **Daily M-F about 11:30 a.m.** - Repeater Of The Week - **Very Informal Morning Net** - If you show up and there is no net control, become one! The object of this net is to encourage more on-air activity.
- ◆ **Saturday 8:30 p.m. Iowa D-Star Net** on D-Star Reflector XLS632A
- ◆ **Sunday 7:30 p.m. Minnesota D-Star Net** on D-Star Reflector XLS632A
- ◆ **Sunday 8:30 p.m. Dodge County ARES Net** on the 146.820 (PL Tone 100) Repeater at 8:30 p.m.
- ◆ **Sunday 9:00 p.m. RARC/ARES Net:** 147.255 repeater (PL Tone 100) Odd numbered Sundays
146.820 repeater (PL Tone 100) Even Numbered Sundays



- ♦ **Are you a member of the [ARRL](#)?**
- ♦ **Are you new to Ham Radio?**
- ♦ **Have you been licensed for a while but not active?**
- ♦ **Are you active but never explored the [ARRL](#)?**

RARC has been an ARRL affiliated club for the past 25+ years. RARC wants all members to know about the benefit of being a member of the ARRL and how the ARRL promotes amateur radio and represents and supports Hams throughout the year.

Here are two links you can explore to see what the [ARRL](#) offers Hams. Take a look:

- ♦ **[ARRL Benefits](#)**
- ♦ **[The Value of ARRL Membership](#)**

