



THE HAMSTER

February 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

- ♦ **February's meeting program features a look back at Amateur Radios assistance during the July 1978 Rochester Flood.** See all the details on **page 3**.
- ♦ **Niel (W0VLZ)** is a **guest columnist** this month reporting on the **ARRL's "Straight Key Night"** and **CW rigs** beginning on **page 8**.
- ♦ **Melissa (KE0WNH)** reports on the activities of the **Rochester JM Rocket Radio Club** beginning on **page 6**.
- ♦ **Bob (KE0EXE)** reports on Hamster Hints that will help you with your Amateur Radio hobby. Check out his article beginning on **page 10**.
- ♦ **Contest season is in full swing.** Be sure to check out **Fred's (K4IU)** comprehensive February contesting lineup report and operating hints beginning on **page 14**.
- ♦ **Check out the RARC Buy & Sell items on page 12.** If you have Ham radio related items that you would like to sell, buy or trade, send your ad to [RARC Buy & Sell](#) and we'll get it in the next issue - all for free!



PRESIDENT'S MESSAGE

Steve (W0STV) - President w0stv@yahoo.com

The **RARC Holiday Party** started at 6 pm at **Charlies Eatery And Bar**, with 29 people attending. The food and service were great, the room was large for our use. We visited and drew multiple prizes until 8:15 PM.

We have **moved our RARC last Thursday of the month social to Charlies Eatery And Bar**. The food is reasonably priced, and the menu was a wide variety of choices.

We need **members to please pay their 2023 RARC dues ASAP** to support our repeaters, activities and general expenses.

You can pay your dues in several ways: You may **mail a check**, pay with your **credit card**, or use **PayPal** or **pay in person at the RARC monthly meeting**. Go to <https://www.rarchams.org/wp/> for club due's payment, RARC information. to follow upcoming activities and to sign up for the RARC groups io email to stay in touch with each other.

The February meeting will establish committee leaders and the general direction of the RARC for 2023. Please plan to attend either in person or by using ZOOM on the internet on February 14th.

If you need information or help to connect with the RARC, please contact me at 254-3993.



Rochester EOC (Fire Station #2)

MEETING PROGRAMS

Taylor (WB0RSJ) - Vice President

"July 6th, 1978 Rochester, MN Flood. Amateur Radio to the rescue!"

RARC monthly meeting at Rochester EOC at 6:30 PM, Tuesday, February 14, 2023



KTTC Television



Apache Mall



February 2023 RARC Online Meeting Info

OPTIONAL FOR THOSE NOT ABLE TO ATTEND IN-PERSON



Here is the information for the February 14, 2023, 6:30 PM CST RARC ZOOM monthly club meeting. The ZOOM login info is also posted via the [RARC email reflector](#) prior to the meeting.

- ♦ **When:** February 14, 2023 @ 06:30 PM CST (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:** #####

ARES

AMATEUR RADIO EMERGENCY SERVICE

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



February ARES meetings and activities will be posted on the [RARC groups.io reflector](https://groups.io/g/RARC) at a later date.





JM **ROCKET** RADIO CLUB

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

The JM Rocket Radio Club is continuing small but steady. Students are learning how to solder, and in the photo attached : remove solder. I chuckled at the surgical precision these two young ladies were applying to heat and "suck" the badly soldered chip. I have ordered some solder wick so they can try the other method to remove solder when errors are made (or repairs are being done). There is a new young man who keeps saying things like "this is SO COOL!" and "In my computer class, we are learning how to program, it's really neat to be able to actually make something". He has an engineer's heart is so excited. When he has free time during his physics class, he's in the back of the room working on his FM radio receiver.

This month, on February 14th, having completed the volunteer application for RPS, **Mel (KCOP/Rover)** is coming to our club meeting after school with his radio and antenna to help the students get on the air to make contacts as part of the **biannual ARRL School Club Roundup** (<http://www.arrl.org/school-club-roundup>) The students are excited about that and on Jan 31st are designing small posters to hang around the school to advertise for more participation on the event.

(Continued on next page)





JM **ROCKET** RADIO CLUB

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

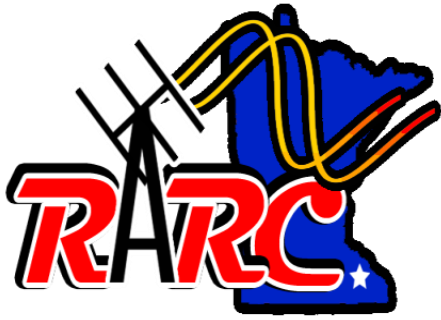
They are almost done with their first radios, so we will go back to **making the handheld directional Yagi's for fox hunting** now that they can do some **basic soldering**. It's a slow process as I see them for about an hour and with set up/clean up time and fun side discussions following topics of interest, they aren't getting finished quickly.

I had my Yaesu 991 with Compactenna-7 set up in the classroom last year but had taken it home for summer. **Now I need to find a radio to replace it here in the school for more frequent use.** The club had loaned us a radio which is now being used at 125 Live. In the meantime, the students are using my Yaesu HT's and are practicing also with some Baofengs set to receive only that **Collin (AA0CN)** had brought in for us to use.

That's all for now!

Melissa (KE0WNH)





RARC GUEST COLUMN

Niel (W0VLZ)

This year I operated in ARRL's "Straight Key Night" (see <https://www.arrl.org/straight-key-night>).

From the ARRL website: "This 24-hour event is not a contest; rather it is a day dedicated to celebrating our CW heritage. Participants are encouraged to get on the air and simply make enjoyable, conversational CW QSOs. The use of straight keys or bugs to send CW is preferred. There are no points scored and all who participate are winners."

Most are familiar with straight keys but how about bugs or semiautomatic keys? This is the sort of key encouraged for Straight Key Night operating. **Pictured is my EF Johnson Speed-X bug.** It was made not far from here in Waseca, MN. Bugs have been around for over a century. The horizontal mechanical pendulum makes a string of dits. Dahs are created manually, one at a time. Bugs were the solution to "Telegraphers Elbow", basically Carpal Tunnel Syndrome brought on by many hours of banging away on a hand/straight telegraph key.



ARRL's SKN description says nothing about the rig used but most HF transceivers have a place to plug in a straight key or bug. Almost any HF rig will work. In my case I used a couple of my vintage stations from around 1960.

I found SKN itself to be fairly laid back. There was no feeling that a QSO had to be wrapped up in the shortest time possible so that the QSO count could be driven higher. It was sort of a ham radio un-contest. Depending on how competitive you are this can be either a good or bad thing. During SKN I made a total of only four contacts including stations in Ontario, Pennsylvania, Michigan and St Paul. Mostly we "talked" about our equipment or the weather. This certainly won't win any awards but it was a nice chance to practice my CW without being under a lot of pressure to get it right the first time.



I plan to participate in SKN again next year and to have a few more SKN style contacts between now and then.

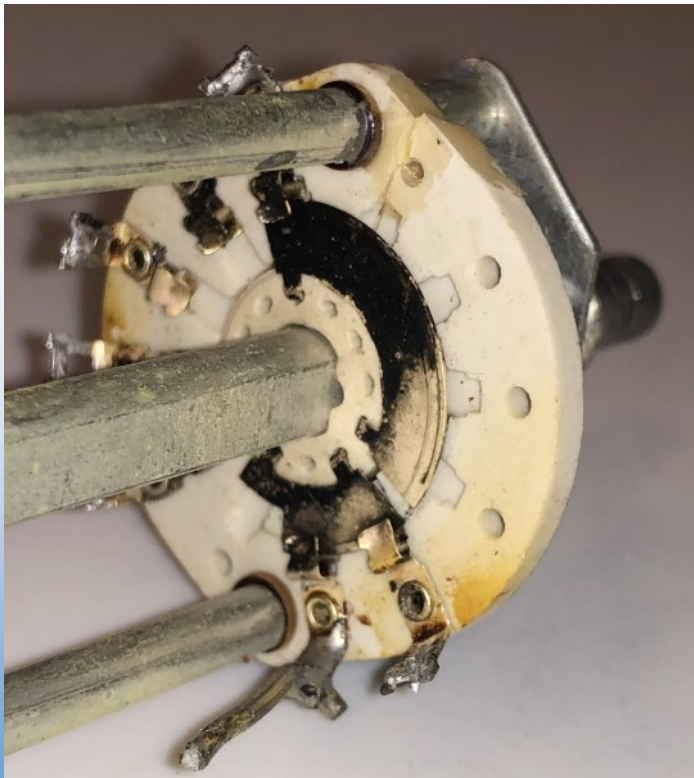
Niel – W0VLZ



HAMSTER HINTS

Bob (KEØEXE) gettuit@charter.net

For some projects, we must make special tools. Recently, I began restoring a **vintage Heathkit DX-40 HF transmitter**. Inside it, I discovered a broken, ceramic plate in the "operation" switch. It had been glued together by a previous owner, in "band-aid" fashion--not a robust fix. At least one contact also needed replacing, due to arcing. To begin repairing the switch, I first visited **Niel (WØVLZ)**, who dug up several vintage switches having the same type of ceramic plates (unbroken).





HAMSTER HINTS

Bob (KEØEXE) gettuit@charter.net

After disassembling the switch, separating the broken pieces, and cleaning or substituting the blackened hub-contacts, I also removed an outer, ceramic plate from a similar, sacrificial switch. I added a replacement for the one damaged, outer, "pinching-type" contact, which required finding a very tiny bolt, lock-washer, and nut from my stores of such, salvaged treasures.

After cleaning the hub, I inserted it into the "new," outer-plate. The best way to do this was to remove the hub's contacts, slide the contacts through the outer, pinching-contacts, carefully add the hub again, and reform the contact ears, to re-grip the hub. Reattaching the slider-contacts to the hub required making a special anvil and a two-piece "ear-spreader" tool. I dug into more stores of parts, and produced a filed-down nail, some kind of bushing that fit over it well, and a metal core from an old curling iron of my XYL's, in addition to a few other bits of hardware and a block of wood. The switch repair was a delicate process, to avoid breaking any pieces. The pinched, then re-spread "ears," on the slider-contacts, did not hold as well as they did originally, so I also had to add some plastic-binder epoxy to the hub and its composite "washer-plate," working it into the tiny holes around the ears, using a round toothpick. (I used an electric drill and a 1/8-inch dowel "bit" to mix the 15-minute epoxy, fast and well.)

The final result was a strong, inner assembly and a very satisfactory, repaired rotary switch. You can see both sides of the repaired switch in the photos, along with the anvil and the spreader. As a part of the transmitter rebuild, I will be adding a snubber or relay circuit, at the critical points, to avoid obliterating the contacts again, as this is a known flaw in the DX-40! Perhaps that will be in a later Hamster Hints. Happy switching!

(More photos of project on next page)



HAMSTER HINTS

Bob (KEØEXE) gettuit@charter.net





HAMSTER HINTS

Bob (KEØEXE) gettuit@charter.net





CONTEST CORNER

Fred (K4IU) k4iu@me.com

Wow! Today the SFI was 212. We haven't seen sunspots like this in a long time. What's going on? To help us understand here's a video Glenn Johnson, WØGJ, sent along with an update on Cycle 25 that you can see [here](#). Openings on 6 and 10 meters should be on everyone's radar.

Although February is a short month there is no shortage of contests. There will be something for everyone from RTTY to SSB.

Here is just some of the fun for this month:

- **February 4: [Minnesota QSO Party](#)** 1400-2400Z This is **our** contest. MN stations work everyone; all other W/VE & DX work MN stations. You can work stations once per band and mode. MN mobiles and rovers can be worked once per band and mode from each county, and MN mobiles and rovers may work stations once per band and mode from each county. There are plaques and certificates for category winners. Be sure to go to the web page for resources and up-to-date information. NØSPN is already fired up and ready to Rover!
- **February 11-12: [CQ WPX RTTY](#)** If you enjoyed the RTTY round up last month you'll like this one too. But you may have to up your game and make sure those logging programs are working with the radios. Maybe some crowd sourced help in setting up the menus and interfaces would be in order for the RARC hams.



- **February 18-19:** [ARRL DX CW](#) With sunspot numbers above 210 there should be some great openings on the higher bands for this premier, ARRL sponsored contest.
- **February 24-26:** [CQ 160 SSB](#) This is the phone version of the January contest.
- **February 25-26:** [NAQP RTTY](#) Its another chance to fire up those RTTY machines and try to work States/Countries and provinces in North America. You can operate 10 of the 12 hours.

There are a few more QSO parties as well as some digital events to round out the short, but exciting, month of February. You can see it all on the [DL2NBY](#) and [WA7BNM](#) calendars.

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If you are using N1MM for contesting, there are some logging aids that can enhance the performance of testers whether you are search and pouncing or running. These features may be well known to seasoned testers but not to those just starting out. Be aware that these aids will put you into the assisted category for most contests.

Use of the band map:

<https://n1mmwp.hamdocs.com/manual-windows/bandmap-window/>

Use of spotting assistance:

<https://n1mmwp.hamdocs.com/manual-windows/telnet-window/>

73 for now

Fred K4IU



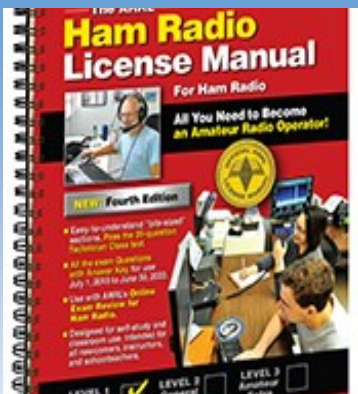
125 LIVE RADIO PROJECT

Dave Naatz (K0VH) dcnaatz@gmail.com

- **Steve (W0STV)** talked to **Tony from 125Live** there about getting the two runs of coax pulled soon from the roof to the technology room where we'll eventually have a lockable cabinet for our radios. We'll take extra rigs from the EOC and hope to be operational in early spring 2023. After that we'll develop a plan to present ham radio at 125Live both to renew some with past ham radio interest and recruit new hams.

Dave Naatz (KØVH)





EDUCATION

Dave (KØVH) dcnaatz@gmail.com

- **John Marshall Rocket Radio Club:** **Melissa (KE0WNH)** reports there are two girls very interested in ham radio and one is studying for her license. Two boys have joined for a bit too.
- **125Live:** **Steve (W0STV)** talked to **Tony from 125Live** there about getting the two runs of coax pulled soon from the roof to the technology room where we'll eventually have a lockable cabinet for our radios. We'll take extra rigs from the EOC and hope to be operational in early spring 2023. After that we'll develop a plan to present ham radio at 125Live both to renew some with past ham radio interest and recruit new hams.
- **Education:** **Bill (KE0RGR)** is mentoring a newly licensed ham. **Eric Bjornson** plans to assist with mentoring too.
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- FOOTNOTE: I just saw this posted for new license training from [ARRL](https://www.arrl.org) 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



D-Star repeater:

- Obtained, programmed and tested.
- Repeater up and running on analog. Will soon be connected to internet reflector.

147.255 repeater:

- Sensitivity and power output are reduced.
- Reported to county. They will wait until 2023 due to budget constraints.

146.82 repeater:

- Battery serviced by W0STV.

EOC computer and laptops:

- Used for 11/12/22 SET event.
- Steve has put labels on switches, headsets.

125Live

- Antenna on roof and stored on saw horses until deployment date set.
- Waiting for 125Live staff to indicated they are ready to pull coax for the station.

Drone Sale

- Progress will be updated at the February RARC meeting.

TECHNICAL COMMITTEE

Eric (KF0S) kf0s@yahoo.com



125 Live:

- VHF antenna procured. Sitting in Steve's garage.
- HF Vertical is in Steve's garage. Long piece still with county.
- Radios at EOC.
- Coax obtained.
- Tony was still out/on crouches at last notice. Likely won't return until. Will hopefully run coax soon.
- *Steve mentioned 125 Live may be hiring some runs and may include our coax.*
- Put antenna together on the roof. Leave horizontal on saw horses.
- Retain a 27" monitor for the station. Run advertising when station isn't in use to draw more attention to radio setup/club.

Other Items:

- Drone sale:
Eric to come up with a proposed sale price. DJI Phantom 3.
\$450-540 on eBay for similar packages.

Possible repeater swap:

- Steve mentioned Brian might have a swap of Motorola Fire Department repeater and cans for a smaller Kenwood repeater and cans. This would work better if we wanted to put in the trailer.

ARES trailer - potentially replace the 2 monitors with new monitors plus a 1.2 kw (or maybe 2 smaller) inverter.



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 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.** 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 RARC D-Star Reflector XLS632A
- ♦ **Sunday 7:30 p.m.** Minnesota D-Star Net on RARC 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](#)?

John (NØHZN) and Fred (K4IU) decided it was time to let other Hams know about the ARRL. Of course, you may think, "it's just another group that wants my money because I'm a Ham." But there is more to it than that, they truly want to grow the hobby.

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

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

The logo for the Rocky Mountain Roller Coaster Riders Club (RARC) is displayed. It features a stylized blue map of Colorado with a yellow roller coaster track winding through it. The letters 'RARC' are prominently shown in a bold, red, italicized font with a black outline. A white star is located in the bottom right corner of the Colorado map.

- ♦ **Online** <http://www.rarchams.org/>
- ♦ **Mail:** RARC , P.O. Box 1, Rochester, MN 55903
- ♦ **Email:** If not a member, [register](#) and a Moderator will respond shortly
- ♦ **Weekly Net:** Sundays at 9:00 PM : 147.255 repeater (PL Tone 100) Odd numbered Sundays
 146.820 repeater (PL Tone 100) Even Numbered Sundays
- ♦ **Facebook:** Rochester Amateur Radio Club

Newsletter articles or questions: Mark (KØGMK) - Editor gmkelm@charter.net