



April 2025

Official Monthly Newsletter of the Rochester Amateur Radio Club





2025 Rochester Amateur Radio Club Officers

President: Pat Hagge (KEOWWG)

Vice President: Dan Stroh (NOSPN)

Treasurer: George Hopkins (N0UM)

Secretary: Collin Howe (AA0CN)

Member-at-large: Steve Wiebke (W0STV)

Trustee: Steve Wiebke (W0STV)

The Hamster is the official monthly newsletter publication of the Rochester (MN) Amateur Radio Club (RARC). The Hamster is distributed monthly via the official RARC <u>groups.io</u> email free to members and non-members and is also available online in the club website: <u>www.rarchams.org</u>.

Rochester (MN) Amateur Radio Club was founded in 1932 and has been an ARRL (Amateur Radio Relay League) Affiliated club for 50+years.

All members are invited to <u>contact the Hamster</u> with comments and/or questions. Additionally, members are encouraged to suggest or submit story ideas or content to the Hamster via the Editor's email link below.

The Hamster has an *outstanding* staff of regular contributors and you are invited to join the team!

G. Mark Kelm (KOGMK) - Editor

This Month In The Hamster

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ARRL Field Day 2025 is slated to be held at the RST EOC June 28th through 29th. If you or a group would like to volunteer to help carry out this important RARC mission please contact Steve Wiebke.

Here is the preliminary 2025 Field Day Plan as outlined by RARC President Pat Hagge:

- There will be no meal/dinner.
- Location @ RST EOC, should be the normal timing.
- 2 stations (1 SSB, 1 CW and perhaps 1 digital)
- Antenna setup is TBD trying to keep it simple so we don't have to rely on too many people (such as a beam/tower would require).
- Signup/station scheduling is TBD indoor station will be daytime only, as long as someone is there
 and is the running the station theme, outdoor station will be in the ARES trailer and will be locked
 at night with a key that is accessible for any overnight ops.

It is evident that our Field Day continues to be scaled down as a result of a lack of volunteers to participate in the event. I recall my first Field Day and how amazed I was with the number of participants, stations, antennas, learning and just how much *FUN* it was. If you as a RARC member want to not see RARC Field Day decrease in importance - then pick the torch and volunteer. As I've elicited previously, the same 5-6 members cannot continue to carry the burden of all activities for a club numbering nearly 100 members. Think about it.

The April 15th RARC meeting will include a special fun training event: homemade CW straight keys, demonstrations and some fun competition led by RARC Vice-President Dan Stroh. It'll be fun!





RARC Needs You!

To Help With Field Day

- Event Coordination
- Operators:

CW

Phone

Digital (FT8 & FT4)

- Help With Set-up & Take-down
- YOTA Operating Assistance
- Demonstrations
- Equipment & Antennas
- Computers & Networking



RARC Training

Dan Stroh (NOSPN) - Vice-President

Homemade CW Straight Key Night

Bring yours for some fun competition *

April 15th 2025 @ 6:30 PM

Presented by: Dan (NOSPN)







Upcoming Training Programs:

- May PSK31 Presented by: Dave (KOVH)
 - June Finalizing Field Day Planning



April 2025 RARC ZOOM Online Login Info

- Optional for those not able to attend in-person -



Below is the **ZOOM** login information for the April 15, 2025, 6:30 PM CDT RARC Meeting

Join Zoom Meeting (click on the link below):

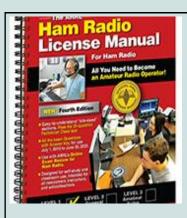
https://us06web.zoom.us/j/9876548873?pwd=T0JBWEFzSCtBYzhiazA1NTdDb2Rkdz09

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**: ######



Education

Dave (KØVH)

The first step needed to really get into Amateur Radio is to get your Amateur Radio License. This license is required in order to transmit on any of the Amateur Radio frequencies – however, listening does not. Listening is only part of the fun, so we encourage you to get your license so you can get the full experience!

Click on the ARRL link below to get your ham radio hobby started:



Getting Licensed - Step by Step



125Live Ham Radio Club



Steve Wiebke (W0STV)



The continuation of this club depends on ALL of the members of Rochester Amateur Radio Club

If you feel that the 125Live Ham Radio Club is an asset to RARC then:

Contact <u>Steve Wiebke</u> It's up to you.

The next meeting of the 125Live Ham Radio Club sponsored by RARC will be April 15th at 125Live in the Technology Learning Center room at 2:00 PM.



ARES

Amateur Radio Emergency Service & Community Service

The best made plans may change when you least expect it. Case in point: the new Olmsted ARES/Skywarn radio room. With the La Crosse NWS prediction that Olmsted County was in a 2 out of 5 severe weather forecast for the week. I visited the weather room a few days earlier to make sure I could turn on the computers and make sure the Pinpoint APRS and the GRlevel-2 radar program were operational, and the radios worked. When I left that day any Skywarn activation would be a net control plug and play operation for the first time. That would not be the case. When Olmsted was put in a storm watch and the EOC Skywarn was activating. I sat down to begin the Skywarn net and all hell happened. Both the computers were turned off by the IT people. This required removing panels and climbing under the desks to turn them on. The monitors lite up ok, now just add my password. Now my password is not acknowledged. The EOC calls their IT people, who inform us all passwords required replacement. We got my password updated; now the monitors are showing the desktop, but the icons are different, there was no Pinpoint APRS program to be found anywhere, and GRlevel radar is not operating.

This is why we learn to be flexible, and redundant, to fix what you can. This is how it played out behind the scenes: I asked the EOC director to call IT to unlock my password updated, which he did. During that time, I took a roll call for spotters to be on standby. To substitute for no APRS computer program I went to my phone app to cover that requirement. I got the radar up in basic mode, but the fonts were very small, but we had the basic tools for a Skywarn net. We did not need to dispatch storm spotters. The takeaway from this is never assume what worked yesterday will work today. This is why we have Sunday and Wednesday ARES radio nets on the 146.820 and 147.255 repeaters. To make sure your equipment works as needed.

Olmsted ARES Mission Statement:

To be so effective that you are able to help others.



ARES

Amateur Radio Emergency Service & Community Service

Olmsted storm spotter training will be on Tuesday April 8th starting at 6:30PM at 1517 16th St SW at the Best Western Hotel in Rochester (West of Apache Mall). Enter from the south side for the event center. We will take RSVPs for dinner via the RARC groups.io email when sent out at the Wild Wood Bar and Grill starting at 5:00PM - enter from the north side of the Best Western Hotel building. You may call me at (507) 254-3993 to RSVP if you are not able to email.

NOTE: The **April RARC meeting** has been moved from April 8th to April 15th, at the same time, and same place. The **ARES monthly meeting** will be on April 12th at 9:00 AM at the Rochester EOC room.

Steve Wiebke-W0STV
Olmsted/Rochester ARES-EC

The more preparation, the less confusion.

Olmsted ARES Mission Statement:

To be so effective that you are able to help others.



2025 NWS SKYWARN Spotter Training



WARNING!!! THIS IS A RADIO ACTIVE AREA!

Contest Corner

Fred (K4IU)

The contesting events in April highlight a lot of popular QSO parties. There are 2 or 3 almost every weekend so you can pick and choose your favorites. Some RARC hams will activate some rare counties during the North Dakota QSO party on April 12-13. Mark your calendars and check the rules on the websites listed:

Louisiana QSO Party

Dates: April 5-6, 2025

Website: Louisiana QSO Party

Mississippi QSO Party

Dates: April 5-6, 2025

Website: Mississippi QSO Party

Missouri QSO Party

Dates: April 5-6, 2025

Website: Missouri QSO Party

New Mexico QSO Party

Dates: April 12-13, 2025

Website: New Mexico QSO Party





Fred (K4IU)

North Dakota QSO Party

Dates: April 12-13, 2025

Website: North Dakota QSO Party

Georgia QSO Party

Dates: April 12-13, 2025

Website: Georgia QSO Party

Nebraska QSO Party

Dates: April 19-20, 2025

Website: Nebraska QSO Party

Ontario QSO Party

Dates: April 19-20, 2025 **Website:** Ontario QSO Party

Michigan QSO Party

Dates: April 19-20, 2025 **Website:** Michigan QSO Party





Fred (K4IU)

Quebec QSO Party

Dates: April 20, 2025

Website: Quebec QSO Party

Florida QSO Party

Dates: April 26-27, 2025 **Website:** Florida OSO Party



More details and resources can be found on the <u>State QSO Website</u>. The <u>WA7BNM calendar</u> lists some other fun operating activities!

At the March RARC meeting Mel, KCØP/r was scheduled to present a primer on correlating aurora predictions from solar indices. I hope he can do this at a future meeting. But in the meantime, here is a brief review.

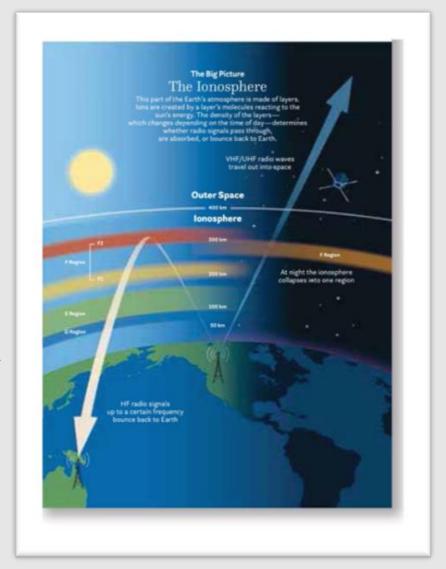
There are several web based propagation tools that can complement your station, antennas and operating skills by combining technical expertise, strategy, in addition to a touch of luck. **By using solar indices, the Reverse Beacon Network (RBN), VOACAP, solar weather data, and geomagnetic activity insights** you can be in the right place at the right time to put those multipliers from Europe, Africa, South America and Asia in your log.

Here's how: (continued on following page)



Fred (K4IU)

- Solar Indices: Solar indices, such as the Solar Flux Index (SFI) and Kp Index, are critical for predicting propagation conditions. A high SFI indicates better ionospheric conditions for long-distance communication, while a low Kp Index suggests minimal geomagnetic disturbances. Monitoring these indices helps you choose the optimal bands and times for contesting.
- Reverse Beacon Network (RBN): The RBN is a network
 of stations that listen for signals and report their strength
 and location in real-time. By calling "CQ" and checking
 where your signal is being heard, you can identify band
 openings and adjust your strategy to target specific regions
 effectively. If you operate WSJT-x digital modes, then you
 are already familiar with PSK reporter which helps you see
 where and how strong you are being heard.
- VOACAP for Propagation Predictions: VOACAP (Voice of America Coverage Analysis Program) is a powerful tool for HF propagation forecasting. By inputting your location, antenna setup, and target area, VOACAP provides detailed predictions on the best frequencies and times to make contacts, helping you plan your contesting schedule.
- Solar Weather: Solar weather events, such as solar flares and coronal mass ejections, can disrupt radio communications. Keeping an eye on real-time solar weather updates allows you to anticipate potential blackouts or take advantage of enhanced propagation during periods of increased solar activity.





Fred (K4IU)

Accounting for Geomagnetic Activity: Geomagnetic storms can degrade HF propagation, especially on polar paths. By tracking geomagnetic activity levels, you can adjust your operating strategy, such as focusing on lower bands during high geomagnetic activity.

Integrating these tools into your contesting routine will not only not only improve your scores but also give you some insight into the science behind radio propagation. Happy contesting, and may the bands be ever in your favor!

*photo inset on page 14 OTA Nov-Dec 2020 p20

CU on the bands

73 Fred K4IU@me.com



Hamster Hints

Bob (KEOEXE)

This winter, one of my projects was to complete my "poor man's Faraday shield", a container in which I keep a few small, semiconductor-based devices that might be nice to have operational, if my locale ever experiences an EMP (Electromagnetic Pulse) that is strong enough to destroy such things. I suspect that, if it ever happens, I will have much bigger problems to

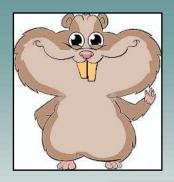
solve (like finding immediate shelter, water, firstaid, etc.), but, "you know," it is nice, psychologically, to feel at least somewhat prepared...

For my Faraday cage, I chose a large, 2-piece, stainless-steel cooking canister (which, in an emergency, also doubles as "a large, 2-piece, stainlesssteel cooking canister"... (;). I probably snatched -up this one a few years ago, for a couple of bucks, at a used-items discount store. I use eight, medium-sized, spring-steel binder clips to keep the lid on, tight. I tested this solution, but found I could still place a call to my cell phone, when it was residing inside the "sealed" canister. Thus, I concluded that "protection was still lacking."

To fix this, I knew I would need to add some type of EMI/RFI ('I' for Interference) gasketing material "Buttoned-up" Faraday Shield--a salvaged, stainless cooking around the entire perimeter of the seal, where the



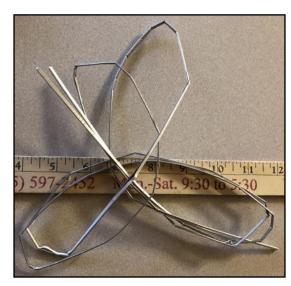
lid meets the canister body. I finally found an appropriate gasket, online, on my free-shipping account, for under \$9. I chose to buy 2 pieces of fairly narrow, adhesive-backed gasket, each 1m long by 3mm x 1mm in cross-section.



Hamster Hints

Bob (KEOEXE)

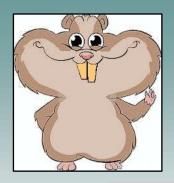
This way, I could run two complete "perimeters" of gasketing around the inner lip of the canister, along the curved, overlap-area, where the can interfaces with its lid. I positioned these two strips 180 degrees "out of phase" with each other, so their end-gaps would be opposite each other on the big pot's lip. Repeating my previous test with the cell phone, I found that leakage of RF energy into the can had been reduced enough so that I could no longer make my cell phone inside it ring when I placed a call to my phone from another phone--neither when using cell-tower nor WiFi channels. (Even using only four clips on the lid was sufficient, but I still use all eight clips, just to be sure.)



The raw, adhesive-backed gasket-strips, as they arrived.



Bottom part of vessel, showing newly-added gasketing material, on lip.



Hamster Hints

Bob (KE0EXE)

There was also a small vent-hole in the lid. From my testing, it turned out to be of no consequence, but I covered-it-over with gasketing material anyway, again "just to be sure." Now I must focus on what to place inside my Faraday-cage container, for use in such an extreme emergency. A paper list of possible candidates seemed like a good place to start. Good planning and forethought, here, I realized, could be just as important as good protection. (It would be sad to have included a flip-phone, for instance, if there are no operational cell towers, although a calculator and a small weighing-scale might prove very useful, for bartering various items.) ...I hope we never see such a day, but Hitler and the Nazis brought the world awfully close to it, just 80 years ago...



Small vent-hole in lid, showing gasket (applied to lid's bottom/inward side)



Rim/lip, showing gap in inner-run of gasketing, positioned "opposite" (i.e., on other side of can)



Rim/lip, showing where the strip's ends meet, to form a gap, in the outer-run of gasketing



Eric (KF0S)

Tech Committee - 3/10/25

Attendees(8): Eric, George, Steve, Taylor, Nate, Dave N, David Iott, Mark Parry Post meeting and RARC meeting comments in italics

Mayo

Work party on 3/6/25.

- Monitors, mice and keyboards placed.
- Some shelves moved in D-STAR cabinet to allow placement and use.

Router

- Decided to keep current router
- Is setup with two NATS
- One is based on 10.0.0.x which was required by the old Icom Generation 2 Gateway Server.
- One is used by Fusion computer 192.168...

Fusion repeater

- Reset to remove the password assigned which no one knew.
- Updated firmware The will be a new VP2430 model soon which will be.



Eric (KF0S)

Fusion computer

- Replaced with new device
- Update Windows 11 settings to allow the WiresX software to work. It would die with an error when trying to write to the device.
- Reconfigured repeater settings to match those of original computer.
- Added remote access software
- Old computer retained in case we need some of the settings.

DSL Router - this was added last summer with the DSL reconfiguration

- Fusion ports were opened at that time
- We needed to add the D-STAR ports here as well

D-STAR computer

- Connected
- Gateway Server software installed. Not totally configured yet.
- First failure here was the port checker failing with no external access to the ports.
- See above where the ports also needed to be added to the DSL router which was added last summer,
- We are still seeing a failure for UDP port 12345 when running the Gateway Server port tester.
- SSH isn't available from the internet. Port timed out before opening in the DSL router. Now seeing access denied. We can SSH from the Fusion computer. I haven't verified if I can SSH via the site router address (I suspect it should work as it worked before the whole fiasco started.
- Once Gateway Server is configured, we need to verify that the database syncs with the D-STAR server.
- Purchase controlled IP power devices so we can shut off repeaters, and maybe computers remotely.



Eric (KF0S)

- Grab old repeater to sell when onsite to install the new computers. David would like to investigate the voice control.
- D-STAR repeater is showing on APRS-fi. This is new. DPRS from users is not.
- More discussion on remote access to computers moving forward.

125 Live

Figure out high SWR when weather warms up.

Control Operator Docs

- Taylor started on this.
- Do we have codes to control the repeater?
- John Scott has them.
- We need a backup copy.
- We are still working on getting multiple people access to the Mayo Site as well as another set of keys to the digipeater site.

Olmsted EOC

- Digital side still needs to be done. Hopefully will continue in March or April.
- HF Head mounted.

Rochester EOC

- Work done on rigs during the ARES meeting on the 2/15.
- New desks for the ARES trailer. Vevor electric adjustable desks. Have a cubby.



Eric (KF0S)

https://www.vevor.com/stand-up-desk-c 11896/vevor-height-adjustable-desk-47-2-x-23-6-electric-dual-monitor-riser-workstation-whole-piece-desk-board-sit-to-stand-3-key-modes-sturdy-dual-metal-frame-180lbs-capacity-for-computer-home-office-p 010651876822

HF rig headphone plug has connection issue. Need to hold plug to side to get both sides of the headphone to work.

Repeater ID discussion

- 10 Mins vs after use.
- W0MXW renewal
- License expires 4/25/25.
- Gil, W0MN, resigned as trustee.
- Steve Wiebke, W0STV, was elected trustee during February RARC meeting.
- Steve will work on getting license renewed, trustee update, and call FRN moved to a new RARC FRN as cur rent FRN is Gil's.
- sent a note to Pat Cahill, as our VEC contact, with a pointer the the ARRL website on renewing a club license and changing a trustee
- Will may need a meeting minutes where that was voted on, as well as other club paperwork.
- Possibly go to Maple Grove/Buffalo Hamfest since we didn't go to LaCrosse. *I believe they sold out before we could reserve tables.*

Webmaster - We seem to be back to one. Need at least 2, maybe 3.



Parks On The Air ® (POTA)

It's Spring POTA Time!



Perhaps you've heard talk on the repeaters or on one of the Nets about <u>Parks On The Air (POTA)</u> 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 <u>Parks On The Air</u> website, view the <u>FAQ page</u>, the <u>Help/Getting Started</u> section and perhaps view some of the getting started <u>videos</u> by seasoned PO-TA operators. If you are interested in becoming an Activator fill out the <u>sign-up</u> to become a member and get started.

Do you know that there is a POTA entity in Rochester?



Weekly Nets

- Monday 8 p.m. Elmers' 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.
- **Wednesday 7 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 use <u>FLDIGI</u> and the rest of the <u>NBEMS</u> 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



Meeting Minutes, February 2025

NOSPN Program

April program; DIY CW keys! April 15th (avoid conflict with Skywarn meeting) Start building them, have fun!

Introductions and Drawing!

Announcements:

- · Wednesday 9AM at Roosters Bar and Grill by Costco
- Grandma's kitchen Sunday 7AM breakfast
- ARES meeting this Saturday
- Skywarn training coming up move meeting? Olmsted Skywarn event is Tuesday April 8th 6:30 16th St. & Broadway (Empire Event Center)
- Advanced Śkywarn, 3/13 and 23th of April (pre-registration needed, online only) Check NWS LaCrosse website.
- Let Dan Stroh know if you have meeting topics! Talk about Meshtastic
- Thursday 13th 3-6pm at Fat Willy's to talk about Meshtastic.

Treasurer's Report NOUM:

Report 2025-Feb

Checking:

Opening Balance: \$10,408.99

Credits:

Dues: \$60.00

PayPal Dues: \$400.00 Equipment Sold: \$294.00

Raffle: Donation: Misc.:



Debits:

RPU \$42.62

Meeting Food

PayPal Charges \$14.37

Field Day:

Picnic

Equipment

Tower Lease

Insurance

Web domain

Postage

Misc.

Total: \$56.99

RARC Checking Balance: \$11,106.00

RARC Savings:

Opening Balance \$1,825.70

Credits:

Interest: \$0.08

RARC Savings Closing Balance: \$1,825.78

RARC Account Balance: \$12,931.78

CD Matures March 2025 \$4,000.00

CD Matures March 2025 \$4,347.36

Will be renewing the CDs for 5months at 4.0%



Technical Committee KF0S:

8 attendees at last night's meeting, check Hamster for full notes.

Work party at Mayo repeater site on the 6th; two computers w. mice/kb/monitors set up.

Decide to keep current router with current Subnet settings.

Couldn't log in to Fusion repeater, was reset and FW update (now current!)

DSTAR repeater now showing up in APRS-FI.

County EOC work ongoing.

Last ARES meeting, we did work on Rochester EOC radios/modems.

Club License renewal, trustee, and FRN change.

Contesting:

• K4IU: End of the month Phone contest is 29th-31st of March. Hamster has additional info.

Training:

Maple Grove; No new classes scheduled, see website & Hamster.

JM Radio Club:

 AA0ME: KC0P had planned to do School Club Roundup – Looking for volunteers! POTA setup? 3:45pm-5pm Wednesdays for JMRC. HF Receivers soldering project! Hot air soldering. (Contact <u>AA3ME@gmail.com</u>)

ARES/Public Service/125Live:

- W0STV:Skywarn April 8th; Wildwood dinner beforehand, approx. 4:30-5PM start. 1.5hrs. Only teaching the basics. Now starting to do every other year for Rochester.
- 125Live antenna having SWR problems, got 2 volunteers to help.
- Buffalo Hamfest, table registration closed, we didn't make it. Several RARC members attending anyway.
- Other Hamfests coming up in the Cities, and Wisconsin. Renew storage for 6 months to store equipment for sale? \$100/6mo. W0STV motions to renew K0AKM seconds, capped at 50% over original rate in case of inflation. Passed.
- ARES Net preamble has been modified and simplified; download new version on RARC website!
- Trusteeship for W0MXW Update on Groups.io as things happen.
- ARES looking at two desks for ARES trailer (adjustable, VEVOR). \$173 each, some assembly



- ARES/SKYWARN information meeting, RARC/ARES focused on our field operations. This Saturday 15th March. APRS/Equipment checks.
- 2 desks for \$175/ea. for ARES trailer. Taking the place of the folding table. W0STV makes motion \$350+tax+ship for desks, up to \$400. Passed!

Old Business:

Field Day, volunteers to help run/setup, email sent. Not doing dinner/food, keeping it simple. Location is City EOC, W0STV confirmed. Zoom meeting in the next few weeks. June 28th is FD weekend. Possibly 2 stations, good to run both in EOC.

Skywarn training/RARC meting conflict in April:

Move meeting by one week, April 15th. April 15th for key building contest!

Meeting adjourned 8:37pm



- Are you a member of the <u>ARRL</u>?
 - Are you new to Ham Radio?
- Have you been licensed for a while but not active?
 - Are you active but never explored the <u>ARRL</u>?

RARC has been an ARRL affiliated club for the past 50+ years. RARC wants all members to know about the benefits 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



Contact RARC

RARC meets the second Tuesday of each month at 6:30 PM (except the August meeting is the annual RARC club picnic and January is the annual holiday party) in the lower level of Rochester Fire Station #2 in the EOC at 2185 Wheelock Drive NE, Rochester, MN

Website: http://www.rarchams.org/

◆ Snail Mail: RARC , P.O. Box 1, Rochester, MN 55903

• Groups.io: Register to post and receive RARC official email, notices and the Hamster

♦ 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

If you haven't done so already, please register for the RARC groups.io email reflector so you can keep abreast of club activities, official club notices and of course, the monthly Hamster emailing. Click on register and you will be taken to the RARC registration page. Once you have registered go to your account settings and choose how you would like to receive email from RARC.

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