



THE HAMSTER

September 2024

Official Monthly Newsletter of the Rochester Amateur Radio Club

G. Mark Kelm (KOGMK) - Editor

Founded In 1932 - 50+ Years Of ARRL Affiliation



- ◆ RARC President's Message - page 2
- ◆ RARC Monthly Training Program - page 3
- ◆ **ZOOM** Online Meeting Login Info - page 4
- ◆ **125Live** Ham Radio Club - page 5
- ◆ **ARES** - pages 6-7
- ◆ **Public Service** - page 8
- ◆ **Contest Corner** - pages 9-12
- ◆ **Hamster Hints** - pages 13-14
- ◆ **Technical Committee Report** - pages 15-17
- ◆ **Education** - page 18
- ◆ RARC **Buy - Sell - Trade** - pages 19-20
- ◆ **Fall POTA** - page 21
- ◆ **Local Ham Radio Nets** - page 22
- ◆ **ARRL** - page 23
- ◆ **Contact RARC** - page 24



RARC President's Message

Pat Hagge (KE0WWG) - President

It was wonderful to see so many people at our annual RARC picnic this year. Thank you to the Marion KOA for allowing us to be there again this year and look forward to being there again and also would like to thank Steve (W0STV) and Eric (KF0S) for picking up the much-needed essentials for a Midwest picnic – and for grilling too. We lucked out again this year with great weather, discussion, and food!

RARC received a donation for the **Bill Osler Memorial Scholarship** from his wife, Faye. We sincerely appreciate all Bill contributed to RARC as a friend, educator, mentor, Elmer, ARES district leader and to the Amateur Radio community over the years. As a reminder to all, this scholarship will pay for the testing fee (\$15) and FCC registration fee (\$35) for new licensees 20 years or younger who successfully pass their test via the RARC VE team in Rochester. If you know anyone who is interested in Amateur Radio, especially those under 21, please let them know about this program and encourage them to get their ticket.

If you have anything you'd like to bring up with club members, please feel free to utilize our groups.io (<https://groups.io/g/rarchams/>) to get the word out. You can also e-mail me pat@theewok.net or call/text me 507.461.6008.

Make it a great September and we will see you at the next meeting on September 10th!

73



RARC Training Program

Dan Stroh (N0SPN) - Vice-President

September 10th 2024 @ 6:30 PM

Fall & Winter 2024

Contesting Discussion

This Fall and Winter months there are many different types of HF contests: Voice, CW, Digital, etc. Let's talk about ways that you could try contesting for fun and even help you to get past mic fright!

Be sure to check out this month's Contest Corner ***starting on page 8*** for all the September contests and a comprehensive primer on Space Weather and how it affects your ham radio operating.



September 2023 RARC ZOOM Online Login Info

OPTIONAL FOR THOSE NOT ABLE TO ATTEND IN-PERSON



Below is the ZOOM login information for the **September 10, 2024, 6:30 PM CDT RARC Meeting ZOOM** . The ZOOM login info is also posted via the [RARC email reflector](#) prior to the meeting.

♦ **When:** September 10, 2024 @ 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:** #####



125Live Ham Radio Club



Steve Wiebke (W0STV)

The 125Live radio group has several people studying to get their ham radio license.

We as the RARC *need to attend their meetings* to teach and support their efforts to become new licensed operators. They are interested in the same programs that we have for our club meetings. Their next scheduled meeting is September 17th, the week after our RARC meeting. Let's support this group to make it an extension of what we do in this hobby.

Let's think of activities and schedule some contests to operate from the 125Live radio station to keep the interest in the fun things that ham radio has to offer. We agreed as the RARC to start this group, now let's keep supporting it. We need to schedule the 125Live meetings as we do the RARC meetings.

We need RARC members to attend and contribute.

Steve-W0STV

Olmsted ARES-EC

The more preparation, the less confusion.



The next meeting of the 125Live Ham Radio Club sponsored by RARC will be September 17th at 125Live in the Technology Learning Center room at 2:00 PM.

For more information please contact(W0STV) at: w0stv@yahoo.com



ARES

Amateur Radio Emergency Service

Olmsted ARES will hold our next meeting at Fire Station #2 on September 28th starting at 9:00 AM. There will be a tabletop event during the meeting. Watch the RARC email reflector for updates and information. Any licensed radio operator can become a member of the Olmsted ARES team.

I want to remind you that all licensed amateur radio operators the FCC requires that you MUST give your call sign at the end of your last transmissions, especially for ARES, SkyWarn, and Public Service information. If you hear Net Control clearing you with your call sign, this indicates you should be doing this yourself. We want to operate within the FCC rules.

The new Olmsted Emergency Operations center will be completed soon. Will plan to have an ARES/SkyWarn walk through once everything has been moved and operational.

The Rochester EOC will be updating radio room equipment soon to be able to offer more ways of moving information in the future.

The Rochester Red Cross damage assessment program is alive and plans to be in full operation by the end of this year. This new stage in damage assessment information is technically advanced and very informative for FEMA, Red Cross, EOC's, and public utilities to use their resources more effectively and be updated more frequently.

Continued on next page

**Olmsted ARES Mission Statement:
To be so effective that you are able to help others.**



ARES

Amateur Radio Emergency Service

Reminder that Olmsted ARES members need to attend meetings to be considered primary contacts for activations. This is so you will be able to transmit any information by any mode the served agency requires. You cannot be so effective that you are able to help others if you do train! The more preparation the less confusion!

Olmsted ARES would like to add people to our Sunday ARES net control roster. Operating a net will help you to operate more efficiently during a real activation. This is not hard to do. We will start with you shadowing a NCS operator to learn as you go. When you are ready a NCS operator will shadow you to help you if needed. Please consider this to become an effective NCS and field operator. Call 507-254-3993 to discuss further.

Check out the RARC Facebook page for educational and information videos that have been or are currently be added. These can and will give you information that you may not be able to see anywhere else. The more you know!

Whenever there is potential for severe weather, please monitor the 147.255 repeater. Have your vehicle fueled up and bring your spotter map with you. Always operate your mobile radio on high power. Follow ALL rules and regulations for the road. You are responsible for your vehicle, not the county or National Weather Service.

Steve-W0STV

Olmsted ARES-EC

The more preparation, the less confusion.

Olmsted ARES Mission Statement:

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



Public Service

Amateur Radio Emergency Service

August 24th was the last public service event for the RARC for 2024. Thanks to all the radio operators that took the time and effort to make our served event coordinators successful in having a safe and smooth operating activity. There are more public service events in Winona that could use your help.

September 21st, the Winona Rotary Club is sponsoring their annual bike tour fundraiser. The event runs from about 6:00 am to about 4:30 pm, but no one is required to commit to that entire time. No previous experience is needed they will help you get started. This is a fantastic way for new hams to get acquainted with public service communications.

If you wish to be part of this event, please contact Winona at this [email address](#) and if you have a particular assignment that you want, please mention that too. If you do not have the time but wish to loan out equipment that is fine also.

W0STV still has shirts from the Med City Marathon for the people that helped with radio communications. If you did not get your shirt, call me at 507-254-3993 to arrange delivering you your shirt. I will have them with me at the September RARC meeting as well.

Steve-W0STV

Olmsted ARES-EC

The more preparation, the less confusion.

Contest Corner

Fred (K4IU)



September is a busy month for contesters so get ready to rumble as the Minnesota Wireless Association (MWA) contest season kicks off with the [CQWW RTTY Contest](#).

Besides the RTTY contest here are some of the other popular contests to include some fun SSB weekend events:

- **[September 7-8 JARL DX Contest SSB](#)** The exchange is signal report and your age. Listen for JAs late afternoons on 10 and 15 or early in morning on 20.
- **[September 14-16 ARRL VHF Contest](#)** This contest includes all modes ie FM and digital. The goal is to work as many amateur stations in as many different Maidenhead grid squares as possible using frequencies above 50 MHz. With cycle 25 peaking we could have some great conditions on 6 meters. Pay close attention to the [rules](#)!
- **[September 14-15 WAE DX contest SSB](#)**, This is the phone version of Worked All Europe (WAE) CW event last month. Remember to review the rules especially regarding transmitting and receiving QTCs (traffic).
- **[September 28-29 CQWW RTTY Contest](#)**, Don't wait until the last minute to either set up or check the settings for your RTTY and logging programs. The exchange is RST and a sequential serial number. There are several tutorials and getting started pages on the [rttycontesting webpage](#). This is the first of the [MWA](#) qualifying contests.

Contest Corner

Fred (K4IU)



Take a look at the [WA7BNM calendar](#) website for more September contests. Another event calendar for local and regional [ham fests](#) can be found here.

I am sure ready for the fall HF conditions, aren't you? Solar flux (SFI) has been high the past week and if it stays up there during September, we'll have great conditions on HF. But we've also had high absorption that's dampened the activity coming from the sun especially earlier in August. **So, what's going on with "space weather"? What is space weather?**

First, **Space weather** is the changing conditions in space caused by the sun. It affects radio communications and our technology. It impacts contesting!

- **Radio Communications:**

Weak Signals: During space weather events like solar flares, HF radio signals can get weak or cut out on the sunlit side of Earth. Think someone disconnected your antenna in the middle of the day.

Even low-frequency navigation signals (like LORAN or GPS) can also get weak temporarily.

- **Geomagnetic Storms:**

Moderate Storms: A moderate geomagnetic storm (G2) occurred on August 13, 2024, due to a solar event that started on August 11.

Severe Storms: A severe geomagnetic storm (G4) happened on August 12, 2024, because of a solar flare hitting Earth. HF band conditions really tanked as many hams observed on social media.

Contest Corner

Fred (K4IU)



- **Solar Cycle Impact:**

Solar Cycles: These cycles affect space weather. Solar Cycle 25 has the highest sunspot number in over 20 years, changing space conditions. Most of us old timers only have distant memories of these conditions. Fall conditions for 10 and 6 meters should be memorable.

We hear that Solar flux and the **K index** are important for radio communications, especially for HF (high-frequency) bands. I have trouble remembering what these terms mean.

- **Solar Flux:**

What It Is: Measured in solar flux units (SFU), it shows the amount of radio noise from the sun.

Higher Values: Higher solar flux (above 200) means more ionization in the ionosphere, which helps long-distance radio communication i.e. good DX with 15 and 20 meters open 24/7.

Impact: High solar flux improves HF communication by allowing signals to bounce back to Earth.



Contest Corner

Fred (K4IU)



• K Index:

What It Is: The K index measures geomagnetic activity, ranging from 0 to 9.

Lower Values: Low K values (0-1) mean quiet magnetic conditions, **good** for HF communication if the solar flux is high.

Higher Values: Unsettled or active conditions (K values 2-4) can degrade HF communication. A K value of 5 indicates a minor geomagnetic storm. Generally **bad** for HF band conditions.

Here are two excellent websites you can bookmark for late breaking Space Weather information:

- <https://www.spaceweather.gc.ca/forecast-prevision/cond-en.php>
- swpc.noaa.gov/communities/radio-communications

73

Fred (K4IU)



Hamster Hints

When I work outside, in and around the garage, I usually leave the big door open, to let in light and air, and to make getting around easier. A little chipmunk who lives under my front step sometimes gets curious and wants to enter, so I've had to discourage such activity. Throwing a nearby shoe in his general direction is a good reminder, but when I'm absent for a few minutes, that scare-technique doesn't work. I've come to rely on an FM radio in the garage, to make continual noise, which also seems pretty effective.

Years ago, I tended to tune it to a strong, local, classic-rock station, but now I only listen to MPR's classical-music station, KLSE (FM 90.7). The problem I found with the music of my youth was that it was all songs. Sure, I liked the songs, but then I discovered this psychological effect was happening, that made me want to "stick around" near the radio, until the current song was finished. Over some time, I realized this was counter-productive to me getting my work done.....sort of stressful, even.....I never felt totally "free" to leave in the middle of a favorite song! As I gradually migrated to the classical station, more and more, as I aged, I realized that I really liked it much better anyway. For one thing, the music has no words, so I don't experience my former hang-up. I eventually gave up the other stations completely, and now I almost exclusively listen to KLSE. The problem I found with the music of my youth was that it was all songs. Sure, I liked the songs, but then I discovered this psychological effect was happening, that made me want to "stick around" near the radio, until the current song was finished. Over some time, I realized this was counter-productive to me getting my work done.....sort of stressful, even.....I never felt totally "free" to leave in the middle of a favorite song! As I gradually migrated to the classical station, more and more, as I aged, I realized that I really liked it much better anyway. For one thing, the music has no words, so I don't experience my former hang-up. I eventually gave up the other stations completely, and now I almost exclusively listen to KLSE (FM 90.7).

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Hamster Hints

This presented one problem, though: the power output of KLSE seems to be much lower than that of the other stations (at least in my direction), so the sound quality was often only fair to poor. This summer, I finally had enough of that, and I made myself a proper dipole antenna to replace the single-wire antenna that I had connected to the radio years ago. To do this, I just repurposed an old set of TV "rabbit ears." This worked great. The two elements even telescope, so I can tune it to KLSE's exact frequency, if I want. Now I always have high-quality, classical FM radio in the garage. Oh, the neighbors don't seem to mind it, either. I don't know about the chipmunk, if he likes it any better or not, but it still seems effective.....and I always have the shoes, to help reinforce the idea that he has his house and I have mine, and we respect each other and stay out of each other's houses!



Telescopic dipole (repurposed TV "rabbit ears"), for FM radio.



Technical Committee

Eric (KFOS)

Tech Committee Meeting Minutes - 8/12/24

Attendees: Eric, George, Pat, Darrel, Taylor, Steve, Mark

(Post meeting and RARC meeting comments in italics)

Tech Committee work for the Mayo Site:

- Darrel is our current access person. Mark and Taylor are working on getting access as well.
- We have old expired licenses displayed at each repeater. Fusion has an old WB0SBH and DSTAR has 2015 expiration of WOMXW.
- Eric has a PDF of the current license (note that this expires next year).
- Who should we list as contacts along with the license on the laminated sheets?
- Eric as Tech Chair?
- Darrel as main person with access?
- Taylor or Mark?
- Note that we are making one for the Simpson site as well with Eric and John Scott as contacts.
- Club email?
- Speed Test was slow (although I think it matches what we have seen in the past)
- Darrel to work with Mayo/CenturyLink on what speeds should we be seeing for the high price being paid. If it's not what it should be, this needs to be fixed.
- Router may have older firmware. Mark to investigate if there is an update and we will update the router.



Technical Committee

Eric (KF0S)

Tech Committee work for the Fusion Repeater (146.625)

- Fusion repeater has a 4 digit lock code to access.
- Eric checked with BJ and he has no recollection of setting a passcode.
- Taylor was going to check if there was a way to reset.
- Might it be exporting the settings on the PC, reset the repeater, and import the settings? Or will the import also pick up the passcode.
- Fusion repeater amplifier needs a new fan (current one doesn't work).
- Darrel said he would tackle this. Will need a short down time or 2 to get the existing fan out and then install the new fan.
- Current PC for Fusion, small unit, is not upgradeable to Windows 11 due to an older processor.
- Taylor/Darrel to look into a replacement.

Tech Committee work for the D-Star Repeater

- Replace PC for DSTAR with a small unit? Big item is the gateway PC needs two NICs (network cards). A little tougher to get.
- Taylor is investigating.
- New Icom Gateway runs on AlmaLinux. Requires a x86_64_v2 chipset, but anything recent should be ok for that.
- Need to request the 3.2 version of the Gateway Software from Icom. Eric will do. May need the serial number.
- Darrel mentioned using an analyzer to check the antennas.
- The old 625 repeater is still onsite. Is it a backup?



Technical Committee

Eric (KF0S)

Tech Committee work for 146.82 Repeater Site

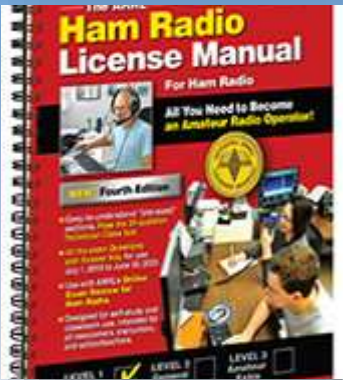
- Old License at site.
- We do have access to the repeater. Key is in a lock box and there is a code to enter when unlocking the door as well.
- We replaced the backup battery with a new better battery since the repeater did not stay up very long with the last power outage; Interstate 110 AH maintenance free deep cycle AGM battery. Need to get the club to reimburse Steve for the purchase. Note that the amplifier is not active when on the backup battery.

Tech Committee work for Digipeater

- Currently, we don't have access as they replaced the gate lock and added a lock to the door. We do not have a key for these locks. John Scott will work with the owner to get 2 keys. One for John and one for the Tech Committee chair. We do have a single key for the second door lock. John will work on getting us another key for the Tech Committee chair.
- Old License again.
- We removed the antenna from the digipeater and hooked it to a radio through a SWR meter. The SWR was low. Antenna hooked back to digipeater and it was digipeating.
- We need a few PL-259/N connector adapters to test a second antenna.
- Update Location in the config? Further discussion later. *I believe the 82 site also has a fictitious location on APRS.*

Education

Dave (KØVH)



One of the first steps 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!

- We'd appreciate knowing any of you who are using ARRL books, the new to ARRL Gordon West training methods, or Dave Casler videos: how effective are they? Would you like some mentoring from the club? A good spot would be the 3rd Tuesday of the month at 125Live.
- We'd also like to know if you are taking any 2024 Maple Grove radio club Zoom classes or remote exams <https://k0ltc.org/training/>



RARC buy - sell - trade



Monarch "Super Sensitive" "Amatuer Receiver" (yes, "Amateur" is mis-spelled on the faceplate), 4-band BC / HF radio. Nostalgic for me, and will pay well, according to cosmetic condition. Bob (KE0EXE), 507-280-0935.



Icom IC-735 HF transceiver - Dan Stroh (N0SPN) you can call or text me at my cell# 507-273-0734 **\$175**

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.



RARC buy - sell - trade



ST-5000 Step Up Step Down Transformer 110V 220V Step Up Voltage Converter Transformer, 5kw rating, used once / no longer need, like-new condition, **\$100 firm** (\$129.99 on Amazon). See Bob, (KE0EXE), gettuit@charter.net



Yaesu FT-950 160 thru 6 meter transceiver Includes MH-31 microphone
Original box **\$500** Lynn (WB0U) (507) 358-8459



Astron RS-35M 13.8 volt power supply 35 amp peak, 25 amp continuous with volt and amp meters. Quiet linear supply, no RF noise, **\$150** Lynn (WB0U) (507) 358-8459

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.



Parks On The Air® (POTA)

It's *Fall* POTA Time!

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.

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

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

POTA is a great way to enjoy Ham radio and enjoy the bonus of operating remotely or out of your vehicle!



Niel (W0VLZ)



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.
- ♦ **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 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 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) in the lower level of Rochester Fire Station #2 in the EOC at 2185 Wheelock Drive NE, Rochester, MN

- ◆ **Online:** <http://www.rarchams.org/>
- ◆ **Mail:** RARC , P.O. Box 1, Rochester, MN 55903
- ◆ **Groups.io:** [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

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