



# THE HAMSTER

*December 2023*

*Official Monthly Newsletter of the Rochester Amateur Radio Club*

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

**Happy  
Holidays!**



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# PRESIDENT'S MESSAGE

Steve (W0STV) - President [w0stv@yahoo.com](mailto:w0stv@yahoo.com)

**We had 42 people attending the November RARC meeting.** Pat/w0bm's presentation on how he is advancing his Morse code operating by attending the [CW Academy](#) training program was a crowd pleaser. If you did not see it you missed a great presentation, discussion and learning opportunity. The December program will be on antenna analyzers presented by Collin/AA0CN. If you have a topic you want the club to do a presentation on contact the VP with your request. The more you know!

**The National Weather Service (NOAA) is back with their storm spotter appreciation day** on December 2nd from 8 am to 4 pm at 711 County Road FA, La Crosse, WI. Spotters from Minnesota and Wisconsin counties are attending. Meet other spotters, compare notes, see old and make new friends, discuss the latest weather equipment. Meet Todd Shea and his staff and maybe you will get to go up into the radar dome. Check out <https://www.weather.gov/arl/SRD2023> for detailed information. There is no place like home!

**The 125Live Ham station is operational.** The next step is a meeting with their program director to get the information of the Ham station out to their membership. We plan to have a meet and great session their 125Live membership to see how many hams there are around and who are interested in taking classes to getting their license. Will update on the reflector with information later. Slow and steady works!

**The IBM radio equipment is going fast.** Sales to Hams from area clubs has been good. There is an equipment listing posted in this Hamster for your information. Eric/kf0s or Dave/k0vh can be contacted through our [RARCHAMS@groups.io](mailto:RARCHAMS@groups.io) email. The equipment is in great condition and complete systems have prices that you will never have the opportunity to purchase again. Can you hear me know!

**We have 2 locations tentatively reserved for the RARC January 9th Christmas party.** The choices are **Forager's or Victoria's**. They both have rooms we can use for the party. We will be ordering off the main menu at either of the restaurants. We need an early response from the club membership on which one you want and how many people would be with you. Please email me at [w0stv@yahoo.com](mailto:w0stv@yahoo.com) using the word "PARTY" in the header with your preference and your total number of people. I will bring the report to the December 12th meeting. We will continue to take votes at the December meeting for anyone that did not email in their request before deciding by popular vote. This will be like back to the future. **Let's party!**

Continued on next page



# PRESIDENT'S MESSAGE

Steve (W0STV) - President [w0stv@yahoo.com](mailto:w0stv@yahoo.com)

**I was contacted by Dave Hass/ke0kbn about a Boy Scout Troop interested in amateur radio from Elgin MN.** They want to attend our December club meeting to learn about ham radio and how to be radio operators. It's not everyday that we get people contacting us. I will get more information from their Troop Leader. The December meeting may include a focus session on their questions after the main program, and before the club business meeting continues. We must be doing something right!

**The RARC needs radio activity for its members to participate in, to learn and have fun.** After my term as RARC president ends this year I want to plan activities for the Rochester and J.M. clubs. Activities including going area fox hunts or have our own. Make contest contacts and logging them. Do POTAs, make satellite contacts to name a few. Lets get radio active!

**We have an RARC VP candidate for 2024, we need a new President for the Rochester Amateur Radio Club. Make a difference do it!**

Steve-W0STV

RARC President



# RARC TRAINING PROGRAMS

Taylor (WB0RSJ) - Vice President

**December 12th 2023 @ 6:30 PM**



## **NanoVNA Antenna Analyzer**

**Presented by:**

**Collin Howe**

**AA0CN**

RARC welcomes and encourages members to present topics like contesting, Kit building, amateur radio software, etc., to the members at RARC monthly meetings. This is your opportunity to share your expertise and help other RARC members grow their Ham radio skills. Please contact any of the club leaders and let them know what topic you would like to present.



## December 2023 RARC ZOOM Online Login Info

OPTIONAL FOR THOSE NOT ABLE TO ATTEND IN-PERSON



Below is the ZOOM login information for the **December 12, 2023, 6:30 PM CDT RARC ZOOM** . The ZOOM login info is also posted via the [RARC email reflector](#) prior to the meeting.

- ◆ **When:** December 12, 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:** #####



## 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



# ARES

## AMATEUR RADIO EMERGENCY SERVICE

Steve (WØSTV) [w0stv@yahoo.com](mailto:w0stv@yahoo.com)  
Olmsted County ARES-EC

**The December Olmsted ARES meeting will be a group social of Fillmore and Olmsted ARES members.** The meeting will be at the Fillmore ARES training room on the east side of Spring Valley at their ambulance/EOC operations building on December 16th starting at 9 am and running to 12 pm. There will be open discussions, food, prizes and a tour of their EOC. Talk in on the Fillmore 147.015 PL-110.9 repeater. Details will be posted later.

**The National Weather Service Skywarn appreciation day** is on December 2nd 2023 from 8 am to 4 pm at their office at: 711 County Road FA, La Crosse, WI, (608) 784-7294 . If you plan to participate in making radio contacts from anywhere other than a National Weather Service office in the United States please review the link [2023 SKYWARN Recognition Day - Saturday, December 2nd \(weather.gov\)](https://www.weather.gov/skywarn) to register and get your information before December 2nd.

**There will be two simplex testing sessions, one in December and another in January** after a Sunday ARES net to test how well you can communicate with an EOC's radio station using a simplex frequency. These drills will be announced during a Sunday net. After the net has ended that roll call will be repeated on one of the posted ARES state VHF simplex frequencies from the EOC for you to respond to or relay. Keep a list of stations that you heard or did not hear, to post on our [groups IO reflector](#) later for others to see how well simplex worked. We will use that Sunday's net control frequency before and after the simplex drill for information and discussion.

**Have you considered expand your disaster communications knowledge to be a more effective resource?** Consider taking the FEMA 100, 200, 700, and 800 NIMS along with the ARRL on line ARES training courses this winter when your sitting in front of your computer. These are training sessions that will build your operational knowledge and qualify you to take AUX COMM field training problem solving that will be offered this summer and become a registered communications technician with FEMA. Keep yourself radio active this winter. Put your call on the air when you are able to, because the more of you that do this the more radio activity overall.

**Olmsted ARES Mission Statement:**

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



# HAMSTER HINTS

Bob (KEØEXE) [gettuit@charter.net](mailto:gettuit@charter.net)

**Fixing the roof. Not the most-fun.** It subtracts time spent on Radio (which has been sparse, lately, due to more-important demands). However, it must be done occasionally, and, if done well (like anything), it won't need doing again for a long time. Here's a trick I've learned for "fixing the roof"...

**Actually, this hint is appropriate whenever and wherever using caulk or sealant:** Have, on -hand, the appropriate solvent; it can be a great help. Many people will simply shoot the goop into the seam, without even cleaning the crack or defect beforehand. Do yourself a favor, and use a clean rag, wet with solvent, to wash the area that you intend to fix, *before* you apply the goop. Be sure to wear protective gloves (e.g., nitrile), as most solvents are pretty nasty to the skin, drying it out severely, if not creating other, longer-term problems. Wondering what solvent to use? Read the "clean-up" directions on the sealant's container (it is *always* good to review the directions, each time before use, anyway).

**Now, that's the bare minimum.** If you really want a professional-looking job, then pour some solvent into a shallow cup, and take it up with you and your caulking gun. With gloved fingers (again, *very important!*), dip your fingers into the solvent, to wet the glove. You can now use your gloved fingers to shape the dispensed goop, without it sticking to you. Try it; you will be amazed at how easy it is to work with even the stickiest of sealants, getting them to go where you want and to stick to the intended roofing (or other) materials, instead of you! The solvent will quickly evaporate, leaving only cleanly-adhered goop, pressed-in, exactly where you want it. You can even shape the sealant, as long as you keep your *gloved* fingers sufficiently wet with solvent.

**A warning: Don't try to use the wrong solvent, for the goop you have--that won't work, and is not recommended, chemically.** Also, examine your gloves for tears, frequently, as working with rough materials will wreck them quickly, and then you will have no more protection. Bring along a dry rag (for quick, emergency wipe-off), as well as several extra pairs of gloves in your pocket, too. Double- or triple-gloving is a good idea.

**Now, admire a job well-done, as you finish-up this task, and get back to the radios!**





# CONTEST CORNER

Fred (K4IU) [k4iu@me.com](mailto:k4iu@me.com)

**We close out 2023 with some ARRL sponsored contests on 160 and 10 meters.** Many hams never get on [160 meters](#), otherwise known as the gentlemen's band for the friendly and casual QSOs common on this segment of the spectrum. There are some good reasons hams have trouble getting on 160 meters given the antenna requirements. The length of a half wavelength dipole at 1.85 MHz is approximately 253 feet (each side would be about 127 feet)! That's a lot of wire for an urban setting let alone a ham in an HOA.

On the other hand, **10 meters is doable for most hams.** A 10 meter dipole would be around 16 ft. long plus or minus. Many of you have made these. The 10 Meter band is a low noise daytime band ranging from 28.000 – 29.700 MHz at the very top of the HF frequency range. And good news! Technicians have privileges on 10 meters. As you have heard many RARC hams say, 10 meters is hopping with the improved solar conditions this fall. Worldwide communications are possible with modest stations running low power. Here is an [article](#) with more information for techs on ten.

- [160-meter contest](#): December 1-3, 2023
- [FT roundup](#): 1800Z, Dec 2 to 2359Z, Dec 3: If the 160 contest isn't to your liking, then the FT round up is a great way to enjoy a Sunday and you can probably still watch football at the same time.
- [10-meter contest](#): December 9-10, 2023

**KØMD, Scott, had a great article published in the November-December issue of the [National Contest Journal](#).** In it he details the planning, execution and performance of an 80-meter upgrade project he completed last year. Several RARC members are pictured in the article. Scott was also interviewed by Kevin, W1DED during his raising [the bar U-Tube video](#). It's a very interesting interview and nice to see a local ham recognized for his many contributions to the hobby.

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# CONTEST CORNER

Fred (K4IU) [k4iu@me.com](mailto:k4iu@me.com)

**There were several contest results published in the December QST. They include:**

**Field day on page 71: WØMXW 2F p. 146, and WØBM 1A, p. 69, June VHF contest: KØSPN/R winner of the Dakota Division rover plaque and Mel, KCØP/R who was in the top 10 unlimited rover box, p81. Congratulations everyone!**

**I would like to close with some 2024 New Year's resolutions for you to consider:**

- **Learn a new mode or band.** There are always new modes and bands to learn, and doing so can open a whole new world of operating possibilities. For example, you could learn to operate on the digital modes, or you could learn to operate on the HF bands.
- **Work a new DXCC entity.** There are 340 DXCC entities in the world, and working a new one is always a challenge. Set a goal to work 10 new DXCC entities in 2024.
- **Participate in more contests.** Contests are a great way to test your skills and station performance. Set a goal to participate in at least five contests in 2024 and send your scores to [MWA](#).
- **Volunteer your time to the RARC or ARRL.** For example, you could volunteer to help with the Field Day event, or you could volunteer to give a RARC presentation next year.
- **Upgrade your ham radio license.** If you have a Technician or General class license, make a goal to upgrade to a higher class license in 2024. Upgrading your license will give you access to more frequencies and modes, and it will allow you to participate in more contests.
- **Improve your operating skills.** There are many ways to improve your operating skills, such as learning to copy code faster, like **Pat WØBM**, or learning to use different antennas. Set a goal to improve your operating skills in at least one area in 2024.
- **Build your own ham radio equipment.** Building your own ham radio equipment is a great way to learn about electronics and to save money. Set a goal to build at least one piece of ham radio equipment in 2024. Try an antenna project, like **Mel, KCØP**.
- **Get on the air!** The best way to improve your ham radio skills is to get active on the airwaves. Set a goal to make at least 100 contacts in 2024.

**Have fun! Ham radio is a hobby that we all enjoy. Set a goal to have more fun with your hobby in 2024.**

**See you next year!**



# TECHNICAL COMMITTEE

Eric (KF0S) - [kf0s@yahoo.com](mailto:kf0s@yahoo.com)

## Technical Committee Meeting Notes - 11/13/23

**Attendees: Eric, Mark, George, Steve, Gil, John D., Pat, Taylor**

\* *Post Technical Committee meeting and RARC meeting comments in **italics***

### **Donation of W0IBM equipment:**

- Everything has been moved to EOC.
- Spreadsheet was sent out with availability at RARC meeting. Groups of 5? during break.
- IBM has said we can remove antennas from the courtyard at a later date, but not sure of an end date. Beam rotated north-south and tower lowered. Try and remove what we can as soon as possible.
- TA-33 tri-band (with WARC), 6m beam, 2 2m beams (1 each H and V polarization), and 2m vertical. All are old, but the tri-band might be a replacement for the club's other beams for Field Day.
- IBM seems to have forgotten they said we could remove the items from the tower. Argh. Working to get that permission again from IBM or may pursue the new site owners. If I end of going to the site owners, I may ask about some of the stuff on the roof like the satellite antennas/rotors.

### **146.625 Fusion repeater:**

- Repeater screen has passcode we do not know. Checked with BJ, and e has no idea about the passcode. We may be able to remove it by simply resetting the repeater. I believe there are repeater and HRI-200 updates (plus the Windows software). We should maybe apply at some point.

### **443.85 D-Star repeater:**

- We still haven't gotten the Gateway Server back at Mayo. Work and other commitments have consumed Eric's time. Will take a longer time period onsite to do the actual installation.
- Discussion on main reflector: 30C was decided back in March.



# TECHNICAL COMMITTEE

Eric (KF0S) - [kf0s@yahoo.com](mailto:kf0s@yahoo.com)

- g2\_link software to allow access to XRFxxxX and DCSxxxX reflectors was asked. There are no published instructions and there is one person who can install the software after getting access to the machine. *I think I found someone who can send us the instructions.*
- Asking about duplicated calls.
- *David, N3ZUK, volunteered to also help with getting things setup.*

## **What to do about Mayo repeater site:**

- Taylor working on getting a badge and key for access. No change. Andy and Taylor busy.
- Andy can provide access in the mean time.
- Another back pocket person being investigated.
- DSL internet connection from ?
- Move to a cellular based internet? Has a monthly cost. Bandwidth would likely be improved. Would prevent us from having to go through the hassle of finding a new site and setting things up, etc.
- T-Mobile Hotspot: 5G-ethernet, \$265 for unit, Data is \$10/month. We lose the Static IP. There are some work arounds, but not necessarily easy/desired options.
- I talked with Brian Stockman a little about the loss of internet. We discussed some ways to handle the loss of static IPs including moving Fusion to a PDN and using a MMVDM, maybe an original Shark RF OpenSpot 1 (maybe 2) will do duplex mode and support D-star with full room control. Eric thinks this will require education on networks and how this works for much of the tech committee. D-Star is not a simple thing.

Router may have password we do not know. BJ hadn't found it at last check. New router if we go with 5G.

## **146.82 repeater:**

- Steve to check battery backup.



# TECHNICAL COMMITTEE

Eric (KF0S) - [kf0s@yahoo.com](mailto:kf0s@yahoo.com)

## **147.255 repeater:**

### **125 Live:**

- Antennas upright. SWR measurements taken.
- VHF 1-1
- HF
- 3-1 on 6M. increases through bands. 7-1 on 80M
- Cable for use to control tuner.
- VHF radio setup with local repeaters.
- Steve would like to order Signal-Link to use digital.
- Gil has one available.
- *Eric picked up from Gil and delivered to RARC meeting. Thanks Gil.*
- John, 13 pin accessory 2 which matches Gil's cable. Might have to remove microphone while using digital.
- Need to work with 125 Live Program Director on things from contesting, classes, operating access.

### **Rochester EOC facility and computers:**

- Collin working on laptop setups for Win-link, VARA.

### **Website:**

- By-law changes coming?
- Preamble



# TECHNICAL COMMITTEE

Eric (KF0S) - [kf0s@yahoo.com](mailto:kf0s@yahoo.com)

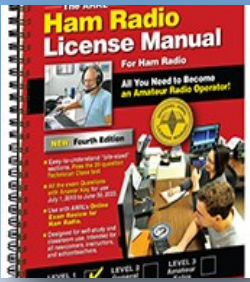
## Website:

- By-law changes coming?
- Preamble

## Other Items:

- Equipment insurance renewal due in November. Paid.

Control operator for D-Star and Fusion repeaters. Bob Hart ended up sending in the MRC updates replacing KCONPF with KF0S for the Fusion and D-Star repeaters.



# EDUCATION

Dave (KØVH) [dcnaatz@gmail.com](mailto:dcnaatz@gmail.com)

Bill (KØRGR) [k0rgr@arrl.net](mailto:k0rgr@arrl.net)

*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!*

**RARC has an agreement with the [Maple Grove Radio Club](#) that prospective new Hams can take Monday classes on ZOOM starting in February 2024 to get their Technician Class license: sign up at [https://k0ltc.org/tech\\_license\\_class/](https://k0ltc.org/tech_license_class/). There are other ways to take this education via the License Manual listed below and online videos if the ZOOM timing or approach doesn't work for you.**

## Study / Take a Class

There are numerous ways to learn about Amateur Radio. Below are some options, find the best that fit you:

**Self-learning Options** – The ARRL has published books for each license class and can be purchased on their website, Amazon and other Booksellers

- [Ham Radio License Manual](#) (Technician – start here!)
- [General Class License Manual](#)

**Online Options** – Dave Casler, KE0OG, has videos online for the [Technician Class license](#) via the ARRL and YouTube. The ARRL has Dave's videos for General and Extra Classes on the [ARRL Learn website](#) (you need to be an ARRL member for these two).

**Other Options** – The ARRL has an entire site dedicated to [Getting Licensed](#) which you can find other classes, online training materials, testing locations, etc.

## Take the Exam

The last step is to take the test with a VE (Volunteer Examiner) team. But, before you do that, it is best to take some practice exams first, to ensure that you are ready for it.

### Online Practice Exams:

- [ARRL Exam Review for Ham Radio](#)
- [HamStudy.org](#) (both online and app)

### License Exams (In-Person):

- [Rochester Amateur Radio](#)
- [ClubARRL Exam Session Search](#)



# JM ROCKET RADIO CLUB

Melissa (KE0WNH) - Mentor [melissa.ke0wnh@gmail.com](mailto:melissa.ke0wnh@gmail.com)

## JM Radio Club Update from President Muniba Hassan

This month provided an amazing opportunity for the HAM radio club as they learn to solder, an essential skill for grasping radio mechanics, and practice doing so.

They are currently focusing on soldering 2 radios; a FM-TV/AM 2 band radio and a FM Stereo Radio Module. The lessons started off with learning about the various parts they will be soldering, including resistors, capacitors, and diodes.

It continued with learning how to solder and desolder pieces onto the circuit board. Now, the students are learning how to avoid bridging between different pads and have shown a remarkable attention to detail. "Learning how to solder has taught me how important the details are when it comes to electronics," one student remarked, "One thing is out of place and the entire flow of the current is massively impacted". This month's focus on soldering will improve the students' handiness with amateur radios, and help guide them to excel in electronics assembly.

## Proposed Calendar of Events

- **December 6, 13 & 20th:** Introduction to Morse Code (CW)  
Build a Telegraph Key
- **January 3rd, 10, 17, 24 and 31:** Introduction to Antennas  
Build a handheld foxhunting antenna  
Build a HF/VHF antenna





# JM ROCKET RADIO CLUB

**Melissa (KE0WNH) - Mentor** [melissa.ke0wnh@gmail.com](mailto:melissa.ke0wnh@gmail.com)

- **February: 7, 14, 21, & 28:** 14th: School Club Roundup with KCOP and ??  
Design/build JM Radio Shack
- **March: 6, 13, 20, 27** Soldering for Fun! Special projects  
Easter Themed Foxhunt
- **April: 10, 17, 24** High Altitude Balloon Launch w/ UMN  
(to be scheduled, Saturday)
- **May:** End of year wrap up and License Study / Review



# 125LIVE RADIO PROJECT



Steve Wiebke (W0STV) [w0stv@yahoo.com](mailto:w0stv@yahoo.com)



**RARC 125Live Antenna Crew:**

(Front) **Dave Satzke (N3ZUK), George Hagge (KC0DEY)**

(Rear) **George Hopkins (N0UM), Eric Bjornsen (W0EJB)**

(Not pictured) **Steve Wiebke (W0STV)**



## RARC BUY OR SELL

### Icom ic-756Pro2 HF/60 MHz Transceiver



160m-6m. 100 watts full power. Comes with **Icom mic and original printed user manual. Includes a SignalLink USB (Icom plug 'n play jumper module installed)** with cable for digital modes. **Valley Enterprises FTDI CAT cable** and rig power cable. Excellent condition. Mark (K0GMK) [gmkelm@charter.net](mailto:gmkelm@charter.net) 507-269-5254, **Price: \$900.00**

### Icom ic-7410 HF/60 MHz Transceiver



**160m-6m. Full power into dummy load.** Comes with mic, DC power cord and printed user manual. It does not have either optional roofing filter. Cash only.

Rob (KE0PWN) [rgolley2@hotmail.com](mailto:rgolley2@hotmail.com) **Price: \$650.00**

**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](mailto:red@bobdubke.com) (507) 398-5964

**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](mailto:gettuit@charter.net)



*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.*



# WOIBM FOR SALE



**Available Equipment & Pricing On Next 2 Pages**



# WOIBM FOR SALE

<b>Yaesu FT-767GX HF (160-10) All-mode 100W transceiver w/gen cov rcvr</b>	<b>\$ 500.00</b>
Yaesu SP-767 Speaker with filter (included with FT-767GX)	
Yaesu MD-1 Desktop Mic (included with FT-767GX)	
<b>Yaesu fl-7000 Linear Amp - 160-15 up to 1200W input</b>	<b>\$ 1,200.00</b>
<b>Yaesu FT-736R 2m/UHF/more satellite/AM/FM/SSB/CW transceiver</b>	<b>\$ 500.00</b>
Yaesu SP-767 Speaker with filter (Included)	
Yaesu MD-1 Desktop Mic (Included)	
Yaesu MH-1 Handheld Mic (Included)	
<b>Yaesu IF-232C digital CAT interface</b>	<b>MAKE OFFER</b>
<b>Kenwood TS-940S HF (160-10) All-mode 250W transceiver w/gen cov rcvr</b>	<b>\$ 600.00</b>
<b>Kenwood SM-220 station monitor</b>	<b>\$ 150.00</b>
Kenwood MC-85 Desk Mic (included with TS-940S)	
Kenwood SP-940 speaker with filter (included with TS-940S)	
<b>Kenwood IF-232C external RS-232 interface</b>	<b>\$ 25.00</b>
<b>Icom IC-275H 2-meter All-mode 100W transceiver</b>	<b>\$ 100.00</b>
Icom SM-6 desk mic (included with rig)	



# WOIBM FOR SALE

<b>Diawa NS-663B VHF/UHF Cross needle meter</b>	<b>\$ 50.00</b>
Diawa U-66V140-525 MHz Remote Sensor *2	Included
Diawa U-66S2 1200-2500 MHz Remote Sensor	Included
Diawa U-66H 1.8-150 MHz Remote Sensor	Included
<b>Astron RS-35A 35Amp power spply</b>	<b>\$ 150.00</b>
Texktronix 2215 Oscilloscope	MAKE OFFER
Rigblaster Nomic rig to soundcard intfc	<b>\$ 30.00</b>
Pakrat PK232 *2	MAKE OFFER
Pakrat PK2323MBX	MAKE OFFER
Kantronics dData Engine	MAKE OFFER
Kantronics D4-10 Data Radio	MAKE OFFER
AEA PK-88 *2	MAKE OFFER
AEA DSP	MAKE OFFER

**If you would like more information or would like to purchase one of the listed items please contact either Dave (K0VH) or Eric (KF0S)**



# Parks On The Air® (POTA)

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## It's Winter 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 entities 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!





- ♦ **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 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](#)**





## CONTACT RARC

RARC meets the second Tuesday of each month at 6:30 PM 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
- ♦ **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](#)

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](mailto:gmkelm@charter.net)