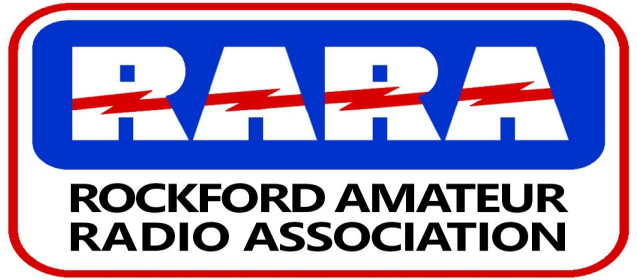


# HAMRAG

Visit our website for more club and area ham information at <http://w9axd.org>, or join us on



## RARA Mission Statement

A member association with common interest of public service to the community through the use of amateur radio.

## March 2024

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## From the Board

**RARA is a volunteer run organization** of individuals donating their time each month to develop activities, maintain repeaters, nets, and education. There are associated expenses and when you become a club member, your dues are providing a service to your community and furthering the hobby of amateur radio.

**Welcome** to our newest RARA members:

Paul Franklin-K9RNR, Steve Hedges-K9MXR, Greg Niles-K9GJN, Brenda Plummer-KD9GDX. Jim Plummer-KD9GDY and James Roberts-KA9TII.

**Thanks** to returning members:

Kevin Grant-W9KLG, Paul Spencer, KC9QPL & Jeff Makeever-AC9KX.

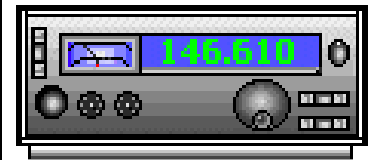
**Planning is underway for events and club meeting programs. Please put the following dates on your calendars:**

### Swap Meet & Social at Camp Winnebago Sunday, May 19, 9am-noon

This is a bare bones event and time to bring items you may want to swap or sell and a good opportunity to just hang out with other hams.

### Summer Field Day at Camp Winnebago, Sat & Sun, June 22-23

Field Day is ham radio's open house. Every June, more than 40,000 hams throughout North America set up temporary transmitting stations in public places to demonstrate ham radio's science, skill and service to our communities and our nation. It combines public service, emergency preparedness, community outreach, and technical skills all in a single event. Field Day has been an annual event since 1933, and remains the most popular event in ham radio. *More information on the event and how you can help will be coming!*



## NEXT MEETING

FRIDAY— March 8, 2024 - 7:00pm

OSF St Anthony Med Center—lower level (Foundation Room)  
5666 East State Street, Rockford

“What it Takes to Run a Club & Repeater Dos and Don'ts”

## Local Events and Information

March 8, 2024 RARA Membership Meeting 7:00pm

March 27, 2024 RARA Board Meeting 7:00pm on Google Meet

### 2024 RARA Officers and Board

#### **Officers:**

President - Tom Souler, N9VJU, 815-633-0089, [n9vju@comcast.net](mailto:n9vju@comcast.net)

Vice President - Larry McFall, KD9HKX, 815-900-1820, [lpmcfall@charter.net](mailto:lpmcfall@charter.net)

Secretary - Larry McFall, KD9HKX, 815-900-1820, [lpmcfall@charter.net](mailto:lpmcfall@charter.net)

Treasurer – Verna Schubert, KD9YUM, 815-505-8170, [schubie2@charter.net](mailto:schubie2@charter.net)

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Webmaster - Verna Schubert, KD9YUM, 815-505-8170, [schubie2@charter.net](mailto:schubie2@charter.net)

Repeater License Trustee - Gordon Seaman, KC9NEX, 815-262-0294, [kc9nex@gmail.com](mailto:kc9nex@gmail.com)

Repeater Chairman - Kurt Eversole, KE9N, 815-389-2784, [kurt.eversole@gmail.com](mailto:kurt.eversole@gmail.com)

### Local Net Information

**Mon** - 7:00pm - RARA Info. Net & CW Lesson, 146.610 (-) offset, pl 114.8  
8:00pm - McHenry Cnty. RACES Net, 146.835 (-) offset, pl 91.5

**Tues** - 7:00pm - Tech & Social Net & CW Lesson , 146.610 (-) offset, pl 114.8  
7:00pm - Rock County Public Service Net, 145.450 (-) offset, pl 123.0

**Wed** - 7:00pm - Stephenson Cnty. ARES Net, 147.390(+) offset, pl 114.8  
7:30pm - Greater Beloit Radio Net, 147.120 (+) offset, pl 123.0

**Thu** - 7:00pm - Northern Illinois Skywarn Training Net, 147.195 (+) offset, pl 114.8

**Fri** - 8:00pm - Friday Night Fun Net, KC9GCR, 146.610 (-) offset, pl 114.8

**Sat** - 8:00pm - Saturday Ragchew Net, 146.610 (-) offset, pl 114.8  
- 8:00pm - Pink Hamsters YL Net, Milw., 910 (-) offset, pl 127.3  
- 9:00pm - Saturday Night Fun Net Milw., 146.910 (-) offset, pl 127.3

**Mon. thru Friday** - 8:00am to 9:00am - Senile Net, 14.287 (HF USB)

## Local Events and Information

### Editor's Note

If you would like to have something published, please call me, or email me at [schubie2@charter.net](mailto:schubie2@charter.net)

Articles are welcome from all hams.

Share your special interest, whether building antennas, contesting, DX, Digital modes, Solar activity, etc. Currently seeking regular contributors for a "Back to Basics" column and to keep us updated on upcoming DX-peditions. Or join AC9GO and share your biggest goof!

We want to hear from you!

**Cut-off for the April 2024 Hamrag will be Sunday, March 31, 2024**

73, Verna—KD9YUM, Editor

### For Sale by RARA

Programmed Baofeng UV-5RTP Radios  
(just a few left)

\$30 each—pick up at Club Meeting

Contact Larry McFall, KD9HKX

815-900-1820—[lpmcfall@charter.net](mailto:lpmcfall@charter.net)

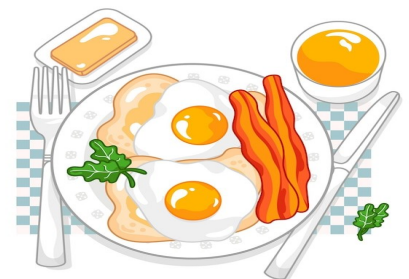


### **FRIDAY MORNING BREAKFAST**

Meets every Friday morning from 7:30 am until about 9:00 am.  
An informal gathering of ham folks, no affiliations necessary, good food  
and good company.

*Everyone is welcome to attend.*

*"The Spring Garden Family Restaurant"  
4820 N. 2nd Street  
Loves Park, IL 61111*



## Feature Article

### FORGET ABOUT SWR—WELL ALMOST By David Gauger W9CJS

“Aha”, said he, as the last small turn of an antenna tuner knob brought the indicated SWR down from 2.0 close to 1.1 on the meter. “Now I can work that DX.” Truth be told, he made only a very slight difference in the radiated power, so little as to be ignored.

High SWR sometimes does cause some problems, but we worry too much about it. Simply said, If we use open wire line, and the transceiver can feed it, SWR presents little to worry about.

There’s nothing wrong with trying to minimize SWR but putting it into perspective it is less satisfying. Suppose we consider a 100 watt station feeding a three element Yagi with RG-8 coax and let’s say that the coax is 100 ft long just for an illustration.

Most any good antenna book has a set of curves depicting how much EXTRA loss is caused by an SWR other than 1:1. Joe Reisert W1JR has a little chart in my ARRL Handbook which tells us.

Supposing we have an SWR at the antenna of 2:1. According to the cable specifications, our 100 ft of RG-8 typically has about 0.7 dB residual loss, if used at 14Mhz. Joe’s chart says that loss due to SWR will be an extra 0.25 dB Whoopie! our total loss will be on the order of 1dB which would approximate 1/6th of an S-unit. Losses rise significantly with the operating frequency. This same setup on 2meters would have much greater loss because coax losses increase with frequency.

#### **STANDING WAVES**

Standing waves are caused by reflections and only reflections. I send energy waves up a transmission line to my antenna and hopefully all of it is radiated. If some portion of it is reflected back, then this interacts with the outgoing waves to produce wave interference” (physics terminology for these interactions) which do stand in place, thus the name ‘standing waves’.

#### **WHERE DO REFLECTED WAVES COME FROM**

Waves will be reflected back along the line from an antenna whose input impedance  $Z$  does not match that of the line. Reflections also can occur from coax connectors, splices or changes in impedance, and bends in the feeder that are too sharp. Especially at VHF and UHF, poorly designed coax connectors can reflect a surprising amount of the applied power.

EM (electro-magnetic) energy waves do not stand, they move close to the speed of light, but the interactions between incident and reflected EM waves **do stay** in one place. With standing waves there will be regular points all along the line where the voltage and current is higher or lower than normal. In the transmitted energy, as the voltage rises, the current falls but the product of the two at any instant is still 100 watts, voltage peak, current minimum.

The loss of efficiency is primarily at standing wave points which do not move, they are stationary. Therefore a point of extra high current produces extra heat losses and a voltage peak produces extra dielectric losses. All energy losses end up as heat.

## Feature Article

### **HOW MUCH IS THE NORMAL CURRENT AND VOLTAGE**

Let's consider 50 ohm RG-8 carrying 100 watts from the transceiver to antenna on 20m with no standing waves.

Characteristic impedance of a transmission line is determined by the physical materials, geometry and dimensions. You've seen 50 ohm, 72 ohm 90 ohm coax and perhaps 300 ohm TV type twin lead and 600 ohm open wire lines.

This impedance value means this particular type of transmission line is **most efficient** with the voltage to current ratio of 50 for 50 ohm coax lines and a ratio of 300 for 300 ohm ladder lines and so on. Will it work with other than 1:1 SWR? Certainly, but the dielectric losses and the ohmic losses will both increase. The chart below shows the RF voltages and currents along typical transmission line types.

At 100 watts, 1:1 SWR			E / I	E x I	
TYPE	IMP Z	FVOLTS	RFAMPS	RATIO	RF PWR
-----	-----	-----	-----	-----	-----
COAX	50 OHM	70.7	1.41	50.1	100W
COAX	72 OHM	84.8	1.18	71.8	100W
TWINLEAD	300 OHM	173.2	0.58	299.9	100W
OPEN WIRE	2000 OHM	447.2	0.22	2032.7	100W

NOTE: The ratio of voltage to current for each type of feeder equals the name designation. That is, 50 ohm cable has a most efficient voltage to current ratio of 50:1 and similarly 300 ohm ribbon has a most efficient voltage to current ratio of 300:1.

This is true, but the engineers among us will include phase angles, wave propagation factors and so on. These are real considerations but at the fundamental level we're speaking here, they only complicate things.

Think about a transmission line carrying exactly 100 watts to your antenna. If the antenna accepts and radiates all of the 100 watts, then the SWR=1:1 and at **all points** along the line, the voltage and current will be the same, what ever values they have.

Now, if we have standing waves, these add to and subtract from both the voltage and current at fixed points along the line. The higher the SWR, the higher the peak voltage and peak currents will be and the higher the losses which follow.

With SWR other than 1;1 the Max voltage will rise and the max. current will rise but at different points along the line. At every point the product of E x I will give the same power. Let's say the SWR reads 5:1. Because this is true, the maximum voltage at points along the line compared with the minimum voltage at the alternate points will still retain the same 5:1 ratio.

## Feature Articles

### **WHY DO WE CARE ABOUT SWR?**

If it gets too high, the transceiver output may be damaged. Most modern transceivers self-protect by using internal circuitry which folds back the output power to prevent damage.

Secondly, our antenna tuner may not be able to match some highly inordinate impedance. If the SWR is not 1:1 the tuner will see not only resistance, but also inductive or capacitive reactance. The tuner simply adds inductance to “add out” the capacitive reactance or adds capacitance to “add out” the inductive reactance. We’re back to 1:1 SWR. A mobile whip is far too short for 20m and has high capacitive reactance, so we add a Hustler loading coil. We’ve achieved what engineers call a conjugate match.

If we are using open wire line, where the ohmic and dielectric losses are extremely low, WE DON’T CARE WHAT THE SWR IS. If your transceiver can feed power to the line, then Let’s rip. But if the Transceiver refuses, that can be easily solved.

Enter the transforming balun. Part of a balun’s function is to be an RF transformer. If the balun transforming ratio is proper, it can make the 600 ohm open-line look like 50 ohms and the transceiver breathes a sigh of relief. Again, all is well with the world.

### **TO SUMMARIZE**

1. We tend to place too much emphasis on achieving 1:1 SWR
2. SWR is not always bad, it can be but is easily handled.
3. SWR losses are much higher at VHF and UHF than they are on HF.
4. An SWR of 2:1 does NOT mean that half our power is lost, actually, much less loss
5. Coax prefers that SWR be held in check.
6. Open wire can handle with very low losses most any SWR.

### **NEXT TIME**

Another antenna myth, or two.

## Congratulations!

John Alcock NG9M - POTA Hunter Award for working at least one Parks on the Air entity in each US State! Additionally, John is the top Activator at Rock Cut Park and has reached over 500 QSOs. His personal goal is 1,000!



Corey Grant KD9ZTZ— son of Kevin Grant W9KLG, received his technician ticket!

Matt Marshall W3MBX— featured in the March online issue of QST for his participation in the ARRL 2023 Rookie Roundup!

Greater Beloit Amateur Radio Club (GBARC) on their 60-year anniversary and successful on-air special event which ran from February 14-29.

## Feature Article

### I Goofed by Larry Schubert AC9GO

I remember a piece of advice the Jim Holich (SK) gave me some years ago shortly after I received my extra license back in 2012. Jim was the leader of RARA's licensing group and very active in ham radio, and I a great guy I might add. I don't remember what bone head thing I did at the time, but I remember telling Jim about it, and saying that wasn't something that you would expect out of someone with an extra class license. The thing Jim said has stuck with me since then, and it really made sense and hit home for me at the time. Jim said and I paraphrase it " You know people think that the extra class license makes you an expert in amateur radio, but actually it just gives you a chance to make bigger mistakes."

You know we are all just amateurs, and I truly don't remember what nutty thing I did at the time, but I can tell you about a couple of things that I have done over the years. Like the time I was sitting in my shack a number of years ago only to see a steady flow of water headed into my amplifier. I remember rushing to turn everything off and then pulling plugs, but it took me a few minutes to figure out where the water was coming from. I first looked at the ceiling which was dry, and the water seemed to be coming from the outside. I ran up stairs and out the back door into a rain storm, and around the side of the house. There it was. I had forgot to put a drip loop at the bottom of the coax before it goes into the house. With lightning and heavy rain underway, there is definitely a better time to grab hold of a coax that is hooked to antenna about 30 or 40 feet in the air, but there I was soaking wet, and I didn't need any more water around or in my equipment. I grabbed the coax and pulled it out far enough to make the drip loop at the bottom, hand formed it, and ran back into the house. By the time I got back to the shack the water had stopped running down the coax, but one thing I'll say. "For any antenna I've put up since that time, I have never forgot the drip loop at the bottom of the coax since that time.

The other thing that I remember doing that I'll never forget is tuning up a transceiver back-words. SWR meters didn't use to have crossing needles to show forward and reverse SWR. By the way the old style SWR meters are still for sale at the hamfests and such. The way they work is you tune the forward side for peek output adjust the needle to 100 %, and then flip the switch to reverse to read the power coming back to the transmitter. The object is to get the output as high as possible and the reverse as low as possible. I was using a Heathkit HW-101, on 80 meters. Somehow I ended up with the meter in reverse, and thought it was in forward. By now some of you are saying, " I'll bet I know what that fool did" and you would be right. I proceeded to tune the transceiver up to full power in reverse rather than forward. Needless to say the HW-101 didn't like that, and let out some of that magic smoke to let me know. Too much of the magic smoke got loose, and when that happens, there is no way to put it back into the unit. There was a choke in the output section that bit the dust, and took the brunt of the damage as well as a scorched circuit board. I tried a few places to get a choke, but wasn't able to find one, and finally ended up selling the unit for parts. Another lessen learned. That was an expensive one, and I hope you never have to learn one that costly.

73.....Larry AC9GO

## Feature Articles

### Skywarn by Joe Perry, K9JPP



#### Why is Skywarn important?

Skywarn allows us to confirm what the National Weather Service (NWS) thinks they see on radar. We are so far from any radar station that the NWS cannot rely on just what their computers show. The radar beam does not follow the planet's curvature, making it hard for radar to see what is below 10,000 feet this far out. The NWS needs as many eyes on the sky as possible.

#### What can I do?

Become a certified weather spotter. You do not have to report via the net. You can call the NWS directly. You can also report from home. There is no need to leave the safety of your own home. There are tools you can use to make good reports. Measured amounts are best but if you can estimate that is fine too.

#### What do I report?

The primary purpose of a Skywarn Spotter is to report what you see in the sky. Remembering the What, Where, and When is a good rule of thumb. The Nation Weather Service has specific requirements of what they need to know. How strong are the winds? They are looking for winds above 55 MPH, rain falls greater than 1 inch per hour, and hail that is 1 inch or greater. Anything else is not reportable. And of course, if you see a tornado, they want to know that too.

#### Where do I make my report?

You can call the NWS in Romeoville, IL. Use our local ham radio net on 147.195. You can also call 911. Remember the three W's, what, where, and when. This will make for a more concise report. The better the report, the more useful it is.



## Feature Articles

### It Does Not Matter by John Alcock NG9M

I think it is safe to say we are all ready for those summer night openings on the higher bands well after the sun goes down. As someone who works with compromised antennas at the QTH, I sure am. When I obtained general, I asked around every ham fest, talked to a few others that I knew at the time, and posted countless message boards. A word of advice stay away from the message boards and forums. I would stress out about my antenna and almost everyone under the sun told me that my antenna ideas for the property wouldn't work and it's a compromise. After many weeks of confusion and frustration as a new ham I can finally say this about antennas "It Does Not Matter"

Every antenna is a compromise, has tradeoffs, and any other phrase you can think of. Not a lot of us can place a 40m dipole at the optimum height. I can guarantee you that none of us live in "Free Space" that is often talked about in books and antenna modeling software. Do you remember building your first dipole? You probably learned the lesson "everything affects everything".

I was getting anxious to get on the HF bands, so I bought a 40-10m EFHW and got on the air with a motorcycle battery and a Xiegu X108G. The way it was configured was not ideal (even for a EFHW antenna). However, I keyed up the radio and the SWR was 1.5:1. I quickly made my first HF contact ever to South Carolina.

As my confidence grew with HF, I started experimenting with different antennas and found the best antenna that works for MY situation. While at my QTH I usually run a 9:1 UnUn with around 40' for the radiating element, and 17' for the counterpoise. Is it a compromise? Absolutely. But it allows me to work 40-10m without much issues. I have even been able to make a couple 80m SSB QSOs around the Midwest.

A few weeks ago, there were some amazing openings into Europe on the higher bands. I was able to work those stations with little issues, thanks to the solar cycle and those contesting stations running stacked Yagi antennas. The most memorable QSO was Australia on CW.

We are heading into those fun Summertime openings during what might be considered the height of the Solar Cycle 25. I am here to encourage you, the reader, to get any wire up in the air. A compromised antenna is better than no antenna. Do not make the same mistake that I made and stress out about it and just remember "It Does Not Matter".

## Communicating with Other Hams

### Contact Basics: Good Amateur Practices

#### Q-Signals

Q-signals are a system of radio shorthand as old as wireless and developed from even older telegraphy codes. Q-signals are a set of abbreviations for common information that save time and allow communication between operators who don't speak a common language. Modern ham radio uses them extensively. The table below lists the most common Q-signals used by hams. While Q-signals were developed for use by Morse operators, their use is common on phone, as well. You will often hear, "QRZed?" as someone asks "Who is calling me?" or "I'm getting a little QRM" from an operator receiving some interference or "Let's QSY to 146.55" as two operators change from a repeater frequency to a nearby simplex communications frequency.

Q-Signals		ITU Phonetic Alphabet		
Abbr.	Questions	Letter	Word	Pronunciation
<b>QRG</b>	Your exact frequency (or that of _____) is _____ kHz. Will you tell me my exact frequency (or that of _____)?	A	Alfa	<b>AL FAH</b>
<b>QRL</b>	I am busy (or I am busy with _____). Are you busy? Usually used to see if a frequency is busy.	B	Bravo	<b>BRAH VOH</b>
<b>QRM</b>	Your transmission is being interfered with _____ (1. Nil; 2. Slightly; 3. Moderately; 4. Severely; 5. Extremely.) Is my transmission being interfered with?	C	Charlie	<b>CHAR LEE</b>
<b>QRN</b>	I am troubled by static _____, (1 to 5 as under QRM.) Are you troubled by static?	D	Delta	<b>DELL TAH</b>
<b>QRO</b>	Increase power. Shall I increase power?	E	Echo	<b>ECK OH</b>
<b>QRP</b>	Decrease power. Shall I decrease power?	F	Foxtrot	<b>FOKS TROT</b>
<b>QRQ</b>	Send faster (_____wpm). Shall I send faster?	G	Golf	<b>GOLF</b>
<b>QRS</b>	Send more slowly (_____wpm). Shall I send more slowly?	H	Hotel	<b>HOH TELL</b>
<b>QRT</b>	Stop sending. Shall I stop sending?	I	India	<b>IN DEE AH</b>
<b>QRU</b>	I have nothing for you. Have you anything for me?	J	Juliet	<b>JEW LEE ETT</b>
<b>QRV</b>	I am ready. Are you ready?	K	Kilo	<b>KEY LOH</b>
<b>QRX</b>	I will call you again at _____hours (on _____kHz). When will you call me again? Minutes are usually implied rather than hours.	L	Lima	<b>LEE MAH</b>
<b>QRZ</b>	You are being called by _____ (on _____kHz). Who is calling me?	M	Mike	<b>MIKE</b>
<b>QSB</b>	Your signals are fading. Are my signals fading?	N	November	<b>NO VEM BER</b>
<b>QSK</b>	I can hear you between signals; break in on my transmission. Can you hear me between your signals and if so can I break in on your transmission?	O	Oscar	<b>OSS CAH</b>
<b>QSL</b>	I am acknowledging receipt. Can you acknowledge receipt (of a message or transmission)?	P	Papa	<b>PAH PAH</b>
<b>QSO</b>	I can communicate with _____ direct (or relay through _____). Can you communicate with _____ direct or by relay?	Q	Quebec	<b>KEH BECK</b>
<b>QSP</b>	I will relay to _____. Will you relay to _____?	R	Romeo	<b>ROW ME OH</b>
<b>QST</b>	General call preceding a message addressed to all amateurs and ARRL members. This is in effect "CQ ARRL."	S	Sierra	<b>SEE AIR RAH</b>
<b>QSX</b>	I am listening to _____ on _____kHz. Will you listen to _____ on _____kHz?	T	Tango	<b>TANG GO</b>
<b>QSY</b>	Change to transmission on another frequency (or on _____kHz). Shall I change to transmission on another frequency (or on _____kHz)?	U	Uniform	<b>YOU NEE FORM</b>
<b>QTC</b>	I have _____messages for you (or for _____). How many messages have you to send?	V	Victor	<b>VIK TAH</b>
<b>QTH</b>	My location is _____. What is your location?	W	Whiskey	<b>WISS KEY</b>
<b>QTR</b>	The time is _____. What is the correct time?	X	X-Ray	<b>ECKS RAY</b>
		Y	Yankee	<b>YANG KEY</b>
		Z	Zulu	<b>ZOO LOO</b>

**Note:** The **boldfaced** syllables are emphasized. The pronunciations shown in this table were designed for those who speak any of the international languages. The pronunciations given for "Oscar" and "Victor" may seem awkward to English-speaking people in the US.

# Basic Resources



## US Amateur Radio Bands

Operator license classes: **E** = Amateur Extra **A** = Advanced **G** = General **T** = Technician **N** = Novice  
 CW operation is permitted throughout all amateur bands. Except as noted, all frequencies are in megahertz (MHz).

■ = RTTY, data, phone, image   
 ■ = USB phone, RTTY, data and CW   
 ■ = RTTY and data   
 ■ = phone and image  
■ = SSB phone   
 = CW only

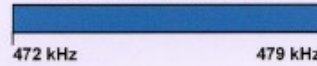
### LF – Low Frequency band

**2200 Meters (135 kHz) E,A,G**  
 1 W EIRP maximum

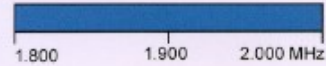


### MF – Medium Frequency bands

**630 Meters (472 kHz) E,A,G**  
 5 W EIRP max, except in Alaska within 496 miles of Russia where the limit is 1 W EIRP



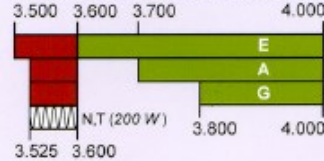
**160 Meters (1.8 MHz) E,A,G**



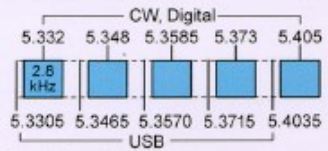
Amateurs wishing to operate on **2200 or 630 meters** must first register with the Utilities Technology Council online at <https://utc.org/plc-database-amateur-notification-process/>. You need only register once for each band.

### HF – High Frequency bands

**80 Meters (3.5 MHz) E,A,G,T,N**

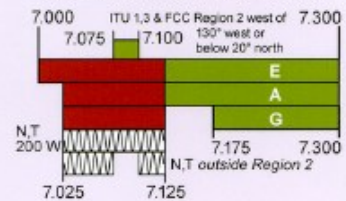


**60 Meters (5.3 MHz) E, A, G (100 W)**

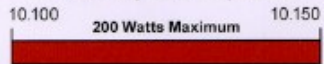


Gen, Adv, and Extra licensees may operate on a secondary basis with a maximum ERP of 100 W maximum.

**40 Meters (7 MHz) E,A,G,T,N**



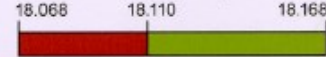
**30 Meters (10.1 MHz) E,A,G**



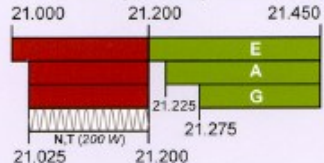
**20 Meters (14 MHz) E,A,G**



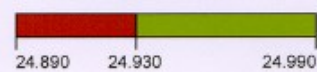
**17 Meters (18 MHz) E,A,G**



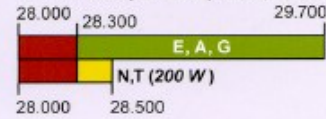
**15 Meters (21 MHz) E,A,G,T,N**



**12 Meters (24 MHz) E,A,G**

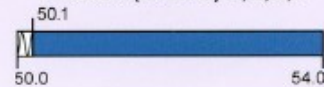


**10 Meters (28 MHz) E,A,G,T,N**



### VHF – Very High Frequency bands

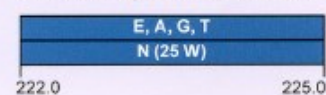
**6 Meters (50 MHz) E,A,G,T**



**2 Meters (144 MHz) E,A,G,T**

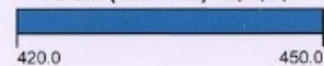


**1.25 Meters (222 MHz) E,A,G,T,N**

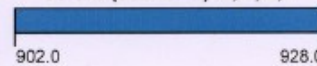


### UHF – Ultra High Frequency bands

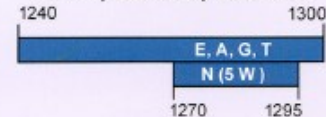
**70 cm (420 MHz) E,A,G,T**



**33 cm (902 MHz) E,A,G,T**



**23 cm (1240 MHz) E,A,G,T,N**



### SHF&EHF – Super and Extremely High Frequency bands

All licensees except Novices are authorized all modes on the following frequencies:

2300-2310 MHz	3300-3500 MHz	10.0-10.5 GHz	47.0-47.2 GHz	122.25-123.0 GHz	241-250 GHz
2390-2450 MHz	5650-5925 MHz	24.0-24.25 GHz	76.0-81.0 GHz	134-141 GHz	All above 275 GHz

See [www.rrl.org/band-plan](http://www.rrl.org/band-plan) for detailed band plans.

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 OTAbands rev. 1-22-20

## DX Breaking News

**Press Release** – The Dateline DX Association is pleased to announce it has received permission from the USFWS for a DXpedition to Jarvis Island National Wildlife Reserve this August. Jarvis is ranked nr. 18 on Club Log’s global most wanted list. It is number 9 in Europe. Jarvis Island is 450 miles from Palmyra Atoll and 1500 miles from Hawaii.

Jarvis was last on the air in 1990 and permission to visit has been difficult to obtain. We have worked very hard for the past few years on this permission and after demonstrating the success of the RIB concept with remote operators from various locations in 2023 we have

received a permit that allows 4 operators on the boat to visit Jarvis with 6 stations on land.

The small team of four, consisting of George, AA7JV, Don, N1DG, Tomi, HA7RY and Mike, KN4EEI, will install 6 RIB stations on Jarvis, operating on 160 to 6-meters, using CW, SSB and FT8 modes. The on-island team will be augmented by 25 remote operators from Asia, Europe and North America, running CW and FT8. FT8 operations will use the Fox/Hound mode. The RIB equipment, which makes

an efficient small footprint operation possible, was developed with the support of the NCDXF.

We will be accompanied to Jarvis by a team of 3 USFWS biologists conducting science. Callsign, website and additional information will be announced shortly.

We wish to thank the staff of the USFWS in Hawaii for their hard work in approving this minimally invasive operation on Jarvis Island NWR.

73 George AA7JV and Don N1DG, permit holders for the Jarvis Island NWR 2024 DXpedition.

For more DX-Pedition news and current expeditions — <https://dxnews.com/dxpeditions/>

### What is a DX-pedition?

A DX-pedition is an expedition to what is considered an exotic place by amateur radio operators and DX listeners, typically because of its remoteness, access restrictions, or simply because there are very few radio amateurs active from that place. This could be an island, a country, or even a particular spot on a geographical grid. DX is a telegraphic shorthand for “distance” or “distant”. Some locations are rare due to their extreme inaccessibility, such as Clipperton Island, Navassa Island or Desecheo Island.

## Upcoming Testing

Looking to upgrade or know someone looking for a testing location?

More information available at [ARRL.org](http://ARRL.org)

- **03/09/2024 | [McHenry IL 60050-4422](#)**

**Sponsor:** NW IL S WI Amrron

**Location:** McHenry Masonic Lodge

**Time:** 10:00 AM (Walk-ins allowed) [Learn More](#)

- **03/16/2024 | [Janesville WI 53545-3024](#)**

**Sponsor:** Wisconsin Area VEs (WAVE)

**Location:** Saint John Lutheran Church

**Time:** 1:00 PM (Walk-ins allowed) [Learn More](#)

- **03/17/2024 | [Jefferson WI 53549-1020](#)**

**Sponsor:** Tri-County ARC Hamfest 2024

**Location:** Jefferson Co Fairgrounds (Activity Center)

**Time:** 9:30 AM (No Walk-ins / register or Call ahead) [Learn More](#)

- **03/19/2024 | [Dixon IL 61021](#)**

**Sponsor:** Sterling Rock Falls ARS

**Location:** Sauk Valley Community College

**Time:** 9:00 AM (Walk-ins allowed) [Learn More](#)

- **03/30/2024 | [Milwaukee WI 53223-4736](#)**

**Sponsor:** MRAC VEC, Inc

**Location:** Ham Radio Outlet

**Time:** 9:30 AM (Walk-ins allowed) [Learn More](#)

- **04/06/2024 | [Freeport IL 61032-4116](#)**

**Sponsor:** Stateline Amateur Radio Club

**Location:** Freeport Public Library

**Time:** 12:30 PM (Walk-ins allowed) [Learn More](#)

- **04/06/2024 | [Madison WI 53715-2143](#)**

**Sponsor:** Four Lakes ARC

**Location:** Univ of WI Space Place

**Time:** 8:00 AM (Walk-ins allowed) [Learn More](#)

# Hamfests & POTA Campout

# Hamfest 2024

Buy/Sell Amateur Radio Equipment, Electronics and Computer Gear



**Sunday**  
**March 17, 2024**



**Free Parking!**

**ADVANCE SALES: Admission: \$8 8' Table Space - \$15/ea**  
**AT THE DOOR: Admission: \$10 8' Table Space - \$25/ea**

**Amateur Volunteer Exams starting at 9:30 AM**  
**— By Appointment Only —**  
You **MUST** contact the Club at [TCARC@W9MQB.org](mailto:TCARC@W9MQB.org) in advance  
to make an appointment OR register online. **Your FRN Number is Required**

**Presented by: TRI-COUNTY AMATEUR RADIO CLUB - W9MQB**  
**Talk-in on the 145.49- Repeater (CTCSS 123.0)**

JEFFERSON COUNTY FAIR PARK  
ACTIVITY CENTER  
503 NORTH JACKSON AVE.  
JEFFERSON, WI 53549

- Vendors will be admitted at 6:30 AM
- Vendors-only unloading zone on West side
- Food and beverages available
- General Admission and Sales begin at 8:00AM



Take I94 to Exit 267 (Johnson Creek), Head South on 26 to the Hwy 18 Exit. Exit East on Hwy 18 and turn left onto Jackson Ave. Look for the Fair Park sign.



Next year's date: March 16, 2025



Register online at <https://www.W9MQB.org/SwapFest>

### Mail-In Registration Form

Admission: \_\_\_\_\_ X \$8.00 = \$ \_\_\_\_\_ Note: Table Reservation does not include Admission.

8' Tables: \_\_\_\_\_ X \$15.00 = \$ \_\_\_\_\_ Total Amount Enclosed: \$ \_\_\_\_\_

Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Email: \_\_\_\_\_ Call Sign: \_\_\_\_\_

Street: \_\_\_\_\_

City \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Mail-In Reservations require that we receive your payment BY MARCH 1<sup>st</sup> with a self-addressed, stamped envelope at:

**TCARC Hamfest 2024, P.O. Box 321, Fort Atkinson, WI 53538**

Questions? Call Michael Zore (AE9MZ) at 414-455-5493 or Email: [hamfest@w9mqb.org](mailto:hamfest@w9mqb.org)



## **Sterling-Rock Falls Amateur Radio Society**

### **62<sup>nd</sup>. ANNUAL HAMFEST** **Sunday – March 17, 2024**

Sauk Valley Community College GYM  
173 IL. Rt. 2 Dixon, IL.

Large indoor flea market, radio, electronic, and hobby items. Free parking on both sides of the building. All tables with or without electricity **\$9.00**. IT IS NECESSARY TO BRING YOUR OWN DROP CORDS AND CARTS. **Setup Saturday 4-8PM. and Sunday** beginning at 6AM. Doors open to public at 7:30AM Sunday. Venders enter east side: Public enter west side. **Rolls, Coffee and Soda** will be available in eating area.

Advance Tickets **\$8.00**

At the Door Tickets **\$10.00**

For advance tickets and tables write to S.R.F.A.R.S. PO Box 521 Sterling IL. 61081, E-mail [w9mepclub@hotmail.com](mailto:w9mepclub@hotmail.com). Make sure all checks are payable to the Sterling-Rock Falls Amateur Radio Society (SRFARS). Advance ticket orders to be received by March 3, 2024. Please send SASE. Talk in 146.850 W9MEP repeater, PL 114.8. Visit our website at [www.w9mep.com](http://www.w9mep.com) for information and registration.

**We will have VE Testing from 9:00am to 11:00am**

**Due to problems in the past, there will be NO SALES before 7:30am Sunday morning.**

53<sup>rd</sup> Annual

# Madison Hamfest

Sponsored by MARA, the Madison Area Repeater Association  
A Non-Profit Organization

**Saturday April 13, 2024**  
**8:00 AM until 12:00 PM**

The MARA Hamfest features vendors of new and used equipment for Amateur Radio, Electronics, Computers, computer parts and software. Come see our huge Flea Market in the Mandt Community Center's spacious 26,000 sq ft main hall.

**VE testing starts at 10:00 AM.**

Vendor space is sold on a "first come, first served bases"

**Location:** Mandt Community Center (Same location since 2000)  
**GPS:** North 42.91157 West 89.21647  
**Address:** 400 Mandt Parkway, Stoughton, Wisconsin  
**Directions:** Take US Hwy 51 South from Madison to downtown Stoughton, WI.  
Turn South on 4<sup>th</sup> Street and the Mandt Center is 3 blocks ahead on the left  
**Talk in:** MARA's Wide Area Repeater 147.150 MHz (+600) pl 123.0  
**Parking:** Free  
**Seller Setup:** Friday night 6:00 PM to 8:00 PM and Saturday morning, 6:00 AM

## Ticket, Table and Chair Prices

Tables are limited to availability!

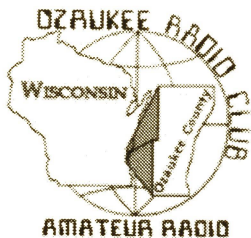
<b>Hamfest general admission tickets:</b>	Purchased on website	\$8.00 per person
<b>Ages 12 and younger: FREE</b>	At the door <b>CASH ONLY!</b>	\$10.00 per person
<b>Eight-foot vendor table fees</b>	Purchased by March 25	\$20.00
Admission tickets are <b>NOT</b> included	After March 25	\$25.00
In the price of tables		
<b>Chairs</b>		\$5.00
<b>AC Service</b>		\$30.00
Admission ticket along with table rental is <b>Required</b>		<b>At the door is CASH ONLY</b>

MARA is not responsible for theft or damage. All orders are final – No refunds.

Hamfest tickets, and vendor table space can be purchased at the MARA website: [www.w9hsy.org](http://www.w9hsy.org) If you have questions about purchasing tickets, chairs, table space. Please check the web page or contact us by e-mail at [hamfest@w9hsy.org](mailto:hamfest@w9hsy.org)



The Ozaukee Radio Club presents its 44th Annual Spring Indoor  
**Amateur Radio, Electronics & Computer**



# SWAPFEST



featuring **TOWER ELECTRONICS!**

Saturday, April 27, 2024 – 8 AM to 12 PM (setup begins at 6 AM)

Ascension Columbia St. Mary's Center (Milwaukee Curling Club)  
W67N890 Washington Ave., Cedarburg, WI 53012

Talk-in: 146.97 MHz – PL 127.3 Hz

Door Prizes! Free WIFI

Food sold by Cub Scout Pack 516/586

Admission: \$7.00 at the gate

Children 12 and under FREE, with a paid adult admission

6 ft. Tables: \$12.00 in advance, \$15.00 at the door, if available

Use the Order Form below, email, or call Tom Trethewey, KC9ONY at 262-421-6351

Email: [swapfest@ozaukeeradioclub.org](mailto:swapfest@ozaukeeradioclub.org)

More information: <http://www.ozaukeeradioclub.org/> or <http://www.facebook.com/orcwi>

For Advance Tickets and Tables, send check with a **SASE** (Business-Size #10 envelope) to:  
Tom Trethewey, KC9ONY- W69N905 Evergreen Ct N, #202, Cedarburg, WI 53012-1170

Name: \_\_\_\_\_

Call sign: \_\_\_\_\_

Address: \_\_\_\_\_

Phone number: \_\_\_\_\_

Email: \_\_\_\_\_

No. of Tickets: \_\_\_\_\_ X \$7 = \_\_\_\_\_

(Advance tickets are double stub)

No. of Tables: \_\_\_\_\_ X \$12 = \_\_\_\_\_

Electricity: Yes (Add \$5) \_\_\_\_\_ No \_\_\_\_\_

Total Amount: \_\_\_\_\_

(Please make checks payable to ORC)



# The DeKalb Hamfest



Sponsored by the Kishwaukee Amateur Radio Club  
**Sunday...May 5, 2024...8am to 1:00 pm**  
 Vendor/Tailgate Setup—Saturday 1 PM to 9 PM  
 and Sunday 6 AM to 8 AM via Back Gate  
 \$8.00 Advance Ticket (Double-Stub—See Below)  
 \$10.00 Admission at the gate (Single Stub).

**Overnight Camping on Fairgrounds \$25 per night—Includes Electric and Sewer**

**Rain or Shine**  
**2 Large Buildings**  
**3 Cash Prizes**  
**Prize Drawings Every**  
**Half Hour**

**Free Outside**  
**Tailgating**  
**No VE Testing**  
**Chairs not furnished**

**Food Vendor: Hyvee**  
**Fairground Regulations**  
**Prohibit Vehicles in**  
**buildings**



**Always the First Sunday in May. May 5, 2024**  
**Sandwich Fairgrounds, Sandwich, IL**  
**(Just North of RT. 34 Intersection of SUYDAM and GLETTY Roads)**  
**TALK-IN: KARC Repeater 146.730 pl=100 (-) or 146.52 Simplex**  
**\*\*\*\* PLEASE USE MAIN GATE \*\*\*\***

**????????????? Questions ??????????????**  
**Phone: Bob Yurs—W9ICU—Hamfest Chairman at 815-757-3219**  
**Or e-mail w9icu@arrrl.net**  
**KARC Hamfest Webpage / Hotel Info: www.karc-club.org**

**Return to: KARC, PO Box 371, DeKalb, IL 60115**  
**Deadline: April 20, 2024 MUST INCLUDE SASE FOR ADVANCE TICKET SALES**

**Advance Tickets will not be for sale on site**  
 \_\_\_\_\_ **ADVANCE TICKETS @ \$8 each (Dual Stubs)**  
 \_\_\_\_\_ **INSIDE TABLES @ \$10 each (FREE TAILGATING)**  
 \_\_\_\_\_ **Total...Please make checks payable to KARC**

\_\_\_\_\_ **Telephone Number** \_\_\_\_\_ **e-mail address**  
 \_\_\_\_\_ **Call Sign**

# STARVED ROCK RADIO CLUB™

AMERICAN RADIO RELAY LEAGUE SANCTIONED HAMFEST 2024



HAM RADIO, RC MODELS,  
COMPUTER & ALL HOBBIES  
FLEA MARKET 6AM-1PM

AMATEUR RADIO HOBBYIST &  
COLLECTORS SHOW



**SUNDAY, JUNE 2nd 2024**  
**Indoor 8:00am to 1:00pm**

**MENDOTA TRI-COUNTY FAIRGROUNDS**  
**503 1<sup>st</sup> Ave, Mendota, IL 61342**

**ARRL VE TESTING 9:30am to 11:00am**  
**GRAND PRIZE CASH DRAWINGS \$50-\$75-\$100 at 12:00noon**

TICKETS \$8.00 ADVANCED (2 Stubs) or \$10.00 AT GATE (2 Stubs)  
ALL ADVANCED ORDERS MUST BE RECEIVED BY MAY 20<sup>th</sup> 2024  
GRAND PRIZE WINNERS NEED NOT BE PRESENT TO WIN.

- ✓ LARGE INDOOR EXHIBIT BUILDINGS - Indoor Setup: Sat 12noon to 6pm & Sun 6am to 8am
- ✓ TABLES \$10.00 ADVANCED OR AT THE GATE WITH FREE ELECTRICITY
- ✓ FREE OUTDOOR FLEA MARKET-TAILGATING AREA 6AM to 1PM
- ✓ ONSITE CAMPING-ELECTRICITY AVAILABLE – FEE BY FAIR BOARD
- ✓ HOURLY DOOR PRIZE DRAWINGS

FOR ADVANCED TICKET AND TABLE SALES OR GENERAL INQUIRIES: SEND A SASE TO  
SRRCTM C/O Hamfest Chairman, PO Box 198, Leonore, IL 61332-0198

E-mail: [starvedrockhamfest@gmail.com](mailto:starvedrockhamfest@gmail.com) or see our internet site for latest info [www.w9mks.org](http://www.w9mks.org)

I39 to Exit 72 US Rte 34, West to 1<sup>st</sup> Ave, South(Left) to Fairgrounds on Left.

GPS: N41.545580deg W089.108484deg ( N41deg 32.735min (44.08sec) W089deg 6.509min (30.54sec))

TALK-IN by SRRCTM Repeater - W9MKS 147.120 +103.5PL

BREAKFAST and LUNCH ON-SITE BY CATERER

**To keep Ticket prices down, DO NOT dispose of unwanted equipment on the fairgrounds.**

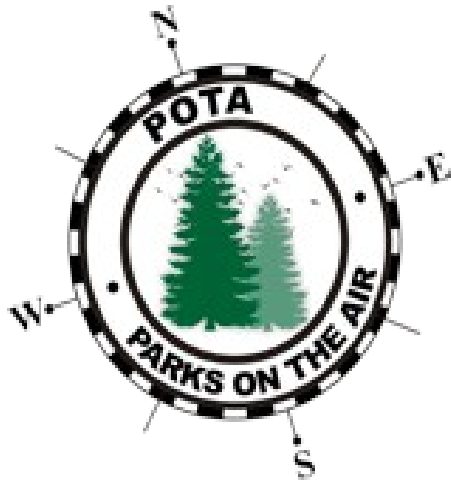
**If it doesn't sell or you can't give it away- Take it Home!**

MAIL WITH PAYMENT & SASE ENCLOSED TO:

SRRCTM C/O Hamfest Chairman  
PO Box 198  
Leonore, IL 61332-0198

Make checks payable to SRRCTM

Name: _____	QTY	ITEM	EACH	EXTENDED
Address: _____	_____	Advance Tickets	\$ 8.00	\$ _____
City: _____ State: _____ ZIP: _____	_____	Indoor Tables	\$10.00	\$ _____
Phone: _____		Total		\$ _____



## Northern Illinois POTA 2024 Spring Campout

Cliff N9BLE, Sean KD9CFO, Mike W9CPL, and Mike KD9OBF are hosting a spring campout and combined Parks on the Air event.

If you love both, we invite you to attend our first ever Northern Illinois POTA Spring Campout on March 22-24, 2024 at the Shabbona State Park campground in Shabbona State Park, ([POTA K-4103](#)). This event will be part social activity and part Parks on the Air activation. You can activate as little or as much as you want, in whatever mode you choose.

The sky is the limit. Learn new skills, see how other hams operate, and learn how to deal with interference when a bunch of hams get on the air at the same time. That's always part of the fun. The weekend is guaranteed to be a blast.

Dates and Location  
March 22-24, 2024

[Shabbona State Park Campground](#)



[Shabbona State Park](#)  
4201 Shabbona Grove Road  
Shabbona, IL 60550  
Park office: 815/ 824-2106  
Camp Hosts: 815/ 824-2565  
[Parks on the Air K-4103](#)

Notice: This is not a Parks on the Air sanctioned event. You are responsible for your own actions. Event hosts assume no liability.

**Alcohol is prohibited in the park.**

Here is a tentative outline of events that will form the basis of the weekend. As we get closer to the date, things might change.

- Friday evening social campfire
- Friday night – POTA activations, group and individual
- Saturday 10am - POTA 101 class for new activators
- Saturday all day - POTA activations, group and individual
- Saturday evening (5pm-ish) pot luck dinner (bring a dish to pass)
- Sunday morning – 8am Group coffee and donuts
- Sunday Till? – POTA activations, group and individual

Camp the entire weekend or just come out for the day/evening. We'd love to have you either way. The campsite fee is \$25.00 per night.

Due to the time of the year the Shabbona Lake SRA campground has available only 60 campsites that are on a first-come, first-serve basis.

All sites have electricity, picnic table, fire rings and vehicle access. A sanitary dump station is available to all campers. One family is allowed per campsite, or four unrelated adults with up to two tents. Campers must be ready to camp upon arrival.

Cliff, Sean, Mike, and Mike will be in sites 107, 108, 109. If you plan to attend please send an email to one of the fine gentlemen below. Remember the campsites are on a first come first serve basis.

Cliff N9BLE

[cliff.n9ble@gmail.com](mailto:cliff.n9ble@gmail.com)

Mike KD9OBF

[mikehauptman@comcast.net](mailto:mikehauptman@comcast.net)

Sean KD9CFO

[sean@soliloquyforthefallen.net](mailto:sean@soliloquyforthefallen.net)

Michael W9CPL

[cott31@comcast.net](mailto:cott31@comcast.net)

Please be aware that camping in March in Northern Illinois can run the gamut. The weather may be beautiful and sunny or it can be cold and snowy. Typically March in Northern Illinois we expect highs around 50 and lows down to 32. This event will happen rain or shine. Be prepared for changing weather conditions. If you need to cancel due to the weather, that is totally ok.

Communications: Since we are all amateurs and communications is the focus of the weekend, here is the repeater and simplex frequency we will use for the event. At the bare minimum please have the simplex ones programmed in your handheld so they can be used for in park P2P contacts:

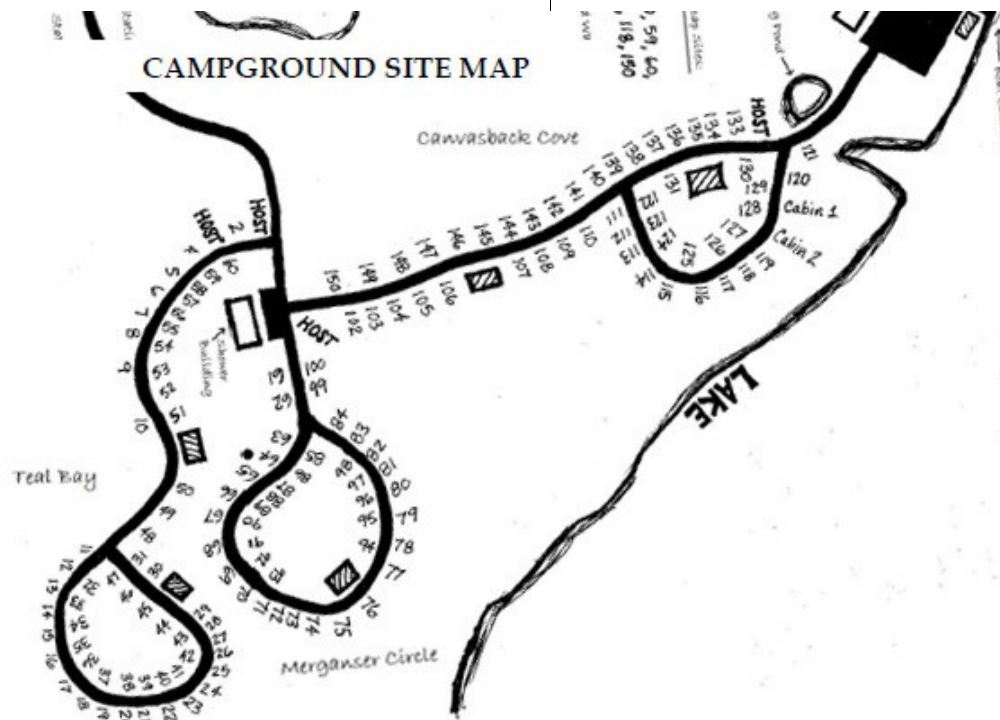
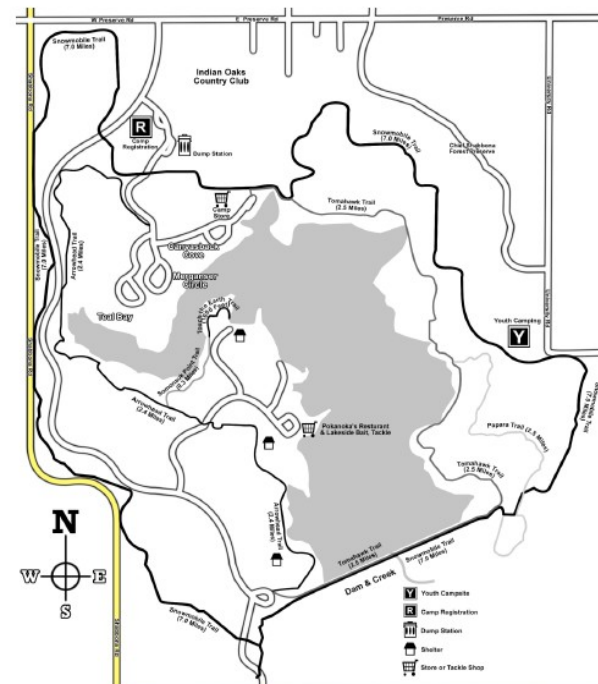
Simplex:

146.520 Mhz Simplex Talk-in and in park P2P channel

146.495 MHz Simplex event channel

Repeater:

146.730 (-0.6M, 100.0) WA9CJN, Dekalb. Primary Talk-in.





website: [w9axd.org](http://w9axd.org)  
email: [w9axdrara@gmail.com](mailto:w9axdrara@gmail.com)

# 2024 RARA Membership\* Form

## Dues are \$25.00

*(This is an editable PDF Form. Fill in the information with your keyboard, then save the PDF, and then attach it to an email to: [w9axdrara@gmail.com](mailto:w9axdrara@gmail.com). See below for mail in information and/or PayPal information)*

Date: \_\_\_\_\_ (mm/dd/yyyy)

Name: \_\_\_\_\_ Callsign: \_\_\_\_\_

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

Phone - Home: \_\_\_\_\_ Cell: \_\_\_\_\_

Can we release your e-mail and phone number to members only? Yes \_\_\_\_\_ NO \_\_\_\_\_

Are you a member of the ARRL (American Radio Relay League)? Yes \_\_\_\_\_ NO \_\_\_\_\_

What things do you like to do with ham radio?

\_\_\_\_\_

What things do you want to do, but need more information to do so?

\_\_\_\_\_

Would you be available to make a presentation on some part of our hobby and what?

\_\_\_\_\_

Do you have any questions that we can help you with presently? If so, explain below.

\_\_\_\_\_

**Mail In:** Please fill out all the information on the form and mail it with \$25.00 to the following address:

Rockford Amateur Radio Association  
P.O. Box 8465  
Rockford, IL 61126

Make your check payable to: Rockford Amateur Radio Association.

**For Internet application and payment:**

To use PayPal, click on the link below. After clicking "Send" and then logging in, enter \$25.00 in the "Dollar Amount", and click "Send", to complete your payment to RARA. Also, **DON'T** forget to email your completed form to: [w9axdrara@gmail.com](mailto:w9axdrara@gmail.com) for your membership application. *Thank you for your support!*

PayPal Link:



\*Membership is based on approval of the RARA Board. The membership fee will be returned if you are not approved. New memberships are good from 10-1-2023 thru 12-31-2024.