

HAM RAG



Visit our website for more club and area ham information
In the Rockford area at <http://www.w9axd.org>

RARA Mission Statement

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

Presidents Log

Greetings,

Here it is the first of November, and I'm guessing many of you are now thinking about finishing up those antenna projects we all have been thinking about since summer. With the advent of the cooler, (colder) weather, rain, and wind, it appears that fall is definitely upon us. The idea of going up the tower again is now being dictated more by the weather, and the shorter daylight available. I know three weeks ago would have been the perfect time to finish these jobs up, but tomorrow is always a better day to do those things. Enough mutterings about tomorrow and on to things I need to relay.

The first thing I would like to report on is the drawing for the afghan which had been scheduled for the November meeting. This has been changed by the board to be drawn at the banquet in January. The afghan was donated to the club with hopes of making a little money for the club, and we as a Board did not feel that we advertised the item very well. After debate, we decided to add a little more time for persons to see it and buy tickets if they were interested. I hope we can also make it available for those to see at the Friday morning breakfasts for those who do not come to the membership meetings. As before you do not have to attend the banquet or be present to win, and the tickets are \$1.00 each.

The next thing I would like to pass on is to keep an eye on your email account. There is a questionnaire almost ready to be sent out by the membership committee, looking for your views and ideas on the club. This is a new undertaking from a new committee hoping to find out what is working, and what could be changed, to increase participation within the club. Also they are looking for new ideas to help bring in some of the new hams we see being licensed every month. Your input and insights will be helpful, please fill them out and return your surveys. The club needs a direction from you our members, to help us improve what we already have and hopefully grow larger.

Sincerely,

Gordon Seaman, KC9NEX
2010 RARA President



November 2010

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NEXT MEETING

FRIDAY

November 12, 2010

7:00 pm

Presentation:

"MARS Program"

By:

Tom Shouler, N9VJU

Location:

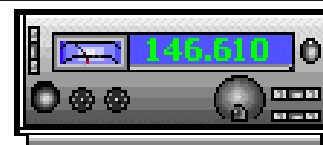
St. Anthony

OSF Medical Center

Foundation Room

5666 E. State Street

Rockford, IL



Latest news and events on our web page: <http://www.w9axd.org>

From the Vice President

Our guest speaker this month is Tom Shouler, N9VJU, who will talk about the MARS program. MARS is a segment of amateur radio in affiliation with the military services. It is another way that we amateur radio operators can use our communication skills to help others in our community. This part of amateur radio is not as well known as ARES is where we can use our skills during times of bad weather or disasters but another way we can be of assistance.

One of the nice things about amateur radio is that we can be helpful to others as well as have fun as we use our hobby. In my mind, using the equipment to help others helps justify my investment. I have especially liked helping with the various events such as the Head of the Rock Regatta, various running, walking and bicycle events. In addition to helping different organizations I got to learn about them as well. (After working my first marathon, I had a better appreciation for what it takes to be a marathon runner.) Helping with these events also helps us learn more about our equipment and aids in brushing up on our communication skills. The amateur radio folks organizing the events can always use some help with the events. Typically they involve 3-6 hours of our time. I know from first hand experience that the people we help really appreciate what we are able to do for them.

As chairman for Ham of the Year, I am still looking for more input. The deadline is at the December 10th club meeting. A form is available in the Ham Rag (October, November & December issues). You can also give me your selection at the club meeting or mail it. If you are not able to get the form, a handwritten or typed entry is also acceptable as long as it has the asked for information.

Next months program will consist of a couple of videos from past DXpeditions. (Thanks to John, W9JGO for making them available.)

73,
Gene, KA9BOD
2010 RARA VP

AWARDS BANQUET TO BE HELD JANUARY 8, 2011

Saturday January 8, 2011

Time: Social Hour 6:15 pm Dinner 7 pm

Location: Lino's Restuarant

5611 East State Street

Rockford, Illinois

Banquet Room Lower Level

Menu

Fish: Baked Cod	\$19.15
Chicken: Baked	\$17.18
Steak: New York Strip	\$25.19
Vegetarian: Lasagna	\$17.18
Appetizer: Relish tray with choice of dressing	

Price includes taxes and gratuities. CASH bar available. **Reservations DUE by December 31, 2010**

Make checks payable to: RARA

Mail checks to: Richard J. Fleming

525 Summer Street

Rockford, Illinois 61103-6161

Call Dick at 815-964-3423 with any questions

Reservations for 30 people are required to insure a private room

Secretary's Report



RARA Club Meeting October 8, 2010

The meeting was called to order by President Gordon Seaman, KC9NEX, at 7:04 pm. There were 22 members and guests present.

Gordy asked all present to introduce themselves along with their call sign and their interests. A special note: Steve, K9LLI, was early.

Secretary's Report: The minutes were published in the September *Ham Rag* and Al, KD9CA, had copies for anyone who needed one. John, N9OTC, made a motion to accept the minutes as published and Tom, N9VJU, seconded the motion. The motion carried.

Treasurer's Report: Gordy, KC9NEX, said that the report was published in the *Ham Rag*. Jim, AB9SX, made a motion to accept the report as published and Jimmy, KC9GOL, seconded the motion. The motion carried.

Old Business:

Gene, KA9BOD, reported that the Tech class at RVC had been cancelled since no one signed up for the class. He went on to say that the General class is still planned for three Saturdays in November. Saturdays November 6th, 13th, and 20th, 8am to 1 pm. The cost is \$35 and includes the manual.

New Business:

Ned, W9VOV, spoke about the need to get our youth interested in Amateur radio.

Jim, W4GFX, reported that Brad, AA9G, was the chairman of the membership committee and that he was on the committee along with Tom, N9VJU, and John, N9OTC. He said that several approaches to increase membership were being looked into.

Gordy, KC9NEX, reported that Scott Francis, KG9SF, had been elected by the Board to be the new W9AXD license trustee.

Dick, KC9BCB, the banquet chairman reported that the banquet will be held at *Lino's* the 2nd Saturday in January, January 8th. A sign up form will appear in next month's *Ham Rag*.

Gene, KA9BOD, said beginning in this month's issue and for the following two months there will be a form for the *Ham of the Year* award. He asked all to fill out the form nominating the *Ham of the Year* based on the nominee being a RARA member and exhibiting exemplary service to the Club.

Gordy, KC9NEX, said that Jim, AB9SX, is the Public Information Officer (PIO) for the Club. Information can be forwarded to Jim at jholich@comcast.net.

Gordy, KC9NEX, said no one has stepped forward to be next year's Officers or Board members.

Gordy asked for a volunteer for President, Vice President, Secretary, Treasurer and *Ham Rag* Editor.

Tom, N9VJU, said he would volunteer to be President, John, W9JGO, volunteered to be Treasurer and Jim, AB9SX, volunteered to be the *Ham Rag* Editor.

Fred, W9WOQ, made a motion to take a vote to elect these three volunteers and Al, KD9CA, seconded the motion. The motion carried.

Steve, K9LLI, and Al, KD9CA, said they would be Board members. Chuck AB9KA made a motion to accept both as board members and John, W9JGO, seconded the motion. The motion carried.

At 7:53 pm the meeting was turned over to Chuck, AB9KA, who gave an interesting and informative presentation on repeaters and how they operate.

When Chuck was finished Gene, KA9BOD, made a motion to adjourn and Jim, W4GFX, seconded the motion.

Submitted by,

Al KD9CA

RARA Secretary

HAM OF THE YEAR---2010 NOMINATION

The Ham of the Year is an honor that is presented to the R.A.R.A. member who has contributed the most to the club and to amateur radio in general during the year. This year the selection will be made by a committee established to evaluate the nominations of deserving candidates from those submitted by club members.

Your nominee should be chosen using two basic criteria: The nominee must be a R.A.R.A. member and should have performed exemplary service for amateur radio during the year 2010. We encourage you to take a few minutes to fill out the form below, or a facsimile, completing all of the requested information.

Nominations may be mailed to KA9BOD at the address below or handed to me at the next club meeting. All nominations must be received by December 10, 2010. They will remain confidential.

Your participation and early response will be appreciated.

Mail nominations to:

Gene Stankiewicz, KA9BOD

3531 Cross St.

Rockford, IL 61108

ka9bod@arrl.net

Nominee _____

Call _____

I nominate the above person for the RARA Ham of the Year-2010 award for the following reasons:

Signed _____ Call _____

VHF Contesting School: Information for Rovers by KC9BQA, edited by KE9N

I imagine you might get tired of hearing from me all the time. So here's some links I found on roving, and VHF Contesting from K0NR Bob. If you re-broadcast this info Bob asks you give credit to him. <http://www.k0nr.com/rwite/rover.html> There's good info here, plus some pictures of rover setups.

K0NR's article on getting started with VHF Contesting is at: http://www.k0nr.com/rwite/vhf_contest.html

An article by a newer rover was in the Oct. 2008 QST. It was written by K4GUN, and is a good read.

I'd also recommend spending time going thru the ARRL Contest Soapboxes. After every ARRL VHF/UHF contest, dozens of stations send in detailed write-ups of their effort, and there are many pictures there. The link is: <http://www.arrl.org/contests/soapbox/> and once you're there, use the drop down menu to select soapboxes from Jan, June, Aug. and Sept. V/UHF contests from various years. Lots of useful info.

If you want to make the maximum impact on a VHF/UHF contest, consider roving. You can go where you want, operate from high places and work stations you might never hear from a home QTH. You also increase activity by a factor of how many grids you choose to activate. In and near WI, there has traditionally been good rover activity. Some of my contest logs can have up to 20-30% of my total Q's from rovers, which all fixed stations greatly appreciate. Rovers can also work other rovers as they move thru different grids, so the more rovers, the merrier.

When you do make rover plans, be sure to share them with other contesters. Email your VHF/UHF reflector, notify your local club, talk things up ahead of the contest and generate your own activity.

UPCOMING RARA EVENTS

November 12 - General RARA Meeting 7:00 pm at OSF
"Update on the MARS Program" by Tom Shouler, N9VJU

November 30 - RARA Board Meeting 7:00 pm at OSF

December 10 - General RARA Meeting 7:00 pm at OSF
"A Couple of DXpedition Videos" provided by Gene Stankiewicz, KA9BOD

December 28 - RARA Board Meeting 7:00 pm at OSF

January 8, 2011 - 2010 RARA Awards Dinner
At Lino's Restaurant, Banquet Room, (lower level)

FRIDAY MORNING BREAKFAST

Meets every Friday morning from 8 am until about 9:30 am. An informal gathering of ham folks, no affiliations necessary, good food and good company.

Everyone is welcome to attend.

"The Stockholm Inn"
2420 Charles Street
Rockford, IL 61108



Notes on Tower Selection by Jim Elkins, W4GFX

These notes deal with some of the considerations in selecting an amateur radio tower. It is not a technical paper, but does consider the design factors found important by mathematical analysis, practical construction, and failure, of towers. We first look at the likelihood the tower will fall, and then the results of the fall.

What is the Probability a Tower will fall?

What is Probability? For those of you who have had the good fortune to avoid a course in statistics and probability, a few comments so we are speaking the same language. Probability deals with the likelihood of an occurrence, given a number of trials. An event with a probability of 0.1 (1 chance in 10 it will occur) is not likely, while an event with a probability of 0.9 (9 chances in 10 it will occur) is very likely. Good engineering practice uses the likelihood of events (strong wind, heavy ice, etc.) to determine design requirements. If your tower is in a location with frequent, heavy, radial ice, and/or winds, you must design for it, or replace your tower frequently. If we use the old Sears & Roebuck grades (good, better and best) "Good" in this note means a tower has a probability of not falling of 0.7, "Better" means it has a probability of not falling of 0.8, and "Best" means it has a probability of not falling of 0.9 or more. If you don't like the negative "0.7 probability of not falling," then flip them over to a 0.3, 0.2, or 0.1 probability of falling. They (0.7-no fall + 0.3-fall) always add to 1. Costs of a tower installation go up dramatically with increasing probability of no fall. Best costs more.

An Analysis of the Forces on a Tower. These forces are generally thought of in three classes.

1. *The axial force.* This force is the sum of the weights of the tower, antennas, mast, rotor, coax, etc., and the vertical component of the guy wires force. These are treated as pointing straight down. Axial forces are responsible for approximately 28% of tower failures.
2. *The shear force.* This is a wind force on the tower which tries to push or break the tower off at its base. Think of shear force as pointing horizontally and acting at the tower base. Shear force is responsible for 2% of the tower failures.

The compressive/stretching force. These forces appear on each side of the tower and try to tip the tower over. Think of them as acting at the top of the tower horizontally, so the tower becomes a great lever trying to break/bend itself off at the base. The compressive - stretching force is the killer of towers, especially those with fixed bases, and stretchy guys. Compressive force is responsible for 70% of tower failures.

The Rohn Catalog. This is not a commercial for Rohn towers, but the Rohn catalog is the *de facto* standard. Go to www.rohnet.com and have a look. Once you find your desired height, and loads (wind speed, weight, square footage, etc.), you are well on your way to a design selection. This catalog is a "soup to nuts" approach, telling you the tower size, guy size, base and anchor point sizes.

A Few Things Outside the Rohn Catalog. Kurt Andress, K7NV, has done stick analysis of the forces which kill towers at www.k7nv.com. A tower with a base in concrete (base can't rotate to relieve compression stress) and stretchy guys (top can rotate, lean and transfer forces to the base) is at greater risk of failure. A better design practice is to use a narrow, tapered pier and pin base, with guys which are large enough to minimize stretch. Pier bases and larger EHS steel guys cost more, but EHS steel guys stretch less. Fiber guys stretch more. If want to use a fiber guy, check to be sure the stretch is not more than the specified EHS steel. This stretch limitation will require you to increase the guy diameters of the fiber guys.

(continued on next page)

What are the Results of a Tower Fall?

The Tower Neighborhood. Where a tower is located is the first consideration of fall results.

Consider, a tower falls in

1. a rural area, upon which there are no other improvements or people. The result of the fall is the loss of the tower and the clean up cost. This tower can be designed as a “good” tower because of the reduced seriousness of a fall.
2. a residential neighborhood, but because the lots are small, it may fall upon a neighbor’s house, with resulting loss of the tower, damage to the property of another, injury, death, and clean up costs. This tower should be designed as a “better” or “best” tower.
3. a commercial location, upon which there are toxic materials. The fall will result in the loss of the tower, and may cause multiple injuries, deaths, etc. Think of a tower falling upon and rupturing a large tank of hydrocyanide gas on a windy day in a populated area. This should be designed as a “best” tower, with a low probability of fall.

The Tower Lot. The second consideration of fall results is what type of tower will be constructed. Is there room for guy wires? If yes, then a guyed tower may be selected. A guyed tower is the most cost efficient of tower designs for a given strength. If there is no room for guys, the tower will have to be self supporting, and will cost considerably more.

Rules of Thumb

1. Keep your strength up. Like an elephant hunter who uses “enough gun,” buy enough tower size to conservatively carry the axial and compressive loads. You can’t put a 25 sq. feet, 400 pound load, on a 100 foot Rohn 25 G in concrete, with 2 sets of 3/16” guys, and hope for the best. Hope will not keep it up.
2. Keep your loads down. The weight and square foot loads should be appropriate for the tower design. Give yourself a safety margin. It is good engineering practice to design for 2 or 3 times the loads indicated.
3. Keep the tower base out of the concrete. Don’t rigidly fix the base section so the compressive forces can break it off.
4. Use enough guy sets and strength. Going from a 3/16” EHS steel to a ¼” EHS steel will greatly increase the safety margin by reducing the guy stretch. The additional weight of the larger guy does not materially increase the load on the tower.

When in doubt, make it bigger, stronger, etc.

I recommend you buy and read a copy of the ARRL Book written by Don Daso, K4ZA, and entitled “**Antenna Towers for Radio Amateurs.**” It can save your life and your tower.

These notes do not deal with periodic inspections, maintenance, and repair. What you don’t know can hurt you and your tower. Keep in touch with rust, guy stretch, etc.

Jim Elkins, W4GFX



Milwaukee Repeater Club / 26th Annual Swapfest
AMATEUR RADIO Fest2010

HAM RADIO, COMPUTERS & ELECTRONICS

Saturday, November 6th, 2010
8:00 A.M to 2:00 P.M.

Vendor Load-in @ 5:00 A.M

at the ELKS Lodge

5555 W Good Hope Road • Milwaukee, WI 53223
just across the street from AES)

Admission: \$6.00 • Extra Raffle tickets: \$2.00; (3) for \$5.00

Table: \$10.00 per 8 ft. table • Electricity: \$5.00

Featuring AMATEUR RADIO & ELECTRONICS • RAFFLE/DOOR PRIZES

New and Used Ham radios, CB radios, batteries, antennas, scanners, test equipment, parts, connectors, electronic components, tubes, wire, coax cable, switches, computers, software, and more.

Talk-in: MRC Repeater, 146.910, – offset, 127.3 PL

Further Information: MRC Website: <http://www.mrc91.org> or

Ken, KC9MXZ - kc9mxz@hotmail.com • 414-491-0686

Matt, KC9COY - kc9coy@the_moog.com • 414-254-2849

For advance tickets, extra raffle tickets, tables and electricity, send your order and SASE to:

Milwaukee Repeater Club

P.O. Box 2123 • Milwaukee, WI 53201-2123

Check it all out! ... then, come on over to AES

- **8:30 A.M. to 3:00 P.M.** – See the Latest Equipment on Display
- **11:00 A.M. to 11:15 A.M.** – **What is D-STAR?** Attend a short presentation about what is D-STAR and how it works.

11:15 A.M. to 12:30 A.M. Open forum on D-STAR. The system administrators for the KC9LKZ and K9AES systems will be available to answer your questions about using the local

D-STAR (Digital Smart Technologies for Amateur Radio)

A Digital Voice and Data protocol specification developed for use in amateur radio. D-Star compatible radios are available on VHF and UHF amateur radio bands. In addition to the over-the-air protocol, D-Star also provides specifications for network connectivity, enabling D-Star radios to be connected to the Internet or other networks. D-STAR is the result of research by the Japan Amateur Radio League to investigate digital technologies for amateur radio.

AMATEUR ELECTRONIC SUPPLY (AES), 5710 W. Good Hope Road, Milwaukee, WI 53223

414-358-0333 • 1-800-558-0411 • www.aesham.com

	AES 5710 W. GOOD HOPE ROAD.	
Good Hope Rd.	ELK'S	
	MRC Swapfest 5555 W. GOOD HOPE ROAD 4.5 Miles	

AMATEUR RADIO EXAM NOTICE

October 16th there were no applicants

Northern Illinois Volunteer Examiners will be holding the next Amateur Radio exam session in Rockford, IL on Saturday, November 20, 2010.

Location:

St. Anthony Hospital

5666 E. State Street

Rockford, IL

Exams will be held in the St Francis Room (just right of the front entrance after you enter).

Check-in is from 9:00 AM until 10:30 AM.

What You Need To Bring To A W5YI-VEC Session

1. Your original Amateur License (unexpired or within the 2 year grace period) and a copy to attach to the paperwork.
2. Any valid CSCE that you are using for credit. Again the VE's have to see the original and have a copy to attach to the paperwork.
3. Two forms of Identification with your signature on them. One must be a picture ID (drivers license, passport, school ID, library card, credit card, etc.)
4. Test Fee \$14.00 cash or check. (please make checks payable to W5YI-VEC)

Contact Information

Randy Scott, W9HL

W9HL@arrl.net

815-877-4328

General Upgrade Training

Since Rock Valley College cancelled the general training class, Carl, W9TQ is willing to lead a class with the goal to complete the training class prior to year end. Details of where and when the classes will be held will depend on who and how many show an interest in having a general class. There will be no student minimum or maximum limits for this class. **If you are interested in a class, please call Carl, W9TQ @ 815-332-2479 or Gene, KA9BOD @ 815-226-1806 or email: ka9bod@ arrl.net by the club meeting on Friday November 12.**

Editors Note

If you would like to have something published , please call me or email me at ke9n@arrl.net.

Cut-off for the December 2010 Hamrag will be Friday, November 26, 2010

Kurt - KE9N, Editor



P.O. Box 8465, Rockford, IL 61126

Website: www.w9axd.org

E-mail: ke9n@arrl.net

Nets

Monday 8 PM	RARA Info.	146.610 - 114.8
Thursday 7 PM	ARES	147.195 + 114.8
Thursday 8 PM	SATERN	146.610 - 114.8

place address label here

November 2010

ROCKFORD AMATEUR RADIO ASSOCIATION MEMBERSHIP APPLICATION

Single Adult: \$25.00 Adult w/Family: \$30.00
 Single Senior: \$15.00 Senior w/Family: \$20
 Student: \$15.00

Above rate includes the RARA monthly newsletter, Ham Rag, via email.

Ham Rag Via U.S. Postal Service: \$12.00 extra

Name _____ Call Sign _____

Address _____

City _____ State _____ Zip _____

Home Phone _____

Work Phone _____

Email _____

Renewal _____ New _____ Retired _____

Radio Interests _____

Other Interests _____

Suggestions: _____

RETURN COMPLETED FORM TO:

ROCKFORD AMATEUR RADIO ASSOCIATION
 P.O. BOX 8465
 ROCKFORD, ILLINOIS 61126