

# 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 December already, and the winding down of another year is upon us. Since I will be stepping down as your president, this is my final letter to the membership in this role.

The first thing I want to do is personally thank all those who helped make this a viable club over the past year. Without their dedication, hard work, and volunteerism, there would not have been any events or programs for our members. Remember, the club can only be as good as its members allow it to be through their volunteering and becoming involved in its functions and operations. If you feel things are not running how you would like, don't complain, volunteer and help out. The person you will be helping is a volunteer themselves and not everyone is an expert in everything. Again, I would like to thank you all for giving me the opportunity to help lead this club the last two years and I hope a few good things have come out of my time here.

I look forward to helping Tom, N9VJU, next year as he takes over the position of President, and wish him and his officers well.

Sincerely,

Gordon Seaman, KC9NEX  
2010 RARA President



## December 2010

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### NEXT MEETING

**FRIDAY**

**December 10, 2010**

**7:00 pm**

**Presentation:**

**“DXpedition  
Videos”**

**Location:**

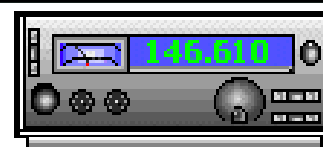
**St. Anthony**

**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

Thank you to all of you who have attended our monthly meetings and weekly nets, and who have volunteered your time and talent to help run the various events throughout the year. Thank you to those that put on our programs and our Monday Evening net control operators. We need to give special thanks to Kurt, KE9N, for his work with the Ham Rag and Robert, KC9ICH, for keeping up the club website. Both of these gentlemen have worked hard to provide a very professional job.

The program for our December meeting will be some videos on DXpeditions. I find it fascinating to watch what they go through to operate from an entity so that the rest of us can increase the number of contacts made to exotic places.

As this years Ham of the Year chairman, this is the last call for nominees for Ham of the Year. The person nominated must be a RARA member and have done something special for the club or ham radio. A nomination form is on page 4, or you can give me a note with the info at the December meeting. The selection process will take place after the December meeting and awarded at the club banquet on January 8, 2011. Information on the banquet is listed below. See Dick Fleming, KC9BCB, to make reservations which are due by December 31, 2010. We need at least 30 people to ensure a private room.

Please take the time to complete the survey that was sent out a couple of weeks ago. The RARA board is looking for ways to increase our membership as well as provide the activities of interest to you.

73,  
Gene, KA9BOD  
RARA 2010 VP  
[ka9bod@arrl.net](mailto:ka9bod@arrl.net)

## 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 November 12, 2010

The meeting was called to order by President Gordon Seaman, KC9NEX, at 7:04 pm. There were 20 members and guests present.

Gordy asked all present to give their name and tell the date of their first Amateur Radio license. Jim Miller, W4JR, was applauded for his 70 years as a Ham Radio operator. His first license was dated November 12<sup>th</sup>, 1940, exactly 70 years ago. He passed around a photo album of stations he had contacted with a JR suffix.

**Secretary's Report:** The minutes were published in the October *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:** Paul, K9RNR, read the report for the period September 27 through October 24<sup>th</sup>, 2010.

Income:	\$67.00
Expenses:	\$00.00
Ending checking balance:	\$2448.23
Ending repeater checking balance:	\$12.00
Ending savings balance:	\$3214.02
Ending total cash on hand:	\$5674.25

Gene, KA9BOD, made a motion to accept the report as read and Bob, W9NTT, seconded the motion. The motion carried.

### Old Business:

Dick, KC9BCB, reminded the membership that the Awards Banquet will be held at *Linos* on Saturday January 8, 2011. He said the menu, prices and his address are in the *Ham Rag*. Your reservations and check are needed by him ASAP and no later than December 31st.

The group was reminded that a questionnaire has been sent out by the Membership Committee to the Club membership and all are being asked to return the questionnaire as soon as possible. This is designed to improve our Club and hopefully increase membership. You can add additional comments if you wish.

John, N9OTC, reported that Larry, K9LC, is ill and needs company during the afternoons.

John, N9OTC, reminded all that we should not forget that our web site [www.w9axd.org](http://www.w9axd.org), it has some valuable information and we need to access it more.

Tom, N9VJU, next year's President reported that he is still in need of a Vice President, Secretary, and one more board member. Gordy, KC9NEX, volunteered for the board making the 3<sup>rd</sup> member of the Board.

Gene, KA9BOD, said Rock Valley College has cancelled the General License class due to not reaching the 4 or 5 participant minimum. He went on to say that Carl, W9TQ, will give private instruction. There are currently 2 signed up for this class. The cost is the price of the instruction manual only.

Gene, KA9BOD, said he is looking for more input for the Ham of the Year nominations. The selection will be made at the end of next month's meeting.

### New Business:

Murray, N9MP, asked for help programming his Icom ICT 70 A.

Gordy, KC9NEX, reminded everyone that John, W9JGO's wife has donated an afghan to the club and it is being raffled with the winning ticket being selected at the Awards Banquet.

Gordy read a letter of thanks from St Anthony's for the Club's \$200 donation.

Gene, KA9BOD, won the 50-50 raffle.

Tom, N9VJU, gave an informative presentation on MARS.

Chuck, K9SAN, made a motion to adjourn and John, W9JGO, seconded the motion. The motion carried.

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](mailto:ka9bod@arrl.net)

Nominee \_\_\_\_\_

Call \_\_\_\_\_

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

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Signed \_\_\_\_\_ Call \_\_\_\_\_

## **AFGHAN TO BE RAFFLED OFF AT AWARDS BANQUET**

John Olson's, W9JGO, wife has graciously made an afghan and has donated it to RARA and will be raffled off at the Awards Banquet in January. Tickets will be available at the meeting for \$1.00 each. Something really nice for the cold winter months ahead. Thank you John and your wife!



## **UPCOMING RARA EVENTS**

**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***



## **VHF Contesting School: Rules and Scoring by KC9BQA, edited by KE9N**

Please remember that if logging or scoring is going to give you difficulty, the main thing is to just get on the air, paper log if need be, with the format I specified in my article entitled "Logging". We can sort thru the scoring and log submission process after the contest is done. Or you can read thru the procedure yourself. Some do get it the first time around. I didn't, but you may.

The vast majority of new VHF/UHF contesters will be in the Single Operator — Low Power category. The upper limit for Low Power is 200 watts on 6 and 2 meters. It's 100 watts on 222/223 and 432/440. It's 10 watts on the microwave bands, which start at 902/3 Mhz, and include 1.2 gig, and on up thru 10 gigahertz.

Remember you don't have to be an ARRL member, nor do you have to submit a log to enjoy contesting. It's voluntary. Encouraged — yes. But still voluntary. Further, if you belong to a V/UHF club, make sure you enter the club's name in the "club affiliation" box at log submission time. If you live within this circle and join the same club I belong to, then you can submit your score as a Badger Contester [http://www.badgercontesters.org/club\\_area.html](http://www.badgercontesters.org/club_area.html) For a short post about the BC'ers, visit this link <http://kc9bqa.com/?p=1654>

The basic contest exchange is callsigns and grid squares. If you don't know your grid square, you will need to. You can find your grid square on [www.qrz.com](http://www.qrz.com), when you look up your own call sign, and then click on "click for more detail". All you need is the EN63, or EN53, EN52, EN62 part. Don't worry about those two small letters at the end of your grid square info.

The scoring is:

1 point for a contact or Q on 50/52 Mhz or 144/146 Mhz.

2 points each for a Q on 222/223 and 432/440.

4 points each for a Q on 902/903 and 1.2 gig (1296)

I doubt anyone who's reading these articles as a beginner has bands beyond 432, but if you do have 1296, make sure to make some Q's there with your 1296 friends. I have 1296, SSB only. I have 902/903 as well.

Your total score is computed by adding up all your raw QSO points and multiplying that times the number of different grid squares (also referred to as multipliers) you worked on each band.

Here's an example: Say I ended up with the following totals:

50 Mhz 18 Q's in 8 different grid squares

144 Mhz 25 Q's in 9 different grid squares

222 Mhz 11 Q's in 7 different grid squares

432/440 12 Q's in 6 different grid squares

The Q's on 50 would be worth 18 pts (1pt each)

On 144, worth 25 points. (1pt each)

On 222, worth 22 points. (2pts each)

On 432, worth 24 points. (2pts each)

Add those 4 numbers up and you have 89 points.

Now multiply 89 times your total number of grid squares worked on the various bands.

$8 + 9 + 7 + 6 = 30$ .

My score in this example would be  $89 \times 30 = 2,670$

***Good Luck in the Contests!***

## The 2010 ARRL 160 Meter Contest Will Warm Up Your Chilly December

The [ARRL 160 Meter Contest](#) -- an all-CW event -- is tremendous fun! As the object of the contest is for DX stations to contact American and Canadian stations (and vice versa), everyone will be seeking *you* (especially if you live in a rare section like North Dakota, Nebraska or any of the rare sections from November's Sweepstakes contests).

In this contest, Alaska (KL7) and Hawaii (KH6) count as DX, as do the Caribbean US possessions (KP1-KP5) and all of the Pacific Ocean territories (KH0-KH9). According to ARRL Contest Branch Manager Sean Kutzko, KX9X, if you don't have an antenna for 160, you should just load up whatever you have through an antenna tuner and give "top band" a try -- even a 40 meter dipole through a tuner will make QSOs.

Since ARRL and RAC Sections are worth 2 points each *and* count as multipliers, the ARRL 160 Meter Contest is a good way to begin working -- or finishing up! -- your Worked All States ([WAS](#)) award. But don't forget about those DX stations -- each DXCC entity is a multiplier and is worth 5 points each.

The ARRL 160 Meter Contest runs from 2200 UTC Friday, December 3 through 1559 UTC Sunday, December 5. Logs must be [e-mailed](#) or postmarked no later than 1600 UTC Tuesday, January 4, 2011. Paper logs should be sent to ARRL 160 Meter Contest, 225 Main St, Newington, CT 06111.

## The K7RA Solar Update

The average daily solar flux declined this week more than 36 points compared to last week, to 24.6. Our reporting week -- which ran until November 24 -- showed the daily sunspot number declining from 40 to 11, but on November 25 the sunspot number rose to 22. Sunspot numbers for November 18-24 were 40, 37, 24, 25, 23, 12 and 11, with a mean of 24.6. The 10.7 cm flux was 86.5, 84, 79.8, 77.6, 74.8, 75.3 and 75.8, with a mean of 79.1. The estimated planetary A indices were 5, 2, 2, 3, 4, 8 and 4, with a mean of 4. The estimated mid-latitude A indices were 4, 2, 2, 2, 4, 7 and 3, with a mean of 3.4.

Solar flux during this week went from a high of 86.5 to 74.8; the predicted solar flux for November 26-30 is 78, 78, 79, 80 and 80. Solar flux is predicted at 78 for December 1-3, then 85 on December 4-11 and 90 on December 12-14. Perhaps this bodes well for the [ARRL 10 Meter Contest](#), December 11-12. That contest is also during a time when ionization from meteors may enhance 10 meter propagation.

The solar flux forecast is from NOAA and USAF, and they say planetary A index should be stable for the next couple of weeks, with the index at 5 for November 26-December 10. Geophysical Institute Prague has a different outlook: They say that for the next week, look for quiet conditions November 26, quiet-to-unsettled November 27, unsettled November 28, quiet-to-unsettled November 29 and quiet November 30 through December 2.

Things are still looking up in terms of increasing sunspot activity: The first 25 days in November had an average daily sunspot number of 38, compared to 18, 23.1, 28.2, 35.7 and 35 for June through October. If this average continues through the next five days, November will have the highest monthly average of daily sunspot numbers since May 2006, when it was 39.6.

Carl Luetzelschwab, K9LA, has a piece on HF circular polarization in his propagation column in the current issue of [World Radio](#).

## Rotor Torque

By Jim Elkins, W4GFX

How much rotor torque do you need to start, turn, and stop your antenna(s)? The answer given by many rotor manufacturers is in **square feet**. “Rotor BigScrew will handle 25 square feet.” Intuitively you should know that is not a complete answer—there is no reference to boom length, wind speed, or weight. We want to know if we can turn the antenna (s) in the wind, not the square footage of the antenna(s).

A rotor has two sets of forces to deal with: 1) axial forces—the weight of the antennas and mast, downward (which this note will not deal with), and 2) rotational forces arising from the start/stop ( $dv/dt$ ) acceleration of the antenna, and the force of the wind on an antenna which is not wind neutral. (Wind neutral means all the wind rotational forces on the elements sum to 0, and all the wind rotational forces on the boom sum to 0, regardless of position. A neutral antenna will not turn, or windmill, from the wind, no matter what its position, even when unrestrained, and can turn with less rotor torque.) A wind neutral antenna is approximately the same as no wind.

Assume our boom weighs 40 lbs., is 32 feet long, and the antenna weighs 80lbs., with a turning radius of 27 ft.

### The Physics

(for those few who care)

The rotational moment of inertia of an antenna is  $I = wL^2/12$ , where  $w$  = weight of the boom, and  $L$  = boom length. (This uses the simplifying assumption that the weight is evenly distributed along the boom). The rotor torque required to accelerate from stop to a speed of  $w$  radians in  $t$  seconds (remember a radian equals about  $57.3^\circ$ ) is  $M = Iw/tg$ , where  $g = 32.2 \text{ ft/sec}^2$ . Substituting, and simplifying,  $M = wL^2/(307.5t)$  inch-pounds. If we let  $t = 1$  second, it drops out of the equation; we can wait 1 second to get up to full speed. We have a torque requirement of 133 foot-pounds, or 1,600 inch-pounds, assuming a wind neutral antenna. This basic torque requirement is not related to the square foot measurement of the antenna, or the wind speed.

If the antenna is not wind neutral, we must add the torque of the wind acting on this antenna. Let's assume we have 1,600 inch pounds of wind torque opposing rotation. If we add the basic torque to rotate the antenna, and the wind torque, we need 3,200 inch pounds. This exceeds the maximum start torque of many rotators. Here, square feet do make a difference.

### Quick and Dirty

(for everyone other than “ugh!,” physicists)

Rotor manufacturers have begun to use “Effective Moment,” or “K-Factor,” to compare the rotational power needed. It is the weight of the antenna (not just the boom) multiplied by the turning radius of the antenna. The effective moment of all antennas on the mast are summed. This same antenna would have an effective moment of 80 lbs. x 27 ft. (weight and turning radius assumed) = 2,160 ft-lbs. (Remember, this product is not the same as torque.) Looking at Yaesu's rotor line, we would use a G-2800 as the G-1000 is just under-size. This effective moment is a useful comparative measurement. Some manufacturers do list torque specifications. When buying your next rotor, have a look at the start torque, full load torque, stall torque, braking torque, coasting torque, and effective moment. You will be an informed buyer, can make good comparisons, will know your needs, and won't have to wait for a windless day to turn your antenna.



## AMATEUR RADIO EXAM NOTICE

November 20th there were 4 applicants resulting in 2 new licenses and 1 upgrade

New Licenses

Franky Chappel, Technician

Gary Galloway, General

Northern Illinois Volunteer Examiners will be holding the next Amateur Radio exam session in Rockford, IL on Saturday, December 18, 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 til 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@arri.net](mailto:W9HL@arri.net)

815-877-4328

### AREA Repeaters

146.610 -	ENC/DEC pl 114.8	W9AXD
147.000 +	ENC/DEC pl 114.8	W9AXD
223.880 -	ENC/DEC pl 118.8	W9AXD
<b>ATV</b> input 1250 Mhz/ 434 Mhz		W9ATN
	output 421.25 Mhz	

146.805 -	ENC/DEC pl 114.8	K9AMJ
224.440 -	ENC/DEC pl 118.8	K9AMJ
147.255 +	ENC/DEC pl 114.8	WX9MCS
444.725 +	ENC/DEC pl 107.2	WX9MCS
	Linked to FISHFAR	

### 2010 RARA Officers and Board

#### **Officers:**

President - Gordon Seaman, KC9NEX, 815-234-5034  
Vice President - Gene Stankiewicz, KA9BOD, 815-226-1806  
Secretary - Al Fischer, KD9CA, 815-885-3926  
Treasurer - Paul Franklin, K9RNR, 815-298-2251

#### **Directors:**

Shari Harlan, N9SH, 815-398-2683  
John Lawrence, N9OTC, 815-397-4624  
Tom Shouler, N9VJU, 815-877-9129  
Steve Thorne, K9LLI, 815-399-9161  
Web Master - Robert Larson, KC9ICH, 815-226-1875  
Ham Rag Editor - Kurt Eversole, KE9N, 815-389-2784  
Repeater Chairman - Chuck Ingle, AB9KA, 815-979-1049



P.O. Box 8465, Rockford, IL 61126

Website: [www.w9axd.org](http://www.w9axd.org)

E-mail: [ke9n@arrl.net](mailto:ke9n@arrl.net)

Nets

Monday 8 PM	RARA Info.	146.610 - 114.8
Thursday 7 PM	ARES	147.255 + 114.8
Thursday 8 PM	SATERN	146.610 - 114.8

place address label here

# December 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