

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.

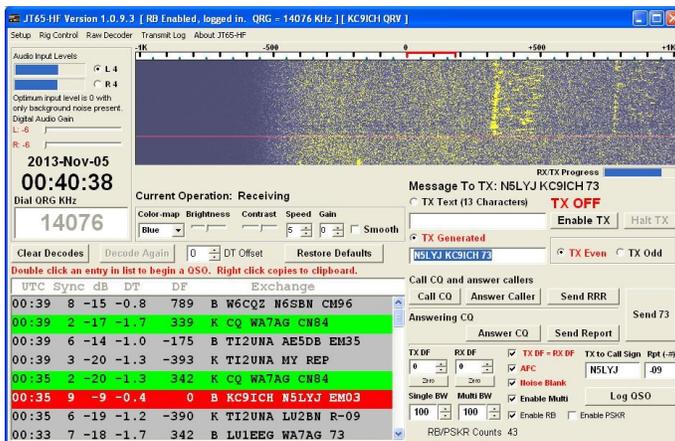
President's Message

R.A.R.A. Members,

2013 was a great year for our organization. Many new as well as returning members have increased our ranks. Many thanks go to the leadership of Doug Abrahamson. During 2013 we saw many interesting presentations at our monthly meetings. Thanks to all those who presented. I hope they prompted us to always try something new. Turn the beam a new direction, change the band switch, or try a new mode of operation.

I look forward to 2014, seeing continued growth in attendance at our meetings and continuing to increase our membership. Thank you for the opportunity to serve as your 2014 President

Robert Larson – KC9ICH



<http://sourceforge.net/projects/jt65-hf/files/>

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

February, 2014

INSIDE THIS ISSUE

President's Message	page 1
Solar Propagation	page 2
Midway Village	page 3
HOTY & VE Test	page 4
KR7RA Solar Rpt	page 5
KR7RA Solar Rpt	page 6
Hamfest Info	page 7



NEXT MEETING

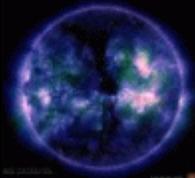
FRIDAY
February 14, 2014

Location:
Foundation Room

Saint Anthony OSF
5666 East State Street
Rockford, Illinois

Program:
2 Meter J-Pole
Antenna
Kurt Eversole
KE9N

Solar Propagation Banner

Solar-Terrestrial Data/Predictions at www.qrz.com				Current Solar	Band	Day	Night
05 Feb 2014 1840 GMT					80n-40n	Poor	Good
SFI 197	SN 183				30n-20n	Poor	Good
A 005	K 1				17n-15n	Good	Good
XRY C2.4	304A 174.6				12n-10n	Good	Poor
Aur 3	Lat 65.6°				Geomag Field VR QUIET		
Bz 4.0	SW 340.5				Sig Noise Lvl S0-S1		
PF 0.1	EF 4.4				CME (UTC) None		
MUF Bdr NoRpt @ - -					(C) P Herrman N0NBH 2013		
EME Deg Fair							

Solar Flux Index (SFI) The SFI is a measure of the 2800 MHz radiation. This value (197 in the banner) is measured each day at noon PST and normally varies from 30-300. While this noise doesn't directly affect propagation, but it correlates with the level of radiation coming from the sun. Higher is better.

Sunspot Number (SN) (183 in the banner) takes into account the size, number, and grouping of sunspots. Higher is better. These two numbers are an indication of the propagation conditions affecting the maximum useable frequency (MUF)

X-Ray Intensity (XRY) This is a measure of the intensity of the HF X-rays hitting the earth (C2.4 in the banner). This affects the D layer and to some extent the E layer. The alphabetic value indicate the absorptive value of the D layer. When the level reaches the M or X value, it can indicate a complete "blackout" of DX communication.

304A This number is the *relative* strength of total solar radiation. It also correlates with the SFI and SN numbers in relation to the F layer. So higher is better.

Interplanetary Magnetic Field (Bz) (4.0 in the banner) indicates the strength and orientation of the interplanetary field which varies from +50 to -50. A positive number indicates that the field is oriented in the same direction as the earth's magnetic field and negative values indicate a polarity opposite to the earth's magnetic field. When the value is negative, it opposes the earth's magnetic field and increases the possibility of ionospheric and geomagnetic disturbances disrupting communications.

Solar Wind (SW) (340.8 in the banner) is the speed of the charged particles passing the earth, It varies from 0-2000 but is typically near 375. If it goes above 500, it can disrupt the F layer leading to poor conditions.

Proton Flux (PF) (0.1 in the banner) is the density of protons within the earth's magnetic field. If the level rises above 10,000, we will experience degraded condition over the poles. For us this means difficult to impossible DX to most of the Northern hemisphere.

Electron Flux (EF) (4.4 in the banner) is the intensity of electrons within the earth's magnetic field. Conditions degrade when levels are 1000 or higher.

Signal Noise Level indicates the noise level caused by solar winds in S units. It is a portion of the background noise you hear.

Coronal Mass Ejection (CME) (None in the banner) is the date, time and severity of a predicted solar event headed toward earth. Generally this is not good for communications.

A and K Indexes K number is best when low. It is an average. A index is derived from the K index. It is what is happening now.

Aurora (AUR) (3 in the banner) is a value from 1-10. A rising value indicates the auroral oval is shifting to lower latitudes.

Latitude (LAT) (85.6 in the banner) indicates the lowest latitude the an auroral event will reach.

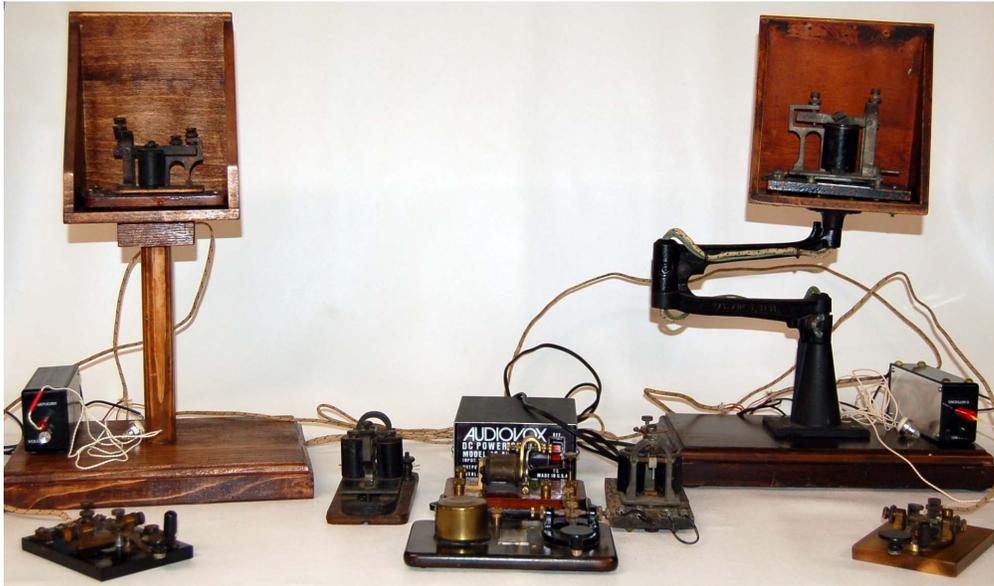
Maximum Usable Frequency (MUF) is measured at Boulder Colorado @ the UTC time indicated. At the time of this writing, the measuring system is not working. It is promised to be up by February 6, 2014.

Earth-Moon-Earth (EME) is the amount of attenuation in dB along the Earth-Moon-Earth radio path.

Geomagnetic Field The value indicates how quiet or active based on the K index. The scale has 9 levels from inactive to extreme storm levels.

The rest of the banner is self explanatory. I have condensed this from the February QST article without a lot of the physics. I hope that it helps. The banner is available from www.hamqsl.com/solar.html There are many others that you can download and use.

Jim Holich—AB9SX



MIDWAY VILLAGE PROJECT
By Rich Range WB9SFG

Last summer Midway Village contacted RARA and asked if we could install a working telegraph system at their site. Midway Village is a turn of the century museum here in Rockford. Jim Holich AB9SX, John Olsen W9JGO and myself took on the challenge. Because MWV is all period correct, we had to find the necessary equipment to do this. Sounders, keys, wire and enclosures were all donated by RARA members.

We had what we needed. Now we had to come up with a working system. After several meetings of trial and error, we had a working table top system. But, here's where we ran into a problem. As CW operators, we can't read the clickity clack of a sounder! What we came up with was an audio oscillator tied into the sounders and a small wire that would go up the operators sleeve to a small earphone. This would all be transparent to anyone watching. Sending or receiving, the operator would hear the tone of CW and spectators would see and hear the sounder. With that done we were ready to demonstrate what we had come up with and set up a foundation for the install.

We met with Laura, who is the Curator of MWV. The meeting could not have gone any better! She was elated with what we had done and gave us the thumbs up. At a different meeting we met with Sean, the grounds engineer and went over the how and where to put all this. We all agreed that one station would be in the Bank and the other, 2 buildings down, at the printers building, would have the second station. MWV is very excited to have us do this at no cost to them and we're excited as they want us to get their hand crank telephone system setup after this. We're all waiting for warm weather to get going on the installation.

Let Jim, John or I know if you would like to help or be an operator

AREA Repeaters

146.610 -	ENC/DEC pl 114.8	W9AXD
147.000 +	ENC/DEC pl 114.8	W9AXD
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

2014 RARA Officers and Board

Officers:

President - Robert Larson, KC9ICH, 815-540-0309
 Vice President - Doug Abrahamson, KC9SDO, 815-979-0329
 Secretary - John Olson, W9JGO, 815-399-4368
 Treasurer - Shannon Larson, KC9QBC, 815-540-0309

Board Members:

Jeff Andrews, KC9ZMR
 Ron Callahan, N9SZV
 Richard H. Range WB9SFG— 630-697-1344

Web Master - Robert Larson, KC9ICH, 815-540-0309
 Ham Rag Editor - Jim Holich, AB9SX, 779-552-8796
 Repeater Chairman - Richard Range, WB9SFG 630-697-1344
 Repeater Trustee—Scott Francis KG9SF, 815-874-7170

Roster of RARA Ham of the Year Awards

1972	Vito Fiorie	K9UCM	1994	Wayne Hanson	KA9IMX
1974	Bill Ridgeway	WB9KOS	1995	Diane White	WB9VLK
1975	Lee Gehlhausen	WA9WVY		(Club member of the year)	
1976	Clyde Aspling	WB9KOT	1996	Marsha Plasters	KB9NGN
1977	Herb Eckstein	K9AMJ		(Club member of the year)	
1978	Lee Shelain	W9ZZL	1997	- ??	
1979	Bill Spires	KB9UL	1998	Jeff Anderson	N9ZUT
1980	Jim Milhone	KI9F	1999	Tom Shouler	N9VJU
1981	Shari Harlan *	WB9SFT	2000	Shari Harlan *	N9SH
1982	Gene Melton	AK9N	2001	Carl Cacciatori	W9TQ
1983	Frank Hirsch	KS9X	2002	Mike Oberg	AB9AY
1984	Carol Melton	KI9G	2003	Larry Snyder	K0HKM
	Gene Stankiewicz *	KA9BOD	2004	Gary Hilker	K9LJN
1985	Chuck Henley	N9CCH		Dan Hunt	KC9ATR
1985	Ziggy Podgorny	W9MOS	2005	Gene Stankiewicz *	KA9BOD
1986	Gene Duncan	K9IKP	2006	Paul Franklin	K9RNR
1987	Jim Miller	W4JR		Chuck Ingle *	AB9KA
1988	Steve Makulec	KB9IW	2007	John Cotner	KC9IED
1989	- None		2008	Rich Ludwig	K9PK
1990	Dale Landis	WD9DBD		Chuck Ingle *	AB9KA
	JoAnn Landis	KA9DNQ	2009	Kurt Eversole	KE9N
1991	- None		2010	Gordon Seaman	KC9NEX
1992	- None		2011	- None	
1993	- None		2012	-John Olson	W9JGO
			2013	-	

AMATEUR RADIO EXAM NOTICE

January 18 there were 5 new licensees and 3 upgrades. Congratulations to:

Albert F Abanes, Technician
 Dana A Brinkmeier, Technician
 Kurt C Keith KC9ZTJ, General
 Randy E Kitchen K9REK, Extra
 Harry D Larson, Technician
 Eric A McCord, Technician
 James P Pankhurst KC9ZJJ, General
 Shannon R Rice, Technician

Thanks to Rich Range WB9SFG, Steve Twigg W9SWT, Jim Holich AB9SX and Alvin Alexander KC9GIO for volunteering their time.

Amateur Radio exams are held the 3rd Saturday of every month in Rockford IL. The next session is 9AM February 15, 2014. Walk-ins welcome. Check-in is from 9AM-10AM, no exams started after 10:30. We require two signature ID's and one photo. If you are a licensed Amateur Radio operator bring your current license and a copy. If you are using a CSCE for exam credit, bring the original and a copy (We need to see the originals & keep a photocopy of each). No copier on site. The test fee is \$14.00. Bring a non-programmable calculator.

Location:
 OSF St Anthony Medical Center
 5666 E State St (Bus US20)
 Rockford IL

Exams are held in the St Francis Room (Main Entrance then turn right).

Rusty Cordell WB9QYV
wb9qyv@aol.com

The K7RA Solar Report

SB PROP ARL ARLP006
ARLP006 Propagation de K7RA

Solar activity surged this week, with average daily sunspot numbers increasing nearly 55 points from 101.4 to 156.3. Average daily solar flux rose nearly 38 points from 142.9 to 180.4. These increases compare the recent period, January 30 through February 5, with the previous seven days.

Geomagnetic indices remained quiet. So quiet, in fact, that on February 4 the high latitude college A index near Fairbanks, Alaska was 0, because each of the 3-hour K index readings that day were 0. The same thing happened back on January 19.

Geomagnetic numbers will increase this weekend, with planetary A index predicted to be 5, 15, 10 and 8 on February 7-10, followed by 5 on February 11-16, 8 on February 17-18, 5 on February 19-24, then 8 on February 25, then 5 February 26 through March 1, and 12 on March 2.

Solar flux should be strong, with values of 190, 185, 180, 170 and 160 on February 7-11, 155 on February 12-13, followed by 135, 130 and 140 on February 14-16, and 145 on February 17-22. Solar flux is expected to gradually climb to 200 on March 1, drop slightly, then peak at 210 on March 5, followed by a low of 130 on March 14 and then another rise.

OK1HH supplies us with his geomagnetic outlook, and he predicts the geomagnetic field will be quite to active February 7-8, mostly quiet February 9-10, quiet of February 11, mostly quite February 12, quiet on February 13-15, quiet to unsettled February 16, quiet to active February 17, quiet to unsettled February 18, quiet on February 19-20, quiet to unsettled February 21, quiet on February 22, quiet to unsettled February 23, and quiet to active February 24-25.

Let us now review the recent averages, to see where solar activity has been and perhaps where it is headed.

The average daily sunspot number for the month of January 2014 was 126, the highest it has been since October-November 2013 when it was 127.2 and 125.7. Prior to that, the most recent date it was higher was way back in 2003, when the average daily sunspot number was 132.8 in July, and 150 in January.

We track a 3-month moving average for sunspot numbers, and the averages for the three months ending in September (2013), October, November, December and January (2014) were 77.4, 91.2, 102.9, 123.7 and 123.3. The last previous 3-month average that was a high as recent numbers was 128.9 ending in February 2003.

Looking over the numbers for the past few years to determine if there was a double peak shows us high average sunspot numbers at the most recent period, 123.7 and 123.3 ending in December 2013 and January 2014, then 106.4 on both 3-month periods ending May and June 2013, then 118.8 and 118.6 ending in November and December 2012. This suggests that our second peak for Cycle 24 is the highest, although how that other peak (May-June 2013) will figure into a 12-month smoothed sunspot number is anybody's guess.

Last week's Propagation Forecast Bulletin ARLP005 mentioned something amiss with some of the recent solar flux and planetary 45 day forecasts from USAF/NOAA. I emailed my spreadsheets of archives for both predictions to a ham contact at NOAA, and they also saw the problem. Apparently on some days the prediction from two days prior was reported instead of the latest one, due to some software problem. They are working on a solution, and updating the past records as needed.

Randy Crews, W7TJ of Spokane, Washington wrote: "Due to the large size and magnetic complexity of sunspots now, January of 2014 set not only a new solar flux high and sunspot number (237 and 245, respectively) as you pointed out in an earlier article, but also exceeded the November 2011 average solar flux value of 153 to approximately 157. Size does matter! It looks as if we are seeing a nice carryover into February, however the overall trend and strength of this cycle will still be a low one. Typically we see big flux fireworks at the top of the cycle, and this one seems to be following suit. Recently there was an article on QRZ.com by a solar science astronomer in Arizona who recapped the trend in sunspot strength as on the decline. Bottom line: Take advantage of the great conditions while they last!"

K7RA heartily agrees.

Phil Plait's blog on Slate.com highlights a big sunspot, which he calls "ridiculously huge." Check it out at http://www.slate.com/blogs/bad_astronomy/2014/02/04/sunspot_ar1967_huge_sunspot_cluster_rotates_back_into_view.html

Mick, W3FJ of Williamsport, Pennsylvania wrote on January 31: "Just a quick note to mention a brief opening this morning from about 1520Z to 1630Z when I had to leave for an appointment. 6 Meters was open to a rather narrow area from my FN11 QTH in North Central PA into Georgia and Alabama. I worked N3HJX, KG4YTP, and W4VAS all in EM84 with good solid 59 signals. I also had a rather long QSO with my old friend Burt, WA4VUT in EM50 in Alabama. Burt was consistently 59+ during our 10 to 15 minute QSO. Burt has been around the band for many years and at age 87 sure doesn't look like he's going to give it up soon."

The ARRL DX Bulletin (<http://www.arrl.org/w1aw-bulletins-archive/ARLD006/2014>) reports that the CQ World Wide WPX RTTY Contest is this weekend, running from 0000 UTC Saturday, February 8 until 2359 UTC Sunday, February 9. In case that isn't clear, on the West Coast of North America (in Pacific Standard Time) that would be 4:00 PM tonight (Friday, February 7, 2014) through 3:59 PM PST Sunday, February 9. See details at <http://www.cqwxrtty.com/>. The site has a nice countdown time.

The K7RA Solar Report

And finally, I was visiting a rural library in a county north of me and noticed a listing in their catalog for "The Radio Amateur's Handbook." But the curious thing about it was that the record did not list a publication date or edition number (now titled the "ARRL Handbook," the 2014 copy is the ninety-first edition), and the subtitle was "A Manual of Amateur Short Wave Radiotelegraphic Communication."

I ordered it, and when it came in, I thought it must be a reproduction, because it was in perfect condition, with all the pages bright and white, no fading at all. It turned out to be the 1926 First Edition, and I was shocked to discover a signature on the flyleaf: "F.E. Handy" and "Personal Copy" written next to the signature. Francis Edward Handy, W1BDI was the original editor and creator of the handbook, and was also the Communications Manager for many years at the ARRL. He was also the ham who dreamed up Field Day and the ARRL Sweepstakes.

A couple of decades back I saw a classified ad in the back of QST placed by his son, offering for sale individual copies of his father's personal collection of handbooks. I bought several, and he included some blank W1BDI QSL cards designed by Gil, W1CJD, the artist who drew those classic ARRL illustrations for many years. One of the cards shows the fellow I bought the handbooks from, as a child, playing catch with a large glass vacuum tube, much to his father's distress.

I seem to recall that he had this first edition for sale at the time, but I couldn't afford it. The library got it in December 2005, and I can only assume that the buyer or the buyer's estate donated it to the library. I have it here, and it is quite a remarkable find.

Chapter One is titled, "What Is An Amateur?" and the third paragraph begins: "There is untold pleasure in two-way amateur operating. The covering of hundreds of miles and the handling of friendly messages with low amounts of power lends an interest not found in any other pastime. Perhaps the relaying of messages has not been sufficiently mentioned. That is one of the amateur's principal activities. Friendly messages are accepted at any amateur station. They are passed on toward their destination from one station to another. No charge is made for the service, and of course no responsibility can be fixed for failure to perform. Usually messages are delivered by telephone or by the operator in person as soon as they reach the city of destination."

Chapter Two, titled "Getting Started" begins the second paragraph with, "To understand and enjoy radio in the fullest sense we ought to listen to all that takes place. The broadcast listener has but skimmed the surface of radio fun. He has no conception of the joy that will be his, once he has put his finger on the throbbing pulse of two-way radio. Long waves, set up by frequencies below the broadcast band, bring us a horde of flute-like signals. Press messages, storm warnings, and weather reports from all over the world tell their story to whomever will listen."

This first edition is truly a remarkable book.

Sunspot numbers for January 30 through February 5 were 112, 87, 147, 163, 168, 183, and 234, with a mean of 156.3. 10.7 cm flux was 160.5, 165.7, 176.7, 189.8, 188.3, 188.1, and 193.5, with a mean of 180.4. Estimated planetary A indices were 5, 3, 5, 4, 6, 5, and 4, with a mean of 4.6. Estimated mid-latitude A indices were 4, 2, 2, 4, 5, 4, and 5, with a mean of 3.7.

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.

"Morning Glory Restaurant"
9155 Alpine Street
Rockford, IL 61108



Secretary and Treasurers Reports

The January meeting was cancelled because of icy weather. There are no reports for January. As a reminder 2014 dues are being accepted now.

HamFest Information

Saturday 02/22/2014
LaPorte, Indiana

Location: LaPorte Civic Auditorium
1001 Ridge Street
LaPorte, IN

Website: <http://lpcarc.org>

Sponsor: LaPorte County Amateur Radio Club

Type: ARRL Hamfest

Talk-In: 146.610 (PL 131.8)

Public Contact: Brian Salzer , KB9HMR
PO Box 148 Michigan City, IN 46361
Phone: 219-229-5927

Email: cabinfeverhamfest@gmail.com

Sunday 03/02/2014
Sterling, Illinois

Location: Challand Middle School
1700 6th Avenue
Sterling, IL 61081

Website: <http://w9mep.org>

Sponsor: Sterling-Rock Falls Amateur Radio Society

Type: ARRL Hamfest

Talk-In: 146.850 (PL 114.8)

Public Contact: Paula Porter , KC9FQK
1302 West 2nd Street Dixon, IL 61021
Phone: 815-284-5650

Email: pportner@comcast.net

Saturday 04/12/2014
Madison, Wisconsin

Location: Mandt Community Center
400 Mandt Parkway
Stoughton, WI 53589

Website: <http://www.qsl.net/mara>

Sponsor: Madison Area Repeater Association

Type: ARRL Hamfest

Talk-In: 147.150 (PL 123.0)

Public Contact: Paul Toussaint , N9VWH
3835 County Road A Stoughton, WI 53589
Phone: 608-205-1994

Email: w9hsy@execpc.com

Sunday 05/04/2014
DeKalb, Illinois

Location: Sandwich Fairgrounds
1401 Suydam Road
Sandwich, IL 60548

Website: <http://www.karc-club.org>

Sponsor: Kishwaukee Amateur Radio Club

Type: ARRL Hamfest

Talk-In: 146.73- (PL 100); 146.52 Simplex

Public Contact: Robert Bob Yurs , W9ICU
1107 Commercial Street Sycamore, IL 60178
Phone: 815-895-7584

Email: w9icu@arrl.net

Sunday 06/01/2014
Princeton, Illinois

Location: Bureau County Fairgrounds
811 West Peru Street
Princeton, IL 61356

Website: <http://www.w9mks.org>

Sponsor: Starved Rock Radio Club

Type: ARRL Hamfest

Talk-In: 146.955- (PL 103.5)

Public Contact: Matthew Weaver , KB9VZH
319 Desoto Street Ottawa, IL 61350
Phone: 815-313-5924

Email: kb9vzh@mchsi.com

Sunday: 06/15/2014
Six Meter Club of Chicago

Location: Du Page County Fairgrounds
2015 Manchester Road
Wheaton, IL 60187

Website: <http://k9ona.com>

Sponsor: Six Meter Club of Chicago

Type: ARRL Hamfest

Talk-In: 146.97 (PL 107.2); 146.52 Simplex

Public Contact: Mike Huedepohl , WD9GJK
3532 Raymond Avenue Brookfield, IL 60513
Phone: 708-485-5481 (after 6 PM)

Email: wd9gjk@arrl.net



P.O. Box 8465, Rockford, IL 61126

Website: www.w9axd.org

E-mail: jholich@comcast.net

<u>Nets</u>		
Monday 8 PM	RARA Info.	146.610 - 114.8 PL
Monday 9 PM	10M SSB Net	28.375 +/- USB
Daily 6 PM	Illinois Traffic Net	3.905 LSB

place address label here

February, 2014

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.

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