



HAMRAG

December 2018

Dec. 14th **Satellite Communications & Equipment**

JoAnne Maenpaa - K9JKM

Try #2

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Next Meeting: Satellites • Friday December 14th • 7:00 PM
Location: St. Anthony Medical Center • Foundation Room • 5666 E. State Street Rockford, IL

President's Message

Greetings all,

This will be my last Presidents letter, and I would like to thank you all for the privilege of electing me your president for the last year. It has been my honor to represent you, and with the help of the board and others try to provide you many great monthly presentations and a few events we were able to schedule. I will be staying on the board as treasurer but have passed the reins off to new blood who have great plans for the future of the club. Please welcome and support them as you have me and I only see great things for the club.

On another note the banquet in January has not been finalized yet, I'm sure that by the December meeting we will be announcing the location and time for the event. If you have not yet turned in your selection for Ham of the Year please do so at the December meeting, this will be your last chance to make your voice heard and let those persons know how much you appreciate what they do for the club.

I hate to bring this up, but dues for 2019 are due. Please get them in as soon as possible as we need to report to the State of Illinois and the ARRL about the state of the club and how many members we have to keep our Service Club Designation and Not for Profit status current.

Thanks again for your support, I would like to wish you all a Merry Christmas and Happy New Year. I'm sure the upcoming year will be great for the club.

Sincerely;

Gordon Seaman, KC9NEX
2018 RARA President



2018 RARA Officers & Board

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kc9nex@gmail.com

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Open

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Editor's Note

A great Hamrag this month!

More and more stuff being submitted from club members. KEEP UP THE GOOD WORK!!!!

Thanks

Lynn Long KD9IFP

Hamrag Editor

randy@rdlgraphics.com.



Awards Banquet

Friday Morning Breakfast



Meets every Friday morning from 8 am until about 10:00 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**

RARA Repeaters

Both repeaters (146.610 and 147.000 (both have a pl 114.8)) will function with both digital and analog radio signals, but the repeaters require time to determine whether the signal is digital or analog. To operate the repeater properly you must first be sure the frequency is clear, then key and hold the microphone button down for 1-2 seconds. Then begin speaking. If you fail to do this, the first part of your message will be lost.

RARA Mission Statement

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



Programs 2018

December - Satellite Communications

Programs 2019

January - Awards Banquet

Meetings

December 14, 2018

General RARA Meeting 7:00 pm at OSF

December 18, 2018

RARA Board Meeting 7:00 pm at OSF

January 11, 2019

General RARA Meeting 7:00 pm at OSF

January 15, 2019

RARA Board Meeting 7:00 pm at OSF



Ham Testing

The following applicants were successful:

Kevin Friend - K9KFM
Upgrade to General

Kerry Tatlow
Technician

Amateur Radio exams are held the 3rd Saturday of every month in Rockford IL. The next session is 9 AM December 15, 2018.

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 a copy of your FCC ULS page with your call sign. 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).

Jim Holich AB9SX
jholich@comcast.net

Election Time

Here are the newly elected RARA Officers and Directors for 2019.

President

Randy Long - AC9OF

Vice President

Jennifer Van Zieleghe - KD9FMJ

Secretary

Greg Kuczek - W9VOX

Treasurer

Gordon Seaman - KC9NEX

Directors

Jacek Gadja - KD9ELI

3 Director positions remain open,
please consider volunteering.

Satellite Links, Apps & Software

Ham Radio Satellite Software

Windows

- Ham Radio Satellite Explorer App
- SimpleSat

Mac

- MacDoppler

Smart Device Apps

Ham Radio Satellite iPhone/iPad Apps

- Satellite Explorer Pro
- GoSatWatch
- ProSat
- SatelliteTracker
- TrackSats
- HamSat

Ham Radio Satellite Droid Apps

- HamSatDroid
- AMSATDroid

General Ham Radio Satellite Info

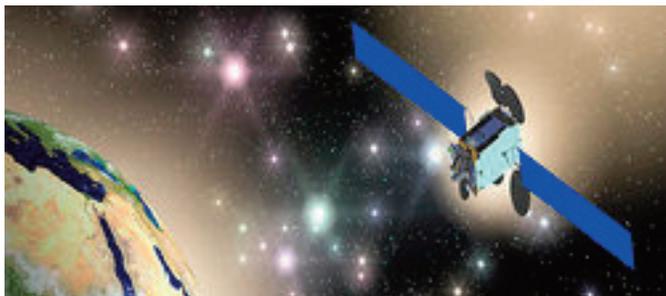
- **Amateur Radio Satellite Info - N2YO.com** - <http://www.n2yo.com/satellites/?c=18>
- **All Satellites Frequency List** - <http://www.ne.jp/asahi/hamradio/je9pel/satlist.htm>
- **Spreadsheet of the uplinks and downlinks of each satellite** - <http://www.ne.jp/asahi/hamradio/je9pel/satslist.xls>
- **DK3WN SatBlog** - http://www.dk3wn.info/p/?page_id=29535
- **AMSAT-UK** - <https://amsat-uk.org/about/>
- **AMSAT Home Page** - <https://www.amsat.org/>
- **Ham Radio Satellite Primer - ARRL** - <http://www.arrl.org/files/file/Technology/tis/info/pdf/0004036.pdf>
- **Amateur (ham) Radio Satellites - RAMMB - Colorado State University** - <http://rammb.cira.colostate.edu/dev/hillger/amateur.htm>
- **Amateur Radio Satellites - KA7FVV** - <http://ka7fvv.net/satellite.htm>

- **Geek Prepper** - <https://geekprepper.org/long-range-communications-using-ham-radios-satellites/>
- **Ham Radio Satellite Presentation** - <https://www.k5nd.net/2018/01/ham-radio-satellite-presentation/>
- **Tutorial on ham radio satellite tracking** - <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=6&cad=rja&uact=8&ved=2ahUKEwjRzJjmuYPdAhVi7YMKHdgICQUQtwlwBXoECAoQAQ&url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DxiSuLV6sOvI&usg=AOvVaw39HCGMnp7JauV4CpTym2QU>
- **ARRL and Satellite Communication Resources** <http://www.arrl.org/ariss-and-satellite-communication-resources>
- **KB6NU's Ham Radio Blog** <https://www.kb6nu.com/category/operating/satellites/>
- **Ham radio satellite tracking Amateur Radio Satellites** <https://www.karhukoti.com/satellites?category=amateur&title=ham%20radio%20satellite%20tracking>
- **FM Satellite Frequency Summary** <https://www.amsat.org/fm-satellite-frequency-summary/>
- **FM Satellite Frequency Summary and Programming Charts** <http://freefishnj.blogspot.com/2018/05/fm-satellite-frequency-summary-and.html>
- **Getting started on amateur radio satellites** http://rsgb.org/main/files/2012/07/satellites_radcom_mar07.pdf
- **Contact the ISS** <http://www.ariss.org/contact-the-iss.html>
- **HAMSATS! Getting Started With Satellites** https://k4lrg.org/assets/hamsats_larg_university_2018_05_19_abridged.pdf

From The ARRL Newsletter Nov. 2018

AMSAT Congratulates Qatar Amateur Radio Society, AMSAT-DL for Successful Es'hail-2 Launch

AMSAT-NA has congratulated AMSAT-DL (Germany) and the Qatar Amateur Radio Society (QARS) for their roles in the successful launch on November 15 of the Es'hail-2 satellite, which carried AMSAT-DL's Phase 4-A transponder aloft. Es'hail-2 will be the first geostationary satellite to sport an Amateur Radio transponder. Launched from Cape Canaveral on a SpaceX Falcon 9 vehicle, Es'hail will be capable of linking radio amateurs from Brazil to Thailand, although it's unlikely to be accessible from North America with typical Amateur Radio satellite gear.



"I applaud the Qatar Amateur Radio Society (QARS) and AMSAT-DL's achievement, the result of 6 years of work," AMSAT President Joe Spier, K6WAO, said. "To be a first at something in space is indeed a rare, rare honor. It is this type of honor that AMSATs around the world work on every day."

AMSAT-DL will commission the Amateur Radio transponder ground station in Doha, with the Es'hailSat control team. AMSAT-DL will announce when the transponders are available for use. Read more (<http://www.arrl.org/news/amsat-congratulates-qatar-amateur-radio-society-amsat-dl-for-successful-es-hail-2-launch>). -- Thanks to AMSAT News Service; Southgate Amateur Radio News

FCC Approves Use of Galileo Global Navigation Satellite System in the US

The FCC has granted, in part, the European Commission's request for a waiver of Commission rules so that non-federal devices in the US may access specific signals transmitted from the Global Navigation Satellite System (GNSS) known as Galileo. The action means that consumers and industry in the US may access certain satellite signals from the Galileo system to augment the US Global Positioning System (GPS). The Order said that the Galileo GNSS is uniquely situated with respect to the US GPS, because the two systems are interoperable and RF compatible.

Specifically, the Order permits access to two of the Galileo system's satellite signals -- the E1 signal transmitted in the 1,559 - 1,591 MHz portion of the 1,559 - 1,610 MHz Radionavigation-

Satellite Service (RNSS) band, and the E5 signal transmitted in the 1,164 - 1,219 MHz portion of the 1,164 - 1,215 MHz and 1,215 - 1,240 MHz RNSS bands. These are the same RNSS bands in which the US GPS satellite signals operate.

The Order does not grant access to the Galileo E6 signal, which is transmitted over the 1,260 - 1,300 MHz frequency band, because this band is not allocated for RNSS in the US or used by the US GPS to provide position/navigation/timing (PNT) services. The FCC pointed out that granting access to the Galileo E6 signal could constrain US spectrum management in the future in spectrum above 1,300 MHz, where potential allocation changes are under consideration.



From The ARRL Newsletter Nov. 2018

The omission of the E6 signal also means that radio amateurs would not have to protect Galileo receivers from interference on 23 centimeters, which has been a significant issue in Europe.

FCC Rejects 2004 AMSAT Petition to Reconsider Applying Orbital Debris Rules to Ham Satellites

As part of a larger ruling, the FCC has rejected a Petition for Reconsideration that AMSAT filed 14 years ago, seeking to exempt Amateur Radio satellites from the FCC's satellite orbital debris mitigation requirements. The Commission took the opportunity in a Notice of Proposed Rule-making and Order on Reconsideration, released on November 19, that revisits its orbital debris rules for the first time since their adoption in 2004. Among other things, AMSAT had argued at the time of its Petition that applying the orbital debris requirements to Amateur Radio satellites would be cost prohibitive, and that the

FCC had not indicated what constitutes an acceptable orbital debris mitigation plan.

"[I]n the years since the debris mitigation rules were adopted, and notwithstanding any costs imposed by FCC regulations, well over 150 small satellites have been authorized, with at least 20 of those considered amateur satellites," the FCC said in its November 15 Order on Reconsideration. "It appears that, to the extent that any costs have been incurred, the main contributor to costs for amateur and similar LEO missions has to do with the availability of launches to appropriate orbits."

The FCC also said that in the years since the FCC issued its Orbital Debris Order, "numerous licensees, including amateur satellites operating in LEO, have successfully satisfied our orbital debris mitigation requirements.

In a statement, AMSAT said, "We look forward to working with the FCC to craft a regulatory framework that addresses the growing concerns regarding orbital debris while preserving the flexibility for hobbyists, experimenters, and researchers to access a variety of orbits."

Area Nets

Monday Night RARA Information Net

The purpose of the net is to disseminate RARA related information as well as other Amateur Radio related information. As a club sponsored activity, please check in with Jimmy, KC9GCR, (net control). 146.610 - offset (pl 114.8) RARA repeater at 8:00 pm, every Monday, except on holidays.

Tuesday Night Tech Net

at 8:00 pm, 145.110 (pl 123.0). Tony, N9ARB, is net control.

Wednesday Night Stephenson County ARES (Amateur Radio Emergency Service) Net

at 7:00 pm on 147.390 + offset (pl 114.8). N9ARB, Tony, is net control.

Thursday Night Northern Illinois ARES (Amateur Radio Emergency Service) Net

at 7:00 pm on the 147.195 + offset (pl 114.8) repeater.

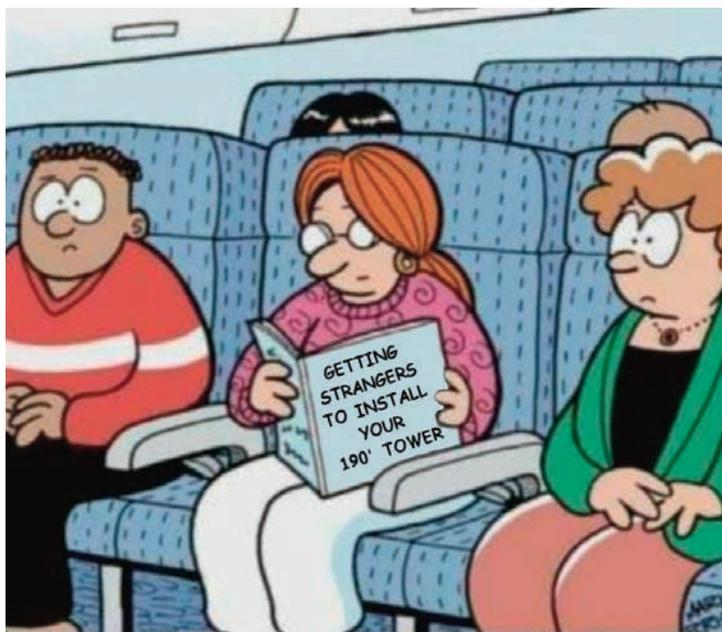
Thursday Night Northern Illinois Skywarn net

at 8:00 PM on the 147.195.

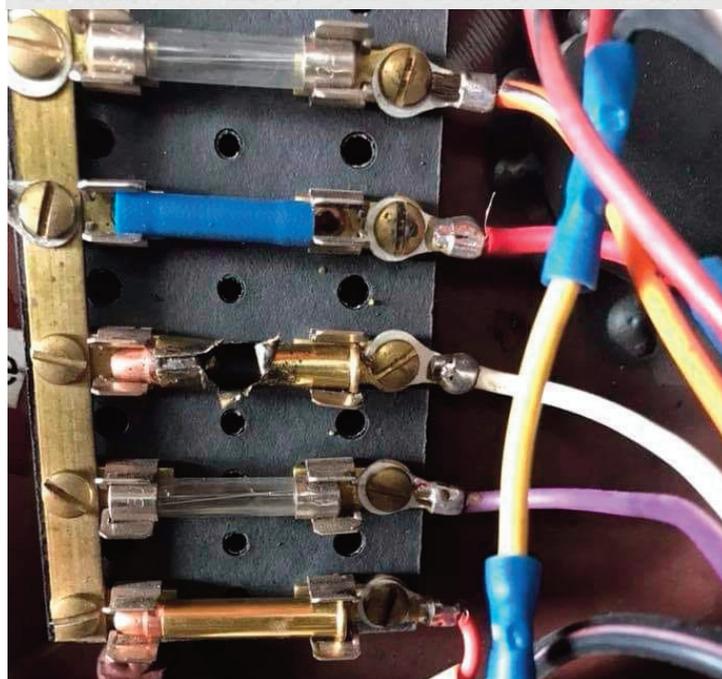
Friday Night Fun Net - Every Friday night at 8:00 pm on the 146.610 - offset (pl 114.8) RARA repeater with Jimmy, KC9GCR, as net control.

HF Net Information - Head on over to the RARA website and take a look at the "Nets" page. We now have listings and links to great HF nets.

Ham Funny



WENDY GETS PRIVACY BY CREATING HER OWN BOOK COVERS



Q: What's the difference between a rich Ham and a Unicorn?

A: Nothing, they're both fictional characters.

Straight Key Night

Larry aka AC9GO

All right, you have been telling yourself that you wanted to get on the air with CW (morse code for you newby's). Maybe it has been years since you touched a key (that morse sender thing) or maybe you have been studying the code between FT8 contacts, and wanted to ragchew with code. Here is your chance. If you aren't doing anything on New Years Eve, try Straight Key Night. This puts everybody kind of on the same plain. The guys that use it all the time generally use a bug or keyer to spit out the code at hyper speeds, but for some, when you put a straight key in front of them, it is like sending with two left feet. For others that haven't touched a key in twenty years, and I mostly fall into this group, it's like spaces where there should be a letter, because I have forgotten if a p is dah dit dit dah or dit dah dah dit. Whatever.

Hopefully the other guy will figure it out. Oh where was I. This is what you can expect to hear:

CQ CQ CQ DE AC9GO AC9GO
CQ CQ CQ DE AC9GO AC9GO
CQ CQ CQ DE AC9GO AC9GO KN (KN MEANS
IT'S YOUR TURN)

That's me calling CQ, and if nobody wants to talk to me, I'll repeat the sequence until either someone thinks they have half a chance of understanding me, or I fall asleep at the key. If I do get a return call, it hopefully will go like this.

AC9GO AC9GO DE IS AB9--- AB9--- KN

(After I get done celebrating with a big yahoo that someone heard me it should go something like this.)

AB9--- AB9--- DE AC9GO AC9GO FB OM TNX
FER THE CALL, UR RST IS 599 5NN HERE IN
ROCKTON, IL ROCKTON, IL. NAME HERE IS
LARRY LARRY. U R MY FIRST CW CONTACT IN
ABOUT 5 YEARS. U R MY FIRST CONTACT IN
ABOUT 5 YEARS. SO HOW CPY? HOW CPY?
AB9--- AB9--- DE AC9GO AC9GO KN

Translated: Fine business Old Man, thanks for the call, your signal report is 599, 599 here in Rockton, Illinois . My name is Larry. You are my first code contact in about 5 years. So how copy?

He or she will probably then give me much the same information:



If you are talking to a lady, refer to them as a YL (Young Lady) and it doesn't matter how old they are. Some of the other things you might hear:

WX IS WEATHER, QTH
IS HOME, R OR RRR IS
RECEIVED YOUR INFORMATION.
QRM IS INTERFERENCE, QRN IS
STATIC NOISE . Other topics might

include age or how long you have been a ham. What you are using for a rig and antenna. You might be asked if you are married and any other thing that might come up. Avoid religion and politics. They may ask if you QSL and how. The main thing is enjoy. It happens every New Years Eve , Straight Key Night. Just blow the dust off that old morse key and find out how to wire it up for your rig, and got on the air. Enjoy! Unless the XYL has something planned I'll be on after she heads for bed, Sometimes as early as 10 pm, but once in a while she actually makes it to midnight. Hope to see you then.

73 AC9GO QRT



Nov. 9, 2018

The meeting started at 7:05 pm with Gordon Seaman, KC9NEX, conducting the meeting.

There were 15 people present.

October Meeting Minutes

A motion to approve the minutes as presented in the Ham Rag was made by Kurt Eversole, KE9N. It was seconded by Tom Shouler, N9VJU. The motion passed.

Treasurers Report

The Treasurers report was presented by Jennifer Van Zieleghe, KD9FMJ. The current balance is \$6072.74. A motion to approve was made by Tom Shouler, N9VJU and seconded by Kurt Eversole, KE9N. The motion passed.

Old Business

Paul Johnston, W9PJ brought up his idea of having name badges for members and a discussion ensued, the board will look into the matter.

New Business

There were no new additions for persons running for office so the following people as presented in the Ham Rag were voted in by a voice vote.

President: Randy Long AC9OF, Vice President: Jennifer Van Zieleghe, KD9FMJ, Recording Secretary: Greg Kuczek, W9VOX, Treasurer: Gordon Seaman, KC9NEX.

Jacek Gadja, KD9ELI was the only person interested in one of the four board positions at this time, the board will look into appointing the other three.

Anthony (Tony) Bustos, N9ARB introduced himself and reported that he is now the ARRL's Illinois Affiliated Club Coordinator and went on

and explained some of his duties and how he plans on helping promote clubs in Illinois. There was much discussion on his ability to help Illinois clubs and some of the things he will be able to provide. He also introduced Karl A. Larson, W9UIJ and their involvement in the State Line Amateur Radio Club.

Kurt Eversole, KE9N reported on the Illinois QSO contest that he hosted at his house and how many contacts were made and how much fun was had by all who attended. He also reported on the upcoming November Sweepstakes and what was involved in working this contest. He also reported on the new equipment purchased for the 147.000 and what it will allow the control ops to do in helping control the repeaters, he also reported that the issues with the 147.000 have been corrected and it appears to be working very well. He also reported that the \$100.00 donation the club made to the Roscoe VFW in thanks of the use of their grounds for field day was presented at their November membership meeting.

Program Information

Program Subject: Beginning Contesting

Presenter: Jennifer Van Zieleghe, KD9FMJ

Comments: Jen presented a very informative look into the equipment and software needed to start contesting and showed how easy it is to get started. She presented too much for me to go into detail here so if you missed the presentation please let her know you would like to see it, maybe she can present it again in the future. There were many questions and discussions about the procedures and equipment involved and was very well received.

Adjournment

A motion to adjourn was made by Kurt Eversole, KE9N. A second was offered by Tom Shouler, N9VJU. The motion passed.

The meeting concluded at 8:40pm.

The meeting minutes were taken by and submitted by Gordon Seaman KC9NEX

RARA Membership Form

If you would like to join the Rockford Amateur Radio Association, please fill out the form below and mail it (with the membership fee payment) to the address shown at the bottom of the form. If you would like to join at our next meeting (see cover for meeting details), fill out the form and bring the form with your payment to the meeting and see our treasurer, Jennifer Van Zieleghe, KD9FMJ.

Thank you for your support!



MEMBERSHIP APPLICATION

website: w9axd.org

Membership Type: New Renewal

Annual Fees: \$20 - Student (up to age 24)

\$35 - Adult \$25 - Senior (age 62+)

Above rate includes the
RARA monthly newsletter, Ham Rag, via email
Ham Rag via USPS: \$12 extra

Name: _____

Call Sign: _____

Email Address: _____

Address: _____

Town: _____ State: _____ Zip: _____

Home Phone #: _____ Work #: _____

Cell #: _____ Ext: _____

Radio Interests: _____

May we make your phone and e-mail available for other RARA members only? Yes No

Comments: _____

RETURN THE COMPLETED FORM TO:
ROCKFORD AMATEUR RADIO ASSOCIATION
P.O. BOX 8465
ROCKFORD, ILLINOIS 61126

All membership applications to become either a new member or to be reinstated as a member of RARA must be approved by the RARA board.

Approved: _____ Membership Year ____/____/____ to ____/____/____