



THE RARA RAG

Newsletter of The Rochester Amateur Radio Association, Inc.
Founded in 1931

DECEMBER 2018
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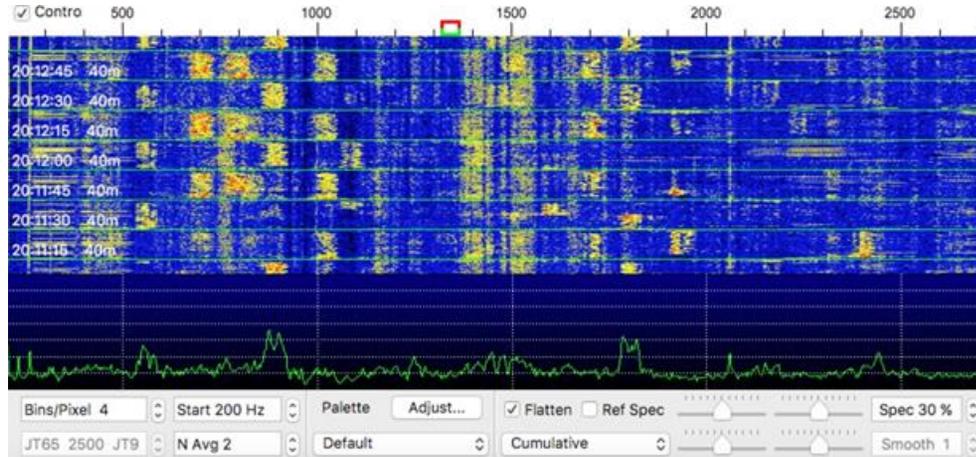
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EVERYTHING DIGITAL—LET YOUR RADIO AND COMPUTER TALK TO EACH OTHER

SCOTT THEIS, W2LW RARA VICE-PRESIDENT

For our December meeting presentation, Duane Fregoe, K2SI, will provide an exposé on digital communications. He will begin by discussing how to get your computer and HF radio to talk to each other while reviewing the backside interface of some newer rigs to see what types of connections are required. If you remember from Duane's earlier presentation on rig control and logging software, all that was needed was a CAT cable so that the computer could retrieve the frequency and mode from the radio to complete the QSO entry in your electronic logbook. When using digital modes on your computer, there needs to be a way to transfer audio (data) back and forth between the HF radio and your software.



Duane's presentation will review the required connections, so your computer and HF radio can talk nicely to each other. A little audience participation will be needed since Duane does not own every radio or soundcard. If you own a newer rig, like an IC-7300 or FT-991, your radio has an integrated sound card.

In addition to getting all connected, Duane will discuss a number of digital modes. Most of you will remember those old forms of digital communication such as RTTY, PSK31, JT-65, and so on. They still exist but are rarely used unless there is a RTTY contest going on. Duane calls them old forms of digital communication as most have been eclipsed by the "new hotness" called FT-8. The presentation will review some of the software required to operate on many of these digital modes. When Duane runs FT-8 he is also running at the same time JTAlerX, DXKeeper, DXView, Pathfinder and LogPublisher. He will explain what each does and show actual contacts in a short video.

Please join us on Wednesday, December 5th, 2018, 7:00PM at the Boy Scouts Headquarters at 2320 Brighton Henrietta Town-line Road, Rochester, New York 14623.



BOARDZ BUZZ

RALPH DUTCHER, KD2BDZ, RARA SECRETARY

Hi, my name is Ralph Dutcher, KD2BDZ and I am the secretary of the Board of Directors of RARA. I have been licensed since 2011 and I am currently a General class operator. Most of my Ham Radio experiences have centered around Public Safety / Service. I have been the President of the Monroe County ARES / RACES team and served on their board of directors. Currently, I managed the Thursday evening ARES RACES net on 146.61. I have done this for three years now. I have also participated as a charter member of the National Public Health Amateur Radio Club.

My interest in Ham Radio started during my employment as a Public Health Preparedness Consultant in the Office of Public Health Preparedness for Monroe County. While working there I coordinated logistics for the Point of Dispensing (POD) planning. This program is the way that necessary Medical Countermeasures are distributed in a time of emergency. It was originally developed to deal with the threat of an anthrax attack but it has morphed into an all hazards operation for potential bioterrorism or other naturally occurring medical emergencies. Since Monroe County has tens of preplanned sites, a robust redundant communications plan was developed to provide contingent communications operations. That's where Ham Radio operators fit in. The county has tested this plan by multiple real-world exercises to demonstrate the operational readiness of this system. I was able to coordinate these exercises.

That was my introduction to the ARES / RACES group and that's where I found my interests in Ham Radio. I was accepted into the organization, took classes from RARA Elmer's and the rest, as they say is history. I was also able to learn and improve my technical knowledge by participating in the three-year series of exercises entitled "The Northern Border series." During that time, I increased my knowledge of APRS protocols and even dabbled in Mesh networking operations. The depth of knowledge that our ARES / RACES and RARA organizations has and shares is what encouraged me to develop my technical understanding and become "addicted to Ham Radio".

I have learned that people use Ham Radio to talk across town, around the world, or even into space, all without the Internet or cell phones. It's fun, social, educational, and can be a lifeline during times of need.

A recent news story on the ARRL website reports on Howard Michel, WB2ITX and some of the things he's working on early in his tenure as ARRL's CEO. It notes:

Michel would like to see ARRL focus on the future of Amateur Radio (sic) and not become the redoubt of a particular generation of radio amateur or interest group. He said, 'Ham Radio shouldn't abandon the old guardians of the hobby, but at the same time, it needs to have new things that appeal to people who have different interests and different passions.'

Somehow it makes little sense that amateur "ham" radio continues to thrive in

the age of **Twitter**, **Facebook** and **iPhones**. Yet the century-old communications technology – which demands such commitment that you must generally pass an exam to receive a license — currently attracts around 350,000 practitioners in Europe, and a further 700,000 in the **United States**, some 60 per cent more than 30 years ago.

What is it about a simple microphone, a transmitter-receiver and the seductive freedom of the open radio spectrum that's turned a low-tech anachronism into an enduring and deeply engaging global hobby? For a start, there is that thrill in establishing a magical person-to-person long-distance radio conversation that no commodified internet communication can compete with. In a world of taken-for-granted torrents of e-mails, instant messages and **Skype** video-chats, there is a purity and a richness in the shared experience of exchanging "73s" during a live "QSO" with strangers on another continent.

That's my story so far.

Is Ham Radio just an Old Man's Hobby? I think NOT.

73

Ralph Dutcher, KD2BDZ "See ya on the Radio!"

CALENDAR OF EVENTS

WEDNESDAY DECEMBER 5, 2018- RARA General Meeting
7:00 PM at BSA Headquarters
2320 Brighton Henrietta Town Line Rd

Thursday December 6, 2018- RARA Board of Directors
5:45 PM at Novaworks, 333 Metro Park, F-500

Saturday December 15, 2018- RARA VE Testing
9:45 AM RIT Kate Gleason College of Engineering, Room 9-3139

SATURDAY FEBRUARY 9, 2019—WINTERFEST
Stewart Lodge—Mendon Ponds Park

SATURDAY JUNE 1, 2019—ROCHESTER HAMFEST 2019

SKYWARN RECOGNITION DAY 2018

DUANE FREGOE, K2SI

SKYWARN Recognition Day will be December 1, 2018 (0000 – 2400 UTC). In local terms it is Friday November 30th, 7:00 PM until Saturday December 1st, 7:00 PM. National Weather Service offices across the country will be on the air for 24 hours. This special event was started in 1999. The goal is to contact as many weather service offices as possible using repeaters, IRLP, Echolink, and HF. This is a fun event for new hams that may only have a technician license since they have privileges for repeaters, Echolink, and IRLP. The exchange is your name, temperature, and current weather conditions such as windy, raining, snowing, overcast, etc. Many of the weather service offices will be on Echolink and IRLP. The National Weather Service office in Buffalo will be participating again this year. If you hear them on a local repeater check in and give them a report. Submit your total number of weather service office contacts for a certificate from the National Weather Service. More information is available from: <https://www.weather.gov/crh/skywarnrecognition> and also <http://www.arri.org/skywarn-recognition-day>



K2SI on the Echolink Station at WX2BUF



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ACCURATE HOMEMADE SETTING CIRCLES

MARTIN PEPE

Recently, during the development of some Radio Telescope hardware, college students had the need to have an accurate, yet inexpensive (spelled – cheap DIY) setting circles for a Radio Direction Finder (RDF). Purpose was to find ‘offending’ (DTV & FM) emitters potentially interfering with our desired celestial (Solar) signal.

In the process of completing this task we developed an inexpensive way to accurately point your antenna or telescope to find your objects of interest. The idea is basically simple, mount a ‘stick on’ scale (Amazon) to a wooden circle. For Radial (horizontal) we used a metal kitchen cabinet Lazy-Susan bearing (Loew’s, etc).



The math is simple, how many degrees in a circle? = 360. How many inches in a yard? = 36. Therefore $360/36 = > 1 \text{ inch} = 10 \text{ degrees}$. With a circle having a circumference of 36 inches, it is not hard to work down to a very small angular number. If 1 inch is 10 degrees, then $\frac{1}{2} \text{ inch} = 5 \text{ degrees}$, $\frac{1}{4} \text{ inch} = 2.5 \text{ degrees}$, etc.

With this kind of accuracy now easily achievable, it goes without saying you have to pay some attention to alignment & calibration. I tend to use ‘geo’ north instead of magnetic, and/or a known (bright) star position from a star chart.

Don’t need a horizontal measure, but a celestial one (zenith = directly overhead) then set the disc on edge, and use 9 inches as 90 degrees (straight up), and ‘0’ as the horizon. Prefer metric? Use a metric rule 0 – 90 cm $\frac{1}{4}$ circle or 180 cm (~70.9” - semi-circle), and scale accordingly.



Want some alternatives?

- [Dial Gauge](#) (Harbor Freight # 34214)
- [Digital Angle Gauge](#) (Harbor Freight # 63615)
- Smart Phone App – Handy Carpenter (iPhone)

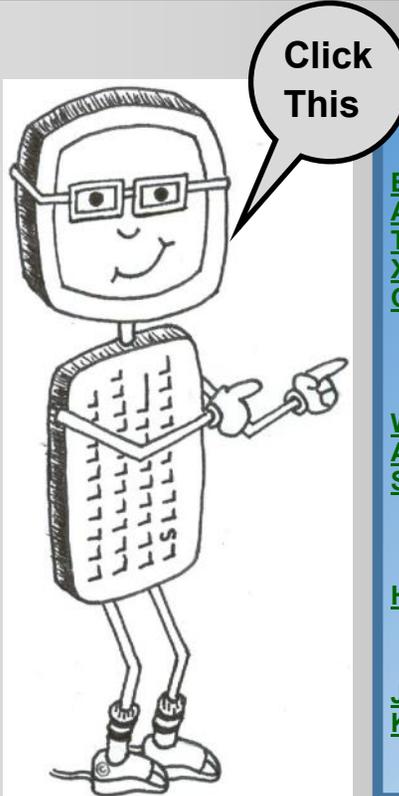
Enjoy this quality addition to your homemade telescope (works great on Dobs) or radio equipment, and expand your capabilities. btw; your wallet will also thank you.

Silent Key

George Chester Keiser III
W2GCK
 April 12, 2018

Silent Key

Robert V. Reinke
N2SEW
 April 29, 2018



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CLUBS

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SATELLITES

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SDR

[Hermes-Lite](#)

CW

[Just Learn Morse Code](#)
[K7QO Code Course](#) (scroll down)

PUBLIC SERVICE

MIKE MOORE, KC2NM, RARA PUBLIC SERVICE COORDINATOR

Pumpkin Patrol

RARA joined Ham Radio organizations across New York State for the annual Pumpkin Patrol which provides monitoring of the bridges over the New York State Thruway. This event began in the early 1990's as a response to vandals found dropping pumpkins in the path of drivers below. This year, operations were conducted from just after dark until nearly midnight on October 30 and October 31 (Halloween). Amateur stations, operating mobile, were stationed in sight of each of 16 bridges over the Thruway in Monroe County. A net operated during those hours and was conducted on the WR2AHL (145.11) repeater with a roll call each 30 minutes. Stations were asked to report suspicious activities or other concerns on the net for relay to the New York State Police or local law enforcement agencies. The Pumpkin Patrol is held each year at the request of the New York State Police and it serves to eliminate the need to dedicate law enforcement resources to monitoring of the bridges and allows them to address more pressing public safety concerns.



Ed, K1EM served as event captain and he reports, "I appreciate the opportunity you bestowed on me as the organizer of the 2018 Pumpkin Patrol. Your dedication to the cause, volunteerism, and sacrifice of personal time made my job easy. The outlook for our safety assumed by net control and the treats and companionship provided by the goodie patrol made our evening hours of watchfulness enjoyable and worthwhile. Thank you all!"

NET CONTROL: TIM, WB2KAO AND LYNN, N2IZX

GOODIE PATROL: LEE, WB2JOR AND CHUCK, KC2KPL AND DIANE, KC2MZP
BRIDGE TENDERS: ANAND, KC2KPG; BOB, NS2B; JACK, W2JAT; CAROLYN, N2YMP; MIKE, KC2NM; BRETT, KD2EHW; DAVID, K2DPC; JACK, WA2CHV; RICHARD, K2UW; CEDRIC, WA2FTV; VAN, N2BNE; DEAN, WB2QCJ AND JEAN LOUISE, N2PHB; REED, N2KZF; BILL, KA2WNS; TOM, KD2IOB; CHRIS, KC2YSO AND MARIA, KD2AZE; ROGER, W2RMB; JIM, WA2MYF; DON, K2DV

No acts of vandalism were reported during this event and this is just the hoped for outcome. DON, K2DV retired this year as an NYS Trooper. He reported over the net that objects thrown from bridges is one of the top highway hazards in the

eyes of the Troopers. He assured everyone that our service in this event is appreciated! Thanks to all who participated in this year's Pumpkin Patrol!

RMSC "Sounds Like STEM"

RMSC has changed the format of its Holiday Science and Technology Days. This year they have requested our help in a program which will run on Saturdays in December. Our involvement will be for Saturday December 8 and this will be the 20th year that we have supported the RMSC in the holiday season.



We have many basic electromagnetism and Morse Code exhibits ready to roll. However, we are always looking for new and interesting additions. Do you have something to add? Some ham volunteers bring their own projects to exhibit when they are present while other volunteers may leave the equipment to allow others to demonstrate it.

DECEMBER RAFFLE

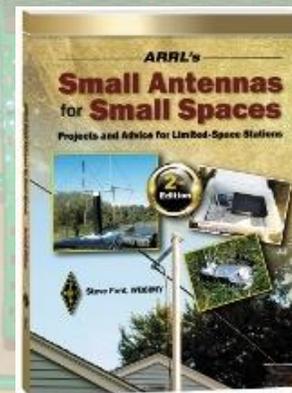
December Raffle prizes are pictured below:

- ARRL 2019 Handbook Boxed Set
- ARRL Small Antennas for Small Spaces
- Comet SMA24 2M 70CM antenna

Coming in January

RSGB Radio Communications Handbook

2M/70cm HT Antenna w/SMA



More information is available in the "Public Service" section on the RARA website: www.rochesterham.org The "Sounds Like STEM" program runs 8:30 to 12:30pm on December 8. You can also sign up on the website to volunteer. We will also pass around a sign-up sheet at our December 6 RARA meeting. Don Kiser AC2EV will serve as Captain for this year's event.

<http://www.rmssc.org/science-museum/programs-and-events/item/605-destember-drop-shop-workshops>

2018 Scouting Jamboree on the Air (JOTA)

Jamboree on the Air or JOTA was held at BSA Camp Babcock Hovey Oct. 20, 2018. This operating activity connects scouting groups around the world via Amateur Radio. It promotes a Scout's sense of belonging to the worldwide Scout Movement and builds cultural awareness, develops tolerance, advocates sharing and collaboration as well as demonstrates teamwork. It provides exciting opportunities for young people to explore technology and to develop technical skills including fostering innovation and creativity through communicating with other Scouts. A wide range of activities using communication technology are the chief methods of attaining these goals.



This year, our event was part of the Trophy Challenge Camporee and there were 2000 scouts encamped. There were 2 DSTAR stations operating. One was an internet hotspot and the other connected directly through KD2HVC repeater in Stanley, NY. There was a low band station on the shack porch provided by Steve K2SRF using an Icom 7200 in the first part of the day, then Mark KC2UES fired up his Elecraft K3. Conditions were not great but we did work scout groups in Georgia and Texas. Mark spent a long time chasing a DX scout station in Namibia but we were unable to snag them. Participants were K2SRF (Event Captain), KC2DQS, KC2NM, KC2UES, KC2TNO, N2WES, KC2VCM. Of note is the fact that N2WES, KC2VCM are youths. N2WES is a technician but received some supervised operating time behind the microphone operating short wave.



Steve K2SRF using an Icom 7200 in the first part of the day, then Mark KC2UES fired up his Elecraft K3. Conditions were not great but we did work scout groups in Georgia and Texas. Mark spent a long time chasing a DX scout station in Namibia but we were unable to snag them. Participants were K2SRF (Event Captain), KC2DQS, KC2NM, KC2UES, KC2TNO, N2WES, KC2VCM. Of note is the fact that N2WES, KC2VCM are youths. N2WES is a technician but received some supervised operating time behind the microphone operating short wave.

US ARMY MARS MEMBERSHIP



My name is Bob Jordan. I am the Civil Affairs Officer for Region Two US Army MARS. Our members consist of an elite group of dedicated professionals consisting of roughly 5,000 licensed amateur radio operators across the county who volunteer their time, services, and communications expertise – using their personal radio equipment – to assist the Department of Defense and other federal, state, and local agencies with auxiliary communications in the event of a disaster or emergency.

The purpose of this message is to extend an invitation to you and any of your members who might be interested in joining our ranks. To that end I have attached two pdf documents that can explain in detail what we do. I have also included a membership application. Please distribute them among your members and forward any applications to my attention. If I can answer any questions, please feel free to reach out to me. My contact information is included in my signature below.

Editor's Note: Email: rbjordan@optonline.net The documents: About Army MARS, Information Brochure and application are available at this link. <https://goo.gl/gSgefA>

THANK YOU

Hi Don,

Thank You for the work you and your team did so I could take the Extra Class exam last Saturday (10/20/18). I started working the extra parts of the bands that afternoon. The FCC database had me shown as EXTRA on Monday and QRZ had it by Tuesday afternoon. Again thanks for your efforts to provide me and the rest of the ham community the opportunity to take the exams.

73 KA2ENE (Harry).

Silent Key

Robert C. Gibney
W2RCG
October 23, 2018

Silent Key

John J. Kinsella
K2QHA
October 25, 2018

NOTES FROM THE WORK BENCH: 3D PRINTING IS HARD!

KARL HEINZ KREMER, K5KHK

3D printing has been around for a while, so one could assume that by now, all the kinks have been worked out, and printing to a 3D printer is just like printing from your word processor to your inkjet printer...

This summer, I got my first 3D printer. It was a fantastic deal: \$179 for a printer with pretty decent reviews – and that included shipping from China. While assembling the device, I was surprised by how sturdy and well-engineered the whole printer was. It came with a few yards of *filament* – the spaghetti shaped plastic material that gets melted and then arranged layer by layer to form the final 3D printed *thing*.

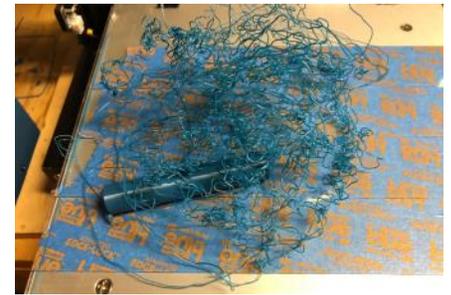


The little dog that came with the printer as a sample file on the memory card that also contained the documentation and other supplemental material, printed without a problem – it just was much smaller than I had expected.

Where does one go to get more 3D designs to print? The internet to the rescue! The site Thingiverse.com contains almost anything one can think of. So, after downloading some of them and going on a printing spree, I realized that 3D printing is much harder than I hoped for. I created one thing after the other that ended up in the garbage. After some Google assisted research, I realized that the print bed on my printer was warped – a pretty common problem with cheap 3D printers. A trip to Home Depot later, I had a homemade glass print bed. Once leveled, it produced much better results. The next problem was the printing temperature: Different filaments from different manu-

facturers require different printing temperatures, and not every manufacturer actually specifies the correct temperature on the spool or the packaging. More experiments were necessary.

The progression of a case (there actually were a couple other stages that went straight into the garbage):



So, how am I using this new toy for ham related printing? Here are some examples.



On the left are front and end caps for an aluminum case with holes and cutouts for a HermesLite-2 SDR radio, the item on the right is a QRP power meter (up to 10W).



The box on the left is a case for a Softrock RXTX Ensemble transceiver, on the right is a 50W HF amplifier.

Once you've gotten a handle on printing stuff, you can walk by a display of nuts in the shell at the grocery store and say "All I need is a nut cracker" ... and about 48 hours later, you are eating nuts, cracked with your brand new 3D printed nut cracker (did I mention that printing is slow?):



Silent Key

Gary R. Greene
W2ZV
November 4, 2018

HAMFEST 2019 UPDATE

TIM GUYOT, KB1POP, RARA HAMFEST COORDINATOR

Good News! The 2019 Hamfest is a go for Saturday June 1st 2019 at the Hilton Exempt Club 137 South Ave, Hilton, NY 14468.

We're waaay ahead of last year. I met with the Hilton Exempt Club and signed the contract. It's time to start advertising and planning. We're waaay ahead of last year.

Thanks to Anand Choudri KC2KPG, we have an easy to follow procedure that includes all the steps to put on a great hamfest, and now that the contract is signed, the hardest part – finding a venue – will be out of the way.

What we need now is a committee of 2-4 people with a designated a chairperson to produce the event. I've been on the committee for the last two years and would be happy to advise, but we need others to step up to the challenge of leading the event. There are several steps to be taken between now and June 1st. To be on the committee, you mostly need to be able to respond to e-mail and make a few phone calls.

If you're interested in being on the committee or being the chair, please e-mail president@rochesterham.org

ST LOUIS SCHOOL ROBOTICS TEAM COMPETITION

MIKE MOORE, KC2NM

The technology class of St. Louis School, Pittsford was the recipient of the 2018 Rochester Amateur Radio Association Educational Grant. RARA awarded \$2000 to the school and this was used to purchase three EV3 robot kits to be used by the schools FIRST robotics team over the next few years. One requirement of the grant award is that RARA receive an update about how the award is being used. On November 15, RARA received an invitation to attend a rehearsal of the presentation for the upcoming FIRST competition. Mike, KC2NM and Tim, WB2PAY attended the presentation rehearsal at the school by the 4th and 5th graders on the two teams. The presentation included the showing of videos which depict the RARA provided robots executing the motions to solve the problems presented in this years FIRST Robotics Deep Space Challenge. Both teams presented a skit about a topic involving issues surrounding deep space travel. One skit described a "sleeping pod" to be used by the astronauts on a long space mission. The pod provided various amenities to keep the travelers engaged. The second team presented a skit about a "magnetic dodge ball" range which could be used to increase the fitness of the astronauts during the space mission.

St. Louis School Robotics Team competed at the first level of school competition on November 17 held at McQuaid Jesuit High School. Results from that competition will be reported in a future Rag article. We hope to link to more information about the competition on the rochesterham.org website.



PEAK THE GRID

Thank You's

In this issue we have presented a Thank You email. The first of many, I hope.

CW Group

At the November RARA meeting and in an email to the RARA General email list, we announced the formation of a CW Group. The group is the joint effort of RARA and XRX.

The response to the announcements has been very positive. We have 17 members interested in learning Morse Code or improving their technique. We have 7 volunteer Elmers and a first meeting on Thursday November 29, 2018, 7:30pm at the Webster Rec Center. This is an exciting outcome for the four coordinators: Bob Karz, K2OID, Tim Brown, WB2PAY, Anand Choudri, KC2KPG and Forest Shick, WA2MZG.

The goal of the group is to make Morse Code and CW operating more accessible to our ham community.

This will not be a one and done event but hopefully a group with continuity and staying power to continually offer teaching and coaching of Morse Code and CW operating.

Silent Keys

At one time or another, we all know someone who passed away. This issue of the RAG has 5 of our friends who are no longer with us. Although this is always sad news, there are times when it hits close to home.

I met Tina and Bob Gibney through RARA and they visited my shack a while ago. I bumped into them a few times since we met, either at a RARA meeting or



► **VHF/UHF Operations— DEC. 1, 2018**
CANCELLED AND WILL BE RESCHEDULED

► **RASPBERRY PI — JAN. 19, 2019**



The January session will cover the Raspberry Pi with a focus on:

- What is it?
 - Computer
 - Development system
 - Micro controller
- LINUX, what is it?
- Overview of Setup
- Pi in the Ham Shack

Latest Academy information is available at https://www.rochesterham.org/rara_academy.htm

Academy Workshops are held at the BSA Headquarters, 2320 Brighton Henrietta Town Line Rd, 10am to noon. You can sign up for Academy Workshops by emailing education@rochesterham.org. If you would like to assist or even create a session, please contact education.

Please take advantage of these RARA sponsored training and operating opportunities.

If you have a topic that you think will interest the membership, drop an email to education@rochesterham.org.

FOR SALE

Newly rejuvenated Heath DX60B transmitter, HR10B receiver, HG10B VFO, home brew TR relay (modifications needed) and J44 key. All units work. The receiver could use an alignment. Original Manuals. External condition is good with a few blemishes.

\$275 for the complete station.

Contact: Richard Vuillequez, W2FBS
richw2fbs@gmail.com



Hobby PCB RS-HFIQ 5W HF SDR Transceiver with case and Startech USB sound card. Only used in receive for about 4 hours. All for \$200.

Contact:
 Forest Shick, WA2MZG
fshick3@gmail.com



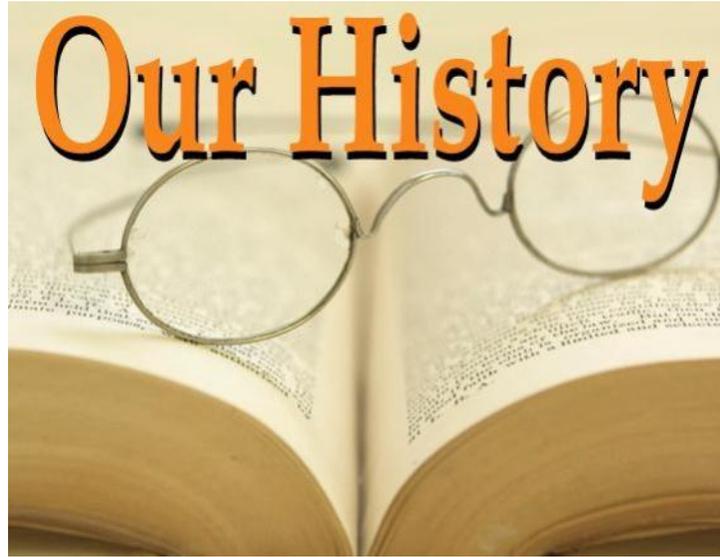
RAGS OF THE PAST

ED GABLE, K2MP, RARA HISTORIAN



40 Years Ago, December 1978

Last month we reported of the DXpedition to Gibraltar by Irv Goodman, AF2K and Russ McKay, WA2CBU. At that time we did not have their DX callsigns but have now learned that they would be known as ZB2EN and ZB2EM, respectively. Want to know more? Easy, just go to the next RARA meeting where Program Chair Alan Komenski AC2K, has arranged for Irv and Russ to tell all. As this was the December meeting a RARA tradition kicked in as this event was hosted by the Kodak Park Amateur Radio Club with the KP Recreation building the venue. A full page article by Craig Stolze WB2AQQ, introduced the new WR2APD repeater on 147.78/18 Megahertz. The repeater, part of the Gridd Radio Network, was privately owned, open to the public and had a free autopatch. Jim O'Brien K2UDP, wrote to tell that RARA has been asked to provide Technical Assistance by the Lake Placid Olympic Organizing Committee during the 1980 Winter Olympics at Lake Placid, New York. More on this later. Back from a fishing trip, Bob Roberts WA2QAU, continues his "For DX'ers Only" column. Novel this month is an interview with Bob Dray ZD7PV, who reported on his St. Helen's Island DX QTH. The novel part was that the interview took place on-the-air while eager DX'ers stood by for their chance to get in the log. Writing for the Rochester Radio Repeater Association (RRRA) was Bill Gillette WB2KIW, who told readers that Brian Foval W2PBJ, would be their next speaker. The Rag Editor was honored to have a real Old Timer contribute to this issue. Duck E. Dengler W2LK, who worked on Rochester's public service radio system for 32 years, penned an interesting article on the country's first unattended repeater station. Operating at 35 Mc, AM, from Mt. Diablo, California, it changed everything! From the Want Ads you could buy a Drake 2C and 2NT from N2AGR. A commercial advertiser had an interesting idea at Christmas time where JR's ham store printed a Christmas Want list. All you had to do was check off a few items, leave the list laying around for the XYL to find it, and take the list to JR's to pick it up. No gift wrapping was offered.



20 Years Ago, December 1998

"Radios in the Cockpit" was the title given to this presentation by Program Chairman and RARA Vice-President Bob Moore N2USB. A triple treat was in store as attendees were promised yet another excellent program by Joe Hood K2YA, another treat was having RARA hosted by the Kodak Equipment Division Amateur Radio Club and thirdly a visit to Kodak's Elmgrove Road facility arranged by Charlie Escriva KB2OSZ. Joe promised and delivered an informative talk where we learned of VOR, GPS, ADF and much more found in modern private aircraft. Alex Piccirilli NV2Y, wrote on a personal observation that found him searching the RARA Directory. Alex discovered that 11% of RARA members listed were YL's! "Where are they" was his question of the day as he has only heard Lia Zwack, WA2NFY, on the air. A good, unanswered question. (Ed) Readers are blessed with the occasional times that Lloyd Caves, WB2EFU, lifts his pen to adorn the Rag pages with writings on the state of local Amateur Radio as seen by his keen eye. This time he related the high regard ham radio enjoys within our community and its leaders and urges members to get involved with public service events. Continuing his writings on what I'll call the human events side of DX'ing, was David Selbert KA2BOK. This issue told the story of two unrelated hams; US and Russian, meeting and eventually helping send much needed cancer medication to help the Russian's family. Half way through this session of the code and theory classes brought Tim Magee, WB2KAO, License Class Director, to our pages with a positive progress report on what will be our newest license holders. With regret it was reported that William Yaeckel, WB2JTH, was reported as a Silent Key. From the Want Ads you could buy a SB-220 Linear from J.E. Taylor W2OZH, for \$390.00. An unusual commercial advertiser found Hamtronics, Inc., of Hilton, NY, with a Want Ad looking for electronic assemblers to build the popular Hamtronics Repeaters.

VE TEAM

The next **ALWAYS FREE** testing session:
 Saturday December 15th (Third Saturday)
 Rochester Institute of Technology
 Kate Gleason College of Engineering
 Gleason School of Engineering
 Room 3139, Bldg. 9
 Use "J" parking lot

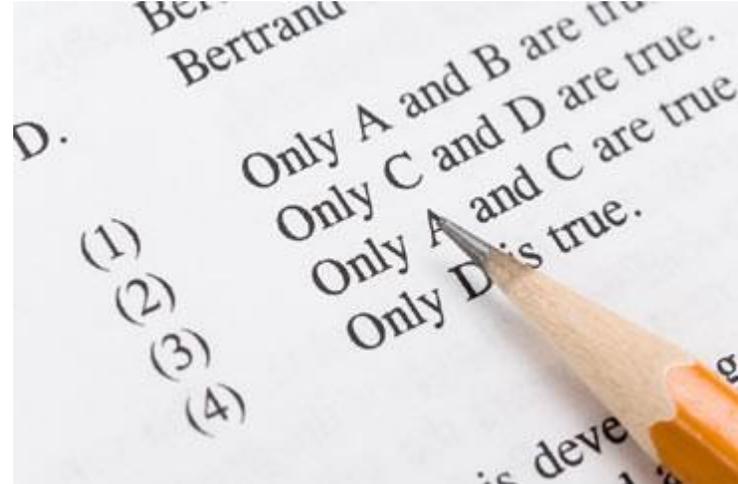
Registration at 9:45AM
 Testing at 10:00AM

You do not have to preregister.

To avoid giving your SSN go to:
<http://wireless.fcc.gov/uls/index.htm?job=home>
 Register and bring the resultant FRN.

For more info:
<https://www.laurelvec.com/?team=RARA>

Don Kiser - AC2EV
 RARA Board member
 VE Team Leader
 585-613-1035



Jeffrey Feeter	KD2QPL	E	Earl Harrington	KD2MIZ	G
Kenneth Kim	KD9MAI	T	Matthew Roca	KN4QMO	T
Hui Wu	KD2QYG	G	Jose Dejesus	KD2QYH	T
F Scott Cicora	N3ICY	E	Douglas Howard	KC2KNH	E
Evan O'Brien	KD2QYI	T	Eric O'Brien	W2EOB	E

New licensees names are in **BOLD**

RARA CALENDAR

Tim Barrett, K9VB

December 2018						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1 AWA Museum Open 1pm - 5pm ARRL 160M CW Contest Wake Up QRP Sprint YARC QSO Party TOPS Activity Contest FT8 Roundup EPC Ukraine DX Contest
2 ARRL 160M CW Contest TOPS Activity Contest FT8 Roundup EPC Ukraine DX Contest	3 ARS Spartan Sprint	4 QRP Foxhunt Phone Fray	5 RaRa Monthly Mtg 7:00pm, BSA HQ, Brighton Henrietta TLR ROC City Net 8:00pm 3.826 MHz CWops Mini-CWT Test QRP ARCI Topband Sprint	6 RaRa BoD Meeting 5:45pm Nova- works 333 Metro Park Rochester 14623 ARES Net 146.61 MHz 7pm NRAU 10M Activity Contest SKCC Sprint Europe NCCC Sprint QRP Foxhunt	7 ARRL 10M Contest	8 AWA Museum Open 1pm - 5pm ARRL 10M Contest PODXS 070 Club Low Band Sprint SKCC Sprintathon International Naval Contest
9 ARRL 10M Contest PODXS 070 Club Low Band Sprint SKCC Sprintathon International Naval Contest QRP ARCI Homebrew Sprint CQC Colorado Snowshoe Run 4 State QRP Group Sprint	10	11 QRP Foxhunt Phone Fray NAQCC CW Sprint	12 ROC City Net 8:00pm 3.826 MHz CWops Mini-CWT Test	13 ARES Net 146.61 MHz 7pm NCCC Sprint QRP Foxhunt	14 UN Digi Contest Russian 160M Contest	15 AWA Museum Open 1pm - 5pm Field Hell Sprint OK DX RTTY Contest Padang DX Contest Croatian CW Contest
16 Padang DX Contest Croatian CW Contest ARRL Rookie Roundup CW Run for the Bacon QRP Contest	17	18 QRP Foxhunt Phone Fray NAQCC CW Sprint	19 ROC City Net 8:00pm 3.826 MHz SIARC 7.30pm RDXA 7.30pm CWops Mini-CWT Test	20 ARES Net 146.61 MHz 7pm NCCC Sprint QRP Foxhunt	21 AGB Party Contest	22 AWA Museum Open 1pm - 5pm
23 RAEM Contest	24	25 Phone Fray	26 ROC City Net 8:00pm 3.826 MHz CWops Mini-CWT Test DARC Christmas Contest	27 ARES Net 146.61 MHz 7pm NCCC Sprint QRP Foxhunt	28	29 AWA Museum Open 1pm - 5pm Stew Perry Top Band RAC Winter Contest Original QRP Contest
30 Stew Perry Top Band Original QRP Contest	31 BOGOR Old and New Contest					

NEWS FROM AREA CLUBS

MONROE COUNTY ARES / RACES NEWS

The Monroe County Amateur Radio Emergency Service, Inc. holds its meetings on the fourth Thursday of each month. Anyone interested, members and non-members, are welcome to attend.

Because of the Holidays, there will not be a meeting in December.

The next ARES Meeting will be held on: **Thursday, January 24, 2019, at 6:00 PM.**

Meetings are held at the **Greater Rochester Chapter of the American Red Cross HQ, 50 Prince Street, Rochester, NY 14607.** (Located behind the Rochester Auditorium Theatre, 885 Main St. E.)

ARES NET: Monroe County ARES/RACES meets on the air every Thursday of the month at 7:00 pm, on the 146.61 MHz (-) 110.9 Hz PL repeater. The only exception to that are nights when we hold our regular meeting, generally on the 4th Thursday of the month.

WEB: www.monroecountymemcomm.org

Severe Weather Alerts:

Winter brings severe weather in the form of heavy snow and strong winds. If you experience severe weather, especially when accompanied by damage to property in your area, listen to your local ARES/RACES repeaters for information. While official ARES/RACES activation could be a possibility, it is more important that we open a spontaneous net simply to share information about weather conditions in your immediate area. Don't wait for someone else to do it. Pick up the microphone and start a net. Have each check-in station give you a situational awareness report and emergency power report. If you don't have a copy of the directed net protocol, you can find one at the WEB address listed above. (Activities/ARES Net/ Net Script/ Downloads)

NBEMS: Want to learn about Narrow Band Emergency Messaging System (NBEMS)? It's the latest and easiest way to "Go Digital!" Bring your laptop computer and 2-M handheld transceiver. We will conduct an NBEMS clinic after every meeting through June 2019.



ROCHESTER DX ASSOCIATION, RDXA

RDXA meets the 3rd Tuesday of every month (September through May) except for December, which is the Annual Holiday Banquet. Meetings are open to everyone and all are encouraged to attend. Meetings are held at the Monroe County EOC 1190 Scottsville Rd. (second floor), Rochester, NY 14624 at 7:30PM.



December 18 is our Annual Holiday Dinner at Rick's Prime Rib House. See the flyer or our web site for details.

ROCHESTER RADIO REPEATER ASSOCIATION

The RRRR board invites all members to join then for lunch at the Golden Corral Friday December 21 at 12 noon. The Golden Corral is located at 450 Jefferson Rd. across from Southtown Plaza. You are encouraged to bring a guest or spouse. The cost is ~\$10 for lunch and they offer a all you can eat buffet. The food served is for breakfast, lunch , or dinner with deserts included. Only beverages are extra. The Friday evening meeting at the Pittsford Town Hall is canceled and any club business will be handled at the luncheon. Hope to see you Friday for the RRRR luncheon. If we don't see you have a Merry Christmas.

The RRRR current officers are Bob Odell, N2BZX President, Bob Shewell, N2HJD Vice President / Technical Chairman, ED Wilkonski, K1EM Secretary, and Bob Smith, NS2B Treasurer / Membership Chairman. RRRR also accepts donations to the club. If you are not currently a member and want to support RRRR, you can join at our monthly meeting or on our web site www.k2rra.org

ROCHESTER VHF GROUP

The Rochester VHF Group sponsors an informal On-Air Net every Monday at 2100 local time on 144.260 MHz USB and a 6 Meter Net every Thursday at 2100 local on 50.200 MHz USB.

More club information can be found by visiting www.rvhfg.org or just calling in any Monday or Thursday night. All are welcome to check in to these nets.

XRX AMATEUR RADIO CLUB

The XRX Amateur Radio Club will have their next meeting at 6PM on Thursday December 13th at the Webster Recreation Center. Look for details on our website <http://xarc.us>

AMATEUR RADIO ASSOCIATION OF THE SOUTHERN TIER, ARAST

ARAST meets the third Thursday of every month at the Town and Country Fire Department on Gardner Rd in Horseheads New York. Chemung County ARES (CCARES) meets the first Tuesday of the month except February at Harris Hill. See www.ccares.info for details. CCARES covers the entire area in Chemung, Schuyler and Steuben counties and all are welcome.

This month ARAST has their annual Christmas get together at the Horseheads Masonic Lodge. Members and their families get together for food and fun. Expect a good time. We will be back at the firehouse in January.

No special events lined up for the remainder of the year but we're keeping our ears and eyes open for whatever may happen.

Communicators are needed to help out with the 2019 Wineglass Marathon (date to be announced) . If you would like to help out, contact the emergency coordinator: emergencycoordinator@stny.rr.com .

2019 Hamfest will be the last Saturday of September 2019. Stay tuned for details

Our website is still under construction. It is anticipated that construction will continue until after the Hamfest. Until that is finished check us out at www.arast.info .

Don't forget to check out our repeaters when you visit the area. The N3AQ 147.36(+) and the 146.70(-) are the principal 2 meter repeaters. Also Echolink is available using the call sign KA2BED-R. Check it out. A full list of available repeaters that can be heard in the twin tiers area surrounding Chemung County can be found at www.arst.info/arast_website/public/repeaters.php .

COMMUNITY AMATEUR RADIO CLUB, CARC

If you are interested in being a part of this forward thinking and active club, visit us at a meeting or join us on one of our weekly nets. We meet at the Hoag Library (134 S. Main St. Albion, NY) on the first Saturday of each month at 7PM. Each meeting has a brief training/refresher period with upcoming topics including: net protocol, repeater set-up/maintenance, and digital signaling. The club holds a net every Sunday evening at 8pm (winter) and 9PM (summer) - 0100 UTC Monday - on 147.585 simplex, and we host the Thursday Night Social Net, Thursday at 8:30PM on 147.285+. We'd love to hear you check-in! Take a look at the club website for more info: www.k2srv.org

DIGITAL COMMUNICATIONS ASSOCIATION OF PERINTON, DCAP

DCAP members continue to experiment with leading edge digital communications modes. We were formed in 1994 to foster the development of local and regional packet radio networks using AX25 and TCP/IP. Today we have members using the club sponsored DSTAR repeater (KB2VZS on 444.8MHz), several personal and public [DSTAR hotspots](#) (using the dvrptr board), Yaesu fusion systems on non-club repeaters and DMR. The last mode is being enjoyed locally through a [DV-Mega-Raspberry PI](#) combination. DCAP meets for breakfast at 7AM nearly every Saturday morning at [Rikki's Family Restaurant](#) in Fairport and everyone is welcome to join us. Talk in is on the KB2VZS analog repeater on 146.715 MHz with a PL of 110.9 Hz.

GENESEE VALLEY AMATEUR RADIO ASSOCIATION

Email n3dsp@lafireline.net for details.

KEUKA LAKE AMATEUR RADIO ASSOCIATION, KLARA

The purpose of our association is to:

- promote interest in Amateur Radio communication and advancement of the radio art.
- conduct programs, training, and exercises that enhance the skills of the members, and educate the community.
- develop ties with other services and establish relationships with community organizations.
- provide emergency communication services.
- promote enjoyable Amateur Radio related events.

The association was incorporated in 1991 and has been a vibrant part of the community ever since. We have a very active VE testing program. We also participate in numerous public events (the Wineglass Marathon and the Wine Country Classic Boat Regatta are two of the largest).

We operate a system of three repeaters (which are linked), providing a large area footprint for two meter FM amateur use. Please see our website for details. (www.klara.us)

Our meetings are held on the second Wednesday of each month at the Civil Defense and Fire Training Center on Route 54 in Bath, NY.

SQUAW ISLAND AMATEUR RADIO CLUB, SIARC

The Squaw Island Amateur Radio Club (SIARC) meets every second Wednesday of the month at 7:30PM at the Ontario County Safety Training Facility, 2914 County Road 48, Town of Hopewell. We have License Exam Testing every other month which begins at 6:30PM. The next meeting will be Wednesday, December 12th which will be our Annual Christmas Party. It will be at the AWA Museum in Bloomfield starting at 6:30PM. Please bring an Appraiser, Desert or other dish to pass. The club will supply drinks and Pizza. There will not be license exams this month. 73's Steve Benton VP SIARC WB2VMR

WESTSIDE AMATEUR RADIO CLUB

The mission of the Westside Amateur Radio Club is to provide emergency communications services to the community, to assist other civic organizations, to promote the technical craft of amateur radio through class training and testing, to mentor new members, and enhance fellowship among radio amateurs.

The Westside Amateur Radio Club meets on the first Tuesday of the month, 7PM, at the Prudential Kares Realty, 3313 Chili Ave., Rochester, NY 14624. Park / enter on the left side of the building and meet in the lobby.

The talk in repeater for all meetings is the WR2AHL Repeater 146.760MHz - 110.9. AllStar, Echolink, and web streaming connections are available. Website: <http://WestsideAmateurRadio.club>

INTERLOCK ROCHESTER - K2HAX - ROCHESTER'S HACKERSPACE

Interlock Rochester is open most every Tuesday night at 7pm. We're in the Hungerford Building (1115 East Main Street, Rochester NY), just north of Village Gate. Come to Door #7 (to the left of Comics Etc) and buzz Suite 200. Want to know more? Visit our website at <http://www.interlockroc.org/>, contact us at info@interlockroc.org, or find us in #interlock on Freenode IRC.

ROCHESTER MAKERSPACE

The Rochester Makerspace is located at the rear of 850 St. Paul Street in almost 4,000 square feet of workspace. We are a volunteer-run 501c(3) nonprofit organization and our mission is to encourage learning, creativity and collaboration. We do that by providing low-cost and free access to sophisticated tools, offering a wide variety of classes, and by providing opportunities for "makers," artists and crafts persons of all kinds to meet and learn from each other.

Drop in to explore, learn and make at our weekly open house:
Every Thursday Night, 6 to 10 PM – Weekly Community Night & Open House
Every Saturday, 11 AM to 3 PM – Weekly Community & Open House
Park in the lot at Scrantom St. and Conkey Ave. and follow the signs.

A ham bench is set up with a 2 meter FM radio and a laptop with WebSDR. Waiting for nicer weather to install outside antennas for the Heathkit HW101

transceiver and Kenwood all mode 2 meter transceiver. Donations of ham equipment accepted.

For more information visit <https://www.makerspacerochester.org/hamradio>

ASTRONOMY SECTION ROCHESTER ACADEMY OF SCIENCE

For more information visit <http://www.rochesterastronomy.org/>

THE AMATEUR'S CODE

Originally written by Paul M. Segal, W9EEA (1928)

THE RADIO AMATEUR IS:

- | | |
|--------------------|--|
| CONSIDERATE | Never knowingly operating in such a way as to lessen the pleasure of others. |
| LOYAL | Offering loyalty, encouragement and support to other amateurs, local club, and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally. |
| PROGRESSIVE | With knowledge abreast of science, a well built and efficient station and operation beyond reproach. |
| FRIENDLY | With slow and patient operation when requested, friendly advice and counsel to the beginner, kindly assistance, co-operation and consideration for the interests of others. These are the hallmarks of the amateur spirit. |
| BALANCED | Radio is an avocation, never interfering with duties owed to family, job, school or community. |
| PATRIOTIC | With station and skill always ready for service to country and community. |

RARA MARKETPLACE

Your commercial ad could be here! The RARA RAG can help spread the word on your business at very reasonable rates. Contact us for details at editor@rochesterham.org.

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PROMOTE YOUR BUSINESS WITH RAG ADVERTISING

Ad size and cost—**per year**:

Business Card	\$140
Quarter Page	\$300
Half Page	\$600

Your advertisement will be seen by amateurs in Rochester, Monroe County, New York State, the United States and even the rest of the world. RAG circulation is approx. 4,500.

Pass it forward
by donating your radio
or accessory to RARA.



Your item may be sold at future RARA events with proceeds to benefit RARA members.

You will get a tax-deductible receipt and the satisfaction that comes with doing good for others.

Call 585-210-8910 or email Secretary@RochesterHam.org.

RARA is an IRS 501.c.3 non-profit

Consult with your tax advisor.

RARA OFFICERS, DIRECTORS AND COORDINATORS

OFFICERS

President: Tim Guyot, KB1POP	(585) 406-3163	timguyot@gmail.com	Treasurer: Brian O'Connor, KA2CGB	(585) 721-2346	ka2cgb@arrl.net
Vice-President: Scott Theis, W2LW	(845) 774-9809	sa_theis@hotmail.com	Secretary: Ralph Dutcher, KD2BDZ	(585) 738-9949	dutchr@gmail.com

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JANUARY RAG DEADLINE

DECEMBER 15, 2018



RARA meets at 7PM on the first **Wednesday of each month. Join us at:**

Seneca Waterways Council, BSA Headquarters
2320 Brighton Henrietta Town Line Rd
Rochester, New York 14623

[Get Directions](#)

[Rochester Area Repeater Listing](#)

THE RARA RAG

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Genesee Valley Amateur Radio Assn.

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Westside Amateur Radio Club

Justin Grigg, KC2EQU: communications@westsideamateurradio.club

XRX Amateur Radio Club

Brian Donovan, K2AS: k2as@outlook.com

The Rochester DVA Association

Cordially invites you to our

*Annual Holiday
Dinner*

18 December 2018

Rick's Prime Rib House

898 Buffalo Road

Rochester, NY 14624

Cocktails: _____ 6:00pm

Dinner: _____ 7:00pm

Dinner Selections - \$30

Prime Rib

Chicken French

Orange Roughy

Dinner, Hor d'oeuvres, Dessert, Coffee included

Cash Bar

Reservations and dinner selection by December 4th to

RDXABANQUET@RDXA.COM

Gayle - NZTWI



Will be offering FCC Licensing Tests

Exams Only No Classes - Test Fee ~~015~~ Free

Pre-Registration is preferred but

Walk-ins will be not be turned away

Cambria Fire Company (Hall)

4631 Cambria-Wilson Rd. (Rt 425)

Lockport, NY 14094

For Additional Information

VE Liaison: Bob Neufeld(N3AU)

Mike Schlee (KB2TRU)

rjneufeld@roadrunner.com

716-240-8826

www.lockportara.us

6:30 pm

Nov. 24th, 2018

9 am to Noon

Jan. 26th, 2019

(During Our Hamfest)

6:30 pm

May 11th, 2019