



SIERA BEACON



Carson Valley, NV

January 2019

"HAM radio is not a hobby. It's a way of life." - Carlos Beltran, XE1MW



Our Post-Holiday Party will be held Saturday, January 5th, at noon, at the United Methodist Church. It will be a potluck, so bring whatever you like to eat to share with everyone. A big thank you to Linda and Brad Smith WT6B for their contribution of the table settings. Speaking of which, we can use some help setting up tables, etc. Please come at 11:30 a.m. to help or to use the kitchen to heat up food.

Cathy Carney's Presentation: Fifty Years in Alaska

KL7 country - Alaska - is six times bigger than Nevada, yet has only one-third the people. Most of them live along the coasts and rivers. The main roads are in the southeastern portion of the state. Thus, snowmobiles, airplanes, and dogsleds are the modes of travel and amateur radio holds communication together. Repeaters are located throughout this vast wilderness and to list them takes up 5 1/2 pages.

Cathy Carney, formerly KL7IFU, spent fifty years in Alaska as a teacher and major player in placing HAM radio in the school curriculum. Her first assignment was at a boarding school where a diverse group of students, Native and white, lived throughout the term. When Cathy arrived, there was already a HAM station set up, but when the operator retired, he left it behind. She didn't have her license, though, but for some reason, the FCC finds it difficult to rein in HAMs without licenses.



For example, the FCC told one operator that he was not in compliance. Since boats carry the mail only twice a year to communities, this conversation took two years. Finally, the FCC bared its teeth and told him if he didn't comply, they would arrest him. His answer: "Come and get me." The matter was dropped.

So, Cathy used her inherited station to teach her students about radio. While the custodian maintained the station with his funds and helped Cathy choose equipment, she wrote grants to incorporate radio into the curriculum. Beyond the mechanical aspects of radio, the students learned things just by listening to conversations. They learned how to use computers as well as radios for different purposes. One boy sold his silk screenings through these technologies.

There were problems, of course. Power outlets and classroom access needed upgrading. Parents complained about the curriculum. So, Cathy worked with the English teacher to incorporate radio into her English assignments.

While living in Fairbanks, Cathy lived with her husband in a cabin. He used her antenna as a boat mast. She joined the radio club, whose president named his daughter after the Morse letters ETAIN. Among the many activities of that club was the support of the Iditarod. They got T-shirts emblazoned with the slogan: "Alaska - where men are men, and women win the Iditarod." (Libby Riddles was the first female winner and Susan Butcher the second. In her honor, Alaskans celebrate Susan Butcher Day.)

While computers and drones have taken over children's interest, radio is still critical to Search and Rescue, beating out the SAT phones normally used by Alaskans. Morse is still used with Handi-HAMS to aid disabled people's communication. The Teacher's Institute has integrated radio into their STEM curricula. Apple Watch and Usher Syndrome use Morse code and Apple Watch taps out the time in Morse.



As part of Cathy's presentation, she brought several items to show us, including a long strip of baleen from a whale, and a beautiful lynx-skin parka made by the parent of a young boy to thank Cathy for housing him in Fairbanks. We all enjoyed the smoked salmon dip she served in a bowl made of the unique Alaskan clay (pictured at right). The dip was her specialty served to guests in her and her husband's bed-and-breakfast.



Dues are Due

A new year always means it's time to pay our dues. If you find SIERA's meetings, presentations, and events fun and inspiring, and you take advantage of all the Elmer's who can help solve your radio problems, then please rejoin for \$24/individuals or \$32/families. Your dues help maintain our NV7CV repeater and the trailer we use for events and emergencies. Both provide a huge service to campers and travelers in our region. So please help your club and your community by paying your dues today. Either send your checks to P.O. Box 2348, Minden, NV 89423, or corner our Treasurer, Debbie Williams, at the January potluck.

Basics 101 Camp Schedule:

Jim Marshall's Basics 101 Camps are proving to be popular. Because of the holidays, he cancelled a couple of sessions, but the next Camp will meet January 19th at the United Methodist Church on Centerville Road in Gardnerville. While he has topics he plans to discuss, you can bring any questions and get the answers.



Power Outage

Just as Brad Smith WT6B was about to key his mic for the *Watering Hole* last month, the lights went out. When the loss of Internet dragged Sue Cauhape KI7CTT away from Facebook, she looked out across a darkened valley. Only a string of lights glimmered along the Sierra Nevada foothills. Of course, her Kenwood TM-281 went down. "Well, darn it, we can't listen to Brad and the boys tonight," she moaned. Jeff Cauhape K7BCV could use his radios because they were always connected to his deep-cycle marine battery. (Every now and then, he runs it on the trickle charger to keep it topped off.)

Static soon crackled through the dark and voices of those who still had power assured KI7CTT that the world was still out there. As modern convenience goes, however, the lights blinked back within about fifteen minutes, just long enough for CTT to lift her Lucy Light from the windowsill and relearn how to turn it on. Discussion on the *Watering Hole* centered on this mini-disaster as regulars checked in from as far north as Maison Cauhape just south of Johnson Lane to Chuck Gervie KI7PGI in Rohenstroth. Bob Williams K7VOC still had power north of Johnson Lane, but Paul Gulbro KE6EWK reported the lights went out in Tahoe.

According to the NV Energy website, over 17,000 customers lost power. Meanwhile, we had a good little exercise to remind us how to respond to these irregularities.

Joint Donation with TARA

Many SIERA members also belong to TARA and joined the festivities at TARA's December Christmas Party at Carson Valley Inn. This year, Paul Gulbro, TARA president, asked attendees to bring an unwrapped toy or game to donate to a local charity. Usually, he said, TARA has given these gifts to kids up in Tahoe, but this year, he wanted to share the wealth with Carson Valley children. So, the toys, games and books donated at the Christmas party were taken over to the Douglas County Social Services where director Karen Beckerbauer said, "We can always find them good homes."

Into the Future

Technician's Exam Class: If you know anyone who wants to get their Technician's license, Jeff Cauhape K7BCV will start his Technician's class at Western Nevada College on Monday, January 28. Contact him at: cauhape@protonmail.com for more details.

Pony Express: Tom Tabacco KE7NCJ is giving us all a long heads-up to get ready for the Pony Express Re-Ride, scheduled to be in Nevada from June 17-19. So mark your calendars and check your gear. More information will be forthcoming in future Beacons.



Maidenhead Grids

By David DeAngelis K1SCN

December 31st marks the end of the International Grid Chase, a year-long activity sponsored by the ARRL. I would have liked to discuss Grid Squares sooner, but the other topics seemed more pressing. So, if you are curious as to what constitutes a “grid” and why someone would want to chase one, here is the story:

The use of locator grids traces its origins to VHF contesting. VHF contests used the distance between the stations contacted to determine a score. Therefore, an accurate method of determining the distances involved was needed. So in 1959, the VHF Working Group adopted a coded system for giving the location of a station. This became known as the QRA-Locator System.

Originally conceived in Germany, the system initially used a two-stage sub-division of latitudes and longitudes starting from the Greenwich meridian. The QRA locator was further refined by the Region 1 IARU (International Amateur Radio Union) Conference in Malmö in 1963 with the addition of a third sub-division. In its final form the QRA-Locator consisted of a five-character code, containing two capital letters, a two-digit number and a lower-case letter, for example: JN01j. The system was officially adopted by the Region 1 IARU in 1966 and the following year changed the official name to “QTH-Locator.”

The system proved to be somewhat successful as it provided an accurate description of a station's QTH in a manner that could be easily communicated in marginal conditions. As time went on there proved to be two disadvantages. First, the conversion to and from latitude and longitude to a locator reference proved to be somewhat complicated, and second, it only covered an area within Europe (Region 1). So other areas of the globe could not be covered without generating ambiguous locators. By the mid-1970's it was recognized that there was a need for a global locator system.

At the April 1980 meeting of the VHF Working Group, in Maidenhead, England, a system devised by Dr. John Morris G4ANB was officially adopted. Additionally, at the 1999 IARU Conference in Lillehammer, Norway, it was decided that the latitude and longitude to be used as a reference for determining the locators should be based on the World Geodetic System 1984 (WGS-84). I would love to get all “National Geographic” on you for all those geography geeks out there, but I will simply say that The World Geodetic System is a standard for use in satellite navigation, geodetics, and cartography. That is why your GPS nav system can display Maidenhead Grid Squares.

By 1984 all three IARU regions adopted the system we now know as the “Maidenhead Locator System.” This system divides the globe into 32,400 sub-squares in this way:

The earth's surface is divided into an 18 x 18 grid, each measuring 20° of longitude, and 10° of latitude, totaling 324 “fields.” Fields are represented by a pair of letters and range from AA – RR. The first character represents longitude, and the second character represents latitude. Now, before we get too far into the description, you may have noticed that the “squares” in the grid are not really square – they are in fact rectangular. But the name “grid-square” has stuck, even though it does not accurately describe the actual area covered.

Each field is further subdivided into a 10 x 10 grid called a "square." Squares are represented with two digits and range from 00 - 99. Again, the first character represents longitude, and the second character represents latitude. Each square measures 1° latitude by 2° longitude and measures approximately 70 x 100 miles in the continental US. This arrangement may be the origin of the term "grid squares."

Using this system, our corner of Nevada would be located in field DM and square 08 or 09 depending on whether you live north or south of 39° N.



But, we are not finished. Each square is further sub-divided into "sub-squares" in a 24 x 24 grid. Each one of these 576 sub-squares measures 5 minutes in longitude x 2.5 minutes in latitude. The sub-squares are represented by a pair of letters in the range of aa-xx, usually lowercase, but not always.

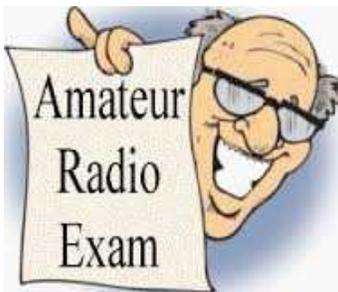


If a higher level of precision is necessary, two additional digits were ratified as an "extended locator," making it altogether eight characters long, and dividing sub-squares into even smaller ones. It could be argued that at this level, it is almost easier to use traditional latitude and longitude, but the system is available for those requiring this level of precision.

Fortunately, the Internet provides an abundance of apps and links for you to determine your Maidenhead Locator Grid. As always the ARRL website is a good place to start. The page at www.arrl.org/grid-squares contains a list of links for different grid-square calculators. Wikipedia has an article covering the Maidenhead Locator system and also has links for additional information. For a really quick look at a grid, though, I would recommend QRZ.com.

From their main page, click on the "Resources" tab and drop down to "Grid Mapper." If you know your lat/lon, just type it in and get instant results. It is also possible to see a particular grid square. If you live northeast of the Minden airport try DM09da as a starting point. If you live near the Ranchos start with DM08dw. This app is fun to use and is also capable of displaying the locations of all the hams living in the chosen grid.

As to the allure of grid collecting outside of contesting, it does present more of a challenge than collecting all states, but is less burdensome than trying to collect all 3000 counties in the US. The lower 48 states cover only 496 grid squares. It is true that worldwide there are over 32,000 grid squares – and most are on the water, so I would not expect to be able get them ALL, but I will never run out of grids to collect.



ARRL Licensing Exam: SIERA offers these exams on the third Saturday every other month at 9 a.m. at **Station 51 Fire Station at 777 South Stewart St., Carson City.** Bring a photo ID, a copy of your license if you're upgrading, and \$15. Contact: Greg Moore at KG7DMI@frontier.com for more information.

The next Licensing exam: January 19.

Congratulations to **Deren Cabrera, KJ7CPF**, who passed his Technician's exam during our December Board meeting. Greg is so flexible in scheduling exams that anyone having scheduling problems can usually be accommodated. Thanks, Greg, for helping new hams get their licenses.

Speaking of licenses, just a friendly reminder to check the expiration date on your license to make sure you don't miss renewing with the FCC. If it expires, you will need to take the exams all over again. Also, whenever you move, notify the FCC of your new mailing address.

Check us out on Facebook: <https://www.facebook.com/SIERA>

SIERA is having remarkable success with our Facebook page. It reaches some of our out-lying members and those discovering our club through the alternate universe of the Internet. We post information once a week or more to keep SIERA members and others tuned in to our classes, events, meetings, and get-togethers. Also, the page is available for posting ads for selling your equipment or announcing events you would like to include in SIERA's roster of activities.



Facebook shows our face to the world and from what I gather from our posted comments, SIERA's is a happy face. So, if you have a photo and news to share, an announcement that can't wait for the Beacon, send an email to: scauhape2002@yahoo.com. We'll get it on there.

DCART News:

The 147.270 linked (with the two 440's) repeater system may be experiencing noise and static. In talking around, we are thinking that the 147.270 antenna system may be a complication. So I recommend our members see if they can reach either of our other linked repeaters: 441.250 pl 123 or 443.750 pl 123.

Our 147.270 system needs some significant repair and upgrade. The CARS (Churchill Amateur Radio Society) has merged with CVRC (our original trustee) and now has oversight for maintenance and repairs. After all these years, upgrades such as a new antenna are necessary. Heavy expenses are anticipated - not to mention winter access and business considerations.

I encourage you to check out the CARS website: www.nvcars.org for information. And if you can give them support by becoming a member, please consider doing so. CARS oversees a lot of Fusion and other technology that has been integrated into our own 911 ham station (W7SR). There is a lot to learn as we DCART members need to be knowledgeable and versed in our radio technology in order to be a current and effective Team. -- Sheila, KA7AJQ, ARES Emergency Coordinator, Douglas and Alpine Counties

The Camp Fire created a black hole of communication. In disasters, our high-tech communities are reduced to 1940s-era responses. Here's a report from Radio World on the failure of communications during the Camp Fire from Mendocino Beacon:

<https://www.mendocinobeacon.com/2018/12/17/camp-fire-created-a-black-hole-of-communication/>

Greg Kruckewitt, KG6SJT, ARRL Sacramento Valley Section, Section Emergency Coordinator

Happy Birthday to:

Justin Nunn KI7VGJ
Kirby Mays KI7ZVX
Gordon Moseley KC7CA



BREAKFAST AND LUNCH GATHERINGS

Lots of fun people gather for breakfast or lunch in Carson Valley. Come join us at:

8 a.m., breakfast, every fourth Saturday at the Tail Dragger Café at the Minden-Tahoe Airport.

11:15 a.m., lunch every Wednesday at Jethro's on Kimmerling in Gardnerville.

Nets Available in Carson Valley and Beyond:

The SNARS Noon Net daily on 147.150.

Daily Carson & Eagle Valley net, 6 p.m. on 28.435 MHz USB

BARC Nightly Net, 8 pm on 146.655 pl 131.8, ragchew and pre-check-in at 7:30 p.m.

DCART Net, Mondays at 6:30 p.m. on 147.270.

TARA Net, Mondays at 7:30 p.m. on 147.240.

SIERA VHF Net, Tuesdays at 7:30 p.m. on 147.330.

SIERA HF Net, Tuesdays at 8 p.m. on 3982kHz.

Plumas County Net, Tuesdays at 7:30 p.m., on 145.470.

Brad Smith's (WT6B) Watering Hole, Wednesdays at 7:30 p.m. on 147.330,
"questions and answers pertaining to amateur radio."

SKYWARN at 7 p.m. Wednesdays and the **NV ARES** is 7 p.m. Thursdays. Both operate on the EchoLink conference server NV-GATE: 152566 EchoLink and can go onto your smart phones, tablets and computers.

SNARS Hospital Net, Fridays at 10:00 a.m. on 147.030 or 147.150
(SNARS Linked Repeaters: <https://snars.org>)

RARA Rural Amateur Radio Assn., Fridays at 8 p.m. on 147.180 pl 123

ARES HF Net, Saturdays at 7 a.m. on 3965kHz.

RARA, Rural Amateur Radio Association, Saturdays 7:30 a.m. on 3965kHz

New Hams Net, Sundays at 1 p.m. 146.760 pl 123

National Traffic Service Net, Sundays at 6:15 p.m. on 3945kHz

For Sale:

- ∞ Yaesu FT-1000 mp 100-watt transceiver 1.8 thru 29 Mhz. Includes all filters plus Inrad roofing filters
- ∞ LED light bar installed. (replaces CFL back light)
- ∞ 9 Mhz buffered IF output installed.
- ∞ High Stability temperature compensated master Oscillator installed.
- ∞ Dual receivers, offers split operation for DX contacts
- ∞ Internal Antenna tuner installed.
- ∞ Yaesu DNR (Dynamic Noise reduction), Plus IF shift and Contour controls.
- ∞ Has been my "daily driver" for 7 years. Works perfect. Look up reviews on EHAM.



Price, \$1,500 Contact: Jim Marshall, 775-392 3734, k6lr@arrl.net

Books:

Ed Eggert K3VO got an interesting book for Christmas from his wife: *The World of Amateur Radio: 1901-1950 A Social History*, by Richard A. Bartlett. Ed raved about it on *The Watering Hole*. You can find it on Amazon at: https://www.amazon.com/World-Ham-Radio-1901-1950-History/dp/1476662754/ref=sr_1_1?ie=UTF8&qid=1545882458&sr=8-1&keywords=history+of+amateur+radio

Kindle: \$9.99, Paperback: \$29.95, and Hardcover: \$58.34

General Meeting Minutes for December 1, 2018

Called to order: 1:00 p.m.

Introductions: Linda Hooper (Bill's wife), Deren Cabrera KJ7CPF, a new technician tested during the Board Meeting.

Treasurer's Report for December 2018:

Checking Account

Starting Balance	\$ 1835.55
Deposit:	.00
Withdrawals: Jim Marshall purchase of coax	\$ 507.82
Ending Balance	\$ 1327.73

Savings Account

Starting Balance	\$ 4070.18
Dividends	.17
Ending Balance	\$ 4070.35

Grand Total \$ 5398.08

Membership: Bill Hooper KJ7CIG

Business:

Repeater: Paperwork has been sent to Andrea Becker, nothing more heard.

Nomination Results: Tom Tabacco moved to approve and Ben Echavarria seconded the motion for the membership to approve by affirmation the new Board members: Jeff Cauhape, president; Ben Echavarria, vice-president; Cathy Carney, secretary; Debbie Williams, treasurer; Bob Williams, David Granish, Jim Marshall, Greg Moore, and Subrina Vinton, Directors.

Post-Holiday Party: Jeff Cauhape announced that the Post-Holiday Party will be a potluck provided by the members in lieu of the January Board and General meetings on January 5 from noon to 3 p.m. He suggested the members bring whatever they like to eat and enough to share.

Radio Basics 101 class: Jim Marshall's next class in Basic Radio 101 will cover Ohm's Law and will be held every two weeks with the exception of the January meeting when the potluck holiday party will be held.

Technician's Class: Jeff Cauhape announced he is teaching another Technician's class through Western Nevada College beginning in January 2019. If members know of anyone who might be interested in this class, they can contact him at cauhape@protonmail.com.

Coax for Club: Greg Moore reported that he, Jeff Cauhape, and Bob Williams met one Saturday afternoon and assembled 5 coax cables: four for SIERA and one for Bob to replace the one he loaned to the trailer and was trashed at the Moving Wall event. He thanked Jim Marshall for the use of his crimper and Subrina Vinton for the food and beer. Greg passed around a sample of the cable for all to see. It was a flexible coax that will be easier to drag around large areas and store in the trailer. Being of higher quality, it would be more robust in adverse conditions and would have less attenuation.

Pony Express: June 17-19 in Nevada. Jeff Cauhape said that volunteers for the three different positions - base stations, relay stations, and followers - are needed and that working the Pony could become habit forming. Those interested should contact Tom Tabacco KE7NCJ.

Donation Jar: Debbie Williams reminded everyone that the donation jar contributions are used for repeater maintenance. We will eventually need to hire a professional to climb the new CHP tower to install the NV7CV repeater and equipment.

Also, the BARC repeater linkages are working well between 146.655 on Leviathan to Olancha. David Granish said that during a recent trip to L.A., he was able to reach the repeaters beyond Olancha. We also talked about the 8 p.m. nightly BARC net that uses those linked repeaters.

Ed Fong On Skype: Jeff Cauhape said that he wanted to make sure the meeting room can handle a skype connection with Ed Fong so he could deliver a lecture about antennas at the February meeting.

Vanity Calls: Ed Eggert suggested that new hams get vanity call signs because they're shorter and therefore easier to copy. They're free and a lot of the older hams have died and their call signs are now available.

Bylaw Change: Bob Williams announced that the Board voted to change one of the Bylaws to allow new members and upgraded members to either prorate their dues for the remainder of the year or to choose the next year waiver of dues.

Dues: Debbie Williams reminded everyone that 2019 dues are now due and still only \$24/individual or \$32/family. People can also earmark donations for specific things, such as the repeater maintenance.

Hand-held Radios: Jim Marshall asked if SIERA still has hand-held radios to loan to new hams until they buy their own. Jeff said the SIERA still has two. Mel Hogan offered his five hand-helds and Jeff asked him to keep them at his house until needed.

BREAK

Cathy Carney gave a talk about her fifty years in Alaska and the use of amateur radio there.

Meeting adjourned: 2:30 p.m.

If you have photos and/or can write a short description of whatever you're doing, send it to the Beacon at scauhape2002@yahoo.com. We'd all like to hear about your adventures with amateur radio.