



SIERA BEACON



Carson Valley, NV

March 2021

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

Hope Springs Eternal For Summer Events

So far, plans are going forward for some of SIERA's biggest events: the Pony Express Re-Ride, The Death Ride, and Field Day. The PEX is June 17-20 and goes west to east. Field Day is June 26-27. We're still waiting for more solid information about the Death Ride and its kissin'-cousin, The Alta Alpina. Of course, COVID restrictions could rear up and change all of these. (By the way, according to the Death Ride/Alta Alpina website, this event is celebrating ... or at least noting ... its 40th anniversary.)

Tom Tabacco KE7NCJ is retiring as Pony Express coordinator, so if anyone is interested in taking over this job, contact the Board members. Tom has taken his box of papers, maps, and other stuff required for the job to Don McRoberts W3DRM. Tom has coordinated this event for years. He passed it to Jeff Cauhape K7BCV for a few years and Jeff compiled the information for each post along the Nevada portion of the route. Between the two, organization of this event has been streamlined. Of course, as technology changes, so does the Pony. Cellphone comm has replaced some of the more accessible regions of the route. The Pony is a fun event for those adventurous enough to set up stations out in the American Outback. There are a few mountaintop relay stations, trailside stations where the riders exchange the mochilla, and slots for those who want to follow the riders along the trail as shown in this photo.



Jeff Cauhape K7BCV and Sue Cauhape KI7CTT follow a Pony Express rider across the Nevada wilderness.

Field Day requires a coordinator who can herd cats in a variety of tasks, including setting up antennas, the trailer, and the public information area where people can hang out and visit. (Ah, those were the days, may they return soon.) In 2020, David Granish KI6EWK led the troops. He had everything set to go with COVID restrictions, but the Board decided to just cancel the event. We haven't heard from David or the Board

regarding the 2021 Field Day. Last year, many individuals and small groups worked Field Day under new ARRL rules and posted their tribulations and triumphs on a Facebook page. Here are some pages that give lots of information about Field Day that will keep us posted on any changes.

<http://www.arrl.org/field-day>

<http://www.arrl.org/field-day-basic-training>

<https://www.facebook.com/groups/arrlfd/>

The General meeting is at 1 p.m. Saturday February 6th on NV7CV 147.330/240. Board meeting at noon. General meeting at 1 p.m. Topic for discussion TBA.

Tape Measure Yagi

Jim Sanders AG6IF has been itching for COVID restraints on in-person meetings to cease so the club could do a fun project: making a portable tape measure antenna for fox hunting and other purposes. He would like to have it as a presentation project after the General meeting business portion (remember when?), but apparently others' have played around with this project on their own.

When he was doing Civil Air Patrol back in the 80s, Jim Marshall K6LR used one of these when searching for ELTs at the airbase. Emergency Location Transmissions happened when planes would come back from a mission and not turn off their ELTs. These latent signals would need to be turned off and the best way to find them was to walk around the hangars with a tape measure yagi.

Knowing how useful these can be, Jim and Don McRoberts W3DRM have been making one and Don wants to assemble a kit for club members to use. There aren't many parts for this easy project: 1/2 to 3/4 inch diameter PVC pipe, a four-way connector, clamps, and, of course, a metal tape measure, either large or small. The metal tape can be soldered. When completed and ready to take on the road, the tape can be folded for transport. Ed Terlau KG7ZOP and Mel Hogan WA6EYD found these parts at Harbor Freight, Lowe's, and Home Depot. ACE Hardware in Gardnerville probably has some of these parts as well.

Ed wants to use his when he goes camping. Traveling down Hwy 395, he would like to see if he can hit the string of BARC repeaters. Such a portable antenna would be useful for SOTA or any other backcountry adventure.

Of course, if you google "tape measure yagi antenna," you'll find all kinds of YouTube videos about building one of these and fox hunting. Here are just a couple:

Building a Tape Measure Antenna

<https://www.youtube.com/watch?v=BmHoQrDfw-0>

Fox Hunting

<https://www.youtube.com/watch?v=yR2cpd0vQdM>

Board Positions and Net Controls Wanted

The Board is still looking for a Secretary to take notes during meetings. At present, that's not as complex as it used to be because our on-air meetings are much shorter than those met in person. David DeAngelis K1SCN has stayed on as Secretary, but ONLY UNTIL SOMEONE CAN TAKE HIS PLACE. Please relieve David of his duties and do a great service to your radio club.

Also, Bob K7VOC and Debbie Williams N7XYL will be retiring from the Board at the end of this year. Debbie has served as Treasurer and, until this year, Membership for many years. Bob has served in many capacities as a Director on the Board for a long time too. He has kept us all in proper form according to SIERA's By-Laws as well as keeping the club trailer in good condition. Now they want to open the positions for others to help SIERA grow and prosper.

Thank you to David, Bob, and Debbie for their many years of service to SIERA. They have contributed in many ways to the growth of SIERA, mentoring and building. Now it's your turn.

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Every Tuesday, SIERA hosts a VHF and an HF net to check on local hams. These nets help hams test their signals and learn net control protocols, which comes in handy during emergencies.

At present, we only have seven erstwhile folks serving as net controls, however, and it would help to add more to our list. Being net control builds communications skills and helps hams lose that dread of the mic. Contact Sheila Clement KA7AJQ or Don McRoberts W7DRM if you want to be put on the roster.

Big Sale of Good Quality Radio Equipment

Paul Gulbro WA6EWV sent this along for anyone who is interested in some good equipment:

"A widow of a Carson ham gave me equipment to sell for her. I have pictures of everything at request. Prices are "make a reasonable offer"

Contact:

Steve Knight WW7SK
Carson City
1knightsc@gmail.com
Cell 775-220-5525

See the comprehensive (and exhaustive) list of equipment on the next page:

Number	Manufacture	Model	Type	Bands	Serial Number	Condition	Est. Value	Notes
1	Kenwood	TS820	HF Transceiver	All HAM	630480	NIB	\$400.	Kenwood Mic 50 NIB
2	Henry	Temple 1-SSB	HF Transceiver	HF 3.5-29.5	6D256530	New		Power supply NIB
3	Heathkit	SBM-102	HF All Mode	3.5-29.5	1035954	New		
4	Drake	2-B	Receiver	3.5-29.5 500-725	7486	Very Good		Model 2 -BQ Speaker
5	Yaesu	Landliner	Phone Patch			Like New		
6	NEC	NC 300	All Band Transceiver	All HF		Good	\$200	
7	Heathkit	HD-15	Hybrid Phone Patch	All bands+comm.	84-2388	Like New		
8	Phantom	500	Linear Amp	HAM	B-4444	Good		500 W?
9	Palomar	Skipper 300	Linear Amp	HAM AM SSB		Like New		
10	Hallicrafters	S-38C	Receiver	AM-HF		Good		
11	General Radiotelephone Co	Super MC-11A	24 channel CB base station	CB	111503	Good		Tube Type
12	Palomar	150	Bi-linear amp	HAM SSB AM		Very Good		Tube Type Finals 12 volt
13	Ranger	AR3500	FM AM USB LSB CW	HAM HF?	86084076	Good		Solid State Mobile
14	Realistic	HTX-202	VHF FM Transceiver Hand Held	2 Meter		Good		Hand held w/ charger/ battery/antenna
15	RadioShack	Scanning Receiver Pro 28	Scanning receiver	29 -54, 137-174,406-512	55009653	Fair		12 volt Hand Held/antenna
16	Realistic	20-301	Pro-41 Scanning Receiver	29-54,137-174,406-512 MHV	15018351	Fair		12 volts DC Hand Held, no antenna or power cord
17	Icom	IC-38 A	VHF FM Solid State Mobile	220?	01083	Very Good		Solid State w/ HM-12 mic and power cord
18	Atlas	210X	Single side band transceiver	325-28.4 HAM		Very Good		120 volts AC, solid state base model
19	Uniden	President HR2510	Solid state mobile CW LSB, USB AM-FM	HAM	83010965	Very Good		12 Volt mobile w/mic and power cord
20	Uniden	President HR2600	Solid state mobile CW LSB, USB AM-FM	HAM	95004976	Very Good		12 Volt mobile w/mic and power cord
21	Pal	170+	AM SSB Mobile Linear amp.	HAM?	877444R	Fair		Tube Finals 12 Volt DC
22	Astatic	UG 8	Table top mic			Like New		Unused 4 conductor plug
23	Astatic	UG 8	Table top mic			Like New		Unused4 conductor plug

Number	Manufacture	Model	Type	Bands	Serial Number	Condition	Est. Value	Notes
24	Sure	526T	Super punch mic			Very Good		3 conductor phono plug
25	Sure	526T	Super punch mic			Very Good		3 conductor phono plug
26	Turner	SSB +2Trans	Mic			Good		Uses 9 volt battery/phono plug and transmit lock switch/adjustable gain
27	Turner	Model 254	Mic			Good		Transmit lock switch 2 conductor plug screw on connector
28	Turner	Plus 3	Mic			Good		9 volt battery/gain control, 4 terminal screw connector
30	Uniden	President Grant	CB AM SSB Transceiver Mobile 12 volts	CB	30059316	Good		Mic, power cord, bracket
31	President	Veep	CB Mobile 12 volt	CB	83011834	Good		No bracket, mobile
32	Necso Radio	1249	CB Mobile 12 volt	CB	5803098	Fair		No bracket
33	Realistic	TRC-47	Side band CB 12 volt	CB	463374	Fair		No bracket, has mic, power cord
34	Mirage	M75	Amateur Bi-linear amp 12 volt					Solid State

Could this be a cause of that annoying noise on HF?

As you have undoubtedly noticed, there's been some kind of radio interference on our HF nets. Some have said it's probably over-the-horizon radar from Russia, as what happened a few years ago. This short article, posted on Facebook by [Bert Rollen VHF/UHF Weak Signal Amateur Radio](#), gives another theory. It's followed by a comment by Arthur Jackson, who presented another article about Es Propagation. (The academic abstract is followed by a version that the rest of us can understand.)

<https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2020RS007169?fbclid=IwAR1K3JT4fFqFDljheTLREFPNKvJgbdSNQ9LA-vYVtNDj4YkohCxeWJ9vPl0>

Using Broadband Radio Noise from Power-Lines to Map and Track Dense E_s Structures

K. S. Obenberger, J. Dowell, C.T. Fallen, J. M. Holmes, G.B. Taylor, S.S. Varghese

<https://doi.org/10.1029/2020RS007169>

We present passive observations of mid-latitude sporadic E (E_s) structures in the 30 to 50 MHz range using the Long Wavelength Array (LWA) telescopes in New Mexico. Spectral and temporal analysis of the structures reveals that some of the emissions can be characterized by broadband, spark-like radiation occurring at a repetition frequency of 60 Hz. The azimuthal distribution indicates that the brightest emissions come from the directions of several large metropolitan centers with distances ranging from 700 to 1250 km from the telescopes. This implies that the source is unintended human-made noise, originating from devices connected to 60 Hz alternating current power.

The geometry of our observations rule out coherent scatter from field-aligned irregularities, and indicate that the unintended noise must undergo a specular reflection off of over-dense plasma distributed approximately parallel to Earth's surface. On certain occasions the reflections are seen at such high frequencies and high elevation angles that the local plasma frequency must be above 30 MHz. During both day and night E_s conditions, the dense structures are observed to be arranged in propagating fronts, and travel at speeds of 70 to 100 m/s. We also present observations that reveal quasi-periodic amplitude oscillations with frequencies consistent with atmospheric gravity waves and acoustic waves.

Plain Language Summary:

Dense, patchy layers of plasma that form in the E layer of the ionosphere (sporadic E) often reflect high frequency radio waves from distant, over-the-horizon sources. While detectable with current radar techniques, sporadic E is difficult to image over large regions due to the limited field of view of a typical radar. We show that unintentional, human-made radio emissions, originating from the electrical grid, act as a widespread set of radio sources, with hotspots centered on large metropolitan areas. The radio emissions reflect off of sporadic E plasma and are readily detectable and imaged by radio telescopes such as the Long Wavelength Array (LWA) in New Mexico. We present LWA observations that prove this capability, which enables the tracking and mapping of sporadic E over large regions.

Arthur Jackson

I still am amazed that knowledge (or ego unknowledge) are able to find resources and bucks to do these studies.

From 2005 to 2011 officially, then on until 2018 less active, I worked with a great group of Hams, a group called PropNET (started by Ev Tupis W2EV). With a dedicated group of participants in North America (30+ well involved) and software developed by Jeff Steinkamp N7YG, I was able to compile 7 excellent years of data explicitly on Spring/Summer Sporadic Es (28 MHz reference). I have published 2 Papers for the Central States VHF Conference and one (the opening) Presentation at the 2011 Conference on the subject. I have also presented other aspects from the study multiple times at other conventions.

I did this strictly for the love of Propagation curiosity and this fun hobby.

It is based on Mathematics, not what I call "witch doctor science".

I did it for free and was never compensated. I had to pay for the 2011 CSVHFS conference fee and Banquet _(^)_/

I think you will find a lot of similarity. I focused on the predictability and consistency of what Spring/Summer Es do.

Enjoy. It is also a very painful read 😊

https://ka5dwipropagation.blogspot.com/2017/03/a-7-year-10-meter-es-propagation-study_31.html?fbclid=IwAR1NBSfce7Tt5z8q5T_AkqYLt8G8gj_xGS8vjZK2xP_I9Wg53dwT7fy2LiQ

The Beacon editor, in an effort to fill these pages with interesting reading, has relied heavily on Facebook and other sources beyond traditional amateur radio magazines. Here's a very long article that may be enjoyable, but only the first couple of paragraphs are printed here to entice readers to click the link:

http://ei5di.com/jt.html?fbclid=IwAR1J-Or5die8JpUini_pMeJzOF1VpQ--4rFrfgHkaW2stUOSM1zeOnrOuf0

This article originally appeared in the February 2018 issue of The Spectrum Monitor. Reprinted with permission of the author.

Amateur Radio Insights

By Kirk Kleinschmidt NT0Z - nt0z@stealthamateur.com

Did Joe Taylor K1JT Destroy Amateur Radio?

Did Joe Taylor K1JT, Nobel Laureate and noted friend of hams everywhere, accidentally destroy amateur radio?

Having just returned from a trip in my time machine, I can unequivocally say that history attributes the death of amateur radio to Joe Taylor in the year 2017. So, yes, he did. In fact, 2018 AD marks the beginning of the "hampocalypse," and becomes known among former ham operators as 1 AT (the first year "After Taylor").

The Watering Hole, Wednesdays at 7:30 p.m. on 147.330/240mh. Questions and Answers pertaining to Amateur Radio.

RATPAC Videos

So, you want to go mobile with your HF radio equipment, maybe in your RV or even (post-COVID) on hotel-stay business trips or vacations. How in the world do you do that, though? Here's a great ZOOM video presentation on how to assemble a quality Go Box that is easily part of your luggage to wherever you want to go. If you don't want to build a Go Box, the family in this video will build one for you.

Topic: ARES Go Boxes

Speaker/Presenter: James Lea, WX4TV (The Lee Family)

View Video: <https://vimeo.com/514434219>

Download

Video: <https://vimeo.com/user107547861/download/514434219/4718944201>

Documents: <https://www.dropbox.com/sh/nob6gedkn2b4a42/AACIJ8Q3zWdk-CwsE3cvMn00a?dl=0>

The full listing of past RATPAC presentations can be found here:

Published Format- <http://tiny.cc/ratpac-list>

Menu Format- <http://tiny.cc/ratpac-ss>

The list is updated regularly by the RATPAC Planning Group.

Ham Talk Live:

Thursday night on Ham Talk Live!, Jim Wilson, @@k5nd will be on the show to take your questions about VHF Contesting and being a rover. Jim has an elaborate roving setup, and is a well-known VHF Contester. Ask your questions LIVE on the show!

Tune into Ham Talk Live! Thursday night at 9 pm EST (Friday 0200Z) by going to hamtalklive.com. When the audio player indicates LIVE, just hit the play button!

If you miss the show live, you can listen on demand anytime also at hamtalklive.com; or a podcast version is on nearly all podcast sites a few minutes after the live show is over. Some sites include Apple Podcasts, Google Podcasts, Spotify, SoundCloud, Stitcher, Spreaker, TuneIn, Vurbl, and iHeart Podcasts; and it's also available on YouTube.

A replay is also broadcast on WTWW 5085 AM shortwave near Nashville, TN on Saturday nights at approximately 3:30 pm Eastern.

Be sure to CALL in with your questions and comments by calling 859-982-7373 live during the call-in segment of the show. You can also tweet your questions before or during the show to @HamTalkLive.



DCART - Douglas County Amateur Radio Team

2021 DCART February ARES report comment

Nevada Department of Emergency Management has established a program to communicate directly with county level Emergency Operations Centers on a designated 800mhz frequency. For Douglas County, the EOC is only activated during a declared emergency, so ensuring equipment is operational on a routine basis it was determined and Director Sagen agreed to, that the best location would be at the DCART station. This solution serves two purposes, (1) the equipment will be maintained and operated routinely and (2) it allows our DCART members to become a closer component to the public safety communications purpose of the team. DCART members will be authorized to transmit and receive messages to and from the State EOC and relay those messages either to the 9-1-1 Center and/or to the county EOC when activated. This is a win-win solution, the only cost to the 9-1-1 Center is an antenna and cable run. The state is providing the brand new equipment along with the license to operate on the state radio system. We are in the process of getting the equipment installed and hopefully be on-line soon.

During this COVID situation, DCART members note that we are allowed only one member (who has not had the 2 COVID vaccinations) at our ham station at a time. However, members who have had the 2 shots may work together there. Masking, hand washing and temperature check requirements are still in place.

Sheila Clement KA7AJQ
Douglas and Alpine Counties ARES Coordinator

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*Diana, KJ7GVY sent this in to DCART and is useful information for how all hams can help study earthquake intensity.*

<https://eos.org/science-updates/amateur-radio-operators-help-fill-earthquake-donut-holes>

### **Free !! online**

An emergency communications & amateur radio conference to be **held online** April 10-11, 2021. Two days of training, talks, and information on emergency communications. Theme: Disasters here, there, and everywhere – are we ready?

Headquartered in Seattle, **COMM ACADEMY** is two days of training and information on various aspects of emergency communications.

Organizations attending include:

Amateur Radio Emergency Services (ARES©)

Auxiliary Communications Service (ACS)

EOC Support Teams

Radio Amateur Civil Emergency Service (RACES)

Civil Air Patrol, Coast Guard Auxiliary

REACT

CERT

The annual event has continued to evolve by presenting keynotes and seminar tracks that engage beginners, intermediate and advanced users in technologies, served agency

support, volunteer management, self-preparedness, and how volunteer and professional communications are used, adapted and improved. Additional opportunities including a select group of Vendor and Sponsors exhibiting capabilities and the Communications and Interoperability vehicle display have also been added over time.

All those interested in emergency and amateur radio communications are welcome. Learn, network, and share your experiences with others. More info and to register: <https://www.commacademy.org/>



**Don't forget to check out the SIERA website on [www.cvhams.com](http://www.cvhams.com) for lots of information and reference material.**

### **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 the following schedule: The first two Mondays on 147.330 linked with 147.240. The third Monday is Tahoe Basin ARES on 147.240 to be linked with 147.330. The fourth (and fifth) Monday(s) on 147.270 to be linked with 147.240

**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.

**W7DEM Net**, Wednesdays at 9 a.m., various frequencies: Eagle Ridge 442.225 T156.7, Carson DEM 442.900 T156.7, Lake Tahoe 442.300 T156.7, and Smith Valley 440.050 T 94.8. (Refer to Nov. 2020 Beacon for details.)

**Carson ARES Net**: 9-10 a.m., check in anytime in that hour on 147.270mh PL156.7. Includes VHF

**CARS Fusion Net**, Wednesdays at 7 p.m. The local FUSION repeater is at 442.300.

**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.

**NV ARES Net** Thursdays at 7 p.m. Echolink conf server NV-GATE 152566 IRLP Western Reflector Ch8:9258

**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 (+or - QRM).

**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

**Don McRoberts W3DRM, our SIERA webmaster for CVhams.com, has a more comprehensive chart with more nets than anyone has time for: <https://www.cvhams.com/nets.php>**

## **SIERA General Meeting February 6, 2021**

*Due to the COVID-19 Virus outbreak, and exercising an abundance of caution, and following recommendations from the CDC and the State of Nevada, the General meeting was held utilizing the NV7CV, SIERA 2 meter repeater.*

**Call to order** 1:00PM

**Attendance:** 18 members checked in

### **Last month's minutes**

*The January minutes were published in the February issue of The Beacon. Copies are available on the SIERA webpage. (<http://www.cvhams.com/>)*

### **Treasurer's Report for February 2020**

*The detailed Treasurer's report was presented to the Board and approved by email.*

### **Announcements:**

If you are interested in becoming a Board member let Jim AG6IF know as there is an open position and anticipated openings in the near future.

SIERA sponsors several nets during the week. The SIERA VHF NET is held on Tuesdays at 1930PT on the 147.93/.33 NV7CV Repeater; SIERA HF NET on 3.982 Mhz Tuesdays at 2000PT; The Watering Hole – questions and answers about amateur radio – on Wednesdays at 1930PT on the 147.93/.33 NV7CV Repeater. Volunteers are welcome to assist with Net Control activities.

A reminder to all that it is time to renew your membership. The renewal application has been updated and available on the SIERA website. Please fill out the application and submit it with your renewal so that we can update your information.

The current issue as well as past issues of the *Beacon* are available on the SIERA webpage at [cvhams.com](http://cvhams.com).

We are in need of a person to coordinate our support of this year's The Pony Express Ride on 17 – 20 June.

### **Business:**

W3DRM suggested building a tape measure Yagi as a club project. This would allow the club to sponsor foxhunting activities, in addition to providing club members the opportunity for hands-on construction activity.

K6LR, WA6EYD, KG7ZOP, and AG6IF related their experiences concerning direction finding and building a tape measure Yagi and signal attenuators for use in direction finding.

**Adjournment:** 1:30PM

**If you want a copy of the Treasurer's Report, email Debbie Williams N7XYL at [n7xyl@arrl.net](mailto:n7xyl@arrl.net).**



Now HERE'S a roving radio station setup! Jim Wilson K5ND talks about this on a podcast on HamTalkLive.com. See article above.

**Remember to send your photos and news for the Beacon and the SIERA Facebook page to [scauhape2020@protonmail.com](mailto:scauhape2020@protonmail.com)**