

LARK NEWS May 2022



Livermore Amateur Radio Klub LARK is an ARRL affiliated club dedicated to Public Service Volunteer Emergency Communications.

Meetings are once a month on the 3rd Saturday 9:30AM

NEW VENUE: City of Livermore Meeting Hall
1016 S. Livermore Ave., Livermore CA 94550

Available live via zoom by invitation only. Visitors Welcome

Editor: Roberto Sadkowski K6KM



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President's Message

I want to take this time to thank all the volunteers that helped on the Cinderella Bike Ride Event on Saturday, April 9th. This event was very successful and gave everyone a chance to use their equipment again at an event.

I wanted to let you know that the Events Chairperson (me) is following the upcoming events for 2022, and I have an update: the following events will be coming up in the future, the DMD Bike event, LARK Field Day in June, and the Patterson Pass Road Race in August. Make sure to sign up when the events become available on the LARK website for these events for which LARK supports. I encourage you to participate in the monthly Technical Sessions/Meetings that will be on different topics and promising it will be very interesting. Make sure to watch for the schedule of the dates and topics coming out in the Newsletter. I wanted to thank Ron AD6KV and VE Team for continuing to provide a way for hams to get their testing completed.

Ian W6TCP continues to work on enhancing the repeaters for use by all of us so please report any issues to Ian by email.

The annual LARK elections occurred at the April meeting and the new officers and board members have been elected.



I encourage you to check in with the LARK Monday, Wednesday (10.10 Windfarms Net), and Thursday night nets, held every week. There are other nets available, and they can be found on the LARK website. It is good experience getting on the air. I want to thank Ed Diemer for coordinating the weekly nets. By participating in the nets, you'll hear what is going on in our Ham community, and you'll make sure that *you* can be heard. I'm looking forward to hearing you on the nets. Our monthly meetings are In Person and hopefully keeping the virtual element for those who can't make it. Wishing you all a very safe and healthy 2022.

KG6GEM
(kg6wui1@comcast.net)

Notes from the Editor

Back from our first in-person meeting in 2 years. It was a blast to see so many familiar faces. The facilities were superb and the participation exceeded expectations.

We had a visitor from India enlightening us about early wireless development there, as well as his operations in that part of the World.

A stable reference development, an early keyer by Gary NA6O and yours truly showing his SOTA backpack or what could be done in limited time.

The sun is ahead of schedule, so lots of solar events steering things up and opening upper bands. Something some of us, "young Hams" have not seen before. Keep an eye on solar conditions and you might score big time for your DXCC counts.

Hamfest is still on schedule for May in Xenia, Ohio. Yours truly will be attending to cover the event for LARK. Don't worry, no charges will be passed on to the Klub. I'm excited to see so many famous operators and get to learn some of the new products introduced in the event.

I will also be attending Contest



University. Not sure I'll get a PhD out of it, but also will be an opportunity to mingle with some of the most serious radio operators in the World.

Besides all this, I will be staying in Ohio for a few more days to activate almost half of the SOTA peaks in the State. We will see how that goes.

With all this I'll be missing the LARK meeting in May but one can't do it all.

Stay safe and active.

73

Roberto K6KM

Board of Directors Meeting Minutes

Livermore Amateur Radio Klub



LARK Board Meeting Tues 12 Apr. 2022

Minutes taken by acting secretary Paul (NK8F)

Meeting started at 1903 hours

Treasurer's Report (Bernie NJ6W)

1. Club funds are good.
2. Membership dues added \$228 since 1 Apr.
3. Rich Combs (KN6HSR) continues to make sales for S/K hams. This month he brought in \$140.
4. For the past two years there has been no fixed expenses because there has been no in person meetings.

Repeater Update (Ian W6TCP – absent, George KG6GEM reporting)

1. There is nothing to be reported.

Tech. Meetings (Simon TM6TCM – absent, George KG6GEM reporting)

1. There might not be a Tech Meeting this month, stay tuned for updates.

Activities (Simon KM6TCM – absent, George KG6GEM reporting)

1. Jerry Benterou (N5KA) will pick up the Activities Position if confirmed in this Saturday's officer election.

Events (George KG6GEM)

1. The Cinderella Bike Ride was very successful this past weekend. No injuries, no radio

problems. And there were over 1,000 riders.

2. Double Mountain Double is on 30 Apr. John Street (WB6ETY) will coordinate this race. He needs 6 more hams to help. The race will start in Livermore this year. You can sign up to help via the LARK web page.
3. LARK will participate in the ARRL Field Day in June. Ron (AD6KV) and Nate (N8MOR) will coordinate this year. Stay tuned for details.
4. The Patterson Pass Road Race is 7 August. This one is still scheduled to be on. Sign-ups will begin in mid-May; 20 hams are needed to help.
5. Pacifcon is on for Oct. once again. LARK will host the SWAP Meet. George would like to train up a new organizer – please contact him if you are interested. Also, LARK plans on having our recruiting table set up. We are looking for someone to take the lead on this activity. In the past Dave Fannin (KK6DF) did this but has moved out of the area. Nate (N8MOR) currently has the posters & easels, etc.

Membership (Var KM6TAB)

1. Currently there are 165 paid up members. The previous roster had 197 members. Var will contact the unpaid members (who are technically past their 'grace' period).
2. Var is going to wait until May before removing unpaid members from the current roster.

LARK Annual Election Update (George KG6GEM)

1. The current proposed roster:
 - a. President – George (KG6GEM)
 - b. Vice President – Chris Quirk (W6CJQ)
 - c. Secretary – Ryan Mahoney (W6RAM)
 - d. Treasurer – Bernie (NJ6W)
 - e. BOD (PP) – Roger (KK6RD)
 - f. BOD – Nate (N8MOR)
 - g. BOD – David Counts (KG6WIR)
 - h. Activities – Jerry Benterou (N5KA)

General Meeting Sat. 16 Apr. @ 09:30 (George KG6GEM)

1. This will be an In-Person meeting for the first time in two years. It will occur at the new Livermore City Meeting Hall Building at 1016 S. Livermore Ave. This is on the corner of S. Livermore and Pacific where the old Library used to be. LARK will also be using Zoom for those who can't attend in person.
2. There are going to be some break-in issues, esp. with the A/V set-up and Zoom. George is asking Nate and Rodger to show up early to help get these technical issues sorted out.
3. The second item of business will be the club elections.

4. Next will be the Officers' Reports, then New Business, and then Old Business.
5. Next will be a 'Show & Tell' series of presentations by hams presenting their projects, ideas, and otherwise interesting items.

Farewell and Thanks (George KG6GEM)

1. George gave a warm and gracious "Thank You!" to outgoing club officers:
 - a. Joe (K6ATM) for serving on the BOD
 - b. Paul (NK8F) for serving on the BOD, and then as Vice President and Acting Secretary
 - c. Simon (KM6TCM) for serving as the Activities Director

Meeting Adjourned at 1948 hours

Attendees:

George (KG6GEM)
Paul (NK8F)
Bernie (NJ6W)
Simon (KM6TCM- **absent**)
Roger (KK6RD)
Joe (K6ATM)
Ian (W6TCP- **absent**)
Var (KM6TAB)
Nate (N8MOR- **absent**)

Rev 1

Monthly Meeting Minutes

Livermore Amateur Radio Klub



LARK General Members' Meeting Sat. 16 April 2022:

Minutes submitted by Peter AI6RG

Meeting started at 0935 hours PDT, 1636 UTC

Location: City of Livermore Meeting Hall, 1016 S Livermore Ave, Livermore CA
This was a **hybrid** meeting, with a Zoom link.

Welcome (George KG6GEM)

Roll Call: 40 members In Person, 10 members virtually, and 3 guests In Person.
Roger KK6RD provided the attendance record.

Nominations:

President:	George KG6GEM
Vice-President:	Chris W6CIQ
Secretary:	Ryan W6RAM
Treasurer:	Bernie NJ6W
Board:	Roger KK6RD Nate N8MOR David KG6WIR
Activities:	Jerry K5KA

Ron AD6KV introduced a motion to accept the nominees by acclamation. The slate of nominees was accepted by acclamation in a voice vote.

Reports (Skipped Officers are either 'not present' or had 'nothing new to report.')

1. Treasurer (Bernie NJ6W):

1.1. The bank account is healthy. LARK has so far not made a payment to support the W6SRR repeater as it has done in the past.

1.2. Bernie would like to train a new treasure to take over next year. Questions about this task should be directed to Bernie.

1.3. LARK is also looking for someone to take over the role of acquiring coffee and refreshments for LARK meetings. Bernie has been performing this task even though it is not specifically part of the treasurer's duties.

2. Events (George KG6GEM):

2.1. George thanked the volunteers for the Cinderella bike ride which was held on 9 April 2022. There were no injuries.

2.2. The Devil Mountain Double is scheduled for 30 April 2022. John WB6ETY announced that this year's even will have a maximum of 50 riders. LARK will cover some rest stops and will install APRS units in SAG vehicles and at rest stops. There will be a need for six to ten hams from LARK. Sign-ups and further information are on the LARK web site.

2.3. The Patterson Pass Road Race is tentatively on 7 August 2022.

3. Newsletter: (Roberto K6KM):

3.1. Deadline for submission is Monday afternoon. The newsletter is in "good shape," and the editor appreciates contributions.

Old business

4. Minutes

4.1 Minutes of the last LARK meeting were approved without objection.

5. Tech meeting

5.1. The next tech meeting is scheduled for 23 April at 9:30 AM, and the topic is TBD. It will be virtual. The Zoom link should be the same as the link for today's LARK general meeting.

6. VE Sessions (Ron AD6KV).

6.1. From now on, VE sessions will be in person directly after the monthly LARK general meetings. Anyone interested in taking an exam should contact Ron with at least two weeks' notice.

6.2. Ron reminded the group that the \$35 FCC license fee will take effect on 19 April 2022.

7. ARES (Ron AD6KV).

7.1. LARK is working with the cities of Livermore, Pleasanton, and Dublin to support an ARES program in this area. ARES is associated with the ARRL but does not require ARRL membership. It provides emergency response to support each city.

7.2. In the event of an emergency, the meeting room for this morning's LARK meeting would become the EOC (Emergency Operations Center). There will also be a radio room in the building.

7.3. Both the ARRL and FEMA offer online courses that explain basic skills and management for emergencies.

7.4. Interested hams who did not return a completed registration form in person this morning should email the completed form to ad6kv@arrl.net.

Guest speaker:

8..Datta Deogaonkar (VU2DSI) recognized the Indian scientist Aacharya Jagadish Chandra Bose (1858-1937) who is considered by his proponents to be the father of wireless communication.

8.1 For more information, one can consult the AU2JCB QRZ page on www.qrz.com/lookup.

New Business

9. Klutz Awards

9.1. Nate N8MOR was recognized with two Klutz awards.

10. Field Day: Ron AD6KV and Nate N8MOR.

10.1. The last weekend in June.

10.2. Tentatively planned for the open field north of Livermore Airport, to be confirmed with the airport management.

10.3. LARK provides a barbeque with a social period. Chefs are welcome to contribute their culinary creations.

11. Operating

11.1. Clancy N6QQ reported good contacts on 20 m

11.2. Gary NA6O reported activity on 6 m.

11.3. Chuck WA6SYE reported successful reverse beacon operation.

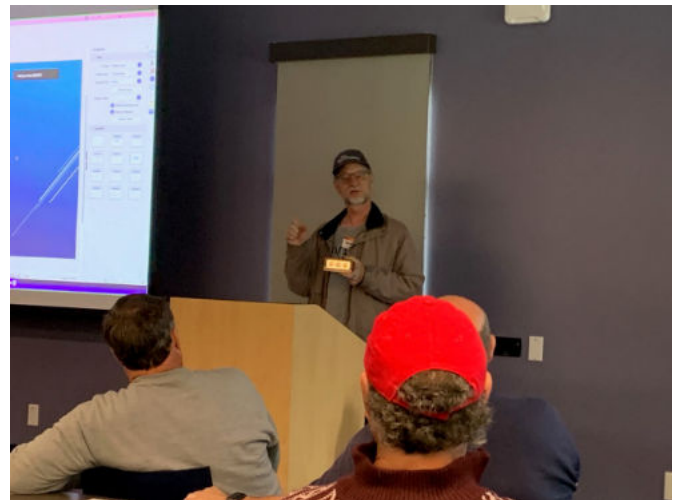
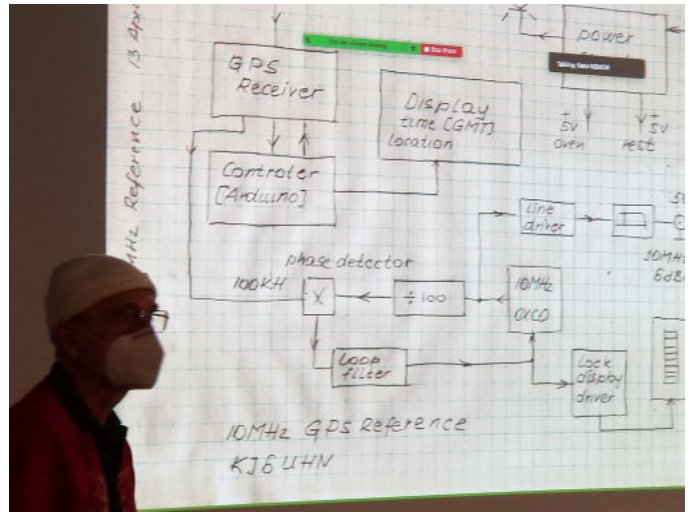
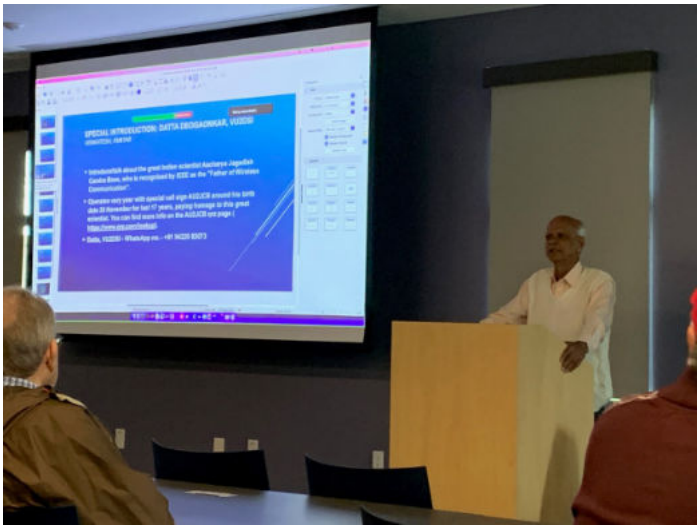
Show and Tell (Arnold KQ6DI)

- A 10 MHz GPS frequency reference, from Alexander KJ6UHN.
- Gary NA6O displayed a low-power keyer that he designed and built.
- Jerry N5KA showed a Go Box that he also uses as a base station in his shack, as well as a “mini-version” consisting of a mobile VHF/UHV transceiver on a cutting board with a handle.
- Roberto K6KM showed the hardware that he uses for SOTA and POTA and carries in a backpack.

Meeting adjourned at 1145 hours PDT, 1845 hours UTC.

Rev 2





Community Events Supported by LARK

Devil Mountain Double Century

Saturday, April 30, 2022

<https://syhcpa4.wixsite.com/quackcyclists/devil-mountain-double>

The Devil Mountain Double Century is a 195 mile, one day bicycle ride with 16,000 feet of climbing that attracts the strongest of riders. LARK has supported this event since its beginning in 1996.

The 2022 DMD will be smaller, with a maximum of 50 riders, with a new start/finish location at the La Quinta Inn at 7700 South Front Road near Greenville Road, in Livermore.

As a result of the DMD format changes the needed Ham radio support is much reduced. We will focus our support on APRS tracking of SAG vehicles and being a "point of contact" for the mobile ride director and his staff. We also plan to support rest stops and SAG vehicles on sections of the route that have poor (or nonexistent) cell phone coverage; possibilities are Morgan Territory Rd, Patterson Pass Rd, and Mines Rd.

We are looking for Hams to install LARK APRS trackers, to be at a few rest stops, to support the NCS, and possibly to ride in one or two SAG vehicles. Each shift is planned to be 5 hours maximum. Earliest report time will be 9:00AM, five hours later than in past years, while the last Ham-supported rest stop will close at about 11:00PM, an hour earlier than in past years. The event itself is a "work in progress", so we're not yet sure of total support needed, likely to be about 6 Hams. If you can help, please sign up.

Amateur Radio coordinator: John Street, WB6ETY wb6ety@sbcglobal.net

Sign Up online here:

<https://www.signupgenius.com/go/10C0844AEAD28A6FA7-2022>



2022 Cinderella Bicycle Ride - George KG6GEM

There were 37 Hams who volunteered from LARK, MDARC who helped support the Cinderella Classic Bicycle Ride held on Saturday, April 9th, 2022. This year there were a total of 1,060 riders on the road. The rider breakdown for the following courses: Short Course- 363, Classic Course- 555, Challenge Course: 133 There were no injuries that required medical attention. The Amateur Radio operators were at the Start/Finish, Critical Turns, and covered the Challenge, Classic, and Short courses and at each of the Checkpoints, Rest Stops, Lunch Stops along the way, additionally we had 19 in support vehicles, Net Control had 4 hams and Stationary Posts had 16 hams supporting this event.

We had 19 APRS (GPS) trackers being utilized in vehicles this year, considerably more than the last year. Since the computers at Cinderella Net Control were connected to the Internet, the phone APRS trackers did have their position on our maps. (This only works where cell phone coverage is available, and data rates do apply.) We wish we could have had trackers in many more vehicles as this aids Net Control in dispatching vehicles to incidents and requests for assistance.

The weather was beautiful this year. The Start /Finish of the ride was at Las Positas College in Livermore. Net Control was set up in the San Ramon Valley Fire Protection District Communications Vehicle (CS-131) this year with ample space for operations. Net Control as well as other Hams was on duty from 6:00 am until 6:00 pm. The SRVFPD Comm Unit CS-131 was present supporting the event. Thank you for your time and being able to use the Comm Unit for this event.

The weather was beautiful this year. The Start /Finish of the ride was at Las Positas College in Livermore. Net Control was set up in the San Ramon Valley Fire Protection District Communications Vehicle (CS-131) this year with ample space for operations. Net Control as well as other Hams was on duty from 6:00 am until 6:00 pm. The SRVFPD Comm Unit CS-131 was present supporting the event. Thank you for your time and being able to use the Comm Unit for this event.

I want to thank everyone who helped: John WB6ETY, Ron K AD6KV, Chris Q W6CJQ, Mark KM6XU, Dave C KG6WIR, Ryan W6RAM, Jim G KG6RZQ, Keith KC6JHF, Bernie NJ6W, Jerry N5KA, Daniel KB6FF, Clancy N6FQQ, Tony s KK6CPC, Kim N6LVQ, Mark KK6UKU, Bill N6SGT, Nate N8MOR, Arnold KQ6DI, David H K6WOO, Bill H AJ6UU, Brian KF6ONF, Rich KN6HSR, Kian K6KDK, Edward KN6MBF, Sean KK6SM, Roger KK6RD, Michael K6MWM, Phil KM6JOY, Steve K8YIP, Andrew KN6MPB, Elisabeth KJ7MEB, Sri KN6INK, Bill KB6YHL, Rodney KC5A, Raj KN6MBG, and Jeff AD6RH. I also want to recognize Workday for their volunteers that support this event. COMM Reserves: Ryan Mahoney, Chris Quirk, and Steve Nissen. San Ramon CERT volunteers Steve Dummer, and Mary Erhardt worked as Scribes in Net Control. It should be notes that 3 of the Comm Reserves also have their ham licenses and not only helped at Net Control but also were in the field as SAG/Sweep support.

A big THANKS to everyone for putting up with our last-minute assignment changes.

Looking forward to your help again next year.

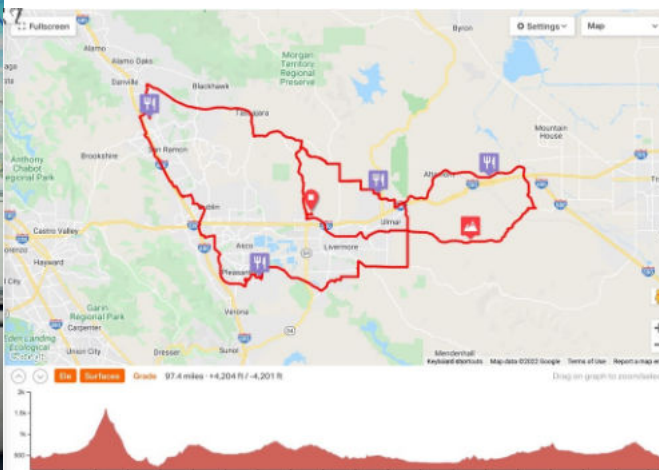
73,
George Moorehead (KG6GEM)



Cinderella Classic Bike Ride - Sean KK6SM

I want to share my experience providing support for the Cinderella Classic bicycle ride in the area around Livermore, California. For this I drove my SUV, providing "Support and Gear" (SAG) and Amateur Radio communications. I was one member in a team of over 40 radio communicators, 15 SAG drivers, and five "shuttles" to support the more than 1,000 cyclists on this ride day.

This view out the front of my SUV was my "office" for the day - driving the course, watching for stopped cyclists, rendering aid, communicating on radio, and constantly being aware of my position on the course route. Indeed it



was just as much activity as that sentence suggests.

On the radio we each identify ourselves using a "tactical call sign" - a short "handle"

(Pictured above: the radio I used during the day, and a map of the 97-mile hilly Challenge route which I supported..)

which we have been assigned. My tactical call was "SAG 12" which I used often. At certain times we are required to also say our Amateur Radio call signs; mine is KK6SM.

A typical exchange with Net Control (the radio boss) sounded like this,

"SAG 12, this is Net Control."

"Net Control, SAG 12 KK6SM"

"SAG 12, please proceed to 0.8 miles before Patterson Pass summit to assist a rider having a broken derailleur." (and so forth). We radio operators were in frequent contact with "Net Control", the nerve center which operated in that comms truck.



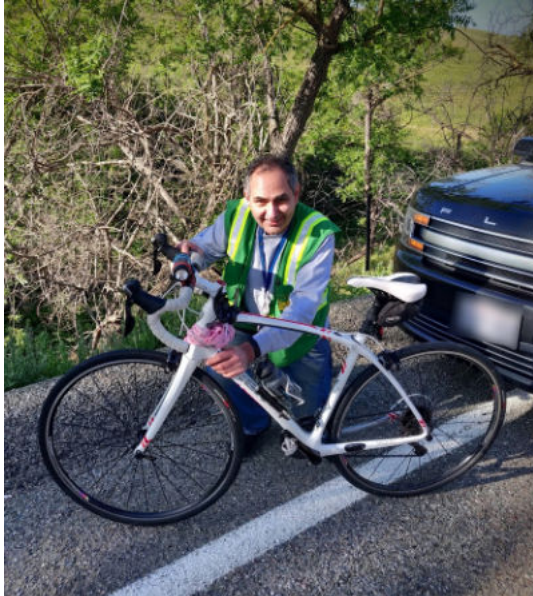
(Pictured above: San Ramon Valley Fire's CS-131 communications truck of the San Ramon Valley Fire Protection District which was located at Ride Headquarters, Las Positas College.)

My involvement was of a dual role - from both a work club plus a civilian emergency-response training team. I was one of the 8 or 9 members of our Workday Amateur Radio Club (WARC) who came out to support the event as part of our Giving and Doing service, plus to practice radio operations and have fun.

In addition, I was one of the 5 team members from the San Ramon Community Emergency Response Team (SRV CERT). CERT groups are residents who train in what to do after a major disaster. Here in the Bay Area, think "post-earthquake response".

Such CERT groups exist throughout the country and several US territories, and several other countries have similar groups.

Now that we have the acronyms out of the way, let's see what fun the day held.



I was called to assist a rider near the summit of a long steep climb up Patterson pass; the complaint was that her derailleur was broken. When I arrived, she explained that she had been climbing in a tall gear for a long time, but this

was as far as she could go. I diagnosed the issue as a broken cable which would no longer hold the rear derailleur up at a large cog. The question then became, "how can we pull the cable and secure it in place?"

I removed the cable from its sheath, and with her pulling on the cable to put the derailleur into a low gear, we padded the head tube to protect its paint. I looped the cable around the head tube and tied the cable back over itself. This held the unit in a lower gear - but still not enough. I then crafted a makeshift tourniquet by using a screwdriver to twist and pull more cable, secured the screwdriver with zip ties, and protected the top tube's paint with scrap plastic.



This got her bike into 2nd gear (almost the biggest cog in the back) and she was elated that she could ride and be on her way. She was adamant that she wanted to ride as far as to the rest stop at Christensen school where a bike shop might have a spare cable.

This was a very janky repair - but it worked!

She was motivated!

Later I heard over the radio that she had made it to the Altamont rest stop and they were

calling ahead in search of a cable at the next rest stop.

This rider deserves some sort of trophy!

Chris W6CJQ (pictured above) leads the Fire District's communications volunteers, is my radio mentor, and is a key member of San Ramon Valley CERT. Radio team members here work in this dispatch room in the truck, under Chris' direction.



(Pictured above: the Net Control room - the nerve center which is the dispatch room in the truck. This view is looking forward towards the "cab", the area where the driver and crew sit while in motion.)



From the lower right: Mary E., a recent CERT graduate, Steve N working radio Net

Control, and on left Steve D. WRAU391 preparing to rotate for a second session as Net Controller.



(Pictured above: more photos of the Net Control team in action.) From left to right: Mary E. (Scribe), Steve D., WRAU391 (Scribe and Net Control), Elisabeth B. KJ7MEB (Net Control).

(Pictured below, Workday's Marilyn P. and her daughter.)

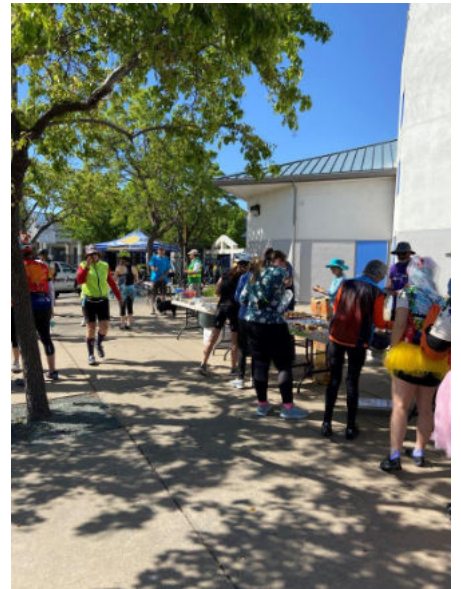
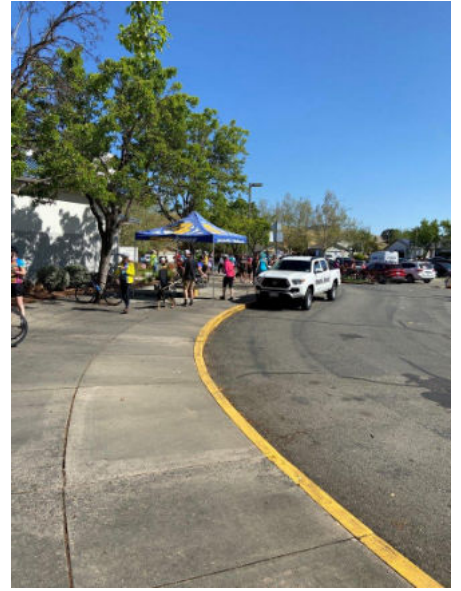


(Pictured above: Bill G. KB6YHL (SAG4, sweep))



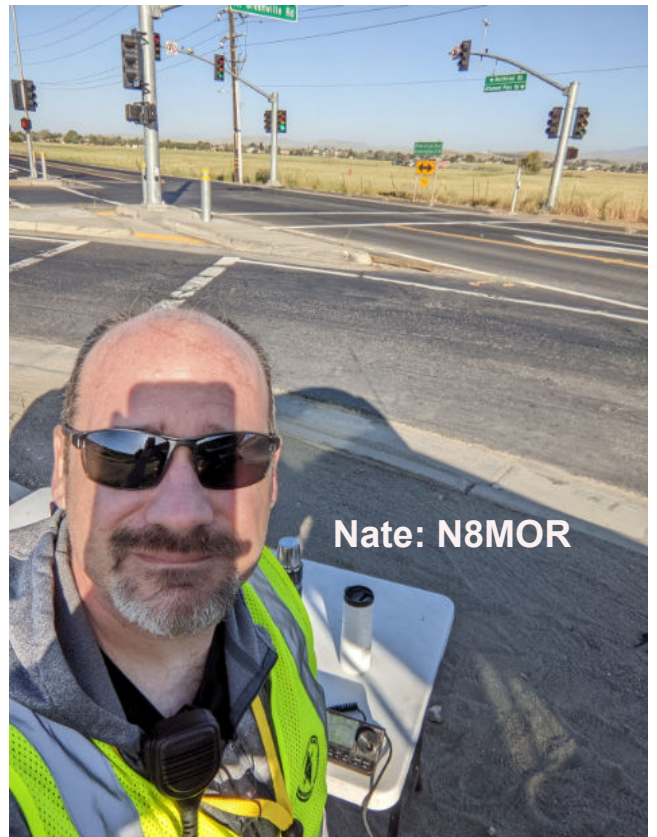
Where would we be without the riders?

Marilyn and I kept missing each other, however I ran into Workday's Ro R. (KJ6GDQ) at a rest stop.



Here are some pics from the Cinderella Ride 4/9/22. I was stationed at the Christensen Middle School rest and food stop in Livermore, and worked as the Shuttle E radio operator. The weather was great, but some wind. We had just a couple of women that could not finish the ride, and we transported them to Las Positas College (where the ride started and finished). All in all, a successful day! Jeff Lillard AD6RH

Pictures by Sri KN6INK



Here are a few pictures taken at the Christensen School rest stop. All riders came through there and those on the challenge course came through twice.



Kim Patik N6LVQ, radioman for the Main Course Sweep car tested out the refreshments.

Clancy Soucie N6FQQ and Dan Simms KB6FF manned two of the three fixed radios at the Christensen stop.



Pictures by Bernie NJ6W



Here is a picture of Phil Flores KM6JOY operating the base station at Vintage Hills School (a food/rest stop for the Cinderella). Phil is a new member Here is a picture of Phil Flores KM6JOY operating the base station at Vintage Hills School (a food/rest stop for the Cinderella). Phil is a new member of LARK. He worked 20+ years in the Navy (retired) as a radio/electronic communications specialist. It was good to have him there helping. He fit right in.

While at Vintage Hills, we logged 3 or 4 riders whose tires disintegrated along on the ride. When supporting bike rides, we occasionally get riders with flat tires (tube punctures) but rarely tires that fall apart. Our theory is that some riders haven't ridden their bikes for 2 years (or even longer) and the rubber on the tires aged and cracked while sitting unused in the garage for several years. Rule #1 check your bike over carefully (especially the tires) before going on a bike ride.

-73-

Jerry N5KA

From the Editor: Welcome to LARK Phil !!!

Hamfest in Sonoma

HAMFEST 2022

Saturday, April 23rd,
8:00 AM to 12:00 Noon

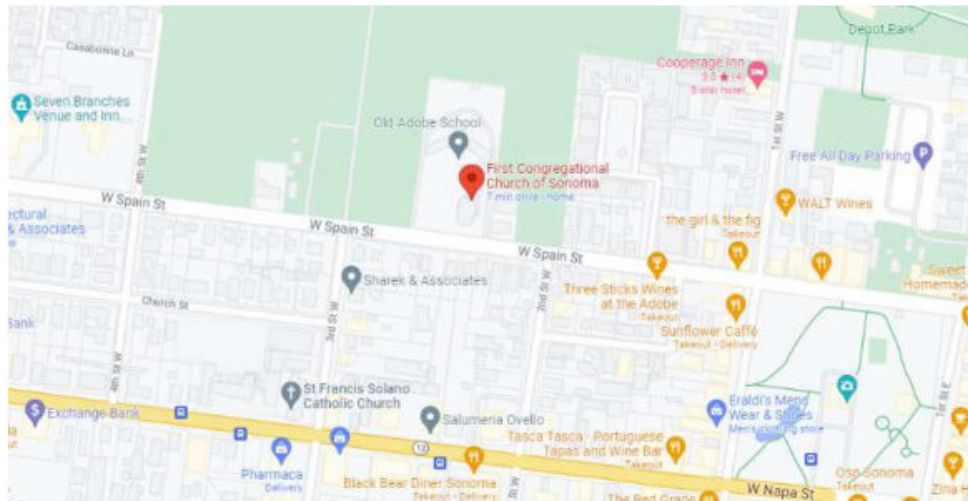
Featuring:

- Swap Meet (indoor and outdoor spaces)
- Breakfast (pancakes, sausage and eggs)
- VE Testing Session (advance registration required)
- Station Demos
- Fox Hunt
- And more!

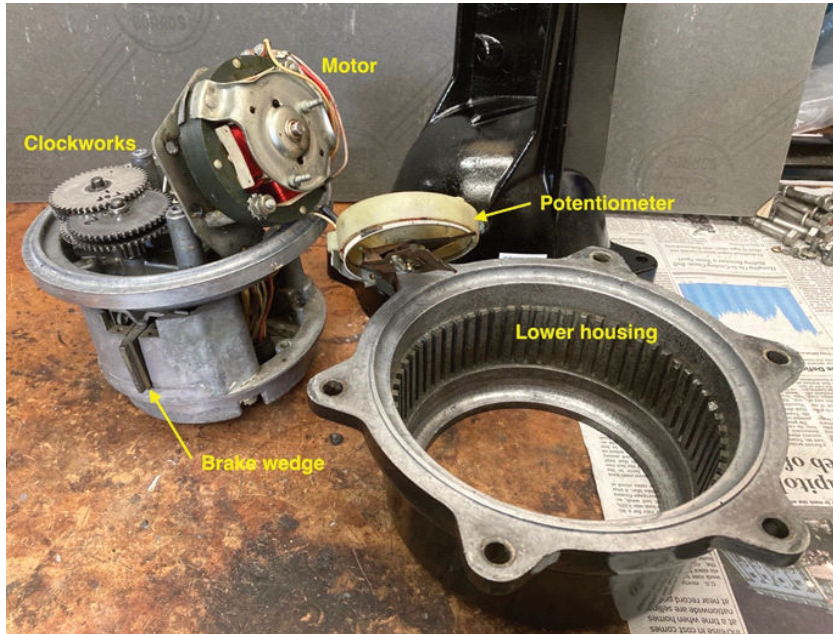


First Congregational Church of Sonoma
252 W Spain St, Sonoma
Talk in on 145.350 MHz (88.5 PL)
For info: valleyofthemoonarc@gmail.com

Admission: FREE
Breakfast: \$10.00
Swap spaces: \$10.00
<http://www.vomarc.org>



Rotator Rebuilds - Gary NA6O

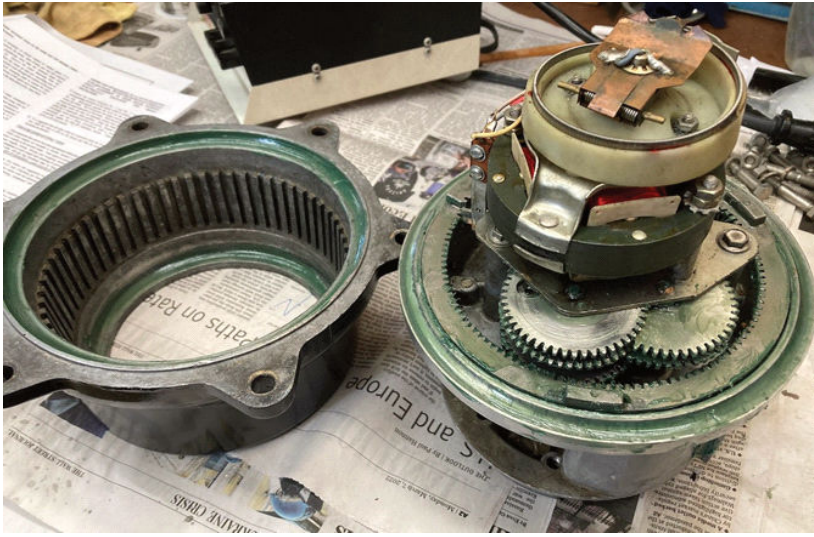


It seems that I've roped myself into taking care of a vast array of equipment at the N6RO super-station up in Oakley, and it's not all radio or electronics. We have a total of 11 rotators on site turning a variety of large HF and VHF Yagis (plus those at my own stations). Did you know that there are actually just two kinds of rotators? Those that have failed, and those that will. Wind and weather just beat these things to pieces. That means REPAIRS, and I have certainly done my share over the years. You can send a rotator out to some nice fellows who will repair them,

but often you can do it yourself. Instructions and manuals are on the web, and at least some of the manufacturers, like Hy-Gain/MFJ, supply parts at reasonable cost.

For the current go-around, I had two to fix. The first was a Hy-Gain Tailtwister, or model T2X. It's the largest of the familiar bell-shaped rotators, part of the trusty and ancient line that started with the Ham-M back in the 60s. These things are like clocks inside, with a stack of gears driven by a small AC motor, a solenoid-operated brake, and with a potentiometer to indicate direction. They have numerous failure modes. Sometime the pot fails, and it has to be replaced. There's a final large ring gear, and it often needs dental work, i.e., it has missing teeth. That turns into a game of ring toss: We simply replace it. Sometimes the brake mechanism is frozen, usually from rust. Or the small gears wear out their little sleeve bearings, leaving them wobbling like penguins, making grinding noises, or simply seizing up. Again, we replace them. This rotator had three of those





gears worn out, and it cost \$50 or so to replace them all. The motor was also barely turning. Its bearings had dried out long ago and had all but welded themselves onto the shaft, another thing to replace. Total repair cost was \$135, which isn't bad for \$800 rotator.

As you take it apart, take photos and write notes on the instructions and drawings. There are always a few items that have hard-to-see features that must be oriented properly. Your main task is always

cleaning and lubrication. Mineral to the rescue. Get out those brushes, rags, and throw-away containers. Old grease hardens and has to be scraped off. Often things are rusty. Wire brushing usually cleans up the rest. Ball bearings are cheap, just replace those. Here is a typical set of rusty bearings. This is totally salvageable and ends up looking and working like new.

After cleaning, all the gears and bearings get a light coat of grease. I emphasize light. I've seen rebuilds where a full pound of grease has been packed in there, and the innards look like they were entombed in some kind of goo. It takes hours to scoop that disgusting mess out of there and get down to clean metal. No no, don't do that. A film of grease is all it takes, just smear it on with your fingers or a brush. Grease serves two purposes: It's a lubricant of course, but also prevents corrosion. Condensation always occurs inside these semi-sealed mechanisms and rust is never helpful to precision mechanisms. Oil is ok but it does in fact slowly evaporate, and many of these rotators are in service for decades. This particular T2X was made in 1984 and had never been serviced.



When you're all done, a rotator like this should be tested stop-to-top and then left in the North (centered) position. Put a label on it to remind the installer that it's all lined up for them. I also put on a service label with the date in case the rotator is stored for awhile.

The second rotator I worked on is one that most hams have never heard of: An AlfaSpid RAK, made by Alfa Radio in Poland. They have become very popular with owners of very large antenna arrays, and are overkill for the small tribanders and such that most of us would own. The RAK mechanism uses a double-reduction worm gear drive, so it does not need a brake. The motor is DC operated, so there is no capacitor required, nor any funny wiring to reverse it as the T2X has. For direction sensing, it uses a tiny magnetic reed switch that generates a pulse for every 1.0 degrees of rotation. Just four wires are all it takes to run this little machine, and yet it produces twice the torque of the T2X. (It also has a big bother, called the BIG-RAK, that nearly doubles the torque again.) The upshot is, this is a powerful yet very simple and robust mechanism.

After 10 years or so of turning a gigantic four-element 40m Yagi, this little fellow was tired. The mast had several degrees of slop, showing that the main gear had all but disengaged with the worm gear. We worried that it was toast, but thankfully it only needed cleaning and adjustment. The motor and other parts were just fine. The company does sell the motor assembly as a spare part, if it's ever needed. Here's what the innards looked like with all the accumulated filth. The weather seal had been leaking badly! That big worm gear was just rattling around, very sloppy.



Here's what it looks like after cleaning. It's very difficult to pull the main gear assembly, so it was cleaned in-place. There were loose ball bearings on the ends of the worm gear, just like the ones on a bicycle hub. A big nut and bearing cone on the left side provides the adjustment. It simply had to be dialed in to get the perfect clearance and smooth operation. Notice that I didn't go nuts with the grease. This particular grease (Prolong PSL45000) is rated for wide temperature ranges and has excellent water resistance and corrosion protection.

Here's the completed RAK. One of the old fixing bolts had rusted into place, twisted off, and had to be drilled out on the tower, a brutal job carried out by Hector, AD6D. I ground off



the old mangled nut, got a new nut, and my friend Greg, KK6PXT, welded it in place, good as new. Then I bought a full set of (metric) stainless hex bolts at Fastenal. Now if only the manufacturer had used stainless screws everywhere it wouldn't have all those rusty things showing. (The latest models finally switched to stainless. Getting enough customer complaints will do that.) I sealed all the important openings with silicone glue, which should help keep things clean. Since there are only four wires, we standardized on a trailer light connector for this rotator. That allows us to replace it without any

wiring hassles on the tower. Trailer connectors are cheap and with a little weatherproofing tape, they hold up very well outdoors.



SOTA Activation Makapu'u Head - Rob K6KM

The title of this article could certainly have been “Time is money”.

On vacation in Honolulu and without a car. That would not preclude me from activating a few peaks accessible by public transportation. You see a lot of buses in the Island. Makapu'u is a volcanic (they are all volcanic)

peak on the Eastern most point of Oahu. The bus ride is a good 1 hour 20 minutes with at least 30 minute wait. Bus 23 from Waikiki will take you to Sea Life Park. That's passed the trailhead parking lot. So you have to walk on the highway some 20 minutes back to the parking lot.

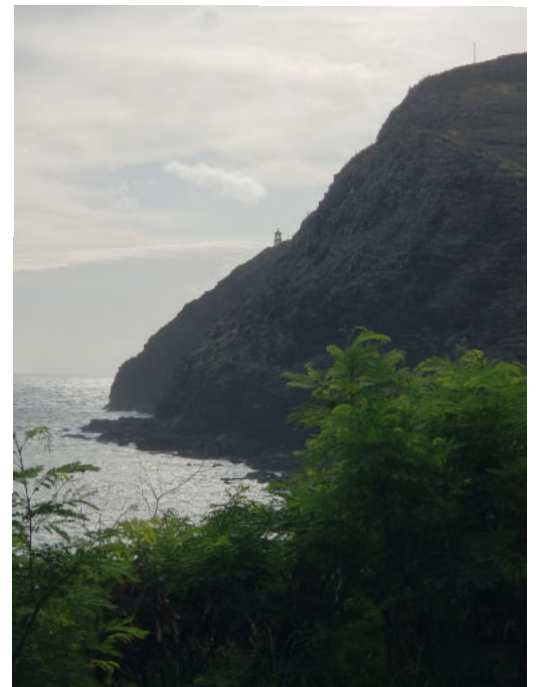


The views are certainly not bad. That's not the peak, that's an island across the beach.

The peak is shown on the right and has a cute lighthouse guarding the passing-by whales.

As in most warm climates, you want to hike early in the morning to avoid the harsh sun and increasing humidity plus the hoard of unruly tourists that flood the island.

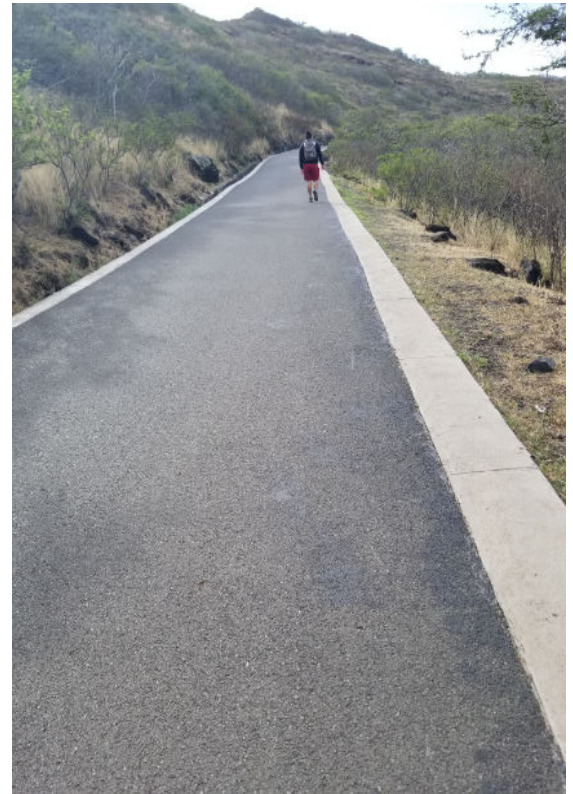
I left the hotel at around 5:20AM and was at the trailhead at around 7:30AM. The climb was gradual and lots of parents pushing strollers.



There is an observation platform on top that is not really the summit. The proper peak is West of the vista point and covered by abandoned missile structures. I set up with a random length end fed to minimize footprint, however in a few minutes some people started passing by my site. Initially I tuned for 20m thinking I was going to hit mainland straight through. I got no takers for a long 15 minute CQ call streak. I was worried I would have to break a CW chat going on nearby my frequency just to get the contacts I needed to get the points. I went to 17m and nothing. Then I was really worried. I switched to 15m and finally I got responses. A few pile-ups and ended up with 17 QSOs.

Two were Summit-to-Summit from Arizona. It was too early to be able to contact JA and no locals answered. I guess I didn't try 40m for that.

Definitely the peaks in Oahu are challenging. Either you need to hike 7 hours roundtrip to the proper mountains or deal with crowded tourist summits with very little space to setup.

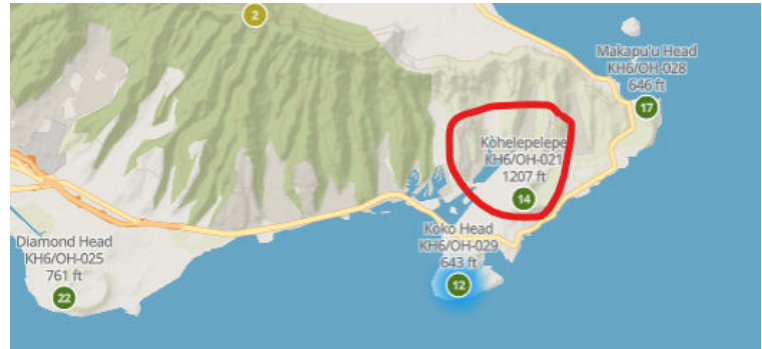


On the way back to the bus I had to wait a good 90 minutes for a ride. Also learned that the park was closed Wednesday and Thursdays so the bus would not reach that destination those days. I was lucky I chose Tuesday for the activation but I was done for the day and

headed back to Waikiki for some cold refreshing Maui Brewery Hefeweizen.

Rob K6KM

SOTA Activation Kohelepelepe - Rob K6KM



Yes, you guessed right. It's an extinct volcano on the East Coast of Oahu. Some people know it as Koko Crater. It was used during WW2 as an observation and defensive point. To carry supplies to the summit, the army built a

railroad track to the top. The mountain is now in a public park and the tracks are not maintained. In fact, half the way up, the ground gave up and the bottom can be seen through the track supports. People built a bypass on the rocks to the side that is used only by those, few of us, who care about safety. Just to give you an idea, the peak is 1200ft high and you do it in less than a mile.

People have counted about 1000 steps and it gets steeper and steeper as you hike up. Definitely you exercise very different leg muscles that you usually use for a normal hike. I was told some locals use it for their morning jogging. I did see a lot of locals but only saw



people jogging down, not up. This is, of course, a one point summit. Once at the summit, I encountered very few people so I looked for a support and there was not much room to deploy the wire. I decided to try something I had in mind for some time. Kind of an inverted V or L end fed. I strung the wire through the top of the pole and went as far as I could leaving enough height clearance for people to walk under. The problem was that I was left with a bunch of wire laying on the ground. Then calamity stroke. Lots of people made it to the summit at the same time and it was unbelievably crowded. I



decided to tune and hope for the best. Of course it would not tune to 1:1 as expected for a 66ft wire. Some was on the ground coiled and tangled. Did I mention the wind picked up big time? I used the tuner and started on 15m based on my previous experience. I did manage 7 QSOs but it was a struggle. Several people asked me what I was doing and one in particular, a guy from Maui, helped me recover my hat that flew away with the wind. Not my most memorable activation for sure but the hike was interesting.

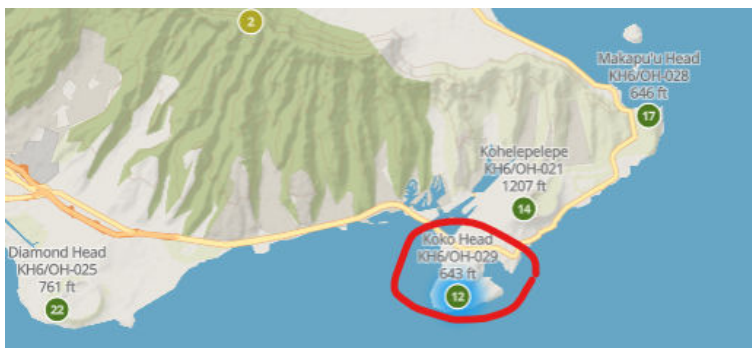


There was a peak nearby that I could do without having to take more buses so there I went. If you do this hike, make sure you go really early in the morning. The track side faces west so it get shade in the morning. Otherwise I heard it's quite brutal since there are no trees around.

Roberto K6KM

SOTA Activation Koko Head - Rob K6KM

Another thing you need to know about buses in Honolulu. You might think that #1 is equal to #1, but that is not always true. Some “same number” buses go to different destinations. I jumped on the 1L confidently to go to Koko. That was at 6AM and after taking another bus. The 1L reached a shopping Mall and shut off the engine. It turned out it wasn't going all the way to Koko. I had to walk two blocks and take the another 1L. So a 2 bus ride to Koko ended up being a 3 bus ride to Koko. Luckily it didn't add more planned time to the hike.



This Koko Head peak is south of the previous one. I followed instructions from previous activations and reached the entrance to Hanauma Beach (\$25/ person). Next to it was a closed and locked gate with FAA clear signs of “No Trespassing”. I froze and started looking back on my phone at previous reports which stated that there was no enforcement to the “No trespassing” signs and locals used the trail for walking dogs and exercise. I asked the guy directing

traffic to the entrance of the beach and he said just walk through. With verbal validation from a local guy (now I had somebody to blame in case I got in trouble) I crossed the gate and started the hike. The FAA facility was very visible from the road. While hiking up I started crossing other walkers and joggers as I was told. That made me feel “less worse”. The wind by then was blowing really hard with the ridge totally exposed. I saw a couple of people working on the antennas at the FAA facility. I tried to avoid the peak itself and stay within the activation zone so I took a side trail.

Given the ferocity of the wind I figured by then that a wire would not cut it. There were no trees nearby, just dry brush, so I installed my mighty loaded whip on a 4 foot plant, sat next to it and proceeded to call CQ without expecting much. Boy, my expectations were met. Very similar activation as the



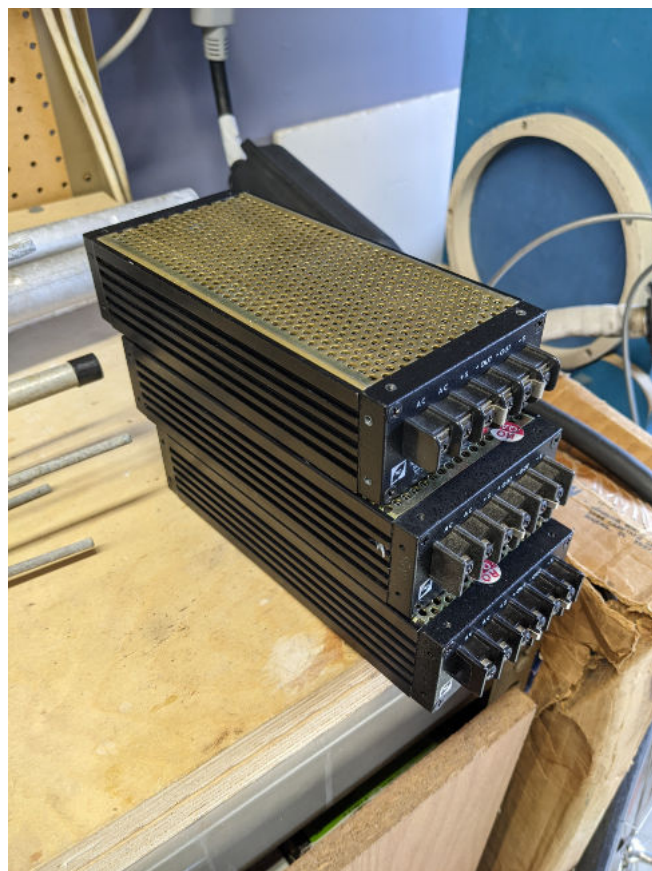
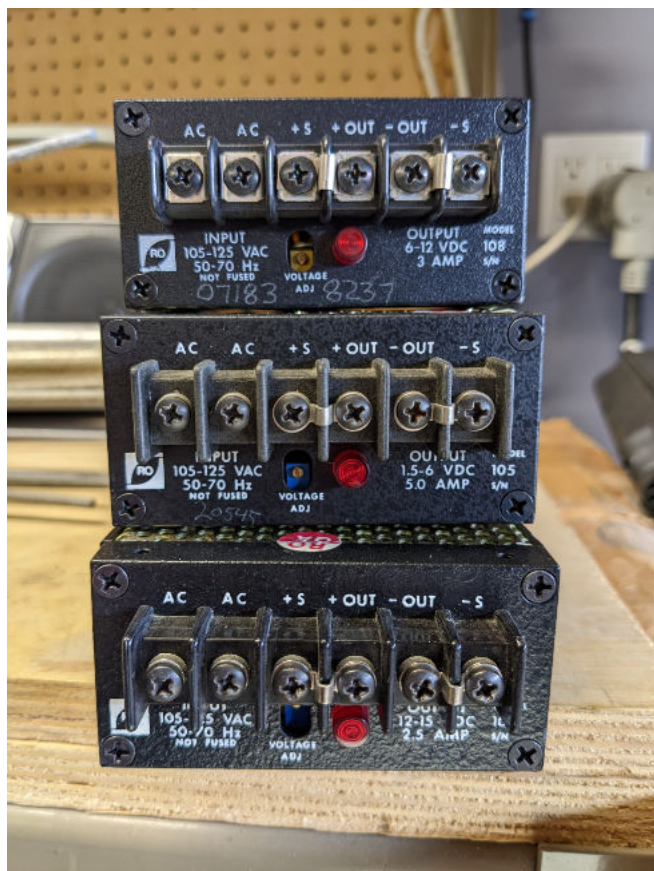
previous one. People struggled to hear me but I managed about 7 QSOs. Some signals were not weak but I'm sure I was weak over there.

This was not a crowded peak but it was windy and miserable one.

What was not miserable was the view down to Hanauma Beach. I was claiming victory (not before my 2 hour ride back to the hotel) but I was totally discouraged to pursue my last planned activation of Diamond Head. Probably the most climbed peak in Hawaii. Very narrow up there and a most likely lousy radio experience awaiting me. I passed it up. Perhaps a 2m HT would be more appropriate for those crowded peaks but I did not bring one with me.

Roberto K6KM

From the LARK CAVE



Swap n Shop Less Power to You

- Last month we offered-and sold!-some heavy hitter power supplies. This month we are taking a lower key approach. Here are three power supplies. All are AC 110V input. 1) A 6-12 Volt DC, 3 Amp out Model 108 unit, 2) a 1.5-6 VDC, 5 Amp out Model 105 unit, and 3) a 12-15 VDC, 2.5 Amp out Model 107 unit. They are \$15 each to LARK members, \$20 each to non-LARK members. Get 'em while their hot! Maybe that's not the right phrase. They do all have an over-temp shut off function.

Contact Rich, KN6HSR@ARRL.net

May 2022

<u>Monday</u>	<u>Tuesday</u>	<u>Wednesday</u>	<u>Thursday</u>	<u>Friday</u>	<u>Saturday</u>	<u>Sunday</u>
					30 DMD LARK supported	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19 LARK HAM Breakfast	20 Hamfest Xenia, OH	21 LARK Monthly Meeting	22
23	24	25	26	27	28	29
30	31					

LARK MON. NIGHT NET ON: 147.120 MHZ + offset,
PL 100 AD6KV.
Every Monday 7 PM local time.
Visitors welcome to join in.

Net Control Operator Schedules

Monday Night Net Control Operator Schedule

April

DAY	OP	NAME
04	AD6KV	Ron
11	EOC	
18	AE6D	Ed
25	N5KA	Jerry

May

DAY	OP	NAME
2	WB6ETY	John
9	EOC	
16	WB6AEA	Jon
23	AD6KV	Ron
30	AE6D	Ed

June

DAY	OP	NAME
6	N5KA	Jerry
13	EOC	
20	WB6ETY	John
27	WB6AEA	Jon

EVERYONE is invited to check in to the net. Please contact AE6D ae6d@sbcglobal.net if you need more information or would like to become a Net Control Operator. After the net please call Ed AE6D with the AC/DC statistics or send him the information by email.

Thursday Night Net Control Operator Schedule

4/7/2022	Thursday	Jerry/N5KA	Nate/N8MOR	Study Night: General Exam
4/14/2022	Thursday	Peter/AI6RG	Rich/KN6HSR	Easy Tech Discussion:
4/21/2022	Thursday	Nate/N8MOR	David/K6WOO	General Discussion:
4/28/2022	Thursday	Rich/KN6HSR	Jerry/N5KA	Advanced Tech Discussion
5/5/2022	Thursday	David/K6WOO	Peter/AI6RG	New Comer, General Discussion:
5/12/2022	Thursday	Jerry/N5KA	Nate/N8MOR	Study Night: General Exam
5/19/2022	Thursday	Peter/AI6RG	Rich/KN6HSR	Easy Tech Discussion:
5/26/2022	Thursday	Nate/N8MOR	David/K6WOO	General Discussion
6/2/2022	Thursday	Rich/KN6HSR	Jerry/N5KA	Advanced Tech Discussion
6/9/2022	Thursday	David/K6WOO	Peter/AI6RG	New Comer, General Discussion:
6/16/2022	Thursday	Jerry/N5KA	Nate/N8MOR	Study Night: General Exam
6/23/2022	Thursday	Peter/AI6RG	Rich/KN6HSR	Easy Tech Discussion:
6/30/2022	Thursday	Nate/N8MOR	David/K6WOO	General Discussion:

Regularly Scheduled Nets

LARK/LIVERMORE NET	Every MON.	1900 local 147.120+	PL 100
RACES Net 7pm	Every MON.		
Windfarms 10-10 NET	Every WED.	1930 local 28.485	USB
LARK TECH NET	Every THURS.	1930 local 147.120+	PL 100
LLNL Retiree Net	Every FRI 8:30 am	0830 local	7.2630 LSB
SWOT	Every Sun. & Tues.	2000 LOCAL	144.250 USB
THE NOON TIME NET	EVERY DAY	1200-1400 LOCAL	7.2685 LSB & 3970 LSB
RV RADIO NET	MON-FRI	0800-0930 LOCAL	7.2685 LSB

LARK CONTACTS 2022

**LARK—LIVERMORE AMATEUR RADIO KLUB P.O. BOX 3190,
LIVERMORE, CA 94550-3190. Web: <http://www.livermoreARK.org>.
E-mail list: livermoreark@groups.io**

GET YOUR HAM LICENSE OR UPGRADE. LARK conducts all levels of license testing (upon request) at the Livermore City Council Chambers following club meetings (3rd Sat. each month). Contact Ron Kane, AD6KV (AD6KV at arrl.net) 2 weeks in advance.

OFFICE	CONTACT	CALL	E-mail	Phone
President & Events	George Moorehead	KG6GEM	KG6WIU1@COMCAST.NET	(925) 516-2676
Vice President	Chris Quirk	W6CJQ	w6cjq@yahoo.com	925-202-1198
Secretary	Ryan Mahoney	W6RAM	Ryan.andrew.mahoney@gmail.com	925-786-0640
Treasurer	Bernie Bernstein	NJ6W	nj6w@xemaps.com	(925) 858-4608
Board (PP)	Roger Deming	KK6RD	rogerdeming@yahoo.com	(925) 484-1285
Board	David Counts	KG6WIR	dlcounts@sbcglobal.net	925-895-4698
Board	Nate Moore	N8MOR	nate@nateandamy.org	(925) 577-4916
Activities	Jerry Benterou	N5KA	benterou@gmail.com	925-321-3263
Repeater Chair	Ian Parker	W6TCP	w6tcpian@gmail.com	
Web Site	Arnold Harding	KQ6DI		
Newsletter Editor	Roberto Sadkowski	K6KM	rsadkowski@gmail.com	
Membership	Venkatesh Varadha (Var)	KM6TAB	svvenkatesh2786@outlook.com	(925) 961-7703
Net Coordinator	Ed Diemer	AE6D	ae6d@arrl.net	
RFI	Gary Johnson	NA6O	gwj@me.com	
T-Hunts	Rich Harrington	KN6FW		
Swap n Shop	Richard Combs	KN6HSR	KN6HSR@arrl.net	



Facebook—<http://www.facebook.com/LivermoreARK>
Twitter link : <https://twitter.com/LivermoreARK>



Special interests: Mesh Networking. Dave KK6DF <http://mesh.sushisoft.com> . <https://www.youtube.com/user/fanninsushi/videos>. View: AREDN!<http://www.aredn.org>. **CERT NEWS:** Tracy Hein CERT contact. Email: thein@lpfire.org or (925) 454 -2317 https://community.fema.gov/Register/Register_Program_View?id=a0xt000000mAuZAAE

Meetings 3rd Wednesdays. Remillard RM 3333 Busch Rd. Pleasanton.

LARK Membership Form



LARK LIVERMORE AMATEUR RADIO KLUB.
P.O. BOX 3190, LIVERMORE, CA 94551-3190

An ARRL Affiliated Club

LARK MEMBERSHIP FORM - Print, fill out, mail in with check.	
Circle all that apply: New / Renewing / Family Today's Date: _____	
NAME: _____ CALL SIGN: _____ ARRL MEMBER? Yes / No	
Address: _____	
PHONE: () - UNLISTED? ___YES ___NO	
Enter your E-mail here and stay connected: _____ LARK NEWS featuring upcoming club events and articles is available monthly via email. http://www.livermoreark.org/ Access the current and back issues on our website.	
ADDITIONAL FAMILY MEMBERS (At the same mailing address, only \$2. membership per person)	
NAME	_____
PHONE	_____
EMAIL	_____
AARL MEMBER	_____
ANNUAL DUES # _____ PRIMARY (\$20.00) ADDITIONAL MEMBERS # _____ (\$2.00 each)	
TOTAL: \$ MAKE CHECKS PAYABLE TO: LARK. Thank You.	
<p>Membership is \$20.00. per calendar year starting on Jan 1 through Dec. 31. To complete membership by mail: print and fill out this form, include a check payable to LARK, and mail to: LARK Membership Chairman, P.O. Box 3190, Livermore, CA, 94551-3190. Please be sure your complete mailing address, e-mail, and call sign are on your check. Questions? Contact the Membership Team via email: membership@livermoreark.org You may also complete membership application and payment by: Bringing this form filled out and pay by cash or check to either the Membership Chairman or Treasurer at any general meeting. Or: pay with a credit card or PayPal account on the Club's membership page: http://livermoreark.org/membership/membership.html. Thank you and welcome aboard from LARK and the Membership Team.</p>	