

# LARK NEWS July 2023



*Livermore Amateur Radio Klub LARK is an ARRL affiliated club dedicated to Public Service Volunteer Emergency Communications. Meetings are once a month on the 3<sup>rd</sup> 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



Gary NA60 presenting “Am I getting out?” A very informative talk about all the possible ways to check how and where your signal is heard.

Beacons, Reverse Beacons, Skimmers, Agregators, PSKReporter, WSPR and more.



The right one is K6KM’s right boot. Hiking in the snow at 8500ft for Summits on the Air, you might encounter some dirty foot prints like this.

# Content:

<b>President's Message .....</b>	<b>3</b>
<b>Notes from the Editor.....</b>	<b>4</b>
<b>Board Meeting Minutes .....</b>	<b>5</b>
<b>Monthly Meeting Minutes.....</b>	<b>6</b>
<b>LARK Field Day June 24,25 2023 Ron: AD6KV .....</b>	<b>8</b>
<b>Patterson Pass Road Race Sunday, August 6, 2023 .....</b>	<b>9</b>
<b>Monthly LARK Presentation .....</b>	<b>10</b>
<b>The Ultimate Portable QRP Antenna. Rob K6KM .....</b>	<b>14</b>
<b>Net Control Operator Schedules.....</b>	<b>25</b>
<b>LARK CONTACTS 2023.....</b>	<b>26</b>
<b>LARK Membership Form .....</b>	<b>27</b>

## President's Message

I want to thank Bernie NJ6W and David KG6WIR for making the coffee and picking up the refreshments for monthly meetings and would like to have someone help him if possible. This effort is appreciated by all who attend.

I wanted to let you know that the Events Chairperson (me) is following the upcoming events for 2023, and I have an update: the following events will be happening: LARK Field Days on June 24<sup>th</sup> and 25<sup>th</sup> at the Livermore Airport, The Patterson Pass Road Race on Sunday, August 6<sup>th</sup>. As more events become confirmed you will be kept advised. Make sure to sign up on the LARK website for these events for which LARK supports, we can always use your help.

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.

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

We are meeting In-Person at the Livermore City Meeting Hall each month on third Saturday, and we are also offering the meeting on Zoom for those who prefer that way to attend.

Wishing you all stay healthy and stay safe.

**George KG6GEM**  
(kg6wui1@comcast.net)

# Notes from the Editor



Field day is in the horizon and LARK is planning a more interesting show than in the recent past. This is a great opportunity to showcase our Hobby to the general public and more importantly give those who don't have a station, the opportunity to get on the air and learn from the more seasoned operators.

Snow is melting in the Sierras but there is still a lot of it above 7500ft. I went for 6 activations in 3 days and 3 of them had plenty of snow. I'm a rookie as far as that white stuff is concerned but I'm learning, and snow at 65F is not that bad.

One thing I learned is that you sunburn (times two). Had some nice activations getting contacted by Northern Ireland, Czech Republic, Slovenia, Japan and Argentina. Most on 15m and I was operating 10W from some nice high peaks.

WRTC is happening in July. Several of the best operators in my Contesting Club are participating.

Ducie Island VP6A is active. That was a new one for me. They are using the RIB (Radio in a box) that has been sponsored by the Northern California DX Foundation. The idea is to drop on

the island a box with a radio and internet connectivity to the boat. A few crew members install and maintain the antennas, come on shore to refuel the generators, but the operators are on the boat. They can also keep the operation running 24 hours a day.

I'm not sure how the traditional DX'ers will view this, but times change and technology evolve.

The ultimate goal of the RIB is to allow operations in places where there are harsh restrictions. For instance, protected lands, hard to reach places, etc.

The cost of DXPeditions is also increasing wildly and the Ham Community has to adapt and find ways to keep the activity going.

Keep riding the Solar Cycle 25 up with its periodic hiccups. Time will tell if this is another yawning cycle or the one we all have been waiting for.

Stay active.

Roberto K6KM

# Board Meeting Minutes



## **LARK Board Meeting | June 12, 2023 | Minutes**

**Attendees:** George, Chris, Jerry, Bernie, Nate, David

**Absent:** Ryan, Jerry, Roger

**Guests:** Var

### **Call to Order**

1. Meeting called to order by George at 7:35 PM.

### **Treasurer's Report – Bernie**

1. The club's finances are solid.

### **Repeaters – Nate**

1. They are working well; will be testing ODP soon.

### **Activities – Jerry**

1. Presentations for the balance of the year for the monthly meetings are covered.

### **Events – George**

1. Patterson Pass Road Race on Sunday, August 6<sup>th</sup>, need more volunteers.
2. Pacificon Booth and Swap Meet volunteers needed on October 21<sup>st</sup> and 22<sup>nd</sup> at the San Ramon Marriot

### **Field Day – Nate**

1. Have 22 people signed up so far.
2. Request has been made for possible license testing during the event, Nate is coordinating the necessary testing materials, etc.
3. Getting the food items at Costco for the BBQ.

### **Membership – Var**

1. 156 paid memberships and 8 Lifetime.

### **Non - members Posting on Groups.IO – George**

1. The board discussed establishing guidelines if non-members can post on the groups.io. It was decided to research what other clubs are doing with this type of requests and what guidelines they are using and revisit this topic at next month's board meeting for further discussions.

### **Adjournment**

1. George adjourned the meeting at 8:05 PM.

Minutes submitted by:

---

George Moorehead (KG6GEM) for Ryan Mahoney (W6RAM)– LARK Secretary

# Monthly Meeting Minutes



## **LARK General Meeting | June 17, 2023 | Minutes**

### **Call to Order**

1. Meeting called to order by George KG6GEM at 9:31am.
2. George started introductions, first of In-Person attendees and then Zoom attendees.
3. Members 39/ 2 Guests = 41 Total attending the meeting.

### **Presentation**

1. George introduced Gary Johnson NA6O for his presentation on **Am I Getting Out? Reverse Beacons, Skimmers, and Other Tools to see How Well Your HF Station is Working**

### **Break for Coffee and Donuts - Thank you David KG6WIR for setting this up.**

1. Resume meeting at: 10:37am.

### **Activities - Jerry N5KA**

1. July: Richard from Radio Maritime Historical Society in Pt. Rays
2. August: Lee KI6OY How to get started in Contesting
3. September Gary NA6O New Tower Upgrade Project for N6RO in Oakley
4. October: Pacificon - No Meeting
5. November: Alinco Equipment Demonstration
6. December: White Elephant Gift Exchange
7. Looking for speakers, any ideas please contact Jerry.

### **Events - George KG6GEM**

1. All confirmed event signups are available on the LARK website.
2. August 6<sup>th</sup> Patterson Pass Road Race. Need at least 10 more people, all levels of experience is welcome
3. Pacificon in October 20<sup>th</sup> and 21<sup>st</sup> and 22<sup>nd</sup> Booth coverage, and Sunday, October 22<sup>nd</sup> Swap Meet coverage with two shifts, watch for sign-ups coming soon.
4. Field Day - June 24<sup>th</sup> and 25<sup>th</sup>, contact Nate N8MOR

### **Membership**

Badges - any questions contact Bernie

### **Repeaters**

Nate working with Ian on some interference on the UHF Link between WA6ODP and AD6KV

### **V/E Testing - Ron AD6KV**

1. General Test being taken today

### **ARES - Ron AD6KV**

1. Continue to make progress in Livermore

### **Field Day - Nate KG6GEM**

1. Field Day is 6/24 and 6/25 at Livermore Airport
2. BBQ during the day, contact Nate N8MOR for more information

**Old Business**

1. Minutes from the March meeting approved unanimously.

**Klutz Award Nominations**

1. No nominations

**Operating**

1. Roberto was doing SOTA in Tahoe
2. Ham Shack Hotline to do a 6:50pm net before the Monday night weekly net.

**Ask an Elmer - Lee KI6OY**

Working on a project and have a question? We can find people that have a question. Please contact Lee by email or phone.

**Adjournment**

1. George KG6GEM adjourned the meeting at 10:57 AM

Minutes submitted by:

---

Ryan Mahoney (W6RAM)- LARK Secretary

## LARK Field Day June 24,25 2023 Ron: AD6KV

LARK members will be participating in the 2023 Field Day Operation on June 24 and 25. This is an opportunity to practice field operations with your equipment and have a good time working with others. Our normal approach to FD is to meet for set up at about 9 AM and discuss what we're going to do, usually over coffee, standing in the field north of the Livermore



Airport parking area. Once some basic decisions are made the operators commence with setup and checkout of their stations and await the 11 AM local start of the event. Most participants in our recent years have not been hardcore operators, rather this is an opportunity for learning and camaraderie. LARK will provide for a later afternoon BBQ and social event in the tree area east of the operating field. Members and family are invited and more details on what to bring will be sent out soon.

After the BBQ some members return to operating and demonstrating how their equipment works, some may spend the night participating. Usually around 9 AM Sunday morning we're ready to dismantle and return our gear to home stations. This is an opportunity to learn how to prepare for emergency operations as well as have fun making contacts with others around the world. Come join us! Watch for further information in the newsletter, in emails and on our Monday night Net.



# Patterson Pass Road Race Sunday, August 6, 2023

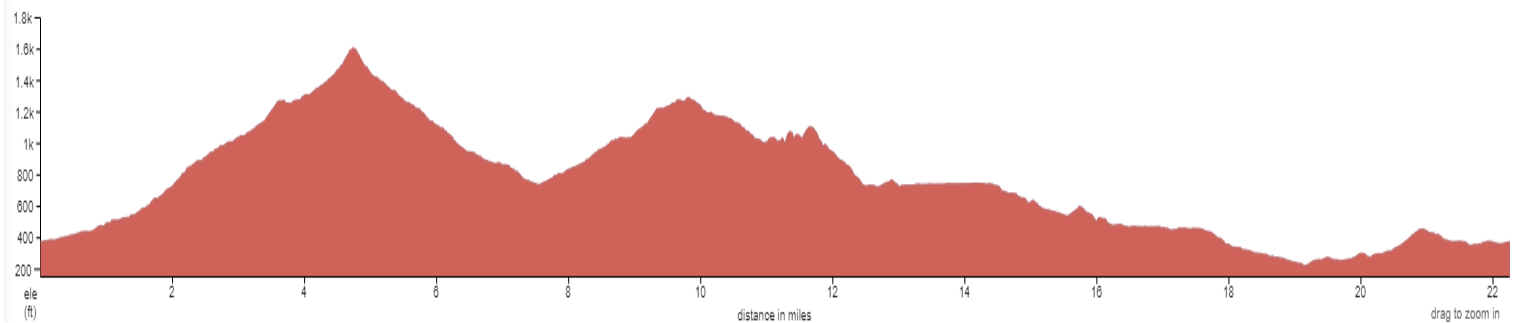
This event takes place in the hills east of Livermore.

The races start at 8am and finish about 1pm. The ham radio volunteers are there to provide emergency communications at planned stationary posts from 7am-1pm approx., there will be a radio check-in at 7:45am. The ham radio volunteer should be able to handle this assignment with a handheld.



Amateur Radio coordinator:  
George Moorehead, KG6GEM [kg6wiu1@comcast.net](mailto:kg6wiu1@comcast.net)

Sign Up online here:  
<https://www.signupgenius.com/go/10C0844AEAD28A6FA7-patterson1>



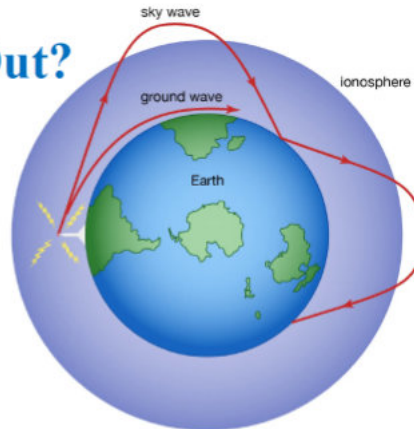
# Monthly LARK Presentation

## Am I Getting Out?

Reverse Beacons,  
Skimmers, and Other  
Tools to See How Well  
Your HF Station is Working

Gary Johnson, NA6O  
June 2023

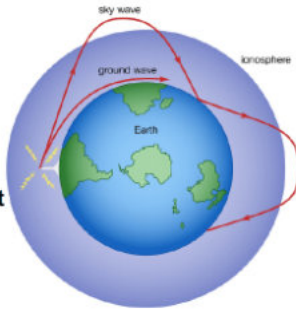
[HTTPS://na6o.com](https://na6o.com)



I've got my HF station on the air, but how do I know if I'm getting out or hearing well?

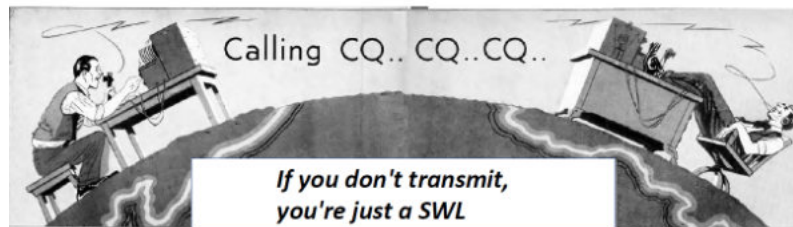
Here are some tools that can help:

- Beacons
- Reverse Beacon network
- DX Cluster spotting network
- PSK Reporter for digital modes
- WSPR for precision measurement



**Tip: Before doing all this technical stuff...**

**Turn on your radio and CALL CQ!!!**



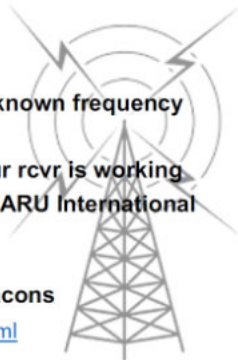
## Beacons

- A **beacon** transmits repeatedly, on a known frequency
- You tune around until you hear it
- Tells you if the band is open, and your rcvr is working
- In the HF bands, there is the NCDXF/IARU International Beacon Project

<https://www.ncdxf.org/beacon/>

- There are also many 6m and VHF beacons

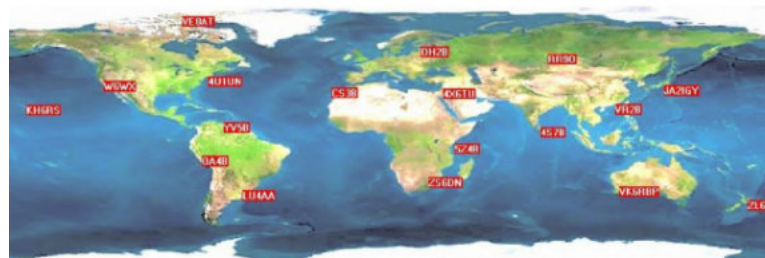
<https://www.newsvhf.com/beacons2.html>



## NCDXF has 18 stations worldwide



- Five frequencies: 14.100, 18.110, 21.150, 24.930, 28.200 MHz in a 3 minute cycle so that no two beacons transmit at the same time on the same frequency. Power steps: 100W, 10W, 1W, 0.1W



## Reverse Beacons listen for *your* signal

- Principle:
  - Hundreds of receivers, all over the world
  - Each receiver runs *skimmer* software to detect call signs
  - All detections are reported to a central server on the internet
- Viewers let you filter activity by call sign, band, etc.
- Works only on CW and RTTY
- Main website: <http://reversebeacon.net/>

## Background: What's is a *skimmer* system?

- Wideband SDR receiver(s) and antenna(s)
- Skimmer software digitizes and analyzes a wide bandwidth
- Detects a nearly unlimited number of signals
- Decodes each signal and extracts call signs
- Normally looks for **CQ** callsign or **TEST** callsign
- Each call sign and freq are posted to the reverse beacon net
- QSY by >500 Hz to get picked up again

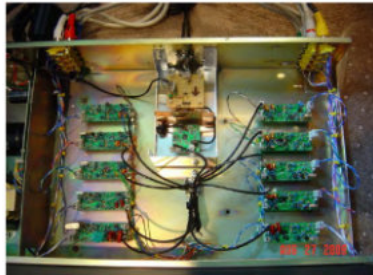


## Some guys put a lot of work into their multi-band skimmer systems

K3LR: 6 Perseus SDRs

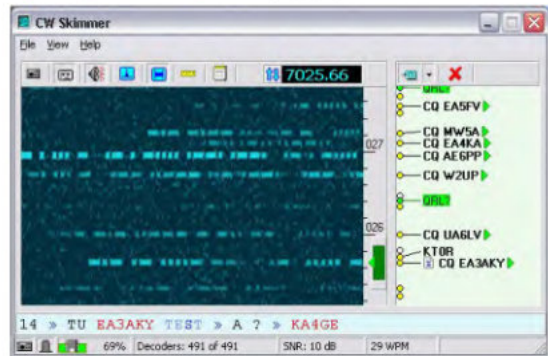


ACOC: Runs 10 SoftRock SDRs



## CW Skimmer in action

<http://www.dxatlas.com/cwskimmer/>



There is also a version for RTTY

## ReverseBeacon.net shows skimmer spots

callsign	apostid	distance mi	freq	mode	type	srr	snr	time	seen
DL1FTD	IN01	4756 mi	21746.6	200	03	5.81	27 up	1984z 17 Aug	48 m reverse-age
W4P7S	IN01	3402 mi	21746.7	200	03	7.80	27 up	1981z 17 Aug	48 m reverse-age
W4S1A	IN01	4158 mi	21746.7	200	03	6.80	27 up	1981z 17 Aug	51 m reverse-age
AD6G-ZE	IN01	1837 mi	21746.7	200	03	7.80	27 up	1981z 17 Aug	51 m reverse-age
DF3AK	IN01	4843 mi	21746.7	200	03	6.80	27 up	1981z 17 Aug	51 m reverse-age
VE7WWS	IN01	2302 mi	21746.7	200	03	12.80	27 up	1981z 17 Aug	51 m reverse-age
W4KSGA-1	IN01	488 mi	21746.7	200	03	17.80	27 up	1981z 17 Aug	51 m reverse-age
T4W	IN01	1200 mi	21746.7	200	03	19.80	27 up	1981z 17 Aug	51 m reverse-age

Just send CQ a few times, then look yourself up

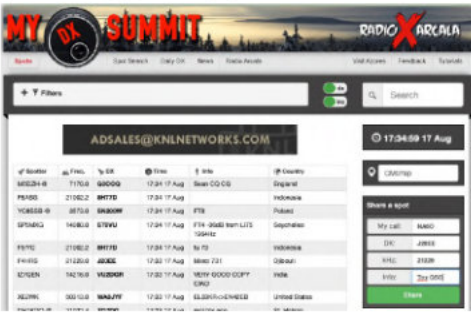
Enter your call here (blank to see everything)

SNR column tells you how strong your sig is

## DX Cluster aggregates manual and optionally automatic reports (spots)

- Also called *packet reporter*, because data was originally distributed by amateur packet radio. Now it's internet.
- Anyone can manually add a spot, with comments
  - Option: Include reverse beacon (skimmer) spots
- You connect to an aggregator node, and optionally filter what you want
- Read via websites like: [dxsummit.fi](http://dxsummit.fi) [dxwatch](http://dxwatch) [eHam](http://eHam)
- Also integrated into all logging software, and on some radio waterfall displays, e.g., FlexRadio

## Enter a manual spot via a web page or your logger application



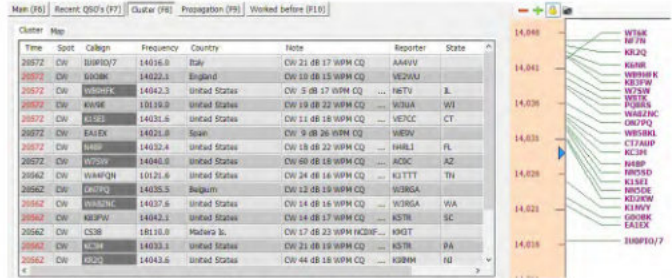
Manual spots help others see who is on the air

<http://dxsummit.fi>

Here you can also search for particular calls

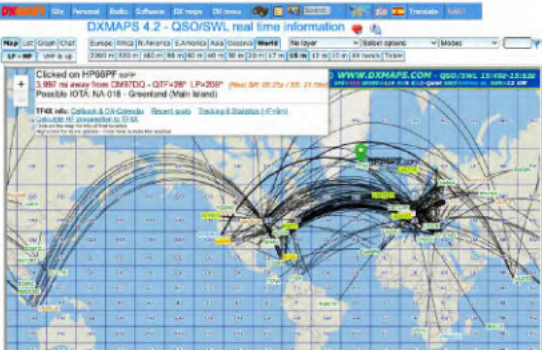
Comments optional (sometimes funny...)

## Cluster interface in Log4OM Logger



All spots are clickable for instant QSY, in the list and band map

## DXmaps.com displays data from the clusters on maps



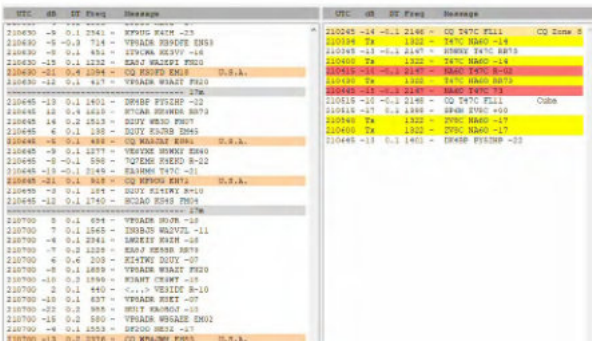
Due to large increase in FT8 activity, this map is not nearly as busy as it used to be, except during contests.

## PSKReporter.info maps data from all digital modes

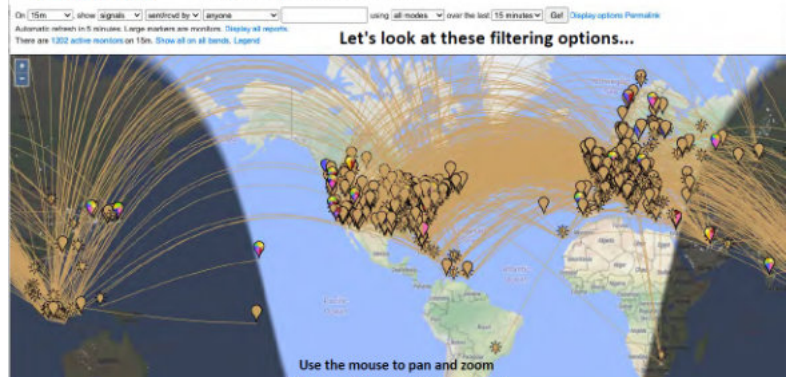
- Especially from WSJT-X, the software for operating FT8, FT4, JT65, and many other modern digital modes
- Every CQ signal you decode can be reported automatically
- Multiply this by the thousands of users worldwide!
- Accumulates hundreds of spots per second

Probably the best overall resource for judging propagation on any band

## WSJT-X interface... lots of decoded signals. All CQs get reported (uploaded)

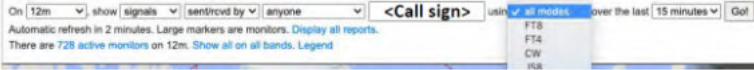


## PSKReporter Can you say, "Too much data?"



Total reports: over 1 Million per hour!

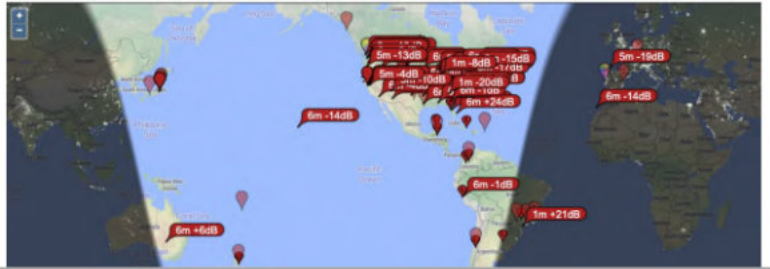
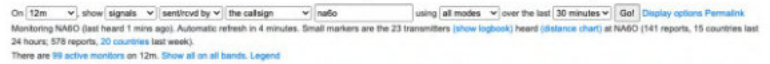
## PSKRporter has many programmable filters



- One band at a time (4000m thru UHF) or all bands
- Look for a particular call sign:
  - See how *you* are getting out... Call CQ and watch it light up
  - Useful when stalking a special DX
- Look for "anyone" to see all activity
- Filter by mode, or just accept all modes
- Limit to just the past 15 min, or look back up to 24 hours

## Filtering to detect only NA60, on 12m

That's much better... Just SNR reports, and relative time of last report



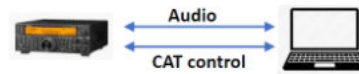
## WSPR: Weak Signal Propagation Reporter

- Uses very low-power transmitters sending very slow, narrow-bandwidth digital codes => Great sensitivity
  - 2 min per transmission, sends call sign and grid locator
- Excels at being receivable "below the noise floor"
- Not a communications mode; only for beacons
- Totally automatic, usually runs unattended
- Results appear in real-time on the internet

Good for testing and comparing antennas and stations, checking propagation over longer periods

## Two WSPR station options

- 1) Transceiver and PC running WSJT-X
  - Allows you to monitor or transmit



- 2) Transmit "device", connected to an antenna
  - Once configured, no computer needed

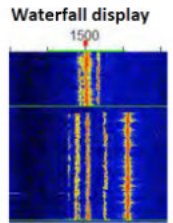


WSPRlite from SOTABeams

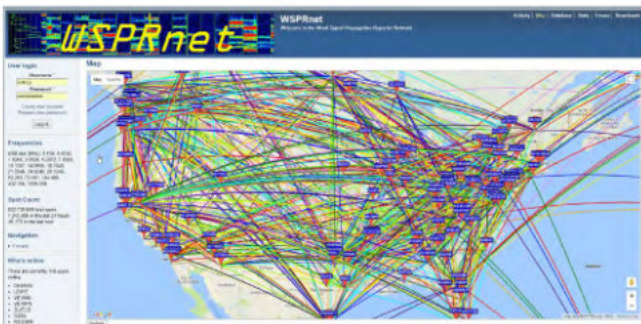


WSPR Desktop from ZachTek \$139

...or homebrew from Raspberry Pi



## WSPRnet.org aggregates data from many receivers for analysis



## Summary: There are many tools to see if you're getting out...

...And they also tell you something about propagation

- PSKReporter is my favorite overview, and also tells me how I'm doing on digital modes
- Reverse Beacons find me on CW and RTTY
- DXSummit is great when searching for a special call sign

If nothing else, turn on your rig and **CALL CQ!**



# The Ultimate Portable QRP Antenna. Rob K6KM

*“Life is the pursuit of the Nirvana Antenna”*

Again, on the subject of inconspicuous portable activations, where there’s not enough room to operate, too many people around or local restrictions, this effort tries to build on the previous loaded whip antenna work. This time, the approach is to locate the antenna right at the rig (no tripod).

Elecraft has solved this issue with their AX1 and AX2 antennas by selling a bipod that holds the whip in place. Notice that the rig has to be tilted for the bipod to work and also that it has to be stationary



(no lap operation), as the whip will tend to rotate at the BNC connection. These whips are sold single band. A single whip can be interchanged with coils.

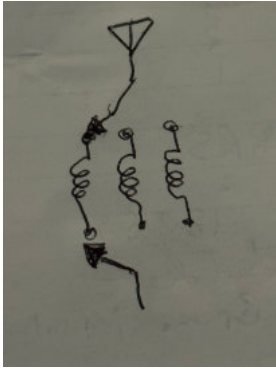
Dave K3GX built some nice 3D printed enclosures for the loading inductor of the previous project and he gifted me with two.

The initial idea was to build individual 15m and 20m with BNC connectors, similar to the Elecraft solution. My radiator is a buddipole featherweight 6ft long when extended. Longer than the Elecraft for better efficiency.

Adam K6ARK challenged me: why not putting a switch and have several bands? Initially I rejected the idea since it is well known that the unused part of the inductor will still create recirculating currents adding to losses. Remember that the inductor, which is located right at the feedpoint will see the largest current, thus highest losses.

After the initial denial period, my mind started to process how to implement a multi-band loaded whip and still have reasonable losses. Remember: Never challenge a Contester...

I asked Gary NA6O if he had a micro



switch double pole as I wanted to completely disconnect an inductor before connecting another one. One inductor at a time. He did not, but he had a tiny single pole 10 position micro rotary switch. He

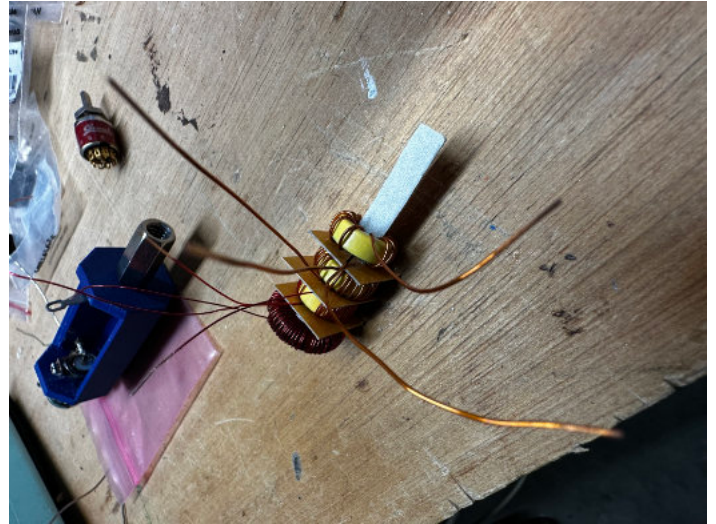
assured me that there would be no problem with single pole and that mutual inductance inside the small compartment would not be an issue either.

Then my project deviated to a 10m/15m/20m loaded whip with BNC connector.

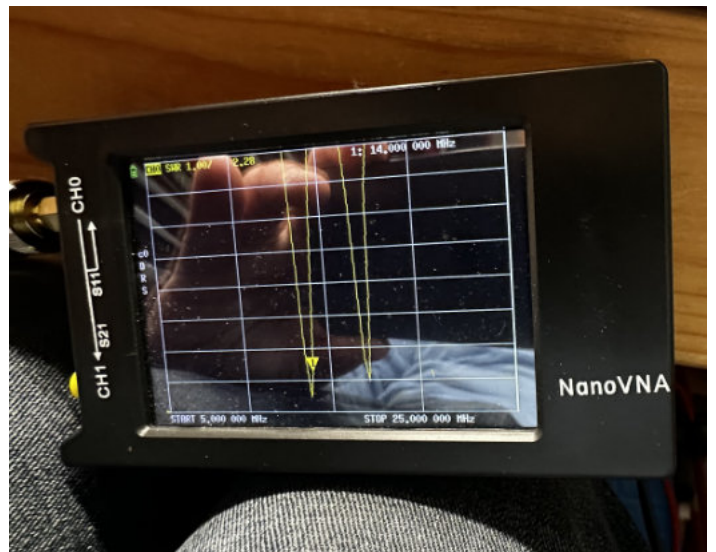
I built the inductors based on a 6ft whip and stacked them butting against each other. There was a bit of room left in the enclosure. I measured the SWR profiles and they looked good as per design. Then Gary asked me, oh, why not 40m? Here we go again.

Now the project became a 10m/15m/20m/40m loaded whip with BNC connector.

I fitted the stack in the enclosure with the micro rotary switch, the BNC and a 2mm female banana plug sticking out for counterpoise connection.



I set to measure the SWR again and oh, surprise! I have a double resonance on 20m.



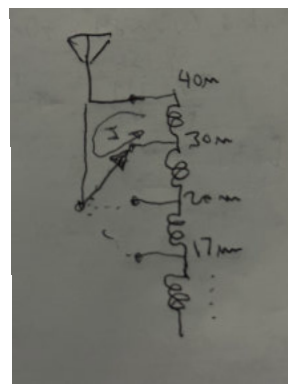
After spending several days theorizing and troubleshooting, the culprit was capacitive coupling in the micro rotary switch connection. The inductor for 40m is very large and a small stray capacitance of 1pF is enough to create another resonance. At this point I started regretting adding 40m to the project, but a contester never gives up.

I spent the next few days studying about the second part of this project, the counterpoise.

Verticals on ground need a very good ground plane to operate efficiently. This

means lots of radials at quarter wave length. Elevated radials are more effective since the earth would absorb less of the energy radiated, so usually you can get by with fewer elevated radials. In my case, I was to use a single radial, also called a counterpoise. A single counterpoise skews the radiation pattern of the antenna in its direction. The gain is not very significant but the losses are higher, particularly when the counterpoise is touching, or very close to ground (less than 4ft).

At this point, I started worrying less about recirculating currents in the loading inductor. This seemed to be a drop in the bucket compared to all the overall losses the system will see with a single counterpoise and in a real portable operating situation. A single inductor would kill my stray capacitance.



Then, if I were to build a single core inductor with taps, why not do it for all bands 10m to 40m?

**Now my project became a 10m/12m/15m/17m/20m/30m/40m loaded whip with BNC connector.**

Initially I built the inductor straight out of the calculator using taps for the different bands. My idea was, I can always adjust the taps by scratching enamel and soldering a different tab.

When I measured the resonances, they





were all over the place and the inductor is so small and compact that tapping another winding is almost impossible. Also, the first band is 10m which has the fewest number of turns. A one turn error here skews all the following bands.

Quickly I realized that I had a very tedious and repetitive task ahead. Build the inductor one band at a time.

Start with 10m, go to the front yard where the house has less of an effect on the SWR measurement. Measure. Go back to the garage and add/remove a turn, go back to the front yard, build the measurement system, rinse and repeat.



That for every single band.

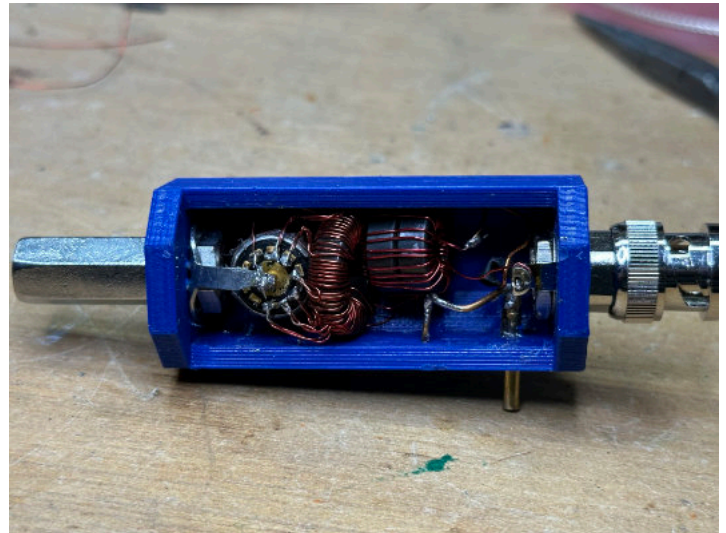
It took me three days of working and catching up with life, but at the end I had a solid system working 10m to 40m.

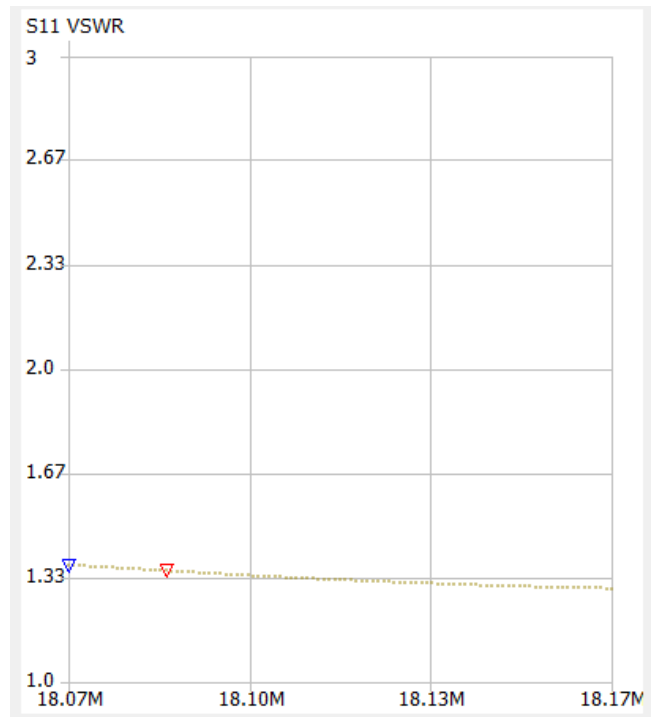
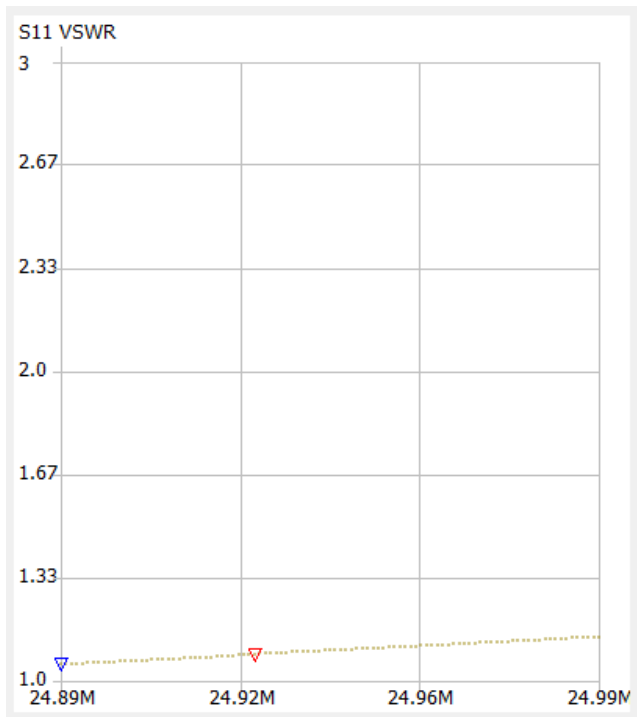
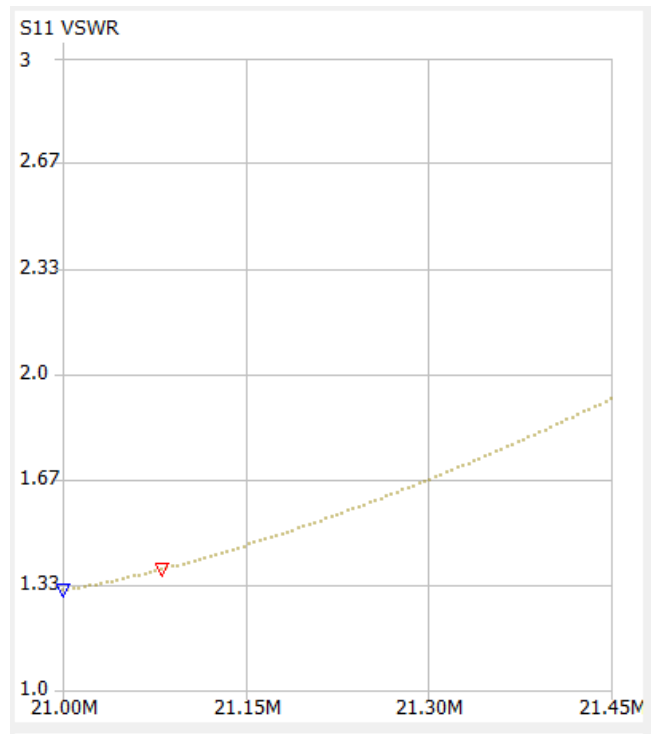
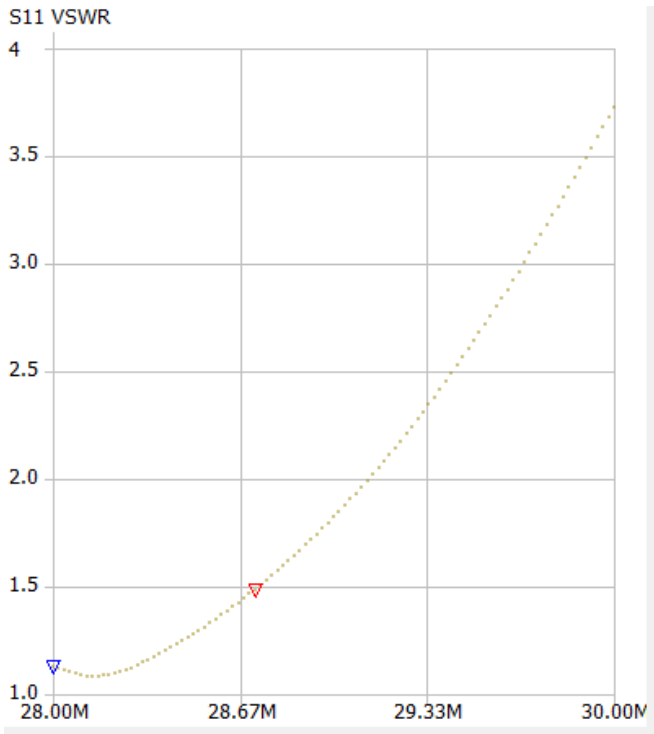
Next day, I wanted to connect the laptop to the VNA and record the SWR plots per band. To my surprise (or not), the plots differed wildly. The resonance shifted and in some cases split in two. The laptop now became part of the antenna system. This is normal for a very non-symmetrical antenna such as a vertical. I connected a bulky common mode choke between the feedline and the VNA. The problem went away.

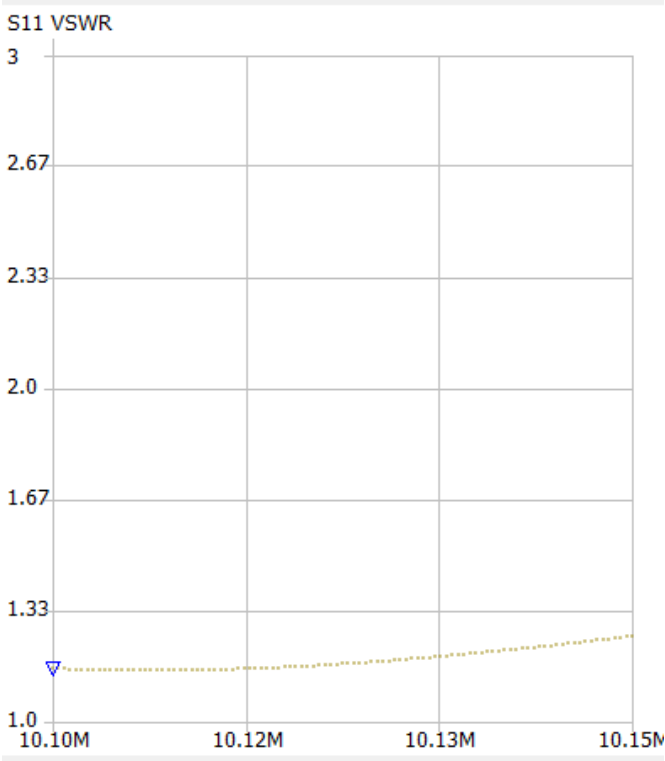
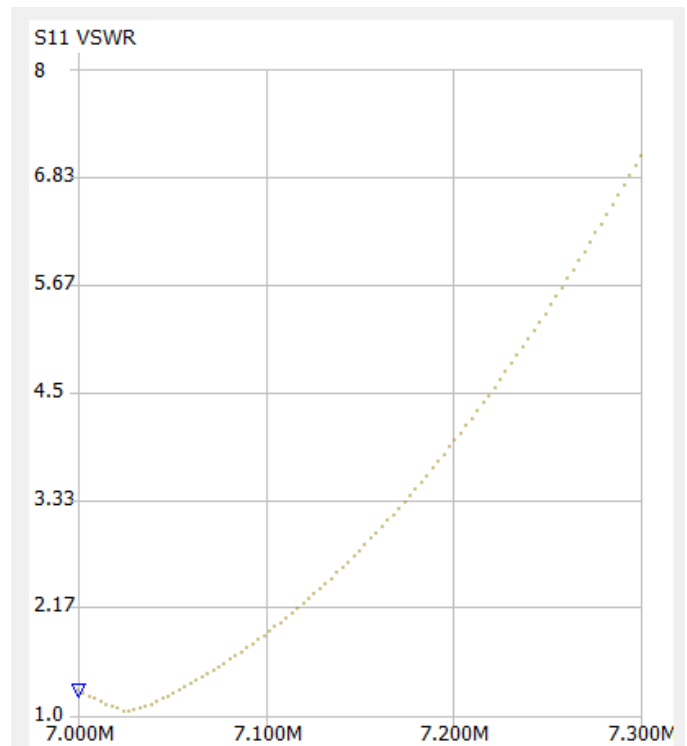
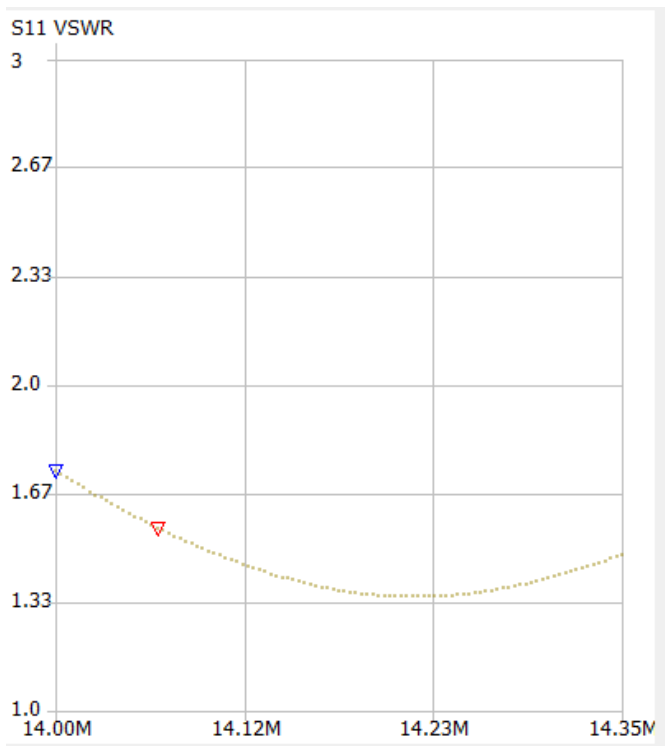
Now that I only had one large inductor in the enclosure, I had enough space to add a double stacked 43 material core, 12 turns. 28AWG magnet wire, common mode feedline choke.

I tested the rejection using the Nano-VNA and it was better than -30dB across the band.

Now I could make the measurements undisturbed and record them.







### The Counterpoise:

I wanted a single counterpoise for all bands so I could adjust length to resonance per band.

My initial thought was a reel. After a few experiments and K3GX printing me one,



I chose to use a chalk line reel.

I had one in an aluminum enclosure, very light. Not the smallest one you can have but the first days of operation proved that aluminum will resist more the perils of dropping it on rocks.

I used an orange AWG26 stranded cable that I had.

### The Marking from Hell.

Initially I used a permanent marker to indicate the quarter wavelength for all bands. The ink disappeared on my fingers, did not stick.

I used oil paint. It cracked and peeled off.

I used heat shrink tubing. It slid.

Many people suggested nail polish. At first it seemed to work. Once rolled in and rolled out, markings were gone.

A few days of trying and we looked at the cable specifications with Gary. and surprise! It was Teflon. I guess they use Teflon on cooking ware so food wouldn't stick to it, right?

Solution: use a PVC jacket cable instead of Teflon. I switched and permanent marking stuck with no sweat. First roll in/ roll out and the cable tangled inside the reel. Disaster. Teflon was really slippery.

Back to Teflon. I removed the felt that comes at the opening of the reel to remove the chalk from the line. With the opening slightly larger now I could do simple tiny knots for the



markings and they would be small enough to reel in/out.

Counterpoise was done.

### The Maiden Voyage.

It was time to take the new antenna for a real life experience. I chose a nearby SOTA peak that I had not done yet (Mount Allison). Went early to beat the crowds and make the long hike up more bearable. I have done it in the past at 100F and it's not very pleasant.

Once at the peak, I set up on an



Eastern looking slope with the counterpoise running to the South. I started on 40m so I could just shorten the counterpoise as I was progressing towards 10m.

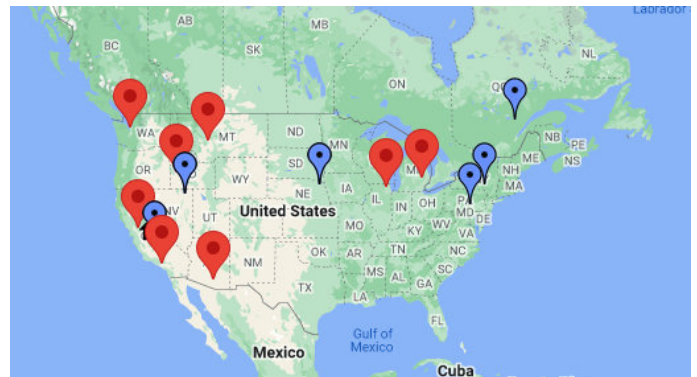
The first contact was with Josh WU7H who called me from a peak.

Overall I had 17 QSOs, 4 of them Summit-to-Summit. One with an activator in New Hampshire.

No RBN's or contacts on 10m nor 12m. I was told the bands were not very hot that day.

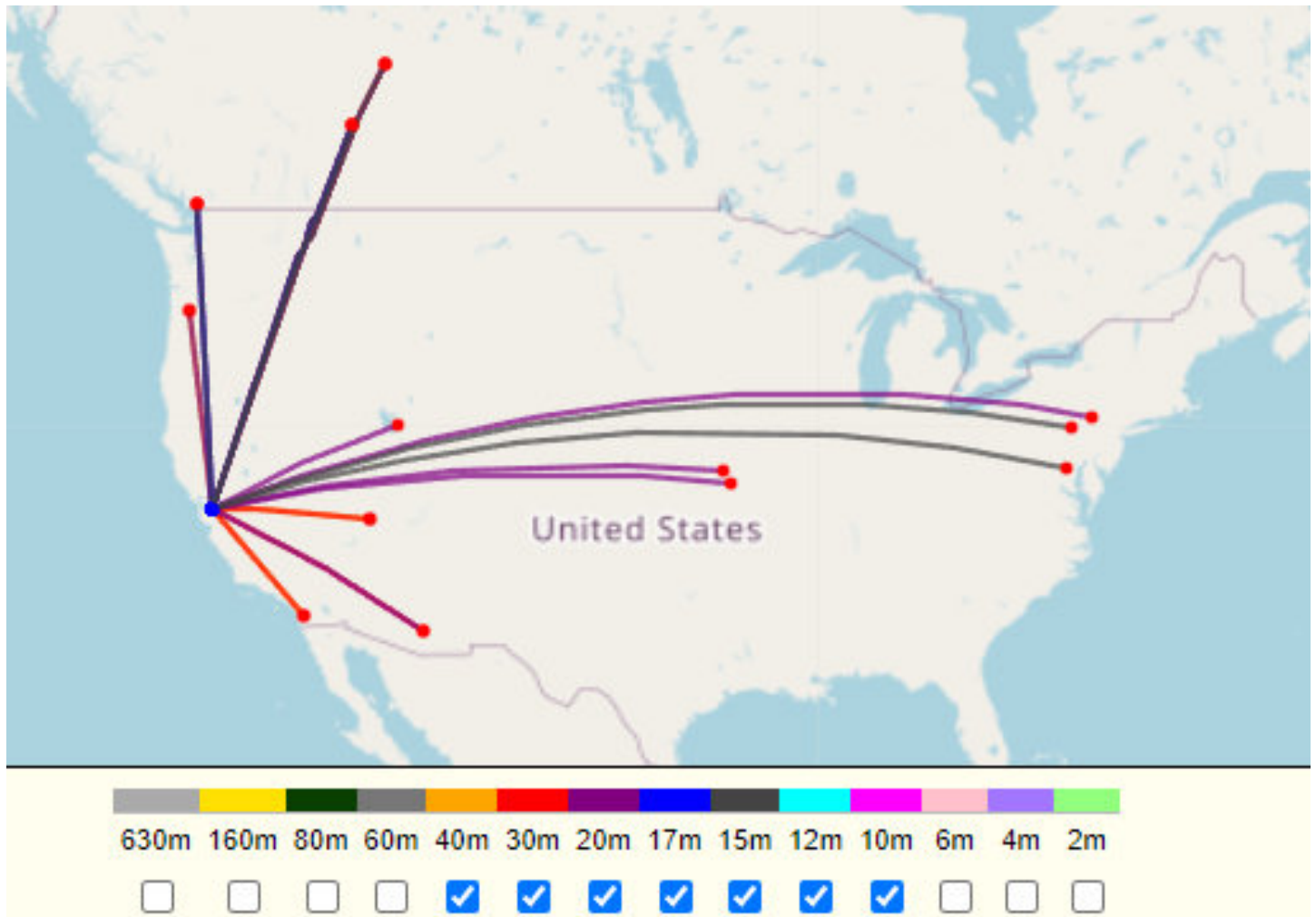
Here is the RBN from the overall activation (one hour).

And here is the map of the QSOs made.



### Changing Bands Procedure.

The Elecraft KX2 has four button memories that can be programmed



with your menu choice. I programmed PF3 with ATU bypass.

If you want to change bands:

- 1) Press PF3 to put the ATU in bypass
- 2) Switch the loaded whip to the desired band.
- 3) Switch the KX2 to the same band.
- 4) Press TUNE to measure SWR.
- 5) Adjust counterpoise as needed
- 6) Press TUNE again. If SWR decreases continue adjusting the counterpoise in the same direction and measuring until

you reach under 2:1.

7) When done, press PF3 again to turn on the ATU

8) Press ATU to perform a tuning.

9) Ready to operate.

### Project is not done yet.

One of the annoying things about BNC antenna support is that they tend to rotate. The connectors are built that way and they were not meant to act as support. Not good for a long whip exerting strain on the KX2 connector nor to keep it vertically steady. Remember,



the Elecraft solution with bipod was for a table top operation and rig tilted. The bipod removes some of the strain off the KX2 BNC.

Once at home I started scratching my head to find a solution to replicate the bipod. Nothing looked promising. I tried different things but the antenna was still very wobbly.

As you might experience in your life, sometimes you have to sleep on it. Next morning I had an epiphany. I don't need to support it out of the rig, I can build a fix support inside my case. It does have a few screw holes to allow installing accessories. I built an acrylic platform that screws on two sides, lining vertically across the box. Slipped a foam on the back to maintain rigidity and avoid flexing (acrylic is very brittle, don't ask me how I know).

I did not mention that I built this, three times. The first two times the acrylic cracked right at the last drilled hole.

Of course the BNC needed to be higher in order not to touch the base of the box, so I had to implement a small platform in plastic to hold the BNC and solder a thin coax to a BNC that mounts to the KX2.

The new BNC in the BOX becomes now the receptacle for anything I want to connect to the rig. It can be the loaded whip, one of the tiny K6ARK Ununs for end feds, a feedline, etc. No more stresses on the rig's connector (connector saver).

The whip will not rotate but there's still a bit of wobbling due to the nature of the BNC. It's tolerable though. I will

see in the future if I can come up with a sleeve that holds the two BNC's together.

### Conclusion.

The antenna performs as expected. Of course, it's a very compromised solution. If I had the space I would deploy a dipole, an end fed, an elevated loaded whip with counterpoise and lastly this solution.



Overall weight: 10oz.

I'm sure this antenna will come handy more than once in my future activations..

K6KM Rob

# July 2023

<u>Monday</u>	<u>Tuesday</u>	<u>Wednesday</u>	<u>Thursday</u>	<u>Friday</u>	<u>Saturday</u>	<u>Sunday</u>
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15 <i><u>LARK Meeting</u></i>	16
17	18	19 <i>Ham Breakfast</i>	20	21	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

July

August

September

DAY	OP	NAME
3	AE6D	Ed
10	EOC	
17	AD6KV	Ron
24	WB6ETY	John
31	N6FQQ	Clancy

DAY	OP	NAME
7	AD6KV	Ron
14	EOC	
21	AE6D	Ed
28	WB6ETY	John

DAY	OP	NAME
4	WB6AEA	Jon
11	EOC	
18	N6FQQ	Clancy
25	AD6KV	Ron

EVERYONE is invited to check in to the net. Please contact AE6D [ae6d@sbcglobal.net](mailto: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

Date	Weekday	Primary Net Control	Backup Net Control	Topic
7/6/2023	Thursday	Peter/AI6RG	Noah/N6TW	Advanced Tech Discussion
7/13/2023	Thursday	Brian/KA6ZED	Peter/AI6RG	New Comer, General Discussion:
7/20/2023	Thursday	Nate/N8MOR	Brian/KA6ZED	Study Night: General Exam
7/27/2023	Thursday	Rich/KN6HSR	Nate/N8MOR	Easy Tech Discussion:
8/3/2023	Thursday	David/K6WOO	Rich/KN6HSR	General Discussion:
8/10/2023	Thursday	Bill/AJ6UU	David/K6WOO	Advanced Tech Discussion
8/17/2023	Thursday	Noah/N6TW	Bill/AJ6UU	New Comer, General Discussion:
8/24/2023	Thursday	Peter/AI6RG	Noah/N6TW	Study Night: General Exam
8/31/2023	Thursday	Brian/KA6ZED	Peter/AI6RG	Easy Tech Discussion:
9/7/2023	Thursday	Nate/N8MOR	Brian/KA6ZED	General Discussion
9/14/2023	Thursday	Rich/KN6HSR	Nate/N8MOR	Advanced Tech Discussion
9/21/2023	Thursday	David/K6WOO	Rich/KN6HSR	New Comer, General Discussion:
9/28/2023	Thursday	Bill/AJ6UU	David/K6WOO	Study Night: General Exam

## 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 2023

**LARK—LIVERMORE AMATEUR RADIO KLUB P.O. BOX 3190,  
LIVERMORE, CA 94550-3190. Web: <http://www.livermoreARK.org>.  
E-mail list: [livermoreark@groups.io](mailto: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	
Ask the Elmer	Lee Zalaznik	KI6OY	Lee.zalaznik@sbcglobal.net	(925)-699-5998



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](mailto:thein@lpfire.org) or (925) 454 -2317 [https://community.fema.gov/Register/Register\\_Program\\_View?id=a0xt000000mAuZAAE](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. <a href="http://www.livermoreark.org/">http://www.livermoreark.org/</a> 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	
ARRL MEMBER	
ANNUAL DUES # _____ PRIMARY (\$20.00) ADDITIONAL MEMBERS # _____ (\$2.00 each)	
TOTAL: \$ _____ MAKE CHECKS PAYABLE TO: LARK. Thank You.	
<p><b>Membership is \$20.00. per calendar year starting on Jan 1 through Dec. 31.</b> 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: <a href="mailto:membership@livermoreark.org">membership@livermoreark.org</a> 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: <a href="http://livermoreark.org/membership/membership.html">http://livermoreark.org/membership/membership.html</a>.</p> <p><b>Thank you and welcome aboard from LARK and the Membership Team.</b></p>	