LARK NEWS November 2024

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

VENUE: City of Livermore Meeting Hall

1016 S. Livermore Ave., Livermore CA 94550

Available live via zoom by invitation only. Visitors Welcome

Editor: Gregory Kiyoi KN6RUQ

Picture by Noah N6TW

Photo by Sri KN6INK

Photo by Roger KK6RD of Clancy N6FQQ

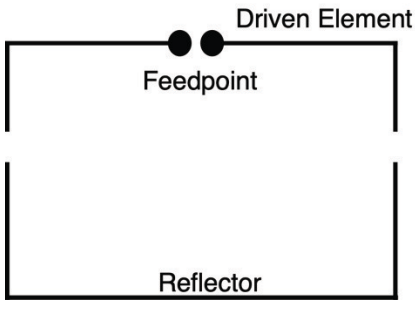

Diagram by Gary, NA6O

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Presidents Message

I want to thank **Noah N6TW** 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 the meeting.

I wanted to let you know that the Events Chairperson (me) is following the upcoming events for 2024, and I have an update: The following events will be happening:

We have completed all the scheduled and planned events for 2024. I am in planning mode and getting ready for the 2025 volunteer season for events. There will be signups coming out shortly for next year.

As more events are confirmed you will be kept advised. Make sure to sign up on the LARK website for these events for which LARK supports.

I wanted to say thanks to all of the volunteers that supported the LARK booth and Swap Meet at Pacificon, your help was greatly appreciated.

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 AE6D** 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 (kg6wiu1@comcast.net)

Notes from the Editor

Great Shakeout
The City of Livermore manager, Herbert Cole runs a full annual exercise. All his staff and other city roles were included. Livermore-Pleasanton CERT were also invited. Normally the LPCERT team create incident reports. This helps to stress test the EOC. The exercise ran from 7:30-16:00.

This year the city added LPCERT Amateur Radio operators. It included deploying the cities Yaesu FT-991a radio equipment.

They have 2 VHF/UHF antennas and GHz antenna in the "radio room" at the EOC. This is in the same building we have our club meetings.

The MSEL had specific Amateur Radio activities. Herbert invited his team to visit the radio room and see the equipment. We had a lot of physical traffic and a lot of interest in how to get licensed.

LPCERT HAMs were **Greg KN6RUQ, Dave K06EYV, David K6WOO, Bob W6RRO,** and **Bill AJ6UU.**

Zombie Shuffle
A unique on-the-air activity exclusively for QRP Zombies! Why Zombie Shuffle? Because Zombies do not sprint. This is a QRP (5w) CW event on October 25th that starts at 15:00 local time. For more details see - https://www.zianet.com/qrp/ZOMBIE/pg.html

Pacificon
Hope you were able to attend Pacificon this year.

The Antenna seminar had many new presenters covering interesting topics. These included:
- Mitigating Fading at the Antenna, **Bruce K6BP**
- End Fed Antenna, **Ward N0AX**
- Focus on Antennas for Limited (Space, Time, Budget), **Tom N6BT**
- The Best Shape for a Wire Antenna, **Steve K6OIK**
- A Novel UHF Circular Polarization Antenna, **Carlo KJ4EGU**
- Evaluating Ferrite Core Antenna Transformer Efficiency, **Dan AI6XG**

The forums had many good topics that included:
- Easy Portable Satellite Operation, **Jim WU0I** - https://www.deloach.net/Satellite
- Basic/Advanced Winlink, **John K9ONR**
- Multi-County Coastal Region Communications Exercise, **Greg KJ6OUI** and **Dan KJ6KEU**

Parachute mobile was there allowing QSO's with different jumpers. **Brian KA6ZED's** Fox hunt booth always had a long line.

Thank you to all that send articles, pictures, and other content.

Please keep sending them to me.

Gregory KN6RUQ

Community Activities

We NEED You!
Sign Up NOW

All 2024 events have been completed. Thank you!

New 2025 events will be posted soon.

Antenna of the Month

Moxon by **Gary, NA6O**

Given a chance, most hams would prefer to have a Yagi up on a tower for as many bands as possible. It's horizontally polarized, has good forward gain and rejects signals off the back and sides... A great combination. But sometimes there is an issue of space because the elements can be quite long. Fortunately a fellow named **Les Moxon G6XN** (SK) a British ham, came up with a simple way to shrink a conventional 2-element Yagi to about 70% of original length without compromising performance. In fact, it's front-to-back ratio is actually superior.

The basic outline of a Moxon rectangle antenna appears in Fig. 1. It's really just a two-element Yagi with the element tips bent at 90 degrees. In fact, the total lengths are the same: A half wavelength for the driven element, and about 5% longer for the reflector. The trick is that the bend locations and the gaps between the elements have to be optimized to give you the best front-to-back ratio, gain, and a good 50-ohm match. In fact, the dimensions are fairly critical if you want peak performance.

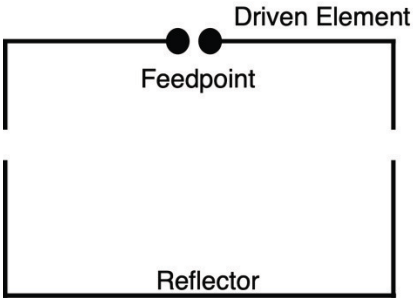

Figure 1. Basic layout of the Moxon rectangular antenna

Like many antenna designs, this one is evolutionary. The last great contribution was by **L. B. Cebik W4RNL** (SK) who studied it in depth and came up with a set of equations that provide those important optimized dimensions [Ref. 1]. And to make life really easy for us all, Dan Maguire AC6LA as written a dedicated application (Moxon Rectangle Generator, Fig. 2) that gives you the magic numbers [Ref.2]. You simply supply the frequency and the size of the wire or tubing. What could be easier? His program even supplies an output for simulators including EZNEC in case you want to explore further. I should also mention that the bent-element concept has been further adapted and morphed into many other designs including the popular Spiderbeam and Hexbeam. Good ideas do seem to propagate.

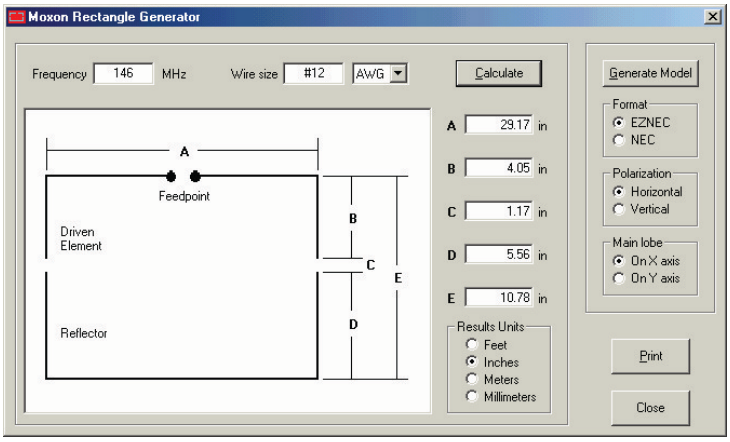

Figure 2. Screenshot of the Moxon Rectangle Generator (courtesy AC6LA).

Construction

You can build a Moxon from either wire or tubing but most designs are based on wire supported by lightweight fiberglass spreaders in an X-shaped configuration. Look up Moxon construction on the web and you'll find many practical examples. An interesting adaption for 40 m was designed by Dave Leeson N6NL who modified a Hy-Gain XM240 2-element Yagi to achieve superior pattern and greater bandwidth in the same compact footprint. This has been very popular and is easy to build [Ref. 3].

Performance

Compared to a regular 2-element Yagi, an equivalent Moxon will yield a forward gain only a fraction of a dB less. But it's distinct lack of rear lobes is remarkable, reliably down 20 dB versus only 10-12 dB for the most common Yagi designs. It achieves this in a manner similar to a loop-fed array (LFA) Yagi via the added coupling provided by the end wires. Those perpendicular wires give the designer an extra degree of freedom when optimizing the pattern. Results are shown in Cebik's report. Also, the Moxon has excellent bandwidth in terms of SWR–much better than Yagis shortened with coils.

Conclusion

The Moxon rectangle is really a win-win design and its popularity including its many derivatives is well deserved.

References

1. L. B. Cebik, W4RNL (SK), Designing Moxon Rectangles by Equation and by Model. http://on5au.be/content/a10/moxon/moxgen.html

2. Moxon Rectangle Generator application by AC6LA. https://ac6la.com/moxgen1.html

3. W6NL Moxon on a Cushcraft XM240. http://www.k3lr.com/engineering/moxon/W6NL_Moxon104.pdf

Next Month: Measuring Ground

Everyone should explore **EZNEC** a free and very powerful program, available from https://www.eznec.com/ and discussed in the ARRL *Antenna Handbook* among other places.

The Great California Shakeout

Nate Moore, N8MOR

This year's International ShakeOut Day was October 17, when millions of people worldwide will participate in earthquake drills at work, school, or home.

At 10:17 am Pacific time on 10/17, Livermore Amateur Radio Klub activated our Earthquake net, confirming repeater function testing as well as ensuring we have a viable communication path to The community.

This followed our ARES/Monday net approach, and confirmed that we have the ability to respond to crises in the area.

The following individuals participated with a special thanks to **Brian KM6EMU** for running the net.

Call Sign	Name	Location	Power	Traffic	Report
KM6EMU	Brian	Pleasanton	DC	Y	10:17 Open Net
KO6FAE	Bill	Livermore	DC		
N8MOR	Nate	Redwood Shores	AC		
KG6GEM	George	Discovery Bay	AC		
AD6KV	Ron	Livermore	AC		
KG6WIR	David	Livermore	DC		
K6WOO	David	Pleasanton	DC	Y	10:23 Pleasanton - Power Out, PG&E Notified
AJ6UU	Bill	Pleasanton	DC	Y	10:24 Pleasanton – Minor Damage

For the 3rd year in a row, LARK was the only amateur radio organization participating in the entire county.

Our certificate of participation from OES follows.

Pacificon Booth and Swap Meet

George Moorehead, KG6GEM

This is a thank you for the LARK volunteers who help support the Swap Meet on Sunday morning and the LARK Booth on Saturday and Sunday. The volunteers for the **LARK Booth** were: **Julian WB6BDD, Peter AI6RG, Tony KF6JS, John WX6G, Clancy N6FQQ, and John KI6MD**.

The volunteers for the **Swap Meet** were **Roger KK6RD, Steve AG6QX, Noah N6TW, Nate N8MOR and Brian KA6ZED**. I want to give a special shoutout to **Nate, Noah, and Brian** for coming extra early to help with the Swap Meet.

With out these volunteers we would not have been able to complete the events as needed and requested, your help is greatly appreciated.

George KG6GEM
Swap Meet and Booth Coordinator

Lark Cave Rich KN6HSR, , Photo by Roger KK6RD

Clancy N6FQQ and New Ham at LARK booth, photo by Roger KK6RD

Brian KA6ZED and Tony AB6BR, Photo by Roger KK6RD

Swap Meet Check-In, Photo by Roger KK6RD

Cycle of Hope Bike Event

George Moorehead, KG6GEM

WHAT IS CYCLE OF HOPE?

Habitat for Humanity is a movement to build a world where everyone has a decent place to live. Cycle of Hope takes "movement" literally – by getting our community moving for a mission.

Habitat is built on community and to increase access to homeownership and housing opportunities, we need our community. When you ride Cycle of Hope, you are that community.

In-person or virtual, one kilometer or 50, you are building a more just, equitable, sustainable, and vibrant Bay Area. With every mile traveled and every dollar fundraised, you are helping Habitat build more in Santa Clara, Alameda, and Contra Costa Counties. You are building with Habitat families as they lay a firm foundation for the future. And, you are building with other Habitat supporters, bonded by purpose.

The Day of the Event: October 20th

There was a need for radio volunteers for this event that starts and finishes in Dublin. The support needed is for SAGs and Stationary Posts and we needed about 20 volunteers, however we did have enough volunteers to cover all Stationary, SAGs, and Sweep assignments.

The weather was cool in the morning hours with a slow warming. The hours for volunteering are from 7am to 3pm.

Thank you **Bill AJ6UU** for supplying the equipment for Net Control which gave us the opportunity to follow the LARK and personal APRS units for this event.

SAGs were assigned APRS for tracking for all three routes. There were about 500+ bike riders who rode on all the courses.

Net Control was fully supported by LARK radio operators and Comm Reserves. Hours of operations was from 0645 hrs. to 1500 hrs. approximately.

George KG6GEM, Bill AJ6UU, Larry KI6LNB, photo by Sri KN6INK

Adrian AK6FR and Joe K6ROM, photo by Joe K6ROM

Del Valle lunch stop, photo by Alan KM6BRQ

We want to the thank the following volunteers: **Bill AJ6UU**, **Mark KM6XU**, **Mark KK6UKU**, **Kim N6LVQ**, **David K6WOO**, **Alan KM6BRQ**, **Edward KN6MBF**, **Brian N6BRB**, **Joe K6ROM**, **John W6JMK**, **David KG6WIR**, **Adrian AK6FR**, **Sri N6INK**, **Medha KO6EYX**, **Allen AK6FB**, and **Larry KI6LNB**.

Radio Volunteer Coordinator was **George KG6GEM**

Training Class

New General Licensing Class - October 31, 2024

A free, weekly, live, Amateur Radio General Class Licensing course on Zoom.

They will begin on **Thursday, October 31st**, and will run through **Thursday, January 9th**. (No class on Thanksgiving and Dec 26.)

They are **three-hour** sessions will start at **6:30 PM Eastern Time**.

These are the classes that we have been holding for years sponsored by the **Amateur Radio Club of the National Electronics Museum**.

Prerequisite is to have or be studying for the Technician Class License. Please publicize this with anyone you know that you think would be interested.

Those wishing to sign up should email Roland Anders, K3RA, at roland.anders@comcast.net.

Swap n' Shop Cave

Looking for a new Shop Keeper!

Big thank you to **Rich KN6HSR** that has done an amazing job with the Swap n' Shop Cave.

He has brought a lot of great equipment and deals to LARK members. Also has provided a revenue stream to the LARK coffers!

He is going to retire so this means a new volunteer is needed. If you have a little garage space you can help fill this role.

For details please contact **Rich KN6HSR** or **George KG6GEM**.

November Calendar

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
				1	2	3
4 Net	5	6 10-10 Net HH Net	7 Tech Net	8	9	10
11 Net	12	13 10-10 Net HH Net	14 Tech Net	15	16 *LARK Meeting*	17
18 Net	19	20 10-10 Net HH Net	21 Tech Net	22	23	24
25 Net	26	27 10-10 Net HH Net	28 No Tech Net	29	30	

LARK MONDAY NIGHT NET

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

October

Date	Net Control
10/7/2024	Ed / AE6D
10/14/2024	EOC
10/21/2024	John / WB6ETY
10/28/2024	Jon / WB6AEA

November

Date	Net Control
11/4/2024	Ron / AD6KV
11/11/2024	EOC
11/18/2024	Ed / AE6D
11/25/2024	John / WB6ETY

December

Date	Net Control
12/2/2024	Jon / WB6AEA
12/9/2024	EOC
12/16/2024	Ron / AD6KV
12/23/2024	Ed / AE6D
12/30/2024	John / WB6ETY

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

Date	Primary Net Control	Backup Net Control
10/3/2024	Noah / N6TW	Bill / AJ6UU
10/10/2024	Nate / N8MOR	Noah / N6TW
10/17/2024	Brian / KA6ZED	Peter / AI6RG
10/24/2024	Nate / N8MOR	Brian / KA6ZED
10/31/2024	Rich / KN6HSR	Nate / N8MOR
11/7/2024	David / K6WOO	Rich / KN6HSR
11/14/2024	Bill / AJ6UU	David / K6WOO
11/21/2024	Nate / N8MOR	Noah / N6TW
11/28/2024	HOLIDAY	NA
12/5/2024	Brian / KA6ZED	Peter / AI6RG
12/12/2024	Nate / N8MOR	Brian / KA6ZED
12/19/2024	Rich / KN6HSR	Nate / N8MOR
12/26/2024	David / K6WOO	Rich / KN6HSR

Regularly Scheduled Nets

LARK/LIVERMORE NET	**Every Mon**	**1900 local 147.120+**	**PL 100**
RACES Net	**Every MON.**	**1900 local**	
Windfarms 10-10 NET	**Every WED.**	**1930 local 28.485**	**USB**
HamShack Hotline Net	**Every WED.**	**1900 Bridge 363**	**PIN 0331**
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	**EVERYDAY**	**1200-1400 LOCAL**	**7.2685 LSB & 3970 LSB**
RV RADIO NET	**MON - FRI**	**0800-0930 LOCAL**	**7.2685 LSB**

LARK Contacts

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	Peter Bedrossian	AI6RG	p.bedrossian@comcast.net	925-606-1342
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
	Steve Nissen	K8YIP	s.nissen55@gmail.com	650-270-3796
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Web Site	Arnold Harding	KQ6DI		
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RFI	Gary Johnson	NA6O	gwj@me.com	
T-Hunts	Brian Zoraster	KA6ZED	ka6zed@gmail.com	925-786-8412
	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: View: AREDN Mesh http://www.aredn.org.

CERT NEWS: CERT contact - Email: cert@lpfire.org or (925) 454-2361
Meetings 3rd Wednesdays. Remillard RM 3333 Busch Rd. Pleasanton.

LARK Membership Form

1-

An ARRL Affiliated Club

-

Circle all that apply: New / /Family

NAME:

CALL SIGN: _____

ARRL MEMBER? Yes / No

Address:

PHONE: ( ) -

UNLISTED? ____YES _____NO

Enter your E-mail here and stay _____ _ LARK mail.

http://www.livermoreark.org/

NAME	
PHONE	
EMAIL	
ARRL MEMBER	

Membership is $20 To complete

P.O. Box 3190, Livermore, CA, 94551-3190 Please be sure -mail, and call sign are on your check.

Contact the Membership Team membership@livermoreark.org

cash or check to either Or:
pay with a credit card or PayPal account on the Club's membership page:

Team.