



**Our March General Meeting
will be on Wednesday, March 16th,
via Zoom, at 6:30 pm.**

Jack Roland (KE0VH), will be speaking
about the SkyHub Link System.

For more meeting info, please see page 2!



**March Meeting will be on Zoom on
Wed, March 16th, at 6:30 pm.**

[https://us06web.zoom.us/j/81928642821?
pwd=WXNSTjdEdHd5emZaaDRaaENQdnFWZz09](https://us06web.zoom.us/j/81928642821?pwd=WXNSTjdEdHd5emZaaDRaaENQdnFWZz09)

See p. 2 for more info.



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March General Membership Meeting

Our General Meeting will be on Wednesday, March 16th, at 6:30 pm.

Jack Roland (KE0VH), will be speaking about the SkyHub Link System.

Some requests for when you join our meetings:

- When you fill out your name, *please add your call sign after your first name*. (Example: Chuck (K0ITP) Poch). If you don't have a call sign yet, just put "no call." *You can change your name with the 3 little dots at the top right corner of your screen.*
- You will be muted automatically. (If you need help getting in, call out on our club repeater via VHF, UHF, or on EchoLink). Be sure to have your video going and your volume up, so we can see/hear you!

The Zoom meeting started at 6:30 pm with social time, ask an Elmer, meet a Board member, and general questions. The *actual meeting* began at 7:00 pm, with intros and club business, and then the presentation began at approximately 7:15 pm.

Going forward, this Zoom info will be the same for all Monthly General Meetings.

Our Zoom Meetings are usually held and found on this link:

[https://us06web.zoom.us/j/81928642821?
pwd=WXNSTjdEdHd5emZaaDRaaENQdnFWZz09](https://us06web.zoom.us/j/81928642821?pwd=WXNSTjdEdHd5emZaaDRaaENQdnFWZz09)

Meeting ID: 819 2864 2821

Passcode: 787437

Find your local number: [https://us06web.zoom.us/j/
kcsybGuZpe](https://us06web.zoom.us/j/kcsybGuZpe).

If you had to miss this meeting, you can see our meetings at
<https://w0eno.org/meeting-presentations/>



Ham Jargon

Ferrite Choke / Ferrite Bead

A Ferrite bead (choke) is used in equipment design to suppress and dissipate high frequency noise levels caused by electromagnetic devices. Ferrite components are used to attenuate EMI and can be extremely effective. See <https://resources.altium.com/p/how-do-ferrite-beads-work-and-how-do-you-choose-right-one> for more info.

LARC's YouTube Channel

Check out videos of many of our previous meetings and activities at:

<https://www.youtube.com/channel/UC0bX61lXfLHEvix6msKzITg> or by going to the club web site at w0eno.org and selecting Presentations. Subscribe to our channel so you don't miss out!

If you miss a meeting or you don't drive after dark, you will still be able to watch them here!



Help Support your Club with your Online Shopping!

Did you know your purchases can make a difference? *When you shop for anything at smile.amazon.com/ch/84-1056239, Amazon Smile donates to the Longmont Amateur Radio Club — at no cost to you!* Last quarter, they sent LARC \$38 as their donation from our members' shopping. Every last dollar helps! *You can also just click on the picture below to log into your Amazon account to shop and to help your Club at the same time.*



When you go to this link, you enter your own username and password, just like you normally do. You can also go to smile.amazon.com and select Longmont Amateur Radio Club. *Shopping with this Amazon link doesn't cost you anything – Amazon provides this donation, and every little bit helps our club!*

Useful Ham Radio Web Site



<https://soldersmoke.blogspot.com/>

Serving the worldwide community of radio-electronic homebrewers.
Provides blog support for the SolderSmoke podcast:

<http://soldersmoke.com>.

**“Today is the day when bold kites fly, When cumulus clouds roar
across the sky. When robins return, when children cheer, When light
beckons spring to appear.”** - Robert McCracken, *Spring*

Let the warmer weather be your friend!

LARC is keeping up with what is going on with Covid-19. I ask all members to be safe & take care of yourselves. Boulder County has lifted mask restrictions. We will start planning in-person General meetings, hopefully to start in April. If you would like to meet in small groups, we can meet at 350 Terry Street or the Clover Building at the Fairgrounds. Contact me for info.

We have several upcoming events. Keep an eye on the website and emails for information.

Join the Tuesday night and Thursday night nets for fun and educational talk! Want to try being a net control station (NCS)? Contact Jerry (NØOUW) or me for details! We have a challenge for you!

Our LARCFest (hamfest) is happening on April 2nd, from 9-1pm! Get involved and help this be a great event! Lots of volunteers are needed! Come join us at the Boulder County Fairgrounds on the corner of Nelson Rd. & Hover!

Do you have an idea for a presentation, or do you know someone who would like to present to your club? Contact a board member and let's get them in front of your club! We are looking for presenters for our 2022 General Meetings.

Keep your ideas coming for new events and/or activities for the club.

I always mention the appreciation award I do for our club members. If you know someone who deserves an extra “Thank you” or “Above and Beyond,” please let me know! I'm looking for recipients for our 2022 awards and recognition. Please tell me your thoughts.

Congratulations to the 2022 Above and Beyond recipient so far:

- January “Above & Beyond” recipient Steve Shearer (KØSTE) - for all the monetary and volunteer hours you put in to support the club.
- February — tbd
- March—tbd
- The rest of the months for 2022 — tbd

Who can YOU recommend for their service to LARC?

I have always said that this is your club. How can you help? We're looking for volunteers for our LARCFest 2022 Committee (it's only 2 weeks away!), Christmas Party, and other club events. If you can help or want to become more involved with your club, please [contact a board member](#).

As always, please contact me with any questions, comments, suggestions, or concerns.

Thank you and 73,
Charles Poch - KØITP
LARC President
KØITP@WØENO.ORG





Take our Poll!

Please take LARC's quick and fun Poll by answering this question. Feel free to add any comments you would like.

After you have finished and submitted it, you will be given the option to see a summary of all the responses so far. Your answers and identity are completely anonymous if you wish. Please select the answers that apply! If clicking on the polls below doesn't take you to the poll, please go to: <https://vote.pollcode.com/59945695>

Net — Tuesday Night Hamlet Net, 7:00 pm

The Club sponsors an informal net for newer ham radio operators on Tuesday evenings at 7:00 pm. Learn how to use nets, ask questions, discuss ham radio topics, get familiar with your radio & make new friends on the club's linked repeaters on 147.270 and 448.800 MHz, Tuesday nights at 7:00 pm. *For more information about this net, click on the title above.*

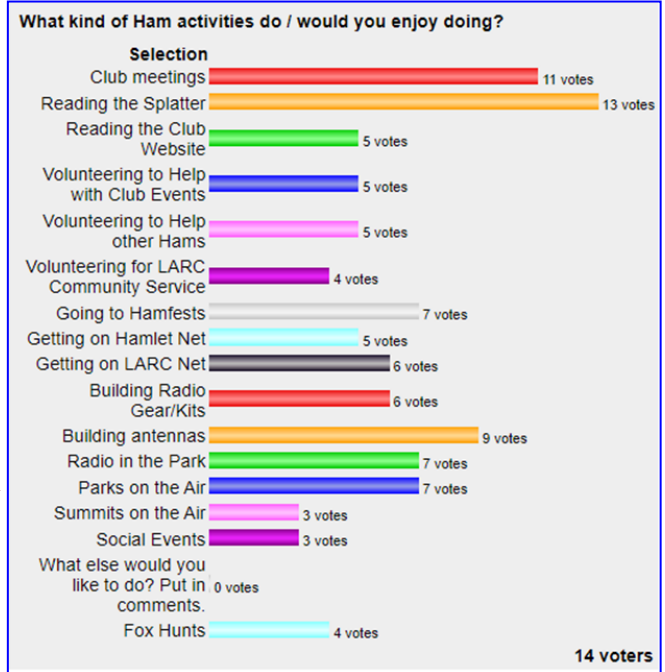
You can also reach our nets on the internet via [EchoLink!](#)

Net — Thursday Night Club Net, 8:00 pm

The Club also sponsors an informal net each week on Thursday evenings at 8:00 pm to chat about whatever is on your mind and to announce upcoming Amateur Radio Club activities. You will find the net on 147.270 and 440.800 MHz on Thursday nights at 8:00 pm. *Click on the title above for more information.*

STAY CONNECTED TO YOUR FELLOW HAMS! GET ON OUR NETS!

Feb. Poll Results — Thanks for voting!



In which ham activities do you participate regularly?

- Chasing DX
- Rag Chewing
- Contests/Sprints
- Kit Building
- Antenna Design/Testing
- Helping other hams
- LARC Activities
- Earning Awards
- Homebrew from scratch
- County hunting
- State hunting
- Country hunting
- Continent hunting

Vote View

pollcode.com [free polls](#)

Take our March Poll Now! It will only take about 2 minutes!



TAKE OUR MARCH POLL!

Either click on the poll on the left, or go to: <https://vote.pollcode.com/59945695>

We want to know your thoughts! Please also add your comments!

Upcoming Special Events and Contests

Here are some selected upcoming QSO Parties and Special Events that you could get on to pass the time while stuck in your house over the next 30 days. See the links below for more information, rules, logs, and QSL card information. Some just provide an email address to get more information. They all present a great opportunity to get on the air and have some fun! Plan your calendar! Lots of radio fun coming right up!

| Start Date | End Date | More Info |
|------------|----------|--|
| 03/19 | 03/20 | Virginia QSO Party https://www.qsl.net/sterling/VA_QSO_Party/2022_VQP/2022_VQP_Main.html |
| 03/19 | 03/27 | 120th Anniv of the Rockville Bridge https://www.radioclub-carc.com/ |
| 03/26 | 03/27 | CQ WW WOX Contest http://www.cqwp.com/rules.htm |
| 03/29 | 03/29 | National Vietnam War Veterans Day https://www.qrz.com/db/w5kid |
| 04/02 | 04/03 | Louisiana QSO Party http://laqp.org/ |
| 04/02 | 04/03 | Mississippi QSO Party https://www.arlmiss.org/index.html |
| 04/02 | 04/03 | Missouri QSO Party https://www.w0ma.org/index.php/missouri-qso-party |
| 04/05 | 04/10 | Sun-N-Fun Aerospace Expo Special Event https://lakelandarc.org/ |
| 04/09 | 04/10 | Texas State POTA https://www.tspta.org |
| 04/09 | 04/10 | Georgia QSO Party https://gaqsoparty.com/ |
| 04/09 | 04/10 | Nebraska QSO Party https://nebraskaqsoparty.com/ |
| 04/09 | 04/10 | New Mexico QSO Party http://www.newmexicoqsoparty.org/wp/ |
| 04/09 | 04/10 | North Dakota QSO Party https://www.ndarrlsection.com/ |
| 04/09 | 04/09 | USS Midway Museum Ship—Doolittle Raid https://www.qrz.com/db/ni6iw |
| 04/10 | 04/10 | Spaceport American Open House NM https://www.nm5hd.org/ |
| 04/14 | 04/15 | Maritime Radio Day 2022 http://maritimeradio.pro/maritimeradioday/ |
| 04/15 | 04/18 | 80th Anniversary of the Doolittle Raid https://www.superstitionarc.org |
| 04/16 | 04/17 | Michigan QSO Party https://miqp.org/ |
| 04/16 | 04/17 | Ontario QSO Party http://www.va3cco.com/oqp/index.htm |
| 04/16 | 04/30 | Whiskey 4 Moonshine https://whiskey4moonshine.wordpress.com |
| 04/17 | 04/17 | Quebec QSO Party https://wp1.quebecqsoparty.org/ |
| 04/18 | 04/18 | 80th Anniv of Doolittle Raid on Tokyo https://www.na1kw.com |
| 04/18 | 04/18 | World Amateur Radio Day NV https://wrn-wfn.com/ |
| 04/21 | 04/24 | San Jacinto Day https://w5nac.com/ |
| 04/23 | 04/27 | 50th Anniv of Apollo 16 https://nasaontheair.wordpress.com/ |

- You can see much more QSO Party and Contest Information at: <https://www.contestcalendar.com/contestcal.html>
- To learn more about having fun with QSO Parties, take a look at this link: <http://www.arl.org/files/file/QST/This%20Month%20in%20QST/April2019/KENNEDY.pdf>

2022 BOARD OF DIRECTORS

President: Charles Poch, K0ITP
Vice President: Michael Ritchie, W0KKI
Secretary: Pat Engstrom, W1PGE
Treasurer: Don Lewis, KE0EE

ADDITIONAL VOLUNTEERS:

Membership: Steve Shearer, K0STE
Technical: Mark Skelton, N7CTM and
Bryan Gonderinger, AF0W
Publicity: Steve Haverstick, KF0AGY
Splatter Editor: Kat Gonderinger, W0UM
Planning/Special Events: Doug Altman,
KE0SI & Mark Mollenauer, KD0GOC
BCARES Representative: Jerry Schmidt,
N0OUW
Repeater Trustee: Bryan, AF0W
Education: Kat, W0UM & Bryan, AF0W
LARCfest Chair: Dick Paige, KE0VT
VE Team Leads: Aaron, AJ7R & Kat, W0UM

Contact Us:

Email to: board@w0eno.org will reach all members of the Board.

Board meetings are held on the first Wednesday of each month at 6:30 pm. General Club meetings are held on the third Wed. of each month at 6:30 pm.

Current Club meetings are held online using Zoom and are open to all. Join us!

If you have a suggestion for a topic or for a guest speaker, or would like to present a topic yourself, please send email to [Chuck, K0ITP](mailto:Chuck.K0ITP).

If you have a general interest article about ham radio that you would like to see in a future issue of Splatter, please email it to [Kat, the Splatter Editor](mailto:Kat,theSplatterEditor).

Articles received by the 25th of the previous month will be considered for publication in the issue for that month.

Longmont Amateur Radio Club
P.O. Box 86
Longmont, CO 80502

LARC is a non-profit organization organized exclusively for one or more of the purposes as specified in Section 501 (c)(3) of the Internal Revenue Code Vol. 17. No.6.

Repeaters:

VHF:

147.270 MHz (+) 600 kHz, 100 Hz CTCSS

UHF:

448.800 MHz (-) 5 MHz, 88.5 Hz CTCSS

Echolink:

W0ENO-R, Station #8305

Visit & Post on our Facebook Page!

Our club has a Facebook page — did you know that? Feel free to share your ham-related posts, projects, activities, and news at:

<https://www.facebook.com/LongmontAmateurRadioClub/>.

We'd love to have our members active on both our LARC web site at w0eno.org AND on our Facebook page, so check it out, share, and post today! Tell all your ham operator friends!

Find us on 

Thank You!

Many thanks to our special contributing authors for this month's Splatter:

- Doug Altman, KE0SI
- Ralph Bilal, WD0EJA
- Bryan Gonderinger, AF0W
- Ed Mohrman, WA7EM
- Chuck Poch, K0ITP
- Steve Shearer, K0STE
- Raman Sinha, KV0N

Call for Articles!

I am constantly looking for articles to publish in the Splatter monthly newsletter. Topics should apply to Amateur Radio, or other closely-related topics of interest to most ham operators. Tell us about your ham radio activities and projects. Articles (250-500 words) of things you have done and/or built (with pictures!) are always of interest.

Submissions may be edited for spelling, grammar, content, or length if necessary. The deadline for submissions is the 25th of each month; however, submissions received after the deadline will be considered if they fit into the newsletter. If a late entry doesn't make it into the current month's news, it may be used in one of the following months.

[Kat, W0UM, Splatter Editor](mailto:Kat,W0UM,SplatterEditor)

LARC VE Exam Session Information

LARC sponsors a VE Exam Session every month. Upgrade your license before FCC fees start up! Our regular *LARC (ARRL VEC) Exam Sessions* are given on the fourth Saturday of the even-numbered months — (but on the 2nd Saturday for December), and our *LARC/Patriot VE Exams* are given on the third Sunday of the odd-numbered months. April has two sessions.

February VE Exam Session Results

Our LARC ARRL VE Team held an Exam Session on Saturday, February 26th, led by Aaron Rees (AJ7R).

Also assisting with this Exam Session were David Casem (AD0UF), Jeanne Lindstrom (AC0XA), Larry Trevaskis (WA0LRS), Lloyd Ferguson (KE0UOC), and Kat Gonderinger (W0UM). Thank you to our volunteer examiners for your service! We couldn't have done it without you!

At this session, 11 candidates were tested, which resulted in 6 new Technicians, 2 new Generals who passed Technician also, 2 upgraded Generals, and 1 upgraded new Amateur Extra. There were a total of 13 passed exams in all.

Congratulations to everyone who passed their exams!



| License | # |
|--------------|-----------|
| Technician | 8 |
| General | 4 |
| Extra | 1 |
| Total | 13 |

March Exam Session this SUNDAY, March 20th @ 9 am

Our next VE Exam will be with the LARC Patriot VE Team led by Kat (W0UM) and Bryan (AF0W) on Sunday, January 16th, at the Terry Street Professional Building at 350 Terry St., Longmont, 80501, *upstairs in the Onyx Room*. This is a free exam session, which may be taken in-person online on the candidate's personal laptop or tablet.

Please pre-register at <https://hamstudy.org/sessions/w0pct>. Walk-ins are also allowed, and will be seated as seats become available.



Upcoming LARC VE Exam Schedule

| Date | Day | Time | Exam Session Info | Exam Options |
|---------|-----|----------|-------------------|---|
| Mar. 20 | Sun | 9:00 am | LARC/PVET VE Team | In person on laptop or tablet, or on paper |
| Apr. 2 | Sat | 9:00 am | LARC ARRL VE Team | In person on paper @ LARCFest, Clover Building. |
| Apr. 23 | Sat | 10:00 am | LARC ARRL VE Team | In person on paper |
| May 15 | Sun | 9:00 am | LARC/PVET VE Team | In person on laptop or tablet, or on paper |

Ham Enthusiast Breakfasts Every Saturday Morning

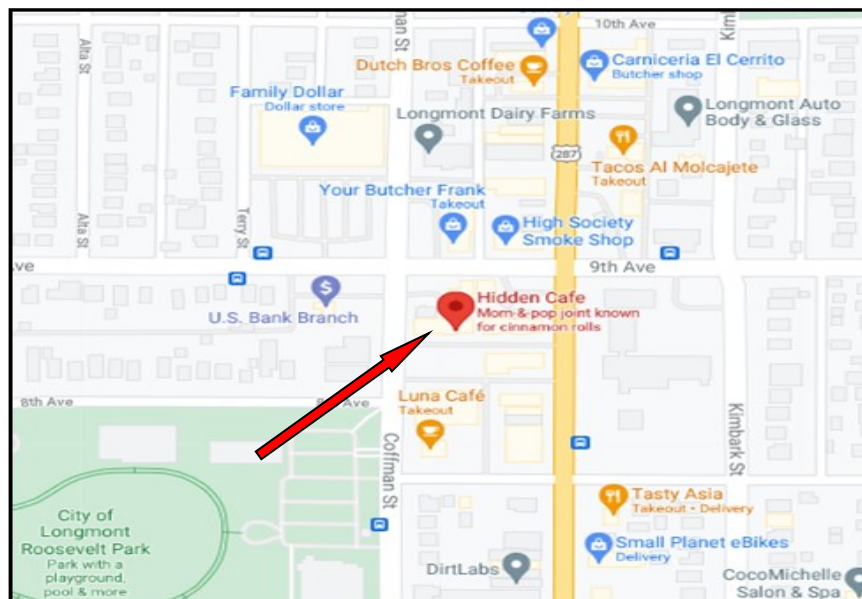
Want some social time with other ham radio operators in a small group? Join us for breakfast!

Saturday morning breakfasts meet at 8:00 am every Saturday.

Join us on Saturday mornings at the **Hidden Café in the Towne Square Shops, at 829 Main Street, #5 in Longmont.** It's easiest to enter the parking lot from Coffman Street, just south of 9th Avenue.

These are hosted by Don Lewis, KE0EE.

We hope you will join us on a regular basis for breakfast. If the group gets much larger, we will relocate to a larger restaurant. Get on the 8 pm Thursday Night Net to confirm the location, and/or check our website to see if the location has changed.



LARCFest is in a Couple Weeks! Get Ready!

Dick, KE0VT

LARC is holding its LARCFest (hamfest) at the Boulder County Fairgrounds on Saturday, April 2nd. ***This date has been changed from the last announcement in the Splatter!***

The 2022 LARCFest will be held on Saturday, April 2nd, at the Boulder County Fairgrounds (corner of Nelson Rd. & Hover). It will be operational from 9:00 am until 1:00 pm, with load in to begin on Friday evening, and load out starting at 1:00 pm.

Many volunteers are needed for this big event — to be on the planning committee and/or to volunteer at LARCFest, contact Dick Paige, KE0VT by phone at 720-220-1931 between 9:30 am and 6:00 pm on weekdays. **We need YOUR help! Help is also needed for setup & takedown.**

More info, including table and entrance fees, is included in the flyer at the end of this Splatter, as well as on our web site.

We had four new LARC members join us in February. When you meet them or hear them on the air, please give them a warm welcome!

| LARC Newest Members — February | | |
|--------------------------------|------------|-----------|
| Call | First Name | Last Name |
| KCØCT | Joseph | Clarke |
| KCØØNT | Dick | Bevington |
| KL2MB | Daniel | Bevington |
| KFØIDJ | Richard | Daarud |

Following the General club meeting on Feb. 16th, a random name of the attendees was drawn, and the winner was Mike (WØKKI). Mike decided to donate the prize back, and it will be used in a future door prize drawing.

Our club is always looking for additional donations of door prizes to give away at the meetings. If you have something you can donate for the drawing(s), you can contact me at the email or cell number below. It does not have to be a ham radio item — but anything that could be beneficial to another member.

Planning to attend the LARFest on April 2nd? Attend to support the LARC and the vendors that will be there. How about a chance to extend your club membership by a year? *Stop by the club’s membership area* (if I’m not there stop by again later, I’ll be shopping!), *verify your data and get an entry for a drawing. Bring a donation for future door prizes at club meetings and get a second entry in the drawing.*

Get an extra entry to the drawing if you attend and bring a friend who joins the LARC while at the LARCFest. Every friend that you bring and joins also gets an entry to the drawing. The drawing prize is being donated by a LARC member.

Stay safe, and hope to see and/or hear you at the next LARC General Meeting, whether it is a virtual meeting or in person. Any questions or issues, feel free to contact me.

73,

Steve Shearer (KØSTE)

Membership Chairman

KØSTE@WØENO.ORG

membership@w0eno.org

303-915-9942



Mark Skelton (N7CTM), Ham of the Year!

One of our own LARC members, Mark Skelton (N7CTM), was awarded Ham of the Year by Rocky Mountain Ham Radio at the ARA Swapfest on February 20, 2022 by ARRL Division Director, Jeff Ryan, K0RM. This Swapfest was held at the Adams County Fairgrounds, in conjunction with the Aurora Repeater Association and Rocky Mountain Ham Radio.

Mark volunteers many hours with RMHAM and also with LARC. Congratulations, Mark, you deserve it for all your many talents and your years of hard work!



Ham
of the
Year,
2022!



Popular Electronics Magazine

Popular Electronics was a magazine intended for electronics experimenters and hobbyists that was published from 1954 through 2000. You can view issues at <https://worldradiohistory.com/Popular-Electronics-Guide.htm>

The site also includes many other radio and electronics magazines that may be of interest.

By now, everyone has heard about the war in Ukraine. One thing that may not be as widely known is that Ukrainian president Volodymyr Zelensky issued a decree on February 24th that includes “a ban on the operation amateur radio transmitters for personal and collective use.”

As to why, I’ve read many opinions – that this is done to prevent inadvertent leaks of sensitive information (like troop movements) to Russia, freeing up the airwaves so that any suspicious communications will “stand out” as opposed to being mingled with amateur traffic, and to prevent Ukrainian stations from being targeted via radio direction finding.

You may think “that could never happen here,” but in fact, it already has – twice. In 1917, during World War I, Congress ordered all amateur radio operators to cease operations and dismantle their gear. Congress again suspended amateur operations during World War II.



Volunteer Monitor Program Cautions against Operating beyond your License Privileges

Many of the Advisory Notices sent out each month by the ARRL Volunteer Monitor Program go to stations heard operating outside the operator’s license privileges.

Typical cases often involve operators holding Technician- or General-class amateur licenses being heard on a frequency or band not permitted by their license privileges. Most recent incidents have frequently entailed FT8 digital mode operation by Technician licensees on 20 and 40 meters. Technician licensees do not have any operating privileges on 20 meters, let alone digital privileges, and FT8 is a digital protocol.

Technicians (and Novices) may operate CW between 21.025 and 21.200 MHz on 15 meters, from 7.025 and 7.125 MHz on 40 meters, and from 3.525 to 3.600 MHz on 80 meters, but they do not have *any* digital (data) mode privileges on these bands.

ARRL Volunteer Monitor Program Administrator Riley Hollingsworth, K4ZDH, said licensees who need a refresher course regarding their operating privileges may refer to Section 97.301 of the rules. ARRL also has a convenient chart on its website that details privileges available to all license classes, from Novice to Amateur Extra.

You can find the current printable Band Plan at <http://www.arrl.org/graphical-frequency-allocations> and at <http://www.arrl.org/band-plan>.

03/03/22 ARRL

Chuck, KØITP, President of the Longmont Amateur Radio Club, and Mike, WØKKI put on a very special event this past weekend.

As usual, I left the house late. Longmont is only about 10 miles up Highway 287 from my QTH, but it always seems to take me about 1/2 hour to get there. I don't know where the time goes! It was already a few minutes past 9 AM - the official start of the Yagi build. I tried to raise Chuck on the Club's repeater on 2 meters but didn't hear anything back. I wanted to tell him I was going to be 10 minutes late. I did have a short QSO with someone else who was going to the Yagi build, but I'll leave out his name and call because he was also going to be late!

I turned onto the road that leads up to the Clover Building at the Boulder County Fairgrounds. There was a sign pinned to a post that said "Coin Show." I chuckled at that thinking how much cooler we Hams must be than those coin collectors!

As I walked into the room, I realized I was obviously late. They'd started class and everyone was paying attention to Chuck teach about Yagi-Uda antennas. There were no open seats in the back. Unfortunately Chuck and Mike saw that I was trying to be covert about walking in late, so they did what any other hams would do - they started clapping. The rest of the class followed suit and I was completely embarrassed as I took my open seat towards the front of the class.

It was a full room with every chair taken. There were pre-cut lengths of PVC as well as some cross fittings set up at each station.

At about 9:15, some of the guys finished up Saturday Breakfast at the Hidden Cafe and came on over. We made room and set up another table. All told I think there were about 18 hams there.

For the next half hour, Chuck described the inner workings of Yagi antennas, going into detail about tape measure widths vs. bandwidth, presence of tape measure antennas on satellites, and general tips and tricks of assembly, including a safety briefing and introduction to all of the tools and parts we would be cutting and assembling.

The room was laid out well with 2 soldering stations, an area to sand the ends of the driven elements, matching stubs, zip ties, and lots of tape measures to cut and sacrifice to the SWR gods.

The other side of the room had lengths of coax, along with your option of male or female SMA connectors to choose from as well as an assortment of crimp tools and wire strippers.

After the educational portion it was time to get our hands dirty. People lined up at the various stations. Some people were helping aid others in safely cutting 4 lengths of measuring tape. Others were assembling SMA connectors. I started off helping out at the tape measure cutting station, and then took my turn and cut my own reflector, director, and both sides of the driven element.

Everyone helped everyone else measure twice, cut once. Chuck and Mike as well as other hams who knew what they were doing answered questions about the finer details of assembly. In addition, I video taped and photographed some of the happenings so that I could share all the fun that we have in this club - and we welcome you whether you're a member or not!

You can see the video at: <https://youtu.be/MGwwh9VprI8>.

>> *Continued* >>

So the reason that this event was pretty special to me was because this was the very first hands-on ham radio build class I'd ever taken. I'd gotten my license in the midst of COVID so I didn't really get to see my fellow LARC clubmates as much as you would in a normal year. Now COVID was becoming a little less of an issue, and Boulder Country recently removed their indoor mask mandate. This meant my fellow hams and I could finally meet in the same room and I could take in everyone smiles and grins as we stumbled our way helping each other through this build.

After I cut my Yagi pieces, I went over to Mike's area. He was helping people with cutting coax and assembling their SMA connectors. I brought a Baofeng to test out my Yagi which meant I needed to have a female SMA connector on the end of my Yagi's coax. We hemmed and haw'ed about how the pieces were supposed to fit correctly, and ended up looking up a YouTube video on assembling the female SMA, which ended up working well.

When I was done with that end of the coax, I took one of the cross PVC fittings and ZIP-tied both driven elements across from each other, and then had some help soldering the center and ground of the coax as well as the matching stub.

What I had now was a simple dipole antenna. So I took it outside into the beautiful 60 degree weather and tried to open the LARC 2-meter repeater. Kat, WØUM heard me and came back! I'd successfully hit the repeater. We had a short QSO where she told me I was talking too far from the radio's mic, which I corrected, and then I was told I had a good signal into the repeater.

While I was out there a gentleman came by and asked if I was dowsing. What? He saw my antenna and thought I was looking for water! I gave him a quick show and tell of my new antenna in the making and invited him to take a peek at all the fun LARC hams we're having in the Clover building. Then he told me why he really approached me.

He was looking for the Coin Show.

I went back in and assembled the rest of my antenna. Chuck was measuring the SWR of everyone's finished projects, so I went up and had him check out mine. My antenna's SWR was 1.2 in the center of the 2m ham band - the lowest he'd seen today!

Then I helped solder and crimp some SMA connectors and cut some other bits for LARC to sell as a kit at the upcoming Hamfest. I also helped some more fellow hams with their own builds.

Noon came fast, and it was time to meet my XYL (who is studying for her Technician ticket) for lunch. On my way out, I tried to give Steve, KØSTE the donation for this event. He wouldn't take it but did show me the delicious event cookies. Then he pointed to the man that was taking the donations—Don, KEØEE! I gave him my \$5 donation for this event and another \$5 just because I really appreciate what LARC is doing for ham radio.

I had a great time hanging out with my fellow LARC hams and stumbling through this build and learning many new things. I'm already excited about the transistor amplifier build that's scheduled for next month that Ed, WA7EM will be putting on.

HF Ham radio equipment typically costs several hundred dollars or easily into the thousands. That's true for a reasonably modern, new transceiver bought at one of the big name Ham retailers. But, there is an aspect of radio that you can get into for tens of dollars. That aspect is building small low power kits and DIY projects following some internet or magazine instructions. You can even get a 40 meter transceiver for a little over \$5.

Old timers can tell stories about how easy it was when you could go to your nearby Radio Shack and buy parts. Radio Shack is gone, but in its place has popped up a large number on internet stores serving the hobbyist market. Below are those I am aware of.

Even if the something you build is not real practical for you, or you are not into CW or don't yet have your General license, there is a joy in succeeding in a small project and learning a little about how things work

eBay.com

eBay has everything from used expensive vintage equipment to \$1 components. Some are competitive auctions. Many are "buy it now" for a fixed price. There is a mixture of sellers – from established US businesses to garage shops selling auction/surplus to individuals selling what they own to Asian import companies shipping directly from China.

I bought a \$5 "Pixie" 40 meter transceiver on eBay for about \$5. It is a 2 transistor 1 watt, fixed frequency CW rig. It does work. I made a contact to Colorado Springs with little difficulty. Its receiver is pretty broad and you hear a lot of stations at the same time. It is more of a novelty than a real daily use rig. But, you learn something and have some fun for \$5.

Pixie \$5 transceiver

<https://www.ebay.com/sch/i.html?>

[_from=R40&trksid=p2334524.m570.l1312&nkw=pixie+cw+transceiver&sacat=0&LH_Title_Desc=0&osacat=0&odkw=qrp+transceiver](https://www.ebay.com/sch/i.html?from=R40&trksid=p2334524.m570.l1312&nkw=pixie+cw+transceiver&sacat=0&LH_Title_Desc=0&osacat=0&odkw=qrp+transceiver) I also bought my 1960 Vintage Heathkit HW100 on eBay for \$120. I won that auction, bidding against several others. It was listed as "for refurb or parts". With some minor work, it is now fully operational.

I have bought a lot of different components, connectors, wire, etc. on eBay.

You should get a PayPal account to pay many of these very small businesses.

Amazon

<https://www.amazon.com/>

Amazon is a middle-man company that does the internet advertising and order taking for 1000s of very small companies. Don't be bashful about looking for fairly specialized electronic and Ham parts on Amazon. I pay the annual fee for Amazon Prime. That gives me free shipping. It continues to amaze me that I can order a few dollars worth of obscure electronic parts on Amazon and it shows up at my door 2 days later for \$0 shipping fee. Use the Amazon link on page 3 to help support our club.

>> continued >>

QRPME

<http://qrpme.com/>

QRPme sells mostly very small, simple projects. They love producing projects that can be mounted in a tuna can. They have supported a variety of “buildathons” at recent Ham conventions or on line events like the “QSO Today Virtual Ham Expo” on 3/12/22. They sell a “better” version of the Pixie transceiver that can be moved to different frequencies and has better filtering.

Pacific Antenna

<https://www.qrpkits.com/index.html>

Their company name is a little misleading. They do sell wire antennas for QRP and portable. Most of what they sell is small, inexpensive kits. I bought a \$25 audio bandpass filter from them. I may buy a transmit/receive switch from them.

QRP Transceivers, Amplifiers, Audio Kits, etc

QRP Guys

<https://qrpguys.com/>

As their name implies, they are into low power, simple kits. They are a pretty stable business that has grown a few steps beyond a “garage shop” I bought an Iambic keyer from them for \$15. Most modern radios support Iambic paddle keyers. But, my vintage radios don’t. With this \$15 kit, it does.

QRP Labs

<http://shop.qrp-labs.com/kits>

QRP labs has a strong “cult” following for their QCX series of QRP transceivers. You find a lot of operators doing POTA/SOTA portable CW work using the QCK radios. These radios are full feature radios of very modern design. I have bought a 20 meter QCX-Mini 5 watt palm size transceiver from these guys for \$60. The QCX radios users have a strong support community on their qrplabs@groups.io email group.

HF Signals

<https://www.hfsignals.com/>

Before there was the QRP Labs products there were the BITX transceivers. These are multi band CW/SSB transceivers imported from India. They also have strong support groups on Facebook and groups.io. The basic BITX has been the launching platform for many skilled builders doing modifications and improvement. There is a very active Facebook group offering help to each other and sharing their mods and improvements.

Max Gain Systems

<https://mgs4u.com/>

>> continued >>

They primarily sell parts for building antennas. But, they have a odd collection of surplus and specialty components. I bought a 6:1 vernier dial and knob to slow down and stabilize the tuning on my vintage HW100 transceiver.

Hy Power Antenna Company

<http://www.hypowerantenna.com/products>

I have not bought from them. But, they sell a large variety of wire antennas, for both fixed and portable use

Sparkfun

<https://www.sparkfun.com/>

Sparkfun is mostly about Arduino and Raspberry Pi. They sell many versions of the basic CPU boards. And they sell a wide range of all kinds of I./O modules. But, they also sell a variety of assembly tools, breadboarding fixtures and many components for breadboarding. Their warehouse is just down the road in Niwot. Prior to Covid, you could go to their will-call desk to pick up your order same day. For now, it is internet order and shipment. Maybe some day pick-up will again be possible.

Adafruit

<https://www.adafruit.com/>

[gclid=Cj0KCQiAr5iQBhCsARIsAPcwRONGqI9QvLT6Ltzvd808AkPVfCWxRov3hOIVcRhWTyVYEKjsWRqCBFcaAiWTEALw_wcB](https://www.adafruit.com/?gclid=Cj0KCQiAr5iQBhCsARIsAPcwRONGqI9QvLT6Ltzvd808AkPVfCWxRov3hOIVcRhWTyVYEKjsWRqCBFcaAiWTEALw_wcB)

Adafruit is a direct competitor to Sparkfun, carrying much the same merchandise.

Mouser

<https://www.mouser.com/>

Mouser and the next several companies are industrial component businesses. They carry a very wide variety of transistors, integrated circuits, resistors, capacitors, inductors, switches, etc, etc. But, they will sell you parts individually or in small lots with no difficulty or extra cost.

I have bought various integrated circuits, diodes, transistors, etc from them

Digikey

[Digikey](https://www.digikey.com/)

Same as Mouser

Circuit Specialist

[https://www.circuitspecialists.com/electronics-components?](https://www.circuitspecialists.com/electronics-components?gclid=Cj0KCQiAr5iQBhCsARIsAPcwRONIaR7jHvn4ImD6GJ8kAyStdHB0A15Q55qctCHcG4FdRuA_HukUz2gaAjrJEALw_wcB)

[gclid=Cj0KCQiAr5iQBhCsARIsAPcwRONIaR7jHvn4ImD6GJ8kAyStdHB0A15Q55qctCHcG4FdRuA_HukUz2gaAjrJEALw_wcB](https://www.circuitspecialists.com/electronics-components?gclid=Cj0KCQiAr5iQBhCsARIsAPcwRONIaR7jHvn4ImD6GJ8kAyStdHB0A15Q55qctCHcG4FdRuA_HukUz2gaAjrJEALw_wcB)

Same as Mouser

Ed Mohrman WA7EM ejmohrman@yahoo.com

Here are some exam questions from the current exam pools. Go ahead and answer them, and then check your answers on page 21. Let's see how you do! We recommend [hamstudy.org](https://www.hamstudy.org) to study with flashcards and also to take your practice tests. It keeps track of your weak areas for you!



Technician Exam Review -- Question T0A05

Why is it unwise to install a 20-ampere fuse in the place of a 5-ampere fuse?

- A. The larger fuse would be likely to blow because it is rated for higher current
- B. The power supply ripple would greatly increase
- C. Excessive current could cause a fire
- D. All of these choices are correct

General Exam Review -- Question G0A05

What must you do if an evaluation of your station shows RF energy radiated from your station exceeds permissible limits?

- A. Take action to prevent human exposure to the excessive RF fields
- B. File an Environmental Impact Statement (EIS-97) with the FCC
- C. Secure written permission from your neighbors to operate above the controlled MPE limits
- D. All of these choices are correct

Extra Exam Review -- Question E9A08

What is one of the potential hazards of operating in the amateur radio microwave bands?

- A. Microwaves are ionizing radiation
- B. The high gain antennas commonly used can result in high exposure levels
- C. Microwaves often travel long distances by ionospheric reflection
- D. The extremely high frequency energy can damage the joints of antenna structures

Check your answers on page 21!

Upcoming Hamfests and Conventions

You can use this info to plan some of your upcoming winter and early spring travel to get away from our cold winter weather. You will find the local events in bold print.

Some conventions and hamfests may have been canceled or postponed due to the Covid pandemic. Check the hamfest event calendar on the ARRL website calendar to be sure it's still on at <http://www.arrl.org/hamfests/search/page:1/model:Event>.

| Date(s) | Description | Location |
|--------------|---|---------------------|
| 03/18-20 | HamSCI 2022 Conference https://hamsci.org/hamsci2022 https://hamsci.org (virtual is free) | Huntsville, AL |
| 03/19 | ARRL West TX Section Convention https://hamfest.w5qgg.org/ | Midland, TX |
| 03/26 | Utah Digital Comm Conference http://utah-dcc.org | Sandy, UT |
| 03/26 | Radio Society of Tucson Spring Hamfest http://k7rst.org | Tucson, AZ |
| 04/08 | Oklahoma State Convention http://greencountryhamfest.org | Claremore, OK |
| 04/02 | LARCFest!! (Longmont Amateur Radio Club) https://w0eno.org | Longmont, CO |
| 04/08 | 2022 Oklahoma State Convention http://greencountryhamfest.org | Claremore, OK |
| 04/09 | Spring Cleanup Hamfest http://www.bellevuearc.org/ | Bellevue, NE |
| 05/20-22 | Dayton Hamvention 2022 https://hamvention.org/ | Xenia, OH |

If you snowbird in Florida over winter, be sure to check out all the many Florida hamfests in the above ARRL link.

LARC Calendar of Events for 2022

Chuck, K0ITP

I would like LARC to host at least one club event each month. Some are still in planning, but this is what we have planned so far. We're open for suggestions on the "tbd" months!

If you would like to host an event, or have ideas for an event you think would be of interest to club members, please contact me at k0itp@w0eno.org. Let's get involved in these events, and come up with ideas for other events that sound fun!

| Date | Day | Event | Date | Day | Event |
|---------------|------------|----------------------------------|--------------------|-----|----------------------------|
| Mar. 12 | Sat | Antenna Building Workshop | July | tbd | tbd |
| Mar. 20 | Sun | PVET VE Exam | Aug. 06 or Aug. 13 | Sat | Radio in the Park |
| Apr. 2 | Sat | LARC HAMFEST!! (LARCFest) | Aug. 06 or Aug. 13 | Sat | Boulder County Fair Parade |
| Apr. 2 | Sat | ARRL VE Exam @ LARCFest | Sep. | tbd | tbd |
| April 23 | Sat | ARRL VE Exam | Oct. 29 | Sat | Longmont Halloween Parade |
| May | tbd | tbd | Nov. 12 | Sat | Turkey Trot |
| Jun. 25 | Sat | ARRL Field Day | Dec. | tbd | LARC Christmas Party |

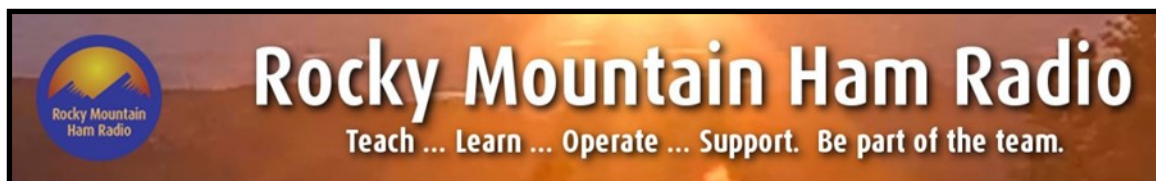
Upcoming RMHAM University Classes

Rocky Mountain Ham (RMHAM) is offering free and very interesting classes for the rest of this class season.

If you are interested in taking one (or more), you can register at:
<https://www.rmham.org/cgi-bin/rmham-u/signup>.



| Date & Time | Presenter(s) | Topic |
|------------------|---|---|
| Apr. 09, 8:30 am | Ben KC2VJW John W0VG Willem AC0KQ | Applications of Software Defined Radio Remote receivers and transmitters, direction finding, signal processing and other interesting applications of SDR. Zoom Meeting ID: 863 3471 6368 Passcode: 296183 |
| May 14, 8:30 am | Rob N0RPF | Balloons and things relating to Rob and others from EOSS Edge of Space Sciences will present on balloons, pico-balloons, and other high flying interests. Zoom Meeting ID: 863 4524 9878 Passcode: 327259 |



RMHAM Past Presentation Videos Available

Past presentation and class videos are available if you cannot make it to the classes.

Upcoming RMHAM University classes and Tech Talks are listed at: <https://www.rmham.org/rocky-mountain-ham-university/>. Presentations are free, and classes (not Tech Talks) have the option of in-person attendance.

Wire Winder/ HOLDERS — Fundraiser for LARC

Mike W0KKI



We have wire winders/holders with the club's call sign for sale at \$5 each. Members can also get them customized with their call sign if they want, with a minimum order of 3 (\$15) for the customized ones. Currently, customized ones will be red in color. We do have a mix of red, green, blue, and white in the club call sign.

If you would like to place an order, you can contact me directly at w0kki@w0eno.org to order. If you order by March 28th, you can pick your order up at LARCFest on April 2nd.

(The \$5 is there to show the size — but no, you don't get that too!)



The primary objective of the HamSCI workshop is to bring together the amateur radio community and professional scientists. The theme of the 2022 HamSCI Workshop is The Weather Connection.

This workshop, held March 18 and 19, will also serve as a team meeting for the HamSCI Personal Space Weather Station project, a NSF-funded project to develop a citizen science instrument for studying space weather from your backyard (<https://hamsci.org/basic-project/personal-space-weather-station>). The PSWS is led by the University of Scranton, and includes participation from TAPR, Case Western Reserve University/W8EDU, the University of Alabama, the New Jersey Institute of Technology CSTR, MIT Haystack Observatory, Dartmouth College, and the amateur radio community at large.

While in-person registrations are closed, you can sign of to participate virtually via Zoom, free of charge. Virtual attendees will be able to register for a Zoom link that will allow them to watch presentations and interact via a text-based chat system that will be moderated by people at the in-person conference. All oral presentations, tutorials, and the banquet keynote will be available via this platform. These presentations will be available for viewing after the workshop as well.

For more information, see their web site at: <https://hamsci.org/hamsci2022>.

Your Support is Making a Difference! Thank You!

Last quarter (from Oct. 1 through Dec. 31st, 2021), King Soopers (The Kroger Co.) donated \$72 from 8 households who have connected their loyalty cards to the charity of our club! Link your King Soopers or City Marketplace loyalty cards to the Longmont Amateur Radio Club on their web site at <http://www.kingsoopers.com> or for City Market at <http://www.citymarket.com>.

Also last quarter, our Amazon Smile program donated \$37.79 into our LARC bank account. When you shop on your Amazon account from smile.amazon.com/ch/84-1056239, Amazon will also donate a small portion (out of their own pocket, not yours) of your purchases to LARC. See p. 3 for more information.

Support your club by linking your loyalty card and shopping with Amazon Smile!

Answers to The Fifth Degree — What Do YOU Know — Questions from p. 18

| Exam Level | Question | Answer |
|------------|----------|--------|
| Technician | TØAØ5 | C |
| General | GØAØ5 | A |
| Extra | EØAØ5 | B |

Last article was on Amplitude Modulation transmission. What is needed to receive this type of signal?

It is very basic. The Audio is carried through the air on the Radio Frequency on which you are operating. We were using 7.200 MHz. Tuning to this frequency with your receiver, the radio is filtering out the carrier and leaving the audio for you to hear.

Some of us old melons may remember the AM radios that required no power. As long as you had a strong AM signal you could hear it.

This little device consisted of a tuned circuit, attached to a wire for an antenna, a small germanium diode, a capacitor, and some ear phones.

The diode changed the RF current (7.200) to a direct current (DC). The capacitor filtered that current so the RF was a steady DC signal. Like the RF signal you can not hear it, but it leaves the audio signal still on the line. Put a set of ear phones to this circuit and you are in business.

Your big fancy radio is doing similar on AM. It has a few added features, like a variety of amplifiers and mixers to make tuning very selective. The audio can be played through a speaker rather than through head phones.

One advantage to Amplitude Modulation is the clarity it offers. This is one of the reasons AM Broadcast is still popular. It is still used on the VHF aircraft frequencies. Why use it there?

Using AM takes less space than the usual Frequency Modulated (FM) signals. More useable frequency is available. On the other hand on the HF spectrum, AM uses more of the spectrum than Single Side band.

Next article will give some basics on the Single Side Band mode.

Your questions are welcome. I will try and answer them in future articles. Email me at wd0eja@isotronantennas.com.

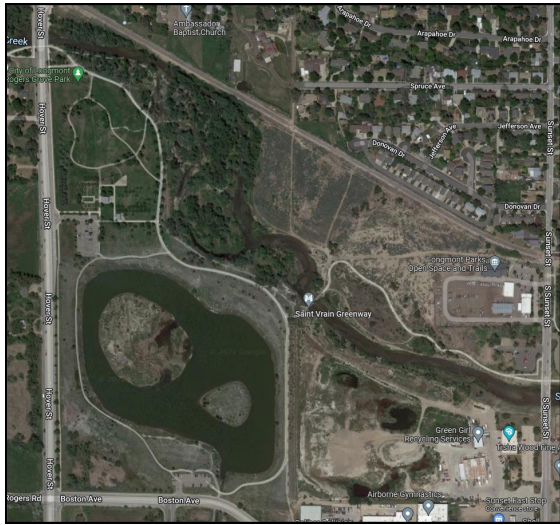
73,

Ralph, WD0EJA

Bilal Company

Isotron Antennas

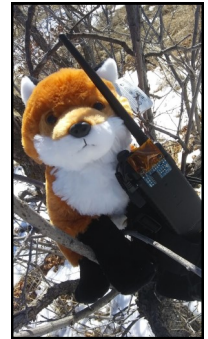




The hunt for “Foxy” was on.

On February 26th, the call was put out to try to find “Foxy” our unofficial mascot.

Well I learned a few things. The first antenna broke, and I replaced that one. Once I finally heard the signal, it appeared to be weak even at 5 watts. So next time, we do this more testing, testing, and even more testing before Foxy is set loose again. I’m hoping to do this again in April, so keep an eye on the website for more information.



Foxy was scared and 4 people found Foxy.

Congratulations to :

- Eric Permut (KGØYS)
- John Bennett (KN6CFI)
- Raman and Kristi Sinha (KVØN)

Hunted but never heard Foxy:

- Sebastian Wessels (NSØW)
- Don Lewis (KEØEE)



For some humorous ham radio news, go to:
<https://hamhijinks.com/>

Most hams are familiar with dipole antennas, and may not be aware that there is a type of antenna that is an end-fed antenna that uses a single “random length” wire as a radiating element, appropriately called “random wire antennas.” I put “random length” in double quotes because there are some issues with the selection of wire length.

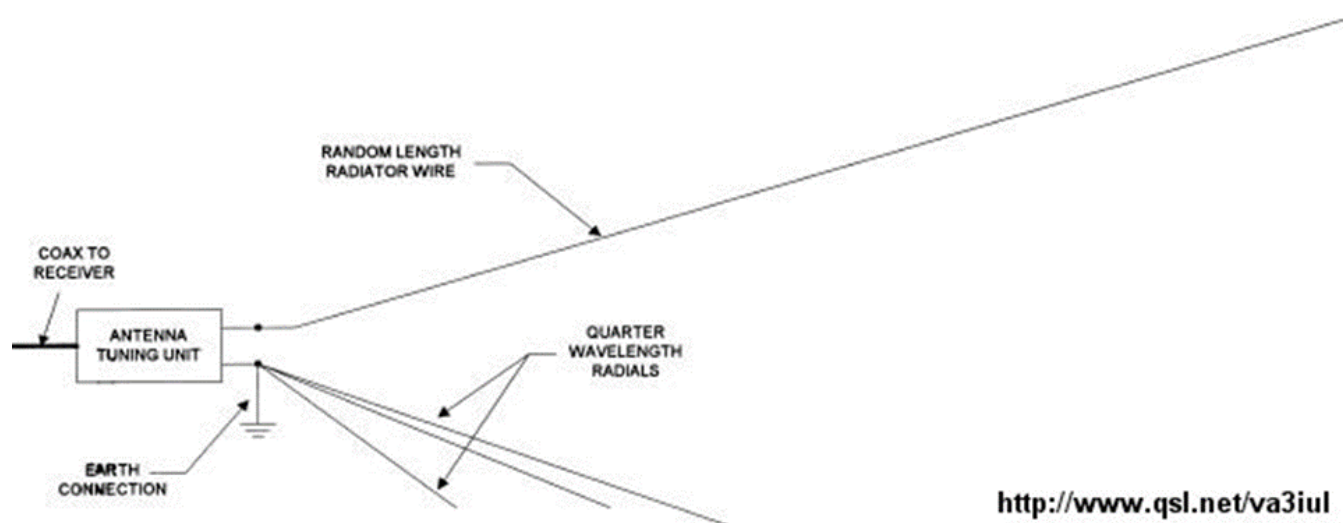
You can read about these issues and more on the following web pages:

<https://udel.edu/~mm/ham/randomWire/>

<https://www.hamuniverse.com/randomwireantennalengths.html>

https://www.w8ji.com/long_wire_antenna.htm

Note that these antennas do typically require an antenna tuner, and many lengths may exceed the capabilities of tuners built into HF radios. Also note that the radiating element (and counterpoise) are typically connected directly to the radio or antenna tuner, which means the radiating element will be close to your operating position, so make sure you evaluate your setup for RF exposure to make sure you don't exceed safe limits.



Local SkyWarn Training

Go to https://www.weather.gov/bou/spot_training to learn more and to sign up for this free Weather Spotter Training.

| Date | Day | Time | Location |
|-------|----------|---------|---|
| 03/22 | Tuesday | 6:30 pm | Greeley, Weld Cty Admin Offices, 1150 O Street |
| 03/24 | Thursday | 6:30 pm | Frederick/Firestone, Fire Admin Office, 8426 Kosmerl Pl |
| 03/26 | Saturday | 8:30 am | Johnstown/Loveland, 4872 Endeavor Dr., Johnstown |
| 04/07 | Thursday | 6:00 pm | Longmont, Longmont Senior Center, 910 Longs Peak Ave |
| 05/03 | Tuesday | 6:00 pm | Arvada, Arvada City Hall |

Some hams have the misfortune to live in neighborhoods with restrictive HOAs or covenants that prevent them from installing many ham radio antennas.

Rick Braddy, W5FCX, has come up with a way to hide an HF antenna in plain view – and your HOA will be none the wiser! His installation is built around a purple martin house, but if you can get that past your HOA, you might be able to install a nice inverted V antenna!



Take a look at his article at: <http://www.w5fcx.net/2021/09/27/purple-martin-birdhouse-antenna/>.

APRS Protocol Description

Bryan, AFØW

The APRS (Automatic Packet Reporting System) has its own protocol which is used for exchanging APRS information between stations. That protocol is spelled out in the aptly-named “APRS Protocol Reference” document (there is a table below the heading that states a version of 1.0.1 dated August 29, 2000), available at: <http://www.aprs.org/doc/APRS101.PDF> (which interestingly enough, has a title page graphic that refers to APRS as the Automatic *Position* Reporting System).

The main APRS web site is at: <http://www.aprs.org/>. It contains a lot of information, but I find it somewhat unorganized, and it usually takes me a while to find the information that I’m looking for.

You can see an example of raw APRS packets by looking at the <https://aprs.fi/> web site. On the right side of the page, under “Other views:” is an option to show raw packets (you may have to create an account on the site to access this link).



The Mar 3 ARRL Letter includes a mention of a satellite called the URESAT-1 which “will carry a VHF/UHF FM ham radio repeater as well as digipeating capability of AX.25 and APRS.” Spain’s IARU member society URE says the payload is not yet defined but could be the same slow-scan television (SSTV) camera that flies in HADES, a thruster, or some kind of experiment. One confirmed project is a chess game that will allow radio amateurs to play against the onboard computer via FSK telemetry.

Not sure how this would work, as during a pass, there is not a lot of time for you to communicate with the satellite, especially if there are multiple people attempting to use it. Perhaps this is an adaptation of the packet chess and checkers programs available on the UZ7HO packet web site: <http://uz7.ho.ua/packetradio.htm> (listed below the big graphic on that web page).

If all goes according to plan, URESAT-1 will launch aboard a SpaceX Falcon-9 rocket from Cape Canaveral in October 2022.



LARC Logo Apparel

These are great clothes to wear for all our club-related activities, and to show your pride for our club at other ham events and around town! They also make great gifts for your favorite hams!

Order your items today at <https://forms.gle/AgZQSMhrRtR1tLEG8>.

| | | | | | |
|-------------------------------------|------------------------------------|-------------------------------|-----------------------------------|-----------------|--------------------------------------|
| | | | | | |
| Short-sleeved Shirt \$32 | Long-sleeved Shirt \$40 | Fleece Jacket \$43 | Soft-shell Jacket \$55 | Cap \$16 | Patches SM \$4 LG \$6 |

Are Your LARC Dues Current?

Did you know that your dues and/or annual renewals can be paid online at the club website (w0eno.org) using PayPal? You don't have to have a PayPal account; you can pay with a credit card (Visa, MC, Discover, AmEx), or select 'bill me later.' You can also join or renew by mailing a check to the club (LARC, P.O. Box 86, Longmont, CO, 80502), or by giving payment to Steve Shearer (K0STE) at a club meeting when we start having them in person again. *If you aren't current on your dues, you are moved to a different mailing list and may not get club info, emails & this Splatter newsletter. Get them paid up, send email, and you're back on list!*

Yearly dues are only \$20 per year for an individual or for a family at the same address. You can find membership information by clicking on the Membership link on our club web page. Contact Steve at membership@w0eno.org if you need to know your current dues status.

Calling All Businesses, Restaurants, Services, and Retail Shops!

Advertise with LARC in the Splatter!

The Splatter newsletter is published once a month. You can advertise your business with us at very reasonable prices!

Your ad will run for a one-year period (12 months) from when your first ad runs.

Get more business by offering a special promotion code for our readers, or by offering a deal on certain products — or just advertise your business!

Donate to LARC for Monthly Drawings

When you donate products or gift cards to our club for the drawings at our monthly meetings, we will run a business-card sized ad for you or for your business in our next monthly Splatter for free!

You also will be mentioned in the next month's Splatter newsletter and in the final issue of the year as a donor to our Club for the year, as well as on our w0eno.org web site. You will also get a donation receipt from our Treasurer.

If you can make a donation, please send your information to Steve Shearer at k0ste@w0eno.org.

PROMOTE YOUR BUSINESS WITH SPLATTER ADVERTISING

Ad size and cost – *per year.*

| | | |
|---------------|----------------|-------|
| Business Card | 2"h x 3.5"w | \$100 |
| Quarter Page | 4.2"h x 3.25"w | \$200 |
| Half Page | 4.25"h x 7"w | \$300 |
| Full Page | 8.5"h x 7"w | \$500 |

The above prices are per year – not per month. (12 months of ads)

Your advertisement will be seen by amateurs throughout Colorado, the Rocky Mountain States, and even the rest of the United States. Splatter circulation is approx. 1,500.

Send Ad and/or Contact us for more details at:

Splatter@w0eno.org

Checks are to be Made out to Longmont Amateur Radio Club. LARC is a 501(c)(3) corporation.

Support Your Club!

Usually, our annual April LARCFest (hamfest) is our biggest fundraiser each year for LARC. In 2020 and 2021, however, they were both cancelled due to the Covid-19 pandemic. We are trying to raise funds for the club in other ways to be able to support more activities and events for our members, support our community, and also to keep our repeaters up-to-date and add new technology.

1. Get a King Soopers or City Market card and link it to our club. Every time you shop, LARC earns a small portion donated by the grocery store! See the directions at: <https://www.kingsoopers.com/i/community/community-rewards>. Select Longmont Amateur Radio Club as your charity (organization # VW736).
2. Do all your Amazon Ordering on Amazon Smile. Doesn't cost you a cent extra! For every order you submit, Amazon sends LARC a small percentage of your sales amount. Go to https://smile.amazon.com/gp/chpf/homepage/ref=smi_chpf_redirect?ie=UTF8&ein=84-1056239&ref=smi_ext_ch_84-1056239_cl
3. Donate directly to our club on our LARC website at https://www.paypal.com/donate/?hosted_button_id=3Y4UZGXS9W. You can use PayPal or a debit or credit card, and you will be sent a receipt from our club treasurer.
4. Volunteer to participate in or to lead ham-related activities for the club members. Your specific skills and knowledge will be a big help to enrich our club! You'll have a lot of fun, too!
5. Advertise your biz or skills with the Splatter. See page 27 for more details. We want your business!
6. Purchase or gift our LARC Logo Wear, and LARC receives a small percentage of your sale! So far, we have a cap and shirt — more items coming soon! These are a great fundraiser for our club! Be proud to wear to ham radio events everywhere! These are purchased, embroidered, and patched by a local business owner who is also a LARC member! These make great Holiday Gifts



Click here to shop at AmazonSmile
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You shop. Amazon gives.

*See them all on page 26! Reduced Prices!
Get your items now!*

- Short-sleeve Shirts (\$32) embroidered with your call sign, name if desired, and our LARC Logo patch.
- Long-sleeve Shirts (\$40) embroidered with your call sign, name if desired, and our LARC Logo patch.
- Fleece Jackets (\$43) embroidered with your call sign, name if desired, and our LARC Logo patch.
- Soft-shell Jackets (\$55) embroidered with your call sign, name if desired, and our LARC Logo patch.
- Caps (\$16) emblazoned with our LARC Logo patch on the front with your call sign embroidered on the back.
- Individual Patches \$4 (2.5") and \$6 (3.5")
- See the pictures of these new items on page 26 of this Splatter.
- To order any of our LARC Logo Items, go to <https://forms.gle/AgZQSMhrRtR1tLEG8>

Editor's Note

I welcome and thank you for any news items you submit for publication in the LARC Splatter.

Please note that all articles submitted may be edited for spelling, grammar, and length. Files in the form of DOC, DOCX, RTF, PDF, and TXT are all accepted.

If you would like a picture included, please send them in separate files, in JPG or PNG format. If you would like a caption under the picture, please specify what you would like your caption to say.

Longmont Amateur Radio Club

LARC is organized for educational and scientific purposes and to provide public communication services to the local community and adjacent areas through the operation of Amateur Radio. The Club holds regular meetings for the business of the Club, for the presentation of papers, amateur radio topics and their discussion.



Longmont Amateur Radio Club 2022 Leadership Team & Committee Chairs

| Position | Name | Call Sign |
|----------------------------------|-----------------------------------|-----------|
| President | Charles Poch | KØITP |
| Vice President | Michael Ritchie | WØKKI |
| Secretary | Pat Engstrom | W1PGE |
| Treasurer | Don Lewis | KEØEE |
| Technical Committee | Mark Skelton | N7CTM |
| Membership Committee | Steve Shearer | KØSTE |
| Past President | Jerry Schmidt | NØOUW |
| Publicity Committee | Steve Haverstick | KFØAGY |
| Planning Committee | Doug Altman | KEØSI |
| Repeater Trustee | Bryan Gonderinger | AFØW |
| LARCFest Committee | Dick Paige | KEØVT |
| Special Events Coordinator | Mark Mollenauer | KDØGOC |
| License Exam Coordinator (ARRL) | Aaron Rees | AJ7R |
| Education Coordinator/Instructor | Kat Gonderinger | WØUM |
| Education Coordinator/Instructor | Bryan Gonderinger | AFØW |
| Splatter Newsletter Editor | Kat Gonderinger | WØUM |

Please Visit LARC's Sponsors & Supporters

(there's always room for more!)

Spaces for entrepreneurs to set up an office, as well as meeting and conference rooms available.



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350 Terry St.
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Contact us at support@cosolve.co for more information



Shop with King Soopers to have them donate to LARC!
Read more about it on page 28.



Jim Andrews, KH6HTV

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February Answer Key

February Answer Key

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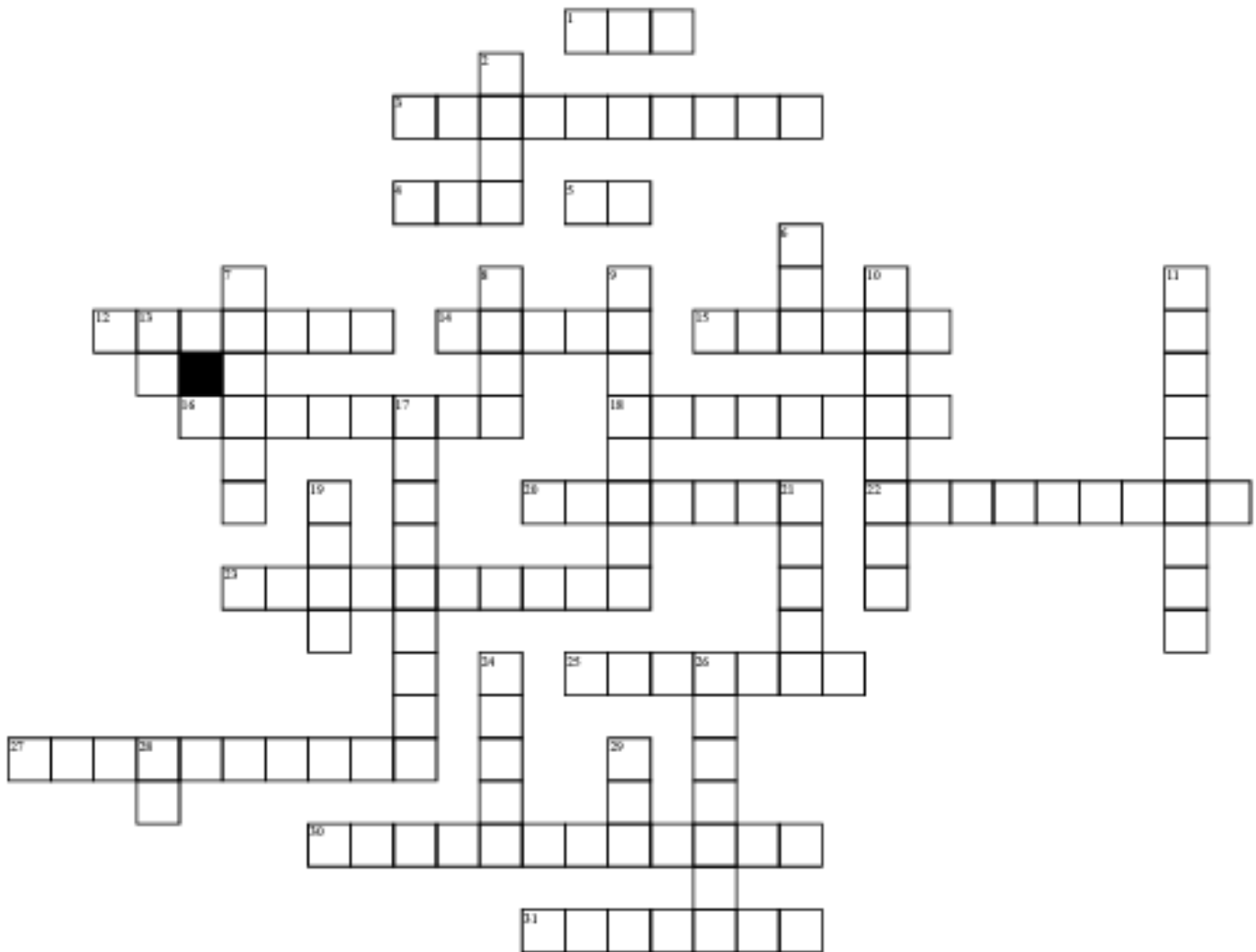
Valentine Word Search

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| DESIRE | SWEETS |
| DEVOTION | TENDERNESS |
| DOVES | VALENTINE |
| EMBRACE | |

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March Puzzle



Across

1. Emission type usually used in HF communications (abbr.)
3. Abbreviated by the Greek letter Lambda
4. Signal sent in Morse code as ... --- ...
5. Process of tracking a signal (abbr.)
12. Type of input signal produced by a computer
14. Circuit device that allows current travel in only one direction
15. Receiving on one frequency and transmitting on a different frequency is known as _____ operation.
16. To add information to a signal
18. Coil of wire
20. Device radio signal comes in through or goes out from
22. Increases a signal

23. Circuit that creates an harmonic signal

25. Components make up a
27. Voice input comes through this device
30. Mixing is also known as
31. Transmitting and receiving on the same frequency is _____ operation

Down

2. Dipole antenna mounted horizontal between 8 to 10 feet above ground
6. Unit of current
7. Type of antenna made of wire with a center feed point
8. Type of wave for normal radio signals
9. Element of a circuit that transforms energy to heat

10. A circuit in which inductance and capacitance are equal

11. Rate of change
13. Output of the first mixer (abbr.)
17. Modulation that increases size of a wave
19. Unit for EMF
21. One type of code used in digital communications
24. Takes two signals and makes a different signal by the addition or subtraction of the two signal's frequencies
26. 50 Ohm feed line
28. Input to a receiver (abbr.)
29. Input device for Morse Code transmission

LARCFEST 2022

Calling All HAMS!



**Saturday
April 2nd
9am to 1pm**

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**\$6 Admission
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**Table Costs
\$15 in Advance / \$20 at the door**

For More Info go to:
<https://w0eno.org/larcfest/>
email Dick, KE0VT - larcfest@w0eno.org

Longmont Amateur Radio Club

P.O. Box 86

Longmont, CO 80502-0086

w0eno.org

Membership Application

Tax Deductible Donation to LARC: \$20 per year [] New Member: [] Renewing Member Payable via PayPal with [sent application](#).

First Name: _____ Last Name: _____ Birth Year: _____

Address: _____ City: _____

State: _____ Zip: _____ - _____ Call Sign: _____ Class: _____

E-mail: _____ (needed for correspondence)

H-Phone _____ C-Phone: _____ B-Phone: _____

I am a member of: [] ARRL [] BCARES [] VE

DISCLAIMER AND WAIVER: I apply for membership in LARC. I understand that some LARC activities are potentially hazardous. If I am injured or killed while participating in a LARC activity, I and my heirs agree to hold harmless LARC and its officers, directors, and members.

SIGNATURE: _____ DATE: _____

OTHER LICENSED FAMILY MEMBERS (Same Address) (No extra cost)

Name: _____ Call: _____ Signature: _____

Name: _____ Call: _____ Signature: _____

Name: _____ Call: _____ Signature: _____

Note: A tax deductible receipt will be provided.

THE CHECKED MEETING TOPICS ARE OF INTEREST TO ME

Training Class for [] Technician [] General [] Extra [] Volunteer Examiner

Band: [] HF [] VHF [] 222 [] UHF [] 900MHz [] Other _____

Mode: [] CW [] SSB [] AM [] FM [] ATV [] Other _____

Digital: [] SSTV [] PSK31 [] MFSK [] PACKET [] FT8 [] APRS [] Other _____

Electronics: [] Components [] Circuit Analysis [] Amplifiers [] Other _____

Other Topics: [] Antennas [] Propagation [] Satellites [] Kit Building [] Fox Hunts [] Soldering

[] DSP [] DX [] ARES [] Contests [] QRP [] HamFests [] Emergency Preparedness

[] Community Service Events [] Other _____

[] Other _____ [] Other _____



ARRL The national association for
AMATEUR RADIO®

Membership Application

Application for use by ARRL Affiliated Clubs

Contact Information

I am a brand new member or my membership has been lapsed for 2 or more years. My club will keep \$15 of my dues.

I am renewing (includes lapsed members of less than 2 years). My club will keep \$2.00 of my dues.

Name _____ Call Sign _____

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City _____ State _____ ZIP _____

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Date of Birth ____/____/____ **Get an annual birthday coupon (US only)**

My Family Member is Joining or Renewing: (\$10 per member)

Name _____ Call Sign _____

Name _____ Call Sign _____

Your Annual Membership Dues – Circle Your Choice/s.

| | 1 Year | 2 Years | 3 Years | |
|--|--------|---------|---------|---|
| US | \$49 | \$95 | \$140 | Monthly QST or On the Air via standard mail for US members |
| Youth | \$25 | | | Must be 21 years old or younger AND the oldest licensed Radio Amateur in the household |
| Canada | \$62 | \$120 | \$177 | Monthly QST via standard mail for Canadian members |
| International | \$76 | \$147 | \$217 | Monthly QST via standard mail for International members |
| International/Canada – no print magazine | \$49 | \$95 | \$140 | Digital magazines |
| Family | \$10 | \$20 | \$30 | Must reside with primary member and have corresponding membership dates; no extra copies of magazine |
| Blind | \$10 | \$20 | \$30 | No delivery; all other member benefits apply. Requires a one time signed and dated statement of Legal Blindness |

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Card Number _____ Expiration Date _____

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