



Volume 10 Issue 110

May/June 2022

We are not holding a June General Meeting this year, and we would like to encourage all our members & guests to attend our ARRL Field Day Event at 12:00 noon on Saturday, June 25th through 12:00 noon on Sunday, June 26th. Come early at 10 am on Sat. to help set up antennas, radios, & layout, and on Sunday at 12 pm to help take down the antenna & radios.

Our LARC Field Day Event is being held at 9595 Nelson Rd., Longmont, at the Boulder County Fairgrounds, in the park across from the Clover Building.

Please join us!

If you will be joining us for the BBQ event at 5 pm on Saturday night, please RSVP to Dick, KE0VT, at Gwabi2@hotmail.com, so we'll have enough food for everyone!

For more information about Field Day 2022, go to:

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



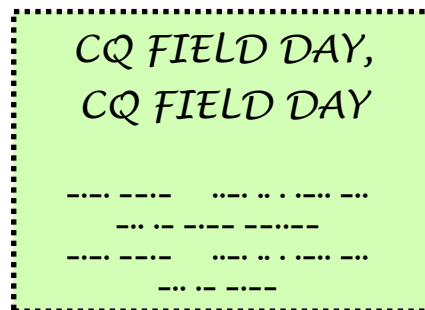
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Join Us for Field Day at the Fairgrounds Park!

Our June General Meeting has been canceled, and we would like to see you ALL at our Field Day Event on June 25-26th at the Boulder County Fairgrounds Park in Longmont.

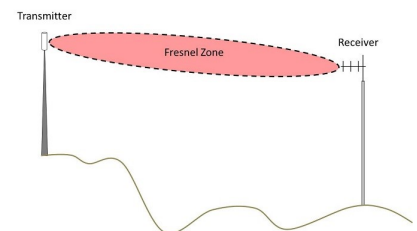
- We begin setting up our antennas, radios, and general layout at 10:00 am on Sat., 06/25. We need help with this, and it will be fun to experience the radio and antennas setup.
- Our Field Day Event starts on the air on Saturday, beginning at 12:00 noon, continuing through the night until Sunday, 6/26 at 12:00 noon.
- You can choose which radio and/or band you'd like to use, and you can also sign up for designated two-hour slots for your on-air operations.
- We need both operators and loggers for this event.
- Techs, Generals, and Extras can all operate on all bands for Field Day if at this LARC event.. Even unlicensed people can get on the air as well with us. Bring your friends!
- Getting on the air is really simple — there's a pre-planned short script to use, so you don't have to be creative and think about what you're going to say.
- We're having a BBQ at 5 pm. You DO need to RSVP for this event to Dick Paige, KE0VT, at Gwabi2@hotmail.com. LARC is providing the meats and buns. Please bring a pot-luck side-dish of some kind to share.
- Take-down of all the equipment, radios, antennas, and other gear begins at 12:00 noon on Sunday, 6/26. We need lots of help for this as well.
- Hope to see you there!



Ham Jargon

Fresnel Zone

Roughly ellipsoidal (football-shaped) region of space between a transmitter and a receiver defined by potential object (obstruction) locations lying off the line-of-sight, resulting in possible constructive (aided by in-phase) or destructive (attenuated by out-of-phase) interference patterns, as in multipath, often resulting in picket-fencing and other irritating sound effects.



- https://en.wikipedia.org/wiki/Fresnel_zone
- <https://www.pagerpower.com/news/fresnel-zone/>

LARC's YouTube Channel

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

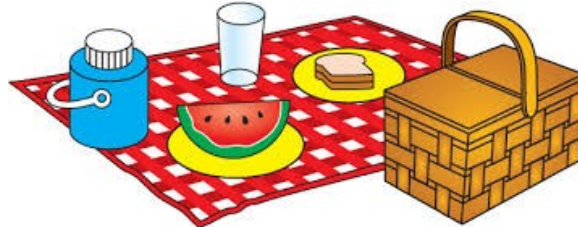
<https://www.youtube.com/channel/UC0bX61lXfLHEvix6msKzITg> or by going to the club web site at w0eno.org and selecting Presentations under the LARC History menu. Subscribe to our channel so you don't miss out!

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 <https://smile.amazon.com/charity?orig=%2F>, 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!*

** Currently only 8 LARC members/families are using this link — please join them to help raise funds for our club repeaters and activities!*

Useful Ham Radio Web Site

<https://morsle.fun/practice/>

If you are learning Morse code, this is a fun site to practice your copying skills for both words and call signs, and to improve your listening/copying speed.

PRESIDENT'S CORNER

From the Virtual Desk of Charles Poch, KØITP May/June 2022

“Life is at the beach. All you have to do is to find your wave in June.”

Currently Boulder County is open with no mask requirements. With that said, the board is looking to get meetings back face-to-face. We have some planning to do to get hybrid (both virtual and in-person) meetings going, so let the work begin!

We have a big upcoming event on June 25-26th with our Summer Field Day. Keep an eye on our website for details, and many are in this issue of the Splatter.

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!

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 currently looking for presenters for our 2022 General Meetings.

Keep your ideas coming for new events and/or activities for the club. I ask that if you have an idea, that if you could run it (with help if needed), it would be a big help to make it successful.

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.
- April “Above & Beyond” recipient Doug Altman (KEØSI) - for all his service as Event Planner for our Club through many years.
- April “Above & Beyond” recipient Richard “Dick” Paige (KEØVT) for putting together a HAM-FEST with fewer than 30 days notice!
- April “Above and Beyond” recipient Sebastian Wessels (NSØW) for supporting the club with activities, all on his own.
- May “Above and Beyond” recipient Harlan Olson (WØHLO) - helping a silent key widower.

Who can YOU recommend for their service to LARC to get this Award?

I have always said that this is your club. How can you help? We’re looking for individuals to help with committees and general volunteering for our LARCFest 2023 Committee (already in planning stage), 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/13764479>

Field Day - Your Plans?

- Come to LARC Field Day
- Do Voice/SSB on Field Day
- Do CW on Field Day
- Attend another club's Field Day
- Camp on my own but work Field Day
- Work Field Day on mobile
- Work Field Day indoors at home
- Work Field Day outdoors at home
- Bring my family to Field Day
- Bring friends to Field Day
- Come for the social part
- Don't plan on working Field Day
- What's Field Day?

[pollcode.com free polls](https://vote.pollcode.com/13764479)

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!](#)

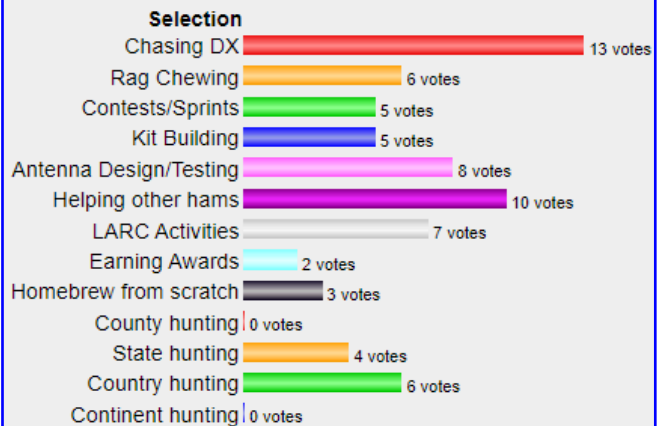
Net — Thursday Night Club Net, 8:00 pm

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!**

**April Poll
Results —
Thanks for
voting!**

In which ham activities do you participate regularly?



19 voters

**Take our
May/June
Poll [Now!](#)
It will only
take about 2
minutes!**



TAKE OUR MAY/JUNE POLL!

Either click on the poll on the left, or go to:
<https://vote.pollcode.com/13764479>

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 this spring. See the links below for more information, rules, logs, and QSL card information. They all present a great opportunity to get on the air and have some fun, and are great for beginners as well! Plan your calendar! Lots of radio fun coming right up!

Start Date	End Date	More Info
06/21	06/21	WW Sideband Activity Contest https://wwsac.com/rules.html
06/25	06/26	ARRL Field Day http://www.arrl.org/field-day
06/30	06/30	Granite Mtn Hotshots—Wildfire Loss https://www.qrz.com/db/n7gmh
07/01	08/31	Iowa Railroads on the Air (IRROTA) https://www.w0dbq.org
07/01	07/01	RAC Canada Day Contest https://www.rac.ca/rac-canada-day-contest-celebrate-canadas-birthday-on-the-air/
07/02	07/02	Colonial Williamsburg Special Event https://www.k4rc.net/
07/02	07/03	Marconi Memorial HF Contest http://www.arifano.it/contest_marconi.html
07/04	07/04	Independence Day Observance https://www.qrz.com/db/w5kid
07/05	07/09	Whiskey Rebellion https://wa3com.com/
07/09	07/10	IARU HF World Championship Contest http://www.arrl.org/iaru-hf-world-championship
07/17	07/17	CQC Great Colorado Gold Rush http://www.coloradoqrpcclub.org/contests/gold.htm
07/20	07/20	Apollo 11 Moon Landing Commemoration https://limarc.org/
07/23	07/23	YOTA (Youth on the Air) Contest https://www.ham-yota.com/contest/
07/30	07/31	RSGB IOTA Contest https://www.rsgbcc.org/hf/rules/2021/riota.shtml
07/30	07/31	Tennessee State POTA http://www.tnpota.org/

- You can see much more QSO Party and Contest Information at: <https://www.contestcalendar.com/contestcal.html>
- You can see many more Special Event station information and dates at: http://www.arrl.org/special_events/search/page:1/model:Event
- To learn more about having fun with QSO Parties, take a look at this link: <http://www.arrl.org/files/file/QST/This%20Month%20in%20QST/April2019/kENNEDY.pdf>



2022 BOARD OF DIRECTORS

President: Charles Poch, KØITP
Vice President: Michael Ritchie, WØKKI
Secretary: Pat Engstrom, W1PGE
Treasurer: Don Lewis, KEØEE

ADDITIONAL VOLUNTEERS:

Membership: Steve Shearer, KØSTE
Technical: Mark Skelton, N7CTM and
Bryan Gonderinger, AFØW
Publicity: Steve Haverstick, KFØAGY
Splatter Editor: Kat Gonderinger, WØUM
Planning/Special Events: Doug Altman,
KEØSI & Mark Mollenauer, KDØGOC
BCARES Representative: Jerry Schmidt,
NØOUW
Repeater Trustee: Bryan, AFØW
Education: Kat, WØUM & Bryan, AFØW
LARCfest Chair: Dick Paige, KEØVT
VE Team Leads: Aaron, AJ7R & Kat, WØUM

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, KØITP](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:

WØENO-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:

- Ralph Bilal, WDØEJA
- Bryan Gonderinger, AFØW
- John Kennedy, KDØJPE
- Don Lee, WB4FAS
- Logan Luther, K04FIE
- Ed Mohrman, WA7EM
- Chuck Poch, KØITP
- Steve Shearer, KØSTE

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) detailing 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, WØUM, Splatter Editor](mailto:Kat,W0UM,SplatterEditor)

LARC VE Exam Session Information

LARC sponsors a VE Exam Session every month. 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.

May 15th VE Exam Session Results

Our LARC PVET VE Team held an Exam Session on Sunday, May 15th, led by Kat Gonderinger (W0UM). Also assisting with this Exam Session were Chuck Poch (K0ITP), Lynn Mears (K0CLM), Rich Gordon (K0EB), Mike Stember (AE0MS), and Mike Ritchie (W0KKI). Thank you to our volunteer examiners for your service! We couldn't have done it without you!

At this session, 14 applicants were tested, which resulted in 7 new Technicians, 3 Generals, and 1 upgraded new Amateur Extra. There were a total of 14 passed exams in all.

Congratulations to everyone who passed their exams!



License	#
Technician	7
General	3
Extra	1
Total	11

June Exam Session is SATURDAY, June 25th @ 10 am

Our next Exam Session will be with the LARC ARRL VE Team led by Aaron Rees (AJ7R) on Saturday, June 25th, at the Terry Street Professional Building at 350 Terry St., Longmont, 80501, *upstairs in the Onyx Room*.



As this is an ARRL exam session, there is a \$15 fee for this exam.

Please pre-register at <https://w0eno.org/2021/10/12/contact-us/>.

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
Jun. 25	Sat	10:00 am	LARC ARRL VE Team	In person on paper
Jul. 17	Sun	9:00 am	LARC/PVET VE Team	In person on your laptop or tablet, or on paper
Aug. 27	Sat	10:00 am	LARC ARRL VE Team	In person on paper
Sep 18	Sun	9:00 am	LARC/PVET VE Team	In person on your laptop or tablet, or on paper

Ham Enthusiast Breakfast Every Saturday Morning

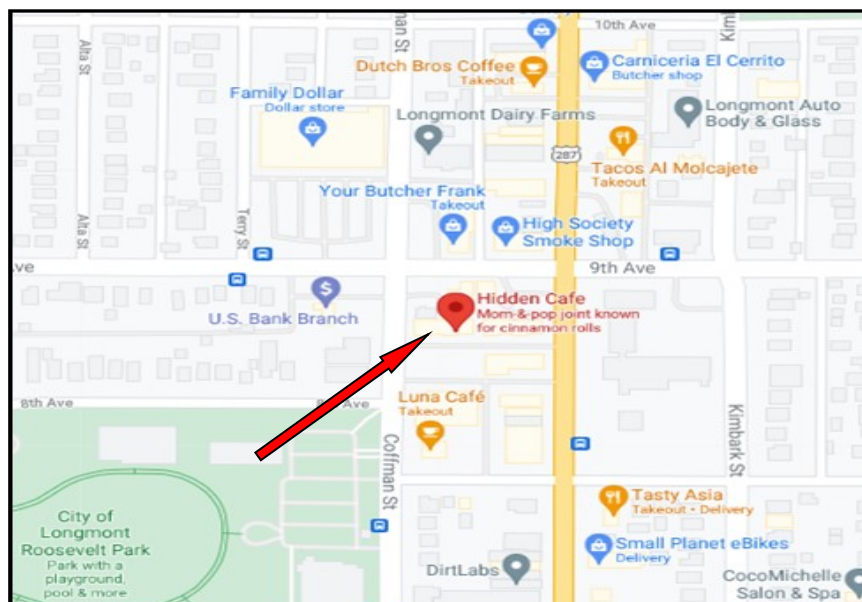
Want some social time with other ham radio operators in a small group?
Join us for breakfast!

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.

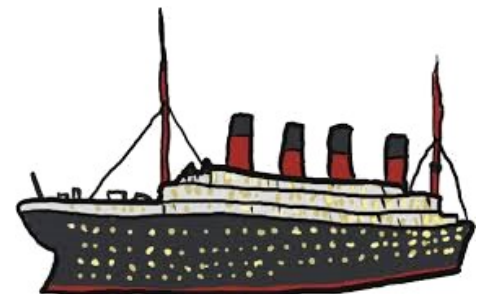
These are hosted by Don Lewis, KE0EE.

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.



100th Anniversary of the Titanic Launch

David Myrick (V01VCE) became a silent key on May 21, 2021. In this video, he reflects on the time his great uncle Jimmy – then only 14 years old – received the Titanic's first distress signal in Cape Race, Newfoundland and Labrador. He was located 300 miles due south of the Titanic wreck. Listen to David telling his uncle's story at <https://www.youtube.com/watch?v=H3aBwkjHxnI>.



The Titanic was launched on May 31, 1911, and sank in the North Atlantic on April 15, 1912.

We had eleven new members join the LARC in April, majority of them joined the LARC at or based on the experience from attending LARCFest. Thank you to all the volunteers and attendees that attended our LARCFest in 2022.

The LARC had one new member join in May.

LARC Newest Members — April						
Call	First Name	Last Name		Call	First Name	Last Name
KDØYSK	Stuart	Ball		NØVHW	Kim	Kayton
AEØPJ	Jason	Bain		NØTPV	Mike	Kayton
NØCTO	Rich	Blackmore		AI7PM	Phillip	McElrath
NØBNY	Linda	Blackmore		NoCa11	Daniel	Neitfeld
KFØJIT	David	Dimond		N7JJY	George	Smith
NoCa11	Patricia "Pat"	Dimond				
LARC Newest Members — May						
KFØIAH	Jarold	Self				

Following the April meeting a random name of the attendees was drawn, and the winner was Stan (K04BGS). Stan decided to donate the prize back and it will be used in a future door prize drawing.

Following the May meeting a random name of the attendees was drawn, and the winner was Jason (AEØPJ). Jason decided to select some recent QST magazines.

The Club is always looking for additional donations of door prizes to give away at the meetings. If you have something to 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.

Stay safe, and hope to see and/or hear you at the next LARC General Meeting on July 20th. Any questions or issues, feel free to contact me.

73,

Steve Shearer (K0STE)
 Membership Chairman
K0STE@W0ENO.ORG
membership@w0eno.org
 303-915-9942



Field Day is June 25-26. Pencil the date in on your calendar. Get ready for some fun!

You may wonder what Field Day is and also have broader questions about Ham contesting.

1st – What’s the big deal about contesting? The answer relates to the general observation that competitiveness is part of human nature. Why do people run marathons? Why do people pay golf pros a lot of money so that they can play better and lower their handicap? Why do people work to have the best lawn in the neighborhood? It is human nature to test your limits, develop, and show your skills. So, it is with Ham Radio contesting. Ham radio organizations look for any excuse to run a contest or special event station and tons of operators fill up the air waves during contest times.

2nd - The goal in almost any Ham contest is to make as many contacts as possible during the contest period. Some contests have scoring rules that give you multipliers for certain kinds of contacts. Some focus on special modes or on less used bands. Most have some specific exchange that goes between the two stations.

For Field Day, the exchange is the number of transmitters and class, and the ARRL section. Field Day multipliers are what kind of power you’re using, and you get a different amount of points for the modes you are operating. Field Day has its roots in emergency preparedness. It was a test to see how well hams could operate away from their normal home stations using temporary antennas and emergency power. Going portable with today’s compact 12V powered radios is a lot easier than 50 years ago with boat anchor vacuum tube rigs drawing 5-10 amps at 120 volts. But, the expectations are now higher about what bands and modes can be quickly deployed.

When you sit down to operate one of the LARC field day radios, you will probably be shocked at the pile-ups from top to bottom of the band. You may panic that there is no way you can be heard and no way that you can copy the other station. But, you can get past the panic and engage. The brain is pretty amazing at how it can ignore a lot of noise to focus on one signal. When you find a strong station calling “CQ Field Day,” answer. Don’t politely wait until everyone else clears. Jump in and transmit! Compete for the contact! Politely wait while an exchange occurs. But then, jump in!

There are two ways to operate and you may do both during your session. One is “seek and pounce.” In that, you tune up and down looking for a CQ and quickly answer. The other way is to camp out on a frequency, call CQ, and collect a pile up of stations calling you. The CQ mode can produce higher contact rates, but you have to have a strong signal and repeatedly call CQ until you start getting responses from other hams. Then stay on this frequency and keep calling CQ!

You typically work with a partner. Partner 1 operates and Partner 2 logs. They work together to copy the station call signs and exchanges in the very noisy environment. Don’t be overly precise about signal report. If the exchange includes a signal report, use 59 for most, 57 for weak, 53 for very weak. Use standard phonetics. Use standard ham abbreviations (CQ, QSL, 73, Again....).

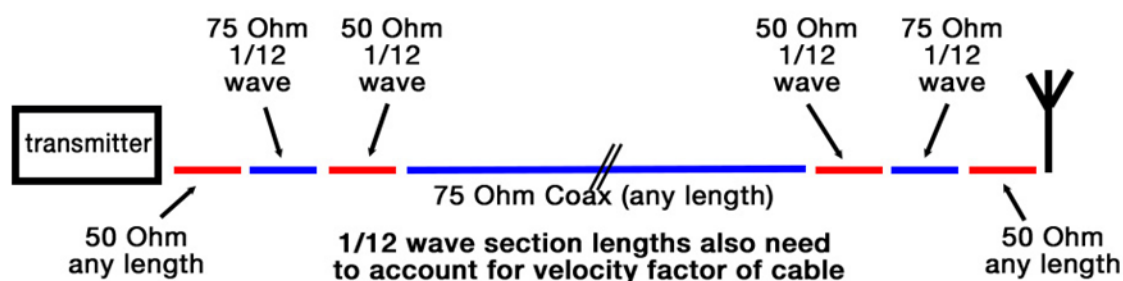
Exchanges are fast. No chit-chat or rag chewing. Very few friendly greetings. Just send and receive the exchange info, get it in the log, and move on. During a successful burst, you may make 4+ contacts per minute. In difficult times, you may scroll around quite some time looking for a station to call.

Come out and have some fun!

You may wonder if you can use the inexpensive RG-59 or RG-6 TV cable you see at big-box stores like Lowe's or Home Depot for your ham radio feedline. The first thing you'll notice when researching these cables is that their characteristic impedance is not the 50 ohms for which amateur radio equipment is designed, but rather 75 ohms, which is common in the TV market.

Does this mean that the cable will not work? It depends a bit on your intended use, but as Michael Martens of *KB8VBR Antennas* explains, this cable can be perfectly usable for some applications. Read his article at: <https://www.jpole-antenna.com/2015/01/28/using-rg-59-or-rg-6-catv-cable-with-an-amateur-radio-antenna/>. He also has a great YouTube channel.

75 Ohm Coax Cable Transformer System www.jpole-antenna.com



Field Day Aggregate Score

As part of their set of 2020 rule modifications due to Covid, the ARRL temporarily began reporting not only individual Field Day scores, but also aggregated scores for club. The idea being that since many clubs were canceling or severely restricting their Field Day operations due to the pandemic, this would allow club members to participate individually, yet still have their scores count toward their club.



So far, the "temporary" 2020 modifications have stayed in place, so if you participate in Field Day from your home station, vehicle, or really any non-club site, and would like your points to be added to the LARC aggregate, please be sure to enter "Longmont Amateur Radio Club" (not LARC) into the "Club or Group Name" field on your entry sheet.

For more information on Field Day, see: <http://www.arrl.org/field-day>

In the last Splatter edition, a brief definition of a decibel was explained, along with the formula for power gains or losses.

We normally keep track of our Standing Wave Ratio (SWR). Some meters have a scale that indicates Reflected Power Percentage. Such as a 3:1 SWR indicates reflecting 25% power. Sounds like quite a loss, but how does it affect what we hear?

To give you an idea of how much difference you will actually hear, we will use a simple example. Our load is a resonant antenna or a pure resistive load at values other than 50 ohms. Either way, the load looks the same if we are right at the resonant point of the antenna.

Now we can look at a nomograph. What is that? Ho ho, it makes life simpler. It has forward power (horizontally) compared to reflected power (vertically). There are several straight lines at a 45 degree angle across the graph that represent various SWR values.

We will pick an unacceptable SWR like 10:1. On the SWR meter, it will appear like nothing is going out. However on the nomograph at 10 watts forward, it shows reflected at 5 watts. Only half the power measured is reflected. How does that calculate in dB?

Using our formula from last month it figures at 2.3 dB loss. With most receivers, this will be a little over 1/3 of an S unit. However at the same time, our ears will detect the loss.

This figure will vary with loads that are not a pure resistance and will increase loss with frequency. However it gives you an idea of what you're actually losing. So why is it at a 10:1 SWR you are not getting heard at all?

This is not due to reflected loss. The solid state radios will only provide a small amount of power out at this high of SWR.

If you are at 10:1 SWR due to moving frequency from where your SWR is 1:1, you will find that by using a tuner to cancel the reactances, you will allow the radio to put full power out.

Many have been surprised that communications can do well with this high mismatch when compensated by a tuner.

This is a very controlled example, just to give you an idea of what a loss may sound like. It can get quite complicated; however, unless we are into antenna design, it is not necessary to be overly concerned.

If you are dealing with a high SWR, use the tuner to reduce it. This will allow the radio to put maximum power out and it is a protection to the transistorized power amp. In many cases, performance will be fine.

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

... or POTA and SOTA

What follows is a description of the antenna system that I've used for the last four ARRL Field Days. Very little of what I will describe is my own invention. Rather, it is a combination of things that I've found on various ham radio web sites or on YouTube. That being said, the advantage of this antenna system is that it can be erected in 10 minutes or less, by a single person and taken down and packed up in the same amount of time.



The system consists of a linked dipole, fiberglass mast and guying system:

The antenna stores in one bag and the guying system in the other. The shorter of the two poles (20 ft.) is sized for the SOTABEAMS 20/40-meter linked dipole. The longer pole (31 ft.) is used with their 20/30/40 meter and 20/30/40/80-meter linked dipoles.

SOTABEAMS is a UK company that specializes in Summits On The Air items and operation. (Most of their products are handled by DX Engineering here in the United States.)

One of the biggest issues with using fiberglass poles to support antennas, is securing the base against movement. Some people just remove the cap from the bottom of the pole and place it over a piece of rebar that has been hammered into the ground. Others use a drive-on mount that has an integrated pipe to slip the pole into. My solution was to drill a hole in the bottom of a 2-inch PVC pipe cap and use a 10-inch galvanized nail to secure it to the ground.

The next issue has to do with guying the pole. The SOTABEAM antennas are designed to support the pole from the top, by using the antenna wires and a guy line. The problem with this method is that you now have a very flexible item being held in place by its two ends. It works but I don't like the idea of the antenna wire having to absorb the tension caused by wind blowing against the pole.



A solution that I modified from another that I found on YouTube involves attaching three or four guy lines to the lower portion of the pole. This works best if the angle of the guy lines is 45 degrees or so to the pole. I decided, again based on other people's experience, to attach the guys up two pole sections from the base. This forms a right triangle with the pole and the ground sides being equal lengths. If you remember some of the Trig that you had to learn in high school, the guy line should be 1.414 times the length of two sections of your pole. Before cutting your guy lines, you should add another foot of length to each end to allow for a loop for the stakes and extra line to attach to the pole.

My solution for attaching the line to the pole was to order guy rings from K1CRA.com that were sized to remain above the second section of my pole. I attached four loops and a tensioning system that I saw on another YouTube video. The tensioners are Nite Ize Figure 9 devices that can be found at Amazon, REI, and many camping gear stores. They are easily adjustable and hold well. I do add a couple of half hitches to add further security. This system withstood the Arizona winds and dust devils that were a daily occurrence at the 2021 Quartz Fest.

>> *Continued* >>

I stake the guy lines to the ground prior to attaching to the Nite Ize. This allows me to support the pole, with one hand, while attaching the lines and makes it possible for a single person to erect the antenna. An easy way to determine where to stake down the line is to extend two sections of the pole and lay it out from the PVC cap. The lines will all overlap the cap and makes it easy to pick them up from the ground while holding the pole.



As noted earlier, the antenna is a 20/40-meter linked dipole made by SOTABEAMS. It consists of three kite string winders with the antenna wire on two of them, and the coax and guy line on the other.



The center insulator is sized to fit over the top-most section of the pole and has a balun attached. Erecting the antenna is as simple as unwinding all three, slipping the insulator over the top section, and extending the pole until it is fully out. All that is left is to stake down the antenna wires and attach the coax to your radio. (Note that everything, except the coax, remains attached to the winders when you stake them down.)



The antenna is a linked dipole. What that means is that sections are connected to increase the length of the antenna and lower the resonant frequency. This is accomplished with a pair of alligator clips between the 20 meter and 40-meter sections. The antenna is tuned to the center of each band (when used with the specified length of fiberglass pole) and does not require a tuner to stay under a SWR of 2:1.

One advantage of this method of erecting the antenna over SOTABEAM's (using the antenna wires and guy line), is that pole sections can be lowered and the antenna links connected, or disconnected, without having to lay the pole flat on the ground. It also allows you to change the orientation of the dipole legs to direct the radiation pattern towards the part of the country that you would like to work.



I'll be using this antenna on the top of Independence Mountain in North Park, on Field Day again this year. I hope that you find this information useful, and please feel free to contact me at my email address, listed on the club website, if you have any questions or would like additional information on any of the antenna items.



At Chuck's (KØITP) 2M Tape Measure Yagi Build class, I was introduced to a connector new to me - the SMA connector. The question came up as to how to identify a male SMA connector versus a female. Mike (WØKKI) tried to explain it to us, but it didn't make much sense to me. Not that Mike was confusing, I was just focused on the wrong thing. Then at LARCFest, a younger ham asked two of us older hams what UHF connectors were - a fair question since he was setting up an HF rig. We two older hams had a disagreement on the "numbers" for the two connectors. With these issues in mind, I consulted the almighty Google.

Before we get into that, let's set some terminology regarding "pin" and "socket." A "socket" is the hole in the middle of a connector. A "pin" is the connector's extension of the center coax conductor that goes into the "socket" to make the connection. Frequently, the "male" connector has the pin, and the "female" connector has the socket. But read on – that is not always the case.

Let's talk about the UHF connector questions first. Why the name "UHF" connector and what's with the different numbers? According to my primary source, <https://www.arcantenna.com/blogs/news/uhf-pl259-so239-what-is-the-difference>, the "UHF" indicates that the connector is good up to the UHF spectrum. However, some say that the top end is in the 100-300 MHz range. The connector with the center pin, also referred to as the male connector, has a number of PL-259. The connector with the center socket, also referred to as the female connector, has a number of SO-239.

(Left) UHF Female SO-239 vs. (Right) UHF Male PL-259



That's right, even though they are always used together to make a connection, they have different numbers. We can blame the military for that as those were their original part numbers. "PL" stands for plug, and "SO" stands for socket. So, the PL-259 is the male UHF connector and the SO-239 is the female UHF connector.

Now let's talk about the SMA connector question – which is male and which is female? My primary source for this question is <https://www.showmecables.com/blog/post/sma-dimensions>. Determining the gender of the SMA connector is not as anatomically intuitive as the UHF connectors. The male connector is identified by the hex nut with threads on the inside – not by the existence of a pin. However, the standard SMA male connector does have the center pin. The female connector is identified by the lack of the hex nut and

>> *continued* >>

has threads on the outside – not by the existence of a socket. However, the standard SMA female connector does have the center socket. The female is more like a bolt for the male's nut. So, the male SMA connector screws onto the female SMA connector.

SMA Male Connector



SMA Female Connector



Now here is the fun part – “reverse polarity”. Maybe a misnomer, but the reason the male is identified by the hex nut and not the existence of the pin is that a Reverse Polarity (RP) SMA Male Connector has the hex nut, but has the socket on the inside, not the pin, hence the "Reverse". The Reverse Polarity (RP) SMA Female Connector has the threads on the outside, but has the pin on the inside, not the socket.

Reverse Polarity SMA Male Connector



Reverse Polarity SMA Female Connector



So, Mike was perfectly correct. I was focused on which connector had the pin and which had the socket, instead of which had the nut and which had the bolt. The same holds true for the genders of the UHF connectors, although they don't have the “reverse polarity” issue. I hope this clarifies these questions for you as it did for me, or at least gave you a chuckle at my prior ignorance!

Rare Alignment of Planets in the Night Sky

Look up on clear nights between now and June 27th to see the five brightest planets clustering together. This alignment includes Mercury, Venus, Mars, Jupiter, and Saturn. Uranus and Neptune will also be seen in the same area, but will be tougher to spot, requiring binoculars or a telescope.

The last time this conjunction occurred was in 2004, and the next time this will be visible is in 2040. For more information, see the following: <https://www.nationalgeographic.com/science/article/see-a-rare-alignment-of-all-the-planets-in-the-night-sky>.

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 to study with flashcards and also to take your practice tests. It keeps track of your weak areas for you!



Technician Exam Review -- Question T3B05

How does the wavelength of a radio wave relate to its frequency?

- A. The wavelength gets longer as the frequency increases
- B. The wavelength gets shorter as the frequency increases
- C. There is no relationship between wavelength and frequency
- D. The wavelength depends on the bandwidth of the signal

General Exam Review -- Question G3B05

What usually happens to radio waves with frequencies below the MUF and above the LUF when they are sent into the ionosphere?

- A. They are bent back to Earth
- B. They pass through the ionosphere
- C. They are amplified by interaction with the ionosphere
- D. They are bent and trapped in the ionosphere to circle Earth

Extra Exam Review -- Question E3B05

Which amateur bands typically support long-path propagation?

- A. Only 160 meters to 40 meters
- B. Only 30 meters to 10 meters
- C. 160 meters to 10 meters
- D. 6 meters to 2 meters

Check your answers on page 21!

Upcoming Hamfests and Conventions

You can use this info to plan some of your upcoming travel to get away from home. You will find the local events in bold print.

Some conventions and hamfests may have been canceled or postponed — 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
07/09	BHARC Summer TailGate http://w0blk.com	Rapid City, SD
07/15-07/17	Glacier Waterton Hamfest - ARRL Montana State Convention http://www.gwhamfest.org	Essex, MT
07/16	Megafest https://ppraa.org	Monument, CO
07/22-07/23	Ham Holiday 2022—ARRL Oklahoma Section Convention https://hamholiday.com	Oklahoma City, OK
07/30	KARS (Kootenai ARS) Hamfest http://www.k7id.org	Post Falls, ID
08/13	RCKARA Hamfest 2022 http://rckara.org	Hutchinson, KS
08/28	Denver Radio Club Hamfest http://W0TX@W0TX.org	Brighton, CO
09/03	Alamogordo ARC 36th Annual Hamfest https://www.qsl.net/k5l1rw/hamfest.htm	Alamogordo, NM



Remember -
our fallen heros.
They are the reason
that we are free.

LARC Calendar of Events for 2022

Chuck, K0ITP

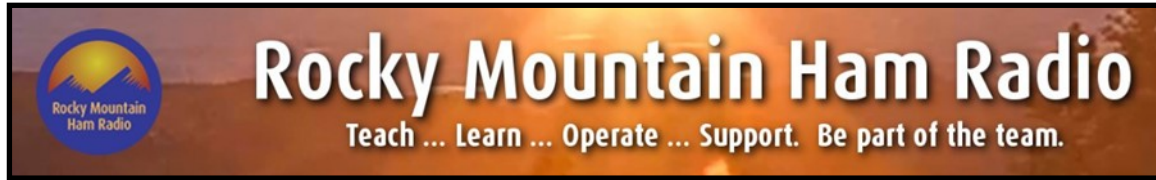
I would like LARC to host at least one club event each month. Some are still in planning, but this is what we have planned so far. We're open for suggestions on the "tbd" months! If you would like to host an event, or have ideas for an event you think would be of interest to club members, please contact me at k0itp@w0eno.org. Let's get involved in these events, and come up with ideas for other events that sound fun!

** volunteers needed!*

Date	Day	Event	Date	Day	Event
Jun. 25	Sat	ARRL Field Day*	Sep.	tbd	tbd
July	tbd	tbd	Oct. 29	Sat	Longmont Halloween Parade*
Aug. 06	Sat	Boulder County Fair Parade*	Nov. 12	Sat	Turkey Trot Race*
Aug. 6	Sat	Radio in the Park	Dec.	tbd	LARC Christmas Party*

Upcoming RMHAM University Class

Rocky Mountain Ham (RMHAM) offers classes throughout the school season, and will be starting up again in the fall. To view all of their past class videos and see handouts (dating back to 2013), you can go to <https://www.rmham.org/course-syllabus/>.



Audio Interfaces - The Tech Prepper

Bryan, AF0W

On a recent Tuesday Night Hamlet net (held every Tuesday at 7pm on the LARC repeaters), we were discussing audio interfaces between radios and computers. This was part of a larger presentation on the VARA modes used by Winlink.

One of the participants mentioned that a Youtuber with a channel called "The Tech Prepper" had recently done a video comparing the Mobilinkd, DigiRig, DigiLink, and Signalink interfaces (<https://www.youtube.com/watch?v=LPeb0dyac5k>). It provides some insight into the different capabilities and limitations of each.

More Information:

- The Tech Prepper Channel: <https://www.youtube.com/c/TheTechPrepper>
- DigiRig: <https://digirig.net/>
- DigiLink Nano: <https://www.hb9zhk.ch/>
- Mobilinkd: <http://www.mobilinkd.com/>
- Signalink: <https://www.tigertronics.com/slusbmain.htm>

Wire Winder/ HOLDERS — Ongoing 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.

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

How to Find an Old Call Sign

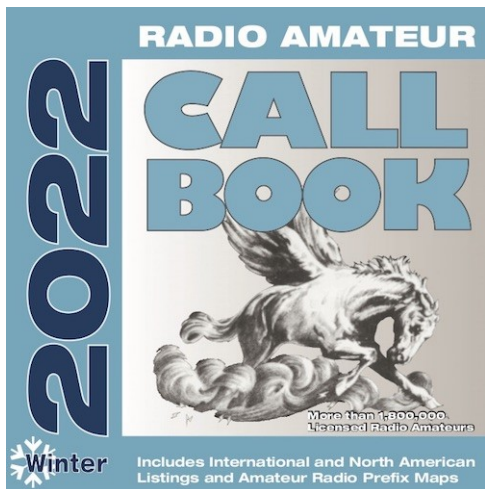
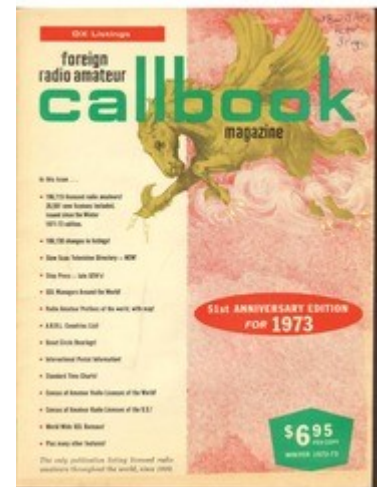
Have you had friends or relatives in the past who were ham radio operators, and you'd like to find out what call sign they had? Here's how to look in the old Call Books that were published:

1. Go to <http://leehite.org/callbooks/>, and just pick a callbook in the timeframe you think the person had an active call sign.
2. Then, instead of trying to "search" the pdf file, just do a "Control-F" (hold Control button down & hit the 'F' key (for find)).

On a Macintosh, this would be a $\text{⌘} + F$ (Command + F).

3. In the search box, just type either their call sign or their last name.

The search function will find them, if they had an active license during that timeframe. If it doesn't find them, try a different year's callbook and repeat. Most of the time, these and other pdf files aren't really "searchable," but you can "find" things in them if you give it the simplest search phrase you can think of.



- <http://w0is.com/oldcallsigns/oldcalls.html>
- https://www.qsl.net/va3rj/callbk_dx.html (international call signs)

The new call books are now produced on your choice of CD or on a USB stick. You can find information on how to order this at <https://www.callbook.biz/>.

Of course, you can also look up current ones on <https://www.qrz.com/>.

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

Exam Level	Question	Answer
Technician	T3B05	B
General	G3B05	A
Extra	E3B05	C

In a post to the "ARRL Field Day (Annual Event)" Facebook group, Brian Smith writes "...if the latest numbers hold true, we'll experience the highest Solar Flux Index [during Field Day] in 20 years!" This information is based on the US Air Force 45-day forecast at: <https://www.swpc.noaa.gov/products/usaf-45-day-ap-and-f107cm-flux-forecast>, which shows:

- Saturday, June 25: SFI 115, A-index 12
- Sunday, June 26: SFI 105, A-index 10

The site also has a graph showing the roughly 11-year solar cycle progression at: <https://www.swpc.noaa.gov/products/solar-cycle-progression>.

So why the excitement, and what is this "SFI" and "A-index?"

The "SFI" is the "solar flux index," a measure of solar particles and magnetic fields ("solar wind") reaching the Earth's atmosphere, and an indication of the electron density of our ionosphere. The higher the electron density is, the more reflective the atmosphere to HF radio signals, and the higher the MUF, or Maximum Usable Frequency.

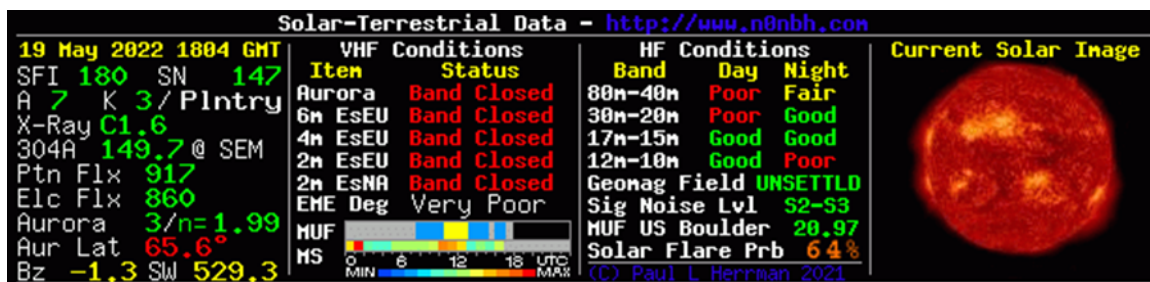
The "K index" is used to characterize the magnitude of geomagnetic storms, and is measured on Earth by using magnetometers. It uses a logarithmic scale with a range of 0 to 9 to represent quiet to severe conditions. Disturbances in the magnetic field result in disturbances in the ionosphere, and tend to lower the MUF.

The "A index" is made up of the average of the previous day's K indices on a linear scale from 0 to 400. This means that the A index is actually yesterday's geomagnetic condition. A indices under 7 represent "quiet" or lack of significant disturbances.

For the Field Day predictions above, the high SFI indicates better propagation (i.e. higher MUF), while the low A index indicates a lower disruption of the ionosphere, resulting in less negative impact on the MUF.

You can see a summary of the solar weather indicators at the very bottom of the LARC web page at <https://w0eno.org>, along with predictions of current band conditions. Click on the image to go to the HamQSL HF Propagation and Solar-Terrestrial Data web site for more details.

More Information can be found on Solar Activity & HF Propagation: <https://www.qrparci.org/resource/FDIM81.pdf>, Understanding Solar Indices: <https://www.arrl.org/files/file/Technology/tis/info/pdf/0209038.pdf>, <https://www.hamqsl.com/solar2.html>.



All amateur license exams contain questions on basic electronic components. The Technician test has some questions on basic circuits, General has more and the Extra has a lot. Over the years, as amateur communications has added more sophisticated modes, more of the questions focus on digital modes, software, advanced circuit components, etc. But a portion of the test is still on the basics of transistors, resistors, capacitors, etc. Examples questions are:

G5A07 (D)

What happens when the impedance of an electrical load is equal to the output impedance of a power source, assuming both impedances are resistive?

- A. The source delivers minimum power to the load
- B. The electrical load is shorted
- C. No current can flow through the circuit
- D. The source can deliver maximum power to the load

T6B08

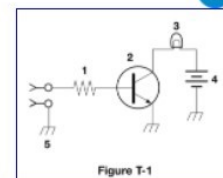
27. What does the abbreviation FET stand for?

- A. Fast Electron Transistor
- B. Field Effect Transistor
- C. Free Electron Transmitter
- D. Frequency Emission Transmitter

T6C03

31. What is component 2 in figure T1?

- A. Indicator lamp
- B. Connector
- C. Resistor
- D. Transistor



T7A09

34. What is the function of the SSB/CW-FM switch on a VHF power amplifier?

- A. Set the amplifier for proper operation in the selected mode
- B. Change the frequency range of the amplifier to operate in the proper portion of the band
- C. Change the mode of the transmitted signal
- D. Reduce the received signal noise

We all passed the tests, but how much is memorization and how much is full understanding?

In January, I thought it would be interesting to lead a group in going deeper into understanding basic circuits. I thought it would be instructive to focus on Experiment #1 “The Common Emitter Amplifier” in the “Semiconductor Basics” section of the ARRL “Hands On Radio Experiments” book. first, the group will study the laws governing basic circuit components. Then, design, build and test this simple circuit.

I thought we could do better than the average “kit building” project where you mechanically insert certain components in certain spots in a circuit board, apply power and hope for correct behavior. I thought we could spend some weeks studying the math that describes the behavior

Report on LARC “One-Transistor Amplifier” Study Group

of resistors, capacitors and transistors, and equip ourselves to select the proper values for the components that surround the transistor in this amplifier.

The class offering was publicized by Chuck in January and some people signed up. In March and April, we did weekly assignments, with homework. The study covered:

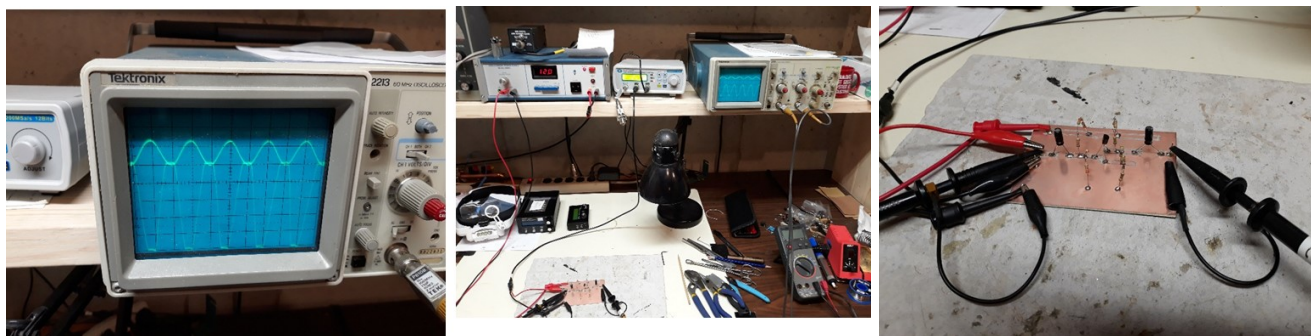
Week 1 – DC circuits – current and voltage in simple and more complex resistor networks.

Week 2 – Capacitors – types and functions in DC and AC networks. Identify analysis of some real radio schematics.

Week 3 – Transistor characteristics, Saturation, cutoff, linear region common transistor amplifier circuits, linear and non-linear classes of operation.

Week 4 – Do the math to select the bias components for the 1 transistor linear audio amplifier.

In May, we will meet to implement the amplifier. Each participant goes home with their board containing the working amplifier. Below are some pictures of the prototype of this class project:



This amplifier is a trivial circuit compared to all that goes into a modern amateur transceiver. But, class participants can take pride in going beyond just pushing buttons on a radio. And, take some pride in doing more than stuffing parts into kit circuit boards without knowing what the parts do. And, can say that he/she can answer exam questions based on, at least a little, hands on experience.

Where this “study group” concept goes from here is TBD. If more LARC members want to work together in this study of basic circuits, contact me at ejmohrman@yahoo.com. 73, Ed WA7EM



How to Get a Wire Antenna into a Tree

Logan Luther, K04FIE

This information will help POTA, SOTA, and Field Day operators to make life easier.

1. Take your arborist line and weight, or whatever else you may have come up with to accomplish the same thing. Tie a bowline knot with a loop at the end big enough that your weight can fit through it.



2. Feed that through the D ring of the weight.

3. Feed the weight through the loop of your line.



4. Cinch tight.

Now you can easily pull your weight off if you make a bad throw and not have to untie your knot or pull your entire length of line through the tree. Two pictures are provided below of how to take the weight off when it's cinched up since I've had a few questions that it was a little confusing how to properly do so once it was on.



Here are a few web sites that have hints and tips for operating during Field Day.

- Nashua Area Radio Club Field Day Primer: <https://www.qsl.net/ta1dx/afet/fieldnedir.htm>
- Arlington Radio Public Service Club Field Day Reference Guide: <http://w4ava.org/articles/Field%20Day%20Reference%20Guide.pdf>
- Reddit r/amateurradio Field Day Tips: https://www.reddit.com/r/amateurradio/comments/tby4n7/field_day_tips/
- AMSAT Field Day on the Satellites: <https://www.amsat.org/field-day/>
- ARRL Field Day Portal: <http://field-day.arrl.org/>
- Field Day Basic Training: <http://www.arrl.org/field-day-basic-training>
- VHF Operation and Field Day: <https://www.centralmiarc.com/docs/2015%20Above%2030%20MHz.pdf>

Check them out if you plan to operate on Field Day – even if you're planning to head to the LARC Field Day site at the Boulder County Fairgrounds. You never know what hints and tips you pick up that may be helpful to others!



Mark Kleine, N5HZR, has come up with a novel way to help hams get experience with sending and receiving Winlink messages by implementing a word-guessing game similar to *Wordle* called *Hamword*. The object of both games is to guess a 5-letter word. When you make a guess, you are told which of the following applies to each letter: The letter is in the target word, and is in the correct location, the letter is in the target word, but is not in the correct location, or the letter is not in the target word.

With *Wordle*, these are indicated via color coding, but as Winlink only supports plain text email, Mark uses the numbers 1 through 3 to represent these states.

For example, if the target word is “radio” and you guess “drain,” the reply you receive would be “11120” indicating that “rad” are in the target word, but in different positions, “i” is in the word and correct position, and “o” is not in the word.

You get six chances to solve the puzzle (both for *Wordle* and *Hamword*). *Hamword* changes the word weekly at 00:00 Zulu on Monday, so you have plenty of time to make your guesses!

To play, you simply send a Winlink message containing only your 5-letter guess to the tactical call sign HAMWORD. You will then receive a response message giving your results. This allows you to practice sending and receiving Winlink email.

Keep in mind that you can participate even if you don’t have a Winlink-capable radio setup. Winlink supports exchanging messages over the Internet via telnet, so everyone can give it a try!

More information:

- Hamword: <https://hambooks.org/hamword/>
- Winlink: <https://www.winlink.org/>
- Wordle: <https://www.nytimes.com/games/wordle/index.html>

To order any of our LARC Logo Items, go to <https://forms.gle/AgZQSMhrRtR1tLEG8>



					 4.5"  1.5"
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 the 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 and Amazon will donate to LARC

amazonsmile

You shop. Amazon gives.

*See them all on page 27! 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 picture(s) 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.



COWORKING
WORKING MORE SOCIALLY

350 Terry St.
Longmont, CO. 80503

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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April Puzzle Solution

April's puzzle was a message in written CW (Morse code).

The translation into text reads as follows:

This is a Morse Code Puzzle.

How many of you can read it without the chart below?

It is good to learn CW for using your radio and for emergencies when your voice cannot get through the interference.

Did you finish it? Good job.

Please put your thoughts about this puzzle in the comments section of this month's poll!

SUMMER
ice cream
sunshine
FLIP FLOPS
lemonade
BARE FEET
vacation
MEMORIES

SWIMMING



May-June Puzzle
Ham Radio Word Scramble

1. TNAANNE _____
2. EIRFIAMPL _____
3. RNRMSREOTAF _____
4. ERALY _____
5. TCCIAESHM _____
6. SYTLRCA _____
7. UETB _____
8. TMEER _____
9. LCLORSATIO _____
10. RCSVRNEIAET _____
11. DDIEO _____
12. EKERY _____
13. RECERVEI _____
14. ELRTIF _____
15. SRSETOIR _____
16. URDTONCI _____
17. MACRNIHOS _____
18. ITCCIRU _____
19. STCWIH _____
20. MESODECOR _____

Look for the answers in next month's Splatter!

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 _____

Address _____

City _____ State _____ ZIP _____

Email _____ Phone _____

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 <i>QST</i> or <i>On the Air</i> 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 <i>QST</i> via standard mail for Canadian members
International	\$76	\$147	\$217	Monthly <i>QST</i> 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

Additional membership options available online at www.arrl.org/join. US Memberships include \$21 per year for magazine subscriptions. Dues are subject to change without notice and are non-refundable. Memberships may not be combined with any other promotion or special offer.

I do not want my name and address made available for non-ARRL related mailings.

Choose your print magazine:

QST, ARRL's membership journal for active radio amateurs (12 monthly issues)

On the Air – New! Beginner-to-intermediate-level help and advice (6 bimonthly issues)

All members can access the digital edition of both magazines

Payment Information

Please charge my ARRL dues less my club's commission. I have paid the commission directly to my club.

\$ _____ Total Charge to: Visa MasterCard Amex Discover Check Enclosed

Card Number _____ Expiration Date _____

Card Holder's Signature _____

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