

2022-02-14 Hamlet Net - EchoLink

Announcements:

- Test Session Info
 - Next VE session is Saturday, February 25th. ARRL session, so \$15 fee to take test
- LARC's February General Meeting is tomorrow, February 15th. It will be our first hybrid meeting - in person at the Clover building at the Boulder County Fairgrounds, as well as on Zoom. Starting with socialization at 6:30pm, the meeting itself begins at 7pm.

Our guest speaker is Anthony Luscre, K8ZT, who will present "Technicians, Life Beyond Repeaters, and Activities Not Just for Technicians," covering things you can do with your technician license other than just talking on repeaters.

- Next up, the February LARC activity involves Echolink. Chuck, K0ITP, will be looking for contacts via Echolink this weekend from noon to 2pm on Saturday and Sunday.

You can use your computer, tablet, or cell phone to connect to the LARC repeater and contact Chuck.

Once you've had a short QSO with him, disconnect from the repeater and hit the CQ option and try to make more Echolink contacts. When you're done, send him an email with the number of contacts you made.

- You can start earning your 2023 membership or future renewal by acting as NCS for at least 5 nets this year. You can run either this Tuesday night net or the Thursday night net (or both). We have scripts available for both, so all you need is a good connection into the repeater, and somewhere to keep track of names and call signs as people check in. If you're going to be on the net anyway, why not save some dough at the same time! There are four free memberships available for 2023, so don't wait to get started!
- If you didn't find what you wanted at the NCARC hamfest this past weekend, the next hamfest in this area is the ARA Swapfest this Sunday, February 19th at the Adams County Fairgrounds from 9am to 1pm. More info at: <https://n0ara.org/the-swapfest-info-and-directions/>
- Chuck has set a goal for the Club of running at least one activity a month. This can be a hands-on construction activity, an operating activity like Field Day, a fox hunt, or a special event station. The goal is to get people together to have fun with amateur radio! We have multiple locations at our disposal, as well as lots of Club equipment, so if you have an idea for something you think others hams would like to do, please let us know, and if you're willing to run it, even better!

- The Club is also looking for presentation topics for 2023. If you have any ideas, or better yet, would like to present, please let Chuck know and we'll get you on the schedule!
- All club activities are open to anyone - members and non-members. ~~If you have questions, ask them on a net or~~ send email to elmer@w0eno.org
- Club breakfast Saturday mornings at 8am at the Hidden Cafe in Longmont
 - Come meet other Club members and discuss amateur radio

Presenter: Bryan, AF0W

Topic: Echolink

- EchoLink allows licensed amateur radio stations to communicate with one another worldwide over the Internet
- The service itself is free, and consists of software that runs on a variety of devices (Windows, Mac, Android, IOS, and Linux) as well as having support in many repeater controllers
- As of tonight, there are 2490 repeaters and 885 logged in users on EchoLink, with over 350,000 total validated users
- There are two ways to utilize or access EchoLink:
 - a. By running an application on a computer, phone, or tablet device and using IP over the Internet
 - b. By using RF to access an EchoLink-capable node
- While you can use the EchoLink software to communicate directly with another user running the EchoLink software over the Internet, this is not really any different than using another chat app
- There are two ways to use an EchoLink-compatible repeater
 - a. The first is to connect into a repeater from an EchoLink node
 - b. The second is to connect out from a repeater to another EchoLink node
- The LARC repeaters only support the first method - this allows users who are outside of the range of the repeaters to participate on nets or other communications
 - a. Our club secretary has moved to Wyoming, yet regularly participates on the Thursday night nets via EchoLink

- b. We also used EchoLink to get connected to Santa for LARC's annual Santa on the Air event
- The primary reason we do not support "dialing out" using EchoLink is that it was felt that this would be confusing for repeater users, especially if someone forgot to disconnect the repeater from an EchoLink node
- For repeaters that do support this, there is a DTMF code you transmit, followed by the remote node's number, then typically followed by the pound symbol to connect the repeater to a node, and another code to disconnect the link.
 - a. To transmit DTMF codes on most radios, you hold down the push-to-talk button and then press and release the buttons on the numeric keypad
- EchoLink can also be used to link two (or more) repeaters together over the Internet
- There are some radios, like the Kenwood TM-D710 and V71, that tout EchoLink support
- These particular radios have two different EchoLink-related features:
 - a. One is the support for "node memories." These allow you to store EchoLink node numbers in memory locations, and then quickly send them when you are in range of an EchoLink-capable repeater to connect to that node (like a "speed dial" on a telephone)
 - b. The second is a built-in PC interface that allows you to set up the radio (in conjunction with your computer running EchoLink software) to operate as an EchoLink RF node.
 - c. In neither case does the radio itself directly connect to the Internet.
- There are a few other devices in the EchoLink system that have specific purposes.
- The first is a conference server - as the name implies, this node allows multiple people to connect to it and communicate as a group (only one user can transmit at a time)
- The second is a relay server.
 - a. The EchoLink protocol requires that every connected node has a unique IP address
 - b. Many networks, including most home networks and cell service networks, are not set up to allow this
 - c. To work around this, nodes on these networks can connect to a relay server when then forwards traffic to and from that node

- d. There are some limitations - namely, you can initiate a connection using a relay server, but you cannot accept incoming connections.
 - e. Also, you may not be able to connect to a conference server if there is another user connected to that server using the same relay server
- EchoLink is not a digital mode (like FT8 or RTTY), as it never sends any digital signals over RF.
- Some hams argue that EchoLink is not really radio - in the case of node-to-node connections solely over the Internet, there is certainly some truth to this
- Since EchoLink traffic may eventually be transmitted via RF, there is a strong focus on making sure that all EchoLink users are licensed amateurs
 - a. This is accomplished by requiring the submission of a copy of your license. This can be done by sending a PDF copy of your official license which you can obtain from the ULS (they don't accept reference copies).
 - b. Users are required to have a CEPT Class 2 license, which specifies that the user is permitted utilization of all frequency bands allocated to the Amateur Service above 30 MHz - the FCC Technician license qualifies
- To obtain an EchoLink account
 - a. You must first install and run the software.
 - b. Enter your call sign when prompted.
 - c. You will then receive a message that you need to validate your account - this is where you provide a copy of your license.
 - d. An EchoLink volunteer will process your request and validate your account, at which time you will be able to access EchoLink (this may take a day or two)

Calling CQ

- One relatively recent new feature is the ability to "call CQ" on EchoLink
- This feature matches you up with another station calling CQ
- In the Windows software, you can select the languages and countries as well as connection types (single-user nodes, repeaters, etc.) you wish to contact
- You don't verbally call CQ - you get connected to a remote node, and can just begin your QSO

- If your Windows, Android or IOS EchoLink client does not support the CQ feature, you likely need to upgrade
- Note that some repeaters are configured to announce the callsign and/or name of incoming users, so if you connect to a repeater, someone may call out your name or callsign
 - a. The LARC repeater does not announce connections or disconnections.
 - b. It is considered rude to connect and then drop from a repeater without saying anything (although this is not to say that no one does so!) - primarily because of the announcements of connections/disconnections that local repeater users may hear
- When you connect to a repeater, you won't hear anything unless there's an ongoing QSO.
 - a. A good example would be our LARC repeaters - if you were to just randomly connect to them via EchoLink, you'd likely not hear anyone talking - at least not until you made some sort of transmission.
 - b. As an example, you could say something like "This is AF0W connecting in via EchoLink from Colorado and looking for a contact"
- You can find out more information and get download links from echolink.org
- Remember that Chuck is running an EchoLink event this weekend, so this would be an ideal time to get it installed and give it a try. It does take a bit of time to get approved on the EchoLink system, so don't wait 'till the last minute!

Questions:

- **The question for the week is:** Do you have EchoLink installed on any of your devices,
- **In my case,** I've got EchoLink installed on my cell phone as well as my laptop and desktop computers. I've been out of town quite a bit, so I use it to connect to the LARC repeater to get on the weekly nets

When I first installed Echolink (prior to it being enabled on the LARC repeater), I figured I'd connect to a repeater to listen to a net, but was surprised when they welcomed me by callsign, as I didn't know it would be announced.

I've also got an Allstar repeater set up on a Raspberry Pi which supports EchoLink over IP.

More Info:

- EchoLink Homepage: <https://echolink.org/>
- EchoLink on Wikipedia: <https://en.wikipedia.org/wiki/EchoLink>
- W6AGO EchoLink Presentation:
<https://mksummits.com/w6ha/download4.php?file=presentations/EchoLink%20Briefing%20V5%20Apr%202020.pdf>

Notes:

- If you have ideas for net topics or general meeting topics / presenters, please let us know! Tell us on a net, or send email to k0itp@w0eno.org

Email to elmer@w0eno.org

1. KN6CFI - John - Longmont
2. K0ITP - Chuck - Firestone
3. NA0A - John - Boulder
4. KC0CT - Joe - Broomfield
5. WA7EM - Ed - Erie
6. WA0JJC - Bob - Boulder
7. KM6SJA - Steve - Longmont
8. AF0W - Bryan - El Paso -
9. W0HLO - Harlan - NE Longmont
10. KV0N - Raman - Lafayette
11. KF0AGY - Steve - Conifer via EchoLink
12. W0DRZ - Chris - Lyons

Push-to-talk choices - keyboard key, momentary or toggle, system-wide

Echolink nodes are registered in 159 nations

One use is for hams that move into assisted living facilities

LARC doesn't announce callsigns or names because there's an issue with Allstar Link and Echolink connections from relay users

Needs Internet to validate login, so believe it requires Internet, so not really appropriate for emergency use

Closed net at 7:43pm