2024-08-27 Hamlet Net - EchoLink

Announcements:

- We only had two candidates at our August 24th test session, but both walked away having passed their exams. One obtained their Technician license, while the other upgraded from Tech to Extra Class.

- Test Session Info

    - Next VE session is September 28th in the Clover Building at the Boulder County Fairgrounds, and starts at 9 am. It is a PVET session, so there is no fee to test. For more info, and to pre-register, see the Licensing/Testing page on the club web site, https://w0eno.org/, under the Education menu.

- In place of the monthly club meeting, Chuck put together a video presentation with a number of radio-related videos. Not sure how many people attended, but it was probably around 25 or so. We had to relocate the presentation, but everyone had a good time.

- Next meeting will include voting on Club Bylaw amendments as well as Club officers. We do have a minimum quorum requirement, so if you are a club member, please plan on participating, either in person, via Zoom, or by submitting a proxy on the Club web site.

- This weekend is the Colorado state QSO party. The object of a state QSO party is for stations outside the state to contact as many stations inside the state as possible, and for stations inside the state to work stations in as many of the state's counties as possible.

    The contest covers all amateur bands except the WARC bands - this includes 2m and 70cm, although no repeater or satellite QSOs are allowed to count for points.

    Digital, voice and CW contacts are allowed. For WSJT protocols, just use the standard exchanges. Nevada did some work on supporting the contest exchange format, but Colorado has determined that the workaround is just too complicated for the low number of contacts they expect.

    Colorado stations send their call sign, name and county, while out-of-state stations send their call sign, name, and state or province.

    For full rules and information, see the Colorado QSO Party web site at: https://ppraa.org/coqp

- We are still experiencing some issues with the 70 cm repeater equipment on Lee Hill, and are currently transmitting on that band from the Justice Center.

- We are still looking for volunteers for Santa on the Air - we can use elves who act as net control, as well as Santas. We've got a script for the elf, and a list of questions for Santa to keep the net going when Santa doesn't have anyone to talk to. No experience is necessary. You can even participate over Echolink as well.

- We have some volunteer opportunities available where you can help out LARC:

  - Photographer / videographer - record team activities and upload to web site / YouTube

  - Newsletter Editor - put together the monthly Splatter newsletter

  - Social media manager

- You can start earning your 2024 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!

- 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 2024. 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**

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 yesterday afternoon, there are 2599 repeaters, 251 conference servers, and 843 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 when you are finished.

    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

a. These particular radios have two different EchoLink-related features:

- 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)

- 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.

- 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 have 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 repeater or 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 - but it does allow you to talk to people in places you otherwise would be unable to reach using 2 m or 70 cm RF

- 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 FCC's License Manager (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 AFØW connecting in via EchoLink from Colorado and looking for a contact"

    c. Some repeaters will announce your name and/or call sign when you connect and disconnect, others, like the LARC repeater system, will not

    d. If you just want to listen, perhaps find a conference server and camp out there

- Some uses for EchoLink are:

    a. Participating in the LARC Tuesday or Thursday night nets when you are out of town

    b. Accessing remote repeaters from your home location to participate in their nets

    c. If you are experiencing interference getting to the LARC repeater, you can use EchoLink on your computer or phone rather than your radio

    d. Use the headset on your computer to talk on a repeater when you are in a high-noise area

    e. Record the output of a repeater using EchoLink on your computer

    f. Connect to a local repeater using EchoLink to monitor your RF transmissions into that repeater

    g. Participate in a local net when outside the US without having to worry about obtaining any sort of operating license in that country

    h. Getting up-to-the-minute information during an adverse event. I read a post by someone who used EchoLink to check into a repeater in Estes Park during a big fire. The operator was not local, but his parents had a house there, and they were unreachable via the telephone network.

    i. Connect to a repeater in another country, and practice speaking their local language

    j. It can help hams who are in location where they cannot install a radio, like retirement or rehab facilities

- You can find out more information and get download links from echolink.org

- 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? If so, have you made any memorable contacts over it?

- **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. K0ITP - Chuck - Firestone
2. N7CTM - Mark - Firestone
3. AE0DO - John - N of Longmont
4. KF0OKA - Ben - Lyons
5. AF0W - Bryan - Longmont
6. W7PGF - Philip - Frederick
7. KF0FEC - Will - Boulder
8. W0DPC - Donald - Northeast of Longmont

End: 7:50pm