

2024-02-20 Hamlet Net - NTS - National Traffic System

Announcements:

- Test Session Info
 - Next VE session is this Saturday, February 24th in the Clover Building at the Boulder County Fairgrounds, and starts at 10 am. It is an ARRL session, so there is a \$15 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.
- The February LARC general meeting is tomorrow night, February 21st. Chuck will be presenting, and will be talking about the club and about taking amateur radio equipment on the air. The meeting will be in-person at the Clover Building at the Boulder County Fairgrounds, and via Zoom. Socialization starts at 6:30pm with the meeting starting at 7pm. All are welcome, whether you're a member or not.
- WA0JJC:
 - Thursday night net at 8pm. Talk about possible topics for monthly meetings. Please join!
 - Dan in Wellington KF0EGA said he needed some help in tuning his dipole. New General license.
- John Parsons, AE0DO, sent me a bit of CW trivia he came across that will help you learn two more CW letters, M and I. Can anyone guess what the reference is to?

It's the theme song for the Mission Impossible series. Think about how it starts (duh.....duh...duh.duh). Morse code for the letter M is dah-dah (or dash-dash), and I is dit-dit (dot-dot).

There are a few other instances of Morse code "in the wild" that I'm aware of. One is the tread pattern on NASA's Mars Curiosity rover, which spelled out JPL in the Martian soil. "The purpose of the pattern is to create features in the terrain that can be used to visually measure the precise distance between drives," said Matt Heverly, the lead rover driver for Curiosity at JPL.

Another one I'm aware of is a song by the Canadian rock band Rush titled YYZ, which is the airport code for Toronto Pearson International Airport. On a flight in a private plane, the band heard the Morse code from a beacon at the airport and thought it was an interesting rhythm, and incorporated it into a song. Y is Dah-dit-dah-dah and Z is dah-dah-dit-dah

- 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
- There are several Board positions that will be available in October. Currently, the President, Treasurer and Secretary are planning to make this their last year of service. If you are interested in serving on the board of a 501(c)3 non-profit, please consider running for one of these positions. The current members would be more than happy to "show you the ropes" during the year, so you wouldn't start with zero experience.
- Also looking for volunteers to help with LARCFest on April 6. If interested, please check out web site and contact Bob Smith (N0OM) for more information. Tables are also being sold if you have stuff to get rid of.
- Our sister club up in Nederland is looking for some help with events they are running. They have a weekly Monday night net with no predetermined agenda, so you can lead it however you want. They are also planning a Field Day site at Golden Gate State Park and are welcoming anyone who wants to participate. Finally, they are looking for operators for the Ned Gravel run on July 8th. They have signup links for all these events, so head over to their web site <https://w0ned.org/> for more information!
- 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: National Traffic System

- Also referred to by its initials, NTS, the National Traffic System is "an organized effort to handle traffic in accordance with a plan which is easily understood, and employs modern methods of network traffic handling."
- It is sponsored by the ARRL, consists of licensed amateur radio operators, and relays messages throughout the US and Canada
- Traffic passing using a formal relay system originates from the founding of the ARRL - the Amateur Radio Relay League
- In this case, "traffic" means formal National Traffic System (NTS) messages
 - a. In fact, when I was first licensed, I saw a lists of nets on the web somewhere, and figured that a "traffic net" would talk about road conditions. When I heard my first traffic net, I was confused listening to the net until I went to look it up on the Internet
- The proposal for today's NTS came from an article in ARRL's September 1949 QST
- This plan proposed covering the US and Canada with a uniform system of handling messages, and creating formal nets for doing so
- In this scheme, the US is divided into areas that approximate time zones across the US
- Areas are further divided into regions, and regions into sections, which correspond to single states
 - a. Colorado is in the Pacific area, region 12, Colorado section
- Each of these components has traffic nets for sending and receiving traffic
- At the lowest level are the local traffic nets
- Messages may be passed from local nets to section nets, to region nets, and then to area nets - depending on the location of the origination of the message and it's delivery point
- Message transmission may utilize many modes, such as voice, CW, and digital
- Digital messages may also make use of store-and-forward systems such as packet systems
- To make sure that the volunteers are ready and able to handle traffic properly, the ARRL National Traffic System routinely passes practice messages

- The exact same forms, procedures, and operations are used as would be used in an emergency situation so operators are able to maintain not only their skills, but also their stations and other equipment.
- If you've ever played the childhood game of telephone where one child whispers a message to a group of children who pass it from person to person, you know that it is easy for the final message to bear little resemblance to the original message. The goal of the National Traffic System is to pass the message exactly as sent from the originator to destination, so while some of their procedures may seem like overkill, they are there for good reason.
- The local net volunteers handle the "first and last miles" of traffic delivery - either originating or delivering messages to or from individuals.
 - a. This was also confusing to me when I heard my first traffic net. I kept hearing net control ask for "stations able to handle traffic to Lyons" or to Westminster.
 - b. Nowadays, with cell phones, pretty much anyone can directly handle traffic to anywhere, but you have to keep in mind the purpose of maintaining the national traffic system is to allow delivery of messages in times of outages of traditional communications systems.
- When delivering a message to a recipient, the amateur operator can use a phone call, postcard, or even a personal visit.
 - a. One thing they have to keep in mind is that the majority of recipients won't have any idea of what they are talking about!
- Here in Colorado, we have an officially-recognized, daily VHF traffic net run by the Colorado Traffic Net or CTN
- The CTN was originally formed in 2014 when nine operators decided to form the Colorado Traffic League or CTL.
- The CTL was a club to support a new NTS-recognized state-wide traffic net.
- Shortly after the CTL adopted its constitution on September 11, 2014, the ARRL formally recognized the Colorado Traffic Net as an NTS net and appointed the first Net Manager.
- The Colorado Traffic Net is a directed net that utilizes repeaters on the Colorado Connection to run their daily traffic net between 7:00 and 7:25 pm local time
 - a. The closest Colorado Connection repeater is located on top of Mt. Thorodin and is accessible at 145.310 MHz with a negative 600 KHz offset and an 88.5 Hz PL tone.

- b. When using the Colorado Connection, remember that it is a linked system covering almost the entire state of Colorado - you need to wait one or two seconds after pressing your PTT button and when you start speaking
 - c. When you want to respond to someone on the system, you must allow enough time for all the repeater links to drop. After hearing the CW K () symbol, wait 3 to 4 second before making your transmission (explained here: <https://colcon.org/tour-5-system-culture/>)
- The Colorado Traffic League also runs a packet node on Saddleback Mountain, about 30 miles west of Denver. Formal NTS messages can be left on the CTL BBS on this node
 - a. The packet station is also a Winlink RMS server, and can accept traffic
- To get messages into and out of Colorado, the Colorado Traffic League also regularly participates in many HF nets, including the NTS 12th region net
- NTS messages are also used at public events such as Field Day and ham fests to introduce the idea of sending messages via radio in an emergency to other hams and the general public
- This may sometimes involve third-party traffic - that is, messages involving one or more non-licensed individuals
 - a. This include things like an unlicensed Field Day visitor sending a message to an unlicensed friend
- The messages themselves consist of a maximum of 25 words, which includes things like punctuation
 - a. Some items have specific formatting. For example, a 10-digit phone number is handled as three words. The first is the area code, the next is the following three numbers, and the third is the final four numbers.
- It must also include delivery information such as a street address and/or full telephone number. A signature is also included, which is a name so that the recipient knows who sent the message.
- Other routing information is added, such as a message number, precedence, handling instructions, and check, which is a count of words in the message
 - a. The precedence specifies the importance of the message. In descending order of importance, they are Emergency, Priority, Welfare and Routine. Emergency messages are "life and death," while "routine" are things like "Congratulations on passing your General licensing exam!"

- b. The handling instructions allow the sender to specify things like canceling delivery after a certain number of hours, report date and time of delivery to originating station, or for the delivering station to get a reply.
- There is an ARRL radiogram form that is used to record messages. This form is also built into systems like Winlink to facilitate handling of messages.
- The limit of 25 words emphasizes the goal of the system, which is to quickly move important messages - brevity is emphasized as the system capacity will be strained in the event of an actual event
- To aid in this, there are a set of messages called ARL messages. They cover common messages, and allow for the inclusion of specific information.
 - a. For example, ARL message 1 is "Everyone safe here. Please don't worry." and consists of just two words
 - b. ARL message 53 is "Received your <blank>. It's appreciated, many thanks!" - you then include the specific item in the message body. If you want to thank someone for their gift, you would only need four words - "ARL fifty three gift"
- The ARRL has an ongoing project called NTS 2.0 where they hope to create a vision for the future of traffic handling, and a plan to get there
 - a. They are not planning to make major changes to the operation of the system but rather add new features such as a web page to allow the public to initiate NTS traffic, training programs both to assure served entities that traffic handlers are all trained to the same standard as well as to communicate the capabilities of the system to them, as well as to get new hams interested in traffic handling
- Any licensed amateur can participate in the National Traffic System - Colorado's net is accessible to anyone with a Technician license and a VHF radio.
- Take some time to listen to a net or two (you can even try the HF area nets) and see how they work.
- The local nets are generally looking for traffic to handle, as it is quite boring to repeatedly check into a net with no traffic, so if this sounds interesting, get on a traffic net and send some traffic!
 - a. You can even use APRS to send a radiogram!
- For more information, see the ARRL's NTS page at: <http://www.arrl.org/nts>

Questions:

- **The question for the week is:** Have you ever sent or received an NTS message?

- **In my case**, I've received one message which was sent to me when I received my first amateur radio license. It was left as a voice message on my house phone, which said it was originated by someone in Germany. I was not aware of what the NTS was at that time.

More Info:

- ARRL's NTS page: <http://www.arrl.org/nts>
- NTS 2.0: <https://nts2.arrl.org/>
- How to Send a Radiogram using APRS: <https://nts2.arrl.org/ntsqtg-an-aprs-nts-gateway/>
- NTS (Wikipedia): https://en.wikipedia.org/wiki/National_Traffic_System
- Colorado Traffic Net (CTN): <https://k0nts.org/>
- The Colorado Connection Repeaters: <https://colcon.org/repeaters/>
- Mission: Impossible's Theme Song Has a Secret Message: <https://collider.com/mission-impossible-theme-song-morse-code/>
- Rover Leaves Tracks in Morse Code: <https://www.jpl.nasa.gov/news/rover-leaves-tracks-in-morse-code>
- Colorado CERN Net: <https://co-cern.org/>

Backup Questions:

1. What hobbies do you have other than ham radio? Do you (or could you) use ham radio in these hobbies?
 2. Share an "a-ha" moment you had with amateur radio?
- 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. WA0JJC - Bob - Boulder
3. AE0DO - John - N of Longmont
4. KC0CT - Joe - Broomfield
5. AF0W - Bryan - El Paso
6. KA0CFR - Charles - Longmont

7. KF0GSA - Jason - Boulder

Send someone a message saying you're trying to get in touch with them about their car warranty

Could send if out of cell phone range

End: 7:50pm