

Loudoun Amateur Radio Group

Regular Meeting Minutes May 18, 2024

Venue: Leesburg Lutheran Church

Meeting called to order at 8:30 AM.

- Pledge of Allegiance
- Arthur W4ART presented information about the Network Engineers Repeater Association (NERA). The repeaters are linked 70cm and both FM and P25 capable. There is no support for 2 meter signals in the linked network. NERA repeaters are several repeaters located in Maryland, Pennsylvania and Virginia that are all linked. The system of interconnected repeaters also includes the Cactus Intertie System in several western states (see <http://www.cactus-intertie.org/>). The system also provides access using echolink and IRLP (node 4000). The NERA system has a coverage map that ranges to areas west of I-81, areas east of DC and areas to the south nearly to Staunton.

It was pointed out that the radios of the linked network include preemphasis processing because of phase modulation. The preemphasis processing increases the level of higher frequency signals. All repeaters and links are FM with a flat frequency response. After demodulation, the signal level of the higher frequency signals is processed using deemphasis to remove the changes to the audio signal that were added during preemphasis and reduce perceived noise.

The NERA repeaters include installations in city as well as rural locations. The city locations often have antennas mounted on building tops while rural locations are usually implemented with antennas on towers. It was pointed out that lightening is an AC current event. To encourage the current of the lightening strike that travels on the signal coax to jump a spark gap to ground, the signal coax is installed with a small number of coils (often one is sufficient) to create an inductor that presents a high impedance to the lightening in the path to the transmitter.

It was noted that concrete building construction and high-E glass reduces radio frequency penetration. The attenuation is reduced with higher frequency because of the shorter wavelength's ability to penetrate through small openings.

The NERA organization includes a website at the URL <http://neradc.org>. Membership requires \$35 annual dues which covers all members of a family. Operators living within the service are asked to become members. Please contact NERA before special events so the repeater links can be configured to localize the event traffic.

- Doug KM4CG is coordinated support for the Alzheimer's bike ride event. He reviewed some comments by the participants. A document containing the comments will be stored on the files portion of the club website.

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- Club support for an ISS contact event is tentatively scheduled for the week of December 9th. Additional changes will be communicated to the club membership.
- A possible simulated emergency test (SET) is possible in early October. Participation in the event will be coordinated by local ARES group. Any results from our local SET will be sent to the ARRL. We will receive extra credit if local participants have taken the ARES training modules before the event. The Loudoun ARES group can be contacted through their website (www.lcares.org).
- The Treasurer Tareck K9TRE reported that the club checking account balance is \$10,940.41.
- The meeting adjourned at 10:25.
- The next club meeting is scheduled for June 15.

- Attendance

W4ART	Arthur
KM4MHT	Jim
K4MFG	Max
KE4S	Dave
K4FWD	Frank
KQ4MAM	Megan
KQ4MAL	Paula
K3WD	Bill
KD4HAX	Joe
K9TRE	Tarek
KM4GC	Doug
N4RAF	Steve
N4PD	Paul
WA4KBM	Kevin
N4FAF	Jim