

# Loudoun Amateur Radio Group

## Regular Meeting Notes April 20, 2019

### Venue: Leesburg Holy Trinity Lutheran Church.

- 8:30-8:45 Coffee, meet and greet
- Pledge of Allegiance
- President welcome and meeting overview
- Attendance
  - 27 club members signed the sign in roster
  - 3 non member amateurs signed the sign in roster
  - 4 club officers were present
- The Treasurer gave the financial report. Checks outstanding written to the church and to the VFW have not been cashed.
- The latest General class has finished. Several operator class upgrades were granted after the exam session.
- The Potomac Valley Contesting Club has a new Chapter. Dave KE4S and Chaz KK4TNO are members of the new chapter. LARG members interested in becoming active in contesting should contact one of these club members.
- Jeff K0ZR presented a teaching moment to the group. The topic was impedance and antennas. Any given value of VSWR appears at two frequencies, one above the minimum and one below the minimum. Mapping of VSWR on a Smith chart was shown. The values appear as a circle on the chart describing the changes of resistance and reactance as the frequency is changed.
- The club participation in Field Day was discussed. The club will not be able to organize a group event. It was suggested that LARG members should attend the activities of another club, individually or as a group.
- Organization for the Reston Bike Ride was discussed. John W5ODJ and Paulson KG4TIH will co-chair the organizational activities for the event. Additional details will be distributed using the club email reflector as they are determined.
- Gump KC5CG presented a slide show on equipment and technology for radio direction finding (DF).
  - Fox Hunts are organized events for DF. Usually the 2m band is used, but some event use the 80m band.

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- o Received signal strength using a directional antenna is a method. The antenna must be rotated to find the best direction.
- o An array of four receive antenna can be set in a circular or linear arrangement. The incoming signals are processed to determine the time difference in arrival on each antenna to determine the direction.
- o The Kerberos SDR product was described. It consists of four inexpensive SDR receivers that are time synchronized. Each receiver is tied to one of the four antennas in the previously described arrays.
- o Directional antennas were described. Two vertical elements are one type. A magnetic and a full wave loop were discussed.
- o A doppler system was described. Such a system would be on a mobile platform.
- o A Moxon antenna is a highly directional antenna with a 40 db front to back ratio.
- Paulson reported that the club web site is up and running using Wordpress. The web site includes a club blog to which is suggested that all net reports be posted. An account to post to the blog can be requested by sending an email to [LARGIT@K4LRG.ORG](mailto:LARGIT@K4LRG.ORG).
- Meeting adjourned at 9:35.