

# Loudoun Amateur Radio Group

## Regular Meeting Minutes February 18, 2023

Venue: Leesburg Lutheran Church

Meeting called to order at 8:40 AM.

- Pledge of Allegiance
- The next club meeting is scheduled for March 11.
- Kevin WA4KBM presented information about tuning homebrewed antennas for efficient operation on various frequencies. The definition of forward power was presented. That is power driven by the transmitter to the antenna. Reverse power was noted as signal power that is reflected from the antenna back to the transmitter. SWR was noted to be the ratio of reverse power to forward power. Since this is a ratio of reverse voltage to forward voltage, it is also known as voltage standing wave ratio (VSWR).

When reverse power is present and the SWR is greater than 1 to 1, there is less power actually radiated by the antenna. An SWR bridge can be used to measure forward and reverse power are present. Using an SWR bridge requires that a radio transmitter be used to drive the signal to the antenna. To measure power without a bridge, an antenna analyzer can be used. An example of an analyzer is the MFJ 259.

Reverse power is created due to an impedance mismatch between the transmitter and the antenna. The impedance can be matched using an antenna tuner. The two main types of antenna tuners are manual and automatic. If a manual tuner is used, it is recommended to keep a log of the tuner settings for various frequencies to speed up setting of the tuner when the transmit frequency is changed.

Discussions about antenna installation occurred during and after the presentation. It was noted that adding solder to a wire to join wires and lengthen an element does not significantly change the SWR. Solder should be used with care because it is inflexible. When wind moves the antenna wires, the solder connection can fracture and open the connection. Split bolt connectors can also be used to length wire elements. When mounting an antenna on a car using a non-magnetic mount, the base of the mount should be connected to the vehicle chassis to allow the vehicle body to function as a ground plane for the antenna.

- It was noted that the Sunday evening 2m net will move from the present repeater to the WA4TXE repeater. The move is made to allow more club members from areas west of Leesburg to participate during the net. The new repeater transmits on 146.700 with a negative offset. No PL tone is required to access the repeater. The transmitter includes a 77Hz PL tone on the output. The repeater is cross connected to a repeater in Chares Town WV transmitting on 146.850, negative offset.

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- A list of scheduled club activities during the coming months was presented. The Gravel Grinder bike race will be held on May 13. Field Day will be held June 24-25. The Reston bike ride will be held August 20. The Oktoberfest event will be held September 22-23.
- It was noted that the PO Box in Purcellville has been closed. The club has rented PO Box 2745 in Leesburg to serve as the official mailing address.
- It was reported that the Parks On The Air template in the N1MM+ logger may be incorrect. It was recommended that the development team for the logger be contacted with details.
- The meeting adjourned at 10:55 AM.

- Attendance

K3WD	Bill
AD7FW	Roy
W4PMP	Chris
N2ALA	Dwight
KS1G	Steve
KC5CG	Gump
KQ4CUE	Shelly
K3FWD	Frank
K9TRE	Tareck
KT9N	Chris
KS4NXG	Bob
Guest	Rick
N4RAF	Steve
N4PD	Paul
WA4TXE	David
KM4GC	Doug
KO4OZJ	Chris
W0MPM	John

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WA4KBM Kevin

N4FAF Jim