



The Roost Report



Welcome to the Green Jacket Roost's first Roost Report! After observing some great initiatives by the Dixie Crows, our sister chapter at Robins Airforce Base, we have decided to implement some of them in our chapter, starting with this report!



Your local chapter supported the AOC booth at TechNet Augusta 2025, raising awareness of the AOC mission and supporting our annual membership drive. From left to right are Daniela Davies, LTC Matthew Sherburne, and Jacob Cox.

Other News

- Voting for the 2025 AOC Board of Directors is open from October 1-31. [View this year's candidates.](#)
- Are you taking advantage of AOC's podcasts? Check them out at <https://crows.org/podcasts/>.
- Keep an eye on [AOC's career center!](#)

EW 101: The Radio Attenuation

Radio attenuation is the loss of signal strength as radio waves travel from a transmitter to a receiver. This is a natural and unavoidable phenomenon in all wireless communication. Attenuation can be caused by a range of factors, including the distance the signal travels (known as **free-space path loss**), absorption by objects like walls or foliage, and reflection or scattering off surfaces. The amount of attenuation is usually measured in **decibels (dB)**, which is a logarithmic unit that expresses the ratio of two power levels.

The most common form of attenuation in open air is free-space path loss. As radio waves radiate from an antenna, their energy spreads out over a larger area, causing the signal power per unit of area to decrease. This loss is directly related to the square of the distance between the transmitter and the receiver. For every doubling of the distance, the signal strength decreases by 6 dB. This principle is fundamental to understanding the range and performance of any wireless communication system.

The **free-space path loss (FSPL)** formula is a key tool used to calculate the signal loss over a distance in a vacuum, ignoring other environmental factors. The formula is often expressed in decibels as:

$$\text{FSPL (dB)} = 20\log_{10}(d) + 20\log_{10}(f) + 20\log_{10}(c4\pi)$$

or

$$\text{FSPL (dB)} = 20\log_{10}(d) + 20\log_{10}(f) - 27.55$$

Where: d is the distance from the transmitter to the receiver in meters. f is the frequency of the radio wave in megahertz (MHz). c is the speed of light (2.998×10^8 m/s). This formula shows that as distance or frequency increases, so does the path loss.

Renew your membership at <https://aoc-greenjacketroost.memberplanet.com/AboutChapter.html>.



Matthew Sherburne is your Green Jacket Roost Membership Chair and the President of K4WAR (ham club on Fort Gordon). Matt is leading an effort to bring Amateur Radio Direction Finding (ARDF) to Fort Gordon, offering physical fitness, amateur radio fundamentals, orienteering, and competition. If you would like to get involved or sponsor the event, reach out to Matt. →

What is Amateur Radio

Amateur radio, or "ham radio," is a hobby and public service that uses the radio frequency spectrum for non-commercial communication. Unlike commercial broadcasters, amateur radio operators use their radios for personal enjoyment, technical experimentation, and community service. This can involve anything from chatting with someone across the country to building your own radio equipment. A major function of the hobby is providing emergency communication during natural disasters when other networks fail, making it a critical public service.

To become a ham radio operator, you need to get a license by passing a test on radio theory and regulations. This opens a world of possibilities for communication, including voice, Morse code, and various digital modes. The hobby is a unique blend of technology, community, and service, allowing people to connect with others globally, experiment with electronics, and provide valuable assistance during emergencies.

The KWWAR Club on Fort Godon conducts quarterly study and license sessions. Reach out to Matt Sherburne to learn more at matt.sherburne@gmail.com.

The Green Jacket Roost Chapter of the Association of Old Crows (AOC) continues to seek opportunities to strengthen our community at Fort Gordon and beyond through impactful events, STEM initiatives, and heartfelt tributes. Share your ideas with us!



The Green Jacket Roost is the local Augusta chapter for the Association of Old Crows (AOC).

To learn more visit:

- <https://aoc-greenjacketroost.memberplanet.com/>

Upcoming AOC Events:

- [Cyber Electromagnetic Activity \(CEMA\) 2025](#) (28 – 29 OCT)
- [AOC 2025](#) (9-11 DEC)

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