It is no secret anymore that drones are redefining modern warfare. Militaries are no longer limiting small Unmanned Aerial Systems (sUAS) to simple reconnaissance and are weaponizing them for devastating strikes, electronic warfare, and battlefield disruption. The war in Ukraine and China's rapid drone advancements serve as stark reminders that the US Army must evolve or risk falling behind.[1] To maintain superiority, the Army must do more than defend against enemy drones—it must harness their potential as offensive weapons and integrate them into its warfighting strategy.

In recent years, the Army has implemented several Counter-small Unmanned Aerial Systems (C-sUAS), such as the DroneBuster and FS-LIDS, to counter this evolving battlefield.[2] However, technology alone is insufficient without a well-trained operator. Current training heavily relies on contracted drone pilots, leaving soldiers without the hands-on experience needed to counter enemy drones in combat effectively. Without an organic Red Air capability at the division echelon, soldiers will be disadvantaged against increasingly sophisticated aerial threats. A dedicated Red Air at the division echelon would ensure realistic training, enhance combat readiness, and empower commanders with offensive drone capabilities, ultimately giving the Army an edge in future conflicts.

The Current State of Red Air UAS Training

Contracted drone pilots, while experienced, are currently conducting most Red Air UAS training, but their numbers are insufficient to meet the Army's growing training demands. As more C-sUAS systems are fielded, the necessity for realistic training intensifies, especially given the effectiveness of drones in combat. Most contracted pilots operate as part of Mobile Training Teams (MTT) deployed across European and Central Command theaters, prioritizing training for units already in operational environments.

Organic Red Air: The Missing Link to C-sUAS in LSCO

By CPT Steven Perez

While this approach ensures a level of readiness for deployed troops, it leaves a critical gap for those training in garrison. Many units receiving C-sUAS systems lack the training and equipment to develop proficiency in countering complex drone tactics. This gap could lead to severe consequences during large-scale combat operations, where battlefield conditions are dynamic and unpredictable. Without adequate Red Air training, soldiers risk facing drone threats with insufficient preparation, leading to increased vulnerabilities and potential battlefield casualties.

Neglecting comprehensive training in drone warfare is akin to deploying an infantry unit that has only trained with laser rifles and skipped out on NTC. Fortunately, the Army maintains strict training standards for its conventional forces, and the same rigor must apply to C-sUAS training to ensure operators are competent and battle-ready.

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1 Council on Foreign Relations. "How the Drone War in Ukraine is Transforming Conflict." Accessed March 4, 2025. https://www.cfr.org/article/how-drone-war-ukraine-transforming-conflict.

2 RTX. "Meet LIDS: A Sure Shot Against Drones." Accessed March 4, 2025. https://www.rtx.com/raytheon/news/2024/02/08/meet-lids-a-sure-shot-against-drones.

The Need for an Organic Red Air Capability

During a forward deployment to Poland in 2022, my platoon encountered firsthand the consequences of inadequate Red Air training. To protect our Forward Operating Base (FOB) from Group 1-3 UAS threats, we developed a layered C-sUAS defensive strategy, incorporating monthly validation exercises against drone threats. These training sessions, led by MTT Red Air pilots, exposed our unit to real-world drone threats, providing invaluable experience in identifying and countering aerial hazards.

However, despite these efforts, training remained insufficient. The limited availability of Red Air pilots restricted our ability to simulate realistic drone swarm attacks. Additionally, the absence of Group 3 drones forced us to use slower, smaller systems that did not accurately represent threats like the Shahed-136, significantly reducing the realism of our training scenarios.

While contractor-led Red Air teams are beneficial, they cannot meet the increasing demand for comprehensive drone training across the Army. Establishing an organic Red Air capability at the division level would ensure that C-sUAS operators receive realistic and continuous training, strengthening overall preparedness for modern drone warfare.

Red Air UAS for Garrison Training

A dedicated Red Air unit must be readily available for C-sUAS training to be effective at the division level. This unit would play a crucial role in:

- **Briefing operators on enemy UAS threats, capabilities, and tactics during C-sUAS familiarization training.**
- **Acting as the Opposing Force (OPFOR) during gunnery and certification processes, ensuring that operators are rigorously tested and validated.**
- **Providing commanders direct access to Red Air teams for training coordination, allowing for more frequent and mission-tailored exercises.**

Moreover, Red Air teams would tailor their training to reflect the operational environments soldiers are likely to face. For example, European deployments would focus on countering ISR drones used by non-state actors. At the same time, Middle Eastern and North African rotations would prioritize training against loitering munitions and one-way attack drones. For Indo-Pacific operations, Red Air training would include swarm attacks and advanced electronic warfare threats modeled after Chinese drone capabilities.[3] By adapting training to mission-specific threats, the Army would ensure its forces adequately prepare for large-scale combat operations.

The Combat Role of Red Air UAS

An organic Red Air unit would be a force multiplier in combat operations. When deployed, Red Air teams would function as UAS "strike teams," providing commanders with offensive drone capabilities tailored to mission requirements. These teams would operate modular, expendable UAS platforms for:

- **ISR support in areas where intelligence gaps exist.**
- **Electronic warfare missions to jam and neutralize enemy drones.**
- **One-way attack operations and aerial munition drops when conventional artillery support is unavailable.**

The Ukrainian military has demonstrated the effectiveness of this approach, using UAS strike teams to

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3 MAJ Gen. David Stewart. "Countering Small Drones: Office Works toward Joint Solutions to Growing Threat," AUSA, January 2, 2025, https://www.ausa.org/articles/countering-small-drones-office-works-toward-joint-solutions-growing-threat.

disrupt Russian forces, gather intelligence, and conduct precision attacks. These teams have played a crucial role in countering enemy artillery, disabling communications, and even intercepting hostile drones.[4] If the US Army adopted a similar model, it could provide maneuver commanders with a critical edge in near-peer conflicts.

Structure and Composition of Red Air Units

A division's Air and Missile Defense (DIVAMD) section, which already oversees C-sUAS programs, is the ideal entity to integrate and manage an organic Red Air element. This team would need a diverse mix of military specialties to operate effectively, including:

- **A team leader to oversee operations.**
- **An intelligence specialist to analyze and replicate enemy drone tactics.**
- **A tactician to develop and execute training scenarios.**
- **A repair and logistics specialist to maintain and sustain drone operations.**

By ensuring that Red Air teams are self-sufficient within DIVAMD, the Army can integrate them into training and combat operations without overburdening existing support structures.

Drone Acquisition Considerations

For Red Air to be effective, the Army must acquire versatile, cost-effective, and domestically produced drones to avoid reliance on foreign supply chains. With current combat losses in Ukraine exceeding 10,000 drones per month, affordability and mass production are critical factors.[5] While US drone manufacturing capabilities remain limited compared to China, the growing military demand could drive investment and innovation within the domestic defense industry, ultimately providing the Army with a reliable and sustainable drone supply.

By developing an in-house Red Air capability, the Army can enhance C-sUAS training, improve combat readiness, and provide maneuver commanders with an essential offensive tool. This shift will increase the Army's lethality and drive innovation within the defense sector, ensuring that US forces maintain technological superiority in an increasingly drone-dominated battlefield.

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Background: Fort Sill's Joint Counter-Small UAS University trains all forces to be prepared for constantly advancing air threats. They fly in real-world scenarios to keep our service members on the offensive. (Photo by Angela Turner, Fort Sill Public Affairs Office)

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4 John Cantin, "Ukrainian Unmanned Aerial System Tactics," TRADOC G2 Operational Environment Enterprise, February 12, 2025, https://oe.tradoc.army.mil/2024/10/08/ukrainian-unmanned-aerial-system-tactics/.

5 David Hambling, "New Report: Ukraine Drone Losses Are '10,000 per Month,'" Forbes, June 2, 2023, https://www.forbes.com/sites/davidhambling/2023/05/22/ukraine-drones-losses-are-10000-per-month/?sh=6815a9f7384a.