US Army Experiments with 3D Printing for Drones, Gateway to Mass Production

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Huntsville, Alabama – The United States Army has initiated a **series of 3D printing experiments for the production of small aerial drones**, intended for use in soldier training programs. The initiative, still in its early stages, aims to meet a growing need: replicating the threat of UAVs (Unmanned Aerial Vehicles) during exercises, with the goal of preparing troops to face enemy drones at a significantly reduced cost.

An Economical and Efficient Approach to Drone Production

General James Rainey, head of the *Army Futures Command*, emphasized the importance of rapid and low-cost production: "**We need to replicate the UAV threat during training, but at a ridiculous price. We don't need luxury cameras or other expensive technologies**," he stated during the Association of the US Army conference.

The project draws inspiration from **practical examples derived from recent conflicts, such as the one in Ukraine,** where Kiev's army used 3D printing to produce drones, and in Myanmar, where rebel forces adopted similar methods. These examples have demonstrated how **low-cost drone production can transform the dynamics of a conflict,** offering practical and immediate solutions.

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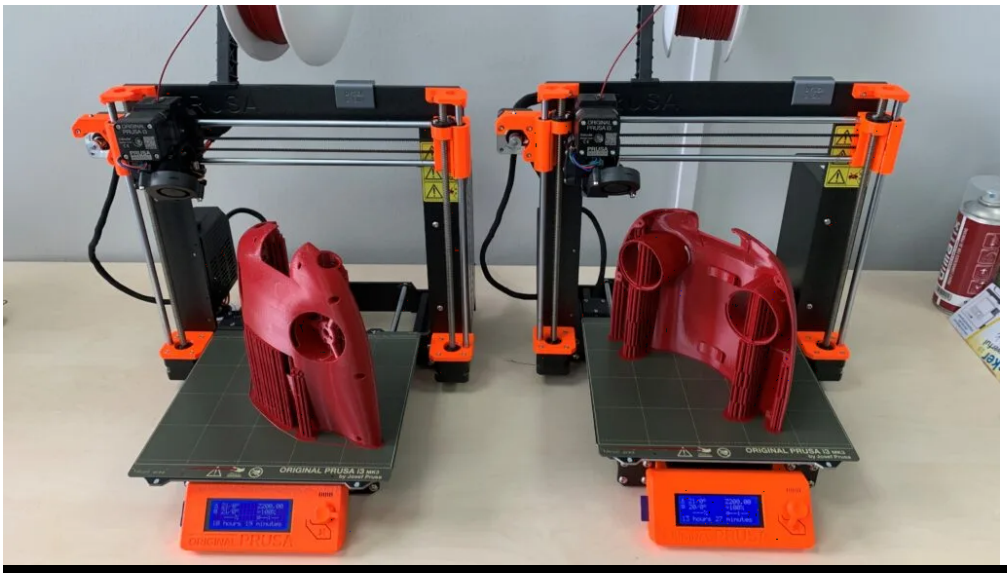
Initial Production and Future Prospects

To date, the Army has started producing about 10 group 1 drones (weighing less than 20 kg) per week. Production takes place at two main locations: the *Rock Island Arsenal* in Illinois, which prints the drones, and the *Tobyhanna Army Depot* in Pennsylvania, where electronic components are integrated.

The next step is to decide whether to expand production. General Christopher Mohan, deputy commander of the *Army Material Command*, stated that it could take a few months to reach a final decision. If large-scale production is approved, the Army will explore ways to increase production to reach much higher numbers, also considering **the transition from 3D printing to injection molding technology, which could allow for the production of 10,000 drones per month.**

Integration Prospects with Other Systems

The use of 3D printing will not be limited to drones but will also extend to other combat vehicles and helicopters. The next step will include analyzing vehicle parts such as the *UH-60 Black Hawk* helicopter, the *AH-64 Apache*, and the *M113* personnel carriers, to determine which components can be produced through 3D printing. **Using *digital twins* (precise digital models), the Army will digitally map these vehicles to identify parts suitable for production through advanced techniques.**



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A New Chapter for the Army and Production Technology

The ongoing experimentation with **3D printing represents a significant step towards the adoption of innovative technologies in military training and preparation**. If the initiative is successful, it could not only revolutionize soldier preparation but also **pave the way for faster, cheaper, and more flexible military production, reducing costs and improving the effectiveness of field operations.**

The United States Army is thus taking a decisive step into the future of military technology, combining the innovation of digital production with the need to prepare for modern challenges of aerial warfare and threats from drones.

News link: https://breakingdefense.com/tag/in-focus-future-army-tech/