Boeing Apache and Unmanned Little Bird Demonstrator Test Expands UAV Control

Boeing [NYSE: BA] has demonstrated for the first time the ability of an AH-64D Apache Longbow helicopter to control an unmanned aerial vehicle (UAV) weapon payload.

Boeing demonstrated the capability in February at its Mesa, Ariz., facility, home of both Apache helicopter production and the company's Unmanned Little Bird (ULB) UAV technology demonstrator used in the milestone test.

"Evaluations of the Apache Longbow helicopter's ability to control UAVs have been ongoing," said Melanie Luna, Boeing program manager for the Airborne Manned/Unmanned System Technology Demonstration (AMUST-D) program. "The latest test is moving the Apache to the next level -- controlling a UAV's sensors and employing its weapons."

During the test, the Apache Longbow, the AMUST-D aircraft, took control and commanded multiple payloads on the unmanned aircraft, an A/MH-6 derivative in development by Boeing. The Apache was on the ground during this engineering phase of remote weapons control while the ULB was several miles away.

Testers used the Apache's newly developed UAV weapon page to perform the standard Hellfire missile firing sequence on the ULB demonstrator through the existing co-pilot station without hardware modifications. Both aircraft feature L3 Communications' tactical common data link equipment and technologies.

The test supported an ongoing U.S. Army Aviation Applied Technology Directorate weaponization program through a contract with Boeing Phantom Works. The program is taking advantage of the ULB's UAV capabilities to provide a proof-of-concept test bed for laser-guided munitions deployment.

The ULB demonstrator last year demonstrated UAV technologies in communication relay, precision re-supply, surveillance and weapons delivery. The ULB also completed a weapons test at Yuma Proving Grounds, Ariz., where the ground station operator controlling the aircraft located and hit the target with a Hellfire missile from several miles away.

The AMUST-D program recently completed the first phase of flight testing at Fort Huachuca, Ariz., where the team demonstrated UAV level 4 (sensor and flight path) control with a tactical common data link-equipped Hunter UAV. Additional AMUST technology demonstrations will continue later this year via the Hunter Killer Standoff Team Advanced Concept Technical Demonstration.

Phantom Works is the advanced research and development unit and a catalyst for innovation for The Boeing Company. It provides advanced solutions and innovative, breakthrough technologies that reduce cycle time and cost while improving the quality and performance of aerospace products and services.
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