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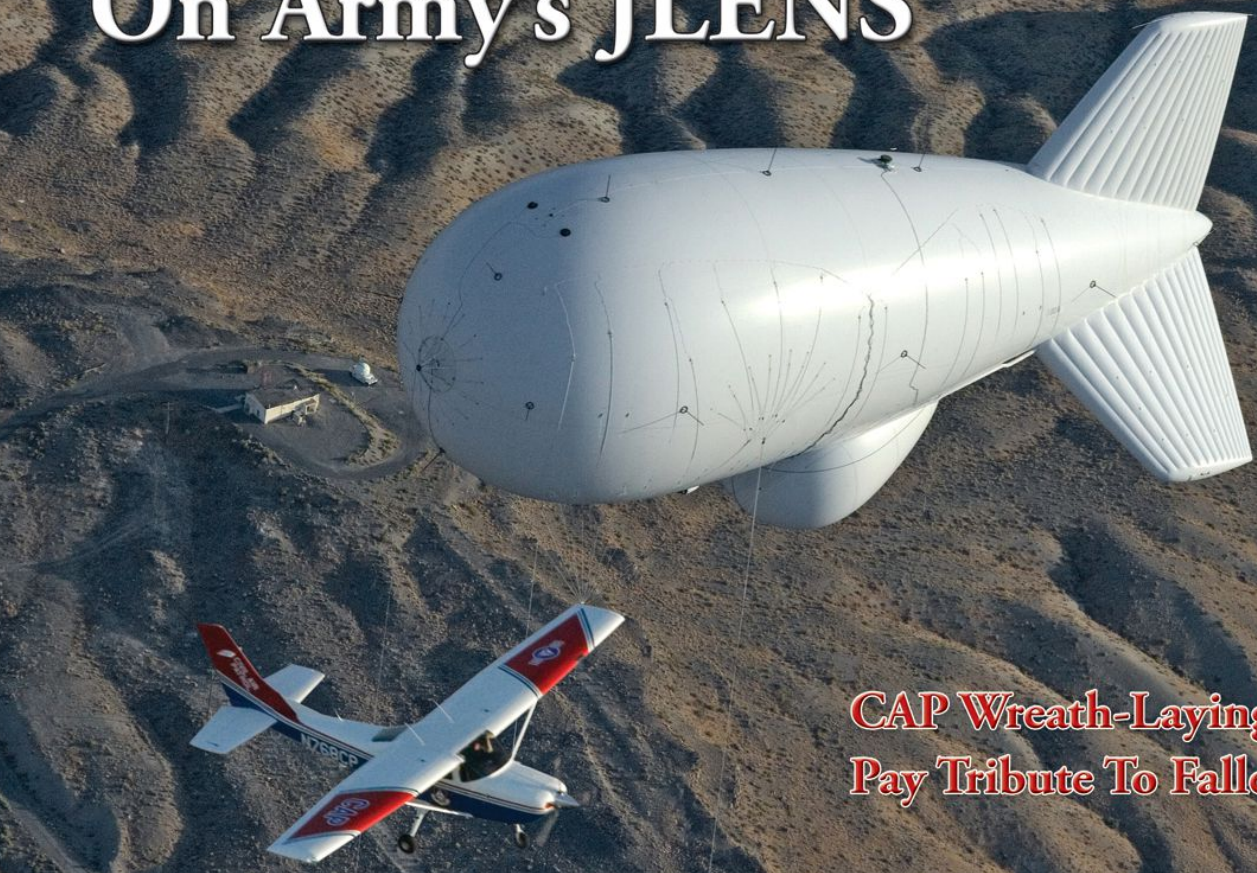
Utah Wing Focuses On Army's JLENS



CAP Wreath-Layings Pay Tribute To Fallen

Cadet Honored As Nation's Top High School Athlete

Bringing JLENS Into Focus:

CAP's Utah Wing Provides Test Support for New Cruise Missile Defense System

By Mitzi Palmer

The 242-foot JLENS aerostat is manufactured by TCOM.

Photo courtesy of Raytheon

This past spring, Civil Air Patrol's Utah Wing helped the U.S. Army reach an important milestone toward defending future battlefields from land-attack cruise missiles.

Through testing conducted over Utah's western desert, the U.S. Army's Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) successfully demonstrated tracking targets

of opportunity via radar carried by an unmanned tethered aerostat.

"It's a game-changing system for warfighters," said Dave Gulla, Raytheon's vice president of Global Integrated Sensors for Integrated Defense Systems, "providing enhanced situational awareness and surveillance capabilities in the detection and deterrence of cruise missile and unmanned aerial threats."

While CAP is a frequent participant in radar test and evaluation missions across the country, this is the first time the organization has been involved in development testing of a major Department of Defense weapon system.

Designed and built for the Army, JLENS is a tactical, theater-based sensor system that's elevated by tethered aerostats to enable battlefield commanders to increase their protection against land-attack cruise missiles.

It's the first aerostat platform featuring long-duration, wide-area, over-the-horizon detection and tracking of low-altitude cruise missiles, providing commanders with early detection of threats and the opportunity to combat them efficiently and effectively.

TESTING MISSIONS

Civil Air Patrol's involvement with JLENS began in late 2009 when the Utah Wing was asked to assist with testing the technology at the U.S. Air Force's Utah Test and Training Range in western Utah.

The Utah Wing's operations special projects chief, Lt. Col. Matt Johnson, said CAP was initially sought to provide flight support for calibration of JLENS' surveillance radar system.

"Army and Raytheon managers asked us to fly an instrumentation package with dual survey-grade differential Global Positioning System receivers to capture real-time kinematics data," Johnson said, "enabling systems engineers to correlate the aircraft's true position with that determined by radar."

As project officer and lead pilot for the mission, Johnson turned the customer's requirements into a flight profile easily replicated by other Utah Wing aircrews.

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>
> *—Dean Barten, U.S. Army JLENS product manager*

"The calibration profile went through several design iterations and a number of proving runs to define and refine procedures that met the customer's requirements," he said.

Johnson said meeting the required navigational precision provided an early challenge when initial flight tests revealed the GPS navigation receivers in the wing's older aircraft refreshed too slowly for their needs.

"However, further flight tests helped determine that CAP's newer Garmin G1000-equipped aircraft were ideally suited for the task," he said. "In fact, the capabilities of the G1000 system proved to be a key to mission success."

The project's original scope included only eight sorties for CAP. Because of their successes, though, the missions have grown considerably over the course of the project.

"Our customer has been beyond pleased with CAP's performance," said Johnson. "As a result, Utah Wing aircrews have flown over 50 sorties and more than 200 hours in support of this project — a greater than six-fold increase over the original program estimate." Mission base staff has also contributed more than 1,300 volunteer hours to the program, he said.

The Utah Wing's expanded role places CAP in the mix with a wide variety of radar targets used to explore the system's capabilities — from T-38s and F-16s to Learjets, helicopters, unmanned aerial vehicles and even kit-built BD-5J microjets.

"The ongoing testing in Utah affirms our confidence

in the system's technical maturity," said Ken Gordon, JLENS program director for Raytheon.

Civil Air Patrol's capabilities have impressed Army officials overseeing the project. "The CAP folks in Utah have exceeded the standard when it comes to professionalism and mission adaptability," said Dean Barten, product manager for the U.S. Army's JLENS Program.

In addition to continued operations in Utah throughout fiscal year 2012, discussions are under way to build on the Utah Wing's successes by including the New Mexico Wing in similar testing at the Air Force's White Sands Missile Range.

"Our efforts here have helped make future battlefields safer for our military," Johnson concluded. "That's a source of tremendous satisfaction for us and something all Civil Air Patrol members can be proud of." ▲

Photo by Lt. Col. Matt Johnson, Utah Wing

Capt. Jason Hess, left, and 2nd Lt. Roger Kehr rehearse mission specific procedures on a PC-based Garmin G1000 systems trainer.