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Forward FPASS

Local team keeps Desert Hawk flying, Page 8

The Desert Hawk glides in for a landing; (inset) what the ground crew sees as the Hawk flies.

Forward FPASS

While living a dream of flying, security forces Airmen offer pinpoint surveillance of local area

Story and photos by Master Sgt. Jason Tudor
Chief of public affairs

On first glance, it's really nothing more than parts of a plastic foam tailgating cooler glued, taped and stapled together for fun. Buzzing along like an electric razor and struggling against the wind, its name — Desert Hawk — seems a tad, well, overreaching.

However, Staff Sgt. Jonathon Krueger's disagrees. As one of five proud pilots of this airplane, flying the Force Protection Airborne Security System is the culmination of a dream that started with poor eyesight.

"I had the grades to go to college. I wanted to fly before I joined the Air Force, but my eyes were bad," said Sergeant Krueger, deployed from Mountain Home Air Force Base, Idaho. "With the Hawk, I still get to realize my dream of flying."

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Airman Reeves spots the Hawk in flight.

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And fly he does. Sergeant Krueger is the proud papa of that airplane —six total, actually — that perform missions at this deployed location. He and two other Airmen strike out about two-dozen times a month flying missions. Cops who fly this system attend training at Indian Springs, Nev., to learn how to handle the Hawk. They go through a rigorous classroom phase followed by day and night qualification flights.

Today's mission began in the back of a pick-up truck. Sergeant Krueger and two others (there are five total on the FPASS team; two work at night) gathered six large boxes of equipment from a storage shed. From there, they rolled out to an assigned location — a 20 by 400 foot area — to launch the airplane.

Once out of the truck, the boxes were pulled down and assembly began. All told, there are six aircraft (five are back-ups); one ground-control station and the antenna. Sergeant Krueger set up the antenna, which he modified combining a long steel pole and a chunk of plywood, attaching both to his pick-up truck. The pole and plywood raise the antenna almost 12 feet and extend the Desert Hawk's range.

Meanwhile, in the bed of the truck, Senior Airman Christopher Brown opened a heavy-duty laptop, its plastic touch screen scratched from hundreds of missions. He connected a few plugs and up popped a map of the area. The laptop allowed Airman Brown to create and fly the mission.

At the same time, Senior Airman Christopher Reeves assembled the Hawk. Parts are removed and pieced together like a puzzle -- wings, fuselage, tail. After Airman Reeves attached a large battery, changed out the camera system payload and set the bird on the ground, it was ready to fly.

After a few moments, the Desert Hawk started beeping, its servos whining and turning. Sergeant Krueger smiled.

"We call those the sounds of happiness," he said. "That means the Hawk has connected with the ground-control unit."

A pre-flight check followed. Airmen Reeves hunched over the airplane. He looked for damage and ensured all of its cameras and flight systems functioned. Then, Airman Brown checked each camera from the ground-control station, a crisp picture appearing on an alternate video monitor. Airman Brown also programmed in the Hawk's flight path. The screen resembled the 'set-up' screen of a flying simulation game — waypoints, loops and maps. He can program the Hawk to do circles, figure-eights or ovals in the sky.

"You simulate the missions (on the laptop) before you actually launch them," Airman Brown said. "It lets you know if you have enough battery, the right altitude and it tells you how long the aircraft will stay aloft."

The mission, however, is almost entirely hands off. Cameras can be spun or tilted by tapping the touchscreen; and the flight path can be modified. If needed, one of the Airmen could actually pilot the aircraft, but Sergeant Krueger said that need is rare.

Initially, the forward camera failed. Airmen Reeves and Brown fiddle with a fix, but get a blue screen. Sergeant Krueger stepped in. With a few taps and jiggles on the camera's structure, the forward camera's image popped on screen.

"OK, we got it now," Airman Brown said.

Soon after, Sergeant Krueger called the tower to get wind speed and direction. Just a few more minutes until launch.

To prepare for the launch, Sergeant Krueger donned body armor and a helmet.

"It has happened before that the bungee cord has hit some, umm, unmentionable areas," Sergeant Krueger said, laughing.

As Airman Reeves pulled back on the cord and attached the Desert Hawk, Sergeant Krueger acted as the resistance, creating something akin to an aircraft carrier catapult. About 170 feet apart, the Airman asked the NCO if he was ready. Sergeant Krueger said as much and called the tower, which gave them clearance to launch. Then, Airman Reeves let go.

Suddenly, the Hawk zipped by, the bungee cord whipping past Sergeant Krueger and his well-armored torso. The engine snapped on, that electric-shaver buzz losing volume as the white plane floated upward to the east.

"That's what it does," said Sergeant Krueger proudly.

Now fully airborne, the Durofoam aircraft struggled against a strong headwind. Once it hit its cruising altitude, however, the mission began. The three Airmen gathered around the screens of the ground-control station to see the imagery flowing in.

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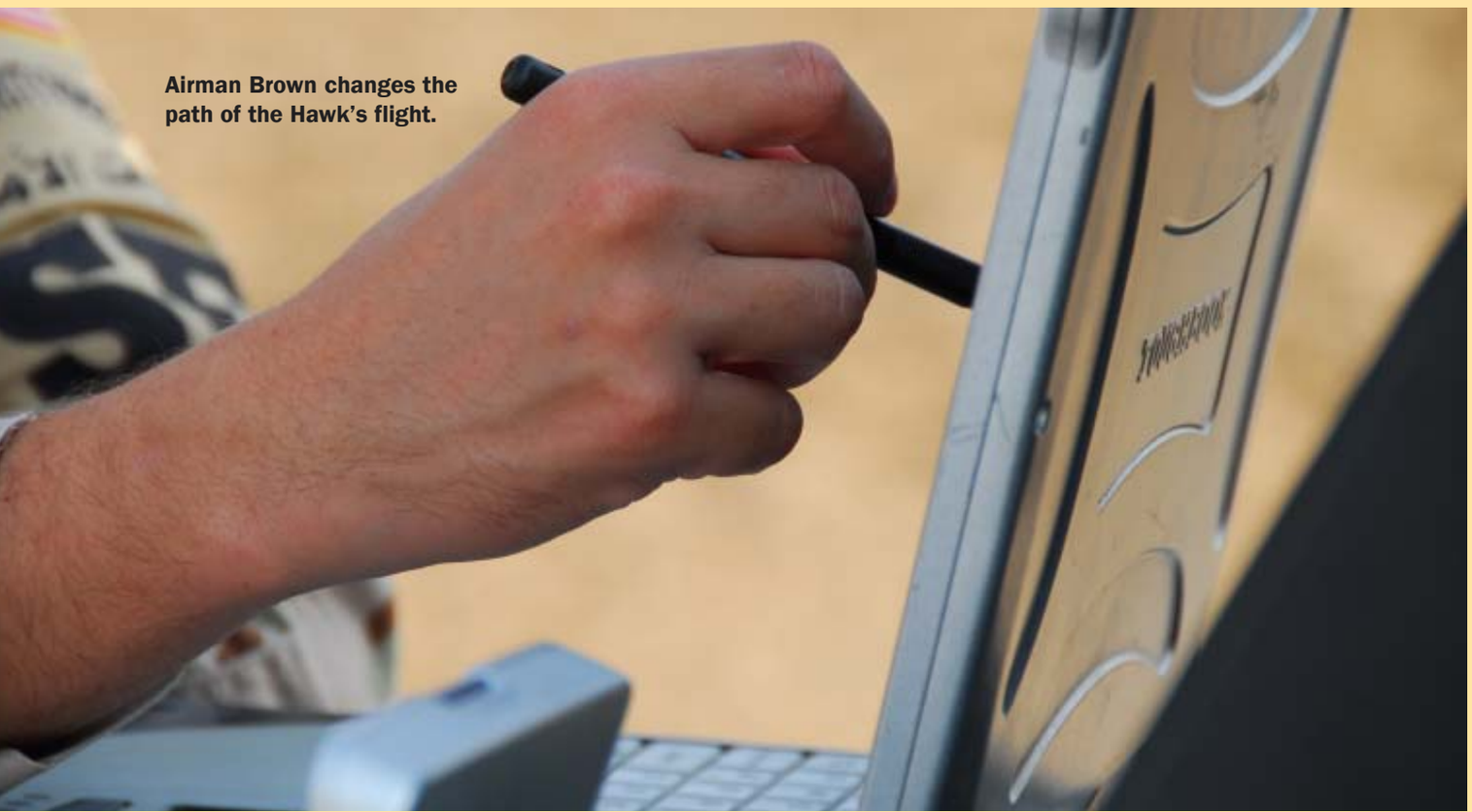

Airman Brown changes the path of the Hawk's flight.

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The surveillance feature of the Desert Hawk gave real-time airborne images of the local area. It can also give ten-digit coordinates to ground forces, enabling them to instantly respond and neutralize a potential threat.

In terms of flight, the Desert Hawk shares similarities to another unmanned aircraft, Sergeant Krueger said.

"It's a miniature Global Hawk," he said. "If it loses signal, it will fly around and land itself right back here." It's also controlled via a sophisticated computer system, like the RQ-4.

Returning imagery is vivid. Local features are crisp and easy to spot. Occasionally, the screen turned to snow because of interference. The entire mission is recorded onto a digital videotape. Airman Brown also took a few digital snapshots as the Hawk cruised overhead.

The Hawk and its first keepers landed here two and a half years ago. Since then, the $250,000 surveillance system has provided valuable imagery for force protection planners.

"The FPASS provides Security Forces with an aerospace platform that provides valuable 'real time' information to Airmen on the ground in relation to enemy activity or exploring unknown terrain," said Capt. Rodney Clark, who runs the force protection office here.

Before distinguished visitors or passenger rotators drop in, the Hawk flies. "It is an ideal system for getting a good look at the local area before high-value assets enter potentially vulnerable air space," Sergeant Krueger said.

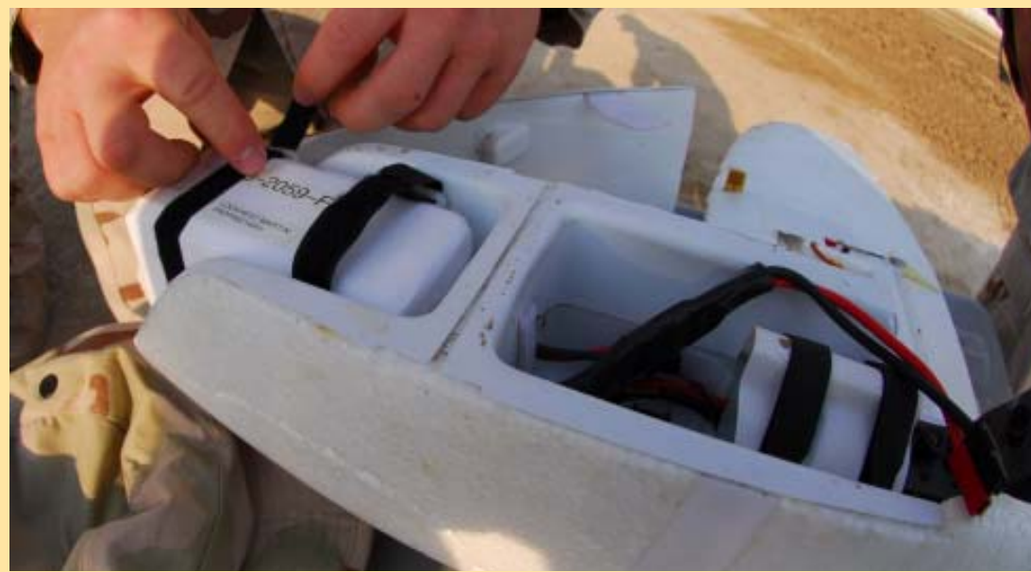
After about 40 minutes, the aircraft returned and circled the pick-up truck a few times. Airman Brown then touched the screen, telling the Hawk to land. It turned out and began an approach. As it started to descend, its engine turned off and it began to glide directly toward a waiting Airman Reeves. Softly bumping the uneven dirt landscape, the Hawk landed almost unscathed. During the flight, it lost a thin panel from the left wing. Otherwise, no mending needed.

Like its larger airplane counterparts, the Desert Hawk also provides mementos of a combat tour. Airmen who can find a flag small enough can have it flown. Each flag and flight is accompanied by a certificate that Krueger himself signs with this signature block:

Jonathon M. Krueger, SSgt, ***Pilot****, USAF*

For the kid with the bad eyes, it's a worthwhile mission, and in his own way, he gets to live his dream. It also helps keep Airmen here safe.

"It's the best of both worlds," he concluded.



The Desert Hawk team posee after the mission for a photo. Below, Airman Reeves unsnaps the Hawk's battery.