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Pentagon to soon deploy pint-sized but lethal Switchblade drones

The drones, which U.S. officials hope will help reduce civilian casualties in war zones, pack tiny explosive warheads that can destroy targets with pinpoint accuracy.


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The Switchblade drone is designed to fit into a soldier's rucksack. It weighs less than 6 pounds and can take out a sniper on a rooftop, without blasting the building to bits. The drone also enables soldiers in the field to identify and destroy targets much more quickly by eliminating the need to call in a strike from large drones that may be hundreds of miles away. (AeroVironment / January 20, 2009)

By W.J. Hennigan, Los Angeles Times
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Seeking to reduce civilian casualties and collateral damage, the Pentagon will soon deploy a new generation of drones the size of model planes, packing tiny explosive warheads that can be delivered with pinpoint accuracy.

Errant drone strikes have been blamed for killing and injuring scores of civilians throughout Pakistan and Afghanistan, giving the U.S. government a black eye as it targets elusive terrorist groups. The Predator and Reaper drones deployed in these regions typically carry 100-pound laser-guided Hellfire missiles or 500-pound GPS-guided smart bombs that can reduce buildings to smoldering rubble.

The new Switchblade drone, by comparison, weighs less than 6 pounds and can take out a sniper on a rooftop without blasting the building to bits. It also enables soldiers in the field to identify and destroy targets much more quickly by eliminating the need to call in a strike from large drones that may be hundreds of miles away.

"This is a precision strike weapon that causes as minimal collateral damage as possible," said William I. Nichols, who led the Army's testing effort of the Switchblades at Redstone Arsenal near Huntsville, Ala.

The 2-foot-long Switchblade is so named because its wings fold into the fuselage for transport and spring out after launch. It is designed to fit into a soldier's rucksack and is fired from a mortar-like tube. Once airborne, it begins sending back live video and GPS coordinates to a hand-held control set clutched by the soldier who launched it.

When soldiers identify and lock on a target, they send a command for the drone to nose-dive into it and detonate on impact. Because of the way it operates, the Switchblade has been dubbed the "kamikaze drone."

The Obama administration, notably the CIA, has long been lambasted by critics for its use of combat

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drones and carelessly killing civilians in targeted strikes in Pakistan, Afghanistan, Iraq, Yemen and Somalia. In 2010, a United Nations official said the CIA in Pakistan had made the United States "the most prolific user of targeted killings" in the world.

In recent weeks, White House spokesman Jay Carney was asked about the issue at a recent news briefing, and he said the Obama administration is committed to reducing civilian casualties.

Although Carney did not mention the Switchblade specifically, he said "we have at our disposal tools that make avoidance of civilian casualties much easier, and tools that make precision targeting possible in ways that have never existed in the past."

The Switchblade drone appears to be an improvement as an alternative to traditional drone strikes, in terms of minimizing civilian harm, but it also raises new concerns, said Naureen Shah, associate director of the Counterterrorism and Human Rights Project at Columbia Law School.

She pointed out that when a drone strike is being considered there are teams of lawyers, analysts and military personnel looking at the data to determine whether lethal force is necessary. But the Switchblade could shorten that "kill chain."

"It delegates full responsibility to a lower-level soldier on the ground," she said. "That delegation is worrisome. It's a situation that could end up in more mistakes being made."

Arms-control advocates also have concerns. As these small robotic weapons proliferate, they worry about what could happen if the drones end up in the hands of terrorists or other hostile forces.

The Switchblade "is symptomatic of a larger problem that U.S. military and aerospace companies are generating, which is producing various more exotic designs," said Daryl Kimball, executive director of the Arms Control Assn. "This technology is not always going to be in the sole possession of the U.S. and its allies. We need to think about the rules of the road for when and how these should be used so we can mitigate against unintended consequences."

The Switchblade is assembled in Simi Valley by AeroVironment Inc., the Pentagon's top supplier of small drones, which include the Raven, Wasp and Puma. More than 50 Switchblades will be sent to the war zone in Afghanistan this summer under a \$10.1-million contract, which also includes the cost of repairs, spare parts, training and other expenses. Officials would not provide details about where the weapons would be used, how many were ordered and precisely when they would be deployed.

AeroVironment, based in Monrovia, developed the weapon on its own, thinking the military could use a lethal drone that could be made cheaply and deployed quickly by soldiers in the field, said company spokesman Steven Gitlin.

"It's not inexpensive to task an Apache helicopter or F-16 fighter jet from a base to take out an [improvised explosive device] team when you consider fuel, people, logistics support, etc.," he said.

About a dozen Switchblades were tested last year by special operations units in Afghanistan, according to Army officials, who said the drone proved effective.

The Army is considering buying \$100 million worth of the drones in a few years under a program called the Lethal Miniature Aerial Munition System, Nichols said. The Air Force and the Marine Corps have also expressed interest in the technology.

AeroVironment is not the only company pursuing small, lethal drones. Textron Defense Systems is also working on a small kamikaze-style drone. Named the BattleHawk Squad-Level Loitering Munition, the drone is being tested at an Army facility in New Mexico.

Peter W. Singer, a fellow at the Brookings Institution and author of "Wired for War," a book about robotic warfare, said the Switchblade's entry into the war zone is typical of today's weapons procurement path. Defense contractors, he said, are on their own developing smaller and cheaper but powerful high-tech weapons vital to waging guerrilla-type warfare in the 21st century, and they are finding success.

"This weapon system is the first of its kind," he said. "If it works, there's little doubt others will follow."

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