

An Apparent First in U.S. Law Enforcement Use of Unmanned Ground Vehicles

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On the night of July 7, 2016, Micah Johnson [opened fire on law enforcement officers](#) who were observing a protest against police-involved shootings in Dallas, TX. Johnson killed five officers and wounded seven. Johnson was later killed by an explosive device deployed by a bomb disposal robot (also known as an "unmanned ground vehicle," or "UGV"). While the tactic is being [hailed by some as an innovative way to tackle a dangerous threat and a way to save officers' lives](#), the Dallas Police Department (DPD) use of a robot to kill an active shooter has raised questions about what this might mean for how police use force in the future.

What We Know About the Standoff

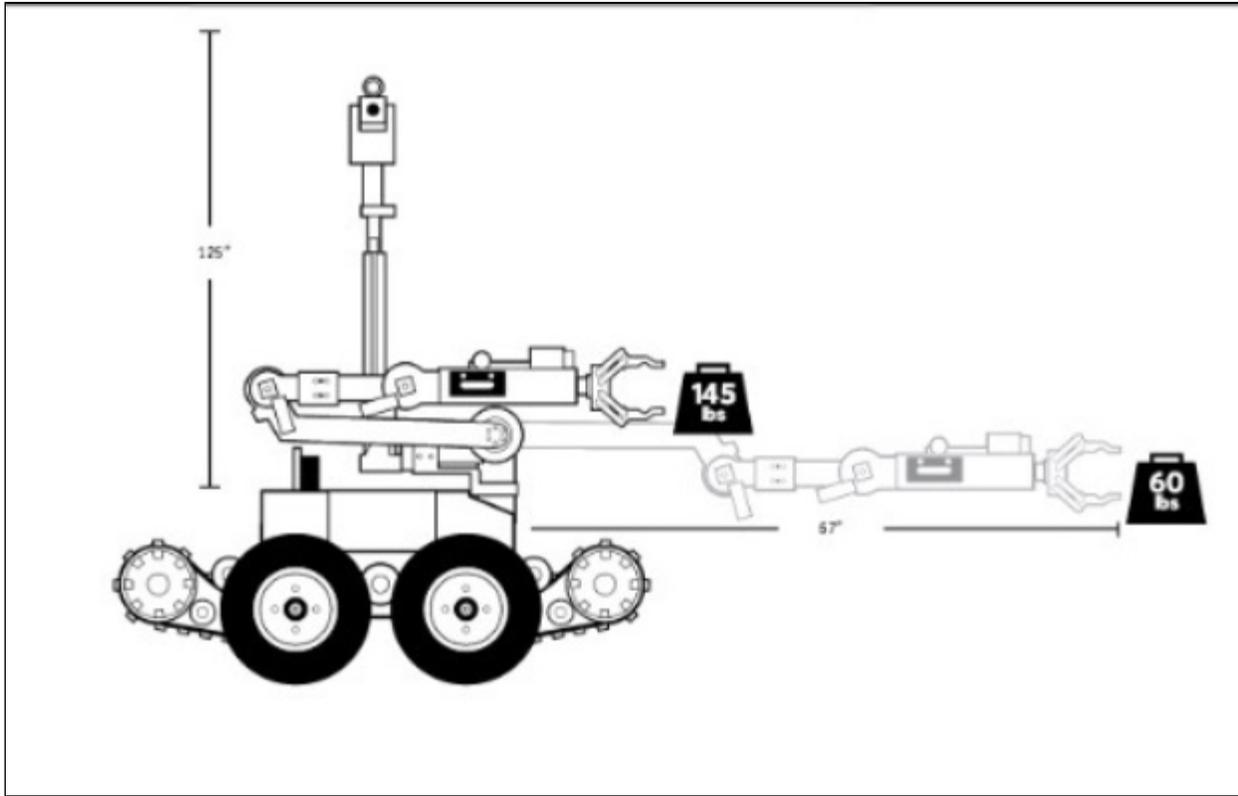
After Johnson was cornered in a building in Dallas, an [hours-long standoff ensued, which involved Johnson and law enforcement exchanging gunfire](#). Reportedly, a hostage negotiator attempted to persuade Johnson to surrender, [but negotiations were unsuccessful](#). During the standoff Johnson talked about how officers would [eventually find explosives, how he wanted to kill officers, and how "the end is coming."](#)

Dallas Police Chief David Brown ordered his Special Weapons and Tactics (SWAT) team to [devise a plan to "neutralize" Johnson without placing more officers in danger](#). The officers decided to deploy their bomb disposal robot with a pound of C-4 explosive in order to "take the sniper out." The robot [placed the explosive behind a wall adjacent to Johnson](#). The C-4 was detonated and the explosion killed him.

The UGV Used by the Dallas Police Department

[The DPD reported](#) that it used a [Remotec Andros Mark V-A1](#) manufactured by Northrup Grumman to neutralize Johnson. It is operated by remote control, is outfitted with a camera, and has an arm that can lift between 60 and 145 pounds, depending on its extension.

Figure 1. Remotec Andros Mark V-A1



Source: Brian Fung, "Meet the Remotec Andros Mark V-A1, the Robot that Killed the Dallas Shooter," in *The Switch*, a blog maintained by the *Washington Post*, July 11, 2016.

The Mark V-A1 is one in a series of robots that are used by law enforcement in tactical situations. These robots are usually used to "[surveil crime scenes, aide in hostage negotiations, or defuse bombs.](#)" It has been reported that [this is the first time that law enforcement has deployed an UGV to kill a suspect.](#) However, there are examples of robots being outfitted to deliver non-lethal ordnances like [flash or smoke grenades](#) or [tear gas](#).

Potential Effect on the Use of Force

Among certain observers, the DPD's use of a robot as a weapon has raised concerns about how law enforcement might deploy force in the future. [Some law enforcement officials have voiced a concern](#) that this could set a precedent and other agencies could start using the tactic. Others have raised the concern that deploying a tactic that [previously had been confined to the battlefield](#) represents another step down the path of the perceived "[militarization](#)" of law enforcement.

[Some experts have raised concerns](#) about whether using robots to neutralize suspects could lead to an increased use of deadly force, because in the right circumstances remotely deployed force can be applied with relative safety and ease. [As an expert with the Center for Strategic and International Studies noted](#), "the further we remove the officer from the use of force and the consequences that come with it, the easier it becomes to use that tactic."

There are also concerns that deploying force remotely could raise ethical issues about when force should be used. [As one expert noted](#), the mission of the police is to protect the public. Further, "that core mission ... includes protecting some people who do some bad things. It includes not using lethal force when it's possible to not." Does the ability to use force remotely, thereby limiting officers' risk of injury or death, give police an incentive to kill an armed suspect instead of working to bring the situation to a peaceful conclusion?

Other experts are not convinced that [what happened in Dallas will prove to be a watershed moment](#). They contend that if other law enforcement agencies use robots to deploy lethal force it will be done sparingly. They believe that the circumstances in Dallas were unique and that most law enforcement agencies will not need to resort to the tactic deployed by the DPD to resolve standoffs with armed suspects. [Another expert stated](#) that people should not be nervous about police using robots in "extreme, anomalous situations with few good options," but rather when their use becomes commonplace.

While there might be concern that using a bomb to kill an armed suspect represents an excessive use of force, experts note that the method used by the DPD might not raise significant issues. [As one expert noted](#), "[t]he circumstances that justify lethal force justify lethal force in essentially every form. If someone is shooting at the police, the police are, generally speaking, going to be authorized to eliminate that threat." [Another expert notes](#) that the DPD's actions do not "seem fundamentally ethically different from another distance weapon, like a sniper rifle, used to take out suspects in an active shooter situation."

Potential Regulation of UGVs

Using an UGV to deploy deadly force has generated questions about whether [there is a need to regulate how and when robots can be used in such a manner](#). There are a few avenues that Congress could consider to potentially influence how law enforcement uses UGVs. It has been reported that the Department of Defense has [transferred 479 bomb disposal robots to law enforcement agencies](#) through its ["1033" program](#) between 2006 and 2014. Congress could consider placing conditions on how law enforcement uses UGVs received through the 1033 program. Congress could also consider requiring law enforcement agencies to have written policies in place limiting the tactical use of UGVs as a condition of receiving funding, such as the [Edward Byrne Memorial Justice Assistance Grant program](#), that can be spent on purchasing equipment.