

## **Electronic Control Weapons: Liability Issues**

Chief's Counsel

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Considerable public attention has been given to electronic control weapons lately. News media outlets have reported incidents in which the use of electronic control weapons were linked to the deaths of suspects, and critics have questioned the safety of the devices. Nevertheless, research supports reasonable deployment and use of these weapons. Much of what is fueling the debate today is anecdotal and not based in research.

### **History of Electronic Control Weapons**

A quick review of the history of electronic control weapons will help the law enforcement executive to understand today's devices. Jack Cover, a National Aeronautics and Space Administration scientist, experimented with electricity as a nondeadly weapon in the 1960s. He discovered that when short-duration (milliseconds) high-energy direct-current electric pulses were applied to human beings, immediate incapacitation almost always occurred with direct, negative side effects. This discovery led to a delivery system he called the Taser.<sup>1</sup> Cover spent several years perfecting this futuristic device, and it was introduced to the public through the 1976 Clint Eastwood film *The Enforcer*.

The original electronic control weapons were 50,000-volt, seven-watt stun systems that were classified as a firearm, because they used gunpowder to fire probes into targeted subjects, and fell under provisions of the 1968 Gun Control Act. Later research and development efforts resulted in the introduction of new electronic control weapons in 1999. One of the newer devices is a 50,000-volt, 26-watt system. Unlike its predecessor, this version uses nitrogen cartridges, rather than gunpowder, to fire its probes. The device is classified as an electro-muscular disruptor that overrides the central nervous system. This version of the device increases its effectiveness.<sup>2</sup>

Electronic control weapons are an important additional force option, significantly because nondeadly force options such as oleoresin capsicum (OC), or pepper spray, impact projectiles, and police batons all rely on pain to overcome a suspect's resistance to officer commands, and persons who are under the influence of drugs or alcohol or who have a mental illness may have a higher tolerance of pain that correspondingly decreases the effectiveness of pain compliance weapons. Officers employing these options sometimes find that these options have little or no effect.<sup>3</sup> Electronic control weapons do not rely on pain and are therefore useful in situations

where other weapons are not.

## **Risk Management**

Like all force tactics and devices, use of electronic control weapons creates liability risks. The more critical question is how the amount and type of risk created compares to the risk reduced or eliminated. For example, if tasing someone, as it is sometimes known, creates substantial risk of serious injury but eliminates the need to shoot and kill that person, the risk of tasing obviously would be worth taking. If tasing creates substantial risk of serious injury but does not substantially reduce any serious risks, the tasing generally would be inappropriate, possibly illegal, and likely to increase liability exposures. Because the touchstone of use-of-force law is reasonableness, the risk-to-reward ratio is crucial.

It is important for decision makers to appreciate fully the following:

- It is usually not the tool itself that increases liability exposures but the reasonableness of when and how the tool is used, given surrounding circumstances.<sup>4</sup> As with any force measure, use of an electronic control weapon must be justified both generally and specifically. Whereas we might say generally that electronic control weapons may be used on persons who are actively resistive, a particular use on an actively resistive but apparently unarmed six-year-old child might nonetheless be totally unreasonable.
- In order to balance risks appropriately, one must know, at least generally, what amount and type of risk is involved in a particular tasing. The starting point, of course, is the gathering of data concerning electronic control weapon use generally. How many applications have there been? What percentage of them caused death or serious injury? What percentage did not? What other circumstances surrounded any deaths or serious injuries? Relevant circumstances can include the suspect's physical condition, drug and alcohol use, existing medical conditions, and level of physical exertion, among other potential contributors. Without this data, risk balancing is impossible because one side of the equation is unknown.
- The fact that a device or tactic occasionally but rarely causes death or serious injury does not make it deadly force.<sup>5</sup> Deadly force, according to federal courts, is force that creates a substantial risk of (or is likely to cause) death or serious injury.<sup>6</sup> It would seem that, under this definition, electronic control weapon use would be classified simply as nondeadly force along with police dogs, impact weapons, and OC, all of which can cause death or serious injury but all of which, when properly used, are unlikely to do so.<sup>7</sup>

The task is to regulate electronic control weapon use as any other force option—that is, to define when the use of a electronic control weapon is reasonable. Of course, these matters are necessarily and irrevocably situational. As in most other liability matters, we note that careful policy, training, supervision, and discipline (proactive and reactive) are critical to proper management of liability risks.

## **Data Analysis**

A good place to start is with a review of what is currently known about electronic control weapon research and applications. One of the leading studies to date, the

U.S. Department of Defense Human Effects Center for Excellence's "Report on Human Effectiveness and Risk Characterization for Electromuscular Incapacitation Devices," concluded that application of an electronic control device such as the Taser M26 and X26 "for temporary incapacitation does not appear to pose significant risk to the recipients."<sup>8</sup>

In another study, the British Home Office Defense Scientific Advisory Council Subcommittee on the Medical Implications of Less-Lethal Weapons concluded that "the risk of life-threatening or serious injuries from the M26 Taser is very low."<sup>9</sup> Additional studies of electronic control weapons, including research by the Force Science Research Center, a nonprofit institution based at Minnesota State University in Mankato; the Orange County, Florida, Medical Task Force; and the Carleton University M26 Evaluation are available at [www.taser.com/facts/medical\\_info.htm](http://www.taser.com/facts/medical_info.htm).

In an article published in the December 24, 2004, edition of the Arizona Republic, Robert Anglen documents 84 deaths that came after the application of an electronic control weapon since September 1999.<sup>10</sup> Of the 84 cases, Anglen reports that medical examiners in 11 cases stated that "Tasers were a cause, a contributing factor, or could not be ruled out in someone's death." In 19 cases, "coroners and other officials reported the stun gun was not a factor." The article also provides limited information about the circumstances surrounding the deaths.

Of the 84 cases identified in the newspaper article, only in 11 cases was the electronic control weapon purportedly linked to a death or not ruled out as a contributing factor. In 19 of 84 cases where an electronic control weapon has been used and a death ultimately resulted from the incident, the weapon was not a factor in death. However, the most meaningful statistic is the total number of applications compared to the 11 deaths where the weapon was reported to be a cause or a contributing factor or could not be ruled out as a factor.

This calculation requires a judgment as to what number is the appropriate baseline for comparison. Taser International, manufacturer of the M26 and X26 devices, cites approximately 62,000 Taser applications in the field and another 100,000 Taser applications in training and on volunteers. Comparing the 11 deaths to the 62,000 estimated field uses results in a .00018 percent death rate. Even using all 65 of the cases where the electronic control weapon was not clearly ruled out (84 total deaths minus 19 deaths in which the weapon was ruled out as a factor) and only the 62,000 field uses results in a .00105 percent death rate.

The appropriate comparison may be to include the 62,000 field uses with the 100,000 training and volunteer applications or 162,000 as the baseline. While the training and volunteer applications do not duplicate real-world applications, it appears reasonable to expect some correlation if the sole factor contributing to the death is the use of a Taser. Using this number, the 11 deaths result in a .000067 percent death rate, and the 65 cases result in a .0004 percent death rate.

Certainly, these statistics suggest that the risk of death caused by electronic control weapon use is low. Some may question the number of field uses and training and volunteer applications, but these numbers appear reasonable given that more than 6,000 police departments have purchased electronic control weapons, and approximately 133,000 devices have been sold through the third quarter of 2004.

It is also worth reviewing the factors that frequently appear in cases of death when

an electronic control weapon has been used. Many involve multiple applications of the device against a suspect, or a suspect who has a history of drug abuse, is suffering from extreme physical exertion, or has preexisting medical conditions. Obviously, the factors of drug abuse, preexisting medical conditions, and extreme physical exertion often contribute to deaths associated with any type of force application.

So what do we do with all this data? Until additional statistically significant data are available, we attempt to make reasonable decisions about whether the risks reduced or eliminated by a particular use of an electronic control weapon substantially outweigh the risks created by that same application. This position comports with the response of Dr. Bill Lewinski, executive director of the Force Science Research Center, to the call of Amnesty International to suspend all electronic control weapon use until additional research has been done; he said, "Nonsense."<sup>11</sup> Presumably, we would not use a tool or tactic at all if we didn't reasonably believe that it would prevent appreciably more injuries and deaths than it would cause.

### **"Less-Lethal"?**

Given the data available, a major question should be addressed: if an electronic control weapon, properly deployed, is well within the existing definition of nondeadly force (extremely unlikely to cause death or serious injury), why would we describe it as "less-lethal," which implies that we view it as lethal, just less so?

Fourth Amendment law speaks of two categories of force: deadly and nondeadly. The term "less-lethal" potentially confuses the fact that electronic control weapons, appropriately used, are by definition nondeadly force devices. It also suggests that the use of electronic control weapons is questionable in anything but deadly force situations.

In fact, some of the most beneficial applications of electronic control weapons will be in nondeadly force situations. Law enforcement agencies should consider eliminating the term "less-lethal" from their vernacular because its use potentially increases liability exposure or, alternately, dramatically narrows the utility of what otherwise appears to be a widely beneficial tool. Even in cases where police canines have caused death, reviewing federal courts have emphatically stated that the deployment of the canine was nondeadly force because it was so statistically unlikely to cause death or serious injury.<sup>12</sup>

### **Recommendations**

At a point, it becomes necessary to enunciate some verbiage that identifies or describes when, generally speaking, we view the use of electronic control weapons as appropriate. It seems clear that the use of such devices should not be limited to situations where a subject has already become assaultive but instead would be allowed when an officer reasonably believes that a subject is "imminently a physical threat." A requirement that electronic control weapons be used only as a last resort of nondeadly force (that is, only after other measures have been unavailing or are deemed impractical) would unnecessarily limit the beneficial use of electronic control weapons. v

Authors' note: The opinions expressed in this writing do not necessarily represent the views of the Police Chief or the IACP.

1. Inspired by a futuristic weapon used by Tom Swift, the hero of Victor Appleton's popular adventure stories from the early 1900s, Cover named his invention the "Taser," an acronym for "Thomas A. Swift's electric rifle." Today, Taser is a registered trademark name that has achieved in law enforcement circles what Kleenex and Xerox achieved in society at large: it has become the generic descriptor for an entire type of product. But the Taser is not the only electronic control weapon. The operational concepts for electronic control weapons are generally standard and could easily be adapted to similar devices. It is noted, however, that although devices may be similar in design, function, and appearance, the individual manufacturers' guidelines may differ and should be followed for particular devices. See the IACP National Law Enforcement Policy Center, "Electronic Control Weapons: Concepts and Issues Paper" (Alexandria, Va.: December 2004): 2.
2. IACP National Law Enforcement Policy Center, "Electronic Control Weapons": 3.
3. IACP National Law Enforcement Policy Center, "Electronic Control Weapons": 3.
4. See *Graham v. Connor*, 490 U.S. 386 (1989).
5. *Robinette v. Barnes*, 854 F.2d 909 (6th Cir. 1988) (K-9 case).
6. See *Ryder v. City of Topeka*, 814 F.2d 1412, 1416 n.11 (10th Cir. 1987); *Pruitt v. City of Montgomery*, 771 F.2d 1475, 1479 n.10 (11th Cir. 1985); and *Robinette v. Barnes*, 854 F.2d 909, 912-913 (6th Cir. 1988).
7. *Robinette*, 854 at 912 (K-9 case resulting in death); *Kuha v. City of Minnetonka*, 328 F.3d 427, at 434 (8th Cir. 2003) (K-9); *Vera Cruz v. City of Escondido*, 139 F.3d 659, at 663 (9th Cir. 1998) (K-9); and *Deorle v. Rutherford*, 263 F.3d 1106, 1113 (9th Cir. 2001) (bean bag).
8. U.S. Department of Defense, Human Effects Center for Excellence, "Report on Human Effectiveness and Risk Characterization for Electromuscular Incapacitation Devices"; available at [www.taser.com/documents/HECOE\\_Report\\_Summary\\_101804.pdf](http://www.taser.com/documents/HECOE_Report_Summary_101804.pdf)
9. The British Home Office, Defense Scientific Advisory Council, Subcommittee on the Medical Implications of Less-Lethal Weapons, "Report"; available at [www.taser.com/documents/UK\\_DOMILL\\_med\\_statement.pdf](http://www.taser.com/documents/UK_DOMILL_med_statement.pdf)
10. Robert Anglen, "84 Cases of Death Following Stun-Gun Use," Arizona Republic, December 24, 2004; available at [www.azcentral.com/specials/special43/articles/1224taserlist24-ON.html](http://www.azcentral.com/specials/special43/articles/1224taserlist24-ON.html)
11. Force Science News, no. 8; available at [www.forcescience.org](http://www.forcescience.org)
12. *Robinette*, 854 at 913.

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