

he terms "electronic control device" or "conducted energy device" generally describe weapons that are designed to use an electric current to momentarily disable an individual's voluntary motor functions to allow that individual to be easily apprehended by the police. The most well known and most widely deployed electronic control devices are the TASERs manufactured by TASER International. Just as the term Kleenex is often used as a general synonym for facial tissue, so too has the term TASER come to be used as a generic term for electronic control devices. In this article, as well as most of the literature on the subject, the terms are used interchangeably. For the purpose of this article, the focus of the discussion will be on those electronic control devices manufactured by TASER International.

From a logical standpoint, provided they are used in proper circumstances and function as intended, it seems clear that TASERs are a beneficial tool for the police forces that deploy them. They are different than previously existing force options in two primary respects. First, in some modes of operation, the TASER provides the only non-lethal force tool in the police arsenal that is not strictly based upon pain compliance. Empty-hand techniques, collapsible batons, pepper spray, and even bean bag rounds from a shotgun all work the same way. In order for them to be effective, the officer or officers must physically overpower the suspect or at least overpower his or her will to continue resisting or to be an immediate threat to the officer. TASERs, on the other hand, when effectively applied, disrupt voluntary muscle control rendering the need for additional force far less likely.

Second, TASERs have the additional advantage over existing force options of ensuring higher levels of police accountability for force use. This is the case because each TASER contains a logging device that records the date and time of the last several hundred instances the TASER has been fired. Also, TASER cartridges contain many discretely numbered confetti-like pieces of paper that are automatically spread over the area of the TASER deployment. This provides additional tangible evidence that a TASER has been used at range. Additionally, TASER International has recently released a camera that mounts to the TASER and automatically records a video record of the events anytime

the TASER device is active, although this option significantly increases the cost per unit of the devices.

TASER deployment is not, however, risk free or likely to be done without some controversy. It is clear that the use of a TASER, even if it works exactly as intended, may potentially harm the person it is being used against through uncontrolled falls, probe penetration of sensitive areas, and contact burns. Also, there are some groups that see a link between in-custody deaths and TASER usage, although this link has been disputed by the manufacturer of the device and many others. Additionally, being a relatively new technology, the jurisprudence of the subject has not been fully established. Like any other emerging technology, TASER litigation is likely to continue until a legal consensus has been reached regarding the technology's appropriate use.

With all this in mind, however, the statistical evidence collected from the agencies that have deployed TASERs shows substantial and tangible benefits that result from their usage. Police officer injuries and associated workers' compensation claims tend to plummet. Injuries to arrestees tend to decrease as well. Some jurisdictions have recorded a significant decrease in the use of deadly force. Finally, there have been many instances when the mere threat of using the TASER has caused a suspect to become compliant. As a result, some, but not all, jurisdictions where TASERs are deployed have experienced a decrease in total use-of-force incidents.

There appears to be a consensus forming from the risk-analysis perspective that TASERs are beneficial when used by someone with proper training in appropriate circumstances. This is likely why the League of Minnesota Cities Insurance Trust has concluded that these weapons give police officers a safe and effective tool for controlling dangerous behavior and overcoming resistance, and that their use has resulted in considerably fewer arrest-related injuries to both officers and subjects. The National League of Cities passed a resolution in December 2006 calling upon Congress to financially assist local law enforcement agencies with TASER acquisition, finding that the devices are safe and effective tools to de-escalate violence and prevent arrestee injury.

From the perspective of legal liability, it appears that it may be within a city's interest to allow its police department to deploy TASERs as long as the officers using the TASERs are properly trained in their use and a policy exists that limits their use to legally appropriate circumstances.

Background

TASER is an acronym. It stands for Thomas A. Swift's Electric Rifle, and is presumably named after the 10th book in a long-standing series of juvenile adventure novels that feature a young genius inventor. That book, *Tom Swift and His Electric Rifle*, was originally published in 1911. The inventor of the TASER was Jack Cover, a NASA scientist. The TASER was invented in the 1970s, but its proliferation as a practical force option for police departments has really taken place only over the last decade. Currently, according to TASER International, TASER-brand technology is deployed in more than 11,000 of the country's 18,000 law enforcement agencies. More than 3,500 agencies equip each of their patrol officers with the units.

TASERs can be used in two ways: at range through a cartridge deployment, or without a cartridge in a touch-stun or drive-stun mode. The physiological effects of the TASER application vary significantly based upon how the device is used. In drive-stun mode, the device works through pain compliance, much as the non-lethal force options currently available to police. Cartridge deployments at range, however, work by neuromuscular incapacitation. They override a person's coordinated neuromuscular control for the duration of the weapon's electrical pulse, which, as a default, lasts five seconds. During that time, the suspect is usually incapable of meaningfully resisting being arrested. This is especially useful when dealing with those aggressive individuals that have abnormal pain tolerances, especially those who might be under the influence of a controlled substance or otherwise in an altered state of consciousness. In proper circumstances, TASERs might allow the police to avoid the application of deadly force even when that force would be authorized under the law.

When deployed in cartridge mode, compressed gas propels a pair of probes trailing thin wires, usually 21' or 25' in length, toward the subject. The probes travel at about 160' a second, which is about 110 miles per hour. The probes are designed to spread apart as they fly to the target, as greater probe separation is desirable from an effectiveness standpoint. Aiming of the device is controlled both by physical sights and a laser aiming device. The probes themselves are thin pieces of metal designed to attach to clothing or to slightly penetrate skin. Once the probes attach properly, a circuit is established and the device uses an electric pulse to cause neuromuscular incapacitation. The device currently selected for many police applications is the X-26 TASER, a fourth-generation TASER device.

While in use, the X-26 TASER's shaped electrical pulse is delivered 19 times per second. Each pulse lasts 1/10,000th of a second. The TASER is powered by a rechargeable battery pack equivalent to eight AA batteries. An often-cited figure regarding the TASER is that it discharges 50,000 volts. While it is true that the peak arcing voltage of the TASER is 50,000 volts, the actual voltage introduced to the human body is much lower, 1200 volts peak and 400 volts average over the duration of the pulse. The purpose of the 50,000 volts is to allow the electrical current to jump a 2" air gap, such as loose clothing. Also, the current delivered by the device is very low, in the range of 2.1 milliamps. One milliamp is 1/1000 of an amp.

Safety of the TASER

TASER International cites a wide range of studies and statistical evidence for the proposition that its products are safe as well as effective. According to the company, it has successfully defended itself from product-liability lawsuits without settlement, prevailing through dismissal, summary judgment, or jury verdict in 70 cases through May 2008. It should be noted, however, that in June 2008, a California jury found that TASER International was 15% at fault in a wrongful death case. In that case, three TASERs were used simultaneously to subdue a violent suspect under the influence of methamphetamine who subsequently died. TASER International has stated it intends to appeal the verdict.

Statistics comparing the number of TASER uses with the number of adverse outcomes seem to support the conclusion that TASERs are generally safe. TASER operators usually experience being tased at least once during their training process. Together with actual field use, it is estimated that TASERs have been safely used several hundred thousand times.

Not all groups agree, however, that the TASER has been shown to be an appropriate, safe, and effective law enforcement tool. The American Civil Liberties Union and Amnesty International have both called for moratoriums on the use of TASERs following the deaths of individuals who died after being tased. These groups note that some medical examiners have listed the TASER as a contributing factor in these deaths. TASER International, however, contests these findings, often pointing to a condition known as excited delirium, which it claims is usually triggered by drug use, as the actual cause of death.

Any discussion about the TASER or any other force option cannot be held in a vacuum. It is important to always keep in mind that the comparison of the safety and effectiveness of a force technology cannot be made between that force technology and no force at all, but rather between the force technology and available alternatives. There is no current force technology that does not carry some element of risk.

The obvious concern when an electrical current is introduced into the human body is the possibility that the subject may die as a result of cardiac arrest induced by electric shock. TASER International denies the contention that its devices have the potential to cause this type of cardiac arrest. Critics of the TASER technology point to the more than 70 deaths that have occurred following TASER use as evidence that in rare cases TASERs can, in fact, be lethal.

Numerous human and animal studies have been conducted that tend to show that the TASER pulses cannot cause ventricular fibrillation and cardiac arrest in the vast majority of individuals, and research is ongoing. The TASER International website (www.taser.com) has links to dozens of studies of various aspects of the technology, including studies regarding the effects on various populations, including the mentally ill and those under the influence of stimulants such as cocaine. Interestingly, some studies suggest that these sorts of stimulants actually lower the threshold for the induction of ventricular fibrillation only during the first three to seven minutes after they are used. After that, the threshold increases above normal levels, theoretically providing more protection from fibrillation induction.

Perhaps the most persuasive evidence regarding the general safety of the device is the number of times it has been used on both suspects and in training on police officers without a significant amount of negative consequences demonstrably linked to the technology. It is now estimated that 500 law enforcement officers are tased in training per day.

Policy and Training Issues

Even if the use of TASER technology is fundamentally safe and sound as a matter of law enforcement practice, inadequate training or use policies may result in liability on behalf of a city if a TASER is used to commit a constitutional violation. The inadequacy of police training may serve as the basis for liability for a municipality as well. A municipality will be liable on a constitutional claim for failure to train its police officers when the failure to train amounts to deliberate indifference to the rights of persons with whom the police come into contact.

The primary policy-related question that needs to be answered if TASERs are deployed is in what circumstances they will be allowed to be used. TASER International does not make any specific recommendations in this regard. In the agencies that utilize a use-of-force continuum, some jurisdictions allow TASER use at a level comparable or below pepper spray, others equivocate TASER use to pepper spray, and the remaining jurisdictions usually place it at the same level as impact weapons such as a baton. It would be possible to go even further, and by policy, limit the use of TASERs solely to situations when deadly force would be authorized, but the author is unaware of any agency that has adopted such a restrictive policy.

Under any view of the technology, TASERs seem to qualify as non-lethal force. Even accepting the critics' arguments that lethal outcomes may be possible, courts have not determined that it is likely that TASER use causes death or great bodily harm. Any policy, then, must limit TASER use to times when that use would be reasonable under the Fourth Amendment. A few of the specific issues that a TASER policy might address include multiple exposures, use with vulnerable populations, probe removal from sensitive areas, use around flammable substances, use where falling would be especially dangerous, and use against fleeing or handcuffed individuals.

Conclusion

While it is important to recognize that a controversy exists over the use of TASERs, they appear to offer many tangible benefits to both arrestees and police officers. TASERs are currently used by a majority of law enforcement agencies in the United States, and recent studies have bolstered the case for their safety.

The observed benefits of TASER deployment often include a significant reduction in officer and suspect injuries, and the avoidance of deadly force incidents. It is also true, however, that if an in-custody death follows TASER use, the probability of protracted and costly litigation remains high.

To minimize that potential municipal liability, limiting TASER use to instances when that use would be clearly constitutionally reasonable is prudent. It is likewise important that each TASER operator be fully trained in the proper use of the TASER, proper aftercare following a deployment, and the limits and dictates of the city's use policy. Finally, as the law regarding TASER use is still developing, cities should be prepared to monitor and quickly respond to new legal developments as they occur.

About the Author

Scott Miller is a Staff Attorney for the Legal Services Department for the City of Lawrence. He can be contacted at (785) 832-3470 or smiller@ci.lawrence.ks.us.

