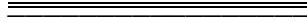
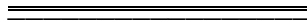


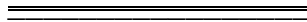
**The Bill Blackwood
Law Enforcement Management Institute of Texas**



Electronic Control Devices are Here to Stay



**A Leadership White Paper
Submitted in Partial Fulfillment
Required for Graduation from the
Leadership Command College**



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ABSTRACT

Establishing that electronic control devices (ECDs) are here to stay is relevant to contemporary law enforcement because much energy is being used to attack valid studies by distinguished and professional people and organizations instead of focusing on better communication. Better communication is necessary for law enforcement professionals, the public, and the media to better understand each other and create a better place to live. In this case, better understanding will highlight the safety of electronic control devices, how frequently law enforcement officers engage in physical confrontations each day, and factual dialog from which to make informed decisions.

The position of the researcher is that ECDs should be accepted as a safe and effective control tool for police agencies to use if they so choose to deploy them. The types of information used to support the researcher's position are training manuals, electronic newspapers, manufacturer training bulletins, legal analyses, professional police consortium recommendations, and U.S. Government papers. Additionally, newspaper articles, a book containing a chart with the level of violence in the United States, a published report on the subject matter by a human rights advocate organization, and federal statistics regarding uses of force by police and deaths in-custody were reviewed.

The conclusion drawn from this position paper is that police organizations can now make an informed decision about whether or not to supply their officers with ECDs. The media and the public should better understand that officers, indeed, serve them, but, many times, officers are physically challenged by suspects and must overcome those challenges as quickly as possible with as little harm to everyone involved.

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INTRODUCTION

Each year, over 57,500 police officers are assaulted and the numbers have continued to grow since 2005 (U.S. Department of Justice-Federal Bureau of Investigation [FBI], 2008). As violence against peace officers and citizens across the United States continues to increase, additional tools are needed by officers as they confront personal and societal threats in an increasingly litigious environment. Arguably the most advanced and useful tool presented to the law enforcement profession in recent history, electronic control devices (ECDs), should be accepted by the public and law enforcement as a safe and effective control tool.

ECDs, or “tasers” as they are generally referred to, in some fashion emit an electrical pulse that is delivered to a target in an attempt to gain compliance or to stop an activity by disrupting the target's control of muscles (neuromuscular incapacitation). Most often the target is a human being, but animals, such as dogs and loose bovine, regularly are the target of a taser normally used by law enforcement officers in the interest of public safety. However, in each instance that an ECD is deployed, the officer activating the ECD is more often than not required to document the use of force in some manner that details the deployment, as well as attest to the circumstances surrounding the deployment. The officer's documentation is in addition to the tamper-proof, computerized tracking performed internally by most ECDs.

The term “taser” is derived from the book series by Victor Appleton of the adventures of fictional inventor Tom Swift. The Tom A. Swift Electric Rifle (TASER), described in the circa 1910 book series, fired an electrical pulse that disabled or destroyed its target. The current TASER was actually developed by the late John H.

Cover as a less-lethal tool primarily to combat aircraft hijackings and civil disturbances. In 1993, TASER International, Inc. was born, and the company logo and their primary product has become a household name. The word “taser” is used frequently to describe an ECD even though the actual manufacturer may be different than Taser International (e.g., Stinger Systems, Inc., Law Enforcement Associates, Inc.), much in the same way that some people may ask for “a coke” and, when asked what kind, they may name a Mountain Dew, Dr. Pepper, or other soft drink.

Many studies have been conducted that demonstrate the safety of the TASER ECD as over 1.6 million exposures have occurred safely (Taser, 2009). While any police tool can be used improperly, the ECD provides the modern law enforcement officer the opportunity to stop a violent confrontation before it gets started or before a prolonged physical battle is joined and with electronic oversight that cannot be manipulated. The days are long passed where officers were hired only if they met height and weight requirements that better enabled them to handle a physical threat, in addition to expecting officers to “take their lumps” as part of their job while they bring violent perpetrators into custody. Today’s peace officer is more educated and more highly trained than ever before and to expect an officer of any stature to wade recklessly into a fray, when they have a tool that can more effectively stop a fight quickly or even before it begins, is unrealistic on the part of the public and truly a failure to train on the part of law enforcement and public administrators.

POSITION

Obviously, the most important aspect of any tool used by law enforcement pertains to the safety of the tool when it is deployed, particularly when that tool will be

used on a fellow human being. The mission of law enforcement is to serve and protect the public and that includes the suspect or perpetrator of a crime. But often, suspects contacted by the police are motivated to resist the officer's attempt to bring them into custody and some do so with effort that includes using violence to escape and even attacking the officer. This resistance must be overcome while using the minimal amount of force necessary to accomplish the task that society has placed upon and been accepted by today's police officer. To aid the officer in overcoming this resistance, society has allowed officers to use a myriad of tools, which includes ECDs, but with the requirement that they are safe to use and used properly by properly trained officers.

Any tool at the disposal of the officer has the potential to be abused to include the pen in the pocket, but today's peace officer is more highly trained and more educated than ever before, so more is expected of them. Tools like the ECD are tested and reviewed extensively and continually watched with a critical eye by everyone but in particular, the officer who must justify the use of the ECD, or any amount of force for that matter, when used to subdue a person.

A unique aspect of the ECD is its use of electricity to control another person. Electricity is not well understood by the lay person except that when they flip the switch on the wall they expect the light to come on instantly. If an inflated balloon is rubbed against a head, it creates what is commonly referred to as "static electricity." But most are not aware that this action can produce up to 50,000 volts; the "electrical pressure" pushes the electrons, though at a very low current, and measures the flow of electrons, referred to as amperes or amps. In the case of the balloon, there is high voltage but very low amperage, just like ECDs.

Furthermore, by the time the electrical charge arrives at the target, only 5000 (M26 Taser) to 1200 volts (X26 Taser) or .05 to .07 joules, which is the volume of the current, depending on the model of ECD, will travel across the target. The ECD is simply not powerful enough to affect the heart directly. As a comparison, an external cardiac defibrillator needs to affect the heart muscle directly, so it typically delivers between 150 to 400 joules per pulse (Taser, 2007).

The predominate provider of ECDs in the world today is Taser International, providing over 14,200 law enforcement agencies in 40 different countries with nearly a half-million Taser brand products. Since February of 1998, the Taser ECDs have been safely deployed over 1.6 million times, and there have been over 280 medical and field studies (Taser, 2008). Some of these studies include those conducted by the United States Department of Defense Joint Non-Lethal Weapons Program, the Canadian Government, The Potomac Policy Institute, University of San Diego, Cincinnati Police Department, the Journal of Pacing and Clinical Electrophysiology (PACE), and the U.S. Department of Justice (DOJ) National Institute of Justice (NIJ) (Taser, 2007).

Though Amnesty International (2008) suggested that ECD technology has not been the subject of sufficient independent study, the DOJNIJ Study of Deaths Following Electro Muscular Disruption: Interim Report [NIJ] (2008) consisted of panel members, including nine medical doctors and three Ph.D.s, who represented practice and study in cardiology, emergency medicine, toxicology, electrophysiology, and forensic pathology from the U.S. Navy. Personnel conducting study into the use of ECDs included Chief and Regional Medical Examiners, researchers from the Boston University School of Medicine, the Georgia Bureau of Investigation, USC Keck, the UCLA Geffen School of

Medicine, and others. In fact, the NIJ (2008) study stated that there is “no conclusive medical evidence” that conducted energy devices (CED, aka ECD) pose a high risk of death or serious bodily injury in the vast majority of instances (p. 3).

It is noted that most studies, and even Taser International's instructional material, advise special consideration before deploying an ECD on a small child, elderly person, pregnant woman, or other at-risk individuals. However, the study does not prohibit such deployments when it may become absolutely necessary, such as in the case of an at-risk person about to use a firearm or move into harm's way by walking into a busy roadway or other situation. Amnesty International (2008) not only agreed with that caution, but also with the study's findings of safety margins of deaths compared to deployments as well.

In most cases, officers are not familiar with the person they are arresting, so they must take the person into custody while the opportunity exists in most instances. This dynamic situation necessitates the officer moving in close proximity to the offender, thereby also placing within the offender's reach all of the equipment the officer is wearing on their duty belt, including the firearm normally carried by most officers. When the officer sees that the offender is showing signs of aggression, or even verbalizes that they will fight to keep from being arrested, the ECD is an effective alternative for those situations, so the confrontation is over in mere seconds instead of a prolonged grappling episode where the risk of injury to the officer *and* suspect increases significantly. It could be argued that an officer unnecessarily caused the outcome when they stepped into a physical confrontation and an injury occurred, knowing that the chances for injury to either or both the officer and the offender increased as the contact moved into a

grappling situation. In many instances, police agencies show a noticeable decrease in injury to officers and suspects, and even use of force complaints, when the ECD is deployed by the department. Those police agencies include, but are not limited to, Columbus, Ohio; Austin, Texas; Orange County, Florida, sheriff's office; and Cincinnati, Ohio, where reductions in officer injuries range from 23% to 80% and suspect injuries ranged from 24% to 80% (Taser, 2007).

Perhaps one of the most obvious discrepancies involving the deployment of ECDs is the misinformation that is promulgated by some media and Amnesty International regarding what the ECDs were designed for. Amnesty International (2008) asserted that ECDs should be deployed at or just below the level allowing for deadly force, but Taser stated in their press kit that the ECDs "do not replace firearms" (Taser, 2009a, p. 14) and their instructor lesson plan stated that ECDs are "not a substitute for lethal force" (Taser, 2007, p. 201). While the ECD is "94% actual field" effective, one of the difficulties in deploying an ECD is that two projectiles progressively diverge from each other and must strike the target in order for the ECD to be effective (Taser, 2009a, p. 5). The ECD's better than 90% effectiveness is safer for the officers, but according to Dr. Richard Parent, Ph.D., continued struggling and prolonged restraint by the arrestee is likely to cause severe exhaustion that may result in sudden death (Parent, 2006). The purpose of ECDs is to stop a situation from escalating to a level where a greater risk of injury or even death is more likely.

As noted by the FBI (2008), assaults on police officers continued to fluctuate slightly with fewer than 60,000 officers assaulted each year. In 2006, there were 58,634; in 2007, there were 59,201; and in 2008, there were 58,792, and over half of

the assaults occurring each year were in the southern portion of the United States. But the public, in general, appears to not realize nor grasp the frequency at which officers must engage in a physical struggle with a person, sometimes even when the officer is equipped with an ECD. While most suspects are fairly cooperative when being arrested, many individuals decide to resist. The motivation of a person to remain free when told they are under arrest can become quite significant.

The FBI study (2008) closely mirrored other data that reflected an overall increase in physical attacks, yet the death rate of officers at the hand of offenders continues to fluctuate along a more consistent average. Retired Army Lieutenant Colonel Dave Grossman (1995) presented a chart showing that the aggravated assault rate in the United States since 1957 has risen from approximately 120 per 100,000 inhabitants to over 440 per 100,000 in 1992, and the prison population has increased as well to nearly half a million persons in American jails at over 300 per 100,000. Colonel Grossman quoted Professor John J. Dilulio of Princeton University as saying “dozens of credible empirical analyses...leave no doubt that the increased use of prisons averted millions of serious crimes” (as cited in Grossman, 1995, p. 301). Additionally, UCLA Professor James Q. Wilson attributed the fairly constant murder rate, despite the rise in numbers of serious assaults, to the progression of medical technology and methodology since 1957. These progressions include the advent of 9-1-1 operators, helicopter medivacs, paramedics, and especially the betterment of trauma and emergency care as just a few of the aspects that result in a faster response and care to the patient that has saved lives where previously a fatality would have occurred.

But perhaps the best example of both sides of the ECD debate is reflected in comments made to the *theman eater*, a student publication of the University of Missouri, as reported by Mike Ziegler (Theman eater, 2009). Columbia, Missouri, Deputy Chief of Police Tomas Dresner is quoted as saying of Columbia's Coalition to Control Tasers member Mary Hussman, "Mary Hussman has never had to, nor will she ever have to face someone who has no interest in cooperation with the police." Mary Hussman's comment was that, "We want a police department who has a good police force and we support them. We just don't like their use of the Tasers" (Theman eater, 2009, para. 18). No alternatives are offered for the police to deal with non-compliant persons, merely that the ECDs are not liked. In fact, a guest column by University of Missouri Professor of English and Women's Studies, Catherine Parke, in the *Missourian* referred to "Tasers" being used in "ways that appear not to conform consistently to standards of 'imminent danger' and appropriate use" (Parke, 2009, para. 5). The well meaning comments by genuinely concerned and supportive citizens reflect the need for law enforcement to better educate the public regarding the great expanse of circumstances which lie between mere presence and deadly force that confront today's police officer.

COUNTER POSITION

Yet Amnesty International and others continue to question the validity of the testing of ECDs and specifically Taser brand ECDs. Amnesty International (2008) correctly pointed out that most studies conducted regarding ECDs (primarily Tasers) reiterated and agreed that additional testing and study needs to be done, particularly in regards to deploying the ECD on pregnant women, older adults, and younger children, as well as individuals with heart conditions. It is a valid claim that Taser International

funded studies represents a potential conflict of interest as the researchers may be influenced to skew their data to please their benefactor. Amnesty International (2008) also refuted those studies funded by Taser as insufficient and stated that there “has been the lack of independent, comprehensive medical testing of Tasers and similar devices” (p. 86). In fact, most studies conducted to date, and even those funded by Taser International, referred to the need for additional testing and study regarding the safety of deploying an ECD on the listed portions of the population noted above.

However, Amnesty International and other entities, such as the Coalition to Control Tasers, have not yet released information of studies they have funded. Additionally, were an exhaustive list compiled of the distinguished persons and renowned organizations involved in the studies conducted thus far, to suggest that every person and every entity compromised their professional career and personal integrity for the benefit of Taser International appears to be without foundation. In fact, a number of prominent medical and research professionals, from noted universities and large law enforcement agencies to the United States Air Force and Marine Corps, who are consistent in their findings, support the validity of the studies. Examples of such studies include *Echocardiographic evaluation of TASER X26 probe deployment into the chests of human volunteers* by the Lompoc Valley Medical Center, Lompoc, CA. (Dawes, Ho, Reardon, & Miner, 2010), *Electromagnetic modelling (sic) of current flow in the heart from TASER devices and the risk of cardiac dysrhythmias* was studied in the United Kingdom (Holden, Sheridan, Coffey, Scaramuzza, & Diamantopoulos, 2007), and the study of *Immediate cardiovascular effects of the Taser X26 conducted electrical*

weapon as written in the Emergency Medicine Journal (Bozeman, Barnes, Winslow, Johnson, Phillips, & Alson, 2009).

But Amnesty International (2008), the primary leader in efforts considered contrary to deployment of ECDs, has encouraged long term and in-depth study of the ECDs and policies governing their deployment. Since the tool is being used against fellow human beings, it is only prudent that studies continue, so law enforcement can continue to ensure they are functioning as safely as possible and all are in agreement regarding this aspect of ECDs. Now enter charges by Amnesty International that police, in general, abuse the ECD and place it too low in the use of force continuum. To state that abuse of power by police officers does not exist would reflect naivety and ignorance, irrespective of the likelihood that the number of those officers is quite small. However, in most instances where abuse or excessive force is used, the source for the investigation is most often the agency where the offending officer is employed.

But, in response to many questions, some public outcry, and questions of their own, the Police Executive Research Forum (PERF) released, on October 25, 2005, a list of 52 recommendations of policy and training guidelines that police agencies should consider following when possessing an ECD program (PERF, 2005). Amnesty International applauded the forum for the collection of personnel at the two day national summit in Houston, Texas. Amnesty International (2008) expressed their disappointment in saying, "However, none of the policies seen by Amnesty International placed the entry level for Taser deployment at the level where officers would be authorized to use firearms and, as noted above, most place them well below this level" (p. 18). It is obvious, therefore, that Amnesty International disagreed with the PERF

study and recommendations that came out of the summit supported by the U.S. Department of Justice Office of Community Oriented Policing Services and the Bureau of Justice Assistance, since they did not place the ECD deployment at the same level as or just below the use of deadly force (PERF, 2005).

Therein lays the true point of disagreement and misunderstanding. Law enforcement is more and more using the circle model when addressing use of force instead of the older “ladder of escalation” model that suggests touching or using a lower “rung” of force before climbing to the next one. The circle model more accurately reflects the decision making model an officer uses when confronted with an escalation of force. No one expects an officer to attempt an arrest by first trying to put hands on the individual, and then deploy OC spray, and then perhaps the straight stick or other impact tool, and then drawing the firearm to confront the assailant who is approaching them armed with a knife or firearm or other deadly weapon. The officer stands in the middle of the circle model and chooses the lowest level of force necessary to accomplish the task at hand with the safety of everyone, including the suspect, in mind. Amnesty International and other organizations and people prefer that the ECD be placed into the use of force continuum alongside or just beneath the firearm, but law enforcement across the United States disagrees. Many caveats and recommendations are made, and each agency is different, but all fall under the auspices of the Constitution to conduct their activities with respect to the freedom of every person. The manufacturing companies have never intended ECDs to replace firearms, but they have mentioned that ECDs will most likely reduce situations requiring the use of deadly force because the ECD is able to stop the fight or further prevent the escalation of the conflict

before it rises to that level. Organizations wanting to restrict the use of an ECD are not aware of the many times officers must grapple and even fight with suspects to bring them into custody, and they are not aware of how the chance for injury increases for the officer and suspect as the situation continues to deteriorate.

Perhaps it is a problem of education. Law enforcement needs to better learn the expectations of the public and special groups, while the public and entities like Amnesty International need instruction about the situations officers must deal with long before reaching the level of deploying deadly force. One reason the ECD should not be deployed exclusively at the deadly force level is due to the fact that both probes must strike the target so the circuit is completed. Otherwise, the ECD is not effective, as opposed to the single line a projectile follows from a firearm. Deploying the ECD becomes more difficult when the target is further away from the officer, thus placing the lower probe in the area of the legs. But legs move, which reduces the probability of a hit by the second probe. The public may not realize how physical an officer's job can be and how rapidly a situation can deteriorate, thus reflected in the number of ECD and OC spray and impact tool deployments and in comparison to the drop in officer and suspect injuries once an ECD is adopted and professionally administered.

However, organizations such as Amnesty International (2008) pointed out a recent training bulletin (15.0) by Taser International (November, 2009b), which acknowledged the ECD causes additional complications to the heart when the unit is deployed to the chest of a person. On the other hand, Amnesty International (2008) failed to mention the follow-up memo that clarified the position of Taser International and the training bulletin as merely to simplify targeting for all Taser systems, to avoid

chest shots (back shots remain preferred because they are more effective and safer) to reduce controversy about whether or not ECDs affect the heart, and an upper torso placement is more effective when the second probe is in the pelvic triangle or thigh area; major muscle groups. Additionally, a detailed analysis conducted by Attorney Jack Ryan, J.D. further explained that Taser International was not prohibiting ECD deployments to the chest but advising law enforcement of what to expect in the event of litigation. The bulletin's recommendations were also to reduce the chance of litigation while continuing to have a successful deployment, and the ECD has not been found to create a "substantial likelihood of serious bodily harm or death" (Ryan, 2009, p. 2).

CONCLUSION

The tasks and challenges facing law enforcement officers in the 21st Century are truly daunting as more education is required and obtained, and officers are thrust into a myriad of circumstances that require decisions to be made almost instantly that could change lives forever, particularly in the event deadly force is used. The electronic control device (ECD) is a powerful tool that causes pain, but the pain is brief in duration, and in the vast majority of instances, the ECD stops the situation from escalating with no injury. In short, though not to the extent, the ECD parallels the work of a surgeon who must damage the tissue by cutting in order to remove the cancer inside. The ECD has been in use for many years at a lower power, and the newer more powerful units have now been in use for ten years, supporting the safety of the devices in study after study by many distinguished individuals and institutions, too many in number to suggest that all studies funded by the manufacturer or supporting their claims are invalid (Ryan, 2009; PERF, 2005; Simms, 2006; NIJ, 2008). In fact, the number of studies funded by

the manufacturer as well as other entities reflects the commitment to the safety of the public regarding the devices as research continues and up-to-date training bulletins are issued regardless of the content, whether it is positive or negative for the manufacturer.

A daunting task facing law enforcement is to better educate the public and media about not only the tools that are used on the street, but, perhaps even more importantly, the situations that officers must encounter each day and the true amount of times people challenge officers physically as is reflected in statistic of over 57,000 officers being assaulted each year (FBI, 2008). Programs such as Citizens Police Academies and increased efforts in media relations would do well to reduce some of the conflict that arises at times, while officers would grow in their relationship with those they serve by better understanding the wants and needs of their public. By and large, today's police officer is better trained and better educated than the "beat cop" of yesterday, but the demands have increased as well since society and police entities are more transparent. Accountability is much higher with the advent of dash cameras, computer chips in ECDs, designated Internal Affairs investigators, cellular phone cameras, and 24-hour news availability. But the time has come for the demagoguery of ECDs to cease, and those concerned with any aspect can choose to either help with the research or perhaps redirect their attention to other endeavors. Not every police entity will choose to deploy an ECD, any more than every agency carries the same firearm, wears the same uniform, uses the same tools, or works the same schedule. But perhaps with the presented information, those considering implementing an ECD program or questioning safety will make an informed decision instead of an emotional one, which is important when considering how it will affect the officers and their citizens.

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