

its obligation, is revokable at will. Moreover, it has been held that ordinances appropriating money may be amended." 15 McQuillin, Municipal Corporations, § 39.66, p 189.

It is my opinion, in view of the foregoing, that a newly elected board of county commissioners may freeze capital outlay that had been budgeted for various departments of county government by its predecessor board.

FRANK J. KELLEY,
Attorney General.

760213.1

FIREARMS: Applicability of Michigan statutes regulating firearms to "Taser Public Defender" device.

The "Taser Public Defender" is a "firearm" as defined in MCLA 8.3t; MSA 2.212(20) and comes under the provisions of specific Michigan statutes.

Opinion No. 4950

February 13, 1976.

Colonel George L. Halverson
Director, Michigan State Police
714 South Harrison Road
East Lansing, Michigan 48823

I am writing in response to your request for my opinion regarding the relevant laws and regulations applicable to the Taser Public Defender. At my request Mr. John Cover, the inventor and the president of the firm which manufactures the Taser, sent me technical data which describes its operation.

Whether this device comes under the statutes which control the sale and use of pistols and firearms depends on whether it is a "firearm" as defined in MCLA 8.3t; MSA 2.212 (20). This section states:

"The word firearm except as otherwise specifically defined in the statutes, shall be construed to include *any weapon from which a dangerous projectile may be propelled by using explosives, gas or air as a means of propulsion, . . .*" (emphasis added)

The rule of construction applicable to the foregoing section is set forth in MCLA 8.3; MSA 2.212 which states:

"In the construction of the statutes of this state, the rules stated in section 3a to 3w shall be observed, unless such construction would be inconsistent with the manifest intent of the legislature."

A "weapon" has been defined as:

"An instrument of offensive or defensive combat or anything used, or designed to be used in destroying, defeating, or injuring an enemy."
Black's Law Dictionary, 4th ed, 1968 (p 1764)

The nature of this device is such that it may be used in an offensive or

defensive manner. The projectile which this weapon fires may be dangerous. The manufacturer agrees, stating:

“. . . It must be emphasized that neither this feature nor the non-injury or no harmful aftereffect aspects can ever be guaranteed. There is no weapon, technique or procedure for subduing, constraining, or dispersing that does not involve some risk of injury to healthy persons or of death especially if the individual has a heart ailment.” (memo dated 5-10-72, p 3 enclosed)

It is therefore my opinion that the Taser is a “firearm” as defined by MCLA 8.35; MSA 2.212(20).

Also, the manner in which the Taser projectile is propelled indicates that the device is a firearm as defined in MCLA 8.3t; MSA 2.212(20). See memo regarding the method of propulsion of the Taser’s barbs, 4-16-73, and letter of 1-3-74 from Mr. A. Peterson of the Department of Treasury to Mr. John Rogers, Attorney (both enclosed).

Since the device is a firearm under MCLA 8.3t; MSA 2.212(20), it remains to be seen which Michigan statutes would regulate it.

The statute regarding the licensing of pistols MCLA 28.421; MSA 28.91, states:

“Pistol as used in this chapter means *any firearm*, loaded or unloaded, 30 inches or less in length, or any firearm, loaded or unloaded, which by its construction and appearance conceals it as a firearm.” (emphasis added)

I am of the opinion that this device is a “pistol” as that word is defined in the above statute. These are the reasons for my conclusions:

1. The Taser is a “firearm” as defined in MCLA 8.3t; MSA 2.212(20).
2. The word firearm is not otherwise defined in MCLA 24.421; MSA 28.91.
3. The definition of a “firearm” as set out in MCLA 8.3t; MSA 2.212 if incorporated or made to be the definition of the word firearm, as that word is used in MCLA 28.421; MSA 28.91, would not in my opinion contravene the manifest intent of the legislature as expressed in that statute. Therefore, the definition must be incorporated as the definition of firearm as that word is used in MCLA 28.421; MSA 28.91 pursuant to the command of MCLA 8.3t; MSA 2.212.

Since this device must be licensed as a pistol we must now direct our attention to MCLA 750.222; MSA 28.419 to determine whether this device is a “pistol” as that word is used therein. The statute says:

“Pistol as used in this chapter means *any firearm*, loaded or unloaded, 30 inches in length, or any firearm, loaded or unloaded, by which its construction and appearance conceals it as a firearm.”

As noted, the Taser is a firearm as that term is defined in MCLA 8.3t; MSA 2.212(20). Although the word “firearm” which appears in MCLA 750.222; MSA 28.419 is undefined, the device under consideration is under 30 inches in length and its construction and appearance is such that it can

easily be concealed. Therefore, it is my conclusion that the Taser is a "pistol" as that word is defined in MCLA 750.222; MSA 28.419. This being the case, the following statutes under this chapter of the Penal Code are applicable to the sale or use of this device:

1. The statute which prohibits the sale of any pistol whose seller has not procured a license as required by the licensing statutes for vendors. MCLA 750.223; MSA 28.420.

2. The statute which prohibits the carrying of a firearm or dangerous weapon with unlawful intent. MCLA 750.226; MSA 28.423.

3. The statute which prohibits carrying a concealed weapon. MCLA 750.227; MSA 8.424.

4. The statutes which punish a person who fails to comply with the safety inspection act. MCLA 28.429; MSA 28.97; MCLA 750.228; MSA 28.425.

Another Michigan statute which applies to this device is the statute which prescribes the duties of persons involved in a death or injury from a firearm. MCLA 752.841; MSA 28.436(11). A firearm is defined under this act as:

" . . . any weapon or device from which is propelled any missile, projectile, bullet, shot, pellet, or other mass by means of explosives, compressed air or gas or by means of springs, leavers or other mechanical device."

Again, the important question is whether for the purposes of the statute the Taser would be classified as a "firearm". As has already been shown, a "weapon" has been judicially defined as:

"A thing or instrument designed for offensive or defensive purposes, or to be used to defeat, destroy or injure an enemy."

The technical data supplied by Mr. Cover indicates that these projectiles are propelled by means of an explosive device. Therefore, it is my opinion that the Taser is a firearm as that word is defined in the death or injuries from firearms act, MCLA 752.841; MSA 28.436(11).

FRANK J. KELLEY,
Attorney General.

Attachment 1

p 3 memo of 5-10-72

TASER SYSTEMS, Inc., P.O. Box 663, Corona Del Mar, California 92625
(714) 557-0622

a quantitatively defineable level of electric shock below which fibrillation will not be induced.

- 4) Taser Systems, Inc., tests were performed to verify effectiveness and show that under the test conditions there were no harmful after-effects. In the case of the 125 lb boar (the pig's cardiovascular system is the closest to man's), the TASER output was stepped up to ten times the design output and passed across the

animals chest with no harmful results. In the fourth test upon a volunteer (Richard Roper), 50% of the design output was passed from his right shoulder to left leg, again across the heart, with no complications developing.

Conclusions—the conclusions reached as a result of these studies and special tests is that the TASER is non-lethal at the design output to normally healthy people. However, it must be emphasized that neither this feature nor the non-injury or no harmful after-effect aspects can ever be guaranteed. There is no weapon, technique or procedure for subduing, constraining or dispersing that does not involve some risk of injury to healthy persons or of death especially if the individual has a heart ailment.

What can be said is that the TASER offers more effectiveness with less risk of bodily harm than do existing kinetic energy type weapons (Billy club or baton, stun-gun and, of course, the conventional gun). The TASER is especially suitable for the home owner or private citizen as a replacement for guns as a defensive device requiring less skill in use to be effective and—unlike the gun—not having irrevocable consequences if a mistake has been made.

An especially noteworthy aspect of the extreme and instant effectiveness of the TASER is that this effectiveness is not reduced by the use of drugs, alcohol or the psychological state of mind of the recipient. This is an entirely unique characteristic of the TASER not shared by any other existing weapon and arises from the fact that the electrical charge passing through the body completely dominates motor control and sensory (pain) functions of the nervous system involved. Even if a person is unconscious, the involved muscles will be forced into uncontrollable spasms comparable to the worst types of cramps.

These conclusions are representative of the opinions of representatives from the government agencies concerned with law enforcement and weapon development. They are also shared by the medical consultants involved in the studies and tests of TASER. In the following sections, additional detail is included.

TASER Tests and Professional Consultants

Animal testing on guinea pigs began in 1968. Pulsed shocks up to levels corresponding to the current design output of the TASER were repeatedly delivered without harm to the animals. In 1970-71 pigs and cattle were tested at levels up to ten times the design output again with no harmful effects.

Attachment 2
memo of 4-16-73
p 1 of 3 pages

TASER SYSTEMS, INC. 800 South McGarry Street, Los Angeles,
California 90021 — (213) 626-9311

Memo: Technical aspects of the non-lethality of the Taser Weapon

Unlike a firearm, the Taser Weapon does not depend upon the physical energy of a projectile to produce its effect upon the target. Taser delivers

a high voltage electrical shock which has been designed in accord with medically proven principles to be well below the dangerous level for fibrillation of the heart.

The attached material provides background data on this subject. Tests conducted by Taser Systems Inc. over a period of five years has shown that these low-level electrical shocks are capable of producing instantaneous immobilization in humans and animals by producing extensive muscular spasms in the limbs and body. There are no after effects due to this shock which operates at levels of better than 100 times lower than the maximum safe non-fibrillating level for the average human.

The shock is delivered to the target through sets of contactors which are projected forward from the weapon along the line of sight towards the aim point. Numerous types of contactors have been developed and successfully tested. To illustrate several types—1) a metalized ping-pong ball which delivers several short pulsed shocks during the time it is in contact with the target. This type is effective out to ranges of 20-25 feet and would be used to repel or disperse rather than to immobilize.

The ping-pong contactor is propelled by means of compressed CO₂ gas. A second type is a lightweight net made of ordinary cotton thread which is carried forward and spread laterally by three or more small masses which are projected on divergent paths such that the net expands to a diameter of 5 feet or more after traveling forward some 10 feet. The nets have been projected using springs, CO₂ and small special pyrotechnical devices. The spring propelled version is good to about 10 feet while the others have an effective range of 20 feet or more.

The net wraps around the target when it strikes and the high voltage electrical energy is delivered to the body by sparks or arcs which jump from conducting segments of the net through the air and clothing to the skin or hide of the target. Actual physical contact is not required. The small masses that carry the net through the air may be made of many different materials including metal or even soft, putty like substances and are essentially harmless in themselves.

As another example of the types of contactors which may be used with the Taser weapon system, a special dart has been developed which is inherently capable of greater ranges than the modes just described.

This dart has a small barbed point intended to snag or catch in the

Attachment 2
memo of 4-16-73
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clothing. Again, the actual contact is made in most cases by the electrical high voltage spark penetrating the intervening clothes.

These darts may be made of various sizes depending on the use intended. In the Taser TF-1 production prototype unit the dart is sub .22 calibre being about .187" in diameter and weighs less than a .22 cal. short projectile. These darts have been projected with springs, CO₂ and using special pyrotechnical cartridges or squibs. Spring projection is pretty well limited to short ranges on the order of 10-15 feet.

When the Taser is compared with a firearm, particularly in reference to the 1968 Gun Control Act, the factor of importance technically speaking is the muzzle energy of the projectiles. As noted in earlier memo's, compressed gas guns are exempted from control as are 'antique' firearms. It is significant to compare the energy of the projected Taser contactors with firearms and compressed gas guns. First note that according to some authorities a projectile may become potentially lethal if its muzzle energy exceeds 6-10 ft-lbs.

For reference, a .22 calibre short has about 40 ft-lbs while a .38 special has about 230 ft-lbs. The Taser net contactor system has about 1.2 ft-lbs and the TF-1 Model .187" dart has about 3 ft-lbs. This can also be compared with a readily available CO₂ pistol which is capable of firing a .22 cal. pellet at about 12 ft-lbs muzzle energy. This comparison makes it clear that the Taser Weapon does not fall in the same category ballistically as does the gun and is considerably less dangerous than compressed gas weapons.

It should be emphasized that Taser would not even be subject to examination under firearm regulations if a gunpowder type pyrotechnic were not used. An electrical squib is used in the TF-1 model primarily because of the greatly increased reliability of this type of device as compared to CO₂ or other compressed gases which are subject to leakage. In applications such as the airline security one, 100% operability in emergency is absolutely vital. A secondary reason for using gunpowder type cartridges is their compact size.

As mentioned in the March 27th Memo, there are other aspects of the Taser weapon which should technically exempt it from being considered a firearm. These are: 1) the Taser 'ammunition', called a cassette, is made of plastic which inherently limits the ballistic performance by its low strength; the cassette contains the small powder charge, the projected system, the trailing wires and the electrical contacts that mate with the power supply within the hand-held case; the cassettes neither resemble nor will they fit any known firearm and they are electrically activated, that is, they cannot be fired by percussion; the cassettes are complete in themselves ballistically—the Taser case does not have barrel(s), etc., as in firearms and only provides the electrical energy to the contactors.

The squib used to propel the contactors in the TF-1 contains only a small fraction of the powder used in the smallest firearm cartridges which is of course the reason for the small muzzle energy. In fact, the amount is about the same as that contained in many cartridge primers used to

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ignite the main propelling charge in modern firearms. Because of its physical make-up, performance, configuration and non-useability with firearms, the cassette is certainly not a 'round' or ammunition as defined for firearms.

2) The Taser case is also made of plastic and does not have parts analogous to a firearm in the sense that there is no barrel, breach, etc.,

designed to hold a firearm cartridge, fire it, and withstand the immense pressures needed to obtain muzzle energies sufficient for firearm purposes. Therefore it is also totally incapable of using firearm ammunition or of providing equivalent performance.

The purpose of the various gun control laws, we assume, is to provide some means whereby lethal weapons of the firearm class can be made available to the well meaning citizen while at the same time making it illegal to use them in certain ways (such as concealment) or for criminal purposes. Title II appears to have been designed to cover a class of firearms more dangerous than the pistol (Title I) either because it is more destructive than the standard firearm (machine guns, bazooka's, etc.) or because it is equally destructive but its configuration lends it a disguise (cane guns, Key guns, etc.) and hence it is essentially a concealed weapon even if displayed.

The Title II statutes are set up to make it impractical for a manufacturer or large numbers of private citizens to sell and/or possess weapons of this type. In short, they are not intended for self defense. All of the weapons under the firearm designation are lethal weapons, Title II might be called 'worse than lethal'.

Manifestly, these laws were not designed to prevent the development and distribution of non-lethal weapons which might better serve the public for legitimate self-defense roles. They were designed to place rigid controls on destructive weapons and somewhat tighter regulation of standard firearm commerce (such as interstate).

The real technical interpretation of the various definitions of firearms could be re-phrased to include muzzle energy of the projectile rather than merely the use of gunpowder or an explosive. Logically, many dangerous compressed gas guns would then also require registration or other restriction. There are now many exceptions and loopholes for making other exceptions. For example, tools using gunpowder to drive nails into concrete are exempted even though they can be made into a very dangerous weapon. This exception must have resulted from a special lobby.

Barrel diameter and length have also been used to exercise special control. Taser could be excluded in a number of ways as, 1) muzzle energy/velocity, 2) the combination of length & diameter of the bore coupled with non-metallic (specifically plastic) construction, and so on.

Attachment 3
p 1 of 2 pages

DEPARTMENT OF THE TREASURY
Bureau of Alcohol, Tobacco and Firearms
Washington, D.C. 20226

January 3, 1974

Refer To T:T:RFD

Mr. John E. Rogers
Rogers, Mirabelli and Berlanti
1250 Connecticut Avenue, N.W.
Washington, D.C. 20036

Dear Mr. Rogers:

This is in reply to your letter of December 5, 1973, in which you request a classification of the "Taser" under the provisions of Title 26, Code of Federal Regulations, Section 181.141(i) the regulations implementing Title XI of the Organized Crime Control Act of 1970.

The Taser is a non-lethal package which is a hand-held, flashlight-configured plastic body containing an electrical supply unit, and into which an expendable plastic cassette is inserted. The Taser operates by deploying two fine wires. The wires deliver a pulsed, low-amperage, high-voltage current which will immobilize a person, but which is non-lethal. The wires are packed in the expendable plastic cassette attached to either small snag barbs or a slightly weighted net. These can be launched to a distance of twenty (20) feet by the expelling energy of a Taser squib.

The squib used in Taser contains four-fifths (4/5) of a grain of smokeless powder and is designed to be ignited only by Taser's high-voltage current. The squib is epoxy-bonded to the cassette and a protective cover-plate is bonded into place over the squib so that only the tip of the electrode is visible through a small hole in the cover. This provides one of the firing contacts for the Taser device. The wires would normally end either in the net or the small barbs.

Section 181.141(i) exempts gasoline, fertilizers, propellant actuated devices or propellant actuated industrial tools manufactured, imported or distributed for their intended purposes.

In reviewing the technical and functional characteristics of the "Taser" device, as described above, the following determination is made.

The "Taser" system, as described and as pictured in the enclosures to your letter is classified as a propellant actuated device and therefore is exempt from the provisions of Title XI, Regulation of Explosives, Organized Crime Control Act of 1970.

We trust the foregoing is responsive to your inquiry.

Sincerely yours,
A. Atley Peterson
Assistant Director,
Technical and Scientific Services