Any "alternative" weapon can be a double-edged sword when used in conjunction with a handgun. Having an extra tool can give you an option in cases where deadly force may be questionable or inappropriate, and it may serve to defuse a situation before it escalates to the point of requiring deadly force. But having multiple options can also complicate the defensive response and produce a dangerous hesitation in a moment of need. In addition, the required amount of training and mental preparation increases exponentially with the number of available tools.

HOW DOES IT WORK?

It's easy to carry on a conversation with a friend across the room, but if someone turns on a vacuum cleaner, communication becomes more difficult—though not impossible, because you can shout over the noise. However, if someone starts jack-hammering concrete in the room, verbal communication is no longer possible, because the noise has become too loud to shout over. The Taser does the same thing to the central nervous system that the jackhammer does to spoken communication: the electrical impulses from the Taser are strong enough to effectively "drown out" the signals the brain sends to the muscles to make them work. The person being zapped essentially loses control of his or her muscles and typically drops to the ground. Taser literature refers to this as Neuro-Muscular Incapacitation (NMI).

If you were trying to come up with a noisemaker that would keep people from being able to communicate across a room, the challenge would be to make something too loud for people to shout over, but not so loud as to cause permanent hearing damage. The same basic problem is at work with the Taser: the goal is to produce an electrical signal powerful enough to disrupt the signals from the brain, but not so powerful as to cause any lasting damage to the brain or body. By tweaking voltage, current, and pulse duration, Taser International allowed the electrical pulses delivered by its units to become potent enough to "out-shout" the brain while still remaining weak enough to prevent any permanent damage.

RESISTING THE TASER

Early Tasers (the original product was called the "Air Taser") suffered an occa-
The Defensive “Burden”: Proper defensive preparedness means carrying a lot of stuff in addition to your handgun. Spare ammo, a tactical light, and a cell phone are widely recognized essentials. A decent knife, a backup light and even a backup handgun are often suggested, too. Fitting a “force option” like a Taser into the mix requires careful consideration.

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When a solid hit is scored with the probes, Stun guns cause pain and other effects but, because they do not overwhelm the nervous system, they can easily be defeated by a motivated assailant. Further, the unit must be held in contact with a grappling, struggling, and angry individual. Many legitimate experts strongly discourage the use of such devices for civilian self-defense, and folks like Massad Ayoob and Gila Hayes have repeatedly demonstrated ways to defeat conventional stun guns.

**DIFFERENCES BETWEEN TASER PRODUCTS**

For simplicity, we have so far used “Taser” as a rather generic term. But Taser has four main models: the M26, the M18, the X26 and the C2. The “M”-series products deliver 0.50 joules per pulse, while the X-series and C2 models deliver a lower, but still effective 0.07 joules per pulse. The joule is a unit of electrical energy and this difference would certainly seem to imply that the M-series products deliver a much more potent jolt. But here’s the rest of the story: The higher-energy M-series products are actually an earlier design. The M-series is very effective, but these products require a large amount of total power to get the job done, so a power plant of eight AA-sized batteries is needed. If you pick up eight AA batteries in your hand and then imagine trying to pack them into a pistol-shaped Taser, you get an appreciation for the size limitations imposed by these power requirements.

With the newer models, Taser tuned the electrical pulse to correspond even more closely to the electrical signals used by the human nervous system. The result is equally effective incapacitation with a lower energy demand, which results in a practical benefit of a smaller, more compact package. The newer X26 and C2 units operate from a pair of the same small, light-weight lithium 123A batteries commonly used in tactical flashlights.

Of course, theoretical effectiveness is one thing, and a smaller package is great, but actual field performance is the important measure. After all, no legitimate defensive expert suggests carrying a .25 auto simply because it is smaller. Fortunately, the vast majority of Taser’s sold to law enforcement in the last few years have been the newer, more compact X26 version, so a big body of field data is available to show that the X26 is every bit as effective as the M-series products in actual use.

**CIVILIAN AND LAW ENFORCEMENT TASERS**

All Taser products available to civilians are limited to a range of 15 feet, while law enforcement units have ranges up to 35 feet. The civilian models also deliver fewer pulses per second than the law enforcement equivalents, at least for part of their cycle. For instance, the law enforcement version of the X26 (the X26E) delivers 19 pulses per second, while the civilian X26C delivers 17 pulses per second for the first two seconds and then drops down to 10 pulses per second. The ergonomic C2 starts out at 19 pulses per second for the first five seconds (same as the law enforcement X26), but then varies through a slower pattern, a faster one and then a slower one again over the rest of its discharge cycle. The energy delivered by each pulse is the same 0.07 joules for both law enforcement and civilian products.

The simple and practical reason for this difference has to do with intended use. In a law enforcement application, the usual post-Taser response is for officers to immediately throw down on the suspect and restrain him. In contrast,
the goal in civilian use is to drop the bad
guy long enough to allow the defender
to get away. These different goals mean
a longer total firing time is appropriate
for the civilian units. The law enforce-
ment X26E fires a five second cycle. But
the new C2 model runs a thirty second
cycle. The longer discharge cycle of the
civilian units demands more energy,
so the number of pulses per second
was modified to insure that the battery
packs could keep up with the demand.

Whether it is the effectiveness of a
product like the Taser, or the reliability
of defensive ammunition, or the lumen
rating of a tactical flashlight, or the hot-
ness claimed by a pepper spray manu-
facturer, consumers must realistically
assess the trust placed in the folks who
make the products. Taser International
confidently states that the modifications
made to allow longer firing times
for the civilian products do not reduce
effectiveness. The company has been
around for a while, its products have
been subjected to a lot of scrutiny, and
they boast an extremely solid track re-
cord for effectiveness. It's worth noting
that, for the first five seconds, the jolt
delivered by the civilian C2 is absolutely
identical to that of the law enforcement
X26E (which has a very well document-
ed track record). But after the five sec-
onds, the law enforcement model stops
(unless it is manually reactivated) while
the C2 continues to fire a restraining
pulse for another 25 seconds.

The Taser is a legitimate tool that
definitely has a role both in civilian
self-defense and in law enforcement.
Whether it has a role to play for you
and your defense plans is your final call
to make. But I hope that a little plain-
spoken background on how the things
work, and the pros and cons that this
creates, will help you make a better-in-
formed decision if you are considering
the Taser for yourself or for loved ones.

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