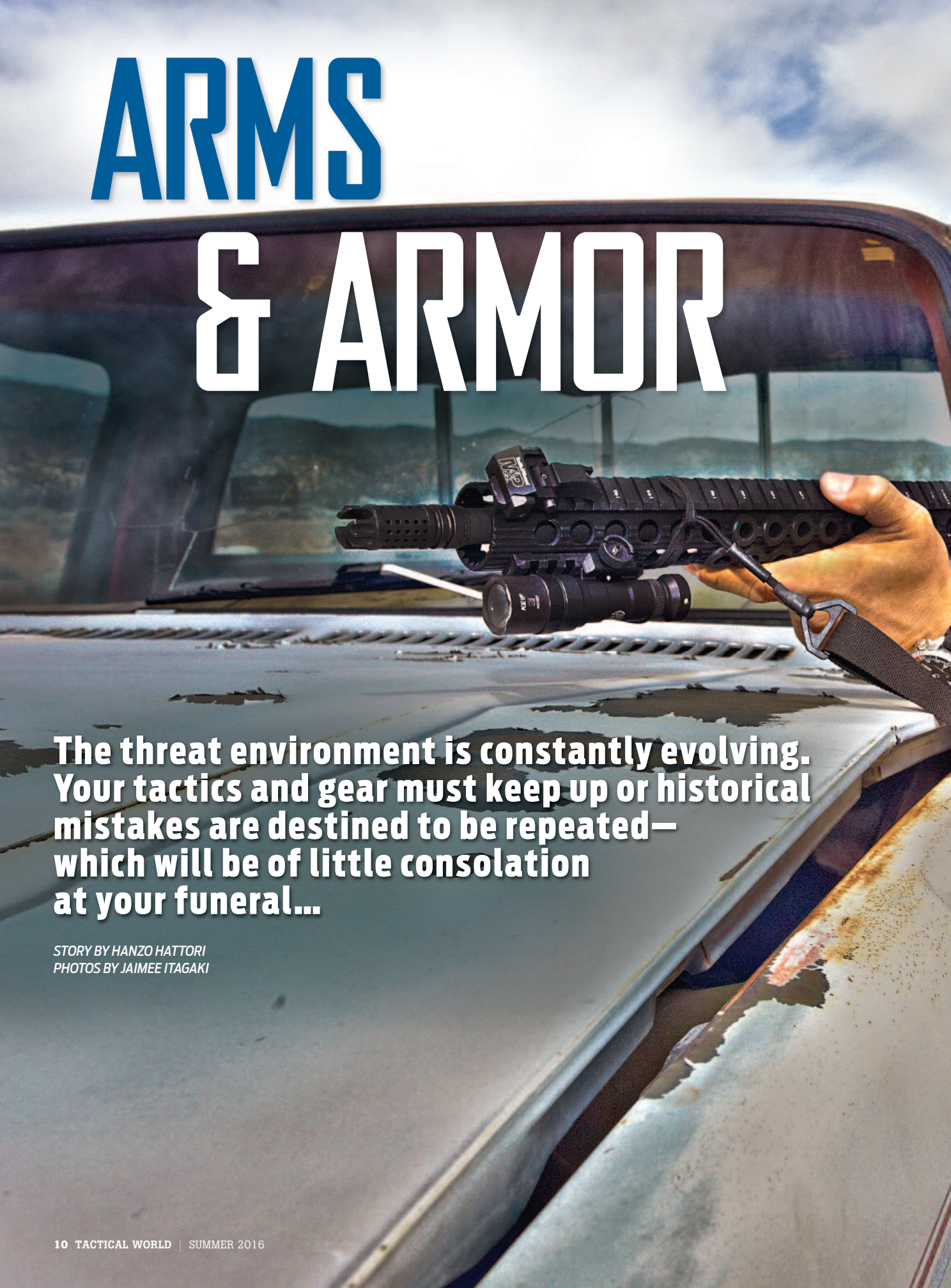
ARMS & ARMOR



The threat environment is constantly evolving. Your tactics and gear must keep up or historical mistakes are destined to be repeated—which will be of little consolation at your funeral...

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PHOTOS BY JAIMEE ITAGAKI

5.11 TacTec Plate Carrier with Paraclete SOST-500 rifle plate insert. M&P 15T with Trijicon TR24 AccuPoint.

You know the statistics: Approximately 300 law enforcement officers responded on the morning of Dec. 2, 2015, when Syed Farook and Tasfhin Maleek stormed the Inland Regional Center in San Bernardino, California, killing or wounding 36 victims in a deadly rampage. If anything about that dark day could be called fortuitous, it would be the happenstance that local police tactical teams were already mobilized and able to respond within minutes.

But even without the usual mobilization delays, it was not a fully equipped tactical team that first entered the site of the shooting. The first three officers on scene were patrol officers. Following "active shooter" protocols, they bravely made entry without waiting for tactical support.

Statistics show that this bravery could have gotten them killed. The husband-and-wife attackers each carried two weapons: AR-15 pattern rifles and 9 mm handguns. The former rifles pose a significant and increasing threat to law enforcement officers, even with protective gear.

A DISTURBING TREND

Between 2005 and 2014, 466 law enforcement officers (LEOs) have been "feloniously killed" by gunshot wounds. In 2005, just three of these killings were committed with a rifle. By 2009 and 2010, the use of rifle-caliber weapons in killings

Shooting a 9 mm 147-grain JHP at 21 feet into Point Blank's Alpha Elite Level IIIA concealable tactical body armor barely scraped the first layers.

of law enforcement officers had spiked to 15 per year. In 2014, there were 10. Of the 10 in 2014, all 10 involved a semi-automatic rifle, in the pattern of an AR-15 (.223/5.56 mm), AK-47 (7.62x39 mm) or AR-10 (.308 cal) type.

The FBI's summaries reveal that in addition to causing those 10 deaths, in nine distinctly reported incidents, four of the incidents involved rifle-armed suspects being able to cause multiple causalities. The statistics also reveal that in each of these cases, the officers were wearing body armor; however, in no case was the armor sufficient to stop the rifle round. (Although, in several cases, the officer was fatally wounded beyond the coverage of the armor, i.e. head or neck).

Handguns remain by far the most common weapon in both firearms assaults on LEOs and LEO fatalities. But there is a disturbing trend of violent criminals armed with rifles being able to overpower multiple officers and negate any and all effectiveness of the body armor.

In terms of ballistics, these types of rifles, similar to military assault rifles and sometimes known as "assault weapons," fire cartridges that are substantially weaker than big-game hunting weapons or battle rifles, but much more powerful than handgun rounds. At 50 yards, the muzzle velocity of a typical (*) .223 round is more than double that of 9x19 mm. The high velocity and bullet construction used in these rifles allow them to bypass soft body armor—any kind of soft body armor, even the high-

Each of the common pistol caliber tested fare against the Alpha Elite soft armor.

Chris Hirt of Point Blank Enterprise demonstrated that even blunt force trauma can be minimized using its tactical body armor due to its proprietary construction as shown by the clay indentation made by each of the pistol rounds.

Even the .44 Magnum round fired from "the most powerful handgun in the world" could not penetrate the Alpha Elite's Level IIIA soft armor.

est rated (Level IIIA). Only armor with plates designed specifically to stop a rifle threat can defeat these types of projectiles. (Our testing shows Level IIIA armor as having no meaningful effect on 5.56 mm projectiles.)

If the first-on-scene officers had come under fire, their armor would have offered them little or no protection, unless they had the option to deploy additional armor specifically calibrated to the rifle threat. For major metropolitan police departments, giving officers that option will likely require the acquisition of new equipment, development of new or additional training, and a policy change.

HISTORY LESSON

History teaches us thematic lessons about the balance between offensive and defensive technologies. When soldiers fought with melee weapons, such as forged metal swords that could pierce skin and sever limbs, warriors covered themselves from head to toe in armor made of equally strong metals. These had drawbacks: They were hot, heavy and limited mobility to the point that only mounted warriors could wear the best protection. And, over time, offensive technology neutralized the armor advantage. In 1415, at the Battle of Agincourt, English archers dealt a tactical and moral defeat to the French. The longbows of English archers delivered a projectile of such momentum that it was able to defeat the armor of the French Knights, which was meant to protect against swords. Since the Knights were not just a potent fighting force but also battlefield leaders, their defeat was both a tactical and moral disaster for the French defenders.

Turning to the other side of the globe and ahead to the 16th century, the advent of firearms was an even greater blow to the concept of armored warriors reigning over the battlefield. The Battle of Nagashino (1575) is often quoted as the turning point in Japanese warfare from swords to muskets. Oda Nobunaga's innovative use of firearms defeated the Takeda clan's famous cavalry tactics. (This battle where firearms annihilated the foot and mounted soldiers is famously portrayed in Akira

Need caption.

Kurosawa's 1980 classic "Kagemusha.") Because there was no technology at the time to slow down an incoming projectile without creating such a massive weight burden that the solider would be immobile, armorers had no solution to protect an individual exposed soldier from gunfire. Tactics changed: first, to volley-fire, because the arms of the day were not very accurate; later, as they became more accurate, and rates of fire became higher in the 19th and 20th century, battles became entrenched, and then when trench warfare was exhausted, battles became highly mobile.

ARMOR EVOLUTION

Body armor first appeared in a civilian law enforcement setting in the 1970s. At the time, armor was very bulky, similar to a flak jacket, and had limited ballistic protection (only handgun calibers, and certainly nothing more potent than a .357 Magnum could be reliably protected). It would not make sense for soldiers to protect themselves from handgun fire, because on the battlefield, the predominant threat is from rifles.

Since then, it has continuously evolved to be more concealable, to the point that major police departments can and do require officers to wear concealable armor. However, in the experience of this author, as a Firearms and Tactics Instructor for more than five years, even with the modern evolution of armor, it is hard for departments to get 100 percent compliance with policy. Bulk, discomfort and loss of mobility remain concerns, as does an, "It will never happen to me" mindset. These

KNOW YOUR LIMITS

Do you know the limits of your protective gear?

NIJ RATING SOFT ARMORS	CORRESPONDING MAXIMUM THREAT LEVEL
Type IIA	9mm FMJ 124 gr @ 1225 ft/s; .40 S&W FMJ 180gr, up to 1155 ft/s
Type II	9mm FMJ 124 gr @ 1325 ft/s; .357 magnum JSP, 158 gr up to 1460 ft/s
Type IIIA	.357 Sig FMJ 125 gr @ 1470; .44 Mag SJHP 240 gr @ 1430 ft/s
HARD ARMOR/ PLATE INSERTS	
Type III	7.62mm FMJ (M80) 147 gr @ 2780 ft/s
Type IV	.30 Call M2AP 166gr @ 2880 ft/s

Note: ratings for NEW not CONDITIONED armor used; velocities subject to +/- 30 ft/s variation
Source: US Department of Justice – National Institute of Justice NIJ Standard-0101.06
https://www.ncjrs.gov/pdffiles1/nij/223054.pdf

types of issues are a minority, but it is every department's responsibility to make sure they are actively discouraged.

The most recent evolution is the portable armor plate, which protects from rifle-caliber ballistics. This is now a mature technology that, since the '90s, has seen body armor reintroduced to the military. This should not be confused with the "trauma plate," which is a different type of armor insert that can provide added protection.

TACTICAL CHANGES

Now that the threat of criminals armed with rifle-caliber weapons is known, and the limitations of soft body armor are exposed, it is time to have a discussion about whether patrol officers (not just tactical teams) should carry additional armor. This is especially true now that we are training officers to confront active shooters who may be bent on committing mass casualties, where simply maintaining a perimeter is not effective.

After the LAPD pioneered the SWAT Team, it became standard practice for officers to stay in positions of safety and wait for a tactical team to confront a heavily armed or armored threat. But mass shootings, specifically targeting vulnerable civilians and sometimes children, have forced a change in tactics. We are training our officers to make entrance and move towards the gunfire and the shooter while people are running away from it. This is a fundamental change in

Shot 5.56 55-grain rifle round through my M&P 15T model at Paraclete's SOST-500 at extreme close distance. The round was absolutely stopped with no chance of getting through.

doctrine and tactics. But it would only worsen the tragedy and undermine public confidence, as well as create additional casualties, if we order patrol officers to confront the active shooter only to end up victims themselves.

How do we prevent officers who bravely respond to an "active shooter" incident from ending up like the defenders at Agincourt?

The obvious answer is "more armor." But it's not that simple. There are many options to be considered. There are cost considerations and practical considerations. Let's look at the various options. First, a department could convert all officers to concealable armor with low profile rifle plate inserts. Another option is to deploy a rifle plate in its own plate carrier, over the top of the uniform, not concealed.

The advantage of always having the plate is that it is always there; no one will ever lose its advantage because they didn't have time to put it on. But, the disadvantage of the former is that it forces the officer to carry significant extra weight. So it may discourage some people from carrying their armor. And any discussion of up-armoring has to be mindful of that practical concern. Cost is another huge factor that the department and the individual officers must overcome.

Also, a rifle plate is overkill for the more likely day-to-day threat of surprise attacks by assailants armed with hand-

There was no damage to the back side of the SOST-500 armor plate. Even the potential trauma from the blunt force seemed minimal.

Removing the armor plate from the nylon cover revealed a gaping hole from a rifle round.

guns. For the same reason we do not deploy a rifle in every shooting, we also do not need rifle plate armor for every shooting.

Based on weighing these considerations, I am a proponent of having the option to deploy a plate carrier. If your department already has a patrol rifle program, it should simply be added on to the training, that in any scenario where the rifle is deployed, the plate carrier might be deployed as well.

SYSTEMS TEST

In researching for data for this article, I tested two systems: First, a 5.11 (model), which has been part of my personal gear for the last four years. Second, I deployed the Paraclete ARMIS tactical vest and SOHPC Gen 3 plate Carrier from Point Blank Enterprises.

I found that with no special training, it took me about 10 seconds to fully armor in the ARMIS system, and about 20 seconds using the 5.11. It took very little fitting, and there are only a few different size options to accommodate nearly every body size and type.

I also conducted an unscientific demonstration of the ballistic properties of the Paraclete SOST-500 rifle plate.

Chris Hirt of Point Blank fitted the author the new ARMIS system from Point Blank Enterprise. It was light, flexible and most of all fit my body like a glove.

The armor plate, rated to stop rifle fire including armor piercing assault weapon rounds, was deployed on a shooting mannequin and engaged from 10 yards distance with various rifle-caliber weapons, including 5.56 mm with XM193 rounds, and with .308 Winchester 147-grain M80 ball. Even at this close range, these rounds were stopped absolutely by the armor plate, with only slight surface spalling, no penetration.

The soft armor tested fared well against handgun rounds, stopping several common rounds: 9 mm, .40 S&W, .45 ACP and even .44 Magnum, as rated. However, it fared poorly against rifle-caliber rounds. Every variant of 5.56 mm that we tried—from M193 (55gr FMJ), M855 Lake City Ball (62GR FMJ/SS109 Penetrator) and Mk 262 mod 1 (77gr OTRM) penetrated a recently expired unit of commonly used Level IIIa vest. In fact, after going through the vest, these rounds all traveled through 13 inches or more of 10 percent ballistic gelatin. (Some of the rounds went through-and-through, while others did fascinating things inside the gelatin).

Based on its rating, and my personal demonstration, I would be very confident that this system would perform its intended task: protecting my vital organs from incoming fire from rifle-caliber weapons, and turning a probably non-survivable wound into a survivable discomfort. That is something that soft armor alone will not do. I also believe it would take fairly modest added acquisition and training to make plate carriers such as the ARMIS, widely available. I would simply train officers that in any "Code Robert" situation (where deployment of our "Patrol Rifle" by a qualified officer would be authorized), the officer can take the extra moment to deploy the plate carrier at the same time. Because many plate carriers combine the plate carrier with a storage system, officers could carry their rifle magazines with the armor. Because there are fewer sizing and fitting concerns, it would be

OFFICER DOWN:
How Firearms Contribute To Peace Officer Deaths

YEAR	# OF FELONIOUSLY KILLED PEACE OFFICERS IN USA	KILLED BY FIREARMS (%)	FIREARM WAS HANDGUN (%)	FIREARM WAS RIFLE (%)
2009	48	45 (94%)	28 (62%)	15 (33%)
2010	56	55 (98%)	38 (69%)	15 (27%)
2011	72	63 (88%)	50 (79%)	7 (11%)
2012	48	44 (92%)	32 (73%)	7 (16%)
2013	27	26 (96%)	18 (69%)	5 (20%)
2014	51	46 (90%)	33 (72%)	10 (22%)
Total	302	279 (92%)	199 (71%)	59 (21%)

Source: FBI - Uniform Crime Reports https://www.fbi.gov/about-us/cjis/ucr/leoka

THE ARMIS

The ARMIS by Point Blank Enterprises offers an innovative approach to body armor design. This scalable, side-opening carrier allows tactical units the flexibility to configure the body armor system to meet mission specific needs. This includes the capability to release the complete vest in one quick motion and select the specific level of protection needed, while enhancing mobility, agility and substantially improved range of motion for the operator.

Features include:

- Ergonomic carrier shape offers optimum protective coverage while maintaining maneuverability
- Vest can be reassembled in two steps and easily configured for left- or right-handed operators
- Available with HALO Buckle system for easy donning and doffing
- Strong and durable outer shell construction
- Integrated torso mesh padding system placed within Tweave lining is designed to improve airflow and breathability
- Raised air channel padding with durable water-repellant inner material
- Padded shoulder strapping system provides adjustability and load-bearing support
- Ambidextrous cable channel openings on the chest
- Hidden wire routing channels
- Internal cummerbund helps stabilize the vest and provide a secure fit
- Sleeves inside each external cummerbund accommodate ballistic inserts
- Removable front flaps to secure the external cummerbund
- Kangaroo pocket on front flap includes three rifle magazine inserts
- Heavy duty, reinforced "man down" strap

- External, bottom loading, hard armor plate pocket in the front and rear
- Plate pocket per carrier size: Small: 8 inches by 10 inches; Medium to 3XL: 10 inches by 12 inches
- MOLLE compatible webbing attachment system
- High visibility, removable 3-inch-by-7-inch ID panels in the front and back
- Bottom grommets for drainage

theoretically possible for the department—even a large department that does not normally supply individual officers with their armor—to obtain a modest number of the plate carriers but still be able to serve every officer who would actually be in the field.

ARM UP, ARMOR UP

Threats will always evolve. The trend does favor offense. It is easier to come up with a bullet that will defeat the existing armor, than to come up with a new armor that will defeat the bullet. Offensive innovation is proactive; defensive innovation is reactive. But you do not want to be caught without the best available protection from the threat of the day, because that is an avoidable disadvantage. That is especially true when your job is to uphold the rule of law.

We do not want, through inaction, to create a perception among the general public or the criminal community that the rule of law can be neutralized by something as simple as a faster bullet. We do not want to exaggerate the risk: statistically, a peace officer is more likely to be shot with a handgun than a rifle. But the rifle is an emerging threat creating a special problem that we must now confront.

Police forces have responded to the threat of better-armed criminals by arming-up in the past, but now, the armor technology has also matured to the point that we can also, in tandem, up-armor to the threat. I would strongly recommend that if you are a CLEO or policy-maker for your department, that you consider augmenting your department's existing patrol rifle or active shooter doctrine to include this equipment and proper training. **TW**

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