

Forum

'STAMPING' OUT VIOLENCE

By Josh Horwitz

The California Senate is set to consider a bill that will utilize exciting technology to help law enforcement solve gun crimes and identify patterns of gun trafficking. AB-1471, the "Crime Gun Identification Act of 2007," mandates manufacturer "microstamping" of all new semiautomatic handgun models sold in California starting in 2010. The bill is being sponsored by Rep. Mike Feuer, D-Los Angeles, and was passed by the California Assembly by a vote of 44-29 on May 29.

Microstamping is a technology that utilizes lasers to make precise, microscopic engravings on the breech face and firing pin of a gun. As the gun is fired, information including the make, model and serial number of the gun is stamped onto the cartridge as numbers and letters. The technology promises to greatly aid law enforcement officials in investigating homicides and other crimes by allowing them to trace firearms through cartridge casings found at crime scenes. Officials would not need to recover the crime gun itself to develop a lead in a case. Currently, 45 percent of homicide investigations in California do not result in the arrest of a suspect, primarily because of a lack of evidence.

The technology is robust and has undergone rigorous testing. Last week, a successful microstamping demonstration was conducted at the Los Angeles Police Academy Range. At the demo, an officer from the LAPD testified a handgun outfitted with microstamping technology. Todd Liziole, the co-inventor of microstamping at Nanohark Technologies, then displayed the ejected cartridge casings under a microscope so that attendees could see the redundant markings made when the gun was fired. Members of the press, as well as California Senate staff members, were on hand to witness the clear and visible engravings made by the technology — engravings that can be detected and read easily by ballistics investigators in California. This demonstration followed a previous successful test of the technology conducted by Liziole at the U.S. Capitol Police Shooting Range in Washington, D.C. That test was sponsored by Sen. Edward M. Kennedy, D-Mass., and

Rep. Xavier Becerra, D-Calif., and observed by Capitol Hill staff members from both sides of the aisle.

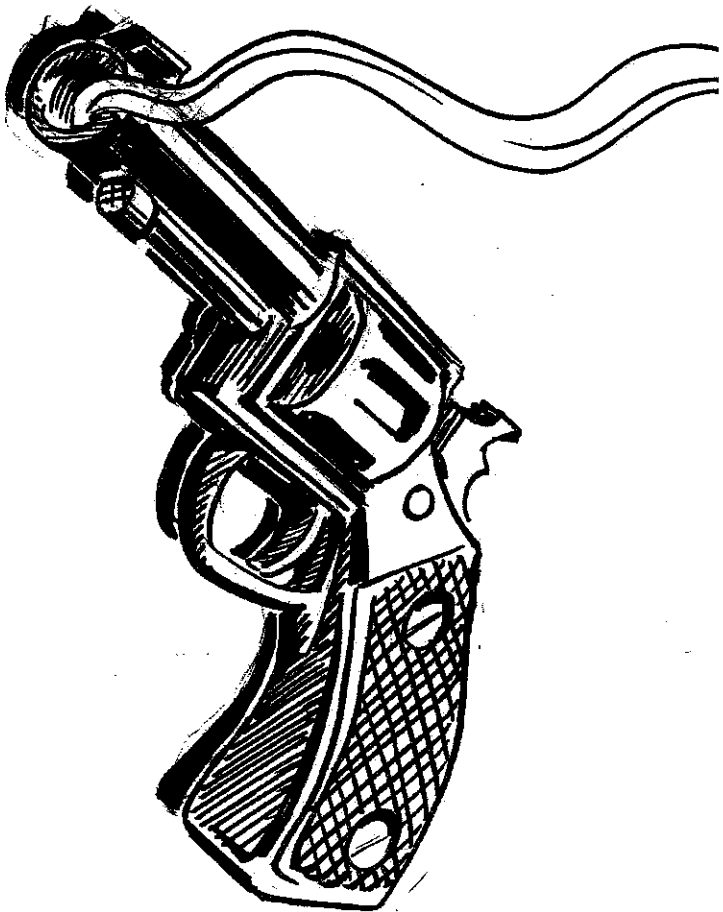
Given these impressive results, law enforcement officials across California are lining up behind AB-1471. To date, 65 police chiefs and sheriffs across the state have signed on as supporters of the legislation. The bill has also been endorsed by the Peace Officers Research Association of California, one of the largest law enforcement associations in the nation.

Los Angeles County Sheriff Lee Baca recently made it clear why he wants to see AB-1471 signed into law, noting that his department's Homicide Bureau is dealing with "hundreds of unsolved cases where the only evidence left at the scene of the crime were expanded bullet casings." In Baca's view, "if these casings had imprinted information on them from the firearm, our investigators would have an exceptional chance of solving these heinous crimes. Assembly member Feuer's legislation takes a bold step forward which would enhance our ability to bring murderers and other criminals to justice."

Even traditional supporters of the gun industry have been impressed with microstamping technology. Well-known forensic researcher Luteen Haag, in an abstract from a 2004 meeting of the Association of Firearm and Tool Mark Examiners, noted that he had conducted his own analysis of the technology and found that "the various characters on all of [labeled] firing pins were easily readable in all types of primer-bested and after hundreds of shots."

Law enforcement and state legislators should also be encouraged by the fact that Nanohark Technologies has agreed to provide a royalty-free license for microstamping technology to every firearms manufacturer who sells handguns in California. This put to rest a myth circulated by gun groups that Liziole was looking to profit from the deployment of the technology.

The gun lobby has launched an all-out effort to discredit the technology in an attempt to shield the firearm industry from additional accountability. One "study" that was highly touted by gun groups in California was conducted by University of California, Davis graduate student Michael Beddow. Beddow's analysis of microstamping uti-



lized non-optimized firing pins and vintage firearms that had never previously been considered for testing because of their advanced age and condition. He concluded that microstamping "does not work well for all guns and ammunition tested" and required "more testing... to determine the costs and feasibility of a statewide program."

These conclusions were quickly discredited. On May 15, a letter was sent to Feuer by UC Davis Chancellor Larry N. Vanderhoef, apologizing for "misimpressions" created by a Beddow press release. In the letter, Vanderhoef set the record straight by noting that Beddow's study had not been peer reviewed and drew false conclusions in regard to AB-1471, which only calls for microstamping of new models of semiautomatic handguns.

It was clear that Beddow had failed to disclose several key factors about his testing. To further rebut the study, Liziole testified a Smith & Wesson 40 caliber semi-automatic handgun outfitted with optimized microstamping technology on May 23. The gun was tested with more than

2,500 rounds. Liziole found that the firing pin marked cartridges with a transfer rate of 100 percent, with all eight digits of the gun's serial number legible 97 percent of the time using optical microscopy and scanning electron microscopy. Even multiple-hit primers, the result of fast, consecutive firing, were still legible.

In addition to the firing pin marks, breech face engravings were successfully transferred onto the cartridges 96 percent of the time. These redundant markings are designed to provide an auxiliary source for forming the code in the unlikely event of a firing pin being dented or replaced altogether. AB-1471 requires new handgun models to transfer the information to cartridges from at least two different places in the firearm.

Some of the gun lobby's claims are quite fantastic. They are telling California's legislators that if AB-1471 becomes law, common criminals will gather spent cartridges from local shooting ranges so they can seed crime scenes with this false evidence after cleaning up their own ejected ammunition. This is the same gun lobby that once told

Californians that criminals weren't smart enough to evade background checks by purchasing firearms from private sellers at gun shows. Back then, the state ignored the industry's misinformation and closed the gun show loophole, eliminating a dangerous source of illegal guns. They should do the same now and give police a new and valuable tool to solve gun crimes and put dangerous individuals behind bars.

The fact is that the gun lobby has no real arguments against the science — and feasibility — of microstamping technology. In test after test, the questions about microstamping have been answered satisfactorily. Californians' legislators and governor now have a historic opportunity to put public safety ahead of the demands of the gun lobby and make their communities a safer place for all.

Josh Horwitz is the executive director of the Coalition to Stop Gun Violence and a visiting scholar at the Johns Hopkins University Bloomberg School of Public Health.