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SIMULATIONS

CAN SIMULATION REPLACE LIVE-FIRE TRAINING?





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need simulation training

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enhance your agency's
firearms training
program

Editor's Note

Preparing officers for the critical situations they will face in the field is a critical component of any agency's training program. While marksmanship is a crucial skill, it is only part of the equation.

This eBook explores why both live fire and simulation are necessary for a well-rounded training program. Simulation training offers the opportunity to test trainees' judgment in a way that simply can't be accomplished on the range.

We'll also cover how simulation training can save your agency money and enhance your current training efforts by providing real-time feedback and a variety of scenarios to evaluate decision-making and train for appropriate use of force.

These articles, plus a list of essential resources for more information, will help your department ensure that your officers are prepared for success.

– Nancy Perry, PoliceOne Editor-in-Chief



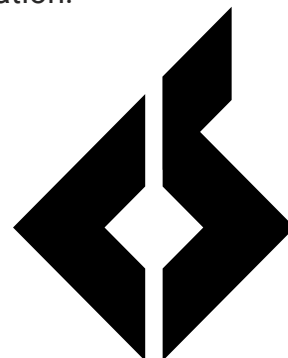
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About the Sponsor

Laser Shot has led the cutting edge of virtual firearms training systems since 1999 and is the virtual range technology depended upon by the Federal Law Enforcement Training Center (FLETC). This same technology is used by departments and agencies worldwide in the form of Laser Shot's affordable portable solutions, which feature the fastest setup time, smallest footprint and the largest judgmental scenario library available in the industry at over 900 and counting. Visit Laser Shot online for more information.



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SIMULATIONS



YES **&** **NOT EITHER OR**



Why your agency's training program should use both live-fire and simulation

By Tim Dees

Training is often the first victim of a budget shortfall, and it's a rare law enforcement agency that doesn't have funding problems. Firearms is one of the more costly elements of a training program, and there can be pressure to economize in this area. One way to do this is to substitute simulator sessions for live fire training, but there can also be over-reliance on live fire. A balanced training program will include elements of both.

Decisions on whether to emphasize simulator or live fire training may be driven by the resources available to the agency. If there has been a substantial investment in a simulator, or if scheduling live fire training poses some difficult logistical issues, using the simulator looks like the more attractive option. Some simulators carry a price tag well into six figures, and the executive who has committed to such a purchase will want to demonstrate that the agency is making the most of it.

A similar pressure arises when range time is hard to come by. An agency that doesn't have its own live fire range might have to schedule time on one that is far away, requiring substantial driving time for officers. Regular days off, vacations and the need to keep officers available for calls for service require that any range sessions be spread over multiple days, increasing the cost and complexity of the training session. Critics without practical police experience will attack a firearms training and qualification schedule where officers have to drive an hour each way to complete a live fire course that takes only a few minutes.

Live fire benefits

Periodic live fire sessions are indispensable, no matter what the cost. Live fire includes elements that a simulator cannot duplicate.

- **Weapon failures:** Many simulators don't employ the officer's sidearm, substituting a modified gun of the same or similar design. If the officer has not properly maintained his sidearm or it has some mechanical failure, and there is no live range time, the problem won't be discovered until he is in the middle of a real deadly force scenario.
- **Recoil:** The guns used in some simulators mimic recoil through the use of gas cartridges, but the recoil of a live round is usually more forceful. Officers unaccustomed to true recoil might be deadeyes in the simulator but less effective with live fire.
- **Muzzle flash:** Simulators seldom replicate muzzle flash, especially as it's seen in dark environments. Shootings are statistically more likely to take place at night, so it's essential to train in real-world conditions.
- **Noise:** This is problematic in both live fire and simulation scenarios, as officers wear ear protection on the range and won't be exposed to the full sound of their weapons firing. Still, officers need to be cognizant of the sound pressure of live fire and understand that their hearing may be impaired after firing their guns without hearing protection.

While traditional live fire training can address these elements better than a simulator, simulator training has virtues that are difficult to duplicate with live fire. Most live fire training is going to be held on a pistol range with designated lanes for each shooter, with targets at one end and shooters on the other. A creative trainer can incorporate some decision-making exercises into a range session, but safety concerns limit the complexity and variation of such evolutions.



Simulator benefits

Simulators usually come with multiple real-world scenarios, all with outcomes that are either selected in advance by the simulator operator, or that branch to different outcomes depending on the actions of the shooter.

For example, a simple traffic stop scenario could start with the violator pulling over to the side of the road, then immediately jumping out to open fire on the officer. When the scenario is run a second time, the motorist jumps out again, using similar gestures, but this time shouts that his wife is having a baby and he is rushing her to the hospital. This sort of drama and variation is all but impossible to re-create on a pistol range.

Because simulators are usually enclosed in a building and access is controlled, there is less opportunity for shooters waiting their turn to get a preview of the scenario and know what to expect. Gun ranges are large, open spaces out of necessity, and it's much more difficult to keep officers who are not actively participating from watching those who are shooting.

Cops tend to be very competitive people, and many will use any advantage they can to appear to excel on the exercise, even if it defeats the part of the training objective.

Environmental concerns

Weather also plays a role in firearms training. Officers may not mind going to the range in the spring and summer, but they have to work in all sorts of conditions, including, rain, snow and

ice. A simulator cannot reproduce severe cold weather conditions, high winds or a downpour. Granted, the firearms trainer who schedules range time during inclement weather may not be very popular with the troops, but he's doing them a favor by conducting training in the same conditions his cops are working in.

For example, an officer might prefer to wear leather gloves in cold weather. Has he ever fired his sidearm while wearing those gloves? If the gloves are going to impair his weapon handling skills (spoiler alert: they will), it's much better to find that out on the range than when he needs all his talent with firearms to overcome an adversary.

Comparing the two

Live fire on a pistol range helps shooters experience the report of the gun, recoil, muzzle flash, environmental elements and the need for marksmanship and safe weapons handling.

Simulators are more effective for judgmental, shoot/don't shoot decision-making training, where a scenario can be replayed as many times as necessary to ensure the officer/shooter is using force at the appropriate level and in the appropriate circumstances. Just as importantly, the simulator also produces situations where force is not necessary or desired.

Both settings – range and simulator – are necessary to ensure a sound use-of-force training program. ■



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WHY

POLICE AGENCIES **NEED** SIMULATION TRAINING

Although live fire training will always be necessary, it can't provide the elements needed to assess and practice critical decision-making skills

By Tim Dees

Police officers have always had situational, decision-making training in use-of-force situations, but the old-school approach was to use role players and scripted scenarios. The players were usually other cops, people who were often familiar to the trainees. It was difficult to eliminate the human element factor that could turn the training experience upside down.

And role players didn't always stick to the script. If the trainee was someone personally known to them, they might make the scenario easier or more difficult, depending on their personal bias. Some role players resented "losing" the scenario, e.g. being bested by the trainee, even when the trainee did everything right and should have prevailed.

The training coordinators who were devising the scenarios and giving the instructions often didn't have much of a choice about who would serve as role players. Further, the "sets" on which the scenarios were played out required a considerable amount of imagination, as most agencies didn't have access to facilities that resembled the real-world environments where the scenario was supposed to be taking place.

Creating real-world scenarios to test judgment

The advent of simulation training made this easier. Firearms simulators have evolved significantly since the 1980s, when the earliest models ran off of laser discs and there were seldom more than a handful of scenarios to choose from. Modern simulators record their scenarios on Hollywood-quality sets with players who both follow the prescribed story line and put on a convincing act. The scenarios are recorded with multiple setups and outcomes, branching according to the direction of the simulator operator and the actions of the shooter/trainee who is negotiating the situation.

"You can get to be pretty adept at making good decisions under duress by simulation training," said Rich Nance, principal at Wartac CQC, a combatives training company. "It focuses on the decision-making component."

Simulators excel at teaching decision-making skills, but they cannot completely supplant live fire range training or duplicate the practice of handling a live firearm and sensing the recoil, noise and other physical dynamics of shooting.

"You still need the live fire component because you have to be able to manage the recoil of your weapon, you have to understand what's going to happen, you have to know what it feels like, you have to be able to hit what you're aiming at," said Nance. "These are all critical skills as well, but that's more like the hard skills, whereas the soft skills are what we need the most work on, and that's what's the most neglected, that simulation

aspect of it. The decision-making component is the most important and the least addressed aspect of training."

Because simulators can provide something very close to a real-world experience, including different outcomes based on different choices made by trainees in the moment, this technology helps police trainers bridge that gap and better address decision-making and use of force issues.

Simulators also make decision-making training more cost-effective. Modern simulators have a significant initial purchase cost but usually require only a single trainer to set up and run the system. Personnel costs are by far the biggest line item in a law enforcement agency's budget. When the per-hour or per-trainee costs of simulator training are compared with the bill that comes with running multiple role-playing scenarios, each with its own set of "actors," the simulator purchase price looks a lot more reasonable.

Why your agency needs both

A sound use-of-force training program includes both live fire and simulator components. Both live fire and simulator training can reveal deficiencies that can be addressed as needed. When there are problems with basic marksmanship, e.g. the shooter isn't hitting the target, they may be able to get in some inexpensive practice in the simulator before returning to the live fire range. Decision-making errors in the simulator can be addressed by a review of use-of-force policies and discussion with a qualified trainer before the shooter has to negotiate a similar situation on the street.

Even the best simulator can't replace live fire training, and live fire training is more effective and less expensive when supplemented with simulated use-of-force scenarios. Neither can replace the other, but used together, simulation and live fire training work to make a well-rounded program. ■



3 WAYS

**SIMULATION CAN
ENHANCE YOUR
AGENCY'S FIREARMS
TRAINING PROGRAM**



Using an immersive system helps officers build confidence in a controlled environment without the safety hazards or costs of the range

By Rachel Zoch

Marksanship training and certification are critical for any law enforcement officer, but this training can be costly and time-consuming – and particularly challenging for police agencies already expected to do more with less.

Using a simulation system like those offered by [Laser Shot](#) can boost your agency's firearms training efforts by bringing training in house, reducing costs, increasing control and providing way to help officers sharpen their skills in an environment that more closely resembles the atmosphere of a real-life incident and that simply can't be replicated on the range.

1 Get more thorough instruction with real-time feedback.

From most qualifying distances, it's hard to see exactly where a bullet strikes the paper target. But the Laser Shot simulator provides precise shot markings, shows every shot in sequential

order, and allows instructors and students to review their after-action reports within seconds. "There are various issues that can be diagnosed based on where their bullets are falling on that paper, but on a live range, it's very difficult to tell," said Scott Goodhart, senior account executive for Laser Shot. "They have to keep moving the paper back and forth or walking down the line, stopping everybody else from shooting, and then addressing the fundamentals and the mechanics."

On a live-fire range, an instructor can't safely stand too near a shooter. In a simulated environment, however, instructors can stand alongside or even in front of their students to correct stance, grip and other fundamental skills in the moment, even before the gun fires and recoils. This helps promote correct technique and avoids the potential for shooters to develop bad habits that have to be unlearned.

"The simulation environment is a great place to hone the basic skills that make a successful



shooter,” said Goodhart. “The simulator allows you to correct bad habits, and all of those things combined help you mitigate risks down the road.”

2 Evaluate decision-making in a variety of scenarios.

Marksmanship is only part of the training officers need to succeed in the field – and it’s no secret that the world is not a nice, neat, controlled environment.

This is where the simulator plays a key role. Testing officers’ judgment in scenario-based training, where they are immersed into a specific environment with variables selected by the instructor, helps trainers assess and guide students’ decision-making process.

“A training instructor can expose them to different things that they might encounter while on the job, whether it be day, night, bad weather, lots of other ambient noises going on,” said Goodhart. “They can set up different obstacles, barricades or role-playing environments, all within the comfort and safety of the classroom – because you’d rather make a mistake in the classroom than out on the street.”

Goodhart says some agencies also incorporate the simulator into their physical conditioning programs to combat the effects of stress and physical exertion on performance and accuracy.

“For example, they will do maybe a series of 10 up-downs, 10 situps, 10 pushups, and then as soon as they finish, they immediately draw their firearm and put five rounds on a given target at whatever distance their instructor does,” he said.

3 Save money by bringing training in house.

Simulation training can literally mean more bang for your buck. The simulators



are portable and can be set up in any darkened room, so departments can take them from station to station. After the initial investment, the department should see cost savings in reduced paid time on the range, as well as less spending on ammunition, range fees and other related costs.

Shooting is a perishable skill, says Goodhart, and simulation training helps agencies provide more opportunities for officers to practice.

"If you have troubled shooters that are constantly having to go back to the range and requalify, then you can bring them in house, practice those fundamentals and see their progression over time," he said. "Whereas most departments are allotted maybe 50 to 100 rounds to practice with every quarter, you can easily shoot 500 to 1,000 rounds in 30 minutes as a single person practicing the different skill assessments that we offer."

Prepare officers for the field

Helping officers hone their skills and build confidence using the simulator, says Goodhart,

can translate not only to better performance but also faster qualifications and recertifications – and more importantly, better outcomes in the field.

"When they do get to the range and it's time to qualify, they're not missing shots," he said. "They're confident in what they're doing and they're, as we say, driving tacks and punching holes in the center of the paper."

Training with many different settings and scenarios instead of shooting at a piece of paper in a well-lit, well-controlled range environment helps law enforcement agencies better prepare officers for the unpredictability of the field.

"The system allows an instructor to throw their officers into a very realistic, stressful environment, as well as speed shooting drills to really test their proficiency," said Goodhart. "If you don't have those fundamental mechanics that you start with, they will show up as a problem down the road." ■

RESOURCES

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Laser Shot on PoliceOne



Laser Shot for Law Enforcement



Grants to help fund your firearms training program



How simulation training can improve officer performance

