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SRM Arms  
1216 Shotgun

## **THE STRONG SILENT TYPE**

Straight Scoop on Suppressors

- **PISTOL PRESENTATION**
- **TRIGGEROMETRY**
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BY DENNY HANSEN | Cover photo by Straight 8 Photography

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BY PATRICK A. ROGERS



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# SWEEPSTAKES

## HANDGUN TRAINING EXTRAVAGANZA

We're starting the New Year off right by offering this big prize package of gear and training. Enter to win a:

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## The Coming Year

**W**ell, the circus that the last year of politics has been is over. Not since the Civil War has this great nation of ours been so divided. Citizens who chose to take part and took the time to vote are either rejoicing or deeply saddened by the results. (Due to press deadlines, this was written before Election Day.)

S.W.A.T. has another great year planned, with comprehensive evaluations of firearms, training, accessories, and gear. To show our commitment to these subjects, the January S.W.A.T. Sweepstakes includes a Ruger SR1911 Lightweight Commander-style pistol chambered in 9mm Luger (below), a Gunsite 250 Defensive Pistol Course, 1,000 rounds of Black Hills ammunition, and DeSantis leather. Check out all the details on page 50.



We will also continue to feature articles on survival preparation, reloading, and many other relevant topics to keep you informed.

We support the Bill of Rights—all of them—and Second Amendment issues will also be included in our coverage.

Regardless of how the elections turned out, we encourage our readers not to tune out. Stay involved and let your elected officials know how you feel about subjects that are important to you. Elections for the House of Representatives are only two years away, and many Congress Critters are probably already planning their campaigns. Let them know you will be watching their voting records.

Finally, join the National Rifle Association and encourage friends and relatives to join. I have bought memberships for five of my grandsons. If you are already a member, consider upgrading to a higher level like a Life Membership. I recently upgraded from "Life" to "Benefactor" level. The NRA offers payment plans, so you don't have to pay for the entire membership at one time.

Until next time, stay low and watch your back. ☺

*Denny Hansen*

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PUBLISHER  
RICHARD J. LUCIBELLA  
EDITOR-IN-CHIEF  
DENNY HANSEN

PRODUCTION DIRECTOR  
KATHLEEN ALLARD

DESIGN DIRECTION  
B. BIGLER | WESTPUB INC.

OPERATIONS MANAGER  
GRIT SALEWSKI

TACTICAL CONSULTANT  
LOUIS AWERBUCK | IN MEMORIAM

TRAINING CONSULTANT  
PATRICK A. ROGERS | IN MEMORIAM

LAW ENFORCEMENT  
CONSULTANT  
BRENT WHEAT

FIREARMS DESIGN AND  
TESTING CONSULTANT  
ASHLEY EMERSON, MN

STAFF PHOTOGRAPHERS  
ROBBIE BARRKMAN  
STRAIGHT 8 PHOTOGRAPHY

CONTRIBUTING STAFF  
REUBEN BOLIEU, TODD BURGREN,  
JUSTIN DYAL, JEFF HALL,  
FLINT HANSEN, KURT HOFMANN,  
SETH NADEL, EUGENE NIELSEN,  
BOB PILGRIM, ROB PINCUS,  
SCOTT REITZ, CLINT SMITH,  
LEROY THOMPSON

SOCIAL MEDIA COORDINATOR  
TAMARA KEEL

INFORMATION TECHNOLOGY  
JUSTIN GUYETT

### ADVERTISING

SALES REPRESENTATIVE  
BILLY ROGERS  
360-244-9185 | billy@swatmag.com

### EDITORIAL

FOR EDITORIAL SUBMISSIONS,  
PRESS RELEASES OR QUESTIONS,  
CONTACT THE EDITOR AT:  
denny@swatmag.com

### READER SERVICE

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### PAPER OR STEEL TARGETS?

My wife inherited a home that sits on six acres in a very rural area. I checked with the local zoning board and they gave me the go-ahead to build a range. A large hill serves as a natural backstop, and our property backs up against Federal land, so there is no danger of anyone building a home in a possible impact area. Very little work will be needed to flatten the ground and maybe put up some side berms.

The range will mostly be used for recreation with family and friends, but I have also considered teaching CCW courses. Do you have any recommendations as to whether I should use steel or paper targets? I'm leaning toward steel because they are fun and you can hear the hits.

P. Steinmetz, New Mexico

*Congratulations and thank you for contacting us.*

*Every range should have paper*

*targets, as they provide verification of sights and it's easier to diagnose problems a shooter may be having.*

*While steel is indeed fun to shoot, it has its drawbacks. One problem is the proclivity to proclaim a hit when the target "gongs." Hearing a bullet hit provides instant feedback but may lead to a false sense of accuracy. Where was the target hit? Was it in the center or on the edge of a 12-inch plate at 20 yards?*

*Another potential problem is that steel should not be fired on at close range. USPSA rules state that competitors are not allowed to shoot steel at a distance of less than seven meters. If a steel target has been cratered by rifle fire, it may be dangerous back to 100 yards—or even more—as the ricochets are unpredictable. The general rule of thumb is not to fire any rifles at steel less than 100 yards away unless frangible ammo is used. MGM Targets offer great quality steel targets at very reasonable prices.*

*Good luck on your endeavor, and let us know how it turns out.*

### SCOUT RIFLES

A few years ago, I got into deer hunting and coyote calling. At a friend's suggestion, I bought a Remington 700 chambered in .300 Winchester Magnum. I only have whitetail deer in my area and, having gained a bit of knowledge since I started hunting, I think the caliber is a bit much. Also at nine pounds without a scope, it starts to weigh me down by the end of a day.

Recently I was reading about Jeff Cooper's Scout Rifle concept. I think a light rifle chambered for .308 Winchester would meet all my requirements. The selection seems a bit limited, so I would appreciate any insight.

R. Leonard, Iowa

*Thank you for taking the time to contact us. We agree that a Scout Rifle should indeed meet your requirements. The*

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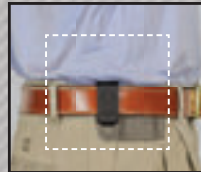
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Scout Concept has experienced a resurgence in the last few years. At the present time four manufacturers are offering their version of a Scout: Mossberg, Ruger, Savage, and of course Steyr, who took Colonel Cooper's ideas and turned them into reality.

We currently have one of each rifle in-house for evaluation and plan a Scout Rifle Roundup, pointing out the desirable and less-than-desirable features of each. Stay tuned!

### CARRYING CONCEALED

I'm wondering if Denny Hansen has any suggestions for a cover garment. I will be taking a Frank Proctor CCE class and am planning on outside-the-waistband carry.

J. Yulo, email

Ask ten people about this and you're likely to get 11 opinions.

I wear a western-cut oilskin vest because it blends well with the style of dress worn in my area. A few companies use denim and other "non-tactical" colors. I stay away from the khaki-colored photographer/contractor-style vests, as they are often associ-

ated with concealed carry.

In the summer, I wear a polo shirt in XX Large that is loose enough not to print, even if carrying outside the waistband. Plus it has Mickey Mouse logos on the front and back. The general idea is not to get noticed.

Denny Hansen

### BALLISTIC EXPERIMENT

My daughter Madilyn is doing a science-fair experiment on ballistics. Do you know where I can purchase blocks of ballistic gelatin for her experiment?

R. DeJean, email

True ballistic gelatin must be kept at a constant temperature and calibrated with a .177 BB at a certain velocity. This is beyond the capabilities of most novice ballisticians.

We have used a product called Perma-Gel in many of our informal tests. Perma-Gel remains solid at room temperature, is reusable by melting it down and reshaping it, has great clarity, is not affected by water, and is not subject to bacteria growth. While results are not as accurate and reproducible as true ballistic gelatin, it serves

well for amateur tests and costs less. You can buy Perma-Gel online from companies including Midway USA and Safariland.

Good luck to Madilyn with her experiment.

### WHO'S WINNING THE S.W.A.T. SWEEPSTAKES?

I'm beginning to wonder if your monthly sweepstakes is some kind of scam, since I never see the names of any winners published. What gives?

J. Pluff, email

No, it's not a scam. As soon as a winner is notified, we ask them if we can publish their name on the S.W.A.T. Facebook page. Most winners request that we use only their first name and town. Some give us permission to use their full name and town, and a few wish to remain anonymous.

If you're wondering why we don't print the names in the magazine, it's due to the time lag between when you see the ad for the sweepstakes and when you'd see the name of the winner. The name of this month's winner couldn't be printed until the April issue. ©



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## Frankenholster

A seemingly endless array of tactical holsters designed to fit every type of weapon and situation is available. From open carry to concealed carry, tactical deployment and more—a shooter has literally hundreds of holsters to choose from.

This wasn't always the case. There was a time when tactical gear was hard to come by and operators had to improvise. Flashlights were attached to guns with pipe clamps, and zip ties secured equipment to vests. The same was true with holsters.

Thirteen years ago, I had the opportunity to attend a Carbine Instructor Course at Gunsite. Even better, the Army paid for it and provided firearms and ammunition. I was given some latitude regarding handguns if I chose not to use an issue Beretta M9. I had a Kimber TLE II M1911A1 that I'd been

itching to put through its paces, so I took that with me.

One problem: I didn't have a holster for it.

I had less than a week to come up with something. Compounding the problem, I am left-handed, which makes buying a holster that much more difficult. Faced with this dilemma, I came up with an unorthodox solution—build my own.

Like many reading this, I have boxes full of excess tactical gear in my garage. They are items I used once or twice, items I bought and never used, items I purchased twice (or in some cases three times) not realizing I had already purchased that item and placed it in a box.

From this motley collection, I began to assemble the Frankenholster.

I started with a black nylon holster. The type I used is commonly referred



Author presents his handgun from his creation.

I attached two nylon leg straps from an old gas mask pouch to secure it to my leg.



Above: Although it sagged a bit from the weight of the 1911, the holster performed surprisingly well.

Frankenholster was cobbled together from other holsters author had on hand.





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to as a "gun bag." For the unacquainted, a gun bag is any holster not designed to fit a specific weapon. Rather it can take most types of medium- and large-frame handguns. It wasn't ideal, since guns come in many different shapes and sizes, but it had to do. Ironically, a company called Bagmaster manufactured it.

I then removed the drop-leg strap from a Safariland Glock 22 holster. I took the screws from the strap and affixed them to the holster itself. I attached two nylon leg straps from an old gas mask pouch to secure it to my leg. I connected everything with copious amounts of paracord and 100 mile-an-hour tape. I added a flash-bang pouch just for the heck of it.

Lightning flashed and thunder roared in my laboratory (aka my garage). "IT'S ALIVE!" Frankenholster was born.

I practiced with it a bit and it worked well enough. The heavy M1911A1 made it hang out a bit, but I liked it. It reminded me of Han Solo's blaster rig. Off to Gunsite I went.

I got some hard stares from students and staff. I hoped some were jealous of my one-of-a-kind rig. More likely they thought I took the short bus to gun class or that I was indigent and in need of tactical donations.

Surprisingly, Frankenholster did pretty well. We did numerous running-and-gunning drills and I never lost my handgun. It was pretty quick to draw and reholster, too.

Frankenholster now resides in one of those boxes of tactical gear in my garage. It served its purpose and was honorably retired. It is unique and I can take comfort in knowing I will never accidentally order a second or third one.

I (obviously) assembled my Frankenholster with no specialized knowledge or skills. What items in your garage can you mix and match and press into service if needed? ☺

*Nick Perna is a Sergeant with the Redwood City Police Department in northern California. He has spent much of his career as a gang and narcotics investigator. He has been a member of a multi-jurisdictional SWAT team since 2001 and is currently a team leader. He previously served as a paratrooper in the U.S. Army and is a veteran of Operation Iraqi Freedom. He has a Master's Degree from the University of San Francisco.*



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# Pistol Presentation

One of my favorite tactical adages is the old “Don’t put the cart before the horse.” What does this proverbial old chestnut have to do with close-range interpersonal violence? Simple, really: In any multi-step process or procedure, we often take the individual segments out of sequence because of the natural tendency to focus on the enjoyable or perhaps more difficult tasks rather than just doing things in the proper order.

The example I’m thinking about today is pistol presentation, i.e., “drawing the gun.” When teaching novices how to fight with a handgun, we always start with the proper presentation. Almost without exception, students give that block of instruction a courtesy nod while obviously thinking, “Yeah, I know it’s important, but when do we get to *shoot*?”



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I cannot disagree that during a gunfight, it’s pretty important to fire quickly and accurately. But you’ll have a difficult time connecting bullet and target if you’re wrestling with a recalcitrant holster or clothing.

Therein lies the lesson for today:

before you start thinking about pulling the trigger (cart), make sure you can get your gun onto the target quickly and smoothly (horse).

One common benchmark for self-defense is putting two shots on a close-range target from the holster in



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1.5 seconds. After a bit of instruction, most students can meet this criterion without much trouble. Of course they are ready for the fire command, hand hovering near the holster on their belt, gun grip uncovered and unfettered by shirts, jackets, or other distractions.

But let's look at a real-world situation. You're sitting at a stoplight when, because of a momentary lapse in your normally impeccable situational awareness, an armed carjacker suddenly approaches from the passenger side and makes it known that he covets your almost-paid-for clunker.

In a split second, after processing all the factors, you make the prudent decision that it's time to defend yourself with that expensive MasterBlaster 5000XL pistol on your hip.

The problem is that, by the time you pull the gun, you're way behind the power curve of the encounter because your understandably shaky hand lost a second or two finding the gun in the first place, then you couldn't get your shirt tail out of the way, and finally the seat belt prevented you from getting a good firing grip prior to pulling the piece.

In the meantime, the dirtbag walked up, yawned, had a good stretch, then fired two shots into your face. It's "game over" for you due to poor presentation skills rather than mediocre shooting ability.

That is why proper, realistic practice of the presentation is so critical. Whenever you're on the training range, you must devote a considerable number of repetitions to producing the pistol while wearing your normal everyday clothing and rig.

Right now everyone is nodding their heads and saying, "Ah yes, of course." However, I'll give you 50:1 odds that at the next range session, you will wear a holster and clothing combination that makes it really easy to obtain your firearm rather than the shirts, skirts, coats, and other folderol that impede your presentation on an average day.

This is understandable because during your always-too-short time on the shooting range, you want to be cranking the trigger rather than fussing with proper coat-flinging techniques. But that doesn't make it less important.

Your desire to get into the "meat" of the firing sequence cannot be allowed to override the necessity of practicing the little-regarded skill that is unglam-

orous yet crucial to saving your life in an emergency.

Fortunately, you can do some things to reinforce good habits without "wasting" any range time.

First, dry fire practice including proper presentation is one of the best ways to smooth out your shooting skills. It can be done nearly anywhere with proper safety precautions and doesn't cost a dime.

Without the noise, recoil, and pressure from onlookers that occur on a real-world range, you can take time to ingrain good habits and fix those little mistakes and bad habits that always creep into our toolbox.

Second, every day when you put your gun into the holster, make it a habit to safely and properly practice the presentation at least two or three times. This reinforces the movements to make them almost instinctual—a key element to smooth and fast performance under stress.

Third, just go ahead and "waste" that time when you are on the range. Make it a personal and unbreakable rule that at least 25% of your shooting practice takes place using the set-up you normally carry. If that means kneeling 50 or 100 times to reach your ankle holster, so be it.

Likewise, time spent pulling up your shirt, reaching inside your pocket, feeling for the hidden compartment in your purse, or whatever else decreases the likelihood of your getting shot while fruitlessly grabbing your right thigh after forgetting you're not wearing that racy drop-leg holster you always take to the range is time well spent.

Presentation: it isn't sexy and you won't win any come-hither looks from the hot chick in the peanut gallery, but it's such a foundational part of the shooting process that you're short-changing yourself if it isn't a major focus of your training and practice.

If you ignore this advice, we can only hope your undertaker doesn't get his hearse before the horse. After all, that would be pretty silly. ☺

*Brent T. Wheat is a former SWAT officer, canine handler, detective, and patrol supervisor who retired after a 30-year law enforcement career. Brent is the publisher of WildIndiana Magazine, a regionally focused outdoor magazine. He can be reached at [btwheat@wildindiana.com](mailto:btwheat@wildindiana.com).*





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Whether you are stranded in the snowy backcountry or lost on a hiking trail, the See/Rescue Streamer highlights your location so you stand out against whatever environment you may find yourself in. The personal See/Rescue Streamer is the size of a cell phone and provides safety and peace of mind that can be stowed or clipped anywhere.

### INVENTOR AND FOUNDER

Dr. Robert Yonover is a Ph.D. geochemist/vulcanologist with a history of innovative scientific contributions, technologies, and patents. His Ph.D. work includes multiple ALVIN submersible dives to two miles deep off the Galapagos Islands to retrieve submarine lava samples, with laboratory work performed at NASA Johnson Space Center and MIT. Dr. Yonover's media credits include appearances on CNN, PBS, and the Discovery Channel. He is the author of *Hardcore Inventing* and *Brainstorm Islands*.

A North Shore big-wave surfer and Molokai Channel rough-water fisher-



See/Rescue Streamer inventor, Dr. Robert Yonover, tests his product in the water. It is used by all branches of the U.S. military.

man, Dr. Yonover uses the ocean as his laboratory. He has invented a multitude of survival technologies that were awarded U.S. Military/DARPA funding and U.S. patents, including the military-approved See/Rescue Streamer, Pocket Flotation technology, Portable Emergency Desalinator, Video Search and Rescue (vSAR) technology, Inflatable Rescue Board, and Inflatable Paddleboards used worldwide.

### LAND OR WATER

The SAR-625 (Personal Streamer) is six inches wide with a length of 25 feet. Its bigger brother, the SAR-11 (Large Streamer) is 11 inches wide with an overall length of 40 feet. Both are orange in color, which is the universal distress color used for most life jackets, life rafts, whistles (attached to life



See/Rescue Streamer floats on water and contrasts with the environment. It comes complete with military-grade chemlights and nylon carrying case.

**If you want to be serious about it, carry two See/Rescue Streamers and use them to make a large "X" in an open clearing.**





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Two sizes of See/Rescue Streamers are available. One is wider and longer than the other, but both feature military-grade chemlights that last approximately 12 hours.

jackets), lifeboats/tenders, search and rescue uniforms, and rescue boats.

Rightly so, because orange generally contrasts with the environment. Orange is not a naturally occurring color in the desert, jungle, snow, woods (except in autumn), water, or city. So it helps you be seen.

The concept of the See/Rescue Streamer is the same as colorful flagging tape. It is brightly colored and can be hung up in a way to move freely in the wind and attract attention. Signaling doesn't stop at night. The streamer features two military-grade chemlights and retro reflectors that offer the option to signal at night without the use of a fire or as a supplement

to a signal fire.

The See/Rescue Streamer comes in a reflective foil-like packaging that is yet another way of signaling, so save the packaging. The streamer is made from heavy-duty polyurethane. It is rolled up like a scroll and has plastic spacers every few feet to help keep it rigid. Once the package is opened, a nylon sheath keeps the streamer rolled up tightly and ready to go.

The pouch also serves as a degree of protection against punctures, wear and tear from constant carrying, and the heat of a fire. Unopened, the package seems to float, as does the actual streamer once it is opened up and put on the water. There is a cord handle to

hold onto or tie to a vehicle, wooden pole, surfboard, airplane, boat, or tree.

## SIGNALING

Up until now, signaling has always been about blowing a whistle or using flares, signal fires, and a signal mirror. Though other ways to signal exist, these are the common methods people use on land and sea, and the most commercially available products on the market. The See/Rescue Streamer is yet another option that should be considered by all outdoors enthusiasts.

Of the many survival classes I have taken and have assisted on, signaling is always the skill that the least time is spent on—if it's mentioned at all. Colleagues who have also taken lots of survival classes have told me the same thing. Many survival programs focus on fire, shelter, water, and navigation, yet leave signaling as an afterthought.

To a rescue helicopter over the wilderness or search party in a boat, the size of a human is insignificant at best. Dyes wash away, flares last only a few seconds and require expert timing, but without a positive visual, you're still in a survival situation.

Signal fires are usually mentioned in survival classes, but not really focused on. Fire-building is another skill that takes time and practice to master. A lot of materials are required and for the most part the weather needs to be on your side.

The See/Rescue Streamer doesn't require skill. You do need a little common sense, but it isn't a whole skill set that you have to practice. This is a huge selling point and confidence booster for the would-be outdoors adventurer.

Laying down ground-to-air signals is all about color, contrast and movement. Whistles and air horns will only carry so far, and gunshots a little farther. Either way, sounds cannot be seen.

The See/Rescue Streamer works for you while you tend to other pressing matters of survival like minor injuries, procuring water, or making a camp.



See/Rescue Streamer comes in reflective package that's good for additional signaling. Streamer is kept in a nylon sheath and is easy to deploy.



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# MOONCLIPS

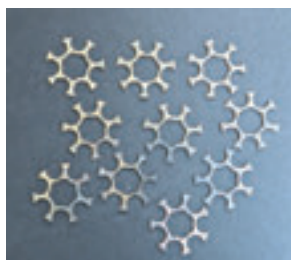
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### GET THE MOST OUT OF THE STREAMER

A few ways to maximize the streamer: Use any and all types of colorful clothing or gear in conjunction with the See/Rescue Streamer to make an arrow pointing to your camp or direction of travel. I don't recommend climbing trees, but attach the streamer to a long wooden pole that extends up over the brush. It will blow in the wind and attract attention (color, contrast, movement).

If you want to be serious about it, carry two See/Rescue Streamers and use them to make a large "X" in an open clearing. That is the universal distress signal for "need help immediately!"

Most people in the outdoors walk around in camouflage clothing or earthy colors, which never helps a person if they go down or are stranded because they can't be seen.

A lost hiker wandering around should wrap the See/Rescue Streamer around themselves like a sash, in an "X" formation, over the shoulders and across the body. This will give you the best chance of being seen if you are attempting to self-rescue.

Flooding and earthquakes have become all too common worldwide in recent years. People who are trapped but mobile could benefit from hanging a See/Rescue Streamer from the highest point on their house or from a window. Search-and-rescue personnel will recognize it and know what the color and identifying marks mean.

I can see a place in the pack for the See/Rescue Streamer, especially for responsible expedition leaders, guides, fishermen, ice-climbers, hunters, mountain bikers, kayakers, pilots, campers, and cross-country truck drivers.

Since the U.S. military and Coast Guard have figured this out and already carry them, you should too! ☺

*Reuben Bolieu is an adventurer, writer, photographer, and survival instructor for Randall's Adventure & Training. A lifetime student of survival, he has studied primitive survival techniques from all over the world.*

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# Cutaway Instructional Firearm

Project Phoenix  
Redux

BY DENNY HANSEN



Completed cutaway Model 25. Except for  
actually firing, revolver is fully functional  
in all regards. Photo: ROBAR



After the fire, I simply could not bring myself to run a cutting torch through the frame and cylinder before junking it. For the next 11 years, it languished in a bucket of oil to protect it from completely rusting away.



Author's Smith & Wesson Model 25 before being restored as a cutaway. Photo: ROBAR

After my house was destroyed by a fire on 10 April 2005, Kevin McClung of Mad Dog Knives helped me clean up my firearms so I could read the serial numbers and report them as lost to the BATE. Firemen had unceremoniously dumped them all into a pile in my backyard. Kevin and I put them in a 55-gallon barrel to take them to his shop so we could run a cutting torch through the receivers.

About a week later, Kevin called to say he believed several of the firearms were salvageable.

Making custom knives for a living, Kevin understands how to heat treat metal and, under his expert guidance, we were able to restore several of my firearms (*PROJECT PHOENIX: Weapons Rise From the Ashes*, December 2005 S.W.A.T.). My favorite revolver—a limited-edition Smith & Wesson Model 25 chambered in .45 Colt—was not among them.

#### S&W MODEL 25

Although a limited edition, I had bought it to be more of a shooter than a collector's piece. I sent it to a gunsmith who came highly recommended and had resigned from the Maricopa County Sheriff's Office (AZ) due to the demand for his services.

He narrowed and smoothed the trigger for optimal double-action (DA) work and performed the best trigger job I've ever seen. It ended up having a seven-pound DA pull and a single-action let-off of just 2.5 pounds—with reliable ignition! In short, this was one sweet-shooting wheelgun.

After the fire, I simply could not bring myself to run a cutting torch through the frame and cylinder before junking it. For the next 11 years, it languished in a bucket of oil to protect it from completely rusting away.

#### ENTER ROBAR

Several months ago, I called Freddie Blish, owner of ROBAR, and asked if he thought the revolver could be restored. With no promises made, Freddie told me to send it to him to see if it were possible.

A couple of weeks later, Freddie advised me that he had talked to some of the industry's top gunsmiths and metallurgists and also to Smith & Wesson. The final determination was that while the barrel was likely OK, the cylin-







**ABOVE:** One of Hansen's Kimber 1911s that was "lost" in the fire.

**RIGHT:** Hansen and four-year-old grandson were able to escape through the front door just before the entire house flashed.

**BELOW:** Same Kimber after cleaning, re-heat treating, and new parts. Pistol now has more than 5,000 rounds through it.



der might have lost enough temper to make it unsafe for modern ammunition. His suggestion was to turn it into a wall hanger.

Since I won't be around forever, I dreaded the thought that years from now a family member would load it and have it blow up in their face. I asked Freddie to run a torch it and dispose of it. Sad day, but I actually expected the news.

But the next day, Freddie came back to me and asked if I would like to have the gun turned into a working "cut-away" for instructional as well as novelty purposes. Great idea!

I have a long relationship with RO-BAR, both with their coating technologies and the firearms made by them, and their quality has always been top notch. When I got the revolver back in mid-September, my feelings about RO-BAR were reinforced—in spades.

## **NP3—ACCEPT NO SUBSTITUTES**

With the exception of the rear sight, the entire revolver, both internally and externally, was finished in NP3®. Developed by Robbie Barrkman about 30 years ago, NP3 combines nickel and PTFE (Teflon®) at the molecular level, resulting in a finish that is not only extremely corrosion resistant, but also provides high lubricity. The color is an attractive satin gray. My experience with NP3 is that the more a firearm's action is worked, the slicker it gets. Usually the only cleaning required is to wipe the gun off with a dry cloth.

Often copied and marketed under various monikers, only NP3 is the real McCoy. Caveat emptor.

As a side note, the finish is not restricted to guns, and is even used in the aerospace industry. If it's good enough for the space shuttle, it's good enough for my firearms.

The revolver now wears a set of beautiful smooth Super Target Walnut stocks (grips) made by Altamont Company.

## **THE PHOENIX**

The Model 25 "Phoenix" operates like any other revolver both in single- and double-action modes, as do the cylinder release and the locking parts on the ejector rod. The only difference, since the revolver is unsafe to fire, is that Robar neutered the firing pin, ensuring no







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- ◆ Four anti-rotation QD sockets for QD sling swivels
- ◆ Supplied MI gas tube with proper internal geometry
- ◆ 11.5 inches in length, weighs only 16 ounces!
- ◆ **Requirements for fit:** Barrel diameter of .700 under lower handguard; Lower furniture length of 6 inches, not counting mounting surface; Will not fit Yugo pattern rifles.

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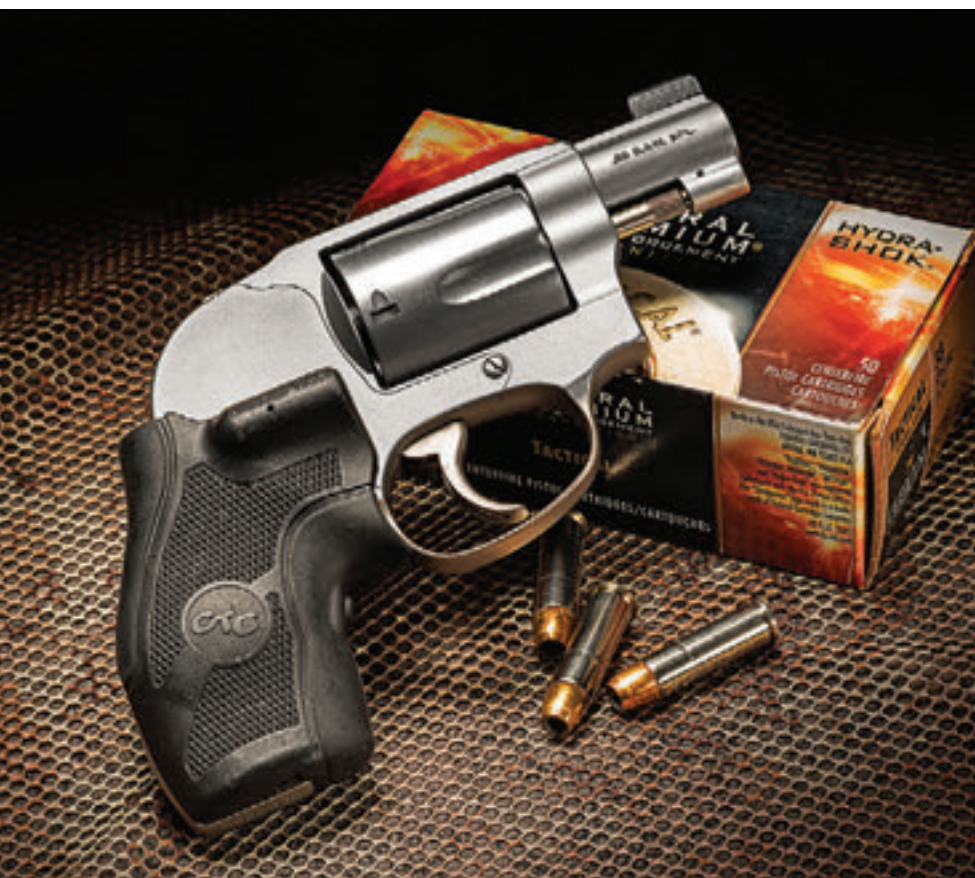
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**ABOVE:** Before his untimely passing, Pat Rogers sent his well-worn S&W M38 to Robar for refinishing. Photo: ROBAR

**BELOW:** Pat's finished M38 was refinished with NP3. Robar also machined off the original front sight, milled a dovetail in the barrel, and installed an XS/24-7 standard dot front sight. Photo: ROBAR



live round can be ignited. I used my Lyman Electronic trigger gauge, and the Model 25 still had those sweet seven-pound D/A and 2.5-pound SA pulls.

As mentioned, I was able to restore several firearms: an AR-15, two Kimber 1911s, a Ruger Bearcat, and a few others. All the steel firearms were carefully re-heat-treated. Each was also placed on a device to confirm they were of the proper Rockwell hardness. The AR-15 was cleaned and then re-anodized. Small parts and springs were replaced as needed.

If not for Kevin's suggestion that we try to salvage *anything* from the ashes, I would never even have considered it. This is not an undertaking for the casual hobbyist, but for someone who specializes in this type of restoration. But a firearm not capable of being fully restored does not mean it is time for the scrap metal pile.

### SHOW, NOT TELL

While an interesting conversation piece, I was recently able to put the M25 back to work. I taught a concealed carry class just a few weeks after I got the Phoenix back from ROBAR. It was an eclectic group of a dozen students, but what made the class unique was that every student had brought a revolver—quite a difference from the polymer striker-fired compacts prevalent in most classes.

Using the M25 as a visual aid, I could show students exactly how their firearm worked, rather than try to explain it. It was such a great experience for them—as well as for myself—that I'm considering turning a Glock and one of my less-expensive 1911s into cutaways for future classes.

If you're thinking about refinishing a gun for either cosmetic or functional reasons, check out ROBAR. Besides NP3, they have other finishes that I have used and rely on. I highly recommend their work. ☺

### SOURCES

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## Doing ISIS' Work for Them

**I**n August, a *New York Times* article quoted former ISIS recruit Harry Sarfo, now serving time in prison in Germany, as saying that Americans are “dumb” for not having more restrictive gun laws.

“For America and Canada, it’s much easier for them to get them over the social network, because they say the Americans are dumb—they have open gun policies,” Sarfo said from a prison in Germany. “They say we can radicalize them easily, and if they have no prior record, they can buy guns, so we don’t need to have a contact man who has to provide guns for them.”

Predictably, domestic anti-gun groups jumped on Sarfo’s judgment as “proof” that America’s rejection of forcible citizen disarmament is a boon for terrorists.

This is nothing new, of course. In 2011, American “gun control” groups were delighted to find an ally in U.S.-born al-Qaeda spokesman Adam Gadahn, who in a video clip ostensibly intended for jihadi sympathizers in the U.S. made the blatantly false claim that at U.S. gun shows, one could easily purchase *fully automatic* firearms without a background check.

So taken were these groups with the idea of having a genuine terrorist echoing their own claims that the lack of oppressive gun laws in the U.S. helps terrorists kill Americans that they shouted Gadahn’s words from the rooftops.

Another rather critical point that domestic gun-ban zealots don’t seem to want to talk about is that these terrorist groups are far from stupid, especially with regard to communicating

their venom to the rest of the world. ISIS in particular has earned grudging respect for its social media savvy.

So are we to believe that these groups would *tell* us how our policies make their efforts easier? They may or may not have read the Napoleon quote, “Never interfere with your enemy when he is making a mistake,” but the general concept can hardly have escaped them.

I’m not saying that when ISIS comes to America, they won’t commit their evil with firearms bought on the civilian market. They likely realize that doing so will greatly help make the case that America’s lack of restrictive gun laws helps them kill Americans, although they might choose a “gun-free” zone to minimize the chance of effective resistance.

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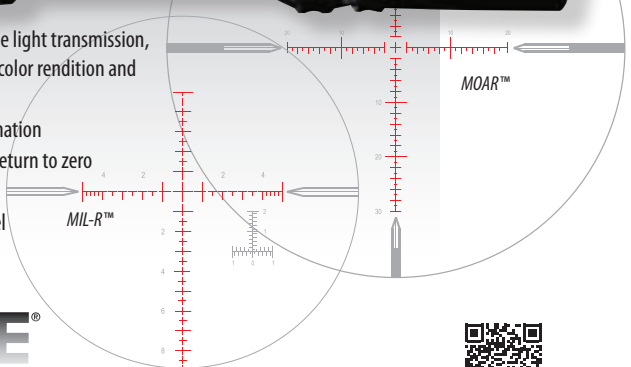
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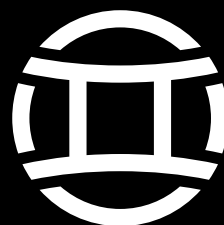


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vocacy groups and the mass media not bothering to point that part out, or to point out the horrid carnage they have wrought in Europe, where gun laws are as draconian as a “gun control” group (or a jihadist group) could ask for.

But then again, ISIS is not in the habit of bothering to “ask for” anything, including draconian gun policies. When the group took control of Mosul, Iraq, among the rules they imposed on those unfortunates who had not escaped the city was this gem: “No public gathering other than those organized by ISIS will be allowed at any stage. No guns will be allowed outside of its ranks.”

Yeah, freedom of speech appeals to them no more than the right to keep and bear arms does.

In other words, ISIS and their ideological allies *want* ultra-restrictive gun laws, and for pretty much the same reason that domestic gun-ban zealots do—disarmed people are far easier to subjugate and dominate.

But the jihadis realize that their best hope for getting such policies enacted in the U.S. is to help domestic gun-ban zealots deceive the public into believing that restrictive gun laws would do more to thwart their agenda than a well-armed American citizenry would. And America’s “gun control” advocates are only too happy to accept that help.

Those who would condemn the American people to abject serfdom, whether motivated by zeal for what they have perverted their religious faith into, or by condescending, collectivist ambition to “save” us from ourselves, will be stopped only if the American people have the means to stop them. Harsh language isn’t going to get it done.

And that is why both types of the enemies of the American people want to deny us access to those means.

It is often said that the jihadists “hate us for our freedoms,” and that may very well be the case. So what would the gun-ban zealots have us do—appease them by unilaterally surrendering those freedoms? And these people call us “traitors!” ☹

A former paratrooper, Kurt Hofmann was paralyzed in a car accident in 2002. The helplessness inherent to confinement to a wheelchair prompted him to explore armed self-defense, only to discover that Illinois denied that right. This inspired him to become active in gun rights advocacy.

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# Don't Move the Evidence

I have been working as a Deadly Force Expert in the Federal and Superior Courts for over 25 years and have heard a lot of nonsense. Plus tons of articles exist about all things tactical. For example, there is the hyper-focused, ultra-combat, will-the-bullet into the target BS technique. Then there's the go-through-the-door Matrix, gravity-defying room-clearance technique (also BS).

In short, there's a lot of hoo-mali-mali (sic) written about absolutely nothing. Ever hear the phrase "win the battle, lose the war"?

Tactics, shooting, gear and all things supposedly "high-speed" are somewhat interesting when multi-million dollar settlements are awarded when there was absolutely no reason for it.

Post officer-involved-shooting (OIS) event protocols are sometimes violated through ignorance, stupidity, or just plain lack of common sense. When the dust has settled, one needs to immediately recompose one's self and take stock in the order of things. Here's the big one: leave evidence in place!

If there is evidence and *especially* if the evidence (gun, knife, or blunt-force object) is what prompted you to apply deadly force in the first place, leave it in place. You're not a Hollywood action movie star.

I am aware of cases where an object was moved post-OIS for no apparent reason. If there are no enraged crowds, no possibility of scene contamination, and no alien visitors (the extraterrestrial type), leave the evidence in place. When you move something at a crime scene, you open the door for the opposition to allude to conspiracy, collusion, or cover-up.

The public is subjected to a lot of negative press regarding police use of force. Bad and marginal shootings are broadcast at light speed 24 hours a day on every imaginable social media outlet. Some of the criticism leveled is justifiable and some is not.

Does the media influence the juries that decide the fate of the officer or

department involved? You'd better believe it. Common sense can go out the window these days. A skilled attorney can place doubt relative to an officer's intention when evidence has been moved or tampered with and justification for doing so is lacking.

As a hypothetical example: Officer "A" shoots a suspect drawing a gun from his waistband. The suspect collapses and it is readily apparent he is no longer a viable threat and is quite possibly expired. Our intrepid Officer "A" secures the gun in his back pocket or moves it to another location for "safekeeping." (After all, that's what movie stars do, right?)

The check on the gun reveals it is stolen. Attorney "B" postulates the theory that Officer "A" actually planted the gun on the deceased, is less than truthful, and there was never any threat posed at all.

In this example, one could argue that in order for this to have occurred, Officer "A" would have to have carried on his person, for every shift of every day and every minute he ever worked, a stolen gun (which no one on his department ever observed or was remotely aware of) in the remote event (in a 20-year average career, in which less than 3% of officers are ever involved in an OIS) he would be involved in a shooting in which no opposing gun was ever to be found (other than the "throwaway").

Sounds ludicrous, right? Guess what? Some people buy into the theory that officers carry "throwaways." I would also acknowledge that yes, a long, long time ago, some officers were guilty of this, but things have changed—radically!

How about this scenario? An OIS occurs and someone in the ensuing moments moves a particular piece of evidence rather seminal to the event. Robbery Homicide questions multiple persons on-scene relative to the evidence movement. No one cops out. There's the opening.

"Well, ladies and gentlemen of the jury, the evidence didn't just move

**When you move something at a crime scene, you open the door for the opposition to allude to conspiracy, collusion, or cover-up.**

itself, now did it? Or was it ever in the suspect's possession in the first place?"

(As an aside, latent prints don't always reveal themselves, and DNA transfers are not always in evidence, so throw those theories out the window.)

If no logical rationale for moving *any* piece of evidence on site exists, don't move it! If, on the other hand, you're some Hollywood \$60-million-a-picture action hero, go ahead and move it—you can afford the lawsuit. I don't know why officers sometimes violate the most elemental of police procedures, but they do.

I have personally been involved in OISs and have been around others who were involved. We took stock of the situation, recomposed, and left everything in place.

This goes very well to evidence crime-scene integrity and the chain of continuity. So ... use your latest and bestest (sic) hyperbolic, super-wha-zoo, ultra-galactic, black-hole-defying techniques to prevail. And then don't move the evidence.

Leave it in place! ☺

*Scott Reitz is a 30-year veteran of the Los Angeles Police Department and the director of the highly acclaimed International Tactical Training Seminars. Course information and schedules are available at their website at [www.internationaltactical.com](http://www.internationaltactical.com). Looking Back, a free monthly newsletter, is available by email at [itts@gte.net](mailto:itts@gte.net).*





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## Two Books on Special Operations Weapons

**B**ooks on weapons used by special forces are written fairly often, but usually aren't very "special." They're often a compilation of photos obtained from manufacturers intermixed with some military PR photos and tables of weapons specs.

Some are marginally useful for quick reference to compare overall length of weapons variations or cyclic rate, but not much else. However, two recent books on the subject are worth reviewing for S.W.A.T. readers.

### GUNS OF THE SPECIAL FORCES 2001-2015

Leigh Neville's *Guns of the Special Forces 2001-2015* is a cut above most of the books that purport to review special ops weapons. Its limitation to the War on Terror years allows coverage of the many weapon developments that have taken place as special operations units have been constantly deployed and in action over the last decade and a half.

Neville is an Australian who does not seem to have a special ops background himself, but who has taken the trouble to interview operators about

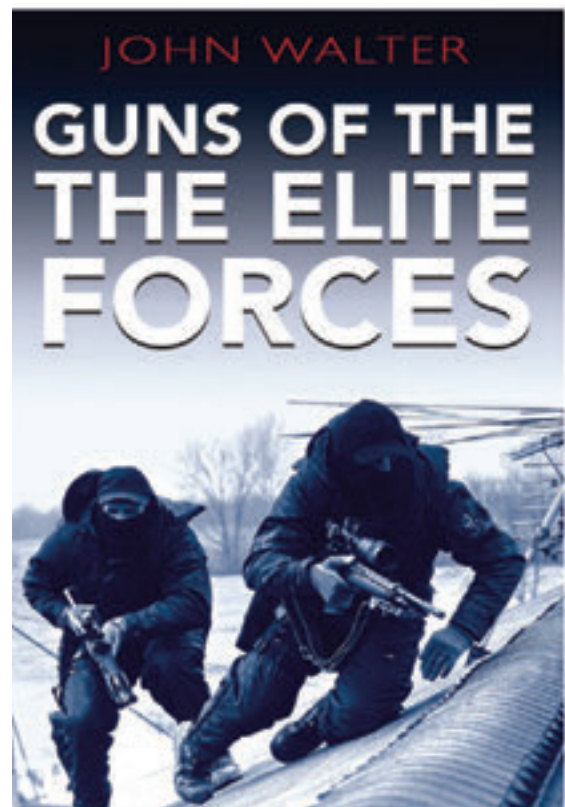
weapons performance in combat. He also has enough basic weapons knowledge and has done enough research that he has gone beyond many books on small arms published in the UK.

Having said that, he does make some mistakes. For example, he writes about the initial U.S. adoption of the semiautomatic AR-15. Indeed, the Air Force initially adopted the AR-15, as it did not get the designation M16 until adopted by the U.S. Army. But the AR-15s adopted by the Air Force were select-fire weapons. It's an easy mistake to make. He doesn't make many, though.

BELOW: *Guns of the Elite Forces* by John Walter is less topical but does have some informative sections.



ABOVE: Thompson believes if only one book is to be purchased, it should be *Guns of the Special Forces 2001-2015*.







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In his introduction, he does a good job setting forth the basic missions of special ops units, allowing the reader to understand how various weapons fit these missions. Like most *S.W.A.T.* readers, I would have preferred more hands-on shooting reviews, but since Neville is an Australian civilian, he did not have a chance to actually shoot most of the weapons.

For those he did shoot, he offers comments, but not ones that normally apply to combat (e.g., pros and cons of mounting accessories on different platforms—weight versus usefulness; how the rifle or carbine performs on a jump test; do the design and magazine length allow the operator to go prone quickly). But he does offer enough operator comments to give insight into weapon performance.

The book is broken into nine logical and well-organized chapters:

1. Combat Pistols
2. Submachine Guns and Personal Defense Weapons
3. Assault Rifles and Carbines
4. Battle Rifles, Special Purpose and

**Both books make nice additions to a tactical weapons reference library. But especially for *S.W.A.T.* readers, who are more sophisticated about tactical weapons.**

5. Designated Marksman Rifles
6. Combat Shotguns
7. Sniper and Anti-Materiel Rifles
8. Squad Automatic Weapons and Machine Guns
9. Grenades, Grenade Launchers, and Rockets
10. Conclusion and the Future

He covers some trends very well. For example, the decline of the MP5 and rise of the M4, and new designs chambered for the .300 Blackout are well explained. In fact, each chapter has a section on ammunition, which is quite useful.

A lot of text is devoted to the pros and cons of the M4 and other 5.56x45mm weapons. Neville correctly explains that special ops units often have to tailor their weapons to the mission.

Sometimes a light, short weapon such as the M4 is useful, while at other times, a longer-range, harder-hitting weapon is more desirable. Some units carry a mix of weapons, giving operators multiple platforms from which to choose. Weapons like the SCAR MK 17, which can be quickly configured with different barrel lengths, receive perceptive coverage and explanation of advantages.

*Guns of the Special Forces 2001-2015* is the best book I've read on this subject, and I highly recommend it. I would like to have seen more on Russian and Chinese special ops weapons, but coverage of the weapons used by U.S., British, Australian, Canadian, and other allied special forces units is excellent. I rate this book highly

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enough that it now sits on the small shelf of reference books I keep next to desk where I write.

### GUNS OF THE ELITE FORCES

*Guns of the Elite Forces* by John Walter is actually a paperback reprint of a book from 2005, so it is not as topical as the one that focuses on 2001 to 2015. But it does have some informative sections.

For one thing, it covers weapons developed for clandestine and special operations usage in World War II. As a result, weapons such as the M1 Carbine, suppressed Welrod and High Standard Model B pistols, and StG44 assault rifle receive some coverage to put later developments into context.

There are some interesting historical comments about the MP43/StG44 and the claims that it allowed German troops to break out of the Kholm Pocket on the Eastern Front. Walter shows that too few of the fledgling assault rifle would have been available to have had a major influence on the battle. He also covers some Russian weapons.

As he moves into the post-World War II period, the author shows how the assault rifle influenced modern combat, giving special attention to the AK-47.

On the other hand, Western powers, including airborne and special forces units, opted for full-powered 7.62x51mm battle rifles like the M14, FN FAL, and HK G3. He does a good job of showing that various counter-insurgency wars influenced adoption of lighter caliber assault rifles, such as the M16, while pointing out that the full-sized battle rifle still showed its value in conflicts such as the Falklands War.

He does not neglect the importance of compact optical battle sights, initially with the British L85 and Austrian AUG, but later with almost every combat rifle in the world, and how they have influenced modern combat.

Coverage of the weapons used on counter-terrorist operations is more historical than topical. For example, he discusses how the 9x19mm round and MP5 SMG became the most

widely used weapons in hostage rescue ops, but there is no analysis of the replacement of the 9x19mm SMG by rifle-caliber carbines like the M4 during the War on Terror and the rationale for this evolution. *Guns of the Special Forces 2001-2015* explains that much more effectively.

The bulk of *Guns of the Elite Forces* offers descriptions of the various types of weapons used in military and law enforcement, with some special emphasis on weapons with applicability to special ops (e.g., suppressed and underwater weapons). It is a useful reference book and a quick read.

Both books make nice additions to a tactical weapons reference library. But especially for S.W.A.T. readers, who are more sophisticated about tactical weapons, if you're going to buy only one book, it should be *Guns of the Special Forces 2001-2015*. ◎

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# ***SEMI-AUTO on STEROIDS***

**SRM Arms 1216 Shotgun**





Most fighting shotguns are descendants of hunting shotguns modified for use in a defensive/offensive role. Many, such as the Remington 870 and Mossberg 500/590 series, have served with distinction.

But due to their genealogy, they share the common complaint of minimal ammunition capacity. Even “tactical” shotguns are somewhat limited. For example, the Remington Express Tactical has a capacity of 7+1 and the Mossberg 590 comes in at 8+1.

What if you could have a shotgun built from the ground up as a fighting shotgun, shorter than most while weighing within a few ounces, and with a total capacity of 17 shells? The SRM Arms 1216 makes this a reality.

#### **SRM ARMS 1216**

The SRM Arms 1216 (hereafter referred to simply as the 1216) is a roller-delayed, straight blowback semi-automatic shotgun. The lower receiver is polymer while the upper receiver, bolt group, and barrel are made of steel. While not necessary for routine maintenance, the upper receiver can be detached and is the serial numbered part.

Barrel length is 18½ inches. The muzzle is threaded and comes with a screw-on thread protector. The optional standoff device, as shown in the photos, adds 2½ inches to the length of the barrel.

On top of the receiver is a six-inch Picatinny rail. The handguard has three six-inch rails located at 9, 12 and 3 o’clock. An additional 1½-inch rail section is located forward on the barrel 4½ inches from the muzzle.

A quality rubber recoil pad caps the buttstock. Also located on either side of the stock are recessed sling attachment points. A sling attachment is located at the front of the side rails and is reversible for right- or left-handed use. Both sides of the pistol grip are textured for a sure grasp.

The sling attachment points are narrow by contemporary standards, and many of the wider “tactical” slings will be too wide to use. Turning to my favorite sling manufacturer, Blue Force Gear, I utilized their one-inch Vickers Combat Application Sling for the evaluation.

**BY DENNY HANSEN**

PHOTOS BY STRAIGHT 8 PHOTOGRAPHY

# SEMI-AUTO on STEROIDS



Right side of SRM 1216 with optional standoff device.

The 1216 doesn't come with sights, though any backup iron sights that fit on a Picatinny rail can be used. For the evaluation, I used an Aimpoint Micro T-2 red dot sight. Due to the straight-line design, the Aimpoint indexed perfectly with the high spacer used on carbines.

The test gun came set up for a right-handed shooter, but the bolt release, charging handle, safety selector, and ejection port can be converted for use by a left-hand shooter.

The safety lever is located just above the trigger guard and is easily manipulated by pushing it upward with the trigger finger.

## QUAD TUBE MAGAZINE

What sets the 1216 apart from other fighting shotguns is the revolving magazine. The magazine is approximately

two inches by two inches wide and 13 inches long. It has four integral magazine tubes that hold four shells in each tube. Each tube has its own spring-loaded shell retainer. To unload a tube, pushing inward on the shell retainer allows the shells to be removed.

At the front of the magazine is a round protuberance that matches up with the magazine hanger on the barrel and four slots that index each tube.

To load the magazine into the gun, insert the rear of the magazine into the mag well and push the front of the mag up into the magazine hanger. Rotate the magazine if necessary to make sure it locks in place. To remove the magazine, push in on the front of the release lever located at the front of the magazine hanger.

A manual index lever is located at ei-

ther side on top of the magazine hanger. To rotate the magazine to the next tube, push up on this lever and either push or pull the magazine with your fingers. The magazine can be rotated clockwise or counterclockwise.

During this evaluation, several shooters fired the 1216, and reactions were mixed on the easiest way to rotate the magazine. Personally I found it easier to push up on the magazine with my fingers turning it counterclockwise as viewed from the rear.

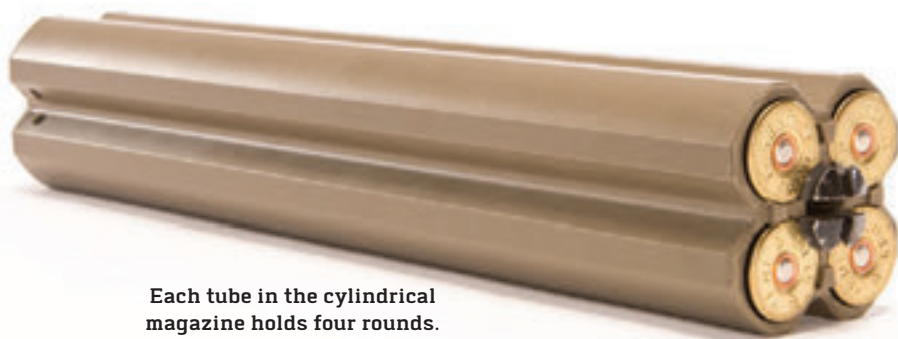
## DISASSEMBLY

Field stripping the 1216 is similar to the takedown of an AR-style rifle. Place the shotgun on safe and remove the magazine. Pull the charging handle and visually and physically verify the chamber is empty, then push the bolt stop and allow the bolt to go forward.

Locate the latch pin at the top rear of the receiver and push it out until it stops. Pivot the stock away from the upper receiver. Grasp the charging handle and pull the bolt carrier to the rear. No further disassembly is necessary or recommended.

## AT THE RANGE

The 1216 operates like any other semi-auto firearm. Insert the magazine, work the charging handle, and you're ready



Each tube in the cylindrical magazine holds four rounds.





**ABOVE:** Though not ambidextrous, safety selector can be set up for either right- or left-handed shooter.

**LEFT:** To accommodate cylindrical magazine, mag well is cavernous.

**BELOW:** Shotgun comes standard with screw-on thread protector.



# SEMI-AUTO *on* STEROIDS

to fire. When the last round in a tube is fired, the bolt stays back. When the mag is rotated to a loaded tube, the bolt goes forward, automatically loading the first shell in that tube.

Some may point out that a round can be dropped into the chamber and the bolt released on other semi-autos for a quick shot. Correct, but that is a *single* round. With the 1216, when the round is chambered, it is backed up by three more in the mag tube.

There was a time when I would pattern numerous brands of buckshot through a shotgun to find the buckshot load a particular shotgun liked. To save

time and ammo, I now go with two proven performers that seem to work great in all shotguns: Federal 00 buckshot with FLITECONTROL® wad and Hornady Critical Defense 00 buckshot with Versatite™ wad.

With these two loads, instead of starting at five yards and working my way back, I normally start at 20 yards—they really do pattern that tightly.

For my purposes, I consider that the shotgun/load has reached its maximum potential when all nine 00 buckshot pellets won't stay inside the "C" zone of an IPSC target—roughly 18 inches high by nine inches wide.

At 25 yards, the Hornady load kept all pellets inside the "A" zone (approximately 11 inches high by six inches wide) and kept them all within the "C" zone out to 35 yards.

All pellets from the Federal were inside the "A" zone at 25 yards and did not drop a pellet outside of the "C" zone until I reached 40 yards, proving the old myth that buckshot opens up at one inch per yard is just that—a myth.

Switching over to slugs, I once again went with Federal and Hornady. The Federal load was their one-ounce TruBall® Rifled Slug. I was curious how

the Hornady Superformance® Shotgun slugs would perform, as they were designed for shotguns with rifled barrels. The Superformance® Shotgun slug is a monolithic solid projectile made from copper alloy (95% copper/5% zinc) and topped with Hornady's exclusive Flex Tip® for uniform expansion even at the low velocities of longer-range impacts.

I went back to 75 yards with the Federal TruBall slug and achieved five-round groups just over six inches fired from braced kneeling.

Three rounds of Hornady Superformance slugs went into about three inches at the same distance but, as mentioned above, since they are designed for rifled barrels, two of the five rounds keyholed from the smooth bore, opening the group up to 6½ inches.

While neither of the slug loads was as precise as a carbine, I didn't expect them to be. Both loads maintained minute-of-bad-guy accuracy.

The 1216 shotgun was fired both with and without the standoff device. A couple of shooters remarked that recoil seemed less with the standoff device attached, as it acted much like a muzzle brake.

While every projectile must be ac-



ABOVE: Pistol grip is textured for a sure grasp.



ABOVE: Magazine release is recessed into magazine hanger. Manual index lever is also visible.



LEFT: SRM 1216 accepts any BUIS that fits on a Picatinny rail.





**ABOVE:** Due to fine threads, both thread protector and standoff device required only moderate tightening to stay in place.

**LEFT:** SRM 1216 hinged open for cleaning. Disassembly is similar to that of an AR-15-type rifle.

counted for, you can put a lot of lead downrange very quickly with the 1216. After a familiarization session, one shooter fired 17 rounds in 12.5 seconds and placed all 153 00 buck pellets into the “A” zone of an IPSC target at 15 yards.

A spare magazine is not included with the 1216 but is available from SRM Arms for \$180.00. I requested and received an extra magazine for this evalu-

ation. There is no dedicated pouch for a spare magazine, so I found the best way to carry it was in a left-side cargo pocket or dump pouch.

With the exception of going into the port with a single round and closing the action, there’s no such thing as a speed reload with a shotgun. After a bit of practice, I could replace the magazine in about six seconds—just a little longer

than it takes to reload a pump shotgun from a SideSaddle—but reloading with 16 shells instead of four or five.

The 1216 experienced no stoppages with 200 rounds of mixed buckshot and slugs.

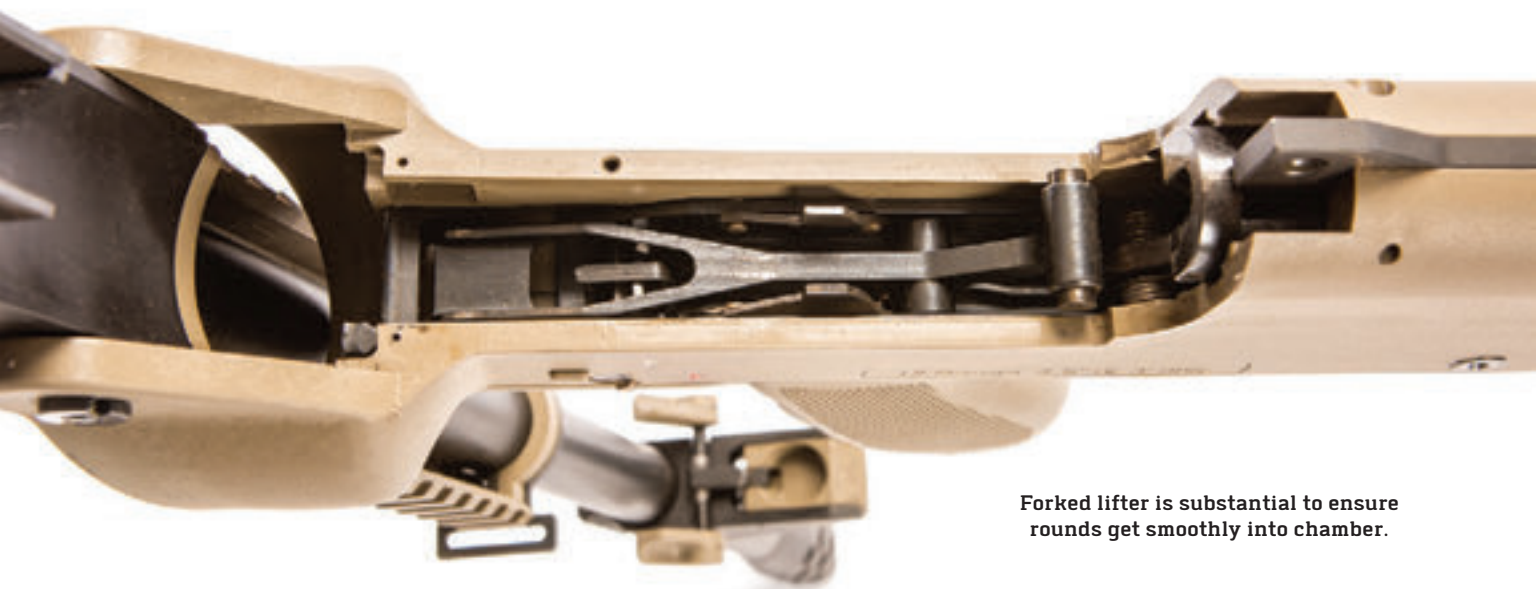
#### VARIANTS

At this time, the 1216 is offered in Black, OD Green and Flat Dark Earth.

## TACTICAL SHOTGUN COMPARISON AT A GLANCE

	SHOTGUN				
	SRM 1216	SAIGA-12	BENELLI M4	REMINGTON 870 EXPRESS TACTICAL	MOSSBERG 500
WEIGHT (pounds)	7.26	7.5	7.5	7.8	6.75
LENGTH (inches)	32.5	45.1	40.0	38.5	38.5
CAPACITY	16+1	5+1	4+1	7+1	5+1
ACTION	Semi-auto, roller delayed	Semi-auto, gas operated	Semi-auto, gas operated	Pump	Pump
MAGAZINE	Detachable	Detachable	Standard tube	Standard tube	Standard tube
COUNTRY OF MANUFACTURE	USA	RUSSIA	ITALY	USA	USA

# SEMI-AUTO *on* STEROIDS



Forked lifter is substantial to ensure rounds get smoothly into chamber.



ABOVE: Manual index lever is located at either side on top of magazine hanger.

LEFT: Pushing the latch pin to the right until it stops allows the upper receiver to hinge open.



Also available is a less-lethal version that uses a special orange-colored bolt and will not fire lethal ammunition. Since the upper receiver is the serial numbered part, I strongly suggest any agency considering the 1216 for less-lethal duty to also purchase the orange stock to readily identify it as a less-lethal gun.

SRM Arms provides a one-year limited warranty on all its shotgun models.

#### SUMMARY

One drawback of the 1216 for some folks will be the cost. Suggested retail price is \$1,799, and the going street price is about \$1,500.

But if you want or need a firearm that's built from the ground up as a fighting shotgun and has more than twice the ammunition capacity as any other shotgun, the SRM Arms 1216 deserves a close look. ©

ABOVE: Left side of SRM 1216 set up as evaluated and equipped with Aimpoint Micro T-2 red dot sight.

## SOURCES

### SRM ARMS

(208) 887-9395  
www.srmarms.com

### AIMPOINT INC.

(703) 263-9795  
www.aimpoint.com

### BLUE FORCE GEAR, INC.

(877) 430-2583  
www.blueforcegear.com

### FEDERAL PREMIUM AMMUNITION

(800) 379-1732  
www.federalpremium.com

### HORNADY MFG. CO.

(800) 338-3220  
www.hornady.com

"Undressed" SRM 1216 with magazine removed shows relative position of magazine to mag well and hanger.

Each tube has its own spring-loaded shell retainer.

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- ▶ Oversized ejection port and extended magazine release.
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- ▶ Lightweight aluminum skeletonized trigger features an adjustable over-travel stop.
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- ▶ Genuine Novak® LoMount Carry 3-dot sight system.
- ▶ Oversized beavertail grip safety.
- ▶ Extended thumb safety and slide stop lever.
- ▶ Integral plunger tube.
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- ▶ Visual inspection port.
- ▶ Swaged link pin, titanium firing pin, two nine-round stainless steel magazines, and bushing wrench.



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## SOURCES

### STURM, RUGER & CO.

(203) 259-7843  
[www.ruger.com](http://www.ruger.com)

### BLACK HILLS AMMUNITION

(605) 348-5150  
[www.black-hills.com](http://www.black-hills.com)

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[www.gunsite.com](http://www.gunsite.com)



# MALFUNCTION *reduction*

## Stay in the Fight! Part 1

By Patrick A. Rogers

**A malfunction  
is a stoppage  
in the cycle of  
operations.**

**B**efore we delve into this maelstrom, a definition is necessary. “Jam” is something you put on your English muffin. It is often used on some erronet forums by people who spend way too much time not interacting directly with other human beings. It is too broad in definition to be useful, and we’ll not use it at all.

We also do not use the military acronym SPORTS (see below), nor do we follow what is written in FM 3-22.9. It is flawed and has been for years, likely because it is low priority and would not look good on a PowerPoint presentation.

Neither do we use the Forward Assist. Never. We have been doing this for a few days, and have never, ever observed a situation where pushing on that useless appendage would have made anything better.

What follows is how we teach it. It is not the only way—but it is “a” way. There are many ways to reduce a malfunction, some of which may be better suited to use on manicured flat ranges when cottonball clouds float in an impossibly blue sky, than what are useful at night, when you are cold, hungry and scared, and people are shooting at you. Many variations on the theme also exist. I lay no claim to any of this. I learned from people a lot smarter than I, and I merely use what I consider to be useful.

### THE MALFUNCTION: A BETTER DEFINITION

A malfunction is a stoppage in the cycle of operations. This stoppage can take many different paths, and we codify each one and break them into two broad categories: those that can be reduced with Immediate Action and those requiring Remedial Action.

Immediate Action is non-diagnostic—*immediate* being the operative word. Remedial Action requires additional effort, intended to correct or improve deficient skills in a specific subject. Breaking malfunctions down into types allows us to reduce the malfunction efficiently.

We have observed that most people, when faced with a malfunction, pull the magazine out, look at the magazine, look at the gun, and then reinsert the mag into the well, apparently hoping to clear the problem by osmosis. You need to do better than that if you want to continue the fight.

Inefficient clearance techniques can make a bad day much worse. If you aspire to mediocrity, drive on with that technique and include hope.

Understand also that the Standard Operating Procedure (SOP) for certain people





**Immediate Action: trigger finger straight. With your support hand, grasp the magazine and push up and pull down. Maintain a master grip with your firing hand.**

armed with a pistol in addition to a carbine is that within a certain distance, Immediate Action is to go to the blaster. Ignoring the problem with the carbine and deploying the pistol puts a loaded, working gun in your hand. When your immediate problem is resolved, you can clear your carbine.

The information below is narrowly directed toward the M16 system. It may or may not be valid for other systems, and it is for information purposes only. You cannot learn how to do something only by reading. Seek training from those qualified to do so.

#### **TYPE 1 MALFUNCTION: FAILURE TO FIRE**

There are multiple causes of this, but in the majority of incidents it is operator error—failure to insert the magazine or failure to chamber a round. Other causes are primarily related to ammunition. These may include no primers, primers inserted sideways or upside down, no flash hole, or other issues.

If you press the trigger and get a click or a mushy trigger, execute Immediate Action (IA), which is:

1. Finger straight.
2. Push/pull.
3. Rack and roll.
4. Get your head back in the fight.

Breaking it down into component parts, it looks like this: Trigger finger *straight*. Maintain a master firing grip with your strong-side hand.

With your support hand, push/pull on the magazine. Do not tap—it doesn't accomplish much and fails to verify that the magazine is in fact seated.

3A. Roll the gun onto the right side—that is, so the ejection port is down.

3B. With your support-side hand, rack the action. You can use the knife edge of your hand, or pinch the charging handle (CH) between your thumb and forefinger. Pull the CH completely to the rear and release it.

Get your head back in the fight.

**Roll the carbine onto the right side and allow gravity to work for you. Pull the charging handle all the way to the rear.**





Release the charging handle and let the bolt go home under its own power.

#### TYPE 2 MALFUNCTION: FAILURE TO EJECT

This is the classic stovepipe malfunction. The case is extracted but does not eject. It winds up stuck between the bolt face and the front of the ejection port. The cause is generally a weak extractor spring or bad extractor, though other issues may contribute to it.

A Type 2 Malfunction is reduced exactly like a Type 1—with Immediate Action.

1. Finger straight.
2. Push/pull.
3. Rack and roll.
4. Get your head back in the fight.

The reason for rolling the gun on the *right* side now becomes apparent. The stovepipe is identified by the case sticking out of the side of the ejection port. Of course, if you are doing IA (remember, non-diagnostic), you are not looking but responding to specific stimuli. In this case, the stimulus is a mushy trigger (the bolt is not in battery).

Trigger finger *straight*. Maintain a master firing grip with your strong-side hand.

With your support hand, push/pull on the magazine.

3A. Roll the gun onto the right side. If you have a stovepipe, this will place the partially ejected case closer to the deck and allow gravity to take over once you go to the next step.

3B. Work the CH as described above. When you pull back on the CH, the bolt moves rearward and releases tension on the trapped case. If the ejection port is down, it should fall out.

The key for IA is to remember that the ejection port is fac-

ing down. If it is facing up, proceed immediately to a Type 3 Malfunction. See Remedial Action for more excitement.

Awhile back, while working with a maritime unit, I watched a shooter run the IA Drills by turning the gun in-board, so the ejection port was up. It looked very cool, and he was satisfied by that (along with some other techniques that showed a lack of situational awareness).

Eventually the god of payback smiled upon the range, and said shooter suffered a Type 2. He executed his IA, replete with ejection port *up*, and what we warned him about occurred. That case went right back into the upper receiver and caused a Type 3 Malfunction—a Double Feed.

I use this as an example of what not to do in class. Once during a malfunction clearance drill, I watched a student rotate the carbine with the ejection port up. I pointed this out to him, but he chose to ignore it. My karma was good and his bad, as he proceeded to the next drill and turned a Type 1 into a Type 3.

We had a “very special training moment”...

Immediate Action is exactly that—immediate. We are not looking at the gun to diagnose an issue. We are reacting to certain stimuli. Looking is nice and has its place, but fighting does not always take place across manicured lawns, in bright sunshine and among trees that give beer.

Other things going on have priority for your vision, maintaining situational awareness being at the top of the list. IA will cure probably 90% of your problems and doesn’t require looking at the gun.



### TYPE 3 MALFUNCTION: DOUBLE FEED

A Type 3 Malfunction—a double feed—requires Remedial Action to reduce. There are two types of double feeds: one that has two live rounds trying to get in the chamber, and one that has a live round and an empty case. Both are handled in the same way.

Initiate your Immediate Action Drill:

1. Finger straight.
2. Push/pull.
3. Rack and roll.
4. Get your head back in the fight.

(Understand that how we continue will be predicated on our tactical situation—that is, alone, part of a team, etc. If you are alone and do not have a secondary weapon, you might consider other tactical options, to include departing the area forthwith. If you are part of a team, proceed according to your SOP. This may include seeking cover while simultaneously advising your teammates that you are temporarily out of the fight and they need to cover your sector of responsibility.)

5. Seek cover/grab a knee—there is no future standing erect in the middle of a fight with a nonfunctioning weapon.

6. Lock the bolt to the rear to remove pressure on the magazine spring follower—it makes removing the mag a lot easier. Push the charging handle forward to mitigate damage to the charging handle after time.

7. Remove the magazine. Unless it is your only mag, discard it.

8. Rack the bolt three times—all the way back each time. This may clear out the double feed. However, it may not.

9. Lock the bolt to the rear. Insert the fingers of your support hand into the mag well and feel for any rounds still in the upper receiver.

9A. Lock the bolt to the rear again.

9B. Take your support-side hand, with the thumb toward your nose. You will get more reach with your fingers doing it this way. Insert the fingers of the support-side hand into the mag well. If you feel rounds therein, work the lower one and it should fall out.

*(As an alternative, some insert their fingers first and then rack three times. The theory is that by doing it this way, you do not risk further forcing cartridges together. That may be so, but the action spring exerts only so much pressure, and this way of doing it may be more feel good than reality—or not.)*

*What we have seen is this. When setting up a Type 3 Malfunction Drill, it may clear by racking the action approximately 60% of the time. When a double feed occurs during the firing cycle, it may clear by racking the action approximately 85% of the time. We obviously prefer the first way, or we wouldn't teach it.)*

10. Insert a new magazine with push/pull, chamber a round, and get back in the fight.

You can take shortcuts and skip a step here and there, but you will only wind up with a Type 3 on Type 3, with a tad more aggravation thrown in.



Double feed: two live rounds attempting to enter the chamber at the same time. Not a good thing.



**LEFT: Remedial Action:**  
Insert the fingers of the support-side hand into the mag well to feel for rounds still inside the upper receiver. Pointing your thumb toward your body may give you more "reach." Maintain a firing grip.

### WHY WE DON'T PLAY SPORTS

As stated at the beginning, we do *not* use the military clearance drill SPORTS (slap, pull, observe, release, tap, squeeze), as it is ill-defined, offers no solutions to existing stoppages and, like much that the military does with weapons, is more suited to the square range than gunfighting. Let's look at SPORTS and identify what it is and why we don't use it.

**SLAP:** Slap the bottom of the magazine (generally three times). Slapping the magazine accomplishes nothing worthwhile. It certainly does not ensure the magazine is seated—only push/pull does that. What slapping *can* do is cause more problems. If the bolt is locked to the rear and the magazine feed lips are worn, you may wind up with a volcano of live rounds in the upper receiver.

**PULL:** Pull the charging handle to the rear. No problem there, but they insist on removing the strong hand from your firing grip and running the charging handle with that hand. Nonsense! You need to maintain a master grip. This is about *fighting*, not square range *training*. It goes no farther than pull, and you are to hold the CH to the rear while you ...

**OBSERVE:** Observe for an empty case or cartridge. Terrific. But suppose your malfunction is that *you* failed to properly seat the magazine (see Slap above)? What will you see then? How about this: It's night. It's raining. 81mm illumination has ruined your night vision. Now what? Another issue is that if you observe, you are rotating the carbine so the ejection port is *up*, and gravity will work against you—not a good thing. Using a drill that requires seeing what is going on is an epic failure.

**RELEASE:** Release the charging handle. No problem with this.



Unless that's your last magazine lying on the ground, resist the urge to put it back in the gun. In almost all cases of double feed with two live rounds, the magazine is the problem. Use a spare magazine to properly load the gun, and get your head back in the fight.



TAP: The forward assist. As stated above, we don't use the forward assist—*ever*. It accomplishes nothing except making a bad thing worse.

SQUEEZE: Squeeze what? The trigger? OK, we use the term "press" because it more accurately describes what we do, but semantics aside, why are we touching the trigger as an automatic response? How about maintaining situational awareness and getting your head back in the fight?

Having a malfunction during a gunfight can make a bad day significantly worse. You can reduce that malfunction and continue the fight, or you can stand in place, befuddled, and be crushed like a mudbug in the ooze of your own blood and bodily fluids.

Your choice.

The above covers the three most commonly encountered malfunctions. In the next issue, we'll take a look at some less common—but more perplexing—malfunctions. ©

[This article first appeared in the December 2008 issue of S.W.A.T.]

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# Wheelgun WISDOM

By Kevin McPherson

## Running Double-Action Revolvers

PHOTOS BY MARK MITCHELL



Relief cut on cylinder stop notch forms an "arrow" that points in the direction the cylinder rotates. Left to right: Ruger Speed Six and S&W 547 turn counterclockwise, while Colt Python's cylinder rotates clockwise.



Recently I had the privilege of instructing the “revolver day” of a New Mexico Law Enforcement Academy’s Firearms Instructor Course. Fourteen cops were in the class, and experience ranged from a few years to one gent with 27 years in the bag.

None of them had carried a revolver as a duty gun. A couple carried J-Frames as backups. Some had recreational experience with revolvers, mostly as kids. Several had never fired a revolver. The general consensus of the group was that revolvers worked pretty well back in the day, but their ship had sailed.

This struck me as odd coming from commissioned officers. In fairness, my generation was the last of many to carry revolvers as the norm.

#### REVOLVERS FOR POLICE AND MILITARY

My academy class in 1988 graduated 36 officers from around the state. Only six of those officers carried semi-automatic pistols. But in the months after I graduated, cops in New Mexico transitioned to semi-autos in droves.

By then, the Glock 17 had been around long enough to earn the trust of the law enforcement market. The Glock was a primary catalyst for the switch—it proved that semi-autos could be as simple to run and as reliable as revolvers. Glocks and the other striker-fired pistols that followed are

solid sidearms for law enforcement use.

Cops of today can be forgiven for a lack of familiarity with revolvers, but they shouldn’t automatically relegate them to antiquity. Revolvers served very well for most of the 20th century because of their reliability and simplicity. These virtues are no less important today.

When SEAL Team 6 was formed in 1980, the first handgun issued to team members was the S&W Model 66 .357 Magnum revolver. The stainless revolvers were selected for rust resistance in the environment that they would be used. The SEALs fired thousands of rounds per week and became fiercely proficient. SEALs retained revolvers in their kit into the 1990s, trading the 66s for the stouter L-Frame 686. I wouldn’t be surprised to hear that SEAL teams still use revolvers.

The SEALs’ deployment of revolvers may be mission specific, but there is wisdom in maintaining them in inventory. The ability of a revolver to quickly drain water when exiting the ocean is significant. So is the revolver’s resistance to silt, sand, and mud. The simple design of S&W revolvers proved dependable enough for the Navy’s elite warriors to carry into rough country. They train hard and with purpose. Revolvers are as effective as any pistol in their hands.

#### EFFICIENT OPERATION OF THE REVOLVER

Revolvers are certainly still capable of martial duties—they just need to be operated in the most efficient way possible.



Lawmen of old kept the peace with revolvers like these N-Frame Smith & Wesson .357 Magnums. Four-inch Model 27 (left) and ivory-stocked 3½-inch Pre Model 27 are still up to that task.

Mastering two trigger pulls on a DA revolver like you have to on a conventional DA semi-auto is unnecessary if you always shoot the revolver double-action. As a defensive weapon, there is no reason to thumb cock the hammer and shoot from single-action mode.

With practice comes the realization that single-action fire is an unnecessary crutch—even at long range. Cocked revolvers, not fired, need to be de-cocked. A simple task when you are relaxing in your garage, but it can be a little trickier when your heart is racing at 190 bpm and your fingers are gloved, wet, frozen, or injured.

The “secret” to running the trigger on a fighting revolver can be extracted from any lesson on the marksmanship fundamental of trigger control: smooth steady pressure straight to the rear.

Once you start pressing, keep the hammer moving constantly rearward until the shot breaks. Release the trigger all the way (to its normal resting position) without losing contact and repeat as needed.

It’s a little weird if you’re used to the short trigger reset of a striker-fired pistol or a 1911. Shooters familiar with semi-autos but new to revolvers tend to “short stroke” the trigger reset. Doing so disallows a new chamber from advancing in line with the bore.

The trigger pull on modern double-action revolvers may seem oppressively heavy and encourages novices to either thumb cock the revolver and fire single-action or switch to an auto. Yes, the pull on a new S&W revolver is heavier than

the average Glock, and it takes some getting used to. The way to get used to it is to do it.

### DRY FIRE

A good rule when buying a new centerfire revolver is to dry fire it a thousand times. Dry fire “marries” the action parts and helps break them in. The trigger pull doesn’t need to be excessively light as long as it feels smooth.

Legendary speed shooter Ed McGivern made a statement in his classic 1930s *Book of Fast and Fancy Revolver Shooting* that summed things up nicely. “It is usually the case with double-action revolvers that the more they are operated by the double-action method and the more care and attention they receive, the smoother the actions become and the better they operate.”

That’s the essential beauty of a double-action revolver. Dry fire the crap out of it and it gets real smooth. All that dry fire used to hone the action also strengthens the muscles operating your trigger finger and trains the feel of that smooth constant press.

“Staging” the trigger is a technique better left on the target range. Staging consists of quickly pulling the trigger to the point of final friction and then establishing a sight picture. This leaves the shooter with a short distance for the trigger to travel before ignition, but complicates a simple system.

The shooter has to know the gun well to stage without the occasional mess up. The “feel” of staging the trigger can vary from one chamber to the next in the same gun. Improper



First handgun carried by SEAL Team Six was S&W Model 66 .357 Magnum. Revolvers hold a place in SEAL Teams’ inventories because of their dependability in harsh maritime environments.





Like pump shotguns, revolvers are very effective defensive weapons for those willing to practice and carry plenty of spare ammunition. Remington 870 and S&W Model 29 are good examples of both weapon platforms.

staging typically results in an unintentional discharge. Do *not* try to make your double-action pull feel like a single-action by staging the trigger.

It's true that the long, heavy trigger pulls of revolvers are more resistant to negligent discharges than most semi-autos if a finger is on the trigger when it shouldn't be. That fact in no way justifies getting a head start on the trigger press before your sights are on target. This practice violates basic sacred safety rules that apply to all who carry firearms.

Present the gun, acquire sights to the degree required, and press. Your brain is capable of making minor corrections in sight alignment/picture as the trigger travels.

Hollywood provides a flawed training manual for revolvers. Avoid it at all costs. I am referring to the abominable practice of flipping the cylinder in and out of the gun like action heroes do. George Clooney has gun wranglers to repair the damage his shenanigans cause—you likely do not.

The "Hollywood flip" will beat the yoke of your revolver out of alignment in fairly short order. The heavier the cylinder, the more quickly this will occur. *Always* support the cylinder all the way out to the fully open position and all the way in to the closed/locked position.

#### **RUNNING THE REVOLVER**

Several methods work for running a revolver. I trust the late 1980s cop training on the subject (sometimes called the Universal Method).

A right-handed shooter lays the revolver on its right side in the palm of the left hand as the cylinder release is acti-

vated with the right thumb. The left middle and ring fingers push the cylinder out and join the left thumb to lock it fully open. The left index finger and pinky wrap around and grip the frame on either side of the cylinder window. Left-handed shooters should reach around the back of the frame with their left thumb to push the thumb piece. The right thumb pushes the cylinder open and joins the right index and middle fingers to lock the cylinder fully open.

Counterintuitive to semi-auto training, the shooting hand loads the gun. The support hand, typically being a shade less dexterous, only has to hold the gun and lock the cylinder fully open. Loading a revolver is a somewhat busier task than sticking a magazine into the magazine well of an empty pistol. It makes sense to use your strong hand for this purpose.

Working the extractor rod is a function best performed by striking it with the open palm of the shooting hand. The muzzle should be straight up and the strike should come straight down. If you hit the extractor rod from an angle, you may bend it and cause binding in the rotation of the cylinder. This is the most "bulletproof" method of emptying the revolver in an emergency reload. It gets spent cases the heck out of the gun.

Granted, it's a tick slower than using the support thumb (or index finger for lefties) to press the extractor rod while the strong hand fetches fresh ammo. But your support thumb may not have the strength to clear a swelled or split case that can lodge in a chamber and tie up your gun in an empty and quite useless condition.

Murphy dreams about splitting an empty case for you when you're firing full-power ammunition in a life-or-death situation.

Additionally, using the support thumb is much more likely to gift you with a failure-to-extract condition. If you don't execute it perfectly, the empties may hang around and give a case rim the chance to lodge underneath the extractor star.

I've caused a few of these debilitating malfunctions in matches trying to "game" it by using my left thumb to shuck empties. I have never had a case hang up using the palm method.

After the gun is emptied, the support hand rotates the gun as close to vertical (muzzle down) as possible, while the strong hand seeks fresh ammunition. Keeping the gun vertical allows gravity to assist the rounds dropping fully into the cylinder.



**ABOVE:** To properly open cylinder, lay revolver in your support hand.



**LEFT:** Press cylinder release with your shooting thumb and push cylinder out with middle and ring fingers of your support hand. Support-hand index finger and pinky secure the gun.

**BELOW:** Support fingers guide cylinder fully open and meet thumb to lock cylinder open so shooting hand can load or unload the gun.

## RELOADS

Speedloaders or full-moon clips are the quickest way to reload an empty revolver. Carrying a speedloader takes about as much room as carrying an extra cylinder in your pocket. A lot of folks don't carry them with a concealed revolver for that reason.

Speed strips and 2X2 pouches are much flatter and conceal better. Even if you carry a speedloader, it's a good idea to carry strips or a pouch, because they let you top off the revolver if you fire and partially empty it. If all you have are speedloaders or if the ammo in the cylinder is moon clipped, you'll be mandated to dump live ammunition on the deck to refill the gun to capacity. Speed strips or a pouch will prevent this and are infinitely quicker than trying to load loose rounds from a pocket.







**Most reliable way to clear empty cases is to strike extractor rod straight down with palm of shooting hand. This method provides more force than using thumb or index finger.**

It pays to know which way your cylinder rotates when you're empty loading from a pouch or strip. S&Ws and Rugers rotate counterclockwise, while Colts rotate clockwise. The cylinder stop notch near the rear of the cylinder has a relief cut that forms an arrow pointing in the direction the cylinder turns if you forget.

With the cylinder fully open, load two rounds at a time into the chambers at 12 and 10 o'clock. As you reach for the next two or peel off the strip, rotate the cylinder clockwise 1/3 turn (S&W). This orients the loaded rounds on the correct side of the forcing cone/barrel if you have to shut the gun and fire during the reload. Otherwise, you'll click on



**It's wise to carry speed strips or 2X2 pouch in addition to speedloaders, as they permit topping off a partially emptied revolver without squandering live rounds. Nothing new to see here, just old stuff that still works really well.**

two to four empty chambers prior to firing, wasting time and likely slapping the trigger frantically praying for a bang.

This technique only works well if your fingers are long enough to keep the cylinder fully locked open. If you have short fingers, turning the cylinder counterclockwise prevents it from unintentionally closing as you load.

A tactical reload may be viewed as nearly an administrative function with an autoloader, but it's more important with a revolver because of its limited capacity. If you shoot it at all, you should think about reloading. Like pump shotguns, loading what you shoot is a good rule. With both systems, carrying spare ammo is mandatory and reloading skill is critical.

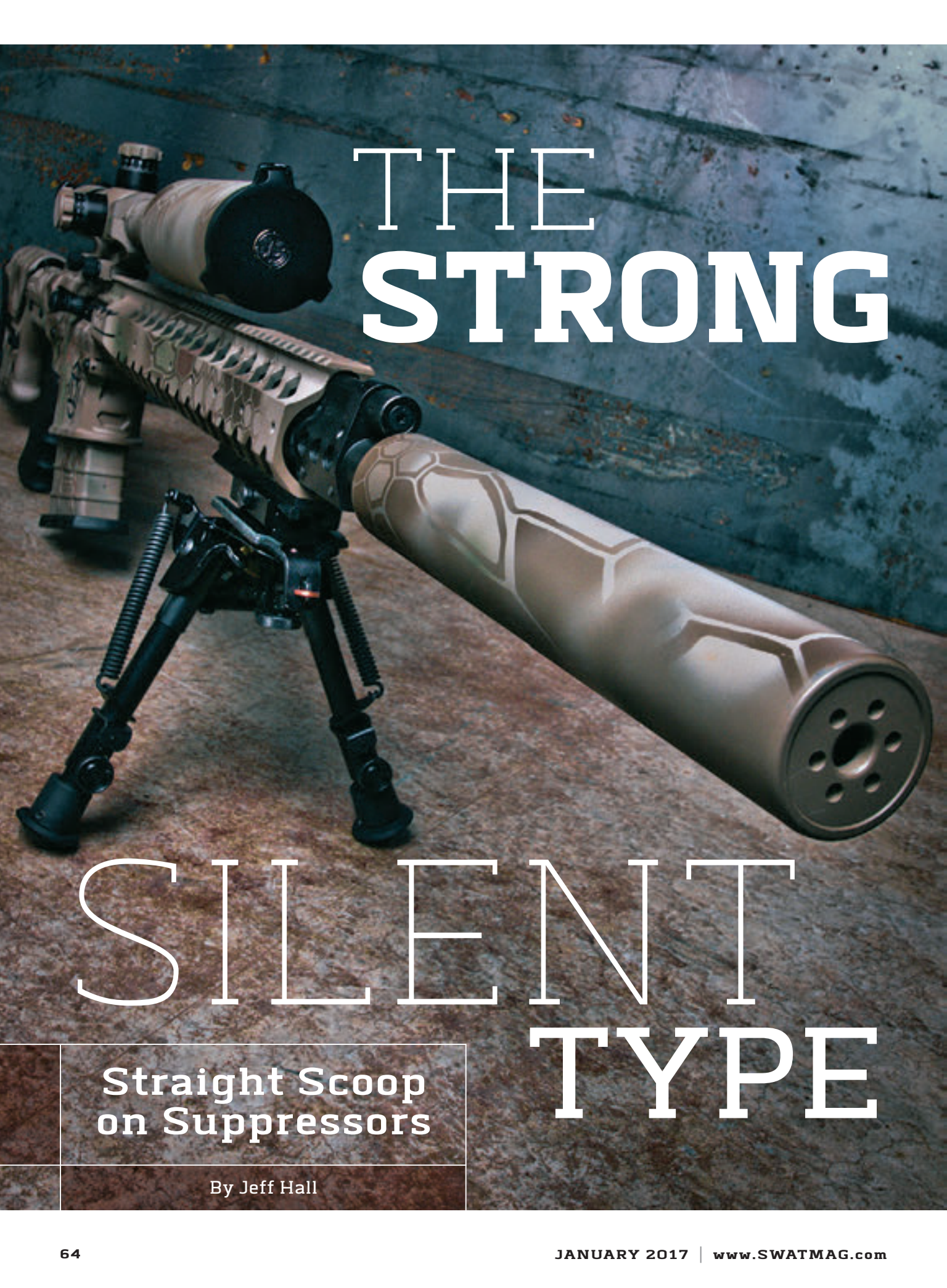
Pump guns and revolvers aren't harder to operate than semi-autos, just different. Pump shotguns are viciously effective if you're willing to become proficient with them. Such is the case with revolvers, and they are as viable now as they were back in the day. ☺

*Kevin McPherson served as a police officer in New Mexico for 23½ years, the last 19½ with the New Mexico State Police. There he worked in the uniform bureau and narcotics enforcement section and did two tours in the NMSP Training Bureau, retiring as a Sergeant in 2011. Kevin ran the firearms program and was the chief armorer for NMSP for 13 years and served as a member of the NMSP Tactical Team.*



**Shooting hand loads the gun. A 2X2 pouch allows easy loading of two rounds at a time. Cartridges should be loaded into chambers at 10 and 12 o'clock. While shooting hand accesses two more rounds from pouch, support hand rotates cylinder to index loaded rounds for immediate firing if needed.**





# THE STRONG

# SILENT TYPE

**Straight Scoop  
on Suppressors**

By Jeff Hall



# Silencer: A device designed to muffle the report of a firearm.



Suppressors, or silencers, also colloquially known as cans, have been around since the late 1800s. The first patented one came from Maxim in 1909. At the same time, Maxim also developed the muffler for gasoline engines—they share the same principles.

The hot gas leaving the muzzle is cooled and redirected through a series of baffles before hitting the cooler air outside the suppressor.

The theory is simple, but building a quality, long-lasting “can” takes a lot of work.

## FACTS vs OPINIONS

I’ve used suppressors many times over the years, and own several, but don’t really know much about them. Some say they change the point of impact, some say they don’t. Do they increase velocity or decrease it? Wet or dry? They beat the gun to death, they burn out if you shoot them too much, and they have to be cleaned regularly or they won’t work. True or false?

One bad thing about the Infernalnet is that everyone has opinions but might lack knowledge when they hit the send button. I decided to do some research and share what I found with *S.W.A.T.* readers, since many of you may have the same questions.

A gun makes noise from three sources: muzzle flash, sonic boom (ballistic crack), and mechanical noise, like the slide functioning. The first is controlled by cooling the gas leaving the muzzle, the second by subsonic ammunition, and the third by limiting the moving parts.

High Standard and Smith & Wesson both made auto-pistols that had a small lever to lock the slide. One example that would handle all three problems is a short bolt-action rifle in .45 ACP with a suppressor screwed to the muzzle.

## WHY USE A SUPPRESSOR?

Why would any person, whether police officer, private citizen, or soldier, need a suppressor? The first reason is to make the gun hearing safe. I hang around with a bunch of Vietnam combat vets, and “what” is a word I often hear. Gunfire and explosions with unprotected ears lead very quickly to permanent hearing loss. A police department I know sold the concept of suppressors by asking for “OSHA approved sound-reduction devices.” Works for me.

Another reason is stealth. The position of a shooter can

be disclosed by the muzzle flash, or maybe a dust cloud, and by the loud report. If the world ever gets worse, survival poaching would be easier with a suppressor.

Limiting muzzle flash can be very important when working in any explosive atmosphere. From oil-field security to raiding a meth lab, a gunshot in vapor-filled air can really get sporty.

All of these things can be mitigated by a quality suppressor.

Suppressors are NFA devices, like machine guns, meaning they have to be purchased from a Class III dealer and a tax of \$200 must be paid. Any competent machinist can make one, but *do not* violate state and federal laws by getting a non-registered suppressor! It is a felony offense punishable by ten years in a federal penitentiary. It’s not worth it.

Suppressors are readily available for almost any man-portable weapon, from .22 LR pistols to .300 Win Mag rifles to 240B machine guns. They come in all sizes, colors, and materials, and cost roughly \$500 to \$1,500.



**RIGHT:** Gemtech QD mount and suppressor.

**OPPOSITE:** Custom finish ties it all together.

## GEMTECH

While teaching in Boise, Idaho, I arranged a visit to Gemtech, which has been in business for over 20 years. It was founded by two guys who had owned another suppressor company. They and their engineers have decades of experience, having built, tested, and destroyed hundreds of models. Gemtech is a major player in the quiet guns world.

Many Gemtech employees are former paratroopers, Rangers, and SF folks, like Alexander Crown (AC), who took care of me when I got there. We loaded guns, suppressors and ammo into AC's truck and headed to the range. I quizzed AC along the way. Casey Foster, the Special Projects guy, came along to keep us both honest.

With a suppressor attached, velocity rarely decreases but usually increases 10 to 30 fps in center-fire rifles. This is a result of the gas being contained in the can for additional time. Accuracy is not adversely affected, and some shooters report better accuracy with a silencer attached.

Mounting a suppressor is done either by threading it onto the barrel, often by removing the flash hider, or by a quick-

detach system. Both men prefer the thread method because it is more positive. The back of the suppressor butts against the shoulder of the barrel, allowing a very clean interface. Do *not* use a crush washer! AC and Casey like to add a drop or two of red Loctite, tighten the can onto the gun, and leave it.

If you need to thread a heavy barrel, go to someone who specializes in the process. I used Tornado Technologies in Oregon and am very happy with the result.

The QD mount allows the can to be easily moved from one rifle to another. I have two LaRue .308 ARs: the OBR and the PredatAR. With QD mounts on each rifle, the Quicksand suppressor permits a quick transition between the guns. I can also put a 5.56 mount on my other PredatAR and use the Quicksand on it. More on this later.

## CONSIDERATIONS WITH SUPPRESSORS

The point of impact may shift when you change from suppressed to unsuppressed fire. Gemtech states that a three-to four-inch shift is expected and accepted. More shift than that may indicate an improper mount of the suppressor.

RIGHT: GMT 5.56 QM suppressor mounted on AR QD mount.

BELOW: Gemtech quick-detachable AR mount.







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4GTN00



GM-45 with Gemtech's new baffle system. This can will work on both .45 ACP and 9mm pistols.



GMT in .300 Blackout.

AC attributes this primarily to a change in barrel harmonics, as you are adding a significant amount of weight to the end of the barrel. A heavy-barreled rifle like my Remington 700 may show less—my POI shifts only one-half inch on that gun.

Continued use of a suppressor *may* beat up the gun a little. More gas is kept in the system, and it may slightly increase the cyclic rate. You may find the gun is dirtier, and the gas rings and buffer springs wear out faster. The simple fix is to add a heavier buffer and spring in any AR system, which should create a more harmonious outcome.

Some companies, like LaRue Tactical, offer models with a gas block that allows a switch from suppressed to non-suppressed without tools. If you plan to switch back and forth a lot, this may be a good choice.

It's tough to burn out a modern suppressor. Gemtech figures the life of one of their suppressors is *three* barrel lives. Gemtech got back one suppressor that had 250,000 rounds through an Uzi, and it still worked. Most of us will never shoot out one barrel, so the can will last as long as you will.

The suppressor can get *hot*! A 5.56 may increase the internal temperature seven degrees *per round*, but it won't burn out.

## MAINTENANCE

Most suppressors don't require a lot of maintenance—you'll never need to clean a 5.56. Center-fire rifles mostly use fast, jacketed bullets, so there is little fouling. But keep the QD mount clean. Carbon builds up from the blow-back and hardens, which might cause a less-than-optimal mating when the suppressor is mounted. After firing, scrub it down with solvent and a brush like you would the gun.

Pistol cans, if they disassemble, should be taken apart and brushed with CLP after 500 rounds. Lots of shooters use lead reloads. Knock out the unburned powder and lead fouling so the baffles don't lock up.

If it doesn't come apart, soak it in a one-to-one solution of transmission fluid and mineral spirits, then blow it out with air. If you don't have a compressor, use canned air like you use on your computer keyboard.

The piston at the rear of the suppressor is a moving part, and Gemtech supplies white lithium grease with your purchase. Take it apart and clean and lube the spring and buffer with the lithium grease.

The new Gemtech G-Core gas direction system is available in several models, like the GM-45, and eliminates most maintenance issues.

## WET OR DRY?

The addition of liquid makes the first shot or two quieter before it burns off. A spoon or two of water works, but Gemtech prefers a little Vaseline on the baffles. The heat vaporizes the liquid and removes air from the inside of the suppressor, but it burns off after a round or two. If the relative sound of the first round is critical, a little moisture can help.

A quality suppressor of .30 caliber can be used on smaller calibers, but not the other way around. Your .308 can will work on .270, 6.8, .243, 5.56, and down to .22LR. If you use your 5.56 on a .22, shoot 20 to 30 rounds of .223 afterward to blow out the crap.





GM-45 mounted on Kimber 1911.

If you have a sound meter, you may record more sound if a .223 is shot out of a .308, or a 9mm out of a .45 suppressor, due to the size of the exit hole, but my ear can't tell a bit of difference.

I was able to shoot a dozen platforms and a dozen suppressors, and was particularly impressed with the QD system. It has a very positive lock system that comes back to the same point each time, ensuring a clear path for the bullet. I've decided to buy a Quicksand model so I can quiet down the three LaRues.

### SHOOTING SUPPRESSED

So, you buy a suppressor and wait the seven or eight months it takes to get your tax stamp. You take your new device to the range, unscrew the flash hider, and screw the suppressor onto the muzzle. Before you crank off a round, take out the bolt group and look down the bore from the rear.

You should see a round hole—if you see anything else, like a half-moon shape, you are not properly aligned, so don't shoot. Dismount the suppressor and try again, or you'll run the risk of a baffle strike, which can harm you and the can. Do the same if you use a QD mount.

I was impressed with the quality and sound reduction of the Gemtech suppressors, which are the only things they build. I was also grateful that Gemtech staff took time out of

their busy day to answer my questions, for myself and for S.W.A.T. readers. The guys I worked with were quick to point out there are several quality suppressor manufacturers, but they have great faith in Gemtech's products.

After seeing how they are built and how they work, I do, too. ☺

*Jeff Hall is an Army veteran, retired Alaska State Trooper lieutenant, and NRA staff instructor. He also teaches for several state POST agencies. He is a martial arts grandmaster and founder of Hojutsu-Ryu, the martial art of shooting. He can be reached at [soke@hojutsu.com](mailto:soke@hojutsu.com).*

### SOURCES

#### GEMTECH

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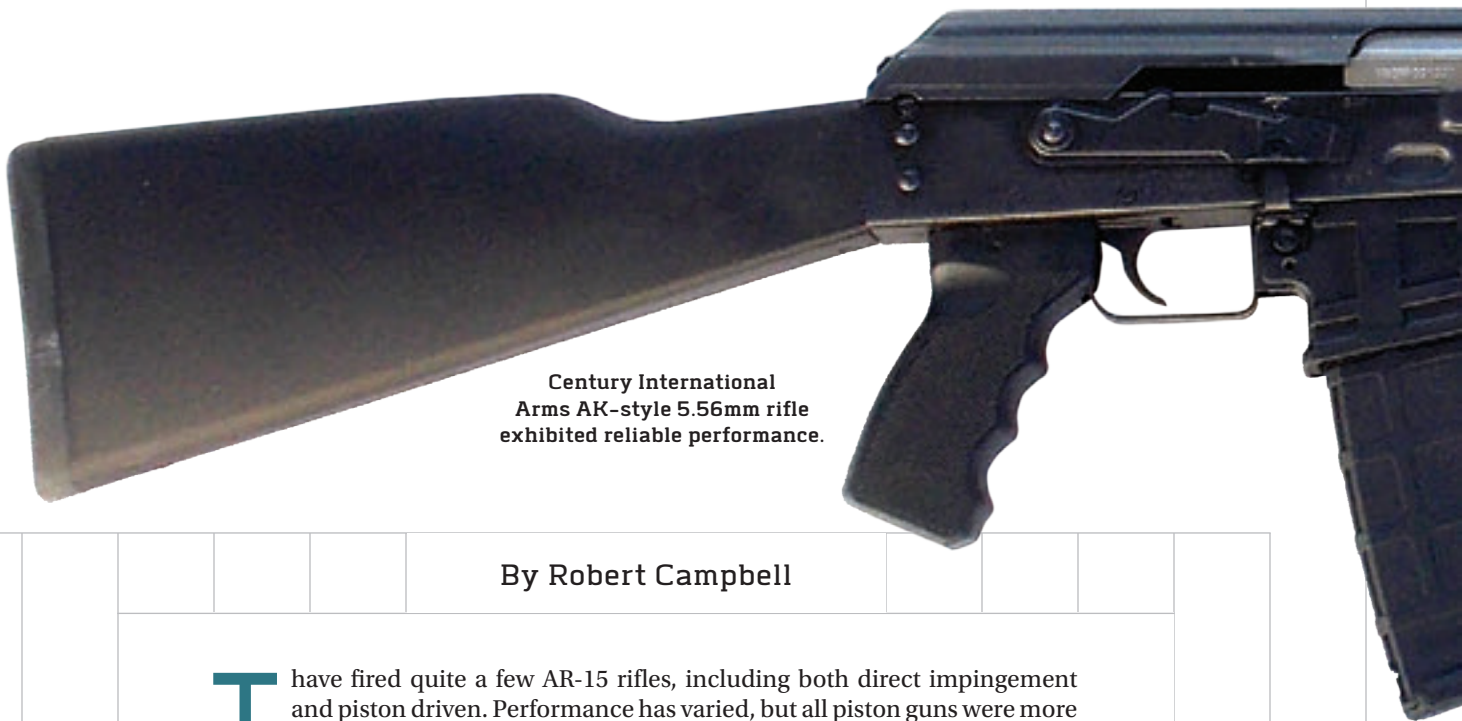
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# BUDGET

## 5.56mm GAS-PISTON

# RIFLE

### Century International Arms PAP M80



Century International Arms AK-style 5.56mm rifle exhibited reliable performance.

By Robert Campbell

I have fired quite a few AR-15 rifles, including both direct impingement and piston driven. Performance has varied, but all piston guns were more expensive than the standard direct-impingement AR-15.

At present, my half-dozen AR-15 rifles all feature the original gas-impingement system. Among those who favor the AK-type rifle, a point often stressed is the gas-piston design of the AK. Similar to the M1 Rifle (Garand), the system is designed with enough play to allow excellent reliability in all climatic conditions and with a broad range of ammunition.

While my Colt, Ruger, and Spikes Tactical rifles are reliable, shooters who favor the reliability, durability, and simplicity of the AK system have a valid point. For those who prefer the 7.62x39mm cartridge, a number of



good rifles are available in the AK format. The rifle has desirable primary and secondary features that will appeal to American shooters.

However, some choose the 5.56mm cartridge. Accuracy, wound ballistics, and availability favor the 5.56mm in my personal scenario. I particularly like the frangibility of the caliber in close-range scenarios. AR-15 magazines are at present readily available at fair prices.

If we could couple the 5.56mm cartridge and AR-15 magazines with the simplicity of operation and handling of the AK, we might have a desirable rifle. There have been 5.56mm AK offerings in the past, but I have experienced less than stellar performance, and the proprietary magazines were difficult to obtain in quantity.

#### **CIA PAP M80 MP**

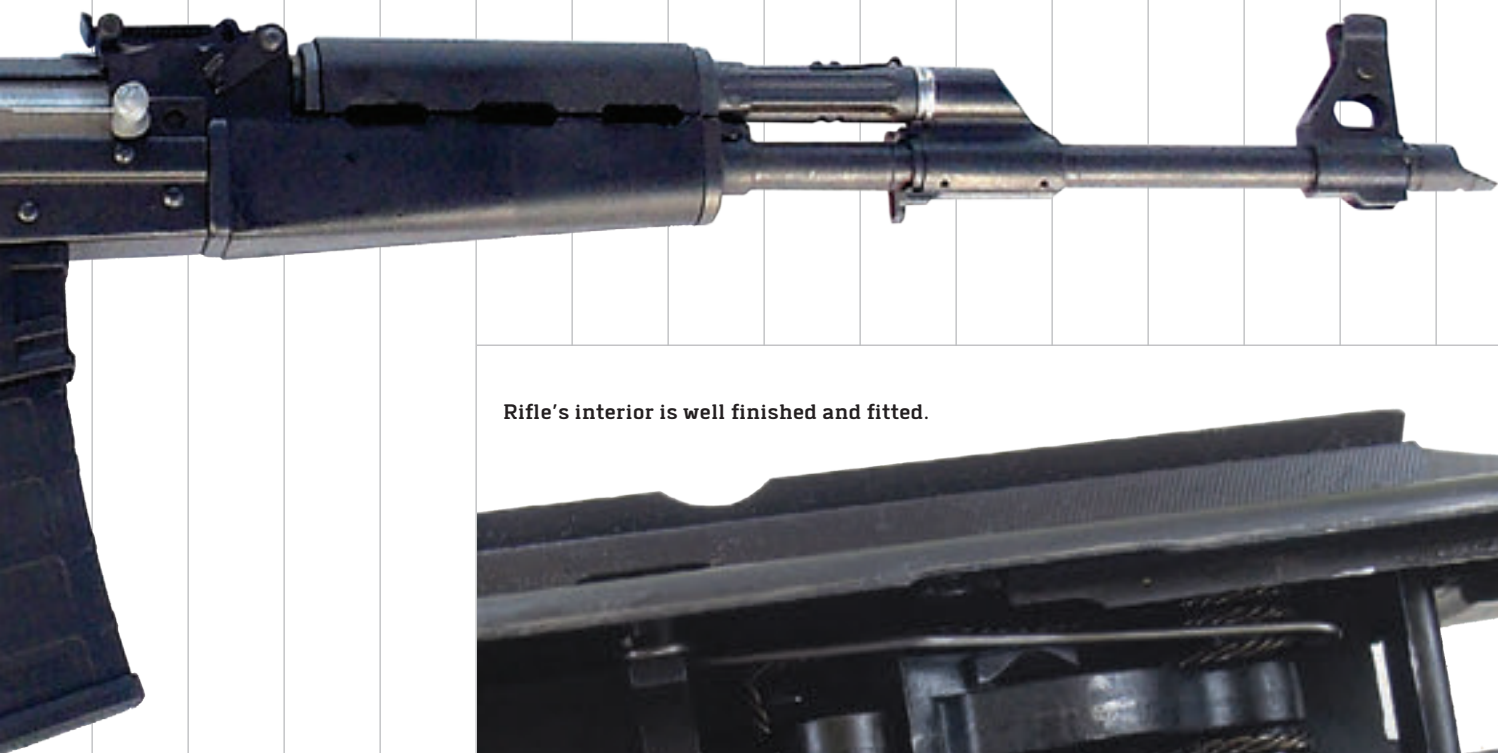
Century International Arms (CIA) offers a rifle chambered in 5.56mm and, by means of a special adapter attached to the receiver, the rifle accepts AR-15 magazines. The CIA PAP M80 MP features hard plastic furniture and a fixed stock. Fit and finish are above average for the AK type, and overall the rifle seems well made.

Sights are the usual AK open-type rear with a hooded-post front sight. The rear sight is set for 100 yards in the lowest elevation setting.

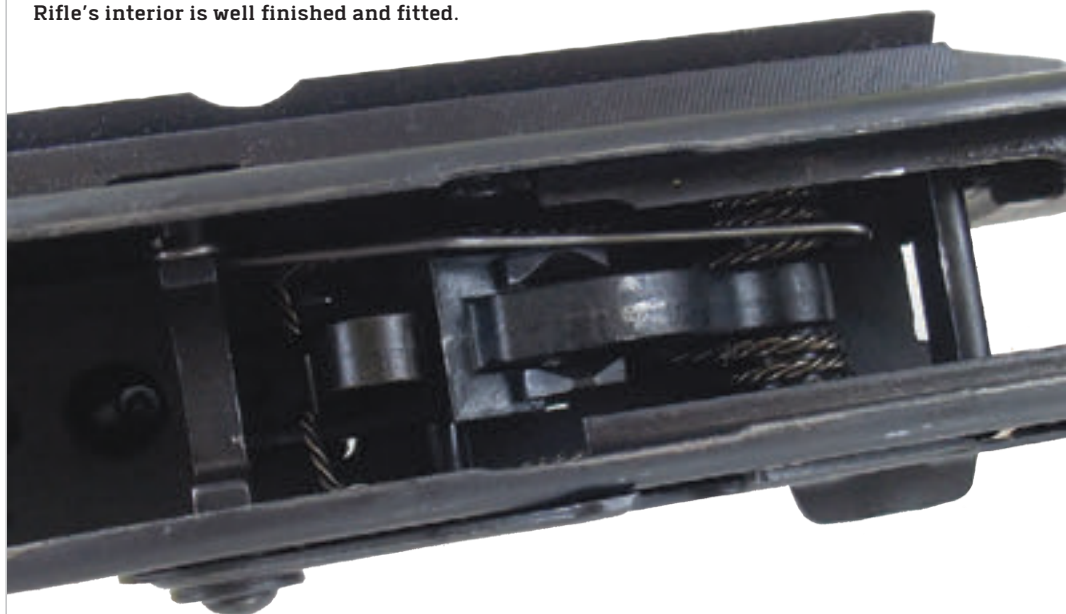
Trigger compression is typical AK at a relatively clean 6.75 pounds with modest take-up. The AK-type safety isn't the most ergonomic design but it works. This rifle's safety lever was stiff as delivered. It eased up after a few dozen manipulations but remained heavier than most I have tested. Considerable effort was needed to place it into the on position from low ready.

Initial examination was followed by an extensive dry-fire period. The CIA PAP M80 was well lubricated and taken to the firing range. I've learned from testing new firearms for over 20 years that takedown and field stripping are easier after the initial firing and break-in period, so the rifle was not disassembled prior to the firing test.

I gathered a supply of 5.56mm and .223 ammunition in a variety of bullet weights from 40 to 69 grains. The magazines used were primarily Brownells aluminum magazines, with a number of Magpul PMAGs. All fit and locked in the magazine well as designed.



Rifle's interior is well finished and fitted.





### RANGE TESTING

I admit that on the first range trip, I was simply turning cartridges into casings, and I made a small hill of them, firing 240 rounds of mixed Winchester, Hornady, and Fiocchi loads. This was a side trip as we were sighting in other rifles.

My brother and I confirmed the CIA PAP M80 was reliable. I fired a few groups from the bench at 100 yards and found the results encouraging. For a proper S.W.A.T. review, the rifle was cleaned after this action and put to a more difficult test a week later. Two hundred forty trouble-free rounds were encouraging, but not the end of the trail.

I have an eight magazine carrier from Brownells, and this went along to the range. Eight magazines, 25 cartridges each, for a total of 200 rounds. This included 50 rounds each of Black Hills Ammunition 55-grain FMJ remanufactured loads, Hornady Steel Match 55-grain FMJ, Fiocchi 62-grain FMJ, and Winchester USA 55-grain FMJ.

I set a number of targets from Tactical Target Systems in place at 15, 20, and 25 yards. A properly designed instructional target is an aid in training and practice. The company also offers excellent sighting-in targets. The rifle is fast on target and well balanced. Results were

good when firing while moving and addressing the targets as quickly as possible.

Target acquisition follows a different sequence than with the aperture sights of the AR-15. With the AR, I first look through the rear sight and find the front sight naturally centered. With the AK, the front sight is acquired and then “pushed” into the rear sight notch. The AK demands a different technique, but using only the front sight at close range works well.

This is subjective, but I felt the Century rifle was more ergonomic than the average AK. Everyone who test fired the rifle found it fit their hand well.

The magazine release proved fast to use well. Move the trigger finger forward and hit the release, and the magazine falls from the well most of the time with aluminum magazines. Some needed a little help to fall free. The polymer magazines seldom fell free. All fed well and there were no malfunctions.

I moved to 50 yards and an Innovative Targets steel reaction target. I elected to assess the rifle’s reliability with different bullet weights.

I am unlikely to deploy a 36- to 40-grain bullet in the AR or the AK. I feel that penetration is limited for personal defense with such a light bullet. Effect on varmints of a 36-grain Varmint Grenade is impressive, but



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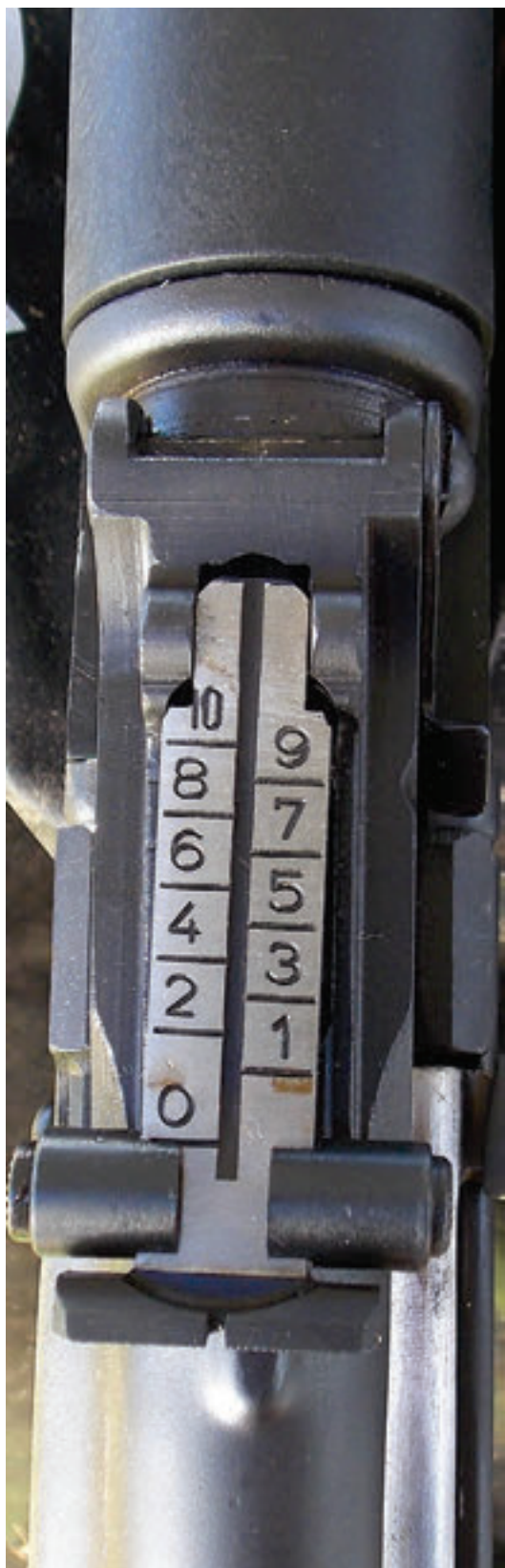
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some AR rifles exhibit sluggish function with light bullets. I loaded ten rounds each of Black Hills Ammunition 36-grain Varmint Grenade and Fiocchi 40-grain V-Max. I sighted for the center of the steel target and ran all 20 rounds off with 20 hits. Function was normal.

Next I loaded a magazine with ten rounds of Hornady 75-grain TAP and ten rounds of Black Hills 77-grain tipped Match King. (A waste of superb target-grade ammunition other than as a reliability check.)

Function was good and the target resounded with a noticeably deeper timbre. I had fired a number of loads at 100 yards, primarily at dirt clods and soda bottles, and found the rifle useful.

Now I decided to settle down and fire for accuracy from a solid benchrest. Firing an iron-sighted rifle demands concentration on both the sights and the trigger, as well as good muscle control. With iron sights, you must also pay attention to the rifle's position. An optical sight would help, but I do not see this rifle as suited for good optics and accuracy work, although a red dot would be appropriate.

I fired three-shot groups with proven loads that have provided good accuracy in the past, and with steel-cased loads that were simply cheap to obtain. The results are outlined in the accompanying table. The PAP M80 isn't the most accurate 5.56mm I have fired, but as I approach 750 trouble-free rounds, I can vouch for the fact that it is reliable.



**ABOVE:** AK-type rifle handled quickly in practicing movement behind cover.

**LEFT:** Rifle used standard open-style AK sights.





**ABOVE:** Century PAP M80 proved reliable with a range bag full of mixed magazines and ammunition.

**RIGHT:** In rapid fire, 5.56mm AK is controllable and accurate enough for most chores.

## » ACCURACY AT 100 YARDS FROM BENCHREST

LOAD	AVERAGE THREE-SHOT GROUP [inches]
Black Hills 55-gr. FMJ	4.5
Black Hills 60-gr. A-Max	3.6
Fiocchi 62-gr. FMJ	3.6
Hornady 55-gr. Steel Match	4.2
Hornady 75-gr. TAP	3.8
Tula 55-gr. FMJ	5.5



## CONCLUSION

The CIA PAP M80 is reliable, well suited to personal defense, and accurate enough for most chores to 100 yards. Speed magazine changes are quicker than the original AK, but due to the magazines sticking and the lack of a hold open on the last shot, the AK is not in the same class with the AR-15 for rapid ammunition replenishment.

A bigger problem was the sticking safety. Rather than becoming more easily manipulated, the safety became so stiff toward the end of the test that we had to stop shooting and carefully push the safety to the fire position with a range tool. Not an ideal situation!

I discovered not poor fitting but a manufacturing error. I field stripped the rifle and rotated the safety lever to the rear, removing it from the receiver. The section in the lever that rides on the receiver is too small. I used a combination of a small file and sand-

ing to open up the metal area until it was larger, and then reinstalled the safety lever. The lever retained a positive detent but was much easier to manipulate.

The PAP M80 performs well and is comparable to inexpensive AR-15s. Its strong point is reliability, while the handling will appeal to some. Poor speed in magazine changes, relatively poor accuracy, and a safety lever that is too tight from the factory are not attractive in comparison to almost any AR-15. The CIA PAP M80 is available for around \$650. ©

*Robert Campbell is a writer in the firearms, personal defense, and outdoors fields, with several thousand published articles, columns and reviews, and ten books. He holds a degree in Criminal Justice and has more than 30 years police and security experience. He has trained hundreds of shooters, including police and military.*

## SOURCES

### CENTURY INTERNATIONAL ARMS, INC.

(800) 527-1252  
www.centuryarms.com

### BLACK HILLS AMMUNITION

(605) 348-5150  
www.black-hills.com

### BROWNELLS INC.

(800) 741-0015  
www.brownells.com

### FIOCCHI AMMUNITION

(417) 725-4118  
www.fiocchiusa.com

### HORNADY MFG. CO.

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### INNOVATIVE TARGETS

www.innovativetargets.net  
(844) 4SHOOTN

### MAGPUL INDUSTRIES CORP.

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### TACTICAL TARGET SYSTEMS

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### WINCHESTER AMMUNITION

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www.winchester.com



Crowd Control mode running on four networked targets.

# REVOLUTIONARY **DRY-FIRE TRAINING** SYSTEM

**Salted Earth  
ATLAS-08**

**Q**uite by accident, I recently became aware of a revolutionary new fully programmable adaptive laser training target system from Chandler, Arizona-based start-up company Salted Earth, LLC. Called the ATLAS-08™, it was developed specifically for military and law enforcement training applications, but it's also an unbeatable training tool for all shooters.

I was intrigued and arranged to meet with the principals of the company (all of whom are avid shooters) at C2 Tactical in Tempe,

**By Eugene Nielsen**

Photos by Vince Estep



Arizona for a demonstration of its capabilities.

The ATLAS-08 allows you to train virtually anytime and anywhere, turning any location into a dry-fire shoot house for safe and effective training in real-world scenarios. While other laser training systems exist, none can currently come anywhere near to providing the functions of the ATLAS-08.

The ATLAS-08 is the only dry-fire target currently on the market that provides real-time prompts and feedback. It has a full-color visible display with 49 programmable hit regions that provide you with unlimited possibilities.

#### HOW DOES IT WORK?

The adaptive sensor array on the ATLAS-08 can detect red, green, and infrared laser emitters, while differentiating between laser aimers and flashlights/weaponlights to enable true low-light or no-light training. Most laser training systems cannot differentiate and, as a result, greatly handicap training.

Unlike many systems on the market, the ATLAS-08 target can be used outdoors, though, depending on the time of day and angle of the sun, you may need to adjust the direction of your training to keep the target sensors out of direct sunlight. The ATLAS-08 is weather resistant but should not be left outdoors for prolonged periods, or in weather exceeding the maximum operating temperature of 120 degrees Fahrenheit.

The ATLAS-08 targets are powered by an on-board rechargeable, cost and environmentally effective lithium battery that provides over eight hours of training on a single charge with standard settings. To recharge, simply plug the

**The ATLAS-08 is an outstanding training system and definitely a heck of a lot of fun. It's easy to use and exceptionally versatile.**

ATLAS-08 into the included charger or use any USB power source. The ATLAS-08 can be used while charging, so your training will never be interrupted by a depleted battery. The battery is included and easily replaced by the user if needed.

ATLAS-08 targets are wirelessly enabled and mesh networked for robust communication. They can be easily deployed in large-scale operations to create sophisticated training environments. Multiple ATLAS-08 targets can be wirelessly connected to create immersive training environments anywhere.

During the demo and testing at C2 Tactical, targets were placed at opposite sides of the building, several hundred feet apart and separated by glass and steel framing, in order to test the wireless functioning. The targets communicated flawlessly. The building is of modern steel-frame construction.

#### TRAINING APPLICATIONS

The training applications of the ATLAS-08 are endless. The ATLAS is perfect for training students on a square range; putting officers through active-shooter scenarios; practicing



Executive protection training with a Citation, with no risk of damage to the aircraft.



Training solo in C2 Tactical office with ATLAS-08.

room clearing, hostage rescue, tubular assaults, and vehicle takedowns; or simply getting in some trigger time in one's own home. The ATLAS-08 can do it all. The wireless functionality can also be disabled for use in secure locations or for solo practice.

Mobile and desktop apps are currently in development that will allow you to control the training environment, while

also receiving real-time feedback (drawstroke, split times, accuracy, etc) on your smartphone or computer. It will provide the option of tracking the metrics over time to provide a real data set to track progress and document skill sets.

All products in the ATLAS family are fully compatible to give the user the ability to expand the system at any time and train for any mission requirement. The ATLAS-08 includes free firmware updates for the life of the system, to continually expand the available features.

On the bottom of the device, the ATLAS-08 has a standard 1/4-20 UNC mount that enables it to be mounted to tripods, RAM mounts, or any standard camera mounts, so the user can mount the targets to suit individual needs. Optional accessories include a magnetic target stand, vehicle suction mounts, and a magnetic battery cover. A lanyard loop on the ATLAS-08 lets the unit be secured with paracord as a backup when using the trainer in precarious positions.

### TRAINING MODES

You can simply turn on the ATLAS-08 and begin training or take advantage of the many training modes that are programmed to the device, including Reaction and Draw Stroke, Accuracy and Trigger Control, Memory and Cognitive Improvement, Decision Making and Crowd Control, Shot Indicator and Heat Map, Reload and Malfunction training, Failure Drills and several other modes.

The user initiates the desired mode and waits for a visual and/or audible prompt to engage the target. When using multiple targets, modes can be mixed to simulate almost any custom training regimen.

Reaction Time and Draw Stroke mode is designed to help trainees improve their drawstroke, reaction speed, and split times when using multiple targets. The tracking metrics in this mode can provide an historical data set to visualize muscle memory improvement and drawstroke refinement over time. A hit within the "hit" region on the target stops the timer and records the metrics. The user's reaction speed scrolls across the target for immediate feedback.

Accuracy and Trigger Control mode forces trainees to



On-board keypad makes set-up simple.





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make quick decisions as to which targets should or should not be engaged, combined with the need to place precise shots on the appropriate areas of the target. It is designed to increase speed of target recognition and requires trainees to practice adjusting for height-over-bore at varying distances.

Metrics can be tracked to know split times, reaction speed, overall accuracy, and number of shoot vs no-shoot areas struck. A hit within the “hit” region of the target stops the timer and records the metrics. The color of “hit” and “no-hit” regions is set at the user’s discretion within the mobile application.

Memory and Cognitive Improvement mode is designed to improve cognitive function and memory. It requires the trainee to memorize a sequence of colors. The targets must then be engaged in the correct color sequence in order to pass. A hit in an incorrect color is a fail.

This mode can be run on multiple targets and include

stationary and moving targets. The target cycles through three colors with an associated auto prompt, and these colors must be remembered in the correct order. The target then illuminates with several colored boxes and each box must be hit in the correct color sequence to pass. This mode works well for cover and concealment training when using barriers.

Decision Making and Crowd Control mode is designed to assess trainees’ abilities in shoot/don’t shoot scenarios. It provides numerous targets that change over time and must be assessed by the trainee not only by the color but minor differentiating features to determine if they are hostile, friendly, or neutral, and engaged accordingly.

The targets can be set to update randomly or change in response to feedback from trainees in order to create a realistic crowd environment and increase trainees’ ability to assess evolving situations with multiple targets. Hits on hostile,



**LEFT:** Indoor carbine training is a great use for ATLAS-08.

**RIGHT:** Having a desk job is no longer an excuse to skip training.

**BELOW:** Using Shot Indicator and Heat Map modes.







Using ATLAS-08, room-clearing training can be done without risk of injury.

friendly, and neutral are recorded. The method of completing training mode can be user-set (e.g., end on friendly hit, end on hostile hits).

Shot Indicator and Heat Map mode is designed to give real-time feedback of shot placement and group size. Targets can be configured to give a visual prompt indicating threat, non-threat, or no visual prompt prior to engaging the target.

A hit on the target displays where the shot would have impacted. Visual feedback can be in real time or after action at the user's discretion. Heat Map mode shows shot placement and frequency of hits with colors: light blue = 1 shot, red = 5+ shots.

Mozambique Drill mode is designed to practice placing multiple shots on multiple targets. The Mozambique Drill, also known as the Failure Drill, Failure to Stop Drill, the "Djibouti Shooty," or informally, "two to the chest, one to the head," is a close-quarters shooting technique.

In this mode, the ATLAS-08 displays a number from 1 to 5 and must be hit that number of times as quickly as possible. To add a level of uncertainty, targets can also be set to display a shape and conceal the number of hits required from the trainee. They visually and/or audibly alert the trainee that the target was struck the correct number of times.

Multiple trainers can be deployed and set to require the trainee to engage them in a specific pattern, randomly, or at their discretion. A hit on the target generates audible and/or visual feedback to alert that it was struck once the target has been engaged the correct number of times, depending on how the training is configured.

## SOURCES

### SALTED EARTH, LLC

(415) 265-0135  
www.thesaltedearth.com

### C2 TACTICAL

(480) 588-8802  
www.c2tactical.com

### NEXT LEVEL TRAINING, LLC

(360) 933-4640  
www.nextleveltraining.com

## SE SIRT TIMING CHIP

Salted Earth offers an SE SIRT Timing Chip, a drop-in modification for any Next Level Training SIRT-brand training pistol or AR bolt that converts the laser to a pulsed output. SIRT is a great dry-fire training tool, but users have a tendency to "slap" the trigger in order to give the dry-fire target the short pulse it is expecting (the ATLAS-08 won't let you cheat by sweeping the target with a laser, in case you were wondering).

This in turn often leads to bad trigger habits. The SIRT Timing Chip corrects this.

## SUMMARY

The ATLAS-08 is an outstanding training system and definitely a heck of a lot of fun. It's easy to use and exceptionally versatile. At \$649.99, it's not inexpensive but will pay for itself after 2,500 rounds or less. And given the training possibilities it provides, it really is a no-brainer. All Salted Earth products are engineered and manufactured in the USA. The SE SIRT Timing Chip is priced at \$29.95. Pricing had not been set on the other ATLAS-08 accessories at the time of this writing.

The author would like to thank C2 Tactical for the use of its facilities for the article. ☺

*Eugene Nielsen's background includes protective intelligence/investigations and threat management, as well as red teaming/security consulting. He is a Licensed Private Investigator in both California and Arizona.*



# CLANGING STEEL

## Renaissance Steel Research Ready Ship Target

By Justin Dyal

Everyone loves shooting steel. How's that for a bold, declarative generalization? But it's a safe one among shooters. The "Pow! ... Ding!" or "Boom! ... Clang!" of steel is addictive, enjoyable, and useful.

For years, large established companies that catered mostly to agencies cornered the market: military units and clubs on one end and often low-quality local fabrications on the other.

As the shooting market has exploded in the last few years, there has been a corresponding rise in steel target providers aimed at the individual shooter. One of the fastest growing of these has been Renaissance Steel Research out

of North Carolina. I've recently been pounding one of their Ready Ship Targets (RST).

### READY SHIP TARGET

The RST was designed from the start to bypass the Achilles heel of steel: shipping costs. With other makers, I have more than once filled the shopping cart with targetry only to wave off when the shipping costs were calculated at checkout. In some cases, the freight alone puts the cost at a significant investment that is difficult to accept or recoup.

The RST was designed around United States Postal Service flat-rate shipping, and the freight is incorporated into the sticker price of the target. Every square inch of the flat-



rate box is maximized to fit a multi-function base, 2x4 post cap bracket, hanger plate, hardware, and RST target face. Humpty Dumpty goes back together again in five minutes with carriage bolts.

The shooter supplies a standard 2x4 post cut to the desired length. The base is large enough to give a stable platform on varied footing and accepts the 2x4 as well as having brackets for standard 1x2s to use for paper targets—a nice touch.

The target hangs at a slight angle titled toward the shooter to guide the deflecting projectiles into the deck. This arrangement puts some lead or jacket fragments harmlessly into the supporting 2x4 post, with the majority cutting a line in the soil directly underneath the target perpendicular to the shooter. It is extremely unusual to get splatter, fragments, or bounce-back with a target at such an angle, and the RST hanger bracket keeps the steel fixed on the perpendicular even as it swings freely back toward the wood post upon impact.

The RST looks immediately familiar to most shooters. Its shape shares the general outline of the B/C zone of a USPSA/IPSC target. But the 3/8ths thick AR 500 steel target measures 10x20 inches, whereas the B/C zone tapes at 12x24 inches.

#### DESIGN PARAMETERS

Danny Domin, founder of RSR, is a former Recon Marine, Ramadi vet, and security contractor. His design parameters on the Ready Ship Target were to make the box with a shape that was functional for a variety of combat shooting

**OPPOSITE:** Pat McNamara engages RST with Glock 17. Target is ideally proportioned for aggressive pistol work.

**RIGHT:** RST hangs off post cap at a slight angle to deflect rounds predictably and directly into the ground.

**BELOW:** RST ships for free in flat-rate packaging and transports easily for a rifle rated target.



tasks—not too small, not too large. I give it an A+.

The B/C zone has always struck me as too sloppy for most tasks inside 100 yards, while the A zone or an eight-inch circle is perhaps too small for aggressive speed work, some shooting on the move, and unsupported carbine snap shots in the 75- to 200-yard bracket.

The RST splits the difference magnificently, at approximately 71% of the surface area of the standard IPSC zone. The 10x20 zone is a much better representation of the vital organs than a B/C. An edge hit on a C zone likely corresponds with a miss or burn along the rib cage on 90% of the developing world's military-age population. The RST size gets a shooter toward the vitals inside the ribs on most target angles aside from a hard 90-degree profile.

The RST is easily visible behind the front sight to 200 yards even on medium-contrast backgrounds. I've used it out to 400 with an Aimpoint, but the light and contrast were favorable—and needed to be to make it out.

The target is a great training match to tasks where the shooter is trying to max out speed but still get an effective hit. Tasks like lateral or oblique movement, where many shooters struggle to find a balance between aggressive movement and delivering hits, are well suited to the mid-size zone of the RST.

With the steel giving instant feedback for correction or encouragement, the shooter tends to improve quickly. The target swings backward a few inches so the shooter picks up

**My Ready Ship is holding up well after five months of hard use. I've put thousands of rounds on it.**

movement, but the hanger arrangement keeps the RST face square with the shooter, keeping rapid follow-up shots on the moving steel.

#### DRILLS

I asked Danny what his favorite RST drills are, and the first one he ponied up was a carbine challenge: One hit from a relaxed patrol or carry posture in one second at 50 yards. That's fast. It's a high-end drill that requires the shooter to smooth all the kinks out and have the shot breaking as soon as the dot or sights come onto the RST.

It ate my lunch for a couple of sessions, with times hovering in the one-teens. But the whole point of a challenge is rising to it, so I tweaked a few things and finally started ringing the RST around .98 with American Gunner 55 grainers out of a ROBAR PolymAR 15L.

Dovetailing off of the Snap Drill above, I wanted to see if I could get a pair on the RST in 1.5 seconds from the ready, again at 50 yards.

Getting the two hits requires a smooth snap to the first

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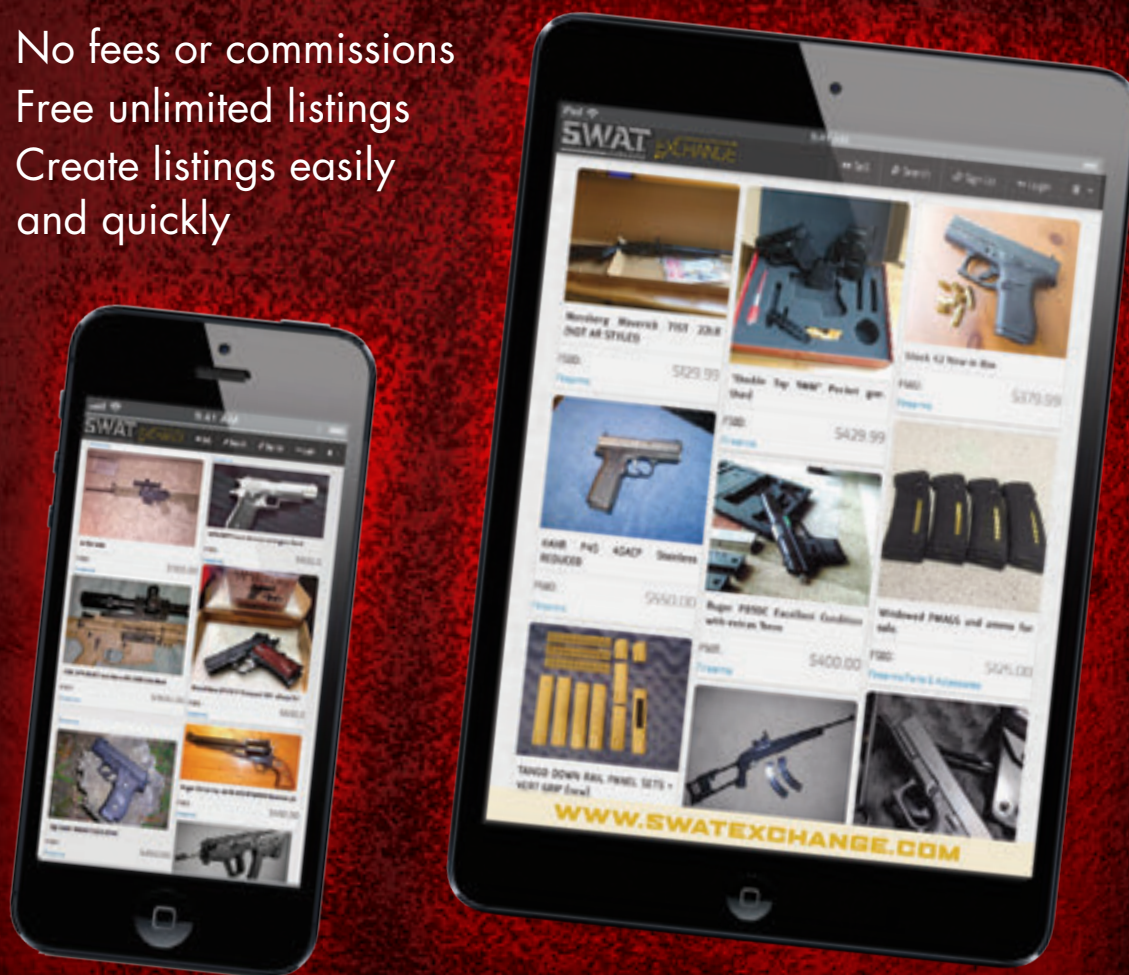
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# STEELISMS

A shooter has to accept a few expectation management items with steel. First, nearly every maker plainly states that impact velocity needs to be kept below 3,000 feet-per-second. Many say that rifles must not be shot nearer than 100 yards.

Most shooters, myself included, proceed to shoot their 5.56 bulk buy, XM 193-type loads at about 50 yards, which from a 16-inch barrel slams the target at right about 3,000 fps. Almost any AR 500 will slightly dimple from this. Overlapping dimples eventually lead to little pocks. It is a "failure to follow simple instructions" situation where the shooter can enjoy steel at 50 yards and accept dimpling, or push the steel out to 100+ yards where the impact velocity doesn't affect the steel.

The second is XM 109, or "Green Tip." The projectile design incorporates a steel penetrator. It shouldn't take an etymologist to realize that such a round is probably not going to treat a steel target gently. It won't. If you look at closed-to-the-public contract ranges that have top-shelf steel but Green Tip shooting customers, the steel looks horrific in short order.

Friends don't shoot friends' steel targets with Green Tip.

When you shoot steel, spray paint becomes a key part of the experience. Buy quality and don't be penny wise/pound foolish. I have had great results with Rustoleum industrial-size cans: great coverage, decent dry time, and a can gets through multiple training days. The .99-cent specials have lousy coverage, barely cover the last hits, and rarely last a day.

Color matters. White is probably the default, but it has some issues. White steel is overly reflective on bright days and gets distractingly "dirty" with shot marks quickly, leading to poor contrast for sight picture.

I am increasingly gravitating to almond-colored paint (Rustoleum 7570), which is pretty close to the buff color on traditional paper bullseyes. It offers good contrast against sights on the one end and vegetation or a gray dirt berm on the other. The almond shows hits well through an optic at distance but doesn't get as high contrast messy as white. But it's not so good against a clay or brown berm.

I sometimes hit the top of the head box and the post under the target with a touch of blaze orange paint to help when contrast is poor.



RST is similar in shape to a standard IPSC B/C zone, but scaled smaller to 10x20 inches. This makes it great for carbine drills 50 yards and out. ROBAR PolymAR 15L used on one-second drill attempts.





BCM .300 BLK pistol and target with 400-yard impacts. RST is a relevant, challenging size but easily visible at carbine distances.

shot and tracking the dot/front sight back to center, taking up the slack in the trigger as soon as the sight picture arcs back onto “meat.” There is just enough time that if the shooter gets a good launch and has good recovery, the dot may be able to pause at center and hold while he presses past the final resistance on the trigger.

Where the first drill has the shooter pushing at the edge, the pair is synched to smooth delivery. Comfortable yet aggressive performance and 99% success with the ROBAR. With a nine-inch BCM .300 Blackout AR Pistol, I had to push to recover the dot in time to get “Ding!” number two with Black Hills 125-grain Open Tip Match rounds.

The target is exceptionally well suited to mid-tempo standing shots in the 75- to 100-yard bracket. There is enough target that most skill levels can work for a hit, but can’t assume one with poor technique.

I also like it equally well for kneeling and barricade work at 200 yards, the ten-inch width being slightly more difficult than clipping the black on a B8 5.5-inch bull at 100. The 20-inch length of the RST gives the shooter the illusion of “this isn’t that hard” and corresponding confidence to press the shot cleanly, but the ten-inch width keeps the hits honest.

#### RST WITH PISTOLS

For pistol work, I have used the RST for speeding up presentation from the holster and movement up close, but I am really liking it for distance. The Ready Ship gives a comfortable sight picture at

35 yards and enough surface area to accept slight imperfections in alignment or placement. The time hack to chip the spray paint off the steel is 2.5 seconds from the ready. Doable for most if their sights are regulated and they stop making excuses.

I’ve shot a variety of field handguns on the target out to 100 yards, and the RST head box makes a great aiming point to stack onto the front sight and let the magnum rounds drop right into center. Getting a “Bong!” drifting back is heavy satisfaction.

The RST steel is top-quality AR 500. Not surprising, since the company had its roots in MRAP armored vehicle production. My Ready Ship is holding up well after five months of hard use. I’ve put thousands of rounds on it, most at higher impact velocities than it’s rated for.

Some fret about the carriage bolt attachment points—I did too, honestly. I’ve only mangled the head on one of the carriage bolts, and that was a too-easy replacement at my convenience several range sessions later.

I’ve had the pleasure to shoot large quantities of the best institutional-grade steel targets from all the big makers. The RST is taking the punishment as good as any I’ve shot.

Cost is \$180.00 with free shipping. ©

#### SOURCE

##### RENAISSANCE STEEL RESEARCH

(910) 742-6022  
www.rsrsteeltargets.com

*Justin Dyal is a military professional with worldwide experience in specialized units. He has taught and been responsible for numerous advanced skills and weapons courses within multiple organizations.*

## ESEE Knives CM6

ESEE Knives has collaborated with many outdoorsmen over the past few years, creating a new era of modern cutlery with years of experience behind them. The CM6 was one of the first collaborations of this kind, with outdoorsman Terrill Hoffman.

### TACTICAL & PRACTICAL

I caught up with Terrill at a convention and got his views on the ESEE-CM6. “This is the knife I made because I wanted it—I designed the CM6 for myself,” said Terrill. “I wanted a knife that could cover duties as a general-purpose outdoor utility knife, but could also serve as a tactical self-defense weapon if needed. This is the knife I would want to be part of my proverbial bug-out bag.”

The ESEE-CM6 is 11.13 inches overall, with 5.88 inches going to the blade length. With a maximum thickness of .188 inch, it’s relatively light for its size, at ten ounces. ESEE uses 1095 high carbon steel and canvas Micarta scales for the handle.

The blade is black powder coated with Chestnut Mountain Proving



Author made all components of this tropical camp solely with ESEE-CM6. Blade length is suitable for an all-around survival knife.

Grounds and PWYP etched on the blade. PWYP was a four-day camping and skills trip that Terrill held each year on his property.

The CM6 comes with a black Kydex sheath that features a metal spring clip for attaching to a belt or web gear. It has lashing points and can be adjusted for a variety of carry styles. Kydex was good for my specific trip because the blade and sheath were usually wet and muddy.

The CM6 is manufactured by Rowen Manufacturing in Idaho.

### THE GAUNTLET

Luckily for me, I was on my way to Hawaii for some outdoor adventures when I picked up the CM6 at a show.

Before leaving the mainland, I took the CM6 to my old Korean War-era metal ammo box. For the first test, I stabbed the tip into the box using a reverse grip, then hammered it in a little farther with a chunk of wood. As ex-

pected due to the sharpened swedge, penetration was far superior to any other knife I own.

Drilling through wood was my next test for the CM6. I drilled each side of a 2x4 until the tip was peeking through. Surprisingly, this didn’t take very long. After penetrating the ammo canister and drilling into the 2x4, the front portion of the main cutting edge still shaved hair off my arm. I’m no stranger to Rowen’s heat treat found on every ESEE knife, so I can’t say I was at all surprised.

The sharpened swedge is designed for penetration, but not limited to it. I personally wanted to test this feature as a scraper for general outdoor use, as well as its ability to pierce hard materials.

In my tropical camp on Kauai, Hawaii, I used a magnesium bar for tinder, but it needed to be shaved and collected. Rather than use my primary cutting edge for this task, I wanted



Testing sharpened swedge, author drilled a hole into wooden 2x4. ESEE-CM6’s edge was not dulled.



to use the swedge (besides, I wasn't surviving—just camping out). I knew there would be more scraping tasks for making tinder and peeling green sticks, although there is a lack of leverage for that due to the length of the blade.

The best technique for scraping and peeling was to stab the knife into a piece of wood on a green banana leaf to collect the tinder shavings and keep them off the damp forest ground. Once the knife was secured, I drew the magnesium and wood against the sharpened swedge to produce shavings. As with sharpening, it's always more stable and energy efficient to move the smaller, lighter object.

Small work with a somewhat "big-



**ABOVE:** Having a strong yet sharp point is a must-have characteristic for a combat knife. Author plunged CM6 into a metal ammo box without any damage to the knife ... only beauty marks.

**BELOW:** One multipurpose feature on ESEE-CM6 is the sharpened swedge. Author utilized swedge to produce thin curls from wood and magnesium shavings for tinder.



Doing small work with CM6 was no problem while making a figure-four deadfall trap. Even on semi-dry wood, thin grind carved like a smaller, thinner knife.

ger knife" was easily accomplished as I made a figure-four trap. The blade geometry of the high sabre grind left me plenty of flat ground area to bite deep into the wood when making trap parts and tarp stake notches.

When it was time to create a camp, the only tool I used was the CM6. Choking way back on the handle gave me enough leverage to lop off a few large banana leaves for preparing food on top of, and for piling them up to create a sitting mat. I had a few extra-large leaves to cover the fire when it would occasionally rain for a few minutes.

I also needed to procure quite a few broomstick-thick and finger-thick pieces of green wood to make utensils, pot hooks, and a quick hanging rig for my titanium kettle. No need for a machete—the CM6 was adequate for such basic light chopping tasks.

The hanging rig was a simple affair. I stuck two Y-shaped forked sticks into the ground, just a couple of feet apart, since this would be a small cook fire. I laid a green stick across the Y supports about 1½ feet above the fire to hold the kettle. I kept it low to the flame since the fire would be small enough for boiling and roasting.

Pot claws were quickly carved from green wood left over from the hanging rig. The CM6 felt comfortable and quicker in the hand than most knives of similar size. Even when putting a quick point on the tip of a green stick,

it felt like I was using a lighter, shorter-bladed knife.

The slicing capabilities of the CM6 were also impressive as I prepared to roast a Hawaiian delicacy—Spam!

On hikes and day trips where a fire wasn't needed, I took a Sterno-size can to warm up my tuna and boil my water. After eating the tuna, I converted the can into a "down and dirty" pot stand for my kettle. Once again, the penetrating ability of the CM6 helped cut vents around the can to create some space for air and raise the kettle. Crude, but it worked.

After using the blade as my can opener and cutting into the sides to create vents, the CM6 was still sharp and able to take on more of the green paradise with ease.

The ESEE-CM6 proved to be very versatile. The sharpened swedge enhanced this tool's usefulness. The high sabre grind helped keep the weight down while preserving its toughness.

Terrill Hoffman has designed a knife suitable for combat and outdoor utility. ESEE Knives has done his design justice, making it worthy of the name Tactical & Practical. ©

## SOURCE

### ESEE KNIVES

(256) 613-0372  
www.eseeknives.com

## Galco Holster Care Kit

**I**n this age of synthetics, leather is still holding its own when it comes to holsters. While synthetic holsters are great and often the best choice for some applications, there's still something to be said for real leather.

Man-made materials certainly can't beat leather for its natural beauty. Aesthetics aside, there are other plusses to leather that continue to make it one of the better materials for holster construction.

### GALCO HOLSTER CARE KIT

A quality leather holster needs minimal care. Leather is a natural product and tends to break down over time without proper care. With a little attention, a well-constructed leather holster can provide many years of dependable service.

There are numerous examples of holsters dating back to the late 1800s that are just as serviceable today as they were back when they were made. Follow the maker's recommendations.

The Galco® Holster Care Kit includes everything you need to care for



**ABOVE:** Galco Exotic Concealable holster, Golf-style Belt with four-piece buckle set, and Concealable Magazine Carrier in Cognac Alligator. Treat them right and they'll give you many years of service.

**BELOW:** Galco Holster Care Kit contains everything you need to keep your leather gear in great condition.



your leather holster and prolong its life. It's easy to use and includes complete instructions.

The Holster Care Kit comes with five components:

- Four fluid ounce bottle of Galco Leather Lotion Cleaner & Conditioner
- One-half fluid ounce bottle of Galco Draw-EZ™ Holster Lubricant
- Application dauber
- Synthetic wool buffing pad
- Synthetic wool and foam scrubbing pad

The Leather Lotion and Draw-EZ are also available separately from Galco.

### LEATHER HOLSTER BREAK-IN

A good leather holster is precision molded by the maker to specific firearms. It is tight at first by design, since the leather fibers will relax to the proper



fit with use. If a new holster has tension screws, they need to be adjusted. Once adjusted, clear nail polish can be used to reduce any unwarranted loosening. Do not use LocTite® or threadlock.

Leather holsters usually break in on their own over time. If the holster is too tight when holstering your firearm for the first time, don't force it. It can easily be remedied by a process known as "blocking out." Never moisten your holster in any way in an attempt to stretch the leather.

Blocking out the leather is accomplished by placing the unloaded firearm in a plastic freezer bag or two to three layers of plastic kitchen wrap and inserting the bagged or wrapped firearm fully into the holster. Wait at least 15 minutes and then unholster the firearm. Remove the bag or wrap from the firearm and try the fit again. The fit should be snug but not tight. If the holster is still too tight, you can repeat the process with two or three bags or additional wraps.

Another technique is to twist the holstered bagged or wrapped firearm about 1/16 inch in both directions six to 12 times.

Galco's Draw-EZ™ can greatly shorten the break-in process of your leather holster and provide a much slicker draw. Draw-EZ is a surface treatment that's applied to the interior of the holster. It's not absorbed by the leather and won't alter the fit of the holster or harm the finish of your firearm.

Draw-EZ needs to be used in conjunction with presentations (again with an unloaded firearm) to break in the holster. Simply leaving your handgun in the holster won't do any good in this regard.

### CLEANING AND CONDITIONING

Leather needs to be regularly cleaned and conditioned. How often this is necessary depends on the amount of use the leather gets and the environmental conditions to which it's exposed.

Dirt and other foreign matter can get into the pores and crevices of the leather. Cleaning the leather regularly helps prolong its life. Holsters and accessories that are used on a daily basis or exposed to excessive perspiration should be cleaned at least once a month.

Regular conditioning is also important and serves several purposes.

Conditioning moisturizes the leather to help prevent it from drying out and provides a surface barrier to help prevent soiling and staining. It also enhances the beauty and appearance of the leather.

Do not use oils (such as Neatsfoot or Mink oil) as they will soften the leather, which is a bad thing when it comes to holsters.

Galco's Leather Lotion Cleaner & Conditioner is the best product I've found for cleaning and conditioning leather holsters. It's a specially formulated wax-free lotion designed to clean, condition, and preserve smooth vegetable-tanned leathers.

It removes surface dirt and penetrates deeply into the pores of the leather to moisturize the internal fibers. It restores the oils that are naturally lost over time as the leather ages



Quality leather holster like this Galco Miami Classic shoulder holster rig is an investment that, with proper care, can provide many years of service.

and helps prevent drying and cracking without softening the leather. It also provides water resistance.

Leather Lotion should not be used on chrome-tanned, suede, nubuck, or napped leathers, as it can stain them. Dirt should be removed from these leathers with a clean terrycloth towel or soft suede brush. Grease stains can sometimes be removed from suede, nubuck, or napped leathers with a soft eraser. A number of commercial suede cleaners are also available.

A fine leather holster is an investment that can give many years of service. To get the most out of your gunleather, all that's necessary is a little care.

The Galco Holster Care Kit has a suggested retail price of \$26.95. ©



Galco Draw-EZ treats interior of leather holsters to shorten break-in period. It's not absorbed by the leather and won't harm the leather or your firearm's finish.



Galco Leather Lotion is specially formulated to gently clean, condition, and preserve finished, naked, and exotic leathers. Its special wax-free formula removes surface dirt and provides water resistance.

### SOURCE

**GALCO GUNLEATHER**  
(800) 874-2526  
[www.galcoGUNLEATHER.com](http://www.galcoGUNLEATHER.com)

# GEAR LOCKER

## NEW PRODUCTS & ACCESSORIES

### TangoDown Slide Racker

TangoDown has developed a Slide Racker to accommodate larger frame 9mm and .40 double-stack Glock models. The GSR-O3 is a top-quality drop-in part that requires no other modifications to the firearm. Injection molded of glass-reinforced nylon with stainless steel reinforcement just

like the OEM part, it replaces the striker retention plate in minutes. Once in place, the GSR-O3 offers easy, effortless, and positive slide cycling under any conditions.

The GSR-O3 provides small serrated wings at the slide's end to guarantee positive cycling of ammunition into the weapon.

Even if you're down to one hand, cycling

the slide against

your belt, holster, or heel is quick and positive. Those with

small hands or struggling with arthritis will benefit from this upgrade. The GSR-O3 is big enough to offer advantage, yet small enough to be unnoticeable in concealed-carry holsters. Suggested retail price is \$18.95.

#### TANGODOWN INC.

(520) 888-3376

[www.tangodown.com](http://www.tangodown.com)



### ELEY Expands Ammunition Line

While ELEY dominates the .22LR Olympic market, they have expanded their product offerings by introducing two new semi-automatic rounds. ELEY Force is a high-velocity round recognizable by its unique black oxidized case. ELEY Contact is a subsonic round designed specifically to cycle through semi-automatic rifles. Sales of these new offerings have been strong and are still increasing.

ELEY continues to offer Subsonic Hollow, the number-one choice for hunters who want a quiet ultra-accurate round for small game.

With the success of ELEY Subsonic Hollow, ELEY has introduced ELEY High Velocity Hollow, which is guaranteed to have world-class accuracy, penetration, and expansion to deliver a lethal blow to any small game. It's the perfect round for the hunter who wants maximum velocity without compromising accuracy.

#### ELEY AMMUNITION

(406) 314-4456

[www.eleyammunition.com](http://www.eleyammunition.com)



### Tacstar Slimline SideSaddle

Tacstar—a leader in tactical accessories and a Lyman brand—has introduced its new Slimline™ SideSaddle. The SideSaddle line has gained a large following because of the convenient placement of shells: right where you need them for a fast reload. Tacstar has taken the SideSaddle to the next level with the Slimline version, which utilizes a non-glare, anodized aluminum backing plate contoured so it takes up less space on the receiver and has fewer areas that could potentially snag. Additionally Tacstar has changed the shell carrier itself to its proprietary flexible synthetic rubber material, which offers durability and weather resistance as well as secure shell retention. Like the backing plate, the shell carrier is smaller in size than the traditional SideSaddle, adding to its sleek appearance.



#### LYMAN PRODUCTS CORP.

(800) 225-9626

[www.lymanproducts.com](http://www.lymanproducts.com)



## Mossberg 590A1 and 500 AOWs

O.F. Mossberg & Sons, Inc is pleased to offer new sub-compact NFA firearms based on its time-proven 12-gauge 590A1 and 500 pump-actions. Classified by the BATFE as AOWs (Any Other Weapon), the 590A1/500 Compact Cruiser AOWs require a \$5 tax stamp for transfer, as well as NFA transfer paperwork.



The Compact Cruisers are built on Mossberg's legendary 500 action, which passed the rigorous testing required to meet or exceed U.S. Armed Services MilSpec 3443 requirements; the only shotgun manufacturer to pass these endurance, accuracy, and quality tests. The 590A1/500 AOWs are designed for smooth, reliable operation and feature non-binding twin action bars, positive steel-to-steel lock-up, an anti-jam elevator, and dual extractors. Their lightweight anodized aluminum receivers provide added durability and ease of operation by right- or left-handed shooters. The Compact Cruiser AOWs have Mossberg's universally recognized ambidextrous top-mounted safety.

### O.F. MOSSBERG & SONS, INC.

(203) 230-5300  
[www.mossberg.com](http://www.mossberg.com)



## Hexmag Series 2

Hexmag, LLC announces the release of their new Series 2 magazine. This lightweight, high-durability magazine has a revised catch pocket with improved magazine stabilization, providing greater retention in the most demanding environments. Additional changes were made to the feed lips, and a new stripper clip guide was added to increase efficiency in charging the magazine.

Engineered for greater overall performance than other magazines and produced from tough and intensely tested proprietary fiber-reinforced polymer, Series 2 magazines are available in Black, Olive Drab, Gray, and Flat Dark Earth and function in all milspec AR platforms and most that are not.

Combined with dual leg tilt-proof multi-color coded HexID magazine followers and base plate latch plate/identifiers, the Series 2 is durable, ultra-reliable, and affordable. Suggested retail price is \$14.99.

### HEXMAG, LLC

(970) 460-2000  
[www.hexmag.com](http://www.hexmag.com)

## Blue Force Gear Medium Dump Pouch

The Blue Force Gear Medium Dump Pouch is able to be stowed and was designed for extended covert use. A "fish trap" style flap at the top allows magazines and other items to be immediately stowed, but offers additional security over traditional open-top dump pouches. This added security keeps all items stowed when going to prone or getting in or out of vehicles.

The Medium Dump Pouch features the patented Helium Whisper Attachment System that is fully MOLLE compatible and only takes up a 3x2 section on a battle belt, vest, or other MOLLE-compatible platform. The pouch rolls up and secures with a hook-and-loop tab when not in use. The main bag is built from ULTRAcamp™, a hard-use high-performance laminate. Suggested retail price is \$79.00.

### BLUE FORCE GEAR, INC.

(877) 430-2583  
[www.blueforcegear.com](http://www.blueforcegear.com)





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## Second Amendment in Action

### Free-For-All at Walmart

Having finished her Sunday shopping at the Shawnee, Kansas Walmart, a woman was buckling her infant into the car seat when a pair of men who had approached her from behind in a broad-daylight robbery attempt brutally and repeatedly struck her over the head. Seeing the attack, a 33-year old Iraqi War vet rushed in to help, winding up in a tangle on the ground with one of the attackers, who pulled a pistol and shot the Good Samaritan in the face, wrist, and chest.

As the two were rolling on the asphalt, a second Good Samaritan rushed into the fray with a pistol of his own and shot the armed attacker multiple times, killing him. The second assailant fled and was arrested the following Tuesday. The woman and the first Samaritan were both hospitalized in critical condition. The surviving attacker faces multiple charges, including attempted murder.

SOURCE: *The Kansas City Star*, Kansas City, Missouri, 9/14/16

### Chicagoans Can Shoot Back Now

A 22-year old man was sitting in his parked car in the Bronzeville neighborhood of Chicago's South Side, talking with a friend in the passenger seat, when two strangers approached the vehicle with drawn handguns and announced a robbery. But their intended victim was an Illinois CCW permit holder.

Drawing his own pistol, he opened fire, striking one attacker in the head and causing the other to flee. The would-be robber was pronounced dead at the scene. A spokesman for the Chicago Police Department said that no charges would be filed against the victim.

SOURCE: *Chicago Sun-Times*, Chicago, Illinois, 9/29/16



Time spent practicing malfunction clearances is time well spent.

### Equalizer

Standing an inch under five feet tall, the Glendale, Arizona woman counted on her openly carried Glock and her USMC Dad's instructions on how to use it to make up for her lack of size. Walking across a gas station parking lot in the early morning hours, she was approached by a man who asked if she had a cigarette and lighter he could use. Answering him in the negative, she walked past only to feel something cold and metallic pressed against the back of her neck.

The robber curtly informed her that his gun was loaded and ordered her not to move. Instead, as she told reporters, she dropped her soda and drew her own pistol. Chambering a round, she fired once and ran home to call 911, since she feared some other men in the parking lot may have been friends or accomplices of her assailant. The robber was transported to the hospital where he was pronounced dead.

SOURCE: KNXV-TV, Phoenix, Arizona, 8/1/16

### Fair Warning

A 91-year-old Eastpointe, Michigan man got out of his car in a drugstore parking lot and started toward the entrance when he saw a much younger man behaving erratically and walking on a converging path across the lot. As it became apparent it was developing into a robbery, the elderly man warned him off, announcing he had a pistol permit, but to no avail.

The young man closed the distance and pointed an unknown object at his intended victim, and the older gentleman responded by pulling his legally carried handgun and opened fire, hitting the robber in the neck and sending him fleeing. Police caught the wounded assailant in the parking lot across the street. He was transported to the hospital pending charges.

SOURCE: WXYZ-TV, Detroit, Michigan, 8/22/16 ©



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## Triggernometry

Most school attendees have an innate dislike of mathematics. Unless looking toward a future vocation directly involving the applied use of math, the majority of pupils usually voice sentiments along the lines of, “When am I ever going to use this garbage when I become the World Skateboard Champion?”

Then years later, you realize retrospectively that you subconsciously use mathematics—especially geometry—every day of your life. Estimating passing distances while driving, or when the 40-foot-tree crunches ten feet of your house roof because you failed to correctly measure the 30-foot intervening space while testing that Horsepower from Hell chain saw, or when trying to outrun a tornado because you figure your self-invented Pythagass Theorem gives better odds than picking a trifecta at a race track.

They all come back to the same root: basic math, be it algebra, geometry or trigonometry. But one field of operations where math is overlooked or not even taken into consideration is that of gunfighting—where trigonometry meets triggernometry.

When dealing with a single adversary and a clear backstop, all you have to consider are marksmanship and time frames. Even if you drop to a lowered firing position to change the angle of projectile insertion, or sidestep to avoid physical contact, as long as the background is safe, you’re clear to fire. Especially when the enemy is at a distance, the only math that enters the equation—no pun intended—is that of exterior ballistics calculus.

But when faced with a single- or multiple-adversary close-quarters encounter, the subconscious geometry slide-rule has to be taken into consideration—especially in a “conventional” urban or domestic conflict. In this situation, there is often a potentially unsafe, ever-changing background and/or foreground, dependant on the dynamics of the fight.

Why is reading the foreground and backstop more difficult at close quar-

ters than at distance? Because of the usually fast-changing geometrics of the Battle Triangle. (If you’ve never heard the term Battle Triangle, don’t worry about it—it’s a cutesy term I just invented.) This term is intended to describe you—the lone gunslinger—positioned at the apex of any one corner of a triangulated battlefield at any given time during the conflict, while your enemy or enemies are positioned at the other two corners. This will continually vary depending on your and his/their foot movement and/or specific location relevant to each other at a specific time.

Before delving any deeper into the problem, two things need to be stated: (1) Avoid contracting the dreaded bug Whatifitis, which consists of overthinking the problem along the lines of “What if this, what if that, what if the next thing?” Overanalyzing can get you killed. And (2) Maybe you should have paid more attention in math class.

If you conduct your range practice solely on a single static target and don’t introduce lateral foot-stepping into your training regimen, you will never encounter the bystander problem until it’s for real. Range safety being paramount, the stationary targets will be conveniently placed where the bullet will terminate in a safe resting place if it penetrates the target. If diligently practiced, what this activity achieves at best is that you become a proficient shooter and weapon manipulator. Even if multiple static targets are used with a stationary shooter, you end up with the same net result—no more, no less. It doesn’t make you a fighter, because the scenario is static and the course of fire is known in advance.

And if—for real—you’re “lucky” enough to be attacked at close quarters and can dispatch him without side-stepping and/or through-and-through projectile overpenetration or deflection into an innocent bystander, obviously you don’t need Pythagoras on that given day.

But on a regular basis, multiple rounds go astray in close-quarters gunfights, some hitting unintended targets. And one of the primary reasons is not

taking angles into consideration—both those of bullet insertion into a moving three-dimensional target, and also of not taking into account that laterally stepping away from a close attacker inversely proportionately widens the background.

In other words, if you were to take three lateral steps off a ten-yard target, the overall surrounding geography wouldn’t change much. But a tri-lateral step off a ten-foot target can open up an immense potentially unsafe background half a mile behind the target in an urban setting.

The close attackers are the ones from whom you need to step away (unless you choose to advance and close the distance). Nobody can make a shot when visually reacting to a fast-advancing target rushing in from ten feet away. You’ll be lucky to clear leather if you don’t move your hind paws.

Scenario: You’re unexpectedly set upon by a knife-wielding thug at an ATM. Quickly side-stepping, you draw your pistol and launch lead at your attacker. He goes down, and you breathe a sigh of relief that you escaped his windmill-like blade. But then you happen to notice a crowd gathering around a prostrate school kid 200 yards down the street.

Congratulations. You can warble all the “Judged by 12, carried by six” clichés you want—you’re now legal toast. Life’s not fair, and there’s no perfect answer. But in your training, you might want to implement the use of lateral footwork, moving three-dimensional targets (both hostile and innocents), and brush up on your multi-visual plane observational powers (such as you employ during a high-speed pursuit).

You don’t want to contract a case of Whatifitis, and you can’t ever foretell the result of a gunfight, but a couple of hours going over basic geometry can’t hurt. As the buxom young lady who’d been hired solely for her physical attributes told an acquaintance, “This isn’t rocket surgery, you know.” ☺

*[This column first appeared in the January 2008 issue of S.W.A.T.]*



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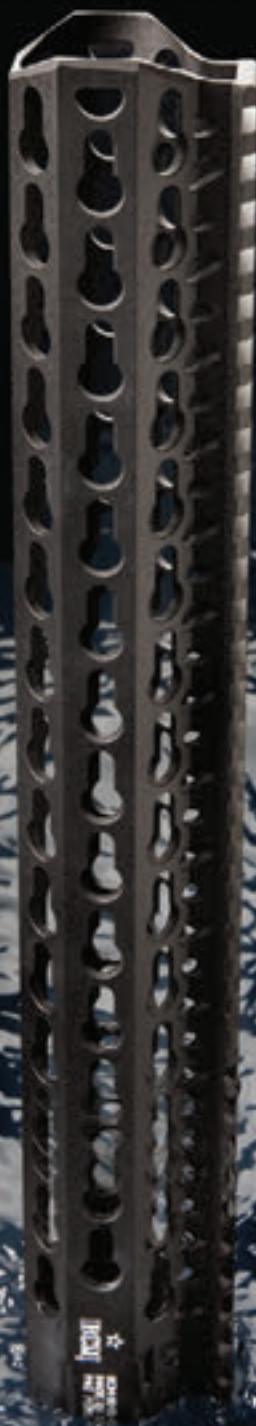
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