# MOSSBERG 930 SPX SEMI-AUTO SHOTGUN PACKAGE **SURVIVAL WEAPONS AND TACTICS** Anything Less May Be Un-American BEATING THE FLINCH THE TERROR GAP **HOMICIDE BOMBERS** TACTICAL CASUALTY CARE TACTICAL RANGEMASTER ON THE ROAD GTIPLIER Christensen Arms OFDATED GRASSIC **TFM Precision Rifle** Smith & Wesson **Performance Center AR MAGAZINES** 686 Plus Separating the Good From the Bad



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Smith & Wesson Performance Center 686 Plus
With an extra shot on board and better sights, this upgrade
may earn a place in your arsenal.

BY MIKE BOYLE





MOSSBERG 930 SPX SHOTGUN



T S K

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This 8-shot pistol grip autoloading shotgun is designed with security in mind and comes in the latest concealment pattern, Kryptek Typhon. The winner also receives 200 rounds of Hornady buckshot and slugs, an Elzetta High Output Shotgun Illumination Kit, and Flying Circle Bag Company Scoped Rifle Case.

RUGER AMERICAN PISTOL
Anything Less May Be Un-American

Ruger designed this pistol with input from military and law enforcement trainers. What did they come up with?

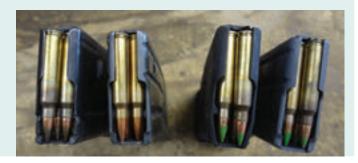
BY DENNY HANSEN 
Cover photo by Straight 8 Photography

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# **BRIEFING ROOM**

BY DENNY HANSEN

# **SHOT Show Report**

**AS** this is written, other *S.W.A.T.* staffers and I have just returned from the 2016 SHOT Show. With 1,600 exhibitors, there was a lot to take in during the four short days.

It was no surprise that AR-15-type rifles seemed to be present in every other booth, with accessories for them in the booths in between. Some designs were quite innovative, while others were more traditional.

Several ammunition companies have come up with new loads for training as well as defensive use. Just one example is the .38 Special 100-grain Xtreme Defense load from Black Hills Ammunition. It will reach 1,000 fps from short-barreled revolvers (and over 1,250 fps from six-inch barrels), penetrates deeply, and makes a larger temporary cavity than conventional hollow points.

For rifles, Hornady showed the new ELD-X bullet in their Precision Hunter line. It should prove to be very good at long range.

The "black rifle" booths that were the most interesting to me were Daniel Defense, with too many top-quality variants to list, and the Bravo Company Mfg rifles at the Battlecomp booth.

At opposite ends of the spectrum, Hill & Mac Gunworks is manufacturing a semi-auto copy of the German StG44—the grandfather of all assault rifles—that will be available in 5.56mm, .300 BLK, 7.62x39mm, and the original 7.92x33mm chambering, while Navy Arms had some beautiful renditions of the Winchester 92 chambered for .45 Colt.

Crye Precision showed me a new bullpup shotgun with a six-round revolver-like cylinder that can be used as a stand-alone piece or mounted under an M-4 type carbine.

Handguns of all types were on display. Some of the more interesting examples were the Ruger American, Kimber's first-ever revolver, Nighthawk Custom's new Browning P-35 Hi Power, and a new Beretta PX4 Compact spec'd by Ernest Langdon.

Optics were big this year. Magnifiers and mounts for use behind red dot sights from Aimpoint, and new scopes from Leupold, Burris and Steiner all caught my eye. Steiner has new binoculars that look a lot like their military line and have excellent light transmission, but with a retail price of only about \$300.

We will be reviewing these and much, much more in the coming months.

Until next time, stay low and watch your back.



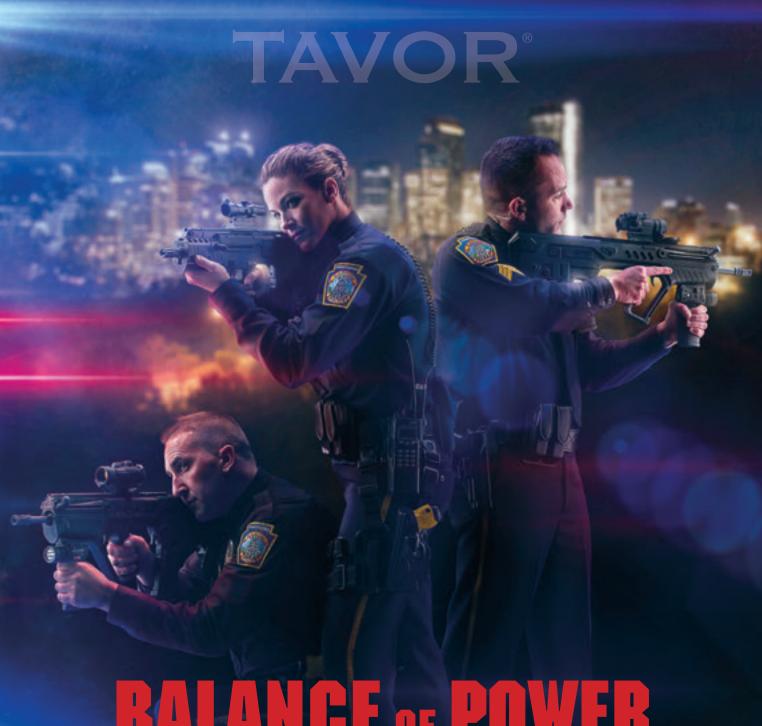
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#### **BATTLE RIFLE BLOWOUT**

I'm looking to buy something in .308/7.62x51mm. I would appreciate a comparison of the M1A/M-14, FN-FAL, and AR-10 style (including Ruger SR-762) rifles. Has *S.W.A.T.* done any articles like that, and if not, could you?

B. W. Van Norman, email

We have covered the rifles you mention but have never done a direct comparison of the different types. Thank you for the suggestion. We'll get to work on it.

#### **JOINING THE LEGION**

I am a subscriber to and long-time reader of your magazine. I am also a retired Army SFC/E-7 and 13-year law enforcement veteran. I just read Denny Hansen's excellent article on the SIG Sauer P229 Legion (JOIN THE LEGION: SIG Sauer P229 Legion Pistol, February 2016 S.W.A.T.).

After reading the article, I decided to buy a SIG P229 Legion for my new everyday carry pistol. My dilemma is

#### SAFETY WHILE TRAVELING ABROAD

I enjoyed Mr. Bolieu's article on traveling overseas (*Against All Odds*, February 2016 *S.W.A.T.*). As someone with over 23 countries under my belt, including four in Southeast Asia and two in the Middle East, there's so much more that can be added to the column, as I'm sure the author knows. A feature article could easily be devoted to the topic.

As a traveler (military or undercover types excluded), you will never blend in. From clothes and hairstyle to possibly skin color, we have "tourist" tattooed on our foreheads the minute we leave the plane. I have a few general recommendations:

Motel in-room safes or front-desk safes are generally secure. In 40 years of travel, I've never had one robbed.

Always keep two copies of your passport and visa—one on you and the other at the hotel. Around-the-neck passport carriers (tucked in—not hanging out saying "Steal me") are excellent. Use an Alosak or similar dry bag to keep perspiration from soaking your documents, especially in hot or humid climates.

In most countries, be wary of carrying a knife of any type, as no doubt many fellow readers do here in the States. That three-inch pocketknife can land you in jail. I was nearly arrested in Japan when they found a Leatherman I inadvertently left in my backpack. It wasn't picked up at JFK but was at Narita Airport while I was making my transfer.

Finally, and I can't emphasize this enough, maintain situational awareness. Standing on a sidewalk engrossed in a map or your smartphone is an invitation to disaster.

J. Urbach, New Jersey

Thank you for the feedback and sharing your extensive experience. We agree that maintaining good situational awareness is critical regardless of the locale.





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choosing between 9mm and .40 caliber. My current carry pistol is a Glock Model 23. It has been a good weapon, and I have no problem shooting it well. I am considering the 9mm because of magazine capacity, but I am also concerned about 9mm stopping power.

I value your opinion, so please give me your thoughts. Thanks again for an excellent publication. I read every issue from front cover to back cover.

B. Hendrix, email

Thank you for the kind comments and taking the time to contact me.

I'm a big-bore fan myself but am less concerned about caliber than shot placement. Like the old saying about real estate: it's all about location, location, location. There are more good 9mm loads now than at any time in history, as technology has impacted (no pun intended) bullet design.

This is very subjective, but I'd personally opt for the 9mm: easier to shoot, a few more rounds, and the availability and cost of ammo.

Denny Hansen

#### **OPTICAL CONFUSION**

I'm getting ready to buy a Ruger Precision Rifle to use for long-range shooting and wild boar hunting. I've been going nuts trying to figure out what scope to put on it. Any suggestions?

S. Yeo, email

Thanks for the question. I'm a big fan of the Burris XTR II that I tested the Ruger Precision Rifle with (LONG RANGE? NO PROBLEM: Ruger Precision Rifle at FTW Ranch, October 2015 S.W.A.T.). However, it's hard to recommend a specific optic, because there are so many variables. Cost is probably the biggest consideration, followed by magnification and even brand loyalty.

Denny Hansen

#### WHEELED WONDERS

The article on the Yamaha ATVs (YAMAHA GOES TACTICAL: Off-Road Adventures at Gunsite, February 2016 S.W.A.T.) was quite a departure from the usual fare I find in your fine magazine. I'm not complaining, mind you, in fact exactly the opposite, and I hope

you can do other stories involving vehicles.

Since we spend a large amount of time in our vehicles, I think many readers would appreciate something with cars and tactical operations.

R. Berry, email

Thank you for sharing your thoughts with us. We covered vehicle-related topics in several articles last year, including RIDING SHOTGUN: Fighting From Vehicles (January 2015), OFF-ROAD RECOVERY: Gear for Vehicle Self-Rescue (September 2015), and WEAPON ON FOUR WHEELS: Escaping The Kill Zone (November 2015).

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Write S.W.A.T. at denny@swatmag.com





# A CHARGING HANDLE FOR THE 21ST CENTURY GUNFIGHTER! BCMGUNFIGHTER CHARGING HANDLE

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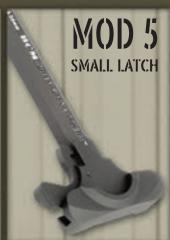


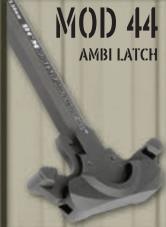
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# **Blade-Tech Total Eclipse**

P eople think that because I work in law enforcement and it is part of my job to carry a gun at work, it's the reason I carry a gun off duty.

The fact is that criminals don't take weekends and holidays off, and neither do I. It is my duty not only as a peace officer but also as a citizen to protect my son, family and friends.

I've all but given up on enumerating the reasons why I carry a firearm to people who simply "don't get it." Now when asked why I carry, I answer the question with a question: "Why don't you?"

Just watching the news on any given day should be enough to prove to people that evil exists and can occur almost anywhere at any time. Perhaps a better answer would be, "I carry a gun to protect you from the wickedness you ignore or pretend doesn't exist."

Whatever handgun is chosen, it goes without saying it should be reliable. Likewise, you need a holster you can depend on. One of the holster manufacturers I



Above: Blade-Tech Total Eclipse Holster with Ruger American pistol set up for right-hand belt carry.

Left: Total Eclipse Holster set up for righthand IWB carry with included Blade-Tech Klipt conversion kit.

have come to know and trust over the years is Blade-Tech. I recently received their latest holster—the Total Eclipse. The sample provided was for the recently introduced Ruger American pistol.

The holster is injection molded from a polymer material, and the fit is very good. Two things I like about polymer/ Kydex holsters is that those from quality manufacturers like Blade-Tech are durable and easy to clean. Just rinse them off, let them air dry, and they are ready to use.

The body of the holster is made of

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two pieces held together with a rivet on the front, a tensioning screw just below the trigger guard area, and four Chicago screws that attach the belt attachments. The holster is dehorned inside and out, so there are no sharp edges to abrade clothing or skin.

The contouring curve of the holster is in the belt attachments, and the holster is molded on both sides, so by simply moving the belt loops to the other side, the holster can be changed from right to left hand. This is useful if you carry a handgun on one side as a primary but want to carry it on the other side as a secondary or backup gun. Included belt attachments are both straight drop and FBI cant.

Also included with the Total Eclipse is the Eclipse IWB conversion kit, featuring Blade-Tech's new easy-on, easy-off Klipt attachment, which lets the user quickly put their holster on without removing their belt.

Long-time readers know I believe it's imperative to carry a reload for the handgun for a variety of reasons. Blade-Tech also sent their new Eclipse SMP (Single Magazine Pouch).

Also an injection-molded product, the Eclipse SMP is held together with four rivets and the four Chicago screws that secure the belt loops to the pouch. The ambidextrous pouch allows magaAbove: Near-mirror image shows versatility of Total Eclipse. Holster on the left is set up for IWB left-hand carry, and holster on the right for right-hand belt carry.

Left: Contour for holster is built into belt attachments rather than the holster itself.

zines to be carried with bullet tips forward or backward.

The Total Eclipse Holster and Single Mag Pouch are a very versatile system with the innovation I have come to expect from Blade-Tech, and are a great choice for off-duty/plainclothes officers or law-abiding citizens.

The Blade-Tech Total Eclipse Holster has a suggested retail price of \$59.99. The Eclipse SMP goes for \$29.99.





Blade-Tech Eclipse SMP is ambidextrous, and bullet tips can point either forward or backward.



# **Homicide Bombers**

WHEN I started to write this column, I prayed that it wouldn't be timely. That's because we're going to talk about bombs and terrorists, specifically suicide (homicide) bombers. These are idiots who intentionally use themselves as a weapon of mass destruction in order to make some kind of grand statement. These incidents are common overseas and may become a threat in the U.S.

Fortunately there have only been a handful of homicide bombers stateside and none of them were confirmed to be terrorism. But only a starry-eyed optimist would believe that trend will continue.

These words were written shortly after the Paris incident late last year when 130 people were killed by jihadist teams using rifles and explosive vests. It appears most of the carnage there resulted from bullets, but in many such

attacks, explosives are responsible for the majority of victims.

Bombs are a near-perfect terror weapon, and a human-borne device is doubly so. Bombs are inexpensive to make in relation to their killing power, the technology used to initiate the explosion is quite simple, and they make a dramatic public statement for the builders. When you add a misguided human as the weapon-delivery platform, it becomes a shocking and formidable weapon system.

The powers of explosives are truly amazing when you consider their weight-to-destruction ratio. A typical suicide vest only holds ten or so pounds of explosive, but is capable of causing injury up to 1,300 feet away due to things such as the nails and ball bearings that are usually added during construction to serve as shrapnel. By the way, explosive material travels up

to 30,000 feet-per-second, so you can't realistically dive for cover during any detonation, Hollywood be damned.

Preventing homicide bombers from carrying out their mission is the key to survival, since the bombs work with such deadly efficiency. We don't have much advice to offer anyone actually caught in a blast other than "Good luck."

Whenever present in a public area that would offer a good terror target, you should stay vigilant for common indicators of potential suicidal bombers. Though we continually beat the deceased equine on this point, you must always strive to stay alert and be aware of your surroundings regardless of the possible threat or probability of danger.

One easy-to-spot sign of impending trouble is someone who noticeably stands out from the crowd. If you are attending a football game and someone is standing alone near the stadium fence,





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dressed in a long trench coat, mumbling and sweating profusely on a warm September afternoon, you have reason to be concerned.

Other common indicators of a possible lurking homicide bomber include: wearing bulky clothing that's inappropriate for the weather or location, furtively and repeatedly messing with articles of clothing (think of Richard Reid, aka the Shoe Bomber), making repeated attempts to enter an access control point or approaching with unusual speed and determination, showing intense interest in or excessive anxiety toward security personnel, and appearing "in a trance" or mentally disconnected from the surroundings. Obviously, someone with a switch or wires in their hand should be considered an immediate threat.

It goes without saying that bombers come in all shapes and sizes, but analysis of incidents overseas shows that a majority of homicide bombers are young males of Middle-Eastern ethnicity. Yes, a gray-haired grandmother from Poughkeepsie *might* be America's first terrorist homicide bomber, but you also would be foolish to ignore the prior trends. Females of the same age

and background have also been seen, as have a few unknowing children.

If you suspect someone is a homicide bomber, your first job is to get away or place shielding such as a vehicle between yourself and the person. Any additional distance and/or hard cover separating you from the device significantly increases your chances of survival.

You must also quickly and safely communicate your concerns to the authorities. This is where breakdowns can occur, because many people subscribe to the "mind your own business" theory of operation and don't want to sound a possible false alarm. But given the stakes involved, you need to err on the side of caution and contact security personnel immediately.

Finally, what can you do if you believe a bomb attack is actually unfolding? Prior experience has shown that, aside from somehow corralling the bomber away from people, the only way to stop a possible detonation is by quickly incapacitating the attacker.

Though most police and military agencies hesitate to talk about such politically incorrect ideas, the common doctrine is to instantly shoot the bomb-

er, in the head if possible, upon threat recognition.

Of course this raises a very sticky wicket: if you are wrong about the person's intent and actions, you have committed murder. That means you have to think quickly and shoot even more quickly. No one said the job of carrying a defensive firearm was easy.

We are blessed that, as of this writing, terrorist bombings haven't occurred in 'Merica, but with the rise of radical Muslim terrorists, it is only a matter of time before it happens here.

We can only hope that a reader of *S.W.A.T.* Magazine will claim the honor of sending the first attempted U.S. homicide bomber straight to hell or wherever such deviants end up in the afterlife.

That would be a blast!

Brent T. Wheat is a former SWAT officer, canine handler, detective, and patrol supervisor who retired after a 30-year law enforcement career in the Midwest. A prolific freelance writer and photographer, he is the publisher of WildIndiana Magazine, a regionally focused outdoor magazine. He can be reached at btwheat@wildindiana.com.



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# **Possibles Pouches**

Look at a photograph or illustration of early 1800s frontiersmen or reenactors of that era and you will most likely see a small leather neck pouch or over-the-shoulder bag as part of their kit. Have you ever wondered what is inside these little pouches or what they are called?

These leather pouches are commonly referred to as possibles pouches, are full of necessities and always kept close for easy access. In the days of the mountain men, a possibles pouch was carried on the belt, over the shoulder, or around the neck. They included all that was possibly needed for the day, such as black powder, lead balls, flint & steel, a patch knife, pipe, and some personal items.

A possibles pouch is not a survival kit. A survival kit is put together with emergencies in mind, while a possibles pouch is meant for day-to-day use and contains necessities plus some items for hygiene and comfort. A possibles pouch stays on your person until bedtime. It should be the last thing taken off before turning in and the first thing put on in the morning.



Traditional-looking possibles pouch from Deep Woods Leather. Leather is the most commonly used material for possibles pouches because of its durability and overall rustic look.

Today, this type of carry has been adapted to modern times and constructed of new materials. Leather and canvas may have been the leading choices of yesteryear, but they were also the only choices.

Now, in the world of synthetics such as Cordura, ripstop nylon, cuben fiber, and vinyl, the options have multiplied. Lighter and larger, yet less durable, bags and pouches are available at sporting goods stores, thrift shops, dollar stores, and online.

I have a few possibles pouches assembled for my specific uses in the outdoors. Some are heavy-duty, all-inclusive pouches, while one or two are for casual day trips.

I keep these close at hand, literally over the shoulder, with my backpack on top. If my pack accidentally goes floating down the river or I decide to scout the area near my established camp, the possibles pouch goes with me—period!

This isn't a purse. In fact, anyone can tell the difference between a purse and a possibles bag just like they can see the difference between a mountain man and a girly man. Make no mistake, wearing a possibles bag is manly—mountain manly!



Author's possibles pouch stays within close proximity of his sleep area. It's the last thing he takes off before sleeping and the first thing that goes on in the morning.

## STAYING ORGANIZED

After years of fine tuning my gear and

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Author's personal preference for his possibles pouch, suitable for woods or jungle. Author encourages people to make their own pouch to suit their environment and style.

needs, I've realized that the same gear doesn't work for every type of terrain, yet the essentials don't change much, no matter where in the world I find myself.

I have one pet peeve during backpacking and survival class trips: I hate emptying my pockets at night and finding a place for everything, and reloading my pockets and gearing up the next morning. It's easier to grab one thing and go. It keeps things organized and easy to get to.

Without making this a "what I carry

in my kit" list, I will just mention what I keep in my pouch in addition to the essentials. During a multi-day camp, I make sure to have the most indispensable survival items with me. Then I add a sharpening ceramic or some kind of light and packable sharpening device.

I keep one ounce of hand sanitizer as a quick way of staying hygienic outdoors. I carry Carmex lip balm in a squeeze tube for not only the obvious, but also for spreading on a cotton ball as extra fuel during emergency fire lighting. (Lip balm has hundreds of uses in

the outdoors as well as at home.) I have a small Wisp-style toothbrush that I use for a few days before discarding.

I carry a one-ounce glass vial of iodine to treat water and a small water bag, along with half a tube of Neosporin for any minor cuts. I have an extra AAA battery for my light. Lastly, I throw in a small chunk of Fatwood for an extra measure of fire lighting.

One possibles pouch I own is large enough to stash a small aluminum coffee cup that started life as a venison sausage can. All my kit contents nestle in the cup and easily fit inside my pouch. I also store my ID, debit card, money, and emergency contact card in a small Ziploc bag (backpackers' wallet) in the possibles pouch.

#### **POUCHES**

If you want a traditional-looking possibles pouch, look no further than Matt Lesniewski of ML Knives. His bags come in various sizes and can be custom made to your specifications, but they are a little on the expensive side.

Just below his bags are those that can be obtained from mass-produced outfitters like Crazy Crow or Track of the Wolf—mostly of fair quality and made from leather and synthetic leather.

For a more modern and lighter approach that won't break the bank, check out Gossamer Gear's pouches, which can attach to a backpack hip belt or hang free. These are the lightest that can be found—period! Materials range from ripstop nylon to cuben fiber, the lightest materials for tarps and backpacks.



Lewis N Clark neck pouch is a lightweight and inexpensive approach to a possibles pouch.



Author used this small possibles pouch for about five years all over the world. Possibles pouch must be compact, comfortable, and durable.



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I have had good luck using a traveler's neck pouch from Lewis N Clark. It's a lightweight, light-colored ripstop nylon pouch that can be worn around the neck or over the shoulder for more comfort and security. These are easy to find online or in travel stores.

I have also found possibles pouches suitable for the outdoors in Mexico and Peru. They do fine leatherwork in both countries and often do custom work while you wait or go for a drink.

The three leather possibles pouches that I rotate all come from Mexico and are good quality. Some arts and crafts stores carry pouch kits that need to be assembled but come with all the pieces and instructions. I used one like this for five years before changing it out for a larger pouch. It carries the marks of well-used leather from smoke, sweat, moisture, soot, and dust, and will forever smell like a campfire.

Nylon camera and binoculars cases make good possibles pouches. To help conserve room inside the pouch, take advantage of the zippers and hang items like clip-on lights, whistles, compasses, or other useful gadgets from them. Military surplus bags (first aid or ammo pouches) are also good options.

As you can see, a possibles pouch is the opposite of a survival kit like an Altoids tin that people cram full of anything small enough to fit inside. Carrying a possibles pouch is more along the lines of carrying larger, important items that improve one's life in the outdoors, plus some tools like sharpeners, files, medications, or even a cup.

Trial and error will tell you what you need and what you don't need in your possibles pouch. Just don't call it a purse!





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# SMALL ARMS AMA CROSSROADS

uring a recent trip through Israel, I was struck by the suffocating influence of history on current affairs in the Middle East.

Some 4,000 years ago, the patriarch Abraham fathered two sons. The elder Ishmael was birthed by the handmaiden Hagar and went on to spawn the Arab peoples. The younger Isaac was the son of Abraham's wife Sarah and his descendants became the Jews. Now four millennia later, the undying enmity that burns so brilliantly between these two groups stands in cacophonous testament to the timeless truism that our actions have consequences.

In the same manner that this common origin could produce such profoundly disparate cultures, a single man fathered the overwhelming majority of the free world's small arms. Starting in the 1950s, Eugene Stoner began unconventionally applying modern manufacturing techniques adapted from the aerospace industry. In so doing, he shaped the complexion of the world's small arms even into the Information Age.

#### IN THE BEGINNING

The origins of the AR-15 are exhaustively documented. While working for ArmaLite, a division of Fairchild Engine & Air-

# Origins and the ArmaLite AR-180

BY WILL DABBS, M.D.
PHOTOS BY SARAH DABBS

plane Corporation, Eugene Stoner and a team of engineers designed a rifle so advanced its very appearance proclaimed its uniqueness.

At a time when the world's weapons were all forged steel and oiled walnut, the AR-10, the 7.62x51mm precursor to the AR-15, was built from aircraft aluminum and phenolic polymers. The light weight, unconventional chambering, and timeless ergonomics of the subsequent scaled-down 5.56x45mm AR-15 captured the imagination of policy makers in a way never before seen nor subsequently repeated.

ArmaLite AR-180 represents Eugene Stoner's next generation design following up on the AR-15. Making maximal use of steel pressing technology, AR-180 was designed to be manufactured in places that lacked first-world industrial capabilities.





As a result, despite some well-publicized initial shortcomings, the M16 went on to become the longest-serving military rifle in American history.

Like most revolutions, the design of the AR-15 had its origins in predictable spaces. The direct gas impingement system that is both hailed by skilled marksmen as exceptionally accurate and decried by critics as unreliable in combat had its genesis in the World War II-era Swedish *Ljungman Automatgevär* AG-42 rifle.

The machined aluminum receivers mimic aircraft components, and the polymer pieces have their origins in the synthetic Bakelite of WWII.

The 5.56mm round began as a modified .222 Remington sporting cartridge. Enhancements such as chrome-plated chambers and bores arose out of necessity exposed by hard experience. The resulting rifle, while indeed extraordinary, required an advanced production capability to manufacture.

ArmaLite was never really in the business of producing weapons. Their mission was one of research and design. The ArmaLite business model had their design team prototyping weapons and then licensing their manufacture to established production firms like Colt.

Once the AR-15 was sold and the books closed on that project, it was time to move on to something different.



Fire controls on AR-180 are bilateral. Apparently left-handed people were not invented until the late 1960s.

Original AR-15 went on to become the M16. While futuristic and groundbreaking, M16 required advanced manufacturing capabilities to produce.

#### **EVOLUTION IN ACTION**

The next generation was actually called the AR-16 and it strived to remedy some of the inevitable manufacturing challenges implicit in using aerospace technology on small arms. The AR-16 looked and felt like something out of the Buck Rogers serials, but all that awesome came at a cost.

Manufacture of the rifle required advanced capabilities to produce the aluminum forgings necessary to build the receivers. This kept the market closed to smaller, less technologically advanced nations. Arthur Miller, Gene Stoner, George Sullivan, and Charles Dorchester saw this as an opportunity and designed the AR-16 accordingly.

The 7.62x51mm AR-16 took some of the basic concepts that made the AR-15 so revolutionary and adapted them to allow the rifle to be built in simpler places. Gone were the expensive aluminum receivers with their elegant geometry, now replaced by stamped steel components that could be pressed out on industrial metal presses by legions of semi-skilled workers.

While the dies required to undertake such pressings cost



Spring-loaded sheet steel dust cover occludes bolt face when rifle is not in use. Firing first round pops this door open.

a holy fortune, once they are built, installed, and calibrated, they produce parts en masse at very reasonable cost. As manifest in the AR-16 design, this meant a lot of rifles could be produced in nations with only modest production capabilities and semi-literate workers.

While the AR-16 dispensed with the aluminum receivers of the AR-15, it also did away with the controversial direct gas impingement system of operation. While innately accurate and elegant, this Swedish contrivance did dump scads of fouling back into the rifle's action and necessitated frequent cleaning and regular maintenance. By contrast, the AR-16 was designed around a more conventional short-stroke gas piston design that kept most of the grunge out forward and away from the action.

Mr. Stoner and ArmaLite parted company soon thereafter and the AR-16 took its place in history, never to go beyond the prototype stage. But the subsequent progeny, the scaled-down 5.56x45mm version of the AR-16, titled the AR-18, went on to find some serious legs.

### TRANSITIONAL FORMS AND EVOLUTION

The AR-18 and its semi-auto civilian counterpart, the AR-180, were comparably revolutionary in their own right. Stocks were made from a robust black polymer and the major components, including the fire control system, were pressed sheet steel. The rifles sported sinister flash suppressors and lightweight detachable box magazines as well as the now-familiar 5.56x45mm chambering.

Sensing a gold mine in the making, ArmaLite pushed the rifles on the international arms market. The angle was simply that underdeveloped nations could purchase the manufacturing rights and build up their own domestic supply of small arms independent of larger benefactor countries that might provide guns with strings attached. Alas, the timing just wasn't right.

The AR-180 was built in California, Japan, and England before it spent its steam and ran its commercial course. Interestingly, the Japanese saga ended when AR-180s, called "ArmaLites" conversationally in the parlance of the era, started



AR-180 magazines (left) are similar to their more familiar AR-15 counterparts save a small retention slot on the right side. AR-15 mags may be converted with some careful drilling and file work while still remaining usable in both rifles.

showing up in the troubles in Northern Ireland. When these guns were found to have been diverted for use in an active armed conflict, the Japanese ceased production and washed their hands of the design.

The sale of these rifles in the U.S. during our involvement in Vietnam was said to have caused some angst as well. The English version had the worst production quality of the three types, but all the guns ran fairly well. The design was all stamped steel and welding, and the guns could indeed be produced using fixtures and presses fairly easily.

## SIBLING RIVALRY

Since you are savvy enough to be reading this magazine, you know how an AR-15 runs. I'll spare you the rehash. But the AR-180 has its own quirky personality.

The charging handle reciprocates and serves as its own forward assist in the event of a sticky round or fouled chamber. This component has an interesting serpentine geometry to allow manipulation by either hand as appropriate. The safety selector is in the same spot as the AR-15 but is am-

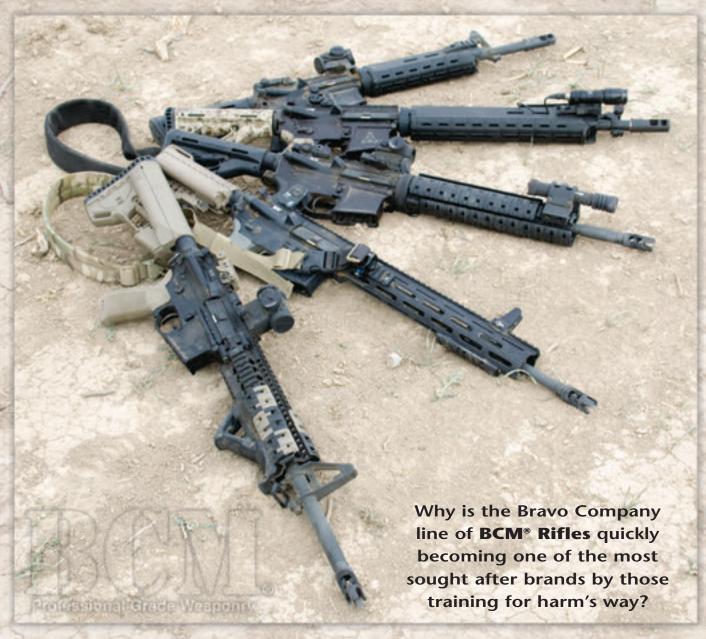


Recoil spring on the AR-180 is contained within the upper receiver assembly. This allows the rifle to incorporate a side-folding stock that makes it quite compact.



Like most of the rifle, magazine release is comprised of stamped steel component parts. Use of stampings made AR-180's design more amenable to less-developed societies than did all the forgings and millings required of the AR-15. Hammer and trigger pins are retained by simple industrial fasteners.

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Sights on AR-180 are typical of its era. Flip rear peep sights are easily adjustable for windage.



Flash suppressor on most AR-180s is similar to open-pronged version on original AR-15. While incrementally better at eliminating muzzle flash when compared to a closed sort, this design was prone to catch on vines and brush. Later AR-180s offered closed birdcage design.



Front sight on AR-180 is fenced and adjustable for elevation.

bidextrous, an advanced notion for its day. Apparently left-handed people were not invented until the late 1960s.

Magazines are functionally identical to those of the AR-15 but are retained via a unique slot cut into the right side of the device. AR-15 mags may be successfully adapted for use in the 180 with a drill press and some careful file work. The bolt locks open on the last round fired and is released by giving the charging handle a quick snatch to the rear.

There is a spring-loaded dust cover that protects the operating slot on the right of the gun and pops open when the first round is fired. The recoil assembly is retained within the receiver so the buttstock is free to pivot around to the left to be retained in the closed position via a spring-loaded catch. Stripping procedures are straightforward enough, and the flip-up sights are similar in form and function to those of the AR-15. The AR-18 is the same rifle, only equipped with a full-auto happy switch.

#### PRACTICAL TACTICAL

On the range, the two rifles have distinctive personalities. The AR-15 sports that distinctive twang as the buffer and spring cycle mere millimeters from the firer's cheek. The AR-180 dispenses with this novel distraction. The AR-15 does indeed feel a wee bit smoother in action, but practical accuracy between these two old rifles is very similar.

The manual of arms for the AR-180 is fundamentally different from that of its AR-15 progenitor, but I am not sure that it might be an improvement. The T-shaped charging handle of the AR-15 looks cool but has always seemed a wee bit awkward. The more utilitarian exposed steel handle on the 180 loses a few cool points but is simpler and easier to run tactically.

Magazine changes are comparable, and both guns weigh about the same. The slick plastic furniture is similarly slippery between the designs, and muzzle flash is about the same after dark. Slings on both guns attach on the bottom in the exact wrong spot for tactical applications, though the open front sight base on the AR-15 does offer a few more mounting options.

#### **GENERATIONS**

The AR-180 was rumored to be a bit frail for general military use, though the IRA revolutionaries who wielded them bragged on the guns. The truly fascinating piece of the story rests in where the design went after the AR-180 died of natural causes. The basic Stoner-inspired short-stroke piston-driven operating system subsequently showed up in some of the most unexpected places.

The extraordinary Austrian Steyr AUG used a heavily modified version of this system, while the British SA80/L85 bullpup and German HK G36 copied the basic design almost completely.

Later designs like the FN SCAR and Beretta ARX-160 were clearly influenced by the short-stroke system, and components of the system can be found on guns of varying notoriety around the globe.

Enterprising designers have even made a proper splash by melding the remarkable ergonomics of the AR-15 with the cleaner system of the AR-180 to produce some truly extraordinary hybrids. The HK 416 that sent Osama bin Laden to his gory end is a perfect example.

At times, some of the most remarkable products spring from a common foundation. While the far-sighted observer will appreciate that Jews and Arabs are all brothers in a geopolitical sense, similarly the M16, G36, AUG, SA80, SCAR, ARX, and scads of other designs all sprang from the fertile mind of Eugene Stoner.

Despite the inevitable rivalry that arises from all fraternal relationships, these two disparate small arms, the AR-15 and AR-180, remain complementary stepbrothers in the purest sense.

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# The Terror Gap

IN the wake of the hideous acts of terror in Paris last November by the extremist Islamic group ISIS, gunban zealots here in the U.S. have perceived an opportunity they dare not miss—to exploit those murdered in France to advance their agenda of forcible citizen disarmament here at home.

One of the first moves has been the renewed effort to empower the Attorney General to unilaterally deny "suspected terrorists" the right to purchase firearms, without a conviction, without an indictment, without so much as an arrest or formal charges against the would-be gun buyer.

Such efforts are nothing new, with bills purporting to close the so-called "terror gap" being introduced in both chambers of Congress every year, going back at least as far as 2007. Those bills went nowhere, even with a rabidly antigun Democrat President, even when his party enjoyed a near super-majority in both chambers.

But those efforts have reached a fever pitch in the aftermath of the Paris atrocities, with anti-gun politicians, gun-

ban advocacy organizations, and the mainstream media shrilly demanding this legislation with an intensity never before seen.

Democrat Presidential frontrunner Hillary Clinton took to Twitter in November to state that, "After the events in Paris and with thousands of gun deaths in the US each year, hard to fathom this from the GOP," with a link to a *New York Daily News* article titled "NRA, Republicans block proposed law to stop suspected terrorists from buying guns in U.S." From the first sentence, the authors left no room for ambiguity about their opinion of opposition to such legislation:

The NRA—and their gun-loving Republican cohorts—are refusing once more to stop terrorists intent on getting armed in the U.S.A.

To illustrate how reckless and irresponsible it is to block these efforts, the article points to the

thousands of guns that have been bought by people on the terrorist watch list, and to the low rate of rejection of such purchases:

While the bill remained a nonstarter, more than 2,000 suspects on the FBI's Terrorist Watchlist bought weapons in the U.S. over the last 11 years, according to the federal Government Accountability Office.

The GAO reported that 91% of all suspected terrorists who

tried to buy guns in America walked away with the weapon they wanted over the time period, with just 190 rejected despite their ominous histories.

These numbers are trotted out every time someone pushes such legislation. There is another relevant number, though, that these people never mention—zero. That, it turns out, is the number of acts of terrorism—or even some lesser violent crimes—carried out with these firearms. More than 2,000 such purchases, over more than a decade, and *not one* act of terror abetted by the sales. Apparently that doesn't fit the desired narrative.

It should be noted, by the way, that the gun-ban zealots have an answer of sorts to the objection that the entire point of the Second Amendment's protection of the people's right to keep and bear arms is defeated if the Administration can simply designate those they deem to be political enemies as "terrorists," and cancel their right to arm themselves.

Their reply to that is that the legislation contains provisions for the "suspected terrorist" to appeal the designation,

and if he prevails, he can then purchase a firearm.

There are a couple of problems with this.

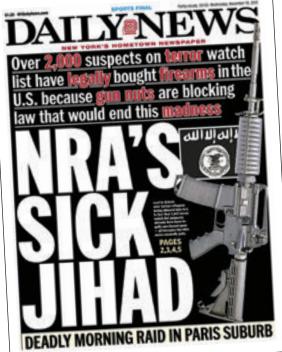
For one, as Martin Luther King, Jr. once said, "A right delayed is a right denied." A right delayed and *maybe* reinstated only after the expenditure of thousands of dollars in legal fees is a right denied even more harshly.

But that's far from the worst of it. In the appeals process, if the Department of Justice asserts that revealing its evidence against the "suspected terrorist" would "compromise national security," that information can be withheld, with the court apparently expected to simply take DoJ's word on the merits of the accusations.

And it gets worse. Claiming that gun rights advocates, in opposing this and other forcible citizen disarmament legislation, are abetting ter-

rorism, is no longer enough. Now, in the eyes of these people, the "gun lobby" (nearly always used as a synonym for the NRA) has *become* the terrorists.

Thus the Brady Campaign's President Dan Gross has argued that the NRA should not be brought to the bargaining table to discuss gun regulation because, "This is not a negotiation with the NRA. We don't negotiate with terrorists." In this, he echoes John Rosenthal, founder of the Stop Hand-



via www.nydailynews.com

gun Violence gun-ban group, who says that, "In my mind it is a terrorist organization..."

Clinton went perhaps even further when, in 2014, in a reference to gunrights advocates, she told a *CNN* "town hall" meeting that "We cannot let a minority of people, and that's what it is—it is a minority of people—hold a viewpoint that terrorizes the majority of people." Yes; she wants to prohibit a politically incorrect *viewpoint* about guns.

And don't forget the media—they most certainly have not forgotten about gun owners. The *New York Daily News* described the NRA's opposition to the "suspected terrorist" gun ban as "The NRA's Sick Jihad," while their columnist Linda Stasi demanded that the NRA *itself* be put on the terrorist watch list. Combine those two ideas and suddenly every NRA member is denied the right to purchase firearms.

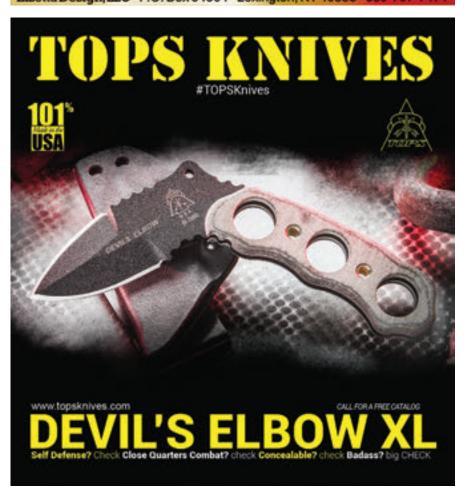
But it's even worse than *that*. The Obama Administration claims the right to assassinate "terrorists," including those who are American citizens, using armed drones or whatever other method appeals to the government. The apparent efforts to disarm the entire NRA membership are beginning to gain a sick, twisted kind of logic. As ISIS could tell you, killing is much easier when the victims are disarmed first.

Those who want gun-rights advocates designated as terrorists are perhaps courting some pretty severe unintended consequences. If the millions of Americans who are NRA members (plus the hundreds of thousands who are members of more hardcore, less compromising gun-rights advocacy groups) are to be branded "terrorists" and face the repercussions of that designation, what incentive do we have to continue to refrain from using violence and force of arms to achieve our political goals?

If we're already "terrorists" before we start fighting back with bullets instead of words, how much worse can our situation get if we really do start pulling triggers in anger?

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.





# **Beating the Flinch**

**S**tance, check. Grip, check. Trigger finger placement, check. Sight alignment and sight picture, check. Anticipating the shot, frustrating.

Long ago, when I first graduated from the .22 long rifle and began playing with the big boys, I developed a problem we have all faced at one point or another. Anticipating the shot, or flinching as it is better known, is a plague that infects many new shooters when moving up to a cartridge with a little more oomph.

I beat my flinch by shooting it out. With a lot of lead downrange, my brain finally figured it out. After much reflection and research, I figured there has to be a better way, at least one a little more thought out and efficient. Working with many different shooters with different experience levels led me to discover a method to the madness.

In breaking the flinch, we have to

train the brain through repetition to deal with something that is not completely natural. Let's face it, holding in your hands two feet from your face something that makes a thunderous boom and tries to jump out of your hands isn't exactly a natural thing for your brain to deal with.

Dry-fire practice is great, but the brain is smart and knows there isn't a live round in the chamber to make the big bad kick and boom. To set the stage for the brain to accept this unnatural process, we first need to confuse the brain, then slowly add parts and pieces until completion.

Once it is determined that the shooter has a flinch, the next step is to remove the brain's connection of the trigger finger controlling or making the kick and boom. With a magazine loaded with live rounds, have the shooter load and chamber a round. After punching out

on target and acquiring the proper sight picture, have the shooter keep their trigger finger straight along the frame.

While repeatedly communicating with the shooter to see if they are still on target, place your finger on the trigger and press to the rear for them until the shot breaks. This drill removes the brain's association of the shooter's trigger finger causing the kick and boom. After a few rounds of this, the shooter should become more familiar and comfortable with the fact that firing the handgun is not a threat and there should be no need to flinch to subconsciously prepare them for the unnatural act.

Once the conscious or subconscious uneasiness is gone, the shooter needs detailed concentration on pressing the trigger. It is often said that the visually impaired can hear and feel more efficiently than the average sighted person.



An instructor pulling the trigger for the student forces the brain to deal with recoil and the gunshot sound without the trigger finger causing them. The brain quickly learns that anticipation of the shot with the trigger finger isn't necessary to deal with the recoil and sound.



Closing the eyes allows more attention to be devoted to the remaining senses. Many shooters describe feeling parts of the trigger pull they'd never recognized before, resulting in greater focus on the principles of proper trigger manipulation.



# Muscle memory is built by the firing of nerves in the brain. For those nerves to fire naturally takes a great amount of repetition.

By removing one of the five senses, we can give more attention to those still in use. This method is the focus of step 2.

Loading a magazine randomly with live rounds and dummy rounds, have the shooter punch out and acquire the sight picture. Once the shooter is on target, have them close their eyes and fire the live or dummy round. Once the shot breaks or clicks, have the shooter open their eyes and allow the trigger to reset.

After questioning shooters I have used this on, they have all said that they are able to concentrate with much more detail on the process of the trigger press. Many have said they are able to feel unique points in their trigger that they had never felt before. The dummy rounds or snap caps allow for visual confirmation of whether the shooter is still flinching, as well as keeping the brain confused about if it is a live round or not. Once the shooter is confident

in the detail of their trigger control, we move to step 3.

The third drill is conducted in the same way as the prior drill, but with the eyes open. Ensure that the shooter has no way of knowing how the rounds are loaded in the magazine. When a dummy round or snap cap is encountered, the shooter can treat it as a failure to feed/failure to fire drill.

Once the eyes are opened, the shooter may revert back to their old ways and you may see flinches resurface. When this happens, start the entire process over immediately. It doesn't have to be as in depth or lengthy, and only a few rounds may be needed in steps 1 and 2 before returning to step 3 again.

It is imperative that the first two steps be conducted again when a flinch is found during step 3, because of how the brain and muscle memory work. Good trigger control is muscle memory and is only ingrained by repetition. If bad repetitions are allowed, the shooter will be spinning their wheels on the road to progress.

When the flinch has been broken and the shooter is displaying consistent and proper trigger control, it's not the end of the road. Muscle memory is built by the firing of nerves in the brain. For those nerves to fire naturally takes a great amount of repetition.

When a habit is formed, certain nerves fire together. When these nerves fire together repeatedly, they wire together, creating the ability for a subconscious action or habit to take place.

To break a developing or existing habit, the new nerves have to fire together enough times to wire together, making them the natural action.

Jayden Quinlan is a former Navy small arms and martial arts instructor. He currently works in research and development for a major ammunition manufacturer.

# Meprolight FRBS Back-Up Iron Sights

MOST likely almost everyone reading this who uses a battery-powered optical sight has had the battery die at some point while shooting a rifle or carbine. I say "almost" because I know a few of you are assiduous enough that you change your batteries at regular intervals to avoid this problem. I'm semi-assiduous, as I try to change my batteries at regular intervals but sometimes forget.

In any case, if you use optical sights on your M4 or other combat carbine, I highly recommend that a set of BUIS (Back-Up Iron Sights) be installed. I use Trijicon, ELCAN, EOTech, and Aimpoint optical sights because I test a lot of carbines and like to stay familiar with the optical sights I'm likely to encounter.

The Trijicon ACOG does not use batteries and is very durable, so it is normally not necessary to go to BUIS, but I still install them. On ELCAN sights such as the Specter DR, batteries are required but a small BUIS is incorporated atop the optic for emergency use. It works at close range but is not as precise as good BUIS at longer distances.

I consider BUIS especially important with EOTech and Aimpoint optical sights. Both require batteries, though the Aimpoint is designed for long battery life. Both also lend themselves well to use of the BUIS, since folding sights may be installed that allow use through the optical sight if its red dot or holograph dies.

Actually, I have found with the Aimpoint that if I install my BUIS correctly, I can shoot more accurately at longer distances when the red dot is on by centering it in the BUIS.

OK, so as the Hulk would say, "BUIS good!"

Given that premise, I want to discuss the Meprolight FRBS, which adds night sights to very well-designed Back-Up Iron Sights.

As it happened, when my set came in to test, I had just re-installed an EO-Tech on my Sabre Defence M4 and was trying to decide what type of BUIS I wanted to use with it. As soon as I examined the FRBS, I decided it was go-



Above: Rear FRBS is mounted so that when flipped up, it allows use through the EOTech. It can be brought into action immediately if the holographic reticle fails.

Below: Front FRBS sight flipped up and showing tritium insert. Dial permits easy adjustment for elevation.



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Rear FRBS sight folded, with larger aperture showing.



Shooting M4 with both FRBS sights flipped up.

ing to be my choice, assuming it performed to expectations.

Among the features I find appealing about the Meprolight FRBS are that the front sight is adjustable for elevation by turning a dial with the fingers, and the rear sight is adjustable for windage also using a dial. There is no need for the familiar front sight tool or screwdriver that can get lost.

The front sight has a tritium insert, while the rear sight incorporates either two or four tritium dots. The rear sight offers two peeps, with the smaller one allowing quite precise shot placement. The sights fold rearward, so they can be quickly deployed from either side of the carbine using the thumb to flip them up.

The FRBS installed quickly and easily on a MIL-STD 1913 (Picatinny) rail. Some care must be taken in installing the rear sight that room is left so it can be flipped up without hitting the optical sight, but since eye relief with the EOTech is fairly long, this was a no brainer.

Installation of the front sight would normally be as far forward on the rail as practical. Once the sights were installed and tightened down, I tried flipping each one up half a dozen times and found that they were quick to deploy and locked in position solidly. Pressing them back down folds them and there is no release lever to be pushed to raise them. Just apply upward and forward pressure with the thumb or finger.

As I normally do for BUIS, I zeroed the FRBS at 25 meters, as this will be close to on at 200 meters and relatively close in between. I would not normally expect to use BUIS past 100 meters.

I like the option of using the wider aperture or the peep aperture on the FRBS. With the peep aperture, I could ac-



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Proper mounting of two sights with the EOTech.

tually shoot more precisely than with the holograph of the EOTech. My vision is such that I do not see the holographic reticle really sharply. I see it fine for quick reaction shooting on a man target, but not well enough for precise shooting.

I found that the finger-operated dials made adjustments for windage and elevation easy. For some reason it took a lot of rounds to get elevation really dialed in, but once it was, I

could shoot very well with the FRBS. Using some targets a friend has made for 25-meter shooting but that duplicate the sight picture at 150 meters and employing the peep sight, I shot good three-shot groups with the FRBS.

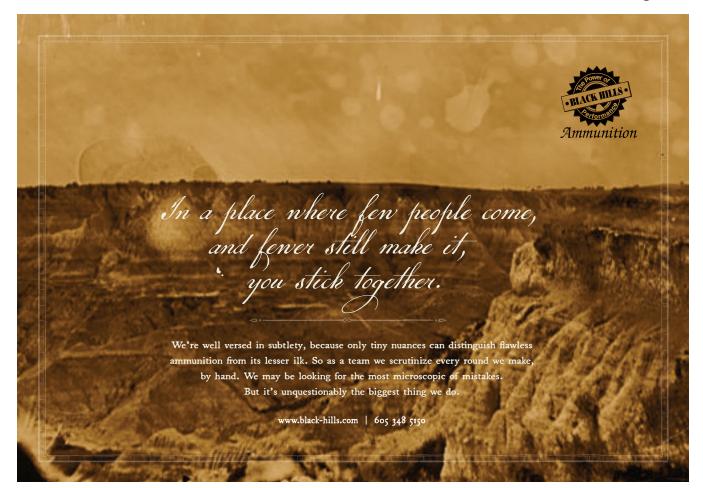
Overall, I am quite impressed with the FRBS. It is a very usable BUIS for daylight but is especially useful at night. There are two options for the rear sight—one with two tritium dots and one with four. The tritium inserts are only on the larger aperture. The one I tested had four and let me acquire the front sight quite well.

The best summation of why I like the FRBS so much is that

it does everything a standard daylight BUIS does with the added advantage of night-fighting capability.

Suggested retail price for the version with four dots is \$194.76, and the two-dot version is \$178.05. (6)





## RANGEMASTER ON THE ROAD

## Instructor Development Class | BY ED LAWRENCE

hen it comes to defensive firearm training geared specifically toward private citizens, I feel confident in stating that Tom Givens is one of the best instructors in the U.S. I can say this because I have been in his class, and because over 60 of his non-LEO students have prevailed in shooting encounters with criminals.

That last figure is kind of amazing, but keep in mind that Tom spent nearly two decades running the largest indoor range in Memphis, Tennessee, a city with a very high crime rate. Something like 5 to 10% of the nation's justifiable homicides take place in Memphis—a city where around 50,000 people, or nearly 7% of the population have concealed-carry permits.

There, Tom and his staff taught thousands of students everything from the state-mandated concealed-carry class to a variety of more advanced firearms classes.

Tom himself spent 25 years in law enforcement. For many of those years he was a detective. He investigated violent crimes and interviewed victims, including shooting victims. Tom drew heavily from this experience to develop a program of instruction geared toward defensive firearm carry and use by armed citizens. He further refined it based on debriefing dozens of his own students who prevailed in gunfights.

After 18 years running a successful range and training facility, Tom has decided to take his company, Rangemaster Firearms Training Services, completely on the road. Instructing is not something new to Tom. He's been doing it for over 35 years and has been offering instructor classes since 1997.

Givens is passionate about developing grassroots-level trainers to provide instruction to those who need it the most—new shooters and people who have not had any training. Tom feels it is es-



Tom Givens lecturing.

sential to bring new shooters aboard and provide them with competent training.

## INSTRUCTOR DEVELOPMENT PROGRAM

Tom designed this program to develop instructors who could teach people with little to no experience and bring them up to a level of competency where they can carry a firearm and use it if necessary.

I recently attended this class. It was sponsored by Wayne Dobbs and Darryl Bolke of Hardwired Tactical Shooting. Though highly experienced instructors themselves, they participated in the



Students qualify at 25-yard line.

class as ordinary students. Once completed, students were certified to teach this basic material without paying any franchise fees or tithing to Givens or anyone else.

The class was held at the Dallas Pistol Club's private outdoor range and consisted of 12 men and three women, most of whom were actively teaching some facet of firearms—from state-mandated concealed-carry classes to more advanced pursuits. Included among these were two active-duty military, two active-duty peace officers, and two retired peace officers.

After the introductions, each student received a 200-page course manual, which they would be responsible to learn for a written test on the final day. The comprehensive manual covered much of the course material, including everything from firearm, holster and ammo selection to defensive shooting techniques, coaching and principles of adult learning, mindset, legalities, and setting up lesson plans. All of this and much more would be covered in the three-day class.

For the second day of class, students had to present a short block of instruc-

tion on an assigned subject that included some type of visual aid. This was a challenge given the long days and the fact that most of the students came from out of town to attend this class and thus did not have a houseful of things to draw on.

The course was co-taught by Tom's wife, Lynn, herself an excellent instructor and a formidable shot. Women trainers come into their own when it comes to helping women integrate concealment holsters and clothing.

## LECTURE MATERIAL

While the class was geared toward training people how to teach, all the information covered was highly relevant to anyone interested in the defensive use of firearms. Recognizing subtle signs of criminals and the early stages of victim selection were integral to the curriculum. It would take several articles to cover all the valuable information that Tom expounded upon. While Tom's admonition to avoid getting involved in other people's potentially volatile situations seems obvious, judging by news reports, it is something far too many people ignore.

Over the course of the three days, we

alternated between classroom and range time. The first few hours were spent in lecture and discussion. Tom sees gun safety not as range rules but as lifestyle rules that enable you to live safely without presenting an unjustified threat to anyone. Tom also covered selecting suitable handguns for self-defense and provided a comprehensive breakdown of the physical mechanics of shooting a handgun.

Givens always had a solid rationale and explanation for everything he taught. He stressed that this is essential for an instructor. Students—especially new students—have lots of questions that require concrete answers to give them confidence to accept the validity of the material as well as that of the instructor.

When instructing students new to firearms, Tom suggested finding non-firearm analogies to get a point across. One example he used is that a handgun that holds more rounds in the magazine can be likened to a car that has more gas in the tank—it can take you farther without having to stop to refuel if you need to do so in an emergency.

Tom exhibited an amazing command of firearms and training history and could easily pinpoint where a specific technique came from and what the rationale for using it was at the time.

Because this class was geared toward private citizen defensive use of firearms, Tom spent some time discussing the legalities of deadly force and how to teach them. Tom provided a one-sentence legal





lecture that summarizes the basics: "I will forget that I have a gun unless it is to terminate an immediate deadly threat to me or to someone for whom I am responsible."

Givens also spent a good amount of time discussing mindset. He showed videos of people who were victims of violent crime as well as a police officer at a vehicle stop who kept issuing verbal commands while the suspect removed a rifle and ultimately killed the officer.

He contrasted this with films and interviews with Lance Thomas, the California watch-store owner who got into four different gunfights with criminals who came to rob his store and kill him. Thomas prevailed in all those gunfights, killing several armed attackers.

### **RANGE TIME**

When it came time to shoot, we broke into two-person teams. One person would shoot while the other assumed the role of coach. For each drill, the shooter changed places with the partner and became the coach. Every hour or so, students rotated to work with different people. As the class progressed, Tom and Lynn gave the coaches an increasing number of specifics to watch for.

Range work began with the fundamentals of shooting individual shots and then progressed to multiple rapid shots. Multiple shots increased the importance of a firm and proper grip. A weak grip increases the gun's recoil and movement in the hands and requires more realignment between shots. This consumes time.

The only things you have to do between shots are reset the trigger and realign the sights. Coaches watched to see if shooters' fingers came off the trigger or if they were readjusting their grips between shots. Finally we added the drawstroke from the holster.

Building a solid base and learning how to teach it were important parts of the class. Experience and skill levels varied among students. Givens stressed that what you do repetitively on the range will come out when you defend yourself.

The fundamentals Tom placed the most emphasis on were sight alignment and trigger control. A bad trigger pull or jerking the trigger has far more potential to cause a miss than bad sight alignment.

Tom is a proponent of using the sights unless the gun has to be fired from retention. At a distance of two to 12 yards, the flash sight picture typically puts the rounds in the vitals or close to them. The

farther the target, the more the sight picture needs to be refined. Instructor candidates had to be competent out to 25 yards and pass both Tom's course of fire along with that of the FBI. Our class, which admittedly had a few ringers, shot record high scores.

We practiced drills at seven yards where the front sight post was not centered in the rear sight but deliberately off to one side or the other, or too high or too low. The hits were acceptable as long as the trigger pull was good.

Three to five yards are where the bulk of Tom's students' shootings have taken place. At this distance, perfect sight alignment isn't a big deal, but jerking the trigger can cause a miss or a bad hit. Trigger manipulation is the major contributing factor to accurate hits. You can do almost everything else wrong and get the trigger right and achieve decent hits at typical civilian defensive distances.

Tom explained that he dislikes using the word "squeeze" relating to the trigger because squeeze usually means clenching your entire hand, which of course will unsteady the handgun and throw your shot off. Rather, you should concentrate on pressing the trigger straight to the rear and not squeezing your hand. Semantics are important.

One tactic Tom covered was sidestepping while drawing the gun. He advocates this for inside of 15 to 16 feet when there is room to do so and the situation permits it. This movement serves to briefly distract the criminal, since they are surprised by your sidestep while you are drawing.

The final morning included a session on revolvers and how to instruct students with them. While Tom is not a fan of revolvers as primary defensive sidearms in this day and age, he feels that instructors need to be able to teach students who choose them as defensive handguns.

Tom stressed how important it is for teachers to continue their own training under different instructors in order to increase their skills and prevent themselves from stagnating.

Tom and Rangemaster offer a wide variety of classes geared toward people of all experience levels. The overriding emphasis of his classes is civilian defense against criminals.

Even if you have no intention of teaching, the skills and knowledge you will gain about defensive firearms use from Tom's instructor class are worth much more than the price of admission.



During this course, students alternated between shooting and acting as coaches. Students rotated every hour to work with different people.



Students worked with revolvers, since they may be encountered in a class.





# CLASSIC

## Smith & Wesson Performance Center 686 Plus

BY MIKE BOYLE

ike many of my contemporaries, I cut my shooting teeth on a double-action revolver. In the not-so-distant past, revolvers were the tool of choice for those who went in harm's way, and pistols were seldom encountered in the hands of serious gunmen.

This was especially true in the law enforcement community, where wheelguns were pretty much universal equipment. A few of my police academy classmates were issued Smith & Wesson Model 59 9mm pistols, which the rest of us regarded as the devil's tool. Real cops carried revolvers, not jammatics, we reasoned. Obviously our vision of the future was a bit clouded.

Over the last 30 years, the paradigm has shifted 180 degrees, and today's law enforcement professionals are armed just about exclusively with automatic pistols. Responsible citizens have followed this lead and come to prefer auto pistols over revolvers by a very wide margin. Sales of small-frame, easy-tohide revolvers do remain strong, but by and large, we live in a square-gun world.

Despite the dominance of the auto pistol in the personal defense and LE markets, there is still a viable niche for the double-action (DA) revolver. In fact, a very strong case can be made that the DA revolver may, in fact, be the better choice for certain applications. What may surprise some folks is the fact that revolver technology has not stood still.

Some of the classics may no longer be available, but you can now choose from an even wider variety of possibilities boasting features that were unthinkable a generation ago.

For many years, Smith & Wesson has been synonymous with high-quality revolvers. At the 2014 SHOT Show, I noted an interesting variation based on the intermediate-size L-Frame Model 686 Plus .357 Magnum. This Performance Center version sported a 2½-inch barrel, round butt, and a host of other desirable features. Not a pocket popper, but a serious fighting handgun designed for concealed carry.

Although it looked like a winner, other new S&W offerings caught my eye too, and the 686 was shifted to the back burner. But as fate would have it, I soon found a spot where it would be the perfect fit.

## **BEHIND ENEMY LINES**

I live in a state that can hardly be described as gun friendly, and my travels often take me across the state line into New York, either on personal or pro-



Pistol or revolver? LW Commander (top) is roughly the same size as the PC 686 but has a very different manual of arms. Choose the system that works best for you.

fessional business. Several years ago, New York passed legislation effectively prohibiting anyone other than an active law enforcement officer from carrying a handgun with more than seven rounds in the magazine. As a retired law enforcement officer, I can legally carry a handgun, but am restricted to the seven-round limit.

When teaching in New York of late, I have utilized a 1911 pistol and haven't missed a beat. Small pistols and revolvers are fine as backup to more serious hardware, but I prefer something a little more formidable, even when going about on personal business. Might that

short-barreled 686 be the answer?

To cut to the chase, I requested a Performance Center Model 686 (PC 686) Plus for test and evaluation, to see if it fit into my plans. One quality that struck a chord with me was the sevenshot cylinder, which offered an additional round over my old S&W Combat Magnum with 2½-inch barrel. A few other bells and whistles included in this package helped seal the deal for me. Let's see what the PC 686 Plus has to offer.

## DETAILS

Smith & Wesson introduced the intermediate size L-Frame line in 1981, and it met with immediate success. A year later, my agency swapped off our K-Frame Model 66 revolvers for the new Model 686, which was a tad beefier than the K-Frame M66, and it was thought the upstart revolver would stand up better to a heavy diet of hot .357 Magnum loads.

Back in the day, it was not unusual to train almost exclusively with light-recoiling wadcutter loads, fire off a cylinder or two of heavy Magnums for effect, and go forth to fight crime. Agencies and officers who did subject their M19s and M66s to high round counts of hot



.357 Magnum ammo often found their guns shooting loose or with excessive flame cutting in the top strap just above the forcing cone.

I carried an M686 up until we swapped our revolvers for pistols. I also own a couple of other L-Frames that remain personal favorites. Based on this positive experience, the PC 686 seemed like a good idea.

Like my original M686, the PC copy is crafted entirely of stainless steel. At 34.6 ounces, it's hardly a flyweight and weighs half a pound more than the Lightweight Commander I've used for similar applications. But with the right belt and holster, the PC 686 remains within my personal limit for comfortable all-day carry.

A glass-bead finish gives the PC 686 a very handsome yet business-like appearance. The Performance Center logo is present on the left side of the frame, and the words Performance Center are also found on the right side of the slab-sided barrel. Another touch that sets it apart from the regular production M686 is the precision crowned muzzle.

The trigger and the teardrop-shaped hammer are chromed. A critical eye will also note the trigger is about 1/3 wider than that of the standard L-Frame and that it is equipped with a trigger stop to prevent overtravel.

Sighting equipment consists of a fully adjustable micrometer rear mat-



Many shooters still prefer a revolver to a pistol for personal defense.

ed to a red ramp front sight. The front sight is dovetailed to the barrel, which should make fitting an aftermarket sight relatively easy if you prefer something different.

During testing, I noted a significant disparity between point of aim and point of impact in the various .38 Special/.357 Magnum loads fired. The micrometer rear will help you dial in your load of choice.

As indicated earlier, the 686 Plus sports a seven-shot cylinder. The unfluted cylinder is cut to accept full moon clips for a faster reload. I also had on hand a number of seven-shot HKS speedloaders, which saved the day.

## **FALSE START**

It took several months for my dealer to take delivery of the PC 686, and I was getting a bit anxious. As luck would have it, my T&E sample arrived right along with the good weather and I was looking forward to putting it through its paces. My past experience with Performance Center guns had been very good, with trigger action on revolvers tested clearly a cut above production grade. Sadly, this was not the case here.

In their advertisement, Smith & Wesson promotes this gun as having a Performance Center tuned action. To say the least, I was more than a little disappointed. Was I being too picky? I

## » SPECIFICATIONS

MODEL 686 PLUS		
MANUFACTURER	Smith & Wesson	
MODEL	686 Plus	
CALIBER	.357 Magnum	
CAPACITY	Seven rounds	
ACTION	Double/single action	
BARREL LENGTH	2.5 inches	
OVERALL LENGTH	7.5 inches	
WEIGHT	34.6 ounces	
CONSTRUCTION	Stainless steel	
FINISH	Bead blast	
SIGHTS	Adjustable rear, red ramp front	
SUGGESTED RETAIL	\$1,089.00	

5&W PERFORMANCE CENT



PC 686 along with HKS seven-shot speedloader and Spyderco Karahawk represent a formidable combination.

passed this particular specimen off to a few other revolver shooters, two of whom were Governor's Twenty PPC shooting champions. When I solicited their opinions, they agreed 100% with my assessment.

As you can see, the popular notion that writers always get "special" guns simply isn't true. Back to S&W it went and in ten days or so, my gun was back with an entirely new attitude.

Double-action pull was now much smoother, certainly something that would help me be my best. To their credit, Smith & Wesson got it right. But for a gun with a suggested retail price of \$1,089, this issue should have been caught before this particular gun left the shop.

## SHOTS FIRED

Trigger action on my sample PC 686 was much improved over my initial encounter. On my Lyman Trigger Pull Gauge, single-action pull tripped just under four pounds, with double-action averaging  $10\frac{1}{2}$  pounds. Best of all, the annoying hitch in the DA stroke was gone. Time to head out to the range to see what the PC 686 could do.

The PC 686 frequently went to the range with me over the next few weeks. At typical combat distances, it proved to be a very capable performer on both steel and cardboard targets. Like any quality revolver, it was 100% reliable with all ammo tested regardless of bullet shape, including light target loads, frangibles, and service quality .38 Specials and .357 Magnums.

The PC 686 is shipped with a set of sexy wooden grips that indeed make

quite the fashion statement. But when shooting hot .357 loads at speed, the gun seemed to shift in my hand and deliver a pretty fair dose of felt recoil.

One cool thing about revolvers is that if, for some reason, the grip doesn't suit your hand, salvation is only a screwdriver away. I quickly retrofitted a set of rubber Pachmayr Compac grips and my problem was solved. My hand was quite a bit happier and my revolver had that early 1980s old-school look.

Taking a turn on the state-mandated qualifications course also yielded some very gratifying results. I'll confess to dropping a single shot, but the other 49 hits were centered in a pie-plate-sized pattern in the chest of the target. I'll just have to write off that miss as operator error and live with it.

Rummaging through my garage, I was able to find four different varieties of .38 Special and eight different types of .357 Magnum. With this unusual assortment of ammo, I once again set off for the range to fire the requisite five-shot groups.

Targets were placed 25 yards distant, and I used a Hornady Delta Rest as an accuracy aid. Group size was mea-

## » PERFORMANCE EVALUATION, .38 SPECIAL AMMUNITION AVERAGE VELOCITY (fps) AVERAGE GROUP (inches) Buffalo Bore 158-or SWC+P 1.082 3.75

Buffalo Bore 158-gr. SWC +P	1,082	3.75
CorBon DPX 119-gr. HP	1,081	2.875
Federal 147-gr. HydraShok +P+	691	2
Hornady XTP 147-gr. JHP	898	2

## » PERFORMANCE EVALUATION, .357 MAGNUM

AMMUNITION	AVERAGE VELOCITY (fps)	AVERAGE GROUP (inches)
CorBon 110-gr. PB	1,282	2
Glaser 100-gr. PowRBall	1,267	3.125
Hornady 125-gr. FTX	1,264	2.125
Remington 125-gr. JHP	1,106	2.375
Remington 125-gr. Golden Sabe	er JHP <b>1,186</b>	3.5
Winchester 125-gr. JHP	1,258	2.25
Winchester 125-gr. Silvertip	1,257	2.5
Winchester 158-gr. SWC	1,094	2.5

Muzzle velocities measured with an Oehler 35P chronograph placed ten feet from the muzzle. Hornady Delta Rest utilized as an accuracy aid.



Winchester .357 Magnum 158-grain SWC loads produced this 25-yard group.



Remington Golden Saber .357 Magnum 125-grain JHPs were manageable and accurate in PC 686.



Handsome wood grips are standard on PC 686. These were swapped for an ancient set of rubber Pachmayr Compac grips (2601) for greater shooting comfort when firing hot loads.



Tuff Strips combined with HKS seven-shot speedloaders give user great flexibility when combat loading. Full moon clips (right) are an all-or-nothing proposition.

sured, rounded off to the nearest 1/8 inch, and then averaged. Muzzle velocities were measured with an Oehler 35P chronograph.

Predictably, the shorter barrel did reduce muzzle velocities a step or two down from a service-sized gun. It should also come as no surprise that the hot .357 loads ran considerably faster than the .38 Specials tested, but at a cost of increased muzzle flip and felt recoil. Ultimately, that will influence what sort of loads you want to carry for personal defense.

Quite frankly, accuracy potential was far better than I expected. Five-shot groups ran from a little over two inches to just under four inches. Short-barreled revolvers are as intrinsically accurate as their long-tubed cousins, but the short sight radius often plays havoc with our ability to shoot with any degree of precision.

My single best effort was a 1 7/8-inch group with CorBon 110-grain JHPs. I was also able to achieve very good results with other loads in both .38 Special and .357 Magnum. The gods must have been smiling on me this particular day.

Without question, shooting qualities were very good. With the right ammo combination, I wouldn't feel the least bit put out carrying the PC 686 to protect my hide.

## DARK SIDE OF THE MOON

The PC 686 features a cylinder cut for the use of full moon clips, which theoretically speed up reload times. While I can appreciate the value of moon clips in a game gun, I consider them to be a limiting factor in a handgun carried for self-defense. With moon clips, reloading becomes an all-or-nothing proposition. This pretty much contraindicates a tactical reload.

A few trainers of my acquaintance no longer teach the tactical reload. That might be all well and good when we discard a partially depleted magazine from our pistol and replace it with a fully loaded one containing 17 rounds to await possible action, but with a low-capacity handgun like a revolver, I don't want to give anything away I don't have to.

The ability to replace spent rounds without discarding live rounds remains absolutely critical. My spare ammo is carried in a couple of HKS speedloaders supplemented by seven-shot Tuff Strips from Tuff Products.

With my gun, this was pretty much a moot point. Three full moon clips were provided. I tried them with Federal, Hornady, and CorBon ammunition. All dropped into the gun lickety split, but I could not close the cylinder.

My gun was as clean as a whistle, with no debris under the extractor star. Go figure. Perhaps another brand of moon clip would do the trick, but for me at least, moon clips were a non-starter.

## **WARTS AND ALL**

Left to my own devices, my normal carry gun is a polymer-frame 9mm autoloader with 15-round magazine. But reality often has a nasty way of kicking us in the teeth, and on occasion I cannot lawfully carry my gun of choice. In those instances, the PC 686 would get the call.

I'm not a fan of small guns for primary carry, as they do not give me a warm, fuzzy feeling. I've long counseled that

one should carry the biggest gun they can carry discreetly, and three seasons of the year, the PC 686 would be just the ticket. With the right clothing, I could probably even get by in the summer.

I realize lots of folks would be put off by the size and weight of the PC 686, but I don't see them as obstacles. Different strokes for different folks.

I often catch a raised eyebrow or two when carrying a revolver for personal defense. I'm not about to enter into that tired debate of revolvers versus auto pistols, but there are some things the wheelgun does exceptionally well. In fact, it may be the superior tool for extreme close quarters confrontations.

Is the Performance Center upgrade worth the added expense over a production-grade Model 686? Only you can decide that. I like that extra shot on board and the better sights. The reworked action is superior to recent production S&W guns I've encountered.

My sample PC 686 addresses my individual needs in a personal-defense handgun while meeting the most restrictive legal standard for concealed carry in the country. Considering its positive attributes, it's a keeper.



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## 5MAT

## **SWEEPSTAKES**

## WIN THIS!

Dependable and simple to operate, the Mossberg® 930™ SPX 8-Shot Pistol Grip autoloading shotgun is designed with security in mind. This versatile 930 platform features a dual gas-vent operating system, which aids in recoil reduction and reduces stress and wear on operating parts, while reliably handling 23/4-inch target loads and hard-hitting three-inch magnum rounds. Setting this 930 SPX model apart is the latest in concealment patterns, Kryptek Typhon, covering the synthetic stock, forend, and exposed metalwork.

Standard features on the 930 SPX include full-length stock with ergonomic pistol grip for improved control; Uni-Line™ stock/receiver design for instinctive eye/rib alignment; magazine extension tube for a total capacity of eight rounds; quick-acquisition rear ghost-ring sight and fiber- optic AR-style winged front; receiver-mounted Picatinny rail for ease of mounting optics; cylinder bore for optimal pattern densities from the 181/2-inch carbon steel barrel; top-mounted, ambidextrous safety; oversized, knurled, and extended bolt han-

dle; and sling swivel studs. The 930 also features a quickempty release button that provides convenient unloading of shells from the magazine.

This full-featured 12-gauge delivers reliability and ease of operation when seconds may count.



## HORNADY AMMO

This sweepstakes includes 100 rounds of Hornady Critical Defense Buckshot and 100 rounds of Hornady American Whitetail Rifled Slugs.

Specially loaded to ensure proper functioning in both semi-auto and pump shotguns, Hornady 12 Gauge 00 Buckshot Critical Defense features Versatite wad technology, which delivers tight patterns, consistent performance, and reliable functioning without

modification to your gun.





Designed for smoothbarrels, Hornady American Whitetail Rifled Slugs feature a one-ounce lead alloy slug that is loaded to 1,600 feet-per-second. A compression-style wad protects the slug at ignition and helps to seal the bore for maximum velocity.

## ELZETTA HIGH OUTPUT SHOTGUN ILLUMINATION KIT

A high-quality white light is critical on a shotgun used for self-defense, so the winner receives an Elzetta High Output Shotgun Illumination Kit, which contains a Model B142 Elzetta Modular Flashlight and ZSM-T Mount. The unique Modular Flashlight provides 650 lumens of diffuse light using a proprietary optical Flood Lens. The uniform beam pattern illuminates entire rooms without simply putting a spot of light on the wall. This dramatically improves situational awareness and threat assessment while nearly eliminating splash-back reflections. The ZSM-T Mount places the Modular Flashlight's pushbutton in an ideal location for activation with one's thumb and may be installed on either side for right- or left-handed shooters.



## FLYING CIRCLE SCOPED RIFLE CASE

Flying Circle's Scoped Rifle Case provides the perfect balance between the traditional choices of hard and soft cases with its semi-rigid construction and durable water-resistant polyester fabric. This lightweight case offers superior protection and convenience when shooting at the range or hunting. The unique shape cradles the firearm, while extra-thick padding cushions and protects the weapon. The weapon compartments feature locking zippers, while tactile zipper pulls provide easy identification by feel between weapon and accessory pockets.

MOLLE webbing is a distinctive feature that allows any MOLLE-compatible pouches and gear to be attached. The Scoped Rifle Case also boasts a four-point Vehicle Attachment System, with adjustable webbing straps and side-release buckles to safely secure the case to an SUV cargo rack or ATV roll cage for easy access when hunting. The case also has an adjustable and detachable shoulder strap and grab handles.

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## SOURCES

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Anything Less May Be Un-American

BY DENNY HANSEN
PHOTOS BY STRAIGHT 8 PHOTOGRAPHY





## RUGER AND ERICAN PISTOL



Small protrusion behind the magazine release on both sides of

the pistol helps alleviate accidental depression of the release.



only changes the girth, but also adjusts trigger reach to accommodate a wide variety of hand sizes. The 9mm comes with three modules—small, medium and large—while the .45 version comes with medium and large modules. The modules are removed and installed with a locking device that's turned with a torx wrench (provided).

The finish on the Ruger American Pistol is a black nitride coating over stainless steel, meeting the Army's standards for their new pistol in regard to corrosion resistance. Internal parts are stainless steel and either nitride or nickel-Teflon® coated.

Instead of plastic, the American's frame is manufactured from a long-strand nylon material. This makes the frame tremendously strong without having to make it thicker or add weight.

The magazines have a nickel-Teflon coating. Capacity for the 9mm is 17 rounds, while the .45 holds ten. A small protrusion behind the magazine release on both sides of the frame helps alleviate accidental depression of the release.

Sights are genuine Novak® LoMount Carry three-dot sights in Novak dovetail cuts. If you desire other types, such as tritium or white outline, they are available for extremely reasonable prices at www.shopruger.com.

While some manufacturers have re-

## » SPECIFICATIONS

## **RUGER AMERICAN PISTOL**

MANUFACTURER	Sturm, Ruger & Co., Inc.	
MODEL	American Pistol	1/6
CALIBER	9mm, .45 ACP	
CAPACITY	9mm, 17+1; .45, 10+1	
WEIGHT	9mm, 30 ounces; .45, 31.5 ounces	
LENGTH	9mm, 7.3 inches; .45, 8 inches	
WIDTH	1.4 inches	
HEIGHT	9mm, 5.6 inches; .45, 5.7 inches	Section 1
BARREL LENGTH	9mm, 4.2 inches; .45, 4.5 inches	
SLIDE FINISH	Black nitride coated	
MAGAZINE RELEASE	Nickel-Teflon coated	
FRAME	Long-strand glass-filled nylon	
CONTROLS	Ambi slide stop and magazine release	
SIGHTS	Novak LoMount Carry three-dot	
ACCESSORY RAIL	MIL-STD-1913 (Picatinny)	
SUGGESTED RETAIL	\$579.00	



Pistol ships with magazines and grip modules in fitted hard case.



Felt recoil with the light 80-grain ARX ammo was almost nonexistent. Moving up to other 115- and 125-grain loads, recoil was still negligible.

Pistol features genuine Novak® LoMount Carry rear sight.

Front sight is mounted in a dovetail, allowing it to be easily changed.





## RUCER DANNER DANNER DANNER DANNER DE LA COMPANION DE LA COMPAN







versible controls, the American's slide stop and magazine release are ambidextrous.

To field strip the American, ensure it is unloaded and lock the slide to the rear. Next, rotate the slide lever down and remove the slide forward off the frame. The recoil spring is a captured type; it and the barrel can now be lifted out of the slide. No further disassembly is required. Unlike at least one popular pistol, the trigger does not need to be pulled to disassemble the pistol. I consider this a very positive attribute.

All rails are not created equal, and there is a wide discrepancy in quality across the industry. The accessory rail on the American's dust cover is a MIL-STD-1913 (Picatinny).

The pistol ships from the factory in a fitted case with two magazines, grip modules, grip module wrench, manual, and gun lock.

## AT GUNSITE

I doubt I'm the only one who has gotten excited hearing about a new firearm that shows promise, only to learn it is still in the prototype stage and it may be months or years before it's actually available. Sometimes they don't come to fruition at all.

Two things I appreciate about Ruger are that when a new product is announced, they have already made enough so they appear on dealers' shelves immediately. Ruger also works closely with holster manufacturers, so ancillary gear is also available right away.

Shortly after I received the test pistol, a handful of other writers and I met with Brandon Trevino at Gunsite. Brandon is the Ruger Product Manager at Ruger's Prescott, Arizona facility, where all of Ruger's semi-auto handguns are manufactured. Brandon brought several 9mm and .45 American Pistols with him, as well as a quantity of Ruger ARX® ammunition—80-grain 9mm and 118-grain .45 ACP.

On a side note, we also got a sneak peek at some other firearms that will be introduced in the coming year and should be welcome additions in the industry. Keep your eye on *S.W.A.T.* for some

Low bore-to-hand placement provides great balance, less felt recoil, and reduced muzzle flip.

of the first comprehensive reports on these new firearms.

I focused mostly on the test pistol, firing about 250 rounds, but also fired a small amount from the .45 version. No malfunctions were encountered in either gun. Other writers who fired the .45 more reported they did not experience any malfunctions.

I mentioned earlier that the trigger pull felt lighter than it actually measured. The take-up on the trigger was short and the reset positive. While not as nice as a good 1911 trigger (nothing is), this is undoubtedly the best trigger I have ever experienced on a striker-fired pistol, and I've fired most of them.

Felt recoil with the light 80-grain ARX ammo was almost nonexistent. Moving up to other 115- and 125-grain loads, recoil was still negligible.

## HOME ON THE RANGE

Curious as to how the Ruger American Pistol would handle a wide range of loads, I took 25 different loads from

» AMMUNITION PERFORMANCE		
BRAND	LOAD	VELOCITY (fps)
Aguila	124-gr. FMJ	1,059.0
ASYM	115-gr. TAC-XP +P	1,229.5
Black Hills	115-gr. FMJ	1,136.6
Black Hills	115-gr. JHP-EXP	1,266.7
Black Hills	115-gr. TAC-XP +P	1,119.3
Black Hills	124-gr. JHP	1,159.9
Black Hills	147-gr. FMJ (subsonic)	901.4
Colt	115-gr. SCHP	1,489.8
Double Tap	115-gr. FMJ (Training)	1,153.7
Double Tap	115-gr. Bonded Defense JHP	1,332.8
Double Tap	124-gr. Bonded Defense JHP	1,336.2
Federal	147-gr. Hydra-Shok JHP	941.4
Hornady	115-gr. FTX JHP	1,196.5
Hornady	147-gr. FTX JHP	962.8
Hornady	147-gr. TAP FPD JHP	973.3
Hornady	147-gr. XTP	972.8
HPR	85-gr. OTF Black Ops	1,263.4
HPR	115-gr. JHP	1,093.5
HPR	115-gr. TMJ	1,057.7
HPR	124-gr. JHP	951.6
Liberty	50-gr. JHP	2,063.3
Ruger	80-gr. ARX +P	1,434.7
SIG Sauer	115-gr. FMJ	1,234.7
SIG Sauer	115-gr. V-Crown JHP	1,218.1
Winchester	147-gr. JHP	959.8
Handload	125-gr. LRN	1,770.2

Velocity obtained with PACT Professional chronograph, 17-round strings with first screen ten feet from muzzle. Elevation 4,843 feet, 42 degrees, 54% humidity.



Frame incorporates recessed slot for use with a lanyard if desired.



Nickel-Teflon® plated steel magazines assure positive ejection from the magazine well and provide protection from the elements.

## RUCER EAMERICAN PISTOL

12 manufacturers plus one handload with me to my home range. Using a PACT Professional chronograph and firing 17-round strings for a total of 442 rounds, I established the velocity of each load. During this portion of the evaluation, I encountered no malfunctions or problems of any kind.

My sample pistol included a Blade-Tech Total Eclipse holster and single magazine pouch, so I was able to evaluate the American as it would be carried. For more on the Blade-Tech Total Eclipse, see *Lawful Carry* on page 12.

Shooting the American Pistol standing offhand, the best 25-yard five-round group I fired was a tad under four inches, with the average being about five and a half inches. Headshots were obtainable at 15 yards—and in the real world, that's fairly far for a shot at a target that small.

I rounded out my evaluation performing different drills from the holster, including shooting and moving, shooting on the move, and multiple targets.

The American Pistol really shined getting rounds on target fast with multiple targets due to the recoil-reducing barrel cam, good trigger, and being able to get a high grip on the gun.

## **SUMMARY**

The American Pistols will not replace Ruger's SR series, but will probably be where the company's centerfire pistol line will be focused. Over the next few years, we will likely see the American offered in different configurations, e.g. a compact model and more caliber options. I for one am looking forward to seeing what comes next.

Check out the Ruger American Pistol at a dealer near you, and I'm sure you'll be impressed with it. I know I was.



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## TACTICAL CASUALTY CARE

## Be Ready To Render Aid | BY EUGENE NIELSEN

an active-shooter incident, it will take longer for emergency response personnel to reach victims than it takes one to bleed out. A "blow out" kit (trauma kit) containing at least a tourniquet and hemostatic agent should be part of your everyday carry. Training is also essential.

The Paris attacks in November 2015 provide an extreme example of a general principle of active-shooter attacks—emergency personnel cannot reach shooting victims until the threat has been neutralized. It was over 160 minutes from the time the terrorists fired the first shots in the Bataclan theater until the first responders were able to reach those inside the venue.

## **BLOOD LOSS**

Acute fluid or blood loss is a life-threatening emergency. It makes the heart unable to pump essential blood to the body

and results in multiple organ failure. This hypovolemic shock has four stages, each based on the amount of blood loss. Stage I is under 15% by volume, Stage II between 15 and 30%, Stage III between 30 and 40%, and Stage IV more than 40%.

Based on a U.S. Army Institute of Surgical Research (US-AISR) study, stopping blood loss while the patient is in Stage I shock, i.e., keeping the blood volume loss below 15%, keeps the survivability rate high—about 94%. If blood loss continues and the patient goes into Stage II shock or greater, survivability rate goes down to just 14%.

Although many dogmas relating to tourniquet use persist, tourniquets have re-emerged in Tactical Emergency Medical Support (TEMS) as the standard of care in the tactical environment due to their ease of use, rapid application, and stoppage of blood loss.

Instead of viewing use of the tourniquet as a last resort, as



Rehearsing live-action scenarios in training helps build confidence and proficiency when similar events are encountered in the field. When life expectancy is measured in seconds, will you know what to do? Proper training and a good trauma kit are essential.

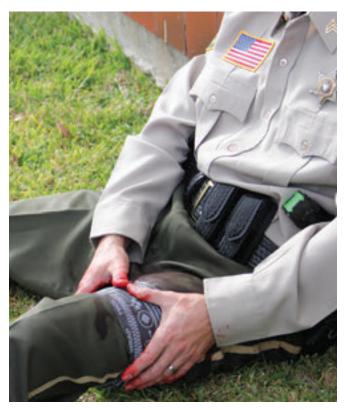
Photo: Suzanna Lapi

has been the case in the past with civilian Emergency Medical Services (EMS) and emergency room physicians, the new Tactical Combat Casualty Care (TCCC) protocol considers the military tourniquet an initial lifesaving intervention to control massive hemorrhage from an extremity.

## TACTICAL COMBAT CASUALTY CARE

Tactical casualty care for private citizens is an adaptation of TCCC, whose guidelines differ from the Advanced Trauma Life Support (ATLS) guidelines on which civilian trauma care has been based in most countries. In ATLS, injuries are diagnosed and treated in accordance with the ABCDE sequence: Airway, Breathing, Circulation, Disability, Environment and Exposure.

In the TCCC model, injuries are diagnosed and treated in accordance with the MARCH sequence: Massive hemorrhage,



No longer a last resort, tourniquet is now considered an initial lifesaving intervention to control massive hemorrhage from an extremity. Self-application skills are essential, as the life you save may be your own. Photo: TEMS Solutions

Airway, Respiration, Circulation, Head injury/Hypothermia. TCCC has three goals: 1) treat the casualty, 2) prevent ad-

TCCC has three goals: 1) treat the casualty, 2) prevent additional casualties, and 3) complete the mission. There are three phases to combat casualty care: 1) Care Under Fire, 2) Tactical Field Care, and 3) Combat Casualty Evacuation Care.

The TCCC Basic Plan for Care Under Fire is: 1) return fire and take cover, 2) direct or expect the wounded to remain engaged as a combatant, 3) direct the wounded to move to cover and apply self-aid, 4) try to keep the wounded from sustaining additional wounds, and 5) airway management should be delayed until the Tactical Field Care phase.

Finally, stop life-threatening external hemorrhage if tactically feasible by directing the wounded to control hemor-



Combat Application Tourniquet (C-A-T) is approved by CoTCCC and standard issue to the U.S. military. First responders and others are most likely to have trained with the C-A-T. Photo: North American Rescue

rhage by self-aid. Use a tourniquet for hemorrhage that is anatomically amenable to tourniquet application, and apply the tourniquet above the wound high on the extremity, over the uniform, and tighten to stop arterial bleeding or until pulse is lost. Move the wounded to cover.

Hemorrhage from extremities is the #1 cause of preventable death on the battlefield. TCCC has guidelines for bleeding. These are: Assess for unrecognized hemorrhage and control all sources of bleeding. If not already done, use a Committee on TCCC (CoTCCC)-recommended tourniquet to control life-threatening external hemorrhage that is anatomically amenable to tourniquet application or for any traumatic amputation.

When time and the tactical situation permit, a pulse check should be conducted. If a pulse is still present, consider additional tightening of the tourniquet or the use of a second tourniquet, side-by-side and proximal to the first, to eliminate the pulse. Expose and clearly mark with an indelible marker all tourniquet sites with the time of tourniquet application.

## RECOMMENDED TOURNIQUETS

The Composite Resources Combat Application Tourniquet® (C-A-T) and Tactical Medical Solutions SOF Tactical Tourniquet® (SOF-TT) are the only two tactical tourniquets CoTCCC recommends, based on a 2004 study of nine battlefield tourniquets conducted by the USAISR. Seven of these were commercially available and two were prototype systems.

Three tourniquets were identified as 100% effective in stopping arterial blood flow: the C-A-T, SOF-TT, and Emer-



**Photo: TEMS Solutions** 







Celox Rapid Ribbon with Chito-R is first compact-carry, minimal-compression-time hemostatic gauze for narrow entry wounds. It's ideal for treating bullet, blast fragment, and stab injuries. Photo: MedTrade Products © Morgan O'Driscoll

gency and Military Tourniquet (EMT).

The EMT is an inflatable pneumatic device best suited for aid stations and hospitals. The C-A-T and SOF-TT are both lightweight and inexpensive windlass-type devices. Due to its lighter weight and being slightly easier to use, the C-A-T was selected as the primary tourniquet, followed by the SOF-TT.

All the tourniquets have undergone improvements since the study, and new tourniquets have also hit the market that have proven very effective.

The C-A-T has had a number of recent enhancements. Its strap now features a red elliptical tip to aid users in threading it. It has a polymer windlass and reinforced windlass clip that is secured with Velcro<sup>®</sup>. The windlass rod is twice as strong. The windlass clip has a highly visible security tab and includes a writable area to record time of application. North American Rescue is the sole distributor for the C-A-T in the United States.

Tactical Medical Solutions has come out with a new version of its SOF-TT: the SOF Tactical Tourniquet Wide (SOF-TT-W), the result of a two-year study that compiled end-user research and



Pocket D.A.R.K. Mini consists of four main components: SWAT-T, Celox Rapid Ribbon with Chito-R, nitrile gloves, and duct tape, all packed in three-mil vacuum-sealed pouch.

Photo: Dark Angel Medical

laboratory studies to develop a more effective tourniquet for all environments. TMS was able to reduce the weight of the tourniquet by 25% while enhancing performance. It's now stronger, faster and easier to apply. The SOF-TT-W features a snap-lock buckle for rapid, easy application and a wider 1.5-inch strap for additional arterial compression. Aluminum alloy components are utilized in all areas of critical function.

Another new tourniquet that is gaining considerable interest in the tactical community is TEMS Solutions unique SWAT-Tourniquet™. Of stretch-retention design, the SWAT-T (Stretch, Wrap and Tuck) is exceptionally versatile. It may be employed as a tactical tourniquet, pressure dressing, and elastic bandage. It can also be used as an expedient sling.

In testing conducted by trauma surgeon Sydney Vail, MD, the SWAT-T has proven 100% effective in stopping arterial blood flow. The SWAT-T is lightweight, easy to apply, and reusable. It has been applied 5,000 times, used in the sub-zero temps of Antarctica, and boiled in water with no strength degradation.

## **HEMOSTATIC AGENTS**

The use of a tourniquet as one of the first responses to stop significant blood loss is gaining widespread approval. But not all wounds lend themselves to tourniquet use. For bleeding that can be stopped or slowed only by compression, or with a tourniquet removal due to an evacuation time longer than two hours, a hemostatic (clotting) agent should be used.

TCCC guidelines specify the application of a clotting agent in conjunction with the application of at least three minutes of direct pressure.

Hemostatic agents (compounds that promote clotting) have become increasingly popular in TEMS. They are designed to stop or slow bleeding more quickly than traditional direct pressure. This does not mean they are without controversy. While the general consensus is that these agents are a valuable addition to the effort to stop blood loss, some see less value in their use.

The overall answer may be that, when it comes to these products, they must be thought of as an addition to the means to the end. No hemostatic agent alone can stop significant bleeding. All must be coupled with direct pressure

>> Continued on page 88



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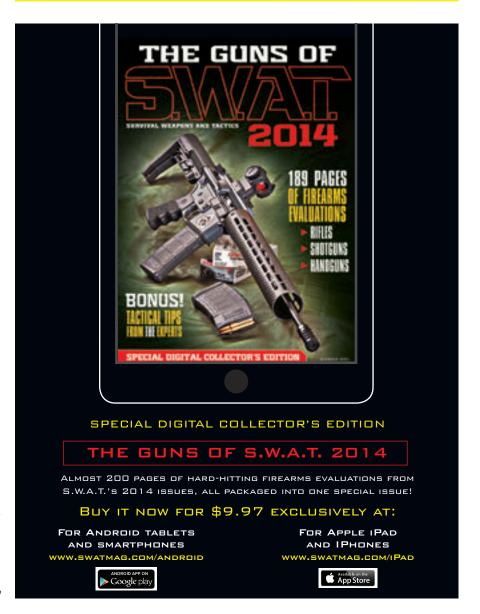
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## MAGAZINES

matter how much money you spend on an AR, if you want it to run reliably, you must use quality magazines. This sounds like common sense, but many times I have found shooters using old, worn-out or low-quality magazines. It's frustrating to watch a shooter fight through clearing a double feed only to re-insert the same magazine, potentially setting himself up for another double feed. (Not the ideal technique in the middle of a gunfight.)

Rifle magazines are one of those items where every shooter seems to have their favorites. This makes sense—when you've had a good experience with an item and it works well, why not stick with it?

Rather than going over what I think are the best magazines—since shooter reviews covering every magazine currently available exist both in print and online—I'd like to discuss what you should look for in a *quality* AR magazine.

Knowing what right looks like can save you money. Getting surplus mags for \$5 each saves you nothing if you end up having to turn around and buy other mags later because they do not run. (Buy cheap, buy twice.)

By using quality magazines to begin with, if you do have feeding issues with your rifle, being able to discount the magazine can save time and effort trying to determine if it's a loading or chambering issue.

## Separating the Good From the Bad

BY JEFF GURWITCH

## WHAT TO LOOK FOR

Many think the most important item on a magazine is the follower. While a smooth, good-working anti-tilt follower is a key item, it's not the only piece required for a well-functioning magazine.

The body and overall construction of the magazine are just as important. Everything from the design of the feed lips to what the magazine is made of plays a part in the overall reliability.

What should you scrutinize to determine if you have a well-built magazine? Whether you use aluminum- or polymer-bodied mags, the areas you need to look at are the same. But what the magazine is made out of determines what you are specifically looking for in those areas.

For metal magazines (aluminum or steel), usually the

body of the magazine itself consists of two pieces of metal joined at the front and back (both pieces overlapped and pressed together). How the metal is joined at the front of the magazine (bullet tip side) is the area you need to examine.

If not joined correctly, you can have issues with the rounds being able to feed up while inside the magazine, as the nose of the rounds can drag on the inside of the front wall.

Looking straight down at a metal magazine, the two pieces that join and overlap on the front should be even against each other. If the two pieces are unevenly pressed together, the inside flap of metal can protrude into the magazine itself. (This is basically a sloppy construction job.) If the tips of the rounds are touching this metal fold, they can drag on it on the inside of the magazine.

The results are failures to feed because the rounds are just not feeding up so the bolt carrier can pick them up, or failures to chamber because the nose of the bullet is touching the inside front lip. The extra pressure it takes to strip the round out of the magazine takes away from the force of



Three aluminum magazines. On the left, what the front folds of a magazine should look like, being evenly pressed together. The center and right magazines ... not so much. With the center magazine, due to the depth of the metal's fold into the inside of the magazine, rounds were dragging and getting caught up on it. This resulted in numerous malfunctions and made it an unusable magazine.

the recoil spring to push it forward to fully seat in the chamber.

The same problem can be found with some polymer magazines (nose of rounds touching the front wall of the magazine), the issue having to do with the thickness of the walls of the polymer magazine body itself. On some of these mags, the front inside wall is thicker, leaving less room for the tips of the round. This leads to the same feeding issues as with poorly joined metal magazines.

## .223 AND 5.56MM: NOT THE SAME

Usually if there is an issue with either the front wall being too thick or not enough clearance for the nose of the round to clear the edge, it is with military ammunition. The reason for this can be found in the variances between .223 and 5.56mm bullet tips. Although it takes a micrometer to measure, there are slight differences in the length of the rounds depending on their manufacture, bullet weight, and type (hollow points, match grade).



Two polymer magazines and a GI aluminum (right). Due to the thickness of the front wall on the far left magazine, the nose of the rounds catches on it. Close inspection reveals two impressions where they have been catching on it. Center polymer magazine had no issues and enough room for all types of 5.56mm ammunition.



Five different polymer magazines. Polymer feed lips can wear out over time with hard use. Of the magazines pictured here, only the Lancer L5 Advanced Warfighter (far right) has metal feed lips.

I have a few polymer magazines that only have feeding issues with military MK262 77-grain ammunition. Even though it's slightly shorter than your average 5.56mm round, MK262s have a flat tip with a hole in the nose of the round. (The purpose is to help stabilize the round in flight—not expansion like a hollow point.) The MK262 flat tip catches on the front lips of certain magazines, leading to chambering issues.

The reason why some brand-name magazines do not run well with military ammunition could be that they have been built around and tested using only civilian ammunition. I have used some metal magazines with poorly joined pieces, and they still run great with civilian ammo.

As a soldier, I personally do not trust or use any magazines that cannot reliably run all types of ammunition. I do not want to have to separate magazines between personal use and military work.



Three different aluminum magazines loaded with MK262 77-grain. Feed lips play a part in determining how high the nose of the rounds sits above the front wall of the magazine. Not enough clearance and your rounds may catch on the front lip of the magazine during the loading process. Center magazine has minimal amount of clearance. Magazine on the right, made by FNH for the 5.56 SCAR Light, has space cut out for the nose of the round, to ensure no issues.

With today's modern manufacturing techniques, there should be no reason why all magazine manufacturers cannot make magazines that reliably run all ammunition they were designed for.

### **FEED LIPS**

Moving up the magazine, the next item to look at is the feed lips. How important are they? If you have a magazine with a substandard follower, it will most likely run for a little while, or at least allow a few rounds to feed before sticking and jamming up. But if you have damaged feed lips, you might get no more than one round off (if that) before feeding issues occur.

Looking at the feed lips, what is important is how much clearance the rounds have above the front wall of the magazine. If you take a loaded magazine and look at it from the front (looking at the nose of the bullets), the top rounds sitting up against the feed lips, the nose of the rounds should have plenty of clearance above the front wall of the magazine, in particular the first round on the left as you look at it from the front (or the round on the right looking down on it as you normally would).

If the rounds do not have enough clearance above the front wall of the magazine, the nose of the rounds can catch or drag on the edge of the front wall of the magazine, leading to chambering issues. The extra energy it takes to strip the round off the edge of the magazine lip takes away from the bolt properly seating the round all the way in the chamber.

Because energy was robbed from the recoil spring in the loading process, the round will be only partially stripped out of the magazine, with the nose of the round usually somewhere on the feed ramp, looking like a chambering problem.

## FEED LIP CONSTRUCTION

This is where using metal or polymer can make a difference. The biggest issue with aluminum or steel mags is the danger of them bending, usually from dropping them on a hard surface.

This was recognized a long time ago, hence you can purchase metal molding tools designed for you to be able to reshape your metal feed lips back into the proper shape and angle.

One benefit of polymer magazines is the polymer feed lips will flex some before breaking. There's less chance of damaging the feed lips when dropping a polymer magazine on a hard surface as compared to an aluminum magazine.

The downside to polymer feed lips is they can wear out via becoming somewhat malleable and allow rounds to slip past them. I have experienced this mainly while serving overseas in hot climates. Running around in 100 degree plus temperatures and having to shoot over an extended period of time (multiple magazines), the rifle tends to get pretty damn hot.

After going through this a few times, the feed lips can develop some slight flex to them, allowing rounds to easily slip out. This can lead to double or triple feeds, because they allow more than the one round the bolt is stripping off to pop out into the chamber.

Although I would not say it's a definitive indicator, if you store your magazines rounds down in the pouches—which you should for the fastest reload—and you start to find loose rounds at the bottom of the pouch, it could be a sign of weak feed lips.

## THE FOLLOWER

Around 1998 I first got some of the new (at the time) GI magazines with green anti-tilt follower. Up until then, all our magazines had the black plastic follower, basically the same design used since Vietnam.

A note on just how bad some of these black follower military-issued magazines were. Prior to any real-world deployment, I test fired all my magazines. It always seemed out of a dozen or so, I'd have one or two that did not run well. (These I would trash.)

An anti-tilt follower works by keeping the rounds level as they feed up to the top of the magazine. Specifically during rapid firing a cyclic full-auto, the black follower sometimes moved unevenly up and down within the magazine. This leads either to the nose of the rounds or the back of the cartridge hanging up during the loading processes.

This uneven feeding can also cause rounds to slip up past the feed lips during the loading cycle, causing double feeds. The good news is just about every manufacturer of magazines today has a version of an anti-tilt follower in their magazines.

To check your followers, simply push down on them with

finger pressure. The follower should move up and down smoothly inside the magazine. You will notice some antitilt followers have zero play and will only go down evenly on both ends, while others have some play. If your followers have a little tilt in them, that is OK, as long as you cannot push down one end so far that the follower sticks at a sharp angle and is stuck in the magazine.

I would like to comment on the magazine catch and the ability for the magazine to drop free. Bottom line is, if the magazine does not drop free without the need to pull on it, I do not deem it serviceable. If metal magazines do not drop free, the body of the magazine might be slightly warped or the magazine catch slot might be damaged in some way.

For polymer magazines that do not drop free, diagnosing why can be a little more involved, because of their variances in thickness and texture.

Depending on how milspec the magazine well on your rifle is, some might not drop free at all. This is why I really like the Magpul EMAG. They were specifically designed to fit the tighter mag well of the H&K 416. Because of this, they are guaranteed to fit and fall free in most other ARs.



Above: Three followers from military-issued magazines and a Magpul Enhanced Self-Leveling Follower at far right. Compared to the old black follower, you can see the efforts to both lengthen and thicken parts of the follower to keep it from tilting in the magazine.



Almost every modern magazine manufacturer offers their own version of an anti-tilt follower with their magazines. Only old GI surplus magazines and some imitation knock-offs don't have it.



U.S. Military issue magazines, from left to right: 1980s-1990s with black follower; late 1990s green follower magazine, which had some anti-tilt design to it; and current issue improved magazine with tan follower. With the tan follower, bullet protrusion is on the left. This puts the 30th round loaded in the magazine on the left and different than any other AR mag.

### **METAL OR POLYMER?**

Which is better, metal or polymer mags? Both have their pros and cons. I personally prefer polymer magazines for a few reasons. First, a lot of polymer-type magazines have a window in them or are translucent enough that you can see the rounds. Being able to glance down and estimate how many bullets are left in your magazine is great for when you are trying to gauge when to perform a tactical reload.

Second, and this is minor, but the corners on aluminum mags can be tough on your magazine pouches, depending on what type you use. Most polymer mags have soft edges that are easier on your pouches.

Last, most polymer magazines have raised portions or texturing specifically designed for better gripping—a handy feature when trying to reload rapidly!

## PET PEEVES, MYTHS, AND WORN-OUT MAGAZINES

Two issues that really bother me are related, even though one has to do with the new GI tan follower magazine, and the other is generally seen only with polymer magazines. They are related because they both have to do with what a properly loaded magazine is supposed to look like.

Something I see a lot at the range, with both civilian and military shooters, is overloading magazines to 31 rounds. When you cram an extra round in a magazine, there is no give in the tension of the rounds under the feed lips. The result is you cannot properly seat the magazine in the magazine well, with the catch locking the mag in place on a closed bolt.

Generally what happens is a shooter walks up to the firing line and slaps the magazine in (it stays in place via the catch but is not locked in). Shooter racks the bolt, loading nothing because the feed lips are not seated close enough to the bolt. He pulls the trigger and "click," the hammer falls on nothing—and usually the mag falls out because the vibration from the hammer is enough to undo the partial mag catch in the magazine.

While it can be a great source of entertainment to watch a shooter at the beginning of a course of fire pull the trigger on his rifle only to hear a click, it's not something you want



Of these four magazines, three are loaded properly and one is not. Can you tell by looking which one is not? Before the adoption of the "improved" tan follower GI mag, the rule was the last round always sits on the right. On the far right is the improved tan follower mag. Next to it is an overloaded polymer magazine.

in a tactical or defensive situation.

To ensure you do not do this, many will say, "When loading magazines, your last round should be on the right." Here is the problem: with the new "improved" GI magazine with tan follower, the last round sits on the left. This is counter to just about every other 5.56 magazine on the planet.

Now it's not that big of a deal if they are the only mags you use, as all the last rounds sit on the left. But what about the Soldier who has some mags with the tan follower and others that are the older green ones? Now when they are all loaded up, he cannot tell by looking at them if they are properly loaded. Some will be last round left, some right.

I find this very annoying, because one of the signs your magazines are wearing out is if they start allowing a 31st round. As you can imagine, this can get confusing. How does this relate to polymer magazines? There are some (even brand new, just out of the wrapper) that allow an extra round and will not properly seat on a closed bolt. As far as I know, the GI aluminum magazine with tan follower is the only mag where the last (30th) round sits on the left.

On to some myths. Here are two that relate to the magazine spring: First is that you should only load mags to 28 rounds to ensure they run correctly and the spring does not wear out prematurely. Second, while shooting from prone,

>> Continued on page 88



Don't let a myth stop you from using a good technique. Despite what you may have heard, resting your magazine on something to get more stable will not "jam up" your rifle. If you do have problems, it's because it's a faulty magazine.



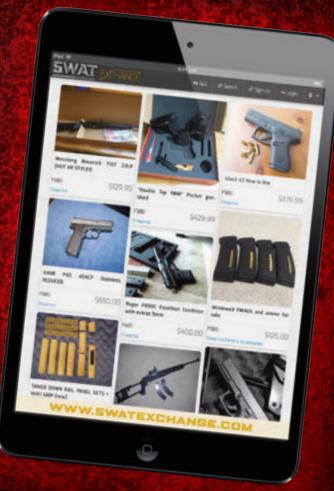
Author's preferred magazines, based on overall design and long-term reliability. From left: Lancer L5 AWM, IMI Defense G2 and Magpul EMAG.

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## TACTICAL FORCE MULTIPLIER

## Christensen Arms TFM Precision Rifle

ny mention of Christensen Arms inevitably brings to mind their precision bolt-action hunting rifles featuring carbon-fiber wrapped barrels. Various models of Christensen weapons have been brought forward since Dr. Roland Christensen saw a way to apply his career experience to his passion for firearms.

Christensen's doctorate in mechanical engineering led the way to how to apply carbon

BY TODD BURGREEN

fiber for the benefit of shooters. He developed and marketed a carbon-fiber wrapped barrel that has significant advantages over solid steel barrels in terms of weight and heat dissipation.

While Christensen hunting rifles are well known and respected, their entry into the tactical bolt-action market is still relatively unknown. Not resting on previous successes, the company now builds a full range of firearms, including tactical bolt-action rifles.

The adage, "If you want it done right, do it yourself" typifies Christensen Arms' endeavors with sporting rifles, 1911 handguns, precision bolt rifles, and ARs. This article will feature the Christensen Arms take on the precision tactical bolt-action platform as embodied by the Tactical Force Multiplier (TFM) chambered in .300 Winchester Magnum (.300 Win Mag).

The same Christensen Arms quality and attention to detail in providing highly accurate, rugged, and reliable bolt-action hunting rifles were turned toward improving the tactical bolt-action. I have written several previous articles covering Christensen AR-pattern rifles and 1911 handguns. It was only natural that my interest spiked when I spotted the TFM.

Christensen has chosen to go a different path with the TFM, by balancing accuracy, weight, and enhanced cartridge capability compared to the heavyweight tactical rifles. One overarching theme with Christensen Arms—stemming from their carbon wrapped barrels—is keeping weight down so as to maximize operator efficiency.

Desirable characteristics for a tactical rifle are cold-bore zero, repeatable accuracy, effective range, reliability, and handling. When not only the shooter's life is at stake but also other people's, such as teammates or innocent hostages, there can be no compromise in terms of consistent accuracy.



Field-expedient firing positions were used during evaluation of Christensen TFM.

The high-stress precision tactical realm is a demanding environment.

## THE RIFLE

The Christensen TFM is the cutting edge of bolt rifle technology, combining many innovative features with time-proven accuracy-producing enhancements. The TFM's distinctive aesthetics immediately put one on notice that this is not an ordinary rifle.

The standard Christensen bolt action is constructed of high-strength 17-4 stainless steel, making it 1.5 times stronger than most receivers. Extraction is accomplished by a miniaturized M16-style extractor. The Christensen bolt is conducive to long-range accuracy due to an extremely stiff and rigid design

and high quality control during manufacturing. The bolt is Nitride coated at 70 HRC for extreme wear protection, and the receiver has an integrated Picatinny rail for stable scope mounting.

The TFM evaluated for this article featured the optional titanium receiver for even greater weight savings. The TFM's carbon-fiber stock is significantly modified to excel in the tactical realm, with adjustable length of pull and comb height allowing a marksman to custom fit it to individual needs. Christensen has designed the TFM's stock to align the shooter's grip to facilitate a straight rearward pull of the trigger.

A Picatinny rail section is found under the TFM's forend for mounting of a bipod or other accessories. A detachable single-column magazine offers five-round capacity. A Timney trigger comes adjusted at a crisp three pounds.

The carbon-fiber wrapped 26-inch barrel mounted in the Christensen stock secured to the action are all integral to the ½-inch MOA guaranteed TFM rifle. A radial titanium muzzle brake is threaded on the barrel via 5/8x28 threads. The TFM rifle weighs only eight pounds. Everyone who picks the rifle up is surprised, expecting a much heavier rifle based on aesthetics and prior experiences.







Initial bench testing was from a Champion pedestal rest and rear bags. Initial 25-yard paper sighting was followed by 100-yard groups.



Radial titanium muzzle brake is threaded on Match carbon-fiber wrapped barrel via 5/8x28 threads.



#### OPTICS

A tactical rifle weapon system is made up of the shooter, rifle, optics, and ammunition. For this evaluation, a Schmidt & Bender 3-20X56mm PM II was mounted on the TFM via AWP rings.

In the past few years, Schmidt & Bender has made powerful statements by winning multiple U.S. military optic contracts, but their reference list does not stop with the U.S. military. Accuracy International promotes fitting the Schmidt & Bender PM II / Military MK II product line as sighting components on their family of sniper rifles, selling S&B optics as package deals with their platform. The Swiss manufacturer Brügger & Thomet uses specially made Schmidt & Bender 3-12X50 PM II LP product-line scopes with a B&T designed TRS reticle pattern for their APR bolt-action sniper rifles. Lastly, Heckler & Koch uses Schmidt & Bender 3-12X50 PM II telescopic sights as standard aiming optics for their highly regarded PSG-1A1 semiautomatic sniper rifles.

#### **AMMUNITION**

Accuracy is a critical requirement of a tactical precision rifle.

Ammunition used for testing the TFM consisted of .300 Win Mag Black Hills Match 190-grain BTHP, Federal Premium 190-grain Sierra MatchKing, and Hornady 178-grain A-Max TAP loadings. The thought process is simple: if these loads do not produce accuracy, nothing will. Prior use of these loads backs up this belief. The TFM shot all the premium loads tested into one MOA or better at 100 yards. This test rifle preferred the Federal 190-grain load, producing near ½-inch groups.

#### **ACCURACY TESTING**

Another sign of an accurate, dependable rifle is how cold-bore zeros compare over time and if the point of aim shifts after a few rounds heat up the barrel. The Christensen TFM showed no shifts in point of aim, and cold-bore zeros produced fine groups when overlaid together.

Bench testing was done from a Champion tripod front rest and rear sand bag. The accuracy figures are based on firing five three-round groups and averaging group sizes. Not a lot of time was spent at the 100-yard range. Three hundred yards and out are more indicative tests of a weapon system like the TFM.

This generates useful ballistic infor-







Right: Echo Valley Training Center's prepared dug-in firing positions are unique features facilitating a user standing behind Christensen TFM while maintaining advantage of prone-like support.

Below: Federal, Hornady, and Black Hills .300 Win Mag loads were tested with Christensen Arms TFM, which is fed via five-round detachable magazine. Leupold RX-1200i laser rangefinder also supported field testing.







Christensen carbon-fiber stock on TFM is designed to excel in the tactical realm with adjustable length of pull and comb height, allowing marksman to custom fit it to individual needs.

mation for the shooter, especially when it comes to elevation and windage, data for log books, and ballistic calculations. Accuracy out to 300 yards was MOA or better.

The TFM's light weight for a precision rifle translates into a weapon that can be carried without fatiguing the user and is easier to adapt to non-standard firing positions, even offhand if needed. Tactical rifles weighing significantly more than the TFM have been handled, and while accurate from a fixed prone position, all were challenging to shoot in any other position than prone, even if employing shooting sticks or other means of support.

The 26-inch barrel is a solid compromise, balancing weight, velocity performance, and field handling for the precision marksman. The TFM had no problems with shifting points of aim even when firing five aimed rounds in relatively rapid fashion. Let's face it, the majority of tactical precision rifle scenarios will not require this many rounds fired during one mission or call-out, especially for law enforcement.

#### **FIELD TESTS**

After testing innate accuracy from the bench, field tests were performed at Echo Valley Training Center (EVTC). This consisted of shooting prone off a bipod or pack from EVTC's fixed firing positions overlooking a multi-stepped berm arrayed with various targets of opportunity.

I performed some of my normal field tests, including shooting at clay pigeons at 300 yards. I worked the bolt and acquired the next target as quickly as possible. The Christensen brake—plus the ergonomic stock—proved potent.

Other range work consisted of shooting B-27 man targets out to 500 yards. The TFM's accuracy, combined with the clear, powerful Schmidt & Bender optic, made

center-mass shots routine and head shots feasible on stationary targets.

Another of my favorite drills encompasses the use of MGM Targets IPSC Precision Rifle Target steel silhouettes with flip-open head and center chest plates. The goal is to "open" and "shut" the plates as quickly as possible. EVTC had two such steel targets placed at 200 and 300 yards. The Christensen TFM performed remarkably during this drill.

Extremely accurate range rifles do not always translate into effective tactical rifles due to durability issues that arise when taken afield. After firing over 100 rounds, I came to fully appreciate the TFM's ergonomics, especially firing from the prone position. The radial muzzle brake is very effective at taming recoil.

While my shoulder is not a scientific instrument, the lightweight .300 Win Mag TFM felt like a .270 Win. The brake allowed for quick follow-up shots and if the shooter is in a stable shooting position, spotting one's own round is possible. This makes it easier to fire multiple rounds accurately and quickly.

The TFM's oversized bolt handle fur-

ther supported the ability to fire aimed rounds in quick succession based on spotter feedback or if in a target-rich environment.

#### CONCLUSION

The TFM in .300 Win will prove a popular Magnum chambering based on established acceptance in tactical circles and the wide range of premium factory ammunition available. A tactical shooter will want a supply of factory Match ammunition for reasons such as practice, logistical availability, price and quality control, not to mention liability reasons.

For most missions, especially antipersonnel, the Christensen TFM is suitable for a wide range of sniping/tactical applications. Chambered in .300 Win Mag, the TFM provides a ballistic advantage over most adversary weapons encountered, and can extend accurate fire beyond 1,000 yards.

The TFM .300 Win Mag fills the gap between the .308 Win and .338 Lapua. Many feel it is the optimal chambering because it offers extra horsepower compared to the .308 Win without the blast and recoil of the .338 Lapua.



#### SOURCES

#### **CHRISTENSEN ARMS**

(888) 517-8855 www.christensenarms.com

#### **BLACK HILLS AMMUNITION**

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

#### **ECHO VALLEY TRAINING CENTER**

(540) 450-7998 www.echovalleytrainingcenter.com

#### **FEDERAL PREMIUM AMMUNITION**

(800) 379-1732

www.federalpremium.com

#### HORNADY MFG. CO.

(800) 338-3220 www.hornady.com

#### **LEUPOLD & STEVENS, INC.**

(503) 526-1400 www.leupold.com

#### **MGM TARGETS**

(888) POPPER1 www.mgmtargets.com

#### **SCHMIDT & BENDER USA INC.**

(603) 287-4830 www.schmidtundbender.de/en

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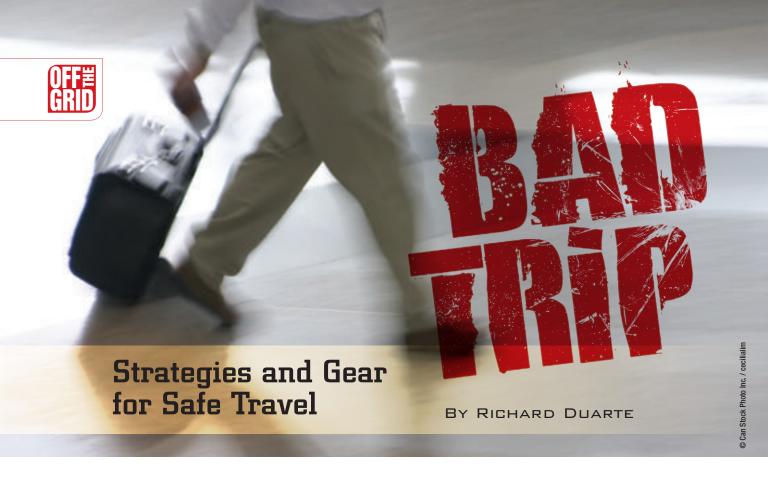
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## "PREPAREDNESS"

is a word that gets thrown around quite a bit these days. Its meaning is often the subject of much disagreement. But regardless of how you define it, most of us agree that being prepared requires time, effort, commitment, awareness, skills, gear, and supplies.

Did I mention commitment? Maintaining that edge at home is difficult enough, but doing so while traveling can be especially challenging. Once you leave the familiarity of your hometown, it's a whole other ball game.

When you're away, you not only give up the home-court advantage, but you're forced to operate without the benefit of the majority of your gear, supplies, and support network. But travel is part of modern life.

There are many things you can do to protect yourself and your family while away from home. You need to start thinking about this long before you leave, and you need to make plans and preparations. In this article, we focus on the travel basics and getting you started with arrangements.

#### THE VACATION CHALLENGE

You just started a week-long trip with the family at a popular theme parkone of those magical places where folks hand over wads of cash for the privilege of standing in line for hours alongside mobs of poorly mannered strangers and their feral offspring.

But your kids are ecstatic, your daily routine is nowhere to be found, and you're all in vacation mode. Well, maybe not everybody. You don't admit it easily, but leaving your home for an extended trip always makes you feel anxious and uncomfortable.

For one thing, you're parting with all your supplies. You can bring some extra stuff with you, but it's not the same. Your family may be on vacation, but you know the world around you continues on its hurried pace, and it doesn't get any safer because you're in a magical land of enchantment.

But you are determined to make the best of it. The challenges are to have fun, relax, and enjoy the time away from home while still managing the situation and keeping yourself and your loved ones safe and secure—a tall order indeed.

Does any of this sound familiar? It should. If you're a regular reader of *S.W.A.T.* Magazine, your mind operates at a level that is exceedingly different than the majority of the people in that very long line. You understand that we

live in a dangerous and unpredictable world. This is not negative thinking. It's a highly accurate and very healthy evaluation of reality—a reality many people willingly ignore.

You also understand that each of us must take personal responsibility for our safety, well-being and security. You've arranged your life, surroundings, and lifestyle to reflect this reality, and this mindset provides you with a level of sanity in a world seemingly gone mad.

The problem is that modern life often calls upon us to leave our well-designed corner of relative safety and enter that *other* world. For those of us who are awake, life in that other world can be very uncomfortable. Why? Because we understand what lies beneath the thin veneer of normal everyday life, and it's not pretty. It's one of the many reasons we are committed to being prepared.

#### THE FIRST STEPS

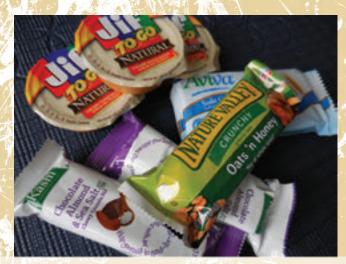
Advance planning is key, but before any planning can occur, you must first establish your goals and objectives. Where are you going? What do you know about your destination? Will you fly, drive, or take a train? How long will you be gone? Where are you going to stay? Are you traveling by yourself or

with others? Does anyone in your group have special medical needs?

These and other questions will help start to focus your preparations. Understand the circumstances and limitations, and come up with a plan of action—and back-ups to those plans.

Every situation is different, but certain basics must always be addressed. It's best to focus our attention on those basics, since they will remain the same no matter where we are or what we are doing. These basic elements are:

- Food
- Water
- First Aid and Medical
- Personal Security and Self-Defense
- Sanitation and Hygiene
- Knowing When To Stay Put and When To Get Out



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Lightweight portable Sawyer MINI Water Filter can produce many gallons of safe drinking water.



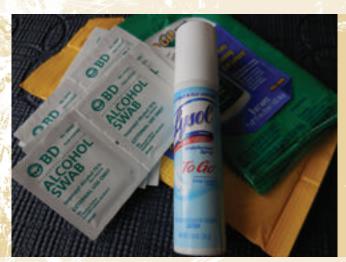
Small supply of assorted first aid supplies can be stored in a water-resistant sealable plastic bag and carried easily.

These are the things that really matter in an urban survival situation—things that may determine whether you live or die.

#### STRATEGIES FOR SAFE TRAVEL

Even though every situation is different, we have compiled a list of suggestions to get you started. While there will be many more issues for you to consider, this is a good place to start your planning and to build a strong foundation for future efforts.

■ Every Day Carry (EDC): Have a trip-specific EDC, items you carry to assist in dealing with everyday needs. What we carry at home may differ from what we carry when we're away from home, but the idea remains the same. Some would argue that travel EDC is even more important, since



Maintaining a clean and sanitary environment helps minimize the spread of germs and infections. Travel sizes make it easier to pack an assortment of products.



**Immediately** upon check-in, scout out your hotel/motel room and the entire building, including all stairwells, halls, exits, etc. While everyone else is checking out the bar, you'll be looking over all the things that 99% of the population never even think about.

Of special importance are the exit routes from your room. Walk all possible paths of egress out to the parking lot or street. Pay attention to the distance from your room to the fire exits and count how many doors there are from your room to the stairwell. In the event of a fire, for example, your vision may be impaired by smoke, darkness, or both. You may need to feel your way to the exits, possibly while crawling along the floor. The more you know about the route, the safer your journey will be. When you make your reservation, request a low floor close to the stairs.

Prepare a small bag to carry your EDC travel items during your stay. Never unpack this bag. In fact, the bag should never leave your side. When you arrive at your hotel for the evening, pick a location close to your bed and place this bag in the same spot each evening for the duration of your stay.

In the event an emergency forces you to leave your hotel room in a rush and you only have time to grab one thing, this is the one thing you will take with you. It contains all your EDC items to help you at least get back home. (Imagine trying to gather all your important items during an emergency evacuation, possibly in the dark: wallet, cash, phone, keys, etc.)

Attach a UV PaqLite reusable glow stick to the outside of your bag to make it easier to find in the dark. (It's not a bad

idea to attach a reusable glow stick to all small children, to help find them in the dark too.) Lastly, place a good flashlight on the nightstand next to your bed. If you do this at home—and everybody should do this at home—why wouldn't you do this in an unfamiliar environment such as a hotel room?

Also consider Brite-Strike All Purpose Adhesive Light Strips (APALS) emergency lighting. The disposable APALS are low cost, waterproof, shockproof, have a runtime of 80+ hours, and are easily activated with the push of a button. Attach an APALS next to the room's exit and activate it each evening before going to bed.



All Purpose Adhesive Light Strips (APALS).

Knowledge and skills are always more important than stuff. This is especially true when you are traveling. While you will never be able to bring all your gear with you on a trip, you'll always travel with every bit of knowledge and skill that you possess.

For this and many other reasons, acquiring knowledge, learning new abilities, and keeping your skill-sets up to date are critical parts of preparedness.

you are away from home and may need to rely on those EDC items even more so than if you were closer to your main supplies.

A sample travel EDC may include your wallet, cash (\$250 to \$500 in small bills), extra set of car keys if you drove to your destination, travel documents, a pocket knife or multi-tool, cell phone and charger, emergency back-up power supply, extra prescription medication, small first aid kit, flashlight, defensive weapon, list of important contacts with phone numbers and email addresses, and a small water filter. (For more details, see *READY FOR ACTION: Everyday Carry Gear*, February 2015 *S.W.A.T.*)

- Food: If something happens during your trip, you probably won't be able to run home to your food supplies. Planning to feed your family during an emergency situation is an exercise in packing compact, calorie-dense, shelf-stable open-and-eat foods. No five-star white-tablecloth dining here, just basic emergency calories. Consider packing high-calorie energy bars, granola, travel-size peanut butter, and even freezedried pouches if space allows. During a crisis, it's all about the calories. No one in your group will be happy to eat this stuff, but it will keep them alive.
- Water: This is a huge issue and a more difficult problem to address than food. Water is heavy and difficult to move around. We also use a lot of it. Most people need at least one gallon per day just to drink. The water supply that many people take completely for granted can quickly be threatened by natural or man-made disasters.

If the water supply becomes contaminated, getting access to disinfected water, especially while you're away from home, can become a life-or-death struggle. The Sawyer MINI Water Filter weighs only two ounces and removes harmful bacteria, protozoa, and cysts without using chemicals. According to the manufacturer, each unit can filter up to 100,000 gallons of water. Bring one for every member of your group.

■ First Aid and Medical: Pack a first aid kit with a small supply of all the essentials. Since it's almost impossible to predict what you will actually need,



Compact bag with your EDC should be kept nearby at all times.

UV PaqLite reusable glow stick helps you see the bag in low-light environments.



Compact 9mm handgun such as Ruger LC9 with integrated laser makes for easy concealment and quick target acquisition.

your goal is to have multi-purpose basic items: bandages, antibacterial ointment, clotting agents, gloves, burn gel, medicine for pain or fever, anti-diarrheal medication, EpiPen for severe allergic reactions, etc.

If you or any member of your group relies on prescription medications, bring an extra seven-day supply and a copy of the doctor's prescription. If your return trip is interrupted or delayed, you'll want to have enough meds until you get home.

- Security and Self-Defense: If you can legally carry what you carry at home and it makes sense to, do so. This expands your available options. If not, make reasonable adjustments. Whatever you do, make sure you plan it out carefully, exercise common sense, and take safety precautions.
- Sanitation and Hygiene: The world outside your home can be a pretty disgusting place, harboring a plethora of germs, bacteria, and other nasties. The World Health Organization reports high proportions of antibiotic-resistant bacteria in all regions of the world. Popular destinations routinely receive travelers from all around the globe.

Take reasonable precautions and pack supplies to clean and disinfect the most used surfaces in your hotel room—bathroom, bed, TV remote, doorknobs, light switches, etc. You have no idea who was in your room, what they did in it, or how well it was cleaned

before you checked in, so assume the worst. Wash hands often and attend to any cuts, scrapes, or burns immediately to avoid complications. Bring a generous supply of antibacterial and disinfecting wipes, gels, and sprays.

■ Knowing When To Stay and When To Go: During a trip away from home, you are more likely to encounter an evacuation than a bugging-out scenario. You are also less likely to shelter-in-place since your supplies, resources, and control over the property will be minimal to none. Evacuating a hotel room at the first sign of trouble may seem like a no-brainer, but you need to have a viable plan and a safe evacuation route. (See "Hotel/Motel Safety" on page 78.)

#### BON VOYAGE!

Travel should be fun and exciting, bringing family and friends together for good times. With some planning and preparation, you can increase your chances of surviving whatever the journey or destination may throw your way, while still maintaining some peace of mind ... and maybe even having a great time.

Stay safe and be prepared.

Richard Duarte is an urban survival consultant, writer, and firearms enthusiast. He's the author of Surviving Doomsday: A Guide for Surviving an Urban Disaster, and The Quick-Start Guide for Urban Preparedness. For the latest news and updates, connect with Richard on www.quickstartsurvival.com.



Especially when traveling, don't go to bed without a quality flashlight, like this Elzetta Charlie model, on the nightstand.



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most of my life, I have kept a lever-action rifle handy for all-around use. I have taken more game with the lever-action than with any other type. During my time as a peace officer, I had a Winchester Model 94 .30-30 lever-action rifle in the trunk on more than one occasion. Such a rifle is capable of solving most problems encountered.

I have the greatest respect for the AR-15 rifle and enjoy firing and using

my Daniel Defense rifle. Few rifles are as versatile, accurate, and reliable as a good AR-15. Few rifles can be used for varmints and deer and then fired in a competitive match the same weekend simply by changing loads.

With that said, I like the lever-action and value its simplicity and ruggedness. In the hands of outdoorsmen, scouts, and working cowboys, I have seen lever-actions that were beaten, battered, and even muddy, but the rifles always worked. When the likely profile is that

you may need only a shot or two but the rifle needs to hit hard, a powerful leveraction rifle is a viable choice.

### WANTED: LEVER-ACTION CARBINE IN PISTOL CALIBER

Recently I was in the market for a short, handy lever-action carbine chambered in a pistol caliber. There are a couple of reasons for this choice. First, it is easier to find a range that allows pistol-caliber carbines, and this is a real consideration in many areas.

Second, I am an enthusiastic handloader. As long as the brass holds out and I am able to obtain lead, primers, and powder, I will be shooting. I don't hoard ammunition but merely keep a reasonable supply. Ammunition is for practice, training, hunting, and personal defense.

While I like the pistol-caliber carbine, I am not sold on the carbine and handgun combination. When carrying the Rossi lever-action rifle, I am as likely to be carrying a .357 Magnum and more likely to be carrying my everyday 1911.

A long gun and a handgun are for different duties, and compromise is evident. The lever-action carbine slips behind the seat of a truck easily. It is flat, light, and can be made ready by quickly working the lever. Once ready,



Author has ejected a spent case and is loaded and back on target. Recoil is almost nonexistent.

it can be made safe just by lowering the hammer. Accuracy isn't the long suit of the short pistol-caliber carbine, but it is accurate enough for most chores well past 50 yards. Versatility is the long suit. It is a bonus that a good example isn't expensive.

I have Winchester 95 and Savage 99 high-power rifles and a good Henry .22 rifle, but no short, powerful carbine. I addressed this deficit in the battery by purchasing a Rossi 92 carbine.

These rifles are available in .357 Magnum, .44 Magnum, .45 Colt, and .454 Casull, and I have seen examples in .44-40 as well.

The .357 is economical and the best choice for Cowboy Action. With Magnum loads, it is a fine defensive caliber and will do for deer.

The .44 Magnum is a great caliber. I have used it to drop large boar hogs and it hits like Thor's hammer. The .44-40 is a handloading proposition for real power.

I recently happened upon one chambered in .45 Colt. The rifle looked good, with nice Brazilian wood and the popular large ring lever. Since I had plenty of .45 Colt brass, the choice wasn't difficult. I have reached that pleasant stage in life when every firearm doesn't have to have a well-defined mission to earn its keep, and where a specialized firearm that does a few things well is good to have.

#### **ROSSI R92**

The Rossi was destined to serve as a goanywhere, do-anything rifle. For shortrange hunting—probably an opportunity rather than a planned hunt—to dispatch predators, pests, and dangerous animals, and for personal defense on the road, the Rossi seemed a good fit.

Despite my Scot blood, I am not the cheapest guy in the world, but the rifle set me back less than \$400, and I like that. This is the first example I have owned in .45 Colt, but the particulars of the rifle are familiar to me.

The sights are pretty basic. There is a front post with a small brass bead and an open sight in the rear. The front post is drift adjustable for windage, and the rear sight may be adjusted for elevation by use of the sight ladder.

You have to know how to use these sights. I have heard more than a little grumbling concerning the difficulty of sighting in similar rifles. The front post must be set in the bottom of the rear notch for the proper point of aim. You do



Hammer spur is nicely checkered and gives good purchase. Also visible are locking wedges and controversial placement of safety.



Left: Rear sight is adjustable via a sliding ladder.

Below: Front post sight with bead is surprisingly precise at moderate range.



not hold it in the upper part of the rear leaf or you will shoot impossibly high.

A tubular magazine holds eight rounds. The lever-action rifle was once referred to as a bolt gun.

The bolt is locked by rear locking wedges. The rifle is unlocked by working the lever. As the lever travels downward, the bolt moves to the rear and the extractor pulls the spent case from the chamber and cocks the hammer. The fresh round is fed from the magazine into a shell carrier. As the lever is closed, the carrier feeds a fresh round into the chamber.

This is a generally reliable and trouble-free system. But make sure you learn to use the lever-action properly. The lever is pressed forward, not down, and a certain cadence of fire comes with practice.

A pistol-caliber carbine such as the Rossi 92 has more leverage than a .30-30 rifle, and the action may be manipulated more quickly. If need be, you may put out a lot of lead with the Rossi 92. If you keep extra rounds on the belt, the Rossi may be topped off one round at a time.

The rifle weighs about five pounds loaded, and is only about 34 inches

long. With the 16-inch barrel, this rifle handles quickly and tracks between targets well. It is no trick to keep steel gongs moving at 50 yards.

#### RANGE TESTING

To test the rifle, firing at the 50-yard line, I set up an Innovative Targets steel target. This target is a great training aid. Using the steel insert rated for pistol calibers, I was able to ring the target on demand

As far as ammunition goes, the Rossi was fired for the most part with handloads using a 255-grain cast SWC. With the .44 Magnum carbine, I have had to crimp over the bullet shoulder in order to assure feed reliability—loads intended for use in a revolver sometimes did not feed correctly in the carbine.

This wasn't the case with the Rossi carbine. Most of these loads generate about 800 fps from a revolver. At 25 yards, the handloads struck a bit right and low, but this was easily adjusted.

In factory ammunition, there are several distinct classes of ammunition. These include cowboy action loads, which are lighter than standard; standard-pressure lead loads; standardpressure personal-defense loads; and heavy hunting loads such as the ones offered by Buffalo Bore and CorBon.

I fired a representative sample of each class of load. I fired a quantity of the Winchester 225-grain PDX JHP defense load and the Speer 250-grain Gold Dot JHP load. Each was mild to fire and accurate. The bonded bullets should be excellent for personal defense. I also fired a quantity of Hornady Critical Defense. This 185-grain bullet struck below the point of aim but gave good feed reliability. It would have been easy to adjust the sights if I wished to deploy this loading.

I also fired a small quantity of Cor-Bon 225-grain DPX. Recoil with all these loads was practically indistinguishable. Each was mild, with no more recoil than a .410 bore shotgun. Only the CorBon load was noticeably hotter. But you are getting serious horsepower.

The .45 Colt was designed for black powder way back in 1873. As such, it is sometimes smoky and not as efficient as more modern calibers when loaded with smokeless powder. However, a good quantity of the Black Hills Cowboy Action load gave both good accu-



#### » AMMUNITION PERFORMANCE

LOAD	THREE-SHOT GROUP (inches)
Black Hills 250-gr. FP	2.50
Hornady 185-gr. Critical Defense	2.75
Speer 250-gr. Gold Dot	2.60
Winchester 255-gr. Cowboy	2.65
Winchester 225-gr. PDX Defender	2.00
Three-shot, 50-yard groups from bench.	

racy and a full powder burn.

A tight chamber and 16-inch barrel increase ballistic efficiency. As an example, the Black Hills Cowboy loading breaks about 800 fps from a 4¾-inch barrel revolver but over 1,000 fps from the Rossi carbine. While the bullet doesn't expand, the .45 Colt enjoys an excellent reputation as a man-stopper.

As for the gain in velocity over a handgun, the average is a 100 fps gain with standard loads, while heavier loads may gain 140 to 160 fps. This is a useful increase in power over the revolver, but the real advantage is in accuracy. It is much easier to get a solid hit quickly with a carbine than with the handgun.

#### **FEATURES AND OPTIONS**

The action of the Rossi is easily the smoothest lever-action I have used, including original Winchester carbines. Pistol-caliber carbines have plenty of leverage. The action is both smooth and reliable. The wood-to-metal fit is good, if not flawless. A point of contention is the "L"-shaped safety found on the bolt. I simply ignore it.

Another source of discussion is the large loop lever. It's a great addition for use with gloved hands but otherwise isn't more efficient than the standard loop and in fact may be slower to use than a standard loop. Still, it is the same large loop that John Wayne, Chuck Connors, and Steve McQueen made famous on movie and TV screens, and some like the looks.

It is fast enough but, in the final analysis, serves no useful purpose and makes the light and flat carbine more difficult to store. I would not have sought out a big ring carbine. It was simply what was on the shelf, and I did not feel strongly enough about the large ring to let it interfere with my decision to purchase the rifle.

The same goes for caliber. Much could be said for the .44 Magnum ver-

sion, but the .45 Colt is a proven defensive loading. At moderate range, it takes deer-sized game cleanly. I had the ammo. As for the leather thong on the saddle ring—ditch it. It sometimes interferes with handling.

Another option with the Rossi 92 is the availability of shot loads. I used a handful of Speer/CCI shot loads in the carbine with good results. I did not cycle the rounds in the action more than one at a time. I would load a single shot cartridge in the magazine, feed it into the chamber, then load another. I could feel the cartridge crunch a little as it chambered.

I have the impression that the shot capsule might crack and crumble in the magazine from the force of a metal cartridge head under spring pressure butting into the plastic shot carrier. You would have a mess! The shot pattern is useful to five yards or so in dealing with vermin and reptiles. I like the option in a go-anywhere carbine.

#### TAKEN AS A WHOLE ...

The Rossi is a capable carbine for many situations. It isn't a precision rifle, but it is accurate enough. It is inexpensive, fires a proven cartridge, and has a good reserve of ammunition. If saddle rings and the big lever appeal to you, the Rossi has much to recommend it.

When you look past the television depiction of *The Rifleman*, you realize that Lucas McCain was pretty smart to deploy a rifle, and it gave him an advantage.

R.K. 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.



Rossi carbine is fully compatible with factory .45 Colt loads, from standard pressure to +P.



Handloaded 255-grain SWC (left) will solve a lot of problems. Hornady 185-grain Critical Defense is accurate and mild shooting.



www.winchester.com

would a nationally recognized defensive firearms instructor spend a week taking a basic defensive pistol course? What would he gain by learning how to draw and shoot, malfunction clearance and speed and tactical reloading? The answers to these questions might surprise you.

Interestingly, there is no one good answer, but several parts of the answer, which add up to making it a worthwhile endeavor. Let me explain.

First was the bucket list concept. Though I'd trained at most of the "big name" schools and with most of the "big name" instructors and had visited Gunsite three times previously, I had never actually attended a class there. I wanted to go before I get too old to fully appreciate it.

I also wanted to compare the curriculum and teaching methods of my own school, The Firearms Academy of Seattle, against what is currently being taught at what I believe is the nation's premier shooting school. What better way to do that than to take its core class?

dent of Cooper's, and of course Chuck was one of Cooper's first Operations Managers at Gunsite.

#### LESSONS FOR THE SEASONED INSTRUCTOR

With those experiences and using my own time as a law enforcement trainer, competitive shooter, and consummate seeker of shooting knowledge, I blended these to form the core of my curriculum.

Interestingly, at the end of the week-long class at Gunsite, I was pleased to find that the Gunsite curriculum and teaching methods and my own were much more similar than different. An example of this is how new skills are taught to students.

One of the first things I learned about Cooper years ago was that he would never demonstrate for his students and also forbade demonstration by his instructors. His reasoning (according to Gunsite Instructor Jerry McCown) was that 1) the students didn't come to see the instructors shoot, 2) instructors shooting could at times be interpreted as show-

# BASICS

### An Instructor Goes to Gunsite

BY MARTY HAYES



When I started teaching firearms for a living in 1990, there were basically two role models to follow. The one I initially patterned my shooting school curriculum after was that of Massad Ayoob's Lethal Force Institute, with a good dose of law enforcement training thrown in for balance. Using these methods and techniques served me well for many years, and in fact I still teach for Ayoob as an adjunct instructor for his current business, the Massad Ayoob Group.

The other role model was, of course, Jeff Cooper and what he was doing with the American Pistol Institute (later Gunsite Academy). As most beginning instructors know, those first years of teaching on your own can be very lean financially, and I never had the resources to make a trip to Gunsite, so I studied video and trained with instructors who had trained at Gunsite—men like Manny Kapelsohn, John Farnam, and Chuck Taylor.

Manny had been a Gunsite instructor, John an early stu-

ing off, and 3) if the instructor flubbed a demo, their credibility would be negatively affected.

Knowing this going into the class, I was pleasantly surprised to see this antiquated teaching methodology gone and replaced with the more common and successful "Tell-Show-Do-Feedback" method.

First, the instructor explains and demonstrates. Then the students perform the new skill and, either when they're doing it or immediately thereafter, the instructor gives them feedback (good or bad). The cycle repeats itself again and again until the students have learned the technique sufficiently to move on to the next technique, usually more complicated or faster.

Above: Gunsite Instructor Steve Lyseczko demonstrates and explains the speed reload.



Student Kristy Young works through the technique, with Coach Charlie McNeese giving her feedback. After a few repetitions, Kristy had it down.



Student Shirley Aquirre-Sprawls negotiates indoor simulator.

As the course went on, I was also very impressed with the instructor cadre and the instructor-to-student ratio. For our 23-person class, we had six instructors. Knowing how much it costs to employ top-notch instructors, there is no doubt in my mind that when it comes to the philosophy behind Gunsite, students are the top priority.

I know of no other place where one can go study the martial art of defensive handgunning with an instructor cadre of this caliber, all of whom were former military, law enforcement, or both.

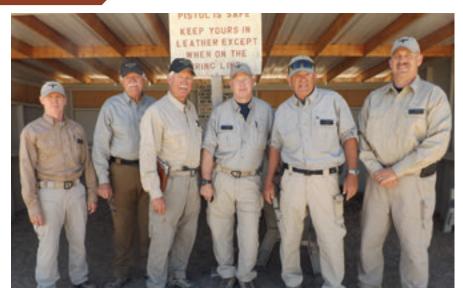
#### MODERN TECHNIQUES AND TACTICS

By the fourth day of instruction, students were solidly grounded in the fundamentals of the Modern Technique of the Pistol, and it was time for working some tactical considerations, such as building search techniques and low-light shooting—two disciplines I was keenly interested in seeing how they are taught at Gunsite.

Some instructors pooh-pooh the idea of teaching building search techniques to the average armed citizen, but Gunsite doesn't (and neither do I). For this class, we were treated to an excellent demonstration and then coaching by Instructor John Hutchison, a former Yavapai County, Arizona, SWAT Team member.



Author shoots in finals against the ultimate shoot-off winner, David Newman, a police firearms instructor from Ohio. Both finalists used 1911s in .45 ACP.



Left to right: John Hutchison, Jerry McCown, Charlie McNeese, Ken Tuttle, Jay Tuttle, and Steve Lyseczko. Total teaching experience: 176 years.



Gunsite Chief Operating Officer Ken Campbell stops by and talks with the class.

After 25 years of teaching this discipline, even this old dog learned a new technique and concept (which I should have known years earlier but somehow missed): the necessity of staying away from confined areas where a committed attacker can trap you as you negotiate a doorway. Instead, never back yourself into a corner. It was a great takeaway for me, and one that I will immediately implement into my curriculum when I teach building search principles.

We all looked forward to the night shoot on Training Day 4. Two techniques were taught: first the classic Harries Technique, where the back of the shooting hand is indexed against the back of the flashlight hand and pressed together to help control recoil. And they taught it for the right reason, as a technique to use when searching around strong-side cover.

But I wondered, would they teach the same for weak-side cover? No. They have adopted a modified version of the old FBI flashlight technique, where the flashlight is held in the

weak hand and used to peer around weak-side cover. If you have to shoot, bring the handgun up and shoot one-handed.

The final reason I wanted to attend this course was to be able to say I learned The Modern Technique at Gunsite—the place it was invented. That way, if I were to argue either for or against a technique, I would have the bona fides of having learned it where it was developed.

I know of several instructors who eschew the Modern Technique in favor of newer, "sexier" shooting methods, yet they cannot claim any legitimate credentials for their criticisms to be valid. I would respect their opinions more if they could say, "I have trained at Gunsite, and here is why I believe my techniques are better."

#### **CHANGING THINGS UP**

Having said that, can one who has been shooting, competing, and teaching handgun shooting for over 25 years claim



to have learned much by taking one class? Well, he can if he sets aside his strong hand (and his ego) and takes the class weak handed.

That's right, the entire 750 rounds I shot that week were made with my weak (left) hand.

Why? First off, I figured after 35+ years of shooting one way, I would be totally frustrated by trying to change shooting techniques if I used my dominant right hand. But my left hand was basically a clean slate. For the purposes of this article and to best absorb the doctrine of Gunsite Academy, I wanted to place myself into the role of a fairly new shooter, so doing it left handed was the logical choice.

I also shot the course with a 1911, and the main takeaway

from shooting the 1911 weak handed for the entire class was that the ambidextrous safety on the 1911, when actually used hard (as in a shooting class for a week) resulted in several failures of that part.

Gunsite doctrine has the shooter place the shooting-hand thumb on the safety and ride it through the entire shooting sequence. When I did that, I broke two different ambi-safeties, as the fragile mechanism that joins the two pieces of the safety would not handle someone pressing down hard on the ambi-safety while firing the gun.

I admit that I typically use a very hard grip, and perhaps the combination of the hard grip and the .45 ACP rounds created an anomaly. I noticed that fellow student Diane Owens, shooting her Dan Wesson 1911 in 9mm, never had the same issue, although it did chew up her thumb a little. Still, at this time I cannot recommend the combination of the ambi-safety and the technique of riding the safety for left-handed shooters.

#### THE SHOOT-OFF

Cooper founded the philosophy of the Modern Technique of the Pistol based upon observed results in man-vs-man competition. His early handgun shooting experiences saw him competing in draw-and-fire competitions in what were known at the time as "leatherslap matches."

On the final day of class, after the morning session of shooting the standards and additional simulator runs, the class got a taste of such a match in the form of the final shoot-off. Twenty years previous, my wife, Gila Hayes, took 250 and won the shoot off. Could I do as well?

The shoot off consisted of knocking down two eight-inch steel plates, one at ten yards and another at 15 yards, per-

forming a mandatory speed reload, and hitting your half of a split Pepper Popper before your adversary. Each student participated in six matches and, after the dust settled, the Rangemaster figured out which one of the 23



Janelle Cooper gives students tour of The Sconce, the Cooper home Jeff and Janelle built and that also served as an exercise in building a defensible residence.

students had the best record.

In our case, there were two undefeated, going 6-0—myself and David Newman, a police firearms instructor from Ohio. The final match was a "best of five" competition, meaning that the first one to win three matches won the shoot-off. Ultimately, David won, 3-1, and if I were to be bested, I am glad it was by a police firearms instructor.

#### THE GUNSITE FAMILY

One of the intangibles of graduating from a Gunsite course is becoming a member of the "Gunsite Family." Instructors who have never gone and are not part of this group cannot appreciate the warm and welcoming feeling that comes with attending Gunsite and joining the family.

Throughout the whole week, the instructors went out of their way to make each student feel important and to ensure their needs were being met. When the students took muchneeded rest breaks, the instructors were still on duty, discussing details about the training with individuals who had questions. No rest for the teaching staff, but the result was the students came away feeling appreciated, welcome, and informed.

When Col. Cooper was running Gunsite, he would invite the students over to his home to see his shooting memorabilia and gun collection. This stopped after Cooper sold Gunsite and retired from active teaching, but with the purchase of the school by Buz Mills, the Colonel reinstituted the tradition, and it lives on with Janelle Cooper and her daughters acting as tour guides.

If there ever was a sacred place for shooting instructors, this was it. On the last day, we were honored to take the tour, and it was a fitting conclusion to a great week of training. I understand that this doesn't occur with all classes, as it is entirely dependent upon Mrs. Cooper's availability. If you attend Gunsite and get this opportunity, you will not be disappointed.

All in all, I believe the experiences of attending Gunsite and becoming a member of the Gunsite Family were actually enhanced by my previous years as an instructor. The takeaways far exceeded the time and money spent attending, and I look forward to returning. In fact, I have already signed up for the 350 Intermediate Defensive Pistol course!

Marty Hayes is Director of Training and President of The Firearms Academy of Seattle, Inc and is a certified law enforce-

ment firearms instructor and an adjunct instructor for two other national firearms schools. He has been teaching firearms to the civilian sector for over 28 years, and holds "master" ratings in four different shooting disciplines.



# AR Magazines Continued from page 68

never rest the magazine on the ground because you can cause a feeding issue as too much tension on the rounds pushes down on the spring.

At one time this may have been true for both, but I mean Vietnam era or Army GI black follower magazines. Today a quality magazine can and should be able to be loaded and stay loaded with 30 rounds for a long time. I have some GI green follower mags from the late 1990s that I have used fully loaded on numerous deployments, and they still run great.

As far as putting pressure on a mag while shooting prone—using it as a monopod—if your magazine does not work when you do this, it's because the magazine is worn out or faulty. Various aftermarket accessories can be added to magazine base plates to give the magazine a better, more stable base while using it as a monopod.

How can you tell if you have wornout magazines, aside from loading them up and seeing if you can cram extra rounds in them from the spring getting weak? As soon as you start having *any* sort of stoppage. As I mentioned earlier, most double feeds are due to the feed lips getting weak or some follower issue. When I get a double feed, I usually throw that magazine away.

But if you do not have an endless supply of AR mags, I suggest numbering all your mags. If you have a double feed, annotate what mag it was and shoot it again. If you get yet another double feed, you definitely know it's the magazine and it's time for it to go!

#### THE WRAP-UP

Whether you are shooting in a match or on the battlefield, do not trust your reliability to your uncle's leftover magazines from the first Gulf War.

Knowing what a quality magazine looks like and when it starts to wear out can make the difference between winning and losing in whatever situation you are relying on your AR to handle for you.

Jeff Gurwitch has 25 years military experience, the past 17 with U.S. Army Special Forces. He served in the first Gulf War, three tours both in OIF and OEF. He has been a competitive shooter for over a dozen years, competing in USPSA, IDPA, and 3-Gun.

# Tactical Casualty Care Continued from page 63

and the principles of blood pressure, blood flow, and blood clotting.

When applied in conjunction with pressure, the product can accelerate clotting and slow or stop bleeding. Such agents work very well as the material used to pack deep wounds. When combined with surface pressure or a compression bandage, the results are almost always favorable.

Controlling blood loss can be a major problem for some individuals, particularly those who take blood thinners and those who suffer from inherited or acquired bleeding or clotting disorders. The blood in these individuals does not clot quickly. Even the smallest cut can be a real problem. Again, hemostatic agents may be a valuable addition to controlling bleeding in these patients.

In addition to a tourniquet, hemostatic agents are wise companions in your blow-out kit. Three hemostatic agents have been approved by the CoTCCC: Z-Medica QuikClot® Combat Gauze®, MedTrade Products Celox®Gauze, and HemCon Medical Technologies ChitoGauze®. All have undergone extensive testing and are battlefield proven.

Unlike previous generations of Quik-Clot products, the kaolin-based 3rd Generation QuikClot doesn't release heat. The chemical reaction associated with the zeolite-based 1st and 2nd Generation QuikClot had potential burn effects, which led to the development of the "cooler" kaolin-based QuikClot.

Celox and ChitoGauze contain chitosan, a natural polymer that is extracted from the shells of crustaceans and highly purified. The chitosan binds red blood cells and platelets on the dressing's surface, providing localized clotting independent of the normal clotting process.

#### **POCKET TRAUMA KIT**

Dark Angel Medical makes an excellent and reasonably priced pocket-sized trauma kit. The Pocket D.A.R.K. Mini comes in a three-mil thick vacuum-sealed bag and includes a SWAT-T, Celox Rapid Ribbon with Chito-R, one pair of nitrile gloves, and two-foot length of duct tape.

The duct tape has multiple uses and can be deployed with the vacuum bag to make an expedient occlusive dressing for treating open chest wounds (aka sucking chest wounds), which can lead to tension pneumothorax, the second leading cause of preventable death on the battlefield. The bag has quick-rip perforations and a zip-style closure should the bag need to be resealed.

The Pocket D.A.R.K. Mini measures 4x2.5x1 inches and weighs only 4.9 ounces. A nylon pouch for the Mini is available as an option. Price is \$39.95 (plus \$10 for optional pouch).

Dark Angel Medical offers a full range of trauma kits as well as training. Their two-day Direct Action Response Training $^{\text{TM}}$  (D.A.R.T.) has no prerequisites and is accredited by CECBEMS for 16 continuing education hours for basic and advanced EMTs/paramedics.

#### **OTHER ESSENTIALS**

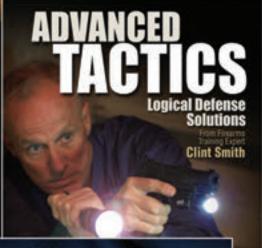
I recommend carrying several tourniquets in addition to a trauma kit. I like the C-A-T for this purpose, since it is the tourniquet that first responders and others are likely to have trained with.

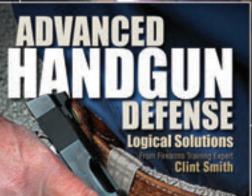
Both a primary and backup flashlight are also essential for everyday carry (EDC). You won't go wrong with any of the flashlight makers advertising in *S.W.A.T.*, such as Elzetta or SureFire. (⑤)

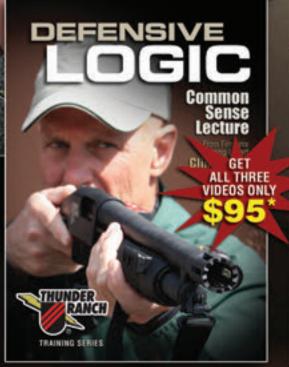


# "The best example of good training is never having to use it."

~Clint Smith







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# KA-BAR Ek Model 4

THE John Ek Commando Knife Company has a long and distinguished history. Since John Ek founded the company in 1941, Ek knives have been battle proven in six major conflicts by American personnel. President Franklin Delano Roosevelt, General George S. Patton, Jr. and Captain Clark Gable were among the proud owners of Ek Commando Knives during World War II.

John Ek called his knives "Ek Commando Knives" in reference to the WWII Allied Commando-type units for which his knives were designed. According to company records, he requested and received permission from the British War Office to use the term "Commando." Ek Commando Knives were sold only for use by members of the U.S. Armed Forces until Ek's death in 1976.

John Ek Commando Knife Company has entered a new era with its recent acquisition by KA-BAR® Knives. The Model 4 was the first Ek Commando Knife to be released by KA-BAR. The Model 4 also happens to be one of my personal favorites. The Ek Model 3 and Model 5 are now also available from KA-BAR. As with all KA-BAR products, they are made in the USA.



U.S. Marine Raiders gathered in front of Japanese dugout on Cape Totkina on Bougainville, Solomon Islands. Although not officially issued, Ek Model 4 was a favorite of the Raiders during World War II. Photo: U.S. National Archives

The new Model 4 is an updated version of the original. It is made from 1095 Cro-Van—the same steel used in the KA-BAR USMC Fighting/Utility Knife. It is 1095 high carbon steel with a little chromium added for better hardening, some molybdenum for edge strength and more edge holding, some nickel for added toughness, and a little vanadium for better bonding. It has excellent edge retention and ease of resharpening.

The Model 4 features a Parkerized 6.625-inch double-edged full-tang blade, 12-gauge commercial-grade steel crossguard, textured fiberglass-filled nylon scales (handles), and traditional X-head fasteners. Blade thickness is 0.154 inch. The Model 4 measures 12.62 inches overall and weighs 0.70 pound.

As a close-quarters combat knife, the Model 4 is designed for both thrusting and slashing. The spear-point design concentrates 100% of the thrust force along the exact center of the knife. The blade on my Model 4 came out of



the box with a razor sharp edge—as my bloody hand attested to in a careless moment.

Although KA-BAR refers to the grind as flat, technically it is a sabre grind, which differs from the flat grind in that it begins at the middle of the blade or lower, not at the spine as is the case with a flat grind. A sabre grind produces a strong, more lasting edge, albeit at the expense of some cutting ability. It is commonly used on tactical and military knives. The Model 4 has a 20-degree secondary bevel (cutting edge).

The Model 4 has superb balance. It is quick and lively in the hand. The balance is toward the handle, making the knife easy to maneuver. It tends to fall into the hand rather than out of it. The handle and S-shaped cross guard facilitate the diagonal, cross-palm fencing grip that was advocated by W.E. Fairbairn and Rex Applegate.

The textured scales feature deep scalloped finger grip depressions that assure a quick, firm grip and enhance the overall ergonomics of the knife. The X-head fasteners allow the scales to be easily removed in the field for cleaning. A coin or cartridge rim works.

All Ek Commando Knives have an extended butt. It is a direct extension



John Ek included a copy of his instruction booklet *Your Silent Partner* with every knife he shipped. Exact reprints of the booklet are available from Cornell Publications. It's a must-have for every Ek Commando Knife collector or aficionado.



Galco SHUKA (Shoulder Holster Universal Knife Accessory) with Ek Model 4 on Galco Miami Classic Shoulder Holster System.

of the tang, extending 3/8 inch beyond the grip. It protects the grips and hand if the butt is used as a hammer and can be employed as a light-duty pry bar. And according to Ek's 1944 manual, *Your Silent Partner*, it can be used for "an upstroke to lay your opponent out."

John Ek included a copy of *Your Silent Partner* with every knife he made. Full color restored and digitally enhanced reprints of the 30-page 1965 edition are available from Cornell Publications (Item #34920) for \$12.95. Cornell Publications is the world's largest reprinter of old gun catalogs and manuals.

The Model 4 comes with a Celcon® thermoplastic sheath that offers multiple carry options. The sheath is of friction fit, self-locking design, with multiple tie-down points and a nylon secondary-retention strap and belt loop. The knife secures solidly in place with a positive click yet is easy to withdraw when one has a proper grip on the knife.

John Ek offered a shoulder rig for his sheaths to be worn under or over clothing. Galco® offers today's Ek Commando Knife owner a similar option with its excellent SHUKA (Shoulder Holster Universal Knife Accessory).

The SHUKA attaches to any of Galco's modular shoulder harnesses and allows carry of most medium and large fixed-blade knives. You can carry the knife as a primary weapon or attach it with your pistol on one side and your knife on the other.

Besides providing a means for low-profile carry of larger fixed-blade knives, the SHUKA keeps the weight off the gun belt and also frees up belt space. Employed in conjunction with belt tie downs, the harness itself acts like suspenders to uniformly distribute weight.

The SHUKA is made of premium steer hide and is available in black and tan. As with all Galco products, the quality and workmanship on the SHU-KA are top notch. It retails for \$59.95.

To sum it all up, the KA-BAR EK44 Ek Model 4 is an outstanding knife and definitely worthy of the name "Ek Commando Knife." The Model 4 retails for \$125.40 and comes with a limited lifetime warranty.



# Stealth Cam G30 Digital Scouting Camera

Outdoors Stealth Cam® Digital Scouting Cameras continue to revolutionize the industry with new innovations and features. The Stealth Cam G30 is one of the most popular models in the lineup, and for good reason. It is an exceptionally practical camera that offers excellent performance at a reasonable price point. And it has gotten even better. In 2015, the G30 was updated with a number of new features, including active time setting, four language multi-lingual (English, French, German and Spanish), pre-set time and date (CST), image enhancements, and faster recovery time.

The G30 is a good-looking camera that exudes quality. It's ruggedly built and features a sleek, modern, practical design. The camera is compact overall, measuring 4.25 x 5.5 x 2.5 inches. It has a durable hinge with security mount that can be used with a padlock or optional Python® Cable (an adjustable braided-steel locking cable). There is a ½x20 threaded insert on the bottom for a tripod, eliminating the need for a tree or post like traditional trail cameras.

The G30 features Triad® Armed 3in1 technology—video/audio, still and time lapse. It features three resolution settings: 8, 4 and 2 megapixels. It offers five- to 180-second 720p High Definition (HD) video recording with audio, plus time lapse with PIR override and a burst rapid-fire mode with one to nine images per triggering. It also has a five-to 59-second/one- to 59-minute recovery time-out.

The camera features a Reflex® sub one-second trigger. It has a trigger speed of 0.79 second, which is plenty fast enough to capture anything that walks in front of the camera. Recovery time has been significantly improved, so you won't miss anything that may walk by after the initial trigger. Recovery time in the 2015 model is quite fast. Multi-zone detection further ensures you won't miss anything.

The camera also features Retina® advanced low-light sensitivity. The G30

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is equipped with 30 IR emitters. Infrared range is an excellent 80 feet. We found the detection range to be quite consistent during our testing. The camera even operates manual shots and has a test mode too.

A wide 16:9 image ratio is featured on the G30. Each image or video recorded has the time, date, moon phase, temperature, and name stamped, keeping track of individual animal's habits and baselines. There's also GPS tagging.

The G30 operates equally well during the day or at night. Picture quality is excellent, with outstanding daytime color. Matrix<sup>®</sup> Advanced Blur Reduction greatly reduces blur. Nighttime pictures are very good overall. There is



some whiteout on closer objects, but not bad, and it is certainly an acceptable tradeoff for the range capability of the IR emitters.

A Secure Lock digital password protection is used to prevent tampering. Additional features include an SD memory card slot for up to 32GB storage, so it can store large quantities of image and video output via USB output.

The G30 features intuitive menu programming with a backlit menu. Quick Set programming provides fast, simple setup. In addition to camera off selection, the user can choose from three Quick Set selections: Q1 selection (8MP, 30-second time out, 3 image burst), Q2 selection (8MP, 30-second

time out, 1 image), and Q3 selection (10-second HD video, 30-second time out). The G30 also offers user-defined custom selection.

Operating on 8 AA batteries, the G30 features an energy-efficient design that provides a well above-average battery life. The G30 will reportedly operate for over four months on one set of batteries. As with any batteries, the ones you select are crucial. There is also an external power jack for an optional 12V battery box.

GSM Outdoors offers a number of accessories for the Stealth Cam line. In addition to the 12V Battery Kit and Python Cable, they sell an all-steel Security/Bear Box, Universal Ball Joint Mount, Lead Acid Battery Cable, SD and SDHC Memory Cards.

To sum it up, the GSM Outdoors Stealth Cam G30 Digital Scouting Camera is an outstanding trail camera. It is ruggedly built, offers excellent performance, and is easy to set up and use. If you are in the market for a trail cam, you definitely need to check out the G30.

The G30 has a suggested retail price of \$159.99 and comes with a one-year limited warranty.







Up to 32GB SD and SDHC memory cards can be used with the G30.

# OGEAR LOCKERO

### NEW PRODUCTS & ACCESSORIES

# **CrossBreed Freedom Carry Holsters**

In response to consumer demand for more versatile carry tools, CrossBreed® Holsters introduces the latest in its line of handcrafted holsters, the Freedom Carry. What sets this new holster apart from its predecessors is that while most holsters only allow for carrying in one position, the Freedom Carry can be worn in several positions without sacrificing comfort.

This new holster additionally allows for carrying larger firearms in the appendix position—a unique feature not found in most holsters. Freedom Carry's goals are to offer the comfort expected of all CrossBreed Holsters products and the versatility expected by modern gun owners.

The Freedom Carry is available for more than 300 different firearms, including some with lights, lasers, and micro red dot sights. It is available in hand-dyed black cowhide, premium tan cowhide, and natural tan horsehide.

CROSSBREED HOLSTERS (888) 732-5011 www.crossbreedholsters.com



## Magpul PMAG30 AK/AKM GEN M3

Magpul's PMAG 30 AK/AKM GEN M3 is an inexpensive, lightweight, high-reliability 30-round polymer magazine designed for Kalashnikov-pattern rifles in 7.62x39mm

(AK-47, AKM, AKS, and others). It features steel-reinforced locking lugs, removable floorplate, constant curve geometry, and a high-reliability/ low-friction follower for the performance and military-grade durability you expect from a PMAG. Made in the USA, it has a suggested retail price of \$26.95.

MAGPUL INDUSTRIES CORP. (877) 462-4785 www.magpul.com



## **Browning Damascus Folders**

Browning has introduced three folding knives to their collection of Damascus blades. All three models feature 31/16-inch long hollow-ground blades crafted from strong, beautiful Damascus steel with a laser-cut Buckmark in the blade.

Three handle materials will be available. The Full Damascus model features Damascus scales. A Mother-of-Pearl model is accented by Damascus bolsters. Lastly, an exotic Mammoth Tooth model is also adorned with Damascus bolsters. Suggested retail prices range from \$222 to \$555 depending on handle material.

BROWNING (800) 333-3288 www.browning.com



## **Bravo Company Mfg EDC Watch**

When the engineers at BCM® began development of the EDC (everyday carry) line, they wanted a timepiece that was both precision crafted and as rugged as their fleet of carbines. Meet the BCM MK15 Tritium Timepiece.

Housed in a case made from 316L stainless steel and finished in PVD Brushed Black, the MK15 is water resistant to 200 meters/20 atmospheres with a 13 Jewel gold-plated Swiss-made chronograph movement. A ratcheted unidirectional bezel frames the face of the timepiece, punctuated by an anodized red screw-in crown.

Offered as a limited edition of 2,500 timepieces, each MK15 is laser engraved with a unique serial number in a custom fiber glass reinforced case.

T25 Tritium illuminated minute, hour and second hands track over the Tritium illuminated hour markers on an enamel-covered carbon-fiber dial. It is protected by Sapphire Scratch Resistant Crystal and two layers of anti-reflective coating applied to the inside of the crystal.

BRAVO COMPANY MFG. | (877) 272-8626 | www.bravocompanymfg.com





## **Civic Duty Self-Defense Round**

G2 Research has introduced its Civic Duty round for self-defense. Designed to reliably and quickly expand to 2.5 times its caliber, this new round delivers incredible stopping energy, large wound area, and excellent penetration.

A Civic Duty round creates a near-instant fight-stopping wound by effectively delivering all its energy inside the target. The Civic Duty is a 100-grain solid copper 9mm CNC-machined bullet. Upon entering the target, the bullet immediately begins expansion and opens up to 0.855 inch. Unlike conventional hollow-point bullets—which may not expand reliably due to clothing filling up the hollow point—the Civic Duty will reliably expand due to its peeling petal design.

The Civic Duty round is currently available in 9mm. Suggested retail price is \$41.99 per box of 20 rounds.

#### **UZI PRO Pistols**

From IWI US Inc., the highly anticipated UZI® PRO Pistol for the American consumer market is now shipping to distributors.

Based on the famous UZI SMG, the UZI PRO is purpose-built with the goals of uncompromising performance and reliability on a robust design. This 9mm Luger Parabellum version for the American public has an advanced polymer pistol grip that reduces weight and incorporates an integrated magazine release button for fast and easy magazine changes. The cocking handle is located on the side, allowing for a full-length Picatinny rail on the top receiver cover. A short Picatinny rail is also incorporated into the polymer body, mounted below the barrel, perfect for additional accessory placement.

Each UZI PRO Pistol comes with one 20-round and one 25-round magazine and has a suggested retail price of \$1,109.00.

IWI US INC. | (717) 695-2081 | www.iwi.us



#### **Screen Shots**

In the pre-dawn darkness of a January night in San Antonio, a homeowner heard an insistent knocking at his front door and went downstairs to investigate. Prudently, he armed himself before opening the door to find a stranger on the porch, demanding to be let in to use the phone, with only a screen door between them.

When the homeowner didn't open the screen door, the shadowy figure on the front porch suddenly produced a firearm and fired through the door, hitting the resident with two of what reports indicate were at least six shots. The homeowner fired back three times, causing his assailant to flee. Police searched for the attacker but had not found him at press time.

SOURCE: KENS-TV, San Antonio, Texas, 1/5/16

#### **Defending Her Castle**

When three masked men with guns forced their way into her Trotwood, Ohio home in the wee hours of the morning, the homeowner defended herself and her four children with the ferocity of a mama bear.

Dodging away from the intruders, who'd been holding her at gunpoint while trying to steal a safe, she pulled a pistol from a dresser drawer and opened fire. The threesome fled, but her fire had taken effect, as responding police officers found one of the robbers dead on a neighbor's lawn.

SOURCE: WDTN-TV, Dayton, Ohio, 12/28/15

#### Did You Ever Have That Feeling...?

A 65-year-old Manchester, NH woman stopped for gas on the way home from work and thought it suspicious that, after leaving the station, a car pulled up quickly behind her at a traffic light and followed her home. She parked as close to the entrance of her apartment building as she could, but when she was feet from the door, a shadowy figure in a hoodie leapt from the following car and got between her and the door to her building.

As the assailant reached for her, the woman, 4'11" and 105 pounds, pulled a pistol from her coat pocket and fired once, hitting her attacker in the chest. The would-be robber, a 5'11" 200-pound 23-year-old man, crumpled to the ground. His accomplice dragged the robber into the getaway car and transported him to the hospital, where he was arrested. "Last night was the first time I ever shot that gun in all the time I've owned it," the woman told local reporters.

SOURCE: WMUR-TV, Manchester, New Hampshire, 1/6/16

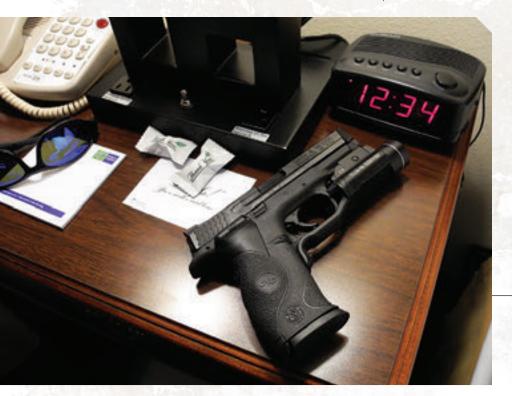
#### **Driveway Dustup**

A man and woman pulled into their driveway in Corpus Christi, Texas. As they parked their car, they were approached by an armed robber brandishing a pistol and demanding the driver's wallet. The driver, a 69-year-old man with a valid license to carry a handgun, pulled his own pistol and fired on the holdup man, hitting him.

The driver then held the 23-year-old gunman for police,

who took the would-be robber to the hospital. He will face arrest as soon as he's discharged. Police told reporters no charges are expected to be filed against the driver.

SOURCE: *Caller Times*, Corpus Christi, Texas, 1/7/16 (1)



If something goes bump in the night, what will you grab?

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# COMING NEXT ISSUE MAGAZINE

SIGNATURE SERIES AK WITH CUSTOM SHOP FLAIR
Rifle Dynamics RD 501 5.45 AK



# I Know You

I know you.

I mean I really know you.

All your achievements and all the failures. All the peccadillos, all the bravado in front of your accomplices—and the fear and trepidation you feel when nobody else is around and you're home alone late at night.

You live your life of desperation, striving for success in the eyes of your peers, hoping all the while that you can avoid the inevitable confrontation with me. But our meeting is unavoidable, and whether it's by gun, sword, bomb, or any of the myriad other means available to me, I will win and you will lose. And I will win because you fear me—you always have and you always will.

I am the one enemy with whom you will never be able to reason because I know how you think and I choose to be unreasoning and unreasonable. If ever the day comes that you become cocky and overconfident and think you can defeat me, you had better join the Witless Protection Program, because I will not be beaten. I am invincible, and all you can do is fight to stave off the inevitable.

Since some powers that be saw fit to publish this in a weapons and tactics-oriented magazine, allow me to explain yourself to you in terms related to those two subjects.

You have an interest in weapons and/or tactics for a variety of reasons: You find the subject matter intrinsically interesting, or you have a puerile wish to put a "notch" on your gun, or you wish to further your knowledge in both fields to gain the edge in battle, or you want to find out what the latest goings-on are so you can pass them on to trainees who have been placed under your tutelage. Or about a dozen other reasons, but these are the primary ones.

If you merely have a base interest in the subject matter, that's fine, but it's probably just that—a base interest—the same level of curiosity that is appeased by your subscriptions to various other periodicals related to computer graphics, the construction of log homes, or gourmet cooking.

If you wish to carve notches on your pistol butt, rest assured you'll never run into me, because someone else will kill you long before you have the displeasure of my acquaintance. I'll be there in spirit when you jump off the twig, but you'll have saved me the energy of having to kill you myself.

The person who is studying to gain information and improve his current levels of knowledge and physical ability is the interesting kettle of fish. He is often experienced in the ways and means of physical conflict, and when and where he dies are dependent on the whims of my mood at any given time. Sometimes I'll snuff out

his life in his first contact, and sometimes he'll have a long and checkered fighting career, along with all the attendant medals and parades. But sooner or later, I'll become tired of his game, and his expiration date will become overdue.

I will choose when, where, and how he dies. And I will choose whether he dies as a hero in his peers' eyes or branded as a coward forever. Because while you insist on categorizing people as heroes or cowards, I know better. Sometimes there are behavioral patterns in battle, and sometimes there aren't, but the fine line between hero and coward is just that—an ultra fine line. One tiny facet or incident can turn a lionheart into a perceived chicken in the blink of an eye—and the man who ran from me once may be released to stare unblinkingly at his fate a dozen times in the future, but he will always be known as a coward.

The fourth reader, the illustrious firearms instructor, is the one I find emotionally the easiest to put to death. Since there are only two types of trainers—those who have honor and integrity, and those who don't—the choice is easy; choosing a time and place is not.

Unless either one braces me face-to-face, I'll usually give both what is commonly regarded as a long lifespan for two different reasons. The long-serving Old School have invariably earned their stripes the hard way and, like hunted game, deserve a quick and accurate bullet. They often spent much time in battle and then passed on their hard-earned knowledge to others who were their juniors in both years and experience.

Many members of the new breed, however, are of the ilk who have false resumes, have coasted to notoriety on others' shirt tails, and have no mitigating redeeming qualities except that sometimes their third-hand information actually does help a blinkered trainee.

So why let him live when he's so easy to kill? Sometimes causing somebody's end brings savage satisfaction—even in my job. And there's nothing much more satisfying than causing the sins of the father to be visited on the sons. To see the clan of someone living for years after his killing known as the Descendants of the Liar is justice indeed.

Distasteful? Maybe. Ugly? Maybe. Hated by all who read this? Yes. But then I don't care one whit what you think of me, because I know you—and I own you.

By the way, I forgot to introduce myself. My name is Death, and we'll be meeting soon enough.

Have a nice life.

[This column first appeared in the April 2007 issue of S.W.A.T.]

# RUGER AR-5

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AR-556® Rifle (Model 8500\*)

The Ruger® AR-556® is a semi-automatic, M4-style, direct impingement Modern Sporting Rifle that offers consumers an affordable, American-made rifle with the rugged reliability they have come to expect from Ruger. Extensively tested during its development, the AR-556® is constructed from top-quality components, including forged 7075-T6 aluminum upper and lower receivers and a cold hammer-forged, chrome-moly steel barrel with M4 feed ramp cuts. Chambered in 5.56 NATO, the AR-556's carbine-length, flattop, M4 design is fully configured with a Ruger® Rapid Deploy folding rear sight, milled F-height gas block with post front sight, forward assist, dust cover, brass deflector, telescoping six-position or fixed stock, improved trigger-reach grip and enlarged trigger guard. Standardized M4/AR components are utilized throughout, so the AR-556® can be customized easily.

- \*Some rifles may not be available in all states and locales due to laws limiting magazine capacity and feature-based restrictions. Please check with your local law enforcement agency prior to purchasing this firearm to verify that it may legally be purchased and/or possessed in your particular state and locale
- \*\* State compliant model 8502 is offered with a fixed stock, heavy contour barrel, no bayonet lug or flash suppressor and includes one, 10-round magazine.

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