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COVER
STORY

MOSSBERG 590 SHOCKWAVE

Short-Barreled 12-Gauge Revolution

One of the hottest new firearms to hit the market this year, the Shockwave is a compact pump-action with the punch of the 12-gauge round and without the hassle of NFA paperwork.

BY EUGENE NIELSEN

COVER PHOTO BY CAMERON HOPKINS

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This is the golden age for enhancing established firearms past what was thought possible only a few years ago. Even the standard bolt-action rifle is getting a makeover in terms of performance and appearance.

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DENNY HANSEN

Warning Shots

Recently my attention was brought to a paper published by the International Association of Chiefs of Police (IACP) titled *National Consensus Policy on Use of Force*. One section of the paper dealt with warning shots, and read as follows:

"Warning shots are inherently dangerous. Therefore, a warning shot must have a defined target and shall not be fired unless:

- (1) the use of deadly force is justified;
- (2) the warning shot will not pose a substantial risk of injury or death to the officer or others; and
- (3) the officer reasonably believes that the warning shot will reduce the possibility that deadly force will have to be used."

I read that section several times because I thought my eyes must be deceiving me. But sure enough, the paper was condoning warning shots under certain conditions.

Let's scrutinize those conditions in order.

- If the use of "deadly force is justified," then the shot should be placed onto the threat. Period.
- How does an officer know if a warning shot will not pose substantial risk of injury to others? The stereotypical warning shot is fired into the air—and what goes up must come down.

A statute in Arizona called "Shannon's Law" is named after 14-year-old Shannon Smith, who was killed while standing in her backyard when a bullet that had been fired into the air struck her in the top of the head. Passed in 2000, the law makes randomly shooting in the air a felony. So, unless a department's policy specifically authorizes warning shots (unlikely), an officer who fires a warning shot into the air is not acting under color of authority, and in Arizona he is committing a felony.

- The last condition in the paper is almost an oxymoron: "reduce the possibility of using deadly force" by discharging a firearm. Really? I think the IACP needs to institute a policy against writing a paper while inebriated.

What's next from the IACP? Recommending shooting a gun out of a felon's hands while firing at an officer?

I want to be perfectly clear on this: A warning shot is never, repeat *never*, acceptable.

The minimum length of a shotgun barrel is generally considered to be 18 inches. Any shorter and it likely falls under the National Firearms Act (NFA) as either a "sawn-off shotgun" or a short-barreled shotgun and requires paperwork submitted to the BATFE with a tax of \$5 or \$200.

But there's a new game in town with the introduction of the Mossberg Shockwave. With a barrel length of only 14 inches, it can be purchased just like any other firearm that does not fall under the NFA. Our comprehensive evaluation of the Shockwave begins on page 52.

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

Denny Hansen

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SWAT

MAGAZINE

SURVIVAL WEAPONS AND TACTICS

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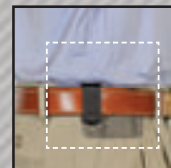
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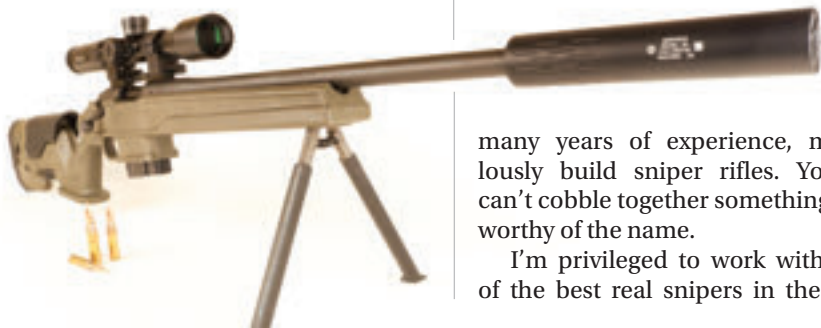


DO IT YOURSELF ...

Being an incurable tinkerer, I immensely enjoyed Dr. Dabbs' article about assembling a "sniper rifle" (*DIY SNIPER SYSTEM: Precision Shooting for the Working Man*, May 2017 S.W.A.T.).

While I'll never be a sniper, there is a certain satisfaction achieved by shooting a very small group on paper or being able to ring a steel target at extended distances.

M. Levin, Montana



We're happy to hear you liked the article. The nice thing about having so many aftermarket accessories available for a wide range of firearms is the ability to create something unique that the owner can take pride in—without breaking the bank.

... OR NOT

I could hardly believe it when I opened your normally fine magazine and found an article about making your own sniper rifle!

Skilled gunsmiths, usually with

many years of experience, meticulously build sniper rifles. You just can't cobble together something that's worthy of the name.

I'm privileged to work with some of the best real snipers in the world

and none of them would ever think of building their own. Doing so would be the equivalent of trying to turn a Prius into a racecar.

S. Canto, North Carolina

Thank you for contacting us with your comments. The point of the article was not to build a true sniper rifle, but rather to create a personalized, accurate rifle while maintaining a reasonable price point.

RIFLED BARRELS?

The article concerning the FBI's new pistol (*FBI ISSUES NEW PISTOL: Glock 19M*, April 2017 S.W.A.T.) was very interesting and informative. I do take issue with the author's presumption that the barrel of the Glock 19 was rifled so agents could fire lead bullets. That is patently ridiculous. As a retired sergeant (firearms instructor, HRT/SWAT), I would guess that the FBI requested rifled barrels over polygonal barrels for accountability purposes,

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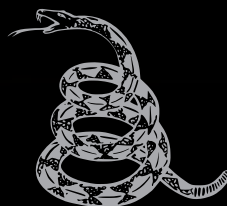
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to make it much easier to figure out who shot what, with the tool marks unique to the weapon used. Lands and grooves make it much easier than the polygonal rifling of conventional G19s. That's my guess, anyway.

Great magazine, keep up the good work!

S. Hancox, New York

Thanks for the kind words and feedback on the article.

Only the FBI knows why they specified rifled barrels for the 19M, but either reason makes sense to some degree. Because agents have access to jacketed bullets, I doubt few would fire lead bullets unless practicing with their own ammunition.

On the other hand, if finding out who fired a shot is paramount, why don't more agencies—some that issue thousands of pistols—also ask Glock for rifled barrels? Maybe this will set a precedent for the future.

Denny Hansen

SHOOTOUT FOLLOW-UP

Ethan Johns did a great job in the article on used handguns (\$300 DOLLAR

SHOOTOUT: Testing Bargain Blasters, May 2017 S.W.A.T.). I would like to see a follow-up article with a twist, specifically about shotguns.

I have seen police turn-in shotguns offered at very attractive prices, but I don't have the experience to know if they are truly good buys.

Would it be possible to have an article about used long guns and what to look for and what to look out for?

L. Dourdan, Indiana

Thank you for the suggestion. It's an interesting idea and we'll see what we can do.

DISGUSTED READER

After reading Denny Hansen's *Briefing Room* in the May issue, I will never buy another issue of S.W.A.T.

He actually endorsed the use of fire hoses against protestors! I'm sure he would have been right at home in Nazi Germany because he writes like a Nazi propagandist.

He often gives lip service to the Second Amendment, but maybe he should start at the beginning of the Constitution and read the First

Amendment, which gives people the right to protest!

K. Braxton

Whoa! I've been called a lot of things, but never a Nazi.

To start with, the First Amendment is not the beginning of the Constitution. It is the first of the Bill of Rights, and, as the names imply, they are amendments to the Constitution.

Thank you, however, for suggesting that I read it. All I can say is, "right back at ya."

You see, words have meanings. The First Amendment does not give people the right to protest. The actual wording is "the right of the people peaceably to assemble ..."

What I thought I made very clear is that I was not talking about a peaceful assembly, and I stand by my words. When "protestors" cause the death of an innocent person because they would not let an ambulance pass, cause property damage, burn buildings and vehicles, attack passersby and beat them to a pulp, that is not protesting, it is anarchy.

Denny Hansen ☺

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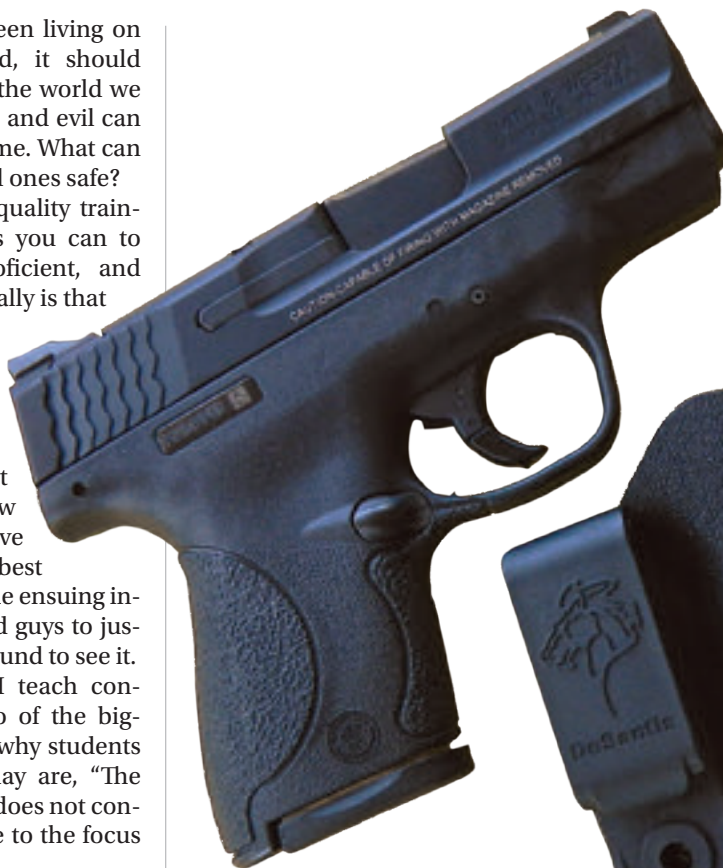
DeSantis Slim-Tuk Holster

Unless you have been living on a deserted island, it should be apparent that the world we live in can be dangerous, and evil can strike anywhere at any time. What can you do to keep your loved ones safe?

Get a gun, get some quality training, practice as often as you can to become (and stay) proficient, and carry the darn thing! It really is that simple.

Whether you are at home or out and about, a life-and-death confrontation can occur anywhere, at any time, and at lightning speed. And law enforcement may not arrive in time to save you. The best you can hope for is that the ensuing investigation brings the bad guys to justice. Make sure you're around to see it.

When my Dad and I teach concealed-carry classes, two of the biggest excuses we hear for why students don't go armed every day are, "The gun is too heavy" and "It does not conceal well." This brings me to the focus of this month's column.



DeSantis Slim-Tuk holster nicely complements slender Smith & Wesson M&P Shield. 360 C-Clip affords many carry options. Clip can be reversed to opposite side for right- or left-hand carry.



S.S. Single Magazine Pouch has tension screw located at top of pouch.



Mag pouch can accept up to a 1.75-inch belt but has slots for a narrower belt if desired. One-way directional snap affords easy on/off.

I recently bought a Smith & Wesson M&P Shield. For those not familiar with it, the Shield is a striker-fired subcompact 9mm that weighs a svelte 19 ounces. Overall length is 6.1 inches and the slide is only .90 inch wide.

The more I shoot it, the better I like it, but I took my time looking for an appropriate holster to carry it in. I was browsing some manufacturers' websites when I came across the DeSantis Slim-Tuk®.

When I think of DeSantis Gunhide, I naturally think of quality leather hol-

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sters, though the company also has nylon and Kydex® in its line-up.

The Slim-Tuk is an inside-the-waistband holster that is precision molded out of Kydex. The holster is an open top, open bottom. The inside of the holster is smooth, with a good sight track to keep the front sight protected and ensure it does not snag when presenting the pistol. Two tension screws with rubber spacers are located at the bottom of the holster and let the user adjust how much or how little resistance he wants to draw the pistol.

One of this holster's unique features is that it uses DeSantis' tuck-able 360™ C-Clip, which affords many carry options and can easily be reversed from right to left hand. The "J" hook clip is made from tough nylon and fits up to 1.75-inch wide belts.

In my opinion, a reload should always be carried. Although manufacturers often refer to the magazine as an "accessory," in truth it is an integral part of the gun, because the weapon will not function without it. Thankfully the Shield is sold with two magazines—a seven rounder and an eight rounder.

For the reload, I got a DeSantis S.S. Single Magazine Pouch. Made from leather, the S.S. has a tension screw located at the top of the pouch and a one-way directional snap for easy on/off. The pouch fits up to 1¾-inch belts. Slots cut into the rear of the flap allow it to be threaded onto narrower belts.

The Slim-Tuk IWB holster is very comfortable, lightweight, and super concealable. Without watching him, I had my son Austin put on the Shield and Slim-Tuk holster while he was wearing just jeans and a T-shirt. When I turned around, I could not tell where the gun was.

The Slim-Tuk holster and S.S. mag pouch are quality gear that complement a quality pistol.

I will recommend this weapon and holster combination to my students, and am looking forward to getting a lot of use from both. ☺

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Have you ever been in such a situation? Our little tableau sounds like bad movie dialogue, but it really happens. In fact, it happens all the time.

"That's crazy," you might say, but if you make such a statement, you obviously haven't participated in many armed confrontations.

If you have experience, you're likely shaking your head thinking about the times when you produced your Wunderblast Custom Shop Pistol to defend truth, justice, and the American Way, only to discover the dirtball on the other side of the equation wasn't scared.

It's a rude awakening but a concept that is too-often overlooked in defensive firearms training. So I would like you to burn today's central theme into

your frontal cortex: There are many people who don't care that you're pointing a gun at them.

This is one of those things in life that goes against common sense, but I've personally seen it countless times. Of all the people I've "held at gun-point" (a misnomer), it didn't matter to roughly half of them that my cohorts and I were instantly ready to facilitate severe body fluid leakage.

Contrast that with the countless times I've heard a common statement from people considering the purchase of a firearm: "I want to own a gun for protection, but I don't think I could really shoot anybody. I just want to scare them." In essence, these well-intentioned folks naively believe display of a firearm will instantly cause a bad guy to reconsider in mid-felony.

Such an idea makes a bunch of sense to you and me. Anybody with

even modest brain function knows that bullets often result in chronic death, so it is wise to comply with someone who has a gun barrel aimed at your cranium. Unfortunately, the bad people of the world operate under a whole different set of rules.

First and most common, miscreants are frequently under the influence of various chemical immoralities. Drunk, stoned, high, wasted, whatever—"recreational" chemicals impair judgment to the degree that common sense gets tied up and thrown into a burlap sack inside the brain.

With the suppression of fear, and feelings of euphoria and invincibility marching alongside a non-existent pain threshold, many frequent-flyer felons don't comprehend nor care that you are ready and willing to give them a 180-grain frontal lobotomy.

A portion of criminals also have

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some type of mental impairment to go along with their addictions. If someone is not living in the “here and now,” but having ongoing dialogues with stoplights and men from Mars, display of your firearm probably won’t bother them too much.

The most difficult category of bad guy for “normal” people to understand is the hard-core criminal. Regardless if he is a straight-up gang-banger or the common criminal sociopath, these people live in a world where death is merely the cost of doing business, and they have utterly and completely resigned themselves to the fact that they could, or are even likely to, die in a violent manner.

In fact death and the threat of death are so common in their world that they aren’t really even considerations. To them, dying is like the fear of getting stuck in a long line at the grocery to you and me—something that should be avoided but will probably happen regardless.

Truly, these folks don’t care and don’t have a gram of pity, remorse, sympathy, or basic human decency in-

side them. They don’t care about their own life and certainly don’t care about yours. We all “know” that such people exist, but it’s difficult to get your head wrapped around the concept when facing it for the first time, especially in a moment of crisis.

That’s why it’s critical to your mental pre-planning and visualization of violent encounters that you embrace the likely scenario wherein the display of your pistol, rifle, shotgun, or handy Hellfire missile results in ... nothing. You pull your gun and the bad guy doesn’t stop, wet his pants, slow down, or even give notice that you’ve got a large-caliber weapon aimed in his (or her) direction.

I often liken this to the situation where a dog is chasing your car and you suddenly stop: The dog ends up standing there with a bewildered look on its face for a few seconds before trotting off because the vehicle didn’t respond as the dog expected.

What we don’t want to happen is a good guy having the same, potentially fatal, pause when a dirtball doesn’t respond to the magical deterrent effect

of a pistol or racking the action of a shotgun, sometimes called the “scariest sound in the world.”

It is, but the select classes of people we’re talking about simply don’t bother to get scared, and that is deeply difficult for normal, decent people to comprehend.

If you hold the tiniest hope that the threat of a firearm will stop a fight, banish it from your mind immediately. Instead, focus on how you will always respond quickly and appropriately to any threat, or lack thereof, presented to you.

Careless, hopeless, debauched people are out there and ready to ignore you and every one of your weapons. Make sure you’re ready to give them something they can’t ignore. ☺

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



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EDC Trauma Kit Basics

Everyone should carry a med kit. If you have made the choice to responsibly carry a firearm for defense, it's irresponsible not to have the tools to render aid as well.

A med kit should be lightweight, compact, and easy to use. It needs to be convenient to carry on your person. When life is measured in seconds, having a med kit in your car or range bag isn't enough. The life you save may be your own.

Having the necessary tools is only part of the equation. Equipment is only as good as the training. Basic emergency medical training should cover the entire spectrum of lifesaving skills. And like shooting, they are perishable skills.

A number of excellent training courses are being offered around the U.S., such as Dark Angel Medical's outstanding two-day Direct Action Response Training.



Firefighters transport "patient" to ambulance during antiterrorism training exercise. Average response time for BLS ambulance in U.S. is ten minutes. You can bleed out in less than five. Photo: U.S. Navy by Mass Communication Specialist 1st Class Richard Doolin

When putting together an EDC trauma kit, stick to the basics.



Hemorrhage is most preventable cause of death in compressible injuries. C-A-T and SWAT-T tourniquets, QuikClot Combat Gauze, NAR Emergency Trauma Dressing, and Sharpie marker are part of author's EDC. C-A-T is on PHLster Flatpack tourniquet carrier.

BleedingControl.org, an initiative of the American College of Surgeons and the Hartford Consensus, is another excellent resource that can direct you to courses in your area.

When putting together an EDC trauma kit, stick to the basics. Just remember "Stop the Bleeding, Start the Breathing." There's obviously a lot more to emergency first aid, but those are the most immediate concerns and what an EDC trauma kit is intended to address. Your goal is to stabilize the patient until EMS arrives.

CONTROL BLEEDING

All military personnel carry tourniquets and hemostatic agents. You should too. To quote BleedingControl.org, "The only thing more tragic than a death is a death that could have been prevented."

Hemorrhage is the leading cause of trauma deaths. Roughly 80% of combat deaths and 50% of civilian trauma deaths can be attributed to hemorrhage. It's the most preventable cause



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of death in compressible injuries—approximately 50% of injuries.

An average adult body with a weight of 150 to 180 pounds contains 4.7 to 5.5 liters of blood. A child under 80 pounds contains approximately half that amount.

Exsanguination (bleeding out) can occur in less than five minutes from a femoral artery bleed. The national average response time for a Basic Life Support (BLS) ambulance is ten minutes. Paramedics are 12 to 15 minutes. And in an active shooter or terrorist event, EMS won't render aid until the scene has been secured. You do the math.

SWAT-T have proven 100% effective in occluding blood flow in upper and lower extremities. As of this writing, there are no scientific studies on the RATS, although it remains a popular option.

My everyday carry (EDC) is a C-A-T and a SWAT-T. They're compact, lightweight, and complement each other.

The C-A-T (Combat Application Tourniquet®) is a CoTCCC (Committee on Tactical Combat Casualty Care) recommended tourniquet that has been used by the U.S. military since 2005. It's the most fielded tourniquet in combat. Now in its seventh generation, the C-A-T features a pat-

for pediatric and K9 applications, whereas windlass tourniquets cannot. The SWAT-T is being fielded in combat theaters and is standard issue in a growing number of law enforcement agencies.

Rapid one-handed self-application with the SWAT-T does take a little practice. It's not as easy as the C-A-T in this regard.

HEMOSTATIC AGENTS

Hemostatic agents are employed for compressible (external) hemorrhage not amenable to limb tourniquet use or as an adjunct to tourniquet removal when evacuation time is anticipated



SFD Responder ankle pouch is a great way to discreetly carry a personal trauma kit. See *Offbeat* on page 92 for a full review.

TOURNIQUETS

Tourniquets have emerged as the standard of care in the tactical environment due to their ease of use, rapid application, and complete stoppage of blood loss. Current protocol considers the tourniquet an initial lifesaving intervention to control massive hemorrhage from an extremity.

The old dogma of "save a life, lose a limb" has been proven to be false. A tourniquet can remain in place for two to four hours. Thousands of combat veterans are walking around today with all their limbs because their lives were saved by tourniquet use.

A fine-point Sharpie® permanent marker should be kept in the kit for writing the time of application on the tourniquet(s) and a "T" on the cheek (now preferred placement) or forehead of the patient.

Popular commercial tourniquets include the C-A-T®, SOFTT-W®, SWAT-T® and RATS® Tourniquet. Each has its plusses and minuses. In scientific studies, the C-A-T, SOFTT-W and

ented windlass system that's robust and easy to use one-handed for self-application. The Gen 7 C-A-T has a single routing buckle system that permits very fast application and effective slack removal. The C-A-T is distributed in the U.S. by North American Rescue.

Anyone who has recently been in the military has trained with the C-A-T. Although the C-A-T is simple to use and instructions are included, an untrained individual is unlikely to quickly figure it out under stress.

The SWAT-T (Stretch, Wrap And Tuck Tourniquet) from TEMS Solutions features a unique stretch retention design that's intuitive to use, making it more likely to be used by a bystander. Instructions are printed on it.

The SWAT-T is a medical multi-tool that may be employed as a tourniquet, pressure dressing, occlusive device, elastic bandage, sling and swathe, and more. It can be successfully employed for higher axillary and groin applications. And it can be employed

to be longer than two hours. They're primarily employed to control life-threatening bleeds.

They're not for use in penetrating thoracic or head trauma. They can be used for deep lacerations as long as pleural or peritoneal space hasn't been breached.

Several brands are available commercially. All of them perform well on heavy bleeds. The latest generation of hemostatic products performs significantly better than earlier generations. The shelf life of these products is related to sterility, not efficacy.

Z-Medica® QuikClot Combat Gauze®, CELOX® Gauze and ChitoGauze® are CoTCCC approved hemostatic dressings.

Current QuikClot products are Kaolin-based. They don't create heat. Kaolin is a clay mineral. It works by activating the body's own clotting cascade.

CELOX and ChitoGauze are chitosan-based. Chitosan is derived from the material that makes up shrimp shells. It forms a gel-like clot when it comes into contact with blood.

All have proven safe and effective. They are irrigated out of the wound at

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PRESSURE BANDAGES

Your kit should include a pressure bandage. It is utilized to direct and maintain pressure on a wound with the goal of creating enough pressure to stop the bleeding. It reinforces wound packing.

When utilizing any pressure bandage, beware of tourniquet effect, which can occur if the bandage is applied too tightly. Always assess distal pulse after application.

Many types of pressure bandages are available commercially. I went with the North American Rescue Flat Emergency Trauma Dressing (ETD™) for my EDC kit. This dressing features a flat-folded vacuum configuration that reduces its footprint. It has a multi-functional all-in-one design and simple application. There are no pressure bars or hooks to deal with.

START THE BREATHING

Tension pneumothorax is the second leading cause of preventable battlefield deaths. It can develop rapidly (although normally over one to two hours), and is 100% fatal if not treated. The only treatment when it occurs is performed by skilled medical personnel.

Laypersons can treat penetrating

chest injuries by the application of an occlusive dressing. These chest seals may slow the development of tension pneumothorax and should allow for better breathing.

CHEST SEALS

Occlusive dressings are designed to form a barrier and prevent outside air from entering the pleural cavity from an open pneumothorax (sucking chest wound). Many types of occlusive dressings are available, including the HALO® Chest Seal, HyFin® Chest



Tension pneumothorax is second leading cause of preventable battlefield deaths. Occlusive dressings, such as NAR HyFin Vent Chest Seals that author carries, can slow development of tension pneumothorax.

Seal, Asherman Chest Seal (ACS), FOX Chest Seal, Bolin Chest Seal, and Vaseline Gauze.

CoTCCC guidelines specify a vented or three-sided dressing as the first choice and non-vented as second choice. I stay clear of the ACS, as it doesn't stick as well as the newer designs, and the valve is prone to clogging. Carry two chest seals to treat both entrance and exit wounds.

I have the HyFin Vent Compact Chest Seal Twin Pack in my EDC kit. The HyFin Vent features three-channel pressure relief vents, as well as an advanced gel adhesive that sticks well to blood, sweat, and hair. It has a large red tab for quick peel-and-stick application and "burping" the seal if needed. If the patient gets worse, the seal should be burped to ensure clogging hasn't occurred.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment (PPE) is essential. Nitrile (latex-free) gloves are a must in any kit. Gloves should be the first thing on and the last thing off. I also keep an MDI® CPR Microshield-Plus™ for mouth-to-mask rescue breathing on unconscious patients who have a pulse but aren't breathing. Eye and face protection is also important.

RIGHT: Not only do you need the necessary tools, you also need to know how to use them. Kerry Davis of D.A.R.K. Angel Medical instructs student at Direct Action Response Training course.

Photo: Daniel Graham

BELOW: Nitrile gloves for protection from blood and bodily fluids are essential. Author also keeps MDI Microshield-Plus for rescue breathing and Benchmade 7 Hook rescue cutter in kit.



BENCHMARKED RESCUE HOOK

I keep a Benchmark® 7 Hook safety cutter in my EDC kit for cutting away clothing, including footwear, and for cutting seat belts in a rescue situation. It's made of 440C (58-61 HRC) stainless steel and has a large coated handle that works well with gloves. It safely cuts through clothing like a hot knife through butter. It has been proven superior to trauma shears in military studies.

EVERYDAY CARRY

No equipment does you any good if you don't have it when you need it. The Safer Faster Defense SFD Responder ankle pouch is a great way to carry a personal trauma kit. I first learned about it from S.W.A.T. Editor Denny Hansen. It's designed to allow comfortable and discreet EDC. Denny has a full review of the SFD Responder in this month's *Offbeat* (page 92).

The PHLster™ Flatpack® Tourniquet Carrier is an efficient low-profile way to carry windlass tourniquets for quick access. Designed for versatility, it can be carried in a pocket, worn horizontally or vertically on a belt, or with MALICE CLIPS® for MOLLE/PALS mounting.

Are there other items I'd like to have in my EDC trauma kit? Yes, but this covers the basics. I want to keep the kit lightweight and compact so I'll be sure to carry it with me at all times. ☺

SOURCES

BENCHMARKED

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BLEEDINGCONTROL.ORG

(800) 621-4111
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DARK ANGEL MEDICAL, LLC

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ammo, and Gemtech GM-22 suppressor.



Browning Black Label Pistols

I have a usual first-day route through the SHOT Show each year—regular stops with companies I know and trust to produce quality gear. One of these stops is Browning.

I've written two articles on the Browning Black Label pistols, in .22 Long Rifle (LR) and .380 ACP. Chapter Three in the Black Label saga: a suppressor-ready .22 and a compact .380.

BLACK LABEL

All Black Label models have a composite frame, machined steel slide and barrel, fixed combat sights, skeletonized hammer and trigger, ambidextrous safety, and solid upswept beavertail grip safety.

The compact models have a barrel ¼-inch shorter than the standard models; the suppressor-ready models have taller fixed, three-dot sights; and several models have a light rail. Depending on the model, the weight varies from 13 to 18 ounces—light enough to carry for days on your belt or in your ruck.

The suppressor gun is nearly identical to the rail model already offered by Browning. This gun has nicer G-10 stock panels, taller sights, and an extended threaded muzzle with a muzzle cap. The .380 was nearly identical, but with night sights and no threaded barrel. I requested and received one of each for this article.

The .22 was just like the other three .22s I've tested: light, reliable, and accurate. I fired seven different loads by major manufacturers, from subsonic to hyper-velocity, 350 rounds total, with no malfunctions.

I've found the same reliability in all four guns. Regular S.W.A.T. readers know I'm more concerned with how guns work than absolute accuracy, and I have yet to be disappointed with the Black Labels in either caliber.

But a reliable gun that won't hit a school bus is worse than useless. Accuracy requirements are up to each individual, but I figure if I can hit a bird or a bunny out to ten yards or so, it's good to go. The Black Label is not a match target pistol, but it will do the above nicely.

I've usually found that the higher the velocity of .22 ammo, the less accurate it is. Standard and subsonic loads usually group better, and I only intend to shoot small game with the gun. If I decide to use the .22 as a backup gun, I'd use a higher-velocity hollow point instead of a slower lead bullet.

I've been shooting for 60 years, and it still puzzles me that one gun will "like" one load over another. This little .22 preferred the standard-velocity Winchester 40-grain lead bullet, at 1,255 feet-per-second (fps) to the other standard-velocity loads I shot. At five yards, the Winchester shot a nice five-shot group, all touching but one, which was a quarter-inch left. Pretty decent for an out-of-the-box micro pistol.

SUPPRESSED SHOOTING

A suppressor-ready pistol needs to be shot with a suppressor, so I screwed my Gemtech GM-22 onto the threads. There is no way to attach a can without muzzling your hand, so *always* remove the mag, lock the slide open, and inspect the chamber. I suggest you never skip this step, trusting the safeties—be paranoid and non-trusting. I shot Remington, CCI, and Gemtech subsonic loads.

Of the subsonic loads, the Gemtech 42-grain round at 1,020 fps had all five rounds touching. The CCI subsonic shot nearly as well but strung out to

By Jeff Hall



The combination of a good pistol and good ammo results in an effective small defensive package.

about half an inch. The worst performance of my subsonic ammo was from the Remington, which shot about one inch. It figures: I bought 5,000 rounds of Remington subsonic a few years ago, when subsonic was hard to find.

I removed the ultra-light (2.5 ounces) GM-22, shot three more groups, and saw no shift in point of impact.

LOW-LIGHT SHOOTING

Since the sneaky little gun has a rail, I had to try it with a light. I mounted a SureFire X200, threw a few empty cans onto the driveway, and waited for dark. I loaded all five magazines with the Gemtech subsonic ammo. It was pitch black by 1630, so out I went.

I shot the first two mags slowly, working the light and a step in tandem. Once I had it dialed in, I'd step, light, shoot, light off, step. With a combination of gun, light, suppressor, and ammo that weighs just over a pound, it was quick and accurate.

I had so much fun that I reloaded the mags and went out for round two. On the serious side, it's a good way to train without breaking the bank or angering the neighbors, and none of us do enough low-light live-fire training.

The .380 ACP round was designed by John Moses Browning, so it's come full circle. The .380 performed as well as the .22, but on a little shot of steroids. The gun is the same size, as are the magazines, so it all fits in my SheepDog Knife & Gun Kydex holsters.

QUAL COURSE

After cleaning and a couple mags of ball, I decided to shoot it through one of my qualification courses. I made a couple of modifications to the Alaska State Trooper qual, shortening the times and adding

lateral movement in two stages. It includes failure drills, six rounds from 25 yards, and one-handed shooting. Max score is 240 points. I shot it on a standard IPSC Brussels target, using Winchester 95-grain FMJ.

The gun was hitting a little right, but functioned and grouped well, especially for a 4.25-inch barrel. The four headshots were in the box, in time, and the gun did well in controlled pairs and hammers.

The six shots at 25 yards strung up and right, with two out of the "A" zone, resulting in a 238 score. You'd have to be *really* optimistic or *really* desperate to shoot this little gun at 25 yards, but if you had to, you can hit the target.

Ball ammo is fine, but a JHP is a better defensive choice for a carry load. I fired 50 rounds of Speer 90-grain GDHP, which functioned well with decent accuracy.

Next I shot 50 rounds of Winchester PDX1 95-grain bonded JHP. If bark equals bite, it would be a better choice. It had a very slight bit more muzzle flip but was more accurate. I fired five slow rounds at five yards. All were to the right, but four were through one hole, with one flyer to the right.

The Black Hills 90-grain JHP shot a little better and hit my steel gong a little harder. The 60-grain JHP Extreme Defense shot a slightly larger group, so the BH 90-grain round will be my carry round in this gun. The combination of a good pistol and good ammo results in an effective small defensive package.



Quality ammo in a reliable gun makes all the difference.

CUSTOM WORK

I decided to buy both guns, so they'll need trigger jobs. Both are California compliant, meaning they have magazine-disconnect safeties. I've never understood the reason for this stupidity, but it is California....

On most guns so equipped, simply re-



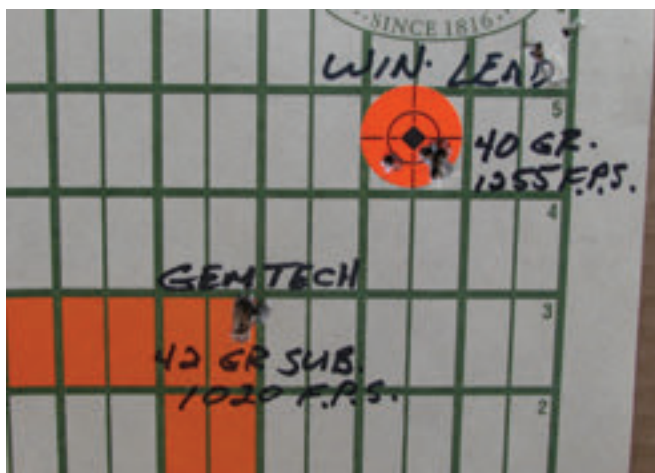
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Winchester 40-grain lead standard velocity and Gemtech subsonic were most accurate rounds tested in Black Label .22.



Author fired qualification course with Black Label .380, with good results.

moving this abomination does a pretty good job of cleaning up the trigger, but I sent both guns to SheepDog Knife & Gun for one of Jon Grossman's trigger jobs. The results are clean, crisp four-pound triggers and improved accuracy.

I've only found one consistent problem with the little Black Labels—my hands are too big. It's difficult for me to depress the grip safety and keep my thumb on top of the thumb safety if I'm drawing and shooting quickly. I sometimes find myself having to adjust my grip in order to get that first shot off. It'll take a while, but I'll figure it out.

The best defensive handgun is the one you have on you. I usually carry a Colt Commander in .45 ACP, strong side, and two spare mags, and a second gun, sometimes a Black Label .22 in a bellyband, on the weak side.

But if I have to run to town on a quick errand, I sometimes don't take the time to dress. I've been known to drop a snubby revolver in a shorts pocket, or the .380 in an IWB

holster under a T-shirt, and carry a reload for each. Neither gun is ideal, and I have better ones, but either is better than my smiling face and empty hands if the balloon goes up at the grocery store. As Clint Smith says, I don't want to "die stupid," so at least I'll have a chance.

LADIES' CHOICE

In the firearms training courses I teach, I'm getting a lot of first-time women shooters. The ages are 20 to 25 or 55 and over, living alone. I start them all on a .22 and move them to better calibers as appropriate. Many want to stay with a .22, some like the .380, a few want a 9mm, but no one wants a .40 or a .45. I'd rather they hit well with a lighter caliber they will carry with them than wish for the .45 at home. Either of these guns fits that bill.

Browning just added a new compact .380 with a light rail, which I will evaluate in the near future. Now, if Browning would only take the same path and build this quality and affordability in both a Government and Commander-size 9mm and .45.... ☺

Jeff Hall is a former soldier, retired Alaska State Trooper, and martial arts grandmaster. He can be reached at soke@hojutsu.com.



Both guns fit into author's Kydex from SheepDog Knife & Gun—much better than stuffed behind the belt.

SOURCES

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It Takes a Killer

FOR the last six months, the Oxygen Channel has been airing a TV show entitled *It Takes a Killer*. Yours truly is one of the co-hosts. I have filmed 30+ episodes, with more scheduled to be filmed in the future. This is interesting to me on several fronts.

First is that this is a show dealing with murderers, rapists, serial killers, cannibals, kidnappers, robbers, sexual deviants, grifters, scammers, cheats, murderous frauds, murdering and plotting spouses (important safety tip: never consume lime Jell-O made by your spouse), and even a rogue music producer who killed an actress after a failed seduction attempt.

In short, it's a light-hearted, whimsical frolic through the chambers of the human heart!

The second front that interests me is that apparently women outnumber men by a large margin in viewing such TV fare. That's the demographic. Women, not men, find these stories compelling.

I have two theories about this. The first is that women want to learn

able intel on precisely how to do away with you if you don't treat them as they should be treated.

This is a valid point to their side. Firearms are noisy and messy. Baseball bats are unwieldy. Chainsaws are out of the question. Tampering with hydraulic brake lines is a bit com-

Some of the most depraved individuals are seemingly those quintessential upstanding citizens we take for granted.

more about those who would do them harm. This is perfectly sensible, as it pre-loads them with information as to the methodologies available to circumvent such catastrophic events.

My second theory on this subject is that women might be gathering valu-

plicated. Explosives can be unpredictable. Hiring Vinnie the hit man, aka "The Cleaner," from Jersey (pronounced Joyzee) is cost prohibitive, coupled with the fact that you'll be indebted to the Mafia for life.

But ... poison? That's an entirely

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different and reasonable proposition.

Lime Jell-O is the preferred medium to deceptively introduce the ingestion of toxins into the targeted audience. The sweet taste of Lime Jell-O masks the sweet taste of anti-freeze, and coincidentally, Lime Jell-O possesses the same lime-green visible spectrum hue as, you guessed it—anti-freeze.

A couple of women used this technique to great effect. Here's the kicker with one. The victim, gravely ill, clings to life by a hair. After a near-death experience while hospitalized, he makes it home, barely limping through the doorway. His despairing wife consoles and comforts him as she nurses him back from the dead with (can you guess?) more Lime Jell-O, and then it's end of watch.

Not surprisingly, a previous husband of the same wife was unearthed and he also suffered from acute toxicity due to the ingestion of anti-freeze. We have filmed a couple of similar capers, and I intend to write to the Jell-O people. I have removed all Lime Jell-O packets from our home and drained my radiator.

The other fascinating aspect to the show is that, despite my years in law enforcement, I had not "seen it all." Take the case of the husband who, while his wife works at a bank, picks up prostitutes, brings them home, abuses and murders them, eats portions of them, and then buries them in the backyard.

If I were a wife, I would be somewhat suspect of a husband who isn't hungry when I make dinner for him after a long day at work. If such a gastronomic pattern of behavior continues for a period of time, it would raise my suspicions even further.

Note to wives: If husband is not hungry, check the backyard.

What never ceases to amaze me when I host the show is the number of people who perform dismemberments in a futile attempt to hide their victims.

Tupperware and plastic bags are the preferred methods of storage. But it's where these items are stored that boggles the mind. Surprisingly, many store them in their garage and use copious amounts of duct tape to seal the edges. Some store them on the roof. Others prefer vehicle trunks.

None of this makes much sense to me, but it did to these folks at the time—which is why they were caught.

Then there are the preachers and religious zealots who cavort about town with mistresses whom they promptly dispatch when things get dicey. What is presented to the outside world may not be what it seems. When the female flock begins to thin out, I cast a critical eye toward the one leading them.

Bodybuilders on steroids entertaining multiple girlfriends is never a great mix. Strangers you meet in bars can prove to be fatal. Alcohol may be the great social lubricant, but it clouds judgment to the extreme.

Overly friendly strangers encountered in everyday life are another sector of the general population one may wish to avoid. More often than not, this turns tragic. If you have what they want, they might employ less-than-altruistic methods to obtain it.

What strikes me the most, relative to all the cases I have filmed, is that some really, really scary people are out there. Some of the most depraved individuals are seemingly those quintessential upstanding citizens we take for granted.


Take the BTK Killer, who bound, tortured, and murdered his victims. He was an active church member, was involved in the Boy Scouts, and had the all-American family with a wife, house, job, and 2.5 kids. That was just his daytime persona. At night, things changed dramatically for the worse. It was years before he was captured.

Some women out there are your classic Black Widows ... and you'll never see them coming. These individuals employ sly tactics and subterfuge with deadly effect. I am highly suspect of any super-grade, high-end, long-legged, thick-lipped, well-endowed Italian fashion model who approaches me. Now to date this situation has not ever happened to me.

But if it does, I do not wish to be Lime Jello'ed, chain-sawed, dismembered, and Tupperware'd in a garage.

I've got a great, sweet gal, and I fully intend to keep her that way! ☺

Scott Reitz is a 30-year veteran of the Los Angeles Police Department and the director of the highly acclaimed International Tactical Training Seminars. Course information and schedules are available at their website at www.internationaltactical.com. Looking Back, a free monthly newsletter, is available by email at info@internationaltactical.com.



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Our Turn Now: Repeal the Hughes Amendment

Many gun rights advocates and organizations have greeted the election of Donald Trump as President and the Republicans' retention of both chambers of Congress with triumphant proclamations of, "It's *our* turn now."

The idea is that, after eight years under the presidency of anti-gun Barack Obama, the early days of which featured Democrat majorities in both chambers and in a time punctuated by several high-profile atrocities committed with guns (which were eagerly exploited by the forcible citizen disarmament lobby), gun rights advocates can now shift from defense to offense.

And indeed, at the time of this writing, efforts to move the ball forward for private gun ownership are underway. The "Hearing Protection Act," to remove firearm sound suppressors from under the oppressive regulatory weight of National Firearms Act authority, has been introduced in both the House and the Senate, and the House version has garnered over 100 sponsors, including one Democrat.

Another bill, the "Concealed Carry Reciprocity Act," has also been introduced in both chambers of Congress. Under this legislation, every state would have to recognize and honor the concealed carry permits of every other state, and even recognize the right of residents of "Constitutional carry" states, in which the right to carry a de-

fensive firearm is not made contingent on receiving a government-issued permission slip to carry a firearm without such paperwork.

Whether or not either of these bills gets any farther along the path to becoming law than they are now—which isn't very far—is open to question. But gun rights advocates can point to one bill, admittedly far less ambitious, that *has* been signed into law.

At the end of February, President Trump signed a bill that rolls back

The other two bills, if they do eventually become law, would certainly be more significant, but can they be considered game changers? Suppressor reform seems a fairly incremental advance, and a concealed carry reciprocity law, by getting the federal government involved in the regulation of concealed carry, could be considered to potentially represent a vast new *threat* to gun rights, rather than an advance.

If this is truly "our turn," if it's our

Getting the federal government involved in the regulation of concealed carry could represent a new threat to gun rights.

an executive order from very late in Obama's reign that directed the Social Security Administration to report to the FBI any recipient of Social Security disability benefits whose disabilities included mental health issues, even those as minor as needing help in managing their finances. Those thus reported would be "prohibited persons" and unable to pass a federal background check to purchase a firearm.

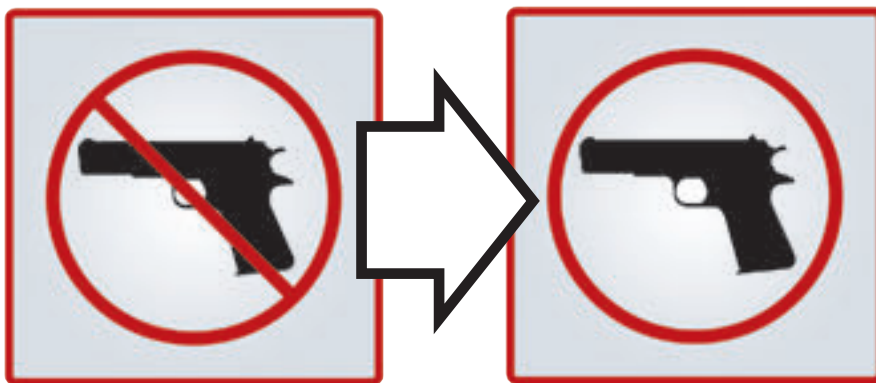
That bill, now a law, was certainly needed, but since it nullifies a restriction so new it hadn't even been implemented yet, it's hard to call it much of an advance for gun rights.

opportunity to advance enforcement of the Second Amendment's guarantee of our fundamental human right of the individual to keep and bear arms, should we not devote at least some effort toward a swing for the fences? And if some of the muscle for that swing can be mustered from the very words of the gun ban zealots, how can we *not* make the effort?

The Hughes Amendment, attached to the otherwise pro-gun Gun Owners Protection Act of 1986, has in the decades since its passage blocked private ownership of fully automatic firearms, even for those would-be machine-gun owners willing and able to jump through the draconian regulatory hoops of the National Firearms Act—unless those firearms were already legally privately owned in the U.S. before the law went into effect that year.

This has artificially inflated the cost of such guns and has also stifled innovation, because there is far less incentive to develop new and better fully automatic firearms, since the market for them is so limited.

Crimes committed with legally owned (and therefore registered) machine guns are so few as to be statis-



Their turn.

Our turn!

tically insignificant. Gun ban zealots point to this fact as “proof” that strict licensing, registration, and background check requirements work superbly in reducing crime and violence.

Think about that, and think about the similar requirements they advocate for other guns. Even when they *have* the oppressive registration, licensing, and screening requirements in place, and even when they credit those requirements for the almost total absence of crime and violence, they *still* want vastly more draconian regulation.

But perhaps the best argument to use for repealing the Hughes Amendment is the words of the forcible citizen disarmament advocates themselves. In their efforts to ban so-called “assault weapons,” they dismiss the fact that these “weapons of war,” as they call the firearms they want to ban, have no ability to fire in fully automatic mode.

Indeed, in a recently decided case, the Fourth Circuit Court of Appeals rejected a challenge to Maryland’s “assault weapon” ban, in large part be-

cause of the supposed insignificance of the difference between fully automatic and semiautomatic firing. From the decision:

The difference between the fully automatic and semiautomatic versions of those firearms is slight. That is, the automatic firing of all the ammunition in a large-capacity thirty-round magazine takes about two seconds, whereas a semiautomatic rifle can empty the same magazine in as little as five seconds. See, e.g., J.A. 1120 (“[S]emiautomatic weapons can be fired at rates of 300 to 500 rounds per minute, making them virtually indistinguishable in practical effect from machineguns.”). Moreover, soldiers and police officers are often advised to choose and use semiautomatic fire, because it is more accurate and lethal than automatic fire in many combat and law enforcement situations.

Setting aside the fact that private ownership and use of “weapons of war” are precisely what the Second Amendment was written to protect, it’s time to confront the gun ban zeal-

ots with the fact that if, as they claim, semiautomatic firearms are not substantially less “dangerous” to the public than fully automatic ones, then, obviously, fully automatic guns are not substantially *more* dangerous than semiautomatic ones.

If that is the case, there can be no justification for freezing the supply of fully automatic firearms, which are already strictly controlled. And if that freeze is not lifted, gun owners have no reason to believe they will not eventually push for the same kind of control over other firearms.

If it’s “our turn” to go on the offensive, it’s *their* turn to have to go on the defensive—and that’s some pretty indefensible ground they’ve set themselves up on. ©

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



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The 5.45x39mm Caliber Rifle

The 5.45x39mm cartridge entered production in 1974 alongside the AK-74 rifle that was chambered for it.

Much of the logic that argued for the U.S. adoption of the 5.56x45mm round and the M16 applied to the Soviet adoption of the 5.45x39mm, especially the idea that lighter cartridges allowed the soldier to carry more rounds and allowed use of a lighter rifle.

Ironically, the AK-74 and the 5.45x39mm round saw their first extensive combat use in Afghanistan, where a cartridge capable of longer-range effectiveness was desirable.

Just as U.S. troops in Afghanistan armed with the M4 or M16 firing the M855 with 62-grain bullet found the need for DMRs (Designated Marksman Rifles) chambered for 7.62x51mm NATO to give a small unit greater range, so did the Soviets find the need to issue SVD rifles in 7.62x54R to support the lighter 5.45x39mm AK74s.

At least some AK-47s in 7.62x39mm remained in use in Afghanistan as well. During the early years of Soviet use of the 5.45x39mm round, U.S. intelligence agencies were anxious to



AKSU is Thompson's favorite 5.45x39mm caliber weapon. Photo: Ken MacSwan

obtain samples of it and the AK-74 rifle to evaluate their effectiveness.

The Russian invasion of Afghanistan gave them that opportunity, as the mujahideen supplied captured Soviet equipment to U.S. sources. Many U.S. shooters may have read about the 5.45x39mm cartridge, but other than some ordnance intelligence or special operations personnel, most had never encountered it.

I had a chance to do quite a bit of

shooting with 5.45x39mm caliber weapons earlier than most. I was in Brussels in 1989, before the dissolution of the Soviet Union but when the Cold War had begun to thaw.

A former KGB 9th Directorate bodyguard was working for a Soviet arms dealer looking for clients outside the Soviet Union ... at least that was the story. He was in Belgium, always a center of the arms industry, to demonstrate products, while I was there to



Thompson's semi-auto AKS-74 with stock folded.

A soldier in tactical gear, including a helmet with night vision goggles and a vest, is aiming a rifle. The word "READY" is overlaid in large, semi-transparent letters across the center of the image.

READY



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Thompson fires later version of AK-74.

assist with training an EEC-affiliated protective team.

A mutual acquaintance arranged a Sunday morning shooting session to which the Russian brought along an AK-74, AKS-74, and AKSU, plus a case of 5.45x39mm ammo.

By the time we were finished, I had shot up the entire case of ammo. I liked the AK-74 and AKS-74, which I found easy to control on full-auto. In fact my wife, who had never fired a rifle before and who weighed only 100 pounds, was able to place controlled bursts on a humanoid target at ten meters.

The weapon with which I was really impressed was the AKSU, sometimes called the “Krinkov” in the U.S., though I have never heard that name used by the Russians. Now, 27 years later, I am still impressed with the AKSU, which I have fired whenever I’ve had the chance.

The original Soviet military load for 5.45x39mm weapons was the 7N6. Its boat-tail bullet weighed 52.9 grains and incorporated a 22.2-grain steel penetrator core. There was a hollow cavity in the nose of the jacketed bullet and a lead plug in the base.

This combination of nose cavity and lead in the base reportedly was designed to cause the bullet to tumble in soft tissue, increasing damage. Former *Spetsnaz* soldiers with whom I talked in Russia assured me they had seen nasty wounds caused by the tumbling bullet.

The AK-74 rifle never achieved the wide distribution of its predecessor, the AK-47, but other countries within the Soviet sphere of influence used it. A few manufactured the AK-74, most notably East Germany and Bulgaria.

Various manufacturers have produced semi-auto kit rifles in the U.S. Many of those I have encountered have been based on Bulgarian parts kits. I have a semi-auto AKS-74 built on an ITM Arms receiver that has worked well for me. Some more knowledgeable than I about builds for AK kits prefer other receivers.

In my case, I bought mine when few if any AKS-74 semi-autos were available, so I could stay familiar with the rifle. I have since put 2,000 to 3,000 rounds through it with no problems. I normally do not use corrosive ammo because I don’t want to do a full cleaning every time I shoot it.

I have one other rifle in 5.45x39mm that I shoot—an S&W M&P15R. This version of the M&P was discontinued after a few years, I believe because of lack of sales. At the time I purchased mine, 5.56x45mm ammo was very ex-



S&W M&P15R, which was made only for a few years, allows less expensive practice with an M4, but is ammo sensitive. Group at left was shot with Century Red Army Standard. “Group” at right was shot with tumbling Silver Bear.



pensive and 5.45x39mm was available for about half as much.

Since I bought non-corrosive 5.45x39mm ammo in bulk, I used it in the M&P15R. It was excellent for training with the AR at a more reasonable price. But some of the Silver Bear Russian ammo did not perform well: The bullets tumbled and went through paper targets sideways at 25 yards.

My M&P15R does perform reliably and accurately with Century Red Army Standard 5.45x39mm ammo. The Russian ammo that did not perform well in my M&P15R works fine in my AKS-74, so until I get a chance to do more testing, I reserve the Red Army Standard for the M&P. The Red Army standard is also the most accurate 5.45x39mm ammo I've used.

I originally became interested in shooting 5.45x39mm weapons because they were different and few shooters in the U.S. had had a chance to handle them. I acquired my AKS-74 because I was still occasionally working in places where this weapon might turn up, though the AK-47 was more likely to be encountered.

I also admit that I have spent quite

a bit of time studying Russian airborne troops, prime users of the AKS-74, which lent it some panache for me. I started shooting the M&P15R for the simple reason that I wanted the ability to train with an M4 that I could shoot more cheaply.

Currently, 5.56x45mm ammo is still reasonably priced, though not as good as it once was—but what is?

I shoot my M&P15R every couple of months. If I put 200 rounds through it, I probably save about \$20 over what it would have cost to shoot M193 in one of my 5.56x45mm M4s. That's partially because I shoot the higher quality and more expensive Red Army Standard ammo.

I don't get a chance to shoot an AKSU much, but I still rate it one of the best rifle-caliber carbines. I always recommend an AKSU or one of the others to security teams over pistol-caliber SMGs.

For someone living in the U.S., I normally recommend a 5.56x45mm, 7.62x51mm, or 7.62x39mm combat rifle above the 5.45x39mm.

Even when cost is a consideration, the 7.62x39mm rifle and ammo com-

bo is probably a simpler and more effective choice. I guess for a prepper who foresaw a *Red Dawn* scenario in which Russian *Desantniki* would be dropping in, the AKS-74 might make sense, so he could use their captured ammo and magazines!

I mainly recommend the 5.45x39mm round and a semi-auto version of the AK-74 or AKS-74, or a registered SBR semi-auto version of the AKSU as a chance to know the weapons of our long-time rivals. ☉

Leroy Thompson has trained hostage rescue, close protection, counterinsurgency, and anti-terrorist units in various parts of the world. Prior to Operation Desert Shield, he trained U.S. Army protective teams and hostage rescue units. He is the author of over 50 books on weapons and tactics and somewhere between 2,500 and 3,000 magazine articles.

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LONG-RANGE HAMMER

Savage Arms 110 FCP .338 Lapua

By Todd Burgreen

THE Savage Arms 110 FCP platform is often overlooked on two fronts, both as a long-range precision tactical rifle as well as a viable platform to launch .338 Lapua rounds downrange.

The 10/110 FCP models are available from the factory with many notable features (depending on the particular model chosen), including stocks from McMillan, HS Precision, and Choate; detachable box magazines; oversized bolt handle; recessed target crown; and most importantly, Savage's industry-leading AccuTrigger.

Savage 110 FCP HSP, Nightforce ATACR, and Talley Tactical rings proved a potent package that was surprisingly manageable in terms of recoil and carrying afield.



Prejudices abound when it comes to Savage rifles, stemming from misconceptions based on elitist sentiments founded on price-point snobbery without actually exploring what is offered. Many individuals, not to mention industry competitors, want you to believe that the moderately priced Savage must somehow be deficient when compared to rifles costing three to four times more.

I am not criticizing these products. I'm just pointing out that an individual's or department's needs should be fully analyzed and the Savage 110 FCP .338 Lapua considered, not rejected out of hand. The Savage 110 FCP .338 Lapua takes a back seat to no rifle in terms of precision, repeatable accuracy, ergonomics, reliability, trigger, and safety.

SAVAGE MODEL 110 FCP

The rifle evaluated here is the Savage Model 110 FCP, with HS Precision stock, chambered in .338 Lapua. Overall length is 49.5 inches with a free-floated 26-inch button-rifled barrel

with 1:9 twist. A well-designed and efficient muzzle brake is threaded on the end of the barrel.

The rifle weighs almost 11 pounds empty without optics. This is a weight more associated with a rifle you can carry, and it has good handling characteristics versus the "boat anchors" typical of many rifles chambered in .338 Lapua.

The 110 FCP's detachable box magazine holds five .338 Lapua rounds in a single-stack pattern, but the user can still feed single rounds if needed by simply laying them in the raceway.

A notable feature on the Model 110 FCP .338 Lapua is an oversized bolt handle. This facilitates rapid and sure operation of the slick Savage bolt for follow-up shots. The oversize bolt and smooth passage of the bolt in the raceway allow minimal disturbance of the rifle when the bolt is worked.

The Model 110 FCP's oversized bolt handle and detachable magazine lend themselves to performing in a tactical environment and maximize the Savage FCP's potential.



BELOW: Savage 110 FCP HSP .338 Lapua shares similar dimensions to typical bolt-action rifles. It stays away from gargantuan frames of other .338 Lapua platforms.

A third swivel stud is installed for bipod use without having to sacrifice the ability to use a sling.

ADD-ONS ALREADY INCLUDED

Savage has done a service to the end user of the Model 110 FCP .338 Lapua by doing their homework and including features that are usually added to a precision rifle after it is purchased.

The first requirement of a tactical rifle is precise accuracy. The HS Precision stocked Model 110 FCP I tested over an extended time period constantly produced sub-MOA groups with several different ammunition brands—an important logistic consideration.

The HS Precision stock is rock solid, with design characteristics that make it conducive to long-range shooting from the prone position using sand bags or a bipod. The wide, flat forend handles bipods and sandbags with equal aplomb. It is not exclusively designed for shooting from the supported prone or bench positions but also permits offhand and field-expedient positions if needed.

The ergonomics of the stock allow a comfortable, repeatable cheekweld. The HS Precision stock contributes to the ruggedness of the Model 110 FCP .338 Lapua ensuring the second key element of a precision rifle is met—accuracy to be constant and repeatable no matter the conditions.

The Savage 110 bolt design must be discussed. Many misunderstandings surround the Savage bolt-action, most attributed to ill-informed conjecture surrounding the floating bolt head and barrel nut arrangement. Many critics mis-

takenly label these as strictly cost-saving measures instead of an ingenious alternative method of producing accuracy without spending undue time and money on precise quality control or hand fitting.

The purpose of the floating bolt head is to allow the bolt's locking lugs to line up independently from the bolt body. This eliminates any minor imperfections between the axis of the receiver and the axis of the bore. The Savage bolt finds its own sweet spot when it locks up due to the floating bolt head behaving independently of the bolt's main body. This system enables a truly free-floated barrel, and improved gas sealing is a by-product of this design. Savage is one of the strongest actions produced.

SAVAGE ACCUTRIGGER

The Savage AccuTrigger is a huge part of the accuracy capability derived from the Savage Model 110 FCP .338 Lapua. In my opinion, the AccuTrigger is just as important as the Savage bolt action and quality button-rifled barrel. A rifle's trigger is the interface between shooter and rifle and must be right or accuracy will suffer.

The industry award-winning AccuTrigger stems from then-Savage President Ron Coburn's desire to give the shooter a proper trigger that is crisp, creep free, and fully adjustable between 1.5 and 6 pounds by the user, yet totally safe from accidentally firing if jarred or dropped.

A by-product of the AccuTrigger design effort is the inclusion of a new three-position teardrop safety conveniently located for smoother, quieter operation. Without going into



.338 Lapua loads from Hornady, Black Hills Ammunition, and Lapua were used in evaluating Savage .338 Lapua rifle.



ABOVE: Oversized bolt handle is a nice feature included on 110 FCP. AccuTrigger's blade is in fired position.



RIGHT: Savage bolt's floating bolt head. Lugs in front are independent of other set. Bolt handle has another gas baffle in front of it, at rear of bolt body.



Savage installs dual sling swivels on HS Precision's forend, allowing for mounting of bipod while keeping a swivel available for sling use.



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minutiae, the AccuTrigger's distinctive release lever (AccuRelease) in the trigger is the secret to maintaining minimal trigger weight, without creep, while keeping the system safe.

The AccuTrigger is adjustable by removing the action from the stock and turning a single screw with the supplied tool. Importantly, even before the AccuTrigger's addition, the Savage bolt action was renowned for one of the fastest lock times in a production rifle.

Combine fast lock time with the AccuTrigger, and the Model 110 FCP HS Precision .338 Lapua is equipped with one of the finest production triggers on the market. This contribution to precise accuracy cannot be overemphasized.

The advantage of the .338 Lapua chambered in a rifle like the Savage 110 FCP is best understood in terms of portability and the likelihood the weapon will be present when the opportunity for use arises. The .338 Lapua is clearly superior to the .308 Winchester and .300 Win Mag for long-range personnel interdiction because of better ballistics and downrange energy.

In the same vein, the .338 Lapua chambered Savage 110 FCP is the better sniping weapon compared to the .50 BMG because of its portability and similar ballistics without the blast signature and weight of a .50 BMG. Proponents of the .338 Lapua make no claim for it as the superior anti-materiel weapon.

OPTICS

A Nightforce ATACR 5-25x56mm (34mm tube) was mounted on the Savage .338 Lapua via Talley Tactical 34mm medium rings, which are made from 7075 Aluminum and hard anodized. Talley has tweaked their tactical rings with two slot bars. Many tactical rings intended for use on a Picatinny rail utilize only a single slot bar. Talley Tactical rings will not move even when mounted on the harshest recoiling rifle.

I have used the Nightforce ATACR on multiple precision projects, including .50 BMG and several .338 Lapua rifles. The Nightforce ATACR is user friendly in that it can be fitted to the most powerful rifles due to constant 3.5-inch eye relief at all magnifications.

The Nightforce's stout construction, combined with the Talley Tactical rings, is perfect for recoil resistance due to inertia forces experienced

during firing, especially with a cartridge like the .338 Lapua.

RANGE EVALUATION

Several .338 Lapua loads were accessed for this evaluation, including Black Hills Ammunition 250- and 300-grain Sierra MatchKing, Lapua Lock Base 250-grain FMJBT, and Hornady 250-grain BTHP and 285-grain ELD Match.

Accuracy and recoil levels with the Savage 110 FCP HSP .338 Lapua were both pleasant surprises. The relatively light weight of the Savage rifle justifiably raised concern for recoil impulse when handling the likes of the .338 Lapua cartridge. But the muzzle brake and HS Precision stock create a recoil impulse more associated with a .300 Win Mag. Even with extended range sessions, the Savage 110 FCP had no issues in the recoil department.

Equally as impressive as recoil management with the Savage 110 FCP .338 Lapua was the accuracy generated. "Big boomer" cartridges like the .338 Lapua are not generally thought of as prime candidates for sub-MOA performance. There are various reasons for this, including action bedding/interface with the stock, evenness of bolt lug bearing, barrel harmonics, shooter interaction, and the ability to deal with recoil and muzzle blast. The Savage action was easy to manipulate, with rounds smoothly moved into and out of the chamber.

Black Hills 250-grain BTHP punched three rounds into a 5/8-inch cluster at 100 yards. The Lapua and Hornady loads were also an inch or smaller. The Savage 110 .338 Lapua seemed to prefer the 250-grain loads compared to the heavier 285- or 300-grain loads. The 250-grain .338 Lapua loads clocked in at 2,900+ feet-per-second (fps), with the 285- and 300-grain loads at 2,750 fps.

The Savage 110 FCP HSP .338 Lapua showed minimal shifts in point of aim even when shifting between different loads. Cold-bore zeros produced fine groups when overlaid after multiple range visits.

The 250-grain BTHP load with a 300-yard zero is four inches high at 200 yards, and only drops to -10 inches at 400 yards. The high ballistic coefficient associated with the .338 round matched with high muzzle velocity gives the .338 Lapua an advantage



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While Chinese factories bang out shiploads of "tactical" flashlights for some of the biggest names in the industry, a small group of quiet professionals, like Karen, are producing The Toughest Flashlights on the Planet, right here in Kentucky. When clients' lives depend on the performance, reliability, and durability of their flashlights, the skilled hands of a craftsman cannot be outsourced to low-bid offshore contractors. Of course, most people don't need The Toughest Flashlight on the Planet, but then again, you're not most people.

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An advertisement for Super Vel 9mm Luger ammunition. It features a woman in a red dress holding a handgun, standing in front of a large target. The target has a bullseye in the center. Below the target is a box of Super Vel 9mm Luger +P ammunition and a magazine filled with rounds. The text "SUPER VEL" is prominently displayed in large red letters, with "Ammunition" in a smaller font below it. The website "www.SuperVelAmmunition.com" is at the bottom, along with a copyright notice for 2017.

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Triple-port muzzle brake is a key reason why 110 FCP .338 Lapua has such manageable recoil.



7.62x39mm, .338 Lapua, and fired .338 Lapua case.

over other calibers as ranges extend to 800 yards and beyond. The round stays supersonic past 1500 yards.

Echo Valley Training Center's Ranges #3 and #6 were used with the Savage 110 FCP .338 Lapua. Range #3 allowed for engagement of randomly placed steel targets out to 320 yards as well as firing into the interior of range vehicles located on the 200- and 300-yard berms.

Range #6 offered the ability to engage steel out to 700 yards from both prone and bench positions. Here the ATACR's Mil-R reticle made hitting targets at distance a simple proposition. The benefit of holding directly on target with appropriate hash mark versus an estimated holdover is obvious.

The Mil-R reticle is also a great tool for estimating range to a target. A 100-yard zero easily translated into holding the correct hash mark below the main horizontal wire directly on target, facil-

itating hits at 300, 500, and 700 yards.

GO SAVAGE!

The accuracy and manageability of the Savage 110 FCP HSP .338 Lapua turned me into an enthusiastic advocate of the rifle. The best ammunition, along with premium optics and mounting system, was employed with the Savage .338 Lapua rifle, giving it the best chance to perform to its potential.

I urge readers not to fall into the trap of thinking that dollars equate to proficiency. Yes, equipment is a huge part of the skills equation when precision marksmanship is sought, but it is often emphasized in lieu of training and practice.

The Savage 110 FCP HSP .338 Lapua is not a compromise candidate in terms of performance, though the user will benefit from selecting it by having money left in the budget for optics, ammunition, and training. ©



Talley Tactical rings secured Nightforce ATACR to Savage 110 FCP HSP's Picatinny rail.

SOURCES

SAVAGE ARMS

(413) 568-7001
www.savagearms.com

BLACK HILLS AMMUNITION

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

HORNADY MFG. CO.

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The strobe feature offers the added benefit of being able to signal in the field or disorient targets. Delivering 1.25 hours of continuous run time, the TLR-1 HPL is powered by two 3-volt CR123A lithium batteries. The TLR-1 HPL attaches and detaches in seconds to all MIL-STD-1913 (Picatinny) rails and weapons with Glock-style rails, using one hand.



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LWRCI-Di

This rifle won the NRA's Golden Bullseye Rifle for the year 2017. The LWRCI™ Di is made with the same craftsmanship and design excellence that come with every LWRCI firearm. Built from the ground up to be more than just another direct-impingement rifle, the LWRCI-Di delivers the quality every rifle enthusiast demands, with the innovation that's expected from LWRCI. Innovations like the "key-less" bolt-carrier design, fully ambidextrous lower-receiver controls, monoforged upper with integrated rail-base, and LWRCI Ni-Corr-treated spiral-fluted heavy barrel, combined with a time-tested operating system, make the LWRCI-Di a true step up.

ATOMIC AMMO

To feed the LWRCI-Di, we are including 200 rounds of .223 ammunition from Atomic Ammo: 100 rounds of 77-grain Match and 100 rounds of 77-grain Subsonic.

Atomic's .223 Match is made with only the very best available components, such as boxer-primed brass cases, Hodgdon powder, and 77-grain HPBT bullets selected based on their unique weight and aerodynamic qualities, which allow these bullets to achieve sub-MOA accuracy.

The Atomic .223 Subsonic is quieter than most .22 Long Rifle ammo, is Hollywood quiet when suppressed, has virtually no felt recoil, produces the same energy and power as most .380 ACP ammunition, and can deliver sub-MOA accuracy to 100 yards from rifles with twist rates of 1:7 or faster.



HEXMAG

Having extra magazines is always a good thing, so we are including six black Series 2 Hexmags. Also included are three 2-packs of colored HexID followers, the new Hexmag Tactical Grips, and a pack of Hexmag low-profile rail covers.

Hexmag Series 2 features the iconic HEXTURE™ design patterned texture. Enhancements make this the most compatible, user-friendly magazine on the market. Made from PolyHex₂ Advanced Composite, it delivers superior strength and reliable performance for lifetime usability.

The Hexmag Tactical Grip is an over-molded rubber grip with the HEXTURE™ design pattern for increased grip combined with ergonomically correct finger grooves.

Hexmag low-profile rail covers protect you and your gear with their high-performance, non-slip design.



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SOURCES

LWRC INTERNATIONAL
(410) 901-1348
www.lwrrifles.com

ATOMIC AMMUNITION
(623) 580-8888
www.atomicammunition.com

HEXMAG
(855) 439-6247
www.hexmag.com

STREAMLIGHT, INC.
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MOSSBERG 590 SHOCKWAVE

Short-Barreled 12-Gauge Revolution

By Eugene Nielsen | Photos by Cameron Hopkins

Although Mossberg 590 Shockwave only has a 14-inch barrel, it meets the overall length requirements to be BATFE compliant. It does not need the Federal paperwork and tax stamp for a short-barreled shotgun.

THE

Mossberg® 590® Shockwave™ is one of the hottest new firearms to hit the market in 2017. That's not at all surprising, since the Shockwave offers shooters a compact, 14-inch-barreled 12-gauge reminiscent of the legendary Witness Protection Shotgun of the U.S. Marshals Service (USMS) but with no NFA (National Firearms Act) restrictions, as confirmed in a letter to Mossberg from the BATFE (Bureau of Alcohol, Tobacco, Firearms and Explosives).

What makes this possible is the fact that a shotgun that has never had a stock on it isn't technically a "shotgun" but a "firearm" insofar as Federal law goes. And if it has an overall length (OAL) greater than 26 inches (the Shockwave has an OAL of 26.37 inches), it's not considered an NFA Title 1 firearm. Transfers only require the traditional 4473 when purchased from a dealer and, since it's a pistol-gripped firearm, you need to be over 21 years of age to purchase one.



MOSSBERG 590

SHOCKWAVE

The reason for this is that the BATFE considers an OAL of 26 inches or under to be concealable, which would make a 26-inch or shorter an AOW (Any Other Weapon) and subject to the purview of the NFA. If it meets the mandated OAL to be considered non-concealable, barrel length is irrelevant. Keep in mind this only applies to Federal law. Your state or local laws may differ.

MOSSBERG 590 SHOCKWAVE

The Mossberg 500® platform has been around for more than 50 years, with over ten million produced. It has proven to be one of the most versatile and reliable pump-action shotgun platforms. It's the only pump action to meet the rigorous testing requirements demanded by the U.S. military to be declared milspec. It has seen action in combat around the globe and continues to do so.

The 500 platform features a lightweight anodized aluminum receiver. Dual extractors for reliable extraction, positive steel-to-steel lockup, non-binding twin action bars, and an anti-jam elevator/lifter ensure smooth operation. A top-mounted safety provides for ambidextrous operation. A large ejection port ensures smooth ejection. It has a combined trigger guard and lockplate made of glass-filled reinforced nylon polymer that can be easily removed to allow for limited trigger adjustments.

The Shockwave has a matte-blued finish and features a three-inch chambered, heavy-walled 14-inch smooth-bore barrel with a cylinder bore. It also features a convenient clean-out magazine tube with 5+1 capacity with 2.75-inch shotshells, gold bead front sight, and web-strapped forend to keep the shooter's lead hand clear of the muzzle and keep it in place during recoil. Weight is 5.25 pounds.

SHOCKWAVE TECHNOLOGIES

The Shockwave features the Shockwave Technologies Raptor® Grip designed for the 500 series. The Raptor Grip is a new bird's head grip developed and manufactured in the USA by Shockwave Technologies. It is molded of tough glass-filled nylon polymer. Reminiscent of the grip developed by Scattergun Technologies for the aforementioned USMS Witness Protection Shotgun but significantly improved, the unique angle of the Raptor Grip minimizes felt recoil and aids in control.

It also brings the OAL of the Shockwave with 14-inch barrel to just over the required BATFE minimum. Both the Raptor Grip and forend feature a non-reflective black finish.

[Editor's note: Just before going to press, we were notified by Mossberg that a running production change was made to the Shockwave by adding a sling swivel stud to the Raptor Grip.]

OPSOL MINI-CLIP

An adapter is available from OPSol of Texas that allows the use of Aguila's 1.75-inch Minishell™ (not included). The OPSol Mini-Clip™ snaps into the loading port of the Shockwave without the use of tools, and is just as easily removed.



Well-designed anti-jam lifter is visible with action open (right). Twin action bars are not visible.



Like all Mossberg shotguns, Shockwave has dual extractors for reliable functioning.



Large port ensures smooth ejection.

Mossberg 590 Shockwave meets requirements of those who need a compact gun with the punch of the 12-gauge round.

Fitted with the OPSol Mini-Clip, the capacity of the Shockwave is increased from 5+1 to 8+1 with Minishells loaded with buck or birdshot and 7+1 with Minishell slugs.

Shotgun shells are measured after they're fired. Unfired Minishell slugs are slightly longer than the buck and birdshot Minishells, as they are roll crimped and the slug protrudes a bit.

Standard shotshells won't feed from the magazine with the OPSol Mini-Clip in place, but can be loaded into the chamber individually.

AT THE RANGE

I tested the Shockwave at C2 Tactical in Tempe, Arizona. Located right off the I-10 freeway, C2 Tactical has been voted Best Indoor Range in Arizona. It has a 25-yard state-of-the-art range with 23 air-conditioned shooting lanes, a new state-of-the-art simulator, full retail store (including NFA firearms), gunsmith services, and much more. It also offers numerous training courses. C2 Tactical is an authorized Mossberg dealer. They're great people and have graciously provided use of the range for my evaluations.

Federal and Hornady® generously furnished all the ammo used for testing, in-

BELOW: Shockwave features convenient clean-out tube magazine cap, front bead sight, and strapped forend to keep shooter's lead hand clear of the muzzle and keep it in place during recoil.



MOSSBERG 590

SHOCKWAVE

Bird's-head grip is key reason why Shockwave meets BATFE's length requirement.



» SPECIFICATIONS

MOSSBERG 590 SHOCKWAVE

MANUFACTURER	O.F. Mossberg & Sons
MODEL	590 Shockwave
TYPE	Pump action
GAUGE	12
CAPACITY	5+1 (2.75-inch shells)
CHAMBER	3 inches
CHOKE	Cylinder bore
BARREL	14-inch, heavy-walled, smooth bore
LENGTH	26.36 inches
WEIGHT	5.25 pounds
FINISH	Matte blue
GRIP	Black synthetic Shockwave Raptor Grip
FOREND	Web strapped
SIGHTS	Gold Bead
SUGGESTED RETAIL	\$455.00

cluding Federal Premium® 00 Police Load, Federal Premium Low Recoil Rifled Slug, Federal Premium Magnum #4 Buck, Federal Premium 00 Buck, Hornady American Gunner® Reduced Recoil® 00 Buck, Hornady one-ounce rifled slug, and Hornady BLACK™ 00 Buck.

The Raptor Grip and forend strap on the Shockwave did a great job of mitigating recoil. The low-recoil loads were very manageable and pleasant to shoot. The standard loads were controllable, but the additional recoil was very noticeable. The magnum loads, as expected, were downright uncomfortable. Low-recoil loads are clearly the way to go in a weapon of this type.

The Federal ammo with its FLITECONTROL™ wads was the tightest patterning, with 00 patterns averaging around four inches at 50 feet from the Shockwave. The Hornady pat-



Tang-mounted safety is ambidextrous. Many experts believe its location is ideal.



ABOVE: As NRA Instructor and RSO Aili deGreef of C2 Tactical demonstrates, Shockwave is aimed like a regular shotgun.

RIGHT: Rather than just pushing a shell into position, lifter cradles the shell, allowing bolt to push it straight in the chamber.



terns were just a tad larger but still outstanding. Both companies make excellent ammo. You won't go wrong with either.

Functioning of the Shockwave was smooth and flawless, no surprise as there is no more proven action than the 500. Although I didn't actually measure it, I would guess the trigger pull to be about 6.5 pounds. The ambidextrous tang-mounted safety and Raptor Grip are an ideal combination, as if they were made for each other.

The safety was easily manipulated. I have read reports that some users have found it difficult to get adequate thumb purchase on the Mossberg factory safety, especially when wearing gloves. I haven't had any problems in this regard and prefer the snag-free design of the factory safety.

That being said, Brownells® offers a drop-in replacement that will address any concern. The Brownells safety features matte-black oxide-finished hardened all-steel construc-

tion and is shaped for no-slip operation with larger grooves. At just under \$20, it's inexpensive too.

COMMON MISCONCEPTIONS

A lot of misconceptions exist about firearms like the Shockwave. First, despite what you see in Hollywood action flicks, it isn't designed to be fired from the hip. You can do so, but the correct technique is to bring it up to eye level and use it like a standard shotgun, except it isn't shouldered.

When so employed, the Shockwave is capable of surprising precision at the close ranges it is intended for. We had no difficulty keeping all shots center mass at the 50-foot distance we were shooting at the range. The bead front sight proved more than capable.

Recoil management is different with the Shockwave than

» Continued on page 89

Sneaky Bags SPYDER

I have found the Sneaky Bags SPYDER Covert Rifle Bag a great way to transport the Shockwave and maintain a low profile, which is always smart when transporting firearms. Designed to look like a high-end generic sports equipment bag, the SPYDER is the latest evolution in the company's line of Covert Rifle Bags. Developed with the input of professional end users, it's packed with cutting-edge features. As with all Sneaky Bags products, the build quality of the SPYDER is outstanding.

The SPYDER is available in four sizes: Micro (22 inch), Small (27 inch), Medium (31 inch), and Large (36 inch). Sneaky Bags recommends ordering the smallest size that lets you carry your weapon system in a ready-to-use condition, unless you are willing to break down the weapon into smaller components. In the case of the Shockwave, that's the Small SPYDER. It's a fairly tight fit lengthwise, but it does fit.



Sneaky Bags SPYDER Covert Rifle Bag is great for low-profile transport of Mossberg Shockwave.

SEEING DOTS

Balor Red Dot Mount for Glocks

By Justin Dyal

Red Dot Sights (RDS) on pistols have been an undeniable trend over the last few years, and this seems to be accelerating.

When early red dots showed up in IPSC and bullseye competitions, they literally changed the games. They were conspicuously “unserious” and tactical taboo for quite a while, but this changed as certain forward-leaning special-mission units began to experiment and see potential in pistol-mounted RDS.

From there, expansion was rapid and well supported by the industry, with nearly every popular service or competition auto having a pre-milled factory model ready to accept RDS. These factory guns have supplemented the custom slides and gunsmiths who have been busily milling slides. It is into this environment that Raven Concealment Systems has introduced their latest offering—the Balor Red Dot Mount.

The Balor came about at a government customer's request and is a simple after-market addition to a Glock that will mount an RDS—either the Aimpoint T-1 Micro or the Trijicon RMR, with a specific mount for each.

HOW IT WORKS

The Balor works very simply. The shooter taps out the existing Glock rear sight and removes the slide cover plate. The Balor mounting platform is attached by drifting into the rear sight dovetail. The shooter next installs the replacement slide cover plate and then joins the cover plate to the mounting platform with a screw to ensure the mount stays in place and holds zero.

The shooter then mounts the RMR of his choice (the Aimpoint is attached prior to instal-



Glock 34 (top) equipped with Aimpoint T-1 and Glock 17 with Trijicon RMR, both in Raven Concealment Systems Balor mounts.

**With both Balor-mounted
Glocks, I routinely hit almost
“trick shot” type attempts.**

Raven Concealment Systems Balor is a simple, rugged dovetail mount that allows a handgunner to add Aimpoint T-1 or Trijicon RMR to the pistol.



lation, since the screws run through the bottom of the mount into the optic). It's kitchen-table simple and doable for even the mechanically challenged.

I've installed one of each on Gen 3 and 4 Glocks, and on my samples the fit is superb. The unit slides into the dovetail easily but with good resistance, and literally no air gap is visible between the mount and the top of the slide, even when held to the light.

Making no permanent alterations to the gun, the Balor is an attractive option for many who are interested in the concept but not convinced. Play with the RDS you have for your carbine and don't cotton to the result? One screw and drift out the mount, and the pistol is back to its previous state. It is also a strong option for those shooting an issue sidearm they can't take to the machinist to mill a mounting surface into, but who still want a dot.

The Balor incorporates a simple steel Glock front sight ahead of the mounting area and uses a notch in the cover plate as a rough alignment for emergency back-up iron sights, since the original front is now on

an entirely different plane.

These irons serve two functions. The first is to serve as a guide to help the shooter align the RDS and “find” the dot. The second is to serve as emergency sights in case the dot fails, is turned off, or is too dim for the lighting conditions. The emergency sights did not perfectly regulate for me, but were within a couple of inches at seven yards.

Keep in mind that the “sight radius” they provide is shorter than a North American Arms Mini revolver and significantly less than a J-Frame, so hitting with them past ten yards takes judicious alignment. The Aimpoint gives the additional option of simply shooting through the tube, using it as a giant ghost ring, and that worked quite well for me at seven yards.

The dots mounted solidly on each mount and offered not a hint of wiggle or give. The Aimpoint changes the balance point of the pistol somewhat and the extra ounces also change the recoil impulse noticeably. I haven't established if the different impulse is “better” or “worse,” but it is different. The Trijicon may have a



Balar sits atop slide of your existing Glock, unlike milled recess in Glock 19 MOS (left).



Five shots, each as fast as possible at seven yards with dot turned off and simply aiming through the Aimpoint's tube.

very slight change in balance for some, but I didn't notice one, nor a meaningful change to recoil.

The dots sit higher than the normal sighting plane in the Balar. This allows the shooter to shoot somewhat more erect, but does take away some of the "alignment by feel" aspect for those very accustomed to their irons.

In several cases of Winchester ammo, I haven't observed any shift in zero—literally none. In fact, there is more shift in most irons (and much more in the awful Glock OEM shiny plastic sights) with normal changes in sunlight direction and angle.

PISTOL RED DOTS: THE GOOD

There are a number of really, really good things about RDS on a pistol.

The aiming process is simplified to "place the dot, press the shot." There is no alignment to deal with other than putting the dot where a hole needs to be. The visual flicker between target, front, and rear sights that occurs on tough shots is reduced to a pretty flat image of the intended target with a red dot on it. This is especially helpful for shooters whose vision has deteriorated and find a hard front sight focus challenging. I know several shooters who are loud and proud about their love for the RMR on their carry guns for this reason.

The dot is an unrelenting coach. Shooters who have long had a lousy firing grip and wind up their trigger snatch all the way from their toes shoot far better when

staring at the little red dot. The dot won't sit still with a lousy grasp and stance and tends to push shooters into positive self-correction. Ditto the trigger break. A lower mid-level pistolero can easily see the fine trigger finger movement needed to steady the dot while making the gun go off.

The shooter can *see* more. The iron-sight shooter typically covers up a lot of important stuff with the front and rear sights at distance. It is not hard for the entire point of aim to "disappear" under a fat front sight once the shot gets out past the three point line.

The typical service front sight can cover a 10x12-inch swatch of the target at 50 yards. At that range, even the "large" dots at seven MOA are covering only an index card, and the 3.5 or 4 MOA dots are covering less. This ability to precisely place the dot makes an increasing difference as the shot difficulty or distance ramps up.

Hitting becomes "Wow, I can do that?!" Largely because of the above reasons, the shooter can hit longer and smaller targets with a dot-equipped pistol than they previously thought possible. With both Balor-mounted Glock, I routinely hit almost "trick shot" type attempts. Both pistols put numerous barricade-supported five-shot groups into seven to eight inches at 100 yards. I

had been convinced the Gen 4 17 was average at best in the accuracy department until throwing the RMR on top and cutting my groups by about 20%.

On one occasion, I had a truck-gun scenario set up to test some shotguns and carbines where I was engaging a Defense Targets Steel "A" zone at 40 yards and then a Ready Ship Target (*CLANGING STEEL: Renaissance Steel Research Ready Ship Target*, January 2017 S.W.A.T.) at 100 yards on the timer. The Balor/Aimpoint-equipped G34 flat embarrassed a Kel-Tec Sub-2000 9mm carbine on that drill. The Kel-Tec has, ahem, mediocre sights and isn't a great fit for me, so despite being a "rifle," it couldn't keep up with the Balor-equipped pistol.

One of my standard truth-tellers is a 3x6-inch steel plate that I typically use at 20 to 25 yards with service autos and try for four out of five hits. Feeling frisky with the T-1 equipped Glock, I set the target at 35 yards. I was pleased, but not overly surprised, to slap the iPhone-sized target with four straight Hornady XTPs.

The RDS mounted on the handgun eases manipulation of the slide. It's like having a giant racking knob on top of the gun. Tactical folk get enthused over ledges on rear sights to aid one-handed manipulation—this is 20 times more surface area.

Dot allows shooter to hit far away and small targets that would hide under typical front sight. 3x6-inch plate with a group from 35 yards.



PISTOL RED DOTS: THE BAD

There is no free lunch. The dots share some issues that must be openly and critically considered before diving in headfirst.

There is an adjustment period to get the “goody” out of the RDS. I suspect this is different for everyone, and skill as well as platform dependent.

For example, for the first 299 rounds, I thought the T-1 was a dud as a pistol tool for anything other than long-range precision. Then on the 300th round, the skies parted, and I received the hidden truths and suddenly was like a whole ‘nother and better shooter.



There was a definite adjustment period, but once “on,” dot made a huge difference in many drills.

Thereafter I was scorching my standard drills and laying down personal bests.

The RMR took even more acclimation. I found the tube of the T-1 far easier to index and find the dot, while the shape of the RMR was a challenge. Mid tempo and precision drills came online at about 500 rounds, but I didn’t really hit my stride with the RMR until I’d stacked up a bunch of empty Winchester white boxes over numerous range days—about 2,200 rounds.

Close and fast is still an iron-friendly zone. Up close I can beat the dot with low-tech irons. When the shot is simple, I find it easier to track the front sight than to recover the dot. At five yards, I have more “reference” with irons that are in motion and won’t necessarily return to a full proper alignment before I trigger a follow-

up. With an RDS, once the dot leaves the field of view in recoil, I am either point shooting or waiting to get a glimpse of it again.

This condition diminishes with every step farther from the target. At a certain point the two systems are roughly equal; for me this is about seven yards. By ten yards the RDS owns the game. This is a not-insignificant consideration for real-world defensive use. Some shooters are far more likely to use their pistol inside of five yards than others whose mission arena might run to longer shots.

Shooting single-handed was better with the dot but faster with irons. I shot *much* more accurately and to greater effective ranges with the Balor-equipped pistol when shooting strong- or support-hand only. But inside of ten yards, it was significantly faster to acquire irons and transition to multiple targets.

The dot is rarely at the intensity you want. For me there wasn’t really a Goldilocks setting that gave me precision on super-difficult shots and warp speed up close. The dot was either too bright and blooming out to cover a tiny target, or too dim to pick up confidently at max speed.

This is no sweat in casual shooting, and it’s nice to be able to pump the dot up or down as the shot requires. But it’s worth mentally separating the “either end” performance with a carefully adjusted dot from the “on demand” performance in a general-purpose setting. For many shooters, this will be different. And it’s possible it will still exceed their iron capabilities.

Dot skill atrophies. Speed gained with the RMR in particular was subject to loss without sustainment. The T-1 tube made getting back on the dot after a break pretty simple, whereas the RMR screen took regular sustainment to keep its edge over irons.

Challenges aside, the handgun RDS is here to stay. I have a number of friends who are all in, and more seem poised to jump. The Balor is a great way to try one on. ☺

Justin Dyal retired from the U.S. Marines as a Lt. Colonel with worldwide experience in specialized units. He has taught and been responsible for numerous advanced skills and weapons courses within multiple organizations.

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SELF-TRAINING

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Harsh Truths

By Patrick A. Rogers

Professionals understand that training is a never-ending quest. They start out with initial training and follow that with sustainment training. Additional training is required as new procedures come into play, and that's followed by still more sustainment training.

Medical folks, pilots, scientists and engineers all engage in continuing education. For those who carry a gun, either professionally or casually, such training is sometimes so limited as to be useless.

Initial training for many may be good to not so good, but sustainment training may be limited to requalification, which has nothing to do with



Rain can cause issues for telescopes and iron sights, but you can shoot through it with red dot sights.

training at all. And for many, the concept of training, as well as the application of such training, may be left in the hands of those without a clue or those with an agenda.

THE QUESTION OF TRAINING

For example, in the early 1970s, the mayor of a large city mandated that the police department not conduct firearms training (in this case, qualification), because he believed cops who knew how to shoot could be relied on to pull the trigger when necessary. This mayor had plans to be President, and didn't want a race riot to spoil his chances. Unfortunately, those riots he feared came about, and cops were sacrificed on the altar of political expediency.

Many cops (and others whose job title requires the carriage of firearms) cling to the belief that "If the job wanted me to have more training, they would give it to me."

Sure they would....

For many who see a clearer path, training may be acquired through other venues and paid for by the individual. Clearly the expense of seeking outside training is prohibitive, leaving some to self-train or train within small groups of like-minded people.

There are issues with self-training/group training, in that what is to be trained or practiced may or may not be what is needed, but rather what the participants like to practice. More on that a little later.

The tendency in all things is to

pursue what you do well and avoid (sometimes at all costs) what is difficult or unpleasant. In the world of fighting other bipeds with guns, some can perform high order across the full spectrum of Tactics, Techniques and Procedures (TTPs), but they are few and far between.

Most mortals of both sexes can multi-task. However, the number of balls one can juggle at any given moment varies according to previous training, quality of training, personal ability (yes, that counts as well...), mindset, and motivation.

And because we are mere mortals, we can perform some tasks exceptionally well, others competently, and still others with degrees of difficulty ranging from minor to extraordinarily difficult.

Here is the issue. With the limited time and training funds we have available, we need to devote those resources to the things we don't do well. But instead, we do feel-good things—those TTPs that we can do easily and that leave us with a warm and fuzzy feeling.

When you head to the range for a day of shooting (hopefully training), you may have a game plan in your workbook. But then again, you may not. Instead of going out to train for a specific purpose, most go out to plink. They have no plan, and as a result accomplish little. In fact, what they do might be in the negative column as they develop and strengthen poor habits.

TRAINING IN INCLEMENT WEATHER

And that is only if you bother to go out to the range at all. How many times have you canceled a range day because of weather? Training in wet weather adds a degree of complexity that doesn't exist on those days when cottonball clouds float across impossibly blue skies.

Manual dexterity goes down a few notches, and you may find accessing magazines from pouches much more difficult. Eye-pro may fog and, if you are running cheesy active ear-pro, you

Performing Immediate Action Drills and Remedial Action Drills may not be sexy or even fun, but they are essential parts of the training regimen.

will probably find them shorting out. If you have a telescope or iron sights, you may have difficulty seeing through the raindrops.

For the wusses, inclement weather means these poor souls no longer want to perfect their warrior's craft, but rather just want to get it over with.

News flash: You don't have a choice as to when you'll get into a fight, and when you do get into one, that fight will end when someone is victorious. You cannot arbitrarily choose to pack up and go home to get warm and re-schedule that fight for a more pleasant day. You have to perform at high order regardless of weather, lighting conditions, or if you have taken your daily dose of Advil. If you only train on perfect days, you may never understand what you could be up against.

Understand that a fine line exists between training in inclement weather and being stupid. Clearly there comes a time when continuing to train may be life-threatening, and you need to

be smart enough to understand when that happens.

The biggest problem is this. At formal training, you are exposed to a multitude of TTPs. At well-structured classes, these TTPs are building blocks, starting at the crawl level, then advancing through walk and finally to run.

Along with the crawl, walk, run concept, complexity of the drills also increases as time standards are enforced, accuracy standards tightened, and multiple targets introduced. And this is all presented according to a program of instruction that provides a standard.

So far, so good.

But when you are unable or unwilling to attend formal training and instead substitute individual or unsupervised range time, there are two possible outcomes.

The first is that those involved are clear thinkers and have a plan for what they intend to accomplish. They have a goal and strive to meet that goal. In

Movement in wet weather can be problematic. People fall. They fall in dry weather and wet, and they fall in gunfights....





ABOVE: Shooting in the snow may not be comfortable, but it may be necessary.

BELOW: An upside of rain is that it aids in cooling the gun during a harsh firing schedule.



this case, progress can be made.

In the second case, our stalwarts go to the range with no discernible plan. They shoot the drills they do well, and this gives them a false sense of accomplishment, as they do not—consciously or otherwise—train for the TTPs they're deficient in.

MALFUNCTION DRILLS

For example, when was the last time you self-trained to reduce malfunctions? Performing Immediate Action Drills and Remedial Action Drills may not be sexy or even fun, but they are essential parts of the training regimen.

The fact that malfunction clearance drills can be practiced off the range with dummy ammunition makes it even more difficult to understand why people fail to perform these drills. But if you have a malfunction in the middle of a gunfight, your interesting day may take a turn for the worse.

Without good initial training followed by regular sustainment training, you will likely not be able to re-

duce that malfunction efficiently while under pressure.

LOW-LIGHT TRAINING

Take it one step further. The engagement process starts with acquiring a potential threat and identifying it as bad guy, unknown guy, or good guy. We know that a lot of fighting takes place in low light, yet very few ever train in low light. We also know that training at night is a pain in the butt. If you can find a place where you can shoot at night, there are a lot of viable reasons for not attending such training. It might disrupt your sleep cycle. Or you might miss *Dancing With Has Beens* or some other socially significant reality TV show.

But you can compromise. Although getting out to do live-fire low-light training can be difficult, you can accomplish a lot at home. A good portion of fighting with a light, either handheld or weapon mounted, is manipulation of the light. In the case of a weapon-mounted light on a carbine, issues

such as the type and brightness of the light, light placement, and switchology can be worked out at home.

A caveat: make sure you have an unloaded weapon when doing this. If running a carbine, remove the bolt carrier group from the carbine first.

Here's another example. We're all snipers at five yards, no matter if we're shooting a pistol, a carbine, or even a shotgun. And while various statistics show that most domestic gunfights take place up-close, I am unsure why anyone would use those stats to influence their training.

At the suggestion of Chappy Chapman, I started bringing my Vectronix laser rangefinder around with me when shopping. I have pinged aisles over 200 yards in some stores and malls, and have paced similar distances in hospitals and terminals.

If you get locked into short-range distances for training, you are preparing for failure. Since the Global War on Terror started, at EAG Tactical we've seen a drastic decrease in pistol ability.



Chase Jenkins, Rainbow City, Alabama PD, trains to handle Type 3 malfunction. Double feed cannot be cleared by Immediate Action. It requires Remedial Action to get the gun—and you—back in the fight.



How often do you train to reduce malfunctions?
 Rich Jones of Jones Tactical (maker of the best belts author ever used)
 reduces Type 3 malfunction at Gadsden, Alabama Police Range.

We're getting people in class who can't shoot accurately past ten yards, and many who can't get hits on paper at 25 yards. This is true no matter if they are cops, military, or private citizens.

Worse, we see people having difficulty with the carbine past 25 yards. This is truly depressing but is curable with proper training.

ACTION PLAN

Before you head out for some self-training or training with a partner, consider the following:

- Have a plan.
- What is it that you need to do? What are you trying to accomplish?
- Run two or more drills per session, depending on the time available.
- Have a pre-planned warm-up or drill that can exercise all the moving parts.
- Unless there is a specific reason to do so, run the majority of your close drills no closer than 15 yards with

the pistol and 25 yards with the carbine.

- Execute the plan.
- Run the most difficult drills first. Your mind needs to be sharp for the drills that you may find boring (e.g., remedial action drills).

We can't make an appointment to have a gunfight. We don't choose when it starts, and have only one vote as to when it ends. We may have that fight on a lovely spring day or a cold, wet night.

But we can prepare ourselves physically and mentally, so that when the flag flies, we'll at least have a clue what's happening.

When all is said and done, practice does not make perfect. Practice only makes permanent—and if we strive only for mediocrity, that is all we will ever achieve. ☺

[This article first appeared in the April 2011 issue of S.W.A.T.]



Bergara LRP Elite is the form modern tactical bolt-action rifles are assuming.

OLD WORLD MEETS NEW WORLD

Bergara LRP Elite Bolt-Action Rifle

By Todd Burgreen

THIS is the golden age for enhancing established firearms past what was thought possible only a few years ago. And I'm not talking only about ARs, AKs, Glocks, and 1911s. Even the standard bolt-action rifle is getting a make-over in terms of performance and appearance.

This is in large part due to the rise of CNC machining and other cutting-edge manufacturing techniques. The Bergara Long Range Precision (LRP) Elite bolt-action rifle is an excellent case in point.

Bergara is part of BPI Inc., which also controls CVA, Dead Air Suppressors, PowerBelt Bullets, Quake accessories, and DuraSight scope rings. BPI is in turn owned by the Spanish firm Dikar. However, BPI is based in Georgia and its focus is the American market. Its various products are conceived and made here in the United States for American consumers.

BERGARA CUSTOM SHOP

The Bergara LRP Elite is no "plug and play" creation relying solely on installing an action into a chassis and calling it good. High-quality components are used in the LRP 17 Elite, but the Bergara Custom Shop believes in the one gun-one builder philosophy that assures rugged, reliable, repeatable accuracy. This stems from the man in charge of the Bergara Custom Shop offerings, Dan Hanus, a 22-year Marine vet who honed his craft in the renowned Marine Quantico Precision Weapons Section.

While Bergara offers a full line of affordable sporting rifles centered on their in-house manufactured barrels and actions, their Custom Shop focuses on producing highly accurate tactical and hunting rifles with their Premier models.

The LRP Elite features the Bergara Premier Action. It is further distinguished by a No. 5 medium contour Bergara



barrel, Timney Trigger, and Orias chassis from Mega Arms/Killer Innovations. The Elite version has a suggested retail price of \$2,640 and is available in .308 Winchester, 6.5 Creedmoor, and 6mm Creedmoor. Every Premier Rifle comes with a sub-MOA accuracy guarantee testing every Premier rifle before it leaves their shop. Bergara includes the test target with the rifle indicating the ammo used, so a customer can either continue using that ammo, or experiment with other brands to ring out even more accuracy.

The Bergara Premier Action (BPA) shares the Remington 700's footprint, making it compatible with the plethora of Model 700 aftermarket triggers and other accessories. The BPA action features spiral fluting to minimize binding even when dirty, a floating bolt head (ensuring perfect alignment to the receiver), stationary gas shield, sliding plate-style extractor, two locking lugs, and a 90-degree throw. The U.S.-made 16-ounce BPA (short action) features an extended collar that incorporates and conceals the recoil lug.

CUSTOM-QUALITY BARRELS AT PRODUCTION PRICES

Bergara is especially proud of their barrels. The controlling of barrel production gives Bergara a competitive advantage compared to other brands in terms of accuracy and cost control. In 2003, BPI approached parent company Dikar with the



ABOVE: Bergara's fluted bolt is not only for aesthetics. It also lightens weight and prevents binding when dirty.

BELOW: Nightforce rings mounted Nightforce ATACR 5-25X optic to Bergara LRP Elite.



idea of taking advantage of renowned Spanish steel quality to produce barrels. An important part of this plan was the involvement of Ed Shilen as a consultant in the process. Shilen's barrels have won 13 world records and he is an inductee into the Benchrest Hall of Fame.

Bergara wanted to create custom-quality barrels at production prices. Shilen helped Bergara develop manufacturing techniques that would make this possible versus the tedious hands-on procedures commonly associated with custom barrels.

When the Bergara barrel factory was set up, it purchased state-of-the-art computerized machinery and robotics. Shilen's techniques, combined with the new machinery, produces custom quality barrels at a price point benefiting from the larger production runs.

Material advantages mean nothing if the people creating the rifles are not qualified to do so. For example, the barrels, which were previously inspected at the Bergara factory, are re-inspected and hand-lapped. All diameters are cut to exact measurements. There are no plus or minus allowances. The centerline of the bore, after the barrel is screwed into the receiver, must be true to within .0002 inch.

The action is pillar-bedded in a compound called Marine-Tex, which is impervious to chemical breakdown and has almost zero shrinkage over time. Before the action is glued in, the components are dry-fit until they match perfectly. Chambering is done by hand, and the reamer pilots are individually ground for each barrel. Threading is done by hand, and each action is hand-lapped to the barrel to ensure proper lockup-thread engagement. There is zero crush factor (lug setback) in the action. Dan Hanus' influence and procedures learned at Quantico are evident.

The LRP Elite takes advantage of the Orias chassis' rear

trunnion design by fitting a Magpul PRS buttstock. The LRP Elite provides the end user with a modular stock that is easily configured as needed—bipod, tactical light, night vision, optics, etc. A KeyMod compatible forend enhances this capability.

The LRP Elite measures 41.5 inches overall with a 20-inch 1:10 twist barrel. A Dead Air brake/suppressor mount is affixed to the Bergara threaded muzzle via 5/8x24 threads. Weight is 11 pounds. A Magpul five-round 7.62 AC detachable magazine arrived with the LRP Elite.

NIGHTFORCE ATACR

A Nightforce ATACR 5-25x56mm (34mm tube) was mounted on the Bergara LRP Elite via Nightforce rings. The Nightforce ATACR can be fitted to the biggest magnum boomers due to constant 3.5-inch eye relief at all magnifications. The Nightforce's tough construction is perfect for recoil resistance due to inertia forces experienced during recoil as well as rough treatment typical of deployments.

The ATACR has 120 MOA of elevation adjustment and 60 MOA in windage. This all lends itself well to long-range shooting adjustments.

The Nightforce ATACR features multi-coated ED glass. Based on my research, ED (Extra Low Dispersion) glass prevents or lessens chromatic aberration because it concentrates and directs the wavelengths of light more effectively. Generally speaking, the better the aberrations are controlled, the cleaner and brighter the image appears, which is especially important for long-range high magnification observation and shot placement.

Other notable characteristics of the Nightforce ATACR optic are second focal plane reticle, ZeroStop elevation adjustment, .25 MOA or .1 Mil adjustments, Hi-Speed elevation



The Bergara's 20-inch barrel produced velocity in the low 2,600 feet-per-second range with the 168-grain loads.

Bergara LRP Elite test fired at EVTC shooting bench with multiple .308 Winchester loads from Winchester, Federal, Hornady, and Black Hills.



ABOVE: LRP Elite takes advantage of Orias chassis' rear trunnion design by fitting Magpul PRS buttstock.

LEFT: Dead Air muzzle device arrives on Bergara LRP Elite. This is compatible with mounting a Dead Air suppressor. It can be replaced if user desires.

BELOW: Bergara LRP Elite is compatible with AICS detachable magazines. Magpul five-rounder ships with the rifle.



adjustment with windage knob capped, separate parallax adjustment with distance markings, digital reticle illumination, enhanced engraving, integrated power throw lever, and XtremeSpeed diopter adjustment.

DETACHABLE MAGAZINES

The Bergara LRP Elite is configured for use of detachable AICS spec magazines with the Magpul variant shipped with the rifle. The LRP Elite's seamless integration of a detachable magazine makes it worthy of consideration in its own right even without all the other enhancements.

The mag well is designed to line up the detachable magazine's lips with the Bergara action's feed ramp. The Orias chassis is configured to send rounds from the detachable magazine nearly directly into the chamber, limiting the chance of feeding issues. This enables the action to be cycled smoothly and rapidly without worrying about driving bullet tips into the feed ramp, which prevents chambering.

AT THE RANGE

Several visits to the range with the Bergara LRP Elite solidified appreciation of what the rifle has to offer. Bipod attachment was possible via the KeyMod Rail interface, with placement options easily achieved along the bottom of the railed forend. The Magpul PRS buttstock proved ideal for bench and prone shooting. It rode support bags well while maintaining the ability for offhand shooting.



Various premium .308 Winchester loadings from Black Hills Ammunition, Federal, Hornady, and Winchester provided the basis of accuracy tests. The Black Hills Match loads tested consisted of both 168- and 175-grain. The Federal chambering was the venerable 168-grain Match load that still serves as the benchmark for performance. A 168-grain Match load from Winchester was also used, as well as Hornady 168-grain TAP and BTHP loadings.

The Bergara's 20-inch barrel produced velocity in the low 2,600 feet-per-second (fps) range with the 168-grain loads. As to be expected with quality ammunition, velocity



Typical accuracy exhibited from Bergara LRP Elite.

figures within the different loads deviated very little from round to round, as witnessed by shooting over an RCBS chronograph.

The LRP Elite produced sub-MOA groups at 100 yards as advertised with the different ammunition brands—an important logistic consideration. The Federal 168-grain Match produced the best 100-yard average at only slightly above ½ inch. All other loads also produced sub-MOA accuracy.

Two other signs of an accurate, dependable rifle are how cold-bore zeros compare over time and if the point of aim shifts after a few rounds heat up the barrel. The Bergara LRP Elite showed no shifts in point of aim, and cold-bore zeros produced fine groups when overlaid together comparing different range visits.

Steel targets were smacked with ease out to 310 yards using a field-expedient prone position at Echo Valley Training Center.

The Nightforce ATACR's 5-25X power range provided solid optic support no matter what situations or condi-

tions were encountered. The Bergara LRP Elite maximizes portability and handling while maintaining .308 Winchester ballistics and terminal performance thanks to the 20-inch barrel.

Bergara's bolt was slick in operation, requiring minimal effort to work it in extracting the spent case and chambering a fresh round. The combination of world-class Nightforce optics and Bergara attention to detail in creating the LRP Elite generates performance equal to any rifle I've tested.

VERSATILE CUSTOMER BASE

Despite its relatively new appearance in the marketplace, the Bergara LRP Elite is a viable tactical platform that holds its own in every evaluation category. Any department, agency, organization, or individual looking for a new rifle model would do well to consider the LRP Elite.

The Bergara LRP Elite has been purchased by police departments, law enforcement snipers, long-range shooters and private security consultants who specialize in counter-sniper

operations. Feedback has consistently praised the LRP Elite's ease in fitting out as the mission dictates, plus its quality construction and accuracy level. Satisfied buyers also appreciate the fact that the Bergara LRP Elite is U.S. made. ©

SOURCES

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SMITH'S SUPER GUN

Smith & Wesson 945 Redux

By Bob Pilgrim

Shortly after I retired, I became an adjunct instructor at the Smith & Wesson Academy. Retired Massachusetts State Police Colonel Bob Hunt was the director and, even though his son, Bob Hunt Jr., was an FBI agent, colleague and member of the Bureau's Hostage Rescue Team (HRT), I still had to audition for the job by attending one of the Academy's classes, in which the boss also participated.

At that point he wanted to know if I could shoot. He took his son's word for it that I could instruct. I think he was sufficiently impressed when the range lights were extinguished and we had to shoot a tight group completely in the dark.

A former Navy SEAL who worked for a facility that maintained military counter-terrorism assets' weapons and conducted some R&D for the teams had built my 1911. The Kart Barrel 1911 did not fail me, and my blind group was celebrated with a wide grin from Colonel Hunt. The six-foot, four-inch, lean-and-mean former Marine loved to shoot too.



ABOVE: Thumb safeties are ambidextrous. Fore and aft grasping grooves are unique Dragon Scale design. On newer pistols such as this one, slotted screws fix laminate wood stocks to frame.

Model number indicates this 945 has a firing-pin safety.

Photo: Atlantic Tactical



Left side of Performance Center 945 shows 1911 influence.

Photo: Atlantic Tactical

MY TEACHING EXCALIBUR

Bob had the Performance Center build me a special five-inch double/single-action .40 S&W high-cap pistol that, while appreciated, I could not get comfortable with. I eventually gravitated to their Glock-like Sigma, liked its feel, and got pretty good with it.

I taught Close Quarters Battle Pistol, Raids One and Two. Bob brought a highly prized Generation One S&W 945 in .45 ACP to one of the classes. The Performance Center had completely blackened the gun and given it an additional trigger job. Trigger pull weight was 2.5 to 3.0 pounds, which matched many of my competition handguns. Bob encouraged me to try it and if I liked it, it would be my teaching pistol.

Liking it was an understatement. After letting all the students run a magazine through it, I claimed it for my own. From that point forward, it was my teaching Excalibur and was one of the finest factory .45s that I ever encountered. The pistol presented to me was all black and did not have the two-tone cosmetics that standard 945s featured. I did not receive its presentation case, but more importantly got additional eight-round magazines.

HISTORY OF THE 945

After presenting the public with a number of single-action pistols ranging from the M745 to the M845 with limited success, it became clear that the public wanted a heavy-caliber Smith with John Browning's familiar features.

The Performance Center's Dick Mochak was the 945's designer. It is a hybrid, a combination of the 4006 series and their 1911 offerings. The Generation Three 645 contributed the slide and the 4506 provided the base. By combining the single action and active safeties from the 1911 with the above platform, S&W created a unique and desirable firearm that did not resemble their historic rival's iconic piece.

Performance Center (PC) guns originate from standard designs or are created from scratch. From hand cutting and fitting to fine tuning for precision, these firearms are top performers. Products from the PC are the ultimate expression of old-world craftsmanship blended with modern technology.

Mochak did away with a number of undesirable 1911 features. The 945's barrel is linkless. It uses a spherical barrel bushing and external extractor, and it acquired a superior grip angle. For me, the 945 points better than any 1911 I own and it fills the hand nicely.

Unlike my high grip when shooting my 1911s, I have never had a problem depressing the 945's Wilson grip safety. Some competitive shooters have a habitual problem with the 1911's grip safety, particularly if they ride the safety with the thumb. Many disable it or tape it down when competing.

ACCURACY OBSESSION

At the time, S&W was obsessed with accuracy, and many of their higher-priced pistols featured Briley's spherical barrel bushing. The 945, at 40.9 ounces with empty magazine and 49.6 ounces fully loaded with nine 230-grain freight trains aboard, was no exception and is a tack driver.

The pistol debuted in 1996 and was released in 1997. A limited number of four-inch compact and 3¼-inch Law Enforcement sub-compact versions became available later in its longevity. During its decade of existence, weights ranged from 43.5 ounces to current specifications of 40.5 ounces.



Author's 945 field-stripped shows linkless barrel and 14-pound recoil spring with guide rod that has its own internal spring. Magazines are eight round. Stocks are wood laminate. Hex screws were later changed to slotted screws.



At the muzzle, Briley's excellent spherical barrel bushing, a critical component of 945's accuracy.

THE 945

My specific 945 is a substantial pistol, made of stainless steel throughout, save for the laminated and checkered wood grips that are held to my model by Hex screws. The 14.1-ounce slide's dorsal surface is flat like a shotgun rib but without striations, and carries the dovetailed front sight blade and fully adjustable Bo-Mar target sight.

Its fore and aft flats feature attractive and efficient "Dragon scale" grasping cuts. The fully supported and ramped Performance Center barrel has no loaded chamber indicator. That came later. Rifling is 1:16, and the muzzle is crowned.

Reflecting its era, the 945 does not have a laser/light rail on the dust cover. The firing pin can be removed via a 1911-style firing pin stop. Its right side features a large and substantial extractor that claws spent cases through an enlarged and lowered ejection port. Exterior and interior finishes are smooth and error free.

The slide's interior reveals only one locking lug recess. Perhaps the 945's most unique feature is the use of a spherical Briley bushing to provide consistent and tight barrel lockup at the muzzle. Briley is best known for its shotgun chokes, but makes myriad 1911 parts and components.

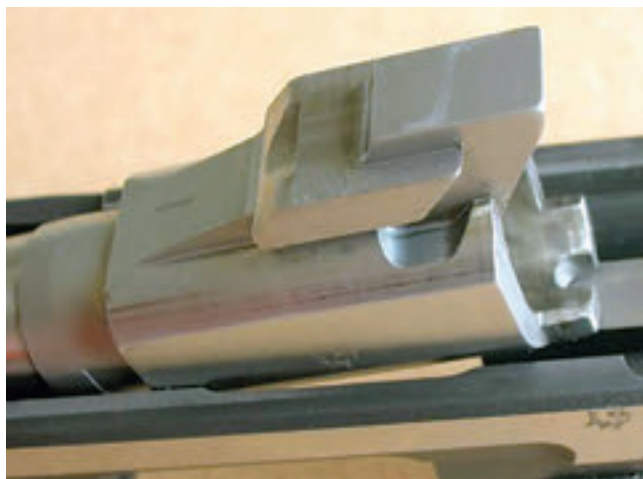
The receiver's substantial hand lapped and polished rails provide full support to its slide. Ambidextrous thumb safeties are of the gas-pedal style and engage and disengage smoothly and positively. The ejector is spring-loaded and must be depressed to reassemble the pistol.

Looking like Thor's war hammer, the "Match Hammer" is of the Commander style and slaps the firing pin with authority. It has a half cock stop. Cupping the hammer when at full cock is a raised beavertail grip safety. It guides the hand into a high grip and distributes recoil. It is intuitive to operate and unblocks the trigger when depressed.

The pistol's backstrap is machine checkered at 30 LPI, and its front strap has the same treatment at 20 LPI. Although the cuts are even, there is top and bottom vertical overrun on the



Dedicated 945 holsters were hard to find. Author occasionally recruited S&W 1076 for holster draw and shoot work.



S&W 945 shed rotating barrel link and opted for fixed lug. Barrel's chamber is fully supported.

Photo: Atlantic Tactical

front strap, which detracts from the costly gun's appearance.

The magazine well is beveled for easier magazine exchanges, and the standard-size trigger guard is undercut, permitting a higher grip. The left-side magazine release is slightly enlarged, and the magazines jettison with vigor. The thin grip panels are dark laminated wood held firmly in place by Hex screws. The slide stop is very 1911.

As received, the adjustable aluminum match trigger was set too light for law enforcement and personal defense, but competitive shooters would love it. It is smooth with no stacking and breaks crisply at 2.5 to 3.0 pounds. At the outset of my relationship with the 945, surprise breaks were commonplace.

As I became attuned to the trigger's character, I could execute "now shots" or command detonations without premature discharges. At the time, Videki triggers were the preferred component for higher-end 1911s. I would think

» SPECIFICATIONS

SMITH & WESSON 945

MANUFACTURER	Smith & Wesson
MODEL	945
TYPE	Single-action semiautomatic
CALIBER	.45 ACP
CAPACITY	8+1
OVERALL LENGTH	8.75 inches
BARREL LENGTH	5.0 inches
WEIGHT (UNLOADED)	40.9 ounces
CONSTRUCTION	Stainless steel
SIGHTS	Front post, adjustable match rear
STOCKS	Wood
SAFETIES	Ambidextrous thumb, grip safety
SUGGESTED RETAIL	\$2,157.00

that S&W would opt for this piece of precision for the 945.

EARLY MODELS CAUTION

As indicated, my model is an early iteration and has no loaded chamber indicator view port, which is located at the rear of the barrel hood's 12 o'clock.

But more seriously, S&W advises that 945s with no dash (-) in the model number should not be carried with a round in the chamber because it has no firing pin block. Models with the dash in the number have such a safety device. When I received the pistol, I was unaware of the absence of the above safety, and carried cocked and locked in all my classes without incident.

A lot is made of bore axis, and the holy grail of pistol design is to get the hand in line with the barrel to create straight-back recoil without cutting the hand. The 945's bore axis is slightly higher than a 1911's, but it was irrelevant for me when I was able to draw and rip off two-second Bill Drills from seven to ten yards. The pistol's comparative recoil was soft and it reindexed the target on its own. Kinetic forces were well distributed.

EATS EMPTY CASES

Reliability is so impressive that the pistol will cycle spent shell casings. Its reliability and soft recoil can be attributed to its relatively long lock time before the slide opens to eject the empty case. The 945 comes with two recoil springs. A 14-pound spring is installed for ball and duty ammunition, and a 12-pound spring is available for wadcutter and match loads. This is interesting, because standard weight recoil springs for the 1911 range from 16 to 18.5 pounds. Slide weight differences may be a factor.

The biggest problem I had with the piece was finding a holster for it. However, London Bridge's nylon leg-drop rig worked out fine, as all my courses were considered tactical. I did not realize at the time that holsters made for the 4005 would probably have accommodated the piece.

RANGE TIME

The 945 is a fine pistol and deserved a superior shooter to exploit its accuracy. *Top Shot: All Stars'* finalist William Bethards did the honors. William shoots for the Cabot Pistol team. Their entry-level 1911s start at over \$3,000. ASYM 230-grain JHP ammunition is his match load, and William produced cold-bore 1.41-inch five-round groups

» AMMUNITION PERFORMANCE

BRAND/LOAD	AVERAGE VELOCITY (feet-per-second)	AVERAGE GROUP SIZE (inches)
ASYM 230-gr. Match JHP	778.9	1.41
ASYM 185-gr. +P TAC-XD JHP	935.3	2.55
Buffalo Bore 255-gr. HCFN	952.8	1.65
Black Hills 185-gr. JHP	1,054.0	2.34
Federal 230-gr. HS JHP	868.2	1.69
Hornady 200-gr. TAP +P	995.9	1.06
Liberty 78-gr. JHP	1,852.0	2.19
Remington 185-gr. JHP	1,011.0	3.27
Remington 230-gr. BJHP	823.1	1.31
Winchester 230-gr. T-series JHP	888.7	0.82

Average velocities obtained from five-shot strings fired through M2 chronograph, 12 feet from the muzzle. Five-shot groups obtained from handheld rest at 25 yards. Temperature: 90 degrees.

from a handheld rest at 25 yards.

Winchester's wonderful 230-grain T-series JHP (FBI HRT load) punched out an excellent 0.82-inch cluster. The ultra-lightweight Liberty CD 78-grain +P JHP sizzled across the sky screens at 1,852 feet-per-second (fps). If there was any lateral deviation to the group, it was determined that the culprit was a broken rear sight pin that caused it to list to port.

William expects perfection from his Cabot competition guns, and he felt that the sight's angled mount had a slightly negative effect on overall accuracy.

What would have been a zero-defect run with 100% reliability was marred by the hammer falling to half cock during a rapid-fire string. The pistol may have been on its way to doubling, but William always vacates the trigger (does not use trigger reset) between shots and may have interrupted the cycle.

William considered the 945 a heavy and large pistol, with the grip's horizontal length longer than his 1911's. He liked the pistol's looks and profile and it had a good trigger, albeit with a little too much overtravel.

Front-strap checkering is excellent—effective but not too aggressive. The slide's scalloped serrations are functional, and William liked its extended slide stop. Recoil was manageable even with hot loads, and our speed-shooting drills were conducted with Federal 230-grain Hydra-Shok JHP exclusively. I shot this load in USPA/IPSC competition, because it was free from my employer. At 868 fps, power factor is 199. No wonder I never beat Leatham!

I have only one conclusion to offer: My 945 is a keeper. ☉

SOURCES

SMITH & WESSON

(800) 331-0852
www.smith-wesson.com

ASYM PRECISION AMMUNITION

(970) 385-7900
www.asym-ammo.com

BLACK HILLS AMMUNITION

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

BUFFALO BORE

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www.buffalobore.com

FEDERAL PREMIUM AMMUNITION

(800) 379-1732
www.federalpremium.com

HORNADY MFG. CO.

(800) 338-3220
www.hornady.com

LIBERTY AMMUNITION

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www.libertyammunition.com

REMINGTON ARMS COMPANY, INC.

(800) 243-9700
www.remington.com

WINCHESTER AMMUNITION

(615) 258-3340
www.winchester.com



HOW LOW

In Search of the Lightweight Carbine

CAN WE GO?

By Ned Christiansen

IN high-end racing, cost is no object in maximizing performance. Some racing engines cost in excess of \$15 million; the horsepower-to-weight ratio reigns supreme. Expensive components made so light they must be replaced each race are acceptable.

With 5.56 as a horsepower constant, I wanted to see how light I could go on an AR-15 within budgetary reason, say, under \$5 million. Using aftermarket offerings, some made specifically with weight reduction in mind, safety and reliability could not be compromised. Accuracy and durability would be somewhat negotiable.

THE FOUNDATION: ROBAR AND GREEN MOUNTAIN

The foundation would be injection-molded upper and lower receivers from The ROBAR Companies and a

finned barrel from Green Mountain Barrels.

Various attempts have been made at plastic AR-15s, none of which have proved equal to the original design, much less superior. With aluminum inserts molded in at stress and wear points, such as fire-control pin holes and buffer tube threads, ROBAR's effort goes further than earlier attempts. On the upper, barrel nut threads and take-down pin holes are molded-in aluminum pieces. Weight savings versus a standard receiver set is just over a quarter pound.

I did say plastic, not polymer, which means plastic. I didn't say lightweight, space-age composite, which usu-

ABOVE: AR built this way puts light weight above long-term durability, but is tempting for some applications.



Some may doubt the value of cooling fins, but nitrided Green Mountain 1:8 barrel is 2.5 ounces lighter because of them. POF Dictator adjustable gas block effectively handled gas regulation duties, and removable Fortis rail made for easy-enough access to adjustment.



ally means plastic. After a few decades in plastic injection molding and mold-making, I see no reason for obfuscating the word. In that phase of my career, I participated in many defense-related programs, from submarine detection components to the SMAW-D rocket launcher. Calling it “plastic” is not really a slight.

The Green Mountain barrel’s cooling fins have lightened this 16-inch nitrided 1:7 twist barrel by 2.5 ounces. As with most nitrided barrels I have used, it needed brushing and patching before use, as the nitriding process leaves residue in the bore that should come out before firing. The flip side is that my several nitrided barrels are easier to clean.

I’ve had excellent accuracy from Green Mountain barrels, but with it anchored in a molded receiver, wouldn’t accuracy suffer, what with the critical conjoining of two important elements—barrel and sight—being plastic, not metal?

Various proven tight-grouping loads gave 100-yard groups from 1½ to 2 inches. Tighter groups would doubtless result from using a target-scoped standard upper, but the goals here were Patrol Rifle-level functionality and light weight, not the Galactic Bench-Rest Championship. My zero seemed to shift a bit from session to session, but not enough to be of great concern—maybe two inches at 100 yards. Was it the plastic upper? Not sure. Some day-to-day zero shift has been a frustrating standard experience with just about anything.

ACCESSORIES

One might think the biggest advantage of a lightweight gun is having, well, a not-heavy gun. But what about the ability to add more “stuff” and come back up to a “standard” weight? The accessories I chose, things I feel a carbine needs, were selected with their weight being an important factor.

SureFire XC1 Light: Yes, it’s marketed toward pistol use, but it weighs so little (two-ounce savings over the four-ounce Insight MX3). It takes a single AAA battery and

enabled after-dark hits on paper plates to the max range I attempted, 65 yards. Its compactness allowed no-interference mounting in the 12 o’clock position. Its beam is more floodlight than spotlight, enabling a big-picture visual input of what’s going on around you.

SOB (Sheriff of Baghdad) Tactical Sling: I originally bought this for its quick adjustability, but it is also light. The webbing itself is thinner, and hardware is plastic except for the steel hook, which I immediately cut off for being heavy and noisy. This sling won’t double as a tow strap, but it is adequate-plus for suspending a rifle in hard use. Some slings feel like sandpaper on the neck, but the SOB’s material is smooth. I rigged it front and rear with paracord as I have done with hundreds of rifles. The per-



To remove Fortis rail, push latch to unlock, pull lever down, and it’s free. Author mounted both front and rear offset Magpul sights to rail to avoid any sight misalignment upon rail reinstallation. None of the lightweight components failed in 1,500 rounds, but there is no denying that some ability to take hard knocks and extreme round counts has been traded away.

fectionist in me used to hate such field-expedient measures, but done right this is a quick, quiet, lightweight, and broadly applicable solution.

V7 Weapons Systems: When a lightweight unit is the goal, look at lightweight components. I found a surprising selection of lightweight parts at V7 Weapons Systems: dustcover and dustcover rod, receiver end plate and castle nut, front and rear takedown pins made from aluminum. Also a titanium pistol-grip screw, buffer retainer, and selector. If you can save an ounce 16 times, you've saved a pound!

Magpul Offset Flip-Up Sights: I ordered these thinking they were plastic like other Magpul sights, but they are steel. I kept them on the gun because the offset feature works well with a scope mounted. Compared to plastic Magpul sights, I gained less than an ounce. They are robust and more easily adjusted than most.

Magpul D60 Drum Magazine: Few would dispute "more ammo is better." One of the best reasons for lighter gear is to be able to bring more ammo for the same overall weight. This carbine as used in class, with the D60 magazine loaded to 60 rounds, weighs *half a pound less* than my last year's training carbine with a magazine of 28 rounds. I've used every drum-type mag made for the AR, and this one makes the most sense. It's no longer than a standard 30 rounder and the drum width is reasonable. It functioned perfectly, with lock-back, in ten 60-to-empty uses.

AIM Skeletonized Carrier: I normally would not consider a lightweight bolt carrier. But a bolt carrier is pretty heavy, so I got a lightweight one from AIM Surplus, now offering a line of AR parts. As its lighter weight might speed

up the cycle, I wanted to be able to dial the gas down to compensate for it. This combo of less reciprocating mass and tuning the gas system to a particular load is common in competition ARs, offering a faster, lighter cycle. In my opinion, it is not appropriate outside of competition or experimentation.

POF Dictator Adjustable Gas Block: I would be firing suppressed at times, where reducing the gas flow is beneficial. For this I used the Dictator system from Patriot Ordnance Factory, which features an adjustment knob mounted to the front of the gas block. The knob is deeply serrated and has nine positively detented settings. Although rather small, it can be turned by hand when clean and lubed. This naturally gets harder after some use, but included with each Dictator is a special wrench. It will seldom be there when needed, so POF thoughtfully made it also adjustable with a 3/32 hex key—which will also be orbiting Pluto when needed. They cleverly included screwdriver slots. You won't have that either, but hallelujah, the rim of a cartridge case works just fine! One downside to having gas adjustment located on the gas block is that adjustment is difficult unless the forend terminates behind the gas block, allowing access to the adjustment feature. I prefer long forends that completely cover the gas block and extend almost to the end of the barrel.

Fortis QD Forend: As fortune would have it, before I found the Dictator, I selected a forend from Fortis that is quick detachable. I chose it because it looked lightweight, but I could not think of a scenario where I would utilize the quick-detach feature until the need arose to access the Dictator. Like most forends, the Fortis is designed with a low-profile gas block in mind. The Fortis works with most gas blocks and the Dictator works with many forends, but this exact combo had only about 1/32-inch clearance between them. I was concerned about barrel-whip contact between them during firing, so I "cheated" a little and milled more clearance through the top of the rail. I can remove the forend, adjust the gas setting, and replace the forend in about three seconds. I settled on using only two positions: wide open, or three clicks open. To adjust gas, I use a cartridge rim to turn the knob if it is too hot or sticky to turn by hand. To remove the Fortis, push the lever's locking latch, pull the lever down, and remove the forend. At first it crept forward 1/32 inch after a few hundred rounds were fired, but after tightening the lever's clamp screw to slightly beyond the recommended torque, it held.

OPTICS

My two optics choices were made considering weight to a degree, but I was also anxious to test the new Leupold Carbine Optic (LCO), and to acquaint myself with the Vortex brand via the 1-6X Strike Eagle.

I'd been curious as to what niche Vortex is in, and found they are in them all, from affordable entry-level glass to high-end optics and accessories. If you look at what top competitors are using in events like the Precision Rifle Series, Vortex is ubiquitous.



SureFire XC1: meant for pistols, works on carbines. At a feathery two ounces, it offers adequate flood illumination for most of what this type of carbine might be used for. Author's paracord-expedient attachment of SOB Tactical sling may not be classy, but is quick, quiet, light, and effective.



Only in *S.W.A.T. Magazine*! 21 days of freezer time, with intermittent 98-degree range sessions, and an additional seven days frozen in a block of ice, all with the dot on medium intensity, did not phase Leupold Carbine Optic's function or battery. Author feels stated battery life—1,800 hours on medium, depending upon setting—is very conservative. No battery change was necessary during ten months of use.

Vortex offers three carbine-ish scopes. I physically examined the 1-6X Razor, 1-4X Viper, and 1-6X Strike Eagle, and selected the last based on image, controls, features, size, weight, and price (under \$350). The Razor appeared a better-made scope but was significantly heavier and about five times the price.

When I select glass, I am also considering the Patrol Rifle students I teach: I'm not looking for the very best available regardless of cost, nor the cheapest and quality be damned. It's about function and value. Officers authorized to use personally owned gear need to be able to afford it and not feel the need to bring a velvet pillow for it on call-outs.

The Leupold Carbine Optic has many features that similar units do not. Only thought-wave activation could get it into play quicker than its one-touch instant on and quick, knob-twist dot-intensity adjustment. Accessible "coin-operated" adjustments for zeroing (cartridge cases work too) have positive detents. Click values of ½ inch at 100 yards and direction of impact shift are clearly indicated on the body, a most useful feature so seldom seen. It's like an EOtech and an Aimpoint shared an evening in

the back seat of a Chevy, resulting in offspring having the best features of both.

The LCO's (DL123A) battery life spec is up to 1,800 hours depending on the setting and temperature. I never used it above the middle setting, so I set it there and put it in the freezer for 28 days total, intermittently mounting and using it in temps up to 98F. I used it in several classes and loaned it to students whose red dots had gone down. I often forgot to turn it off between classes, and at ten months have yet to change the battery.

ANYTHING FOR ANOTHER HALF OUNCE

Once I got rolling on assembly, a certain level of obsession emerged, and I confess to "taking measures." The milspec buffer tube from M&A Parts got some holes drilled (-.6 ounce). The Vortex scope mount got a mild going over (-1.1 ounces). For a flash hider, I used an experimental one made from aluminum (-1.3 ounces).

CONCLUSIONS

With the optics off, this is a sub-six-pound carbine. A different pistol grip might save a quarter-ounce over the TangoDown unit used. A skinnier barrel might save another few ounces, but I was not willing to go to extremes there. A shorter rail would help.

These receivers, the entire carbine, and all its bits and pieces did everything I asked of them over a summer of Patrol Rifle classes and back-40 shooting. An exam after 1,500 rounds showed they were holding up well.

Do I think every AR-15 should be made this way? Absolutely not. If I were tasked with equipping an agency with 50 AR-15s, they would be boringly standard.

An AR built this way puts light weight above long-term durability and the ability to take extreme hard knocks—but is tempting for some applications. ☺

Ned Christiansen is known for his custom 1911 pistols and unique AR-15 armorer tools. A lifelong student of all things related to firearms, he has many years of competition shooting under his belt. He is a police firearms instructor, inventor, and firearms consultant to agencies, industry, and individuals. His AR-15 and 1911 Armorer classes have been well received by clubs and agencies around the country.

THE ROBAR COMPANIES, INC.

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www.robarguns.com

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www.gmriflebarrel.com

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www.vltor.com

VORTEX OPTICS

(800) 426-0048
www.vortex.com

HOT-RODDING

THE 1911

SIG Sauer TACOPS in .357 SIG

By Bob Pilgrim

IN early spring 1994, two hunters and their guide were traversing terrain so difficult they had to dismount their mules (horses couldn't make it) and continue their quest for Texas Mountain Lion on foot.

SIG Arms CEO Ted Rowe and recently retired FBI Supervisory Special Agent icon Bill Vanderpool, a legendary firearms instructor and early ballisticsian at the FBI Academy, were the principal hunters. They were both armed with SIG's most recent version of its compact P229 pistol chambered in the then-new high-performance .357 SIG caliber. The hunt was Ted's graphic way of introducing the new round to law enforcement and the shooting public.



SIG TACOPS features Nitron-coated slide and frame, bilateral safeties, skeletonized hammer, and adjustable aluminum match trigger. Grips are Ergo XT.

.357 SIG ROUND

Federal had collaborated with SIG on the round's development, and the pistols were charged with the company's 125-grain Jacketed Hollow Point (JHP) ammunition. Both lions taken by Ted and Bill respectively were anchored with one shot each of this round, which was created to duplicate the 125-grain .357 Magnum JHP's proven stopping power.

These impressive animals were the first blood drawn by what is now heralded as an excellent self-defense cartridge. While not quite the equal of the original .357 Magnum revolver cartridge, it has been adopted by some significant federal agencies, including the U.S. Secret Service and the Federal Air Marshals, and a number of state police departments. Several state police and highway patrol entities reportedly like its vehicle penetration qualities.

The .357 SIG is a high-pressure load. For comparison purposes, the SAAMI specifications of some other defensive calibers are as follows:

- .357 SIG: 40,000 psi
- .357 Magnum: 35,000 psi
- .38 Super: 36,500 psi
- 9mm Luger: 35,000 psi
- .40 S&W: 35,000 psi
- 10mm Auto: 37,500 psi
- .38 Super: 36,500 psi

SIG TACOPS: NOT JUST ANOTHER 1911

SIG and later SIG Sauer (SS) have been producing near 1911 clones for quite a while. Boss Ron Cohen is very familiar with the John Browning system and most likely the driving force behind its production.

The TACOPS is a no-frills, full-sized fighting pistol designed for heavy-duty defensive work.



SIG Arms CEO Ted Rowe took this large male mountain lion with what is now heralded as an excellent self-defense cartridge, the .357 SIG.

SIG Sauer 1911 TACOPS with four eight-round magazines. Pistol is all stainless steel with 25 LPI checkering and many custom features. Photo: SIG Sauer





Slide is forged stainless steel and Nitron finished with luminous SIGLITE night sights. Extractor is external.

Many new millennial 1911s do not completely reflect Browning's original specifications, and the Tactical Operations (TACOPS), the handgun under review here, is no exception. Most of the changes have been introduced to correct real (or imagined) weaknesses of the 1911 platform.

The TACOPS is a no-frills, full-sized fighting pistol designed for heavy-duty defensive work. Everything internally and externally on the gun has a practical function. It's a handsome firearm cloaked in its black Nitron (ion bond) finish, which is rugged and rust resistant. The only components not dark are its barrel and adjustable aluminum trigger.

The forged stainless steel slide is topped by Novak-like fixed and dovetailed metal sights with SIGLITE three-dot phosphate luminous inserts. The sights must be exposed to light to glow. Its front sight post is 0.148-inch wide and, while appropriate for close combat, is a little too thick for long-range precision. I prefer a 0.100-inch front index for a more flexible sight, but I have to give up any night sight capabilities to acquire the thinner profile.

Currently, the SS Fastback Nightmare is the only other 1911 offered in .357 SIG caliber.

Bilateral rear cocking serrations flank the slide's rear but are absent up front, where they are not missed. For those who prefer the front cocking serrations for loading and press checks, the Nitron finish offers a no-slip surface to perform the same task.

SS employs a massive external extractor that is complemented by an enlarged and relieved ejection port. The slide's smooth dorsal surface is semi-oval and unadorned. Its upper flats are relieved and slightly narrower in width than the lower flats.

A match bushing and GI recoil plug contain the 22-pound recoil spring with flat coils, which permit greater range of reciprocation for more positive feeding and ejection.

The bushing also supports the slightly flared muzzle end of the match barrel. Lock-up is snug. Instead of checkering on the end of the recoil plug, SS has dished it out slightly, making it more comfortable to the touch while retaining tactile control during disassembly and assembly.



ABOVE: TACOPS kit consists of pistol, four eight-round magazines, cable security lock, manual, and documentation.

LEFT: TACOPS fieldstripped with four eight-round magazines. Barrel is Browning traditional swinging link, but is ramped and fully supported.





TACOPS 1911 with some of ammunition used in evaluations. Speer Gold Dot 125-grain eclipsed 1,400 fps and was quite accurate.

The TACOPS' forged stainless steel receiver (frame) is standard in length and features a deeply cut and very prominent MIL-STD under-barrel accessory rail. Aft of that is a GI trigger guard ensconcing a lightened aluminum five-pound trigger that is adjustable for overtravel. The trigger guard is undercut for a higher grip, and above all these components is the extended slide release/stop.

Immediately behind the trigger is an enlarged projected magazine release and, while very accessible, it was not inadvertently activated when I pressed the pistol left side down on a hard surface.

Black Ergo XT grip panels with the SS logo feature a striated pattern with excellent purchase. The grips are affixed to the frame via Allen-head screws that remain locked during robust recoil.

Front- and back-strap checkering is nicely done at 25 lines per inch. Part of the back strap is a nicely flared but unobtrusive magazine well, which I consider essential for positive magazine changes under stress. The grip safety is enlarged for efficient activation, especially for high-grip shooters. Thumb safeties are bilateral and enlarged, but smaller than I prefer, and feel sharp when activated.

Its lightweight and skeletonized hammer shortens lock time, while also being quite attractive.

Four eight-round stainless steel magazines are included with the piece, Checkmate converted .40 SW magazines with a spacer running down the magazine's vertical rear flat. They are polished internally to enhance smooth operation and have round witness holes and modest polymer base pads. Followers are metal. Retail replacement will set you back \$31.50.

The pistol's five-inch stainless steel ramped match barrel has a 1:16 left-hand twist. Its rifling is broach cut and its muzzle slightly enlarged and crowned for firmer lock-up and enhanced accuracy with a fully supported chamber. A threaded barrel is offered as an option.

SCABBARD SHORTAGES

One of the nagging problems of railed SIG Sauer 1911s is finding a choice of holsters for them, since the frames and slides are not cut exactly to John Browning's original specifications.

To allay that concern, SS has teamed up with Mitch Rosen, Blade Tech, and Black Point Tactical to produce beautiful and practical holsters for its brand.

FIELD TESTING

This is not a caliber for beginning shooters. If you can tolerate the recoil of a .45 ACP and the muzzle blast of a .357 Magnum revolver, the .357 SIG may be your self-defense caliber. Although Secret Service and Air Marshal colleagues assure me they have no difficulties qualifying weaker shooters with SIG Sauer .357 P229 combinations, a strong grip is recommended.

Shooters new to the caliber are often observed regripping the 1911 between shots. To achieve ten-yard rapid-fire accuracy, I had to pay strict attention to the TACOPS' front sight. Although my shooting partner and I describe the TACOPS' recoil as akin to its larger-caliber sibling, others disagree and opine that it is noticeably less than the .45 and more pleasant to shoot. When fired from the full-size and weighty 1911, recoil is attenuated.

BETHARDS APPROVES

Top Shot: All Stars' finalist William Bethards squeezed the accuracy potential out of the pistol and the various brands and loads of ammunition used in the evaluation. This 1911 and ammunition exhibited bullseye accuracy at 25 yards from a handheld rest.

With a six o'clock hold, the TACOPS printed high right, parallel to the three-inch black bull. The tightest five-round group was posted by Speer 125-grain GDHP at 1.26 inches.



Top Shot: All Stars' Finalist William Bethards exploited pistol's inherent accuracy, with no groups exceeding three inches at 25 yards.

As expected, velocities were high, and the same load, which is the Secret Service and Air Marshals' caliber of choice, sprinted downrange at an average velocity of 1,413 feet-per-second (fps) and 554 foot pounds of kinetic energy.

But highest individual and average velocities were claimed by Buffalo Bore (BB) "Heavy .357, Low Flash" 125-grain JHP, averaging 1,487 fps. Studies have graphically demonstrated the .357 SIG's ability to produce more severe wound channels than the 9mm Luger.

Another advantage is increased reliability. The bottlenecked .40 S&W caliber cases with the 9mm bullet are like putting a .35-caliber rod into a .40-caliber orifice. It functions like a flared magazine well for an easier and more efficient chambering.

Bethards liked its five-pound trigger. He described it as heavy but smooth with a little overtravel. I found it broke cleanly after a modest amount of take-up, and judged it a very good factory trigger even though its Series 80 trigger and firing-pin safety interface have more complicated geometry.

When it came to recoil control, it was déjà vu, because Bethards has an intimate association with .45 ACP siblings. He considered both the Federal and Speer 125-grain loads to be "hot" rounds. SIG Sauer's loads "felt good and were very smooth." Remington exhibited a lusty muzzle report and had lots of muzzle flash, which may have a psychological impact on downrange recipients, but could also negatively affect night vision. Hornady, a

manufacturer of superior ammunition, surprised us with consistent high left flyers.

NIT PICKING

With an extended slide stop, there is little room for the bilateral thumb safeties. Larger than GI safeties, they are still too narrow and a bit sharp for my liking. Wider "gas pedal" type safeties would be easier to find and trip and would accommodate those who like to establish the highest grip possible with the ability to ride the safety with the dominant thumb.

Additionally, the MIL-STD under-barrel accessory rail is very sharp and capable of puncturing flesh. The rear Novak-type sexy sight is worthless as an aid to one-handed refunctioning. It needs the more standard SS vertical design.

The TACOPS has a really nice and subtle magazine well, but the base pads on the four eight-round sticks are barely adequate to ensure positive seating with the flared magazine well. A slightly larger base pad is called for.

The pistol was not cleaned during the evaluation. Disassembly and reassembly are typical 1911. No big surprises here. While the SIG manual indicates the bushing and recoil plug can be removed without tools, I needed a bushing wrench to accomplish takedown.

Hundreds of rounds of various weights and configurations were fired through the TACOPS without failure of any kind.

For experienced shooters who can handle the .357 SIG caliber, the TACOPS is a good choice for a defensive pistol. Suggested retail price is \$1,221. ©

SOURCES

SIG SAUER

(603) 610-3000
www.sigsauer.com

BUFFALO BORE

(406) 745-2666
www.buffalobore.com

HORNADY MFG. CO.

(800) 338-3220
www.hornady.com

SPEER

(800) 627-3640
www.speer-ammo.com

MOSSBERG SHOCKWAVE

+ Continued from page 57

it is with a standard shouldered shotgun. You should ride the recoil, not fight it. As mentioned, the Raptor Grip and forend strap help greatly. With reduced-recoil loads, there was no difficulty rapidly emptying the Shockwave into the target. Recoil was noticeably lighter than with the commonly encountered pistol grip.

The Shockwave is designed for close-range applications. Coolness factor aside (it definitely is very cool), it's a niche weapon. It's not a general-purpose shotgun. But within its intended parameters, it's an outstanding weapon.

The Shockwave is a great gun for anyone who needs a compact gun with the punch of the 12-gauge round. It's an ideal firearm for home defense with the proper rounds, and a great car gun where allowed. There are also a variety of professional applications in which a short-barreled 12-gauge such as the Shockwave really shines.

OTHER NEW MOSSBERG SHORT-BARREL OPTIONS

In addition to the non-NFA Shockwave, Mossberg has also come out with two new subcompact NFA shotguns—the 590A1® and 500 Compact Cruiser® AOWs. The 590A1 Compact Cruiser features a 10.25-inch heavy-walled barrel, 3+1 capacity, metal trigger guard and safety button, cleanout magazine tube, and parkerized finish. The 500 Compact Cruiser features a 7.5-inch heavy-walled barrel, 2+1 capacity, and parkerized finish.

As AOWs (Any Other Weapon), the 590A1 and 500 Compact Cruiser only require payment of a \$5 transfer tax in addition to the required NFA paperwork. As many of you know, Short Barrel Shot-



When fitted with aftermarket OPSol Mini-Clip (not shown), Shockwave can handle Aguila Minishells, increasing capacity to 8+1 for Minishell buck or birdshot and 7+1 for Minishell slugs.

guns (SBS) require payment of a \$200 transfer tax. Additionally, unlike an SBS, an AOW can be transported interstate without having to file a Form 5320.20 with BATFE.

NFA versus non-NFA aside, the Shockwave is a much more practical weapon for most applications in which a short-barreled shotgun will be employed. The 590 and 500 Compact Cruiser AOWs are highly specialized weapons designed to serve very limited roles. Definitely a lot of fun, but for most readers not the best choice for personal defense. The Shockwave is a much better option in this regard.

FINAL THOUGHTS

If you've wanted a short-barreled shotgun without the NFA hassle, the Mossberg 590 Shockwave won't let you down. It's a great gun worthy of the Mossberg name. It has an MSRP of \$455.00 and comes with a 10-year limited warranty covering defects in material or manufacture. ☺

Eugene Nielsen's background includes protective intelligence investigations and threat management, as well as red teaming security consulting. He has a BA degree from the University of California. He currently owns and operates an investigative and security consulting firm and is licensed in both California and Arizona.

SOURCES

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BROWNELLS

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www.brownells.com

C2 TACTICAL

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www.c2tactical.com

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(800) 379-1732
www.federalpremium.com

HORNADY MANUFACTURING COMPANY

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www.hornady.com

OPSOL, LLC

www.opsolmini-clip.com

SHOCKWAVE TECHNOLOGIES, LLC

(727) 877-8277
www.shockwavetechnologies.com

SNEAKY BAGS

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www.sneakybags.com

TRAINING AND TACTICS

+ Continued from page 98

invaluable, sporting multi-function capability to cut, saw, tighten, loosen, squeeze, grip, and navigate, to name but a few. Some come with attendant equipment such as a signaling mirror, fishing line and hooks, writing implements, band-aids, and sharpening stones. As with most everything else, these tools are illegal as carry-on baggage on commercial aircraft, but if the kite goes down, you're either a goner or there'll be enough on-board grab-and-go gizmos to set up shop on Gilligan's Island.

Carry a firestarter kit with your other daily goods or buy one that attaches to a key ring. Small and lightweight, these units are made of magnesium with an integral steel rod. Carve off some magnesium chips and place them in tinder. Strike the steel rod with a knife blade, sending sparks onto the magnesium chips, and you have the stuff of cave-man legend—instant fire to cook your food, boil water, or warm the cockles of your Armageddon heart.

No, you don't have to be Mad Max, Rambo, or paranoid. But it would be nice, for example, for those of you who have families, if you could make your way back home to protect your spouse and ankle-biters when that never-going-to-happen disaster hits. The first of the loot-shoot-scoot brigade will deploy immediately after a disaster, looking for an easy mark. Those who have nothing to lose will be ready to take, and the sooner they start, the more they can take.

Traffic will be snarled within 15 minutes and there will be no emergency response units available to solve your little problems, so you'll have to do it all by your lonesome—and on foot. And even if you find a drivable route, perhaps you've forgotten that gun thingummybob I mentioned earlier. One teensy-weensy bullet through your head and I now own your Hummer and everything in it—including your address. You know—that place where your widow and kids are waiting. Sorry about that, but survival of the fittest and all that good stuff, don't you know.

Now decide if you want to be the chef or the entree, because the Hell Restaurant is open for business, and only the man with the carving knife and the full belly is walking out alive. ☺

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

Gerber MP1-AR Weapons Multi-Tool

Gerber introduced the first military-grade multi-tool designed specifically for the AR-15/M4/M16 weapon system in 2008. Developed with direct input from U.S. military personnel, the eFECT® weapons maintenance tool is still a popular go-to tool for shooters.

The MP1-AR™ Weapons Multi-Tool is described by Gerber as “the next evolution of the eFECT.” It’s that and more. The MP1-AR is a full-size multi-tool that has all the tools you need not only to simplify cleaning and maintenance of your weapon system, but also to handle everyday tasks.

The MP1-AR features an extended magnetic bit driver that can reach the grip screw in an AR. It uses standard

¼-inch bits. By default, it comes with a versatile #2 Phillips already inserted.

In addition to the Phillips, the MP1-AR comes with a 12-bit kit that includes flat, Phillips, hex, and Torx® bits commonly needed for adjusting optics and accessories, plus a four-prong A2 front sight adjustment tool and a pin punch for trigger assemblies. The bits are secured in a polymer holder when not in use.

The MP1-AR also features two full-size blades (plain edge and serrated), spring-loaded forged-steel combo jaw pliers (needle-nose and regular pliers functionality, wire cutter and wire stripper), a contoured carbon scraper, dental-style carbon pick, and take-down pin punch.

The carbon pick makes cleaning the bolt’s ejector area and other hard-to-reach spots in the weapon a breeze. The carbon pick may be unscrewed to allow standard 8-32 threaded cleaning rods and Otis Technology cleaning kit components to be attached.

The two blades are designed to provide maximum utility. The plain-edge blade features a traditional V-grind. It’s best where precise control and clean cuts are necessary. The serrated blade is best for cutting through tough fibrous material such as rope or webbing. It features a rounded blunt tip for safety in rescue applications.

The butterfly-opening combo jaw pliers make handling a variety of tasks a breeze. Although the wire cut-



MP1-AR is next evolution of Gerber's weapon-specific multi-tools. It has all necessary tools to simplify cleaning and maintenance and handle everyday tasks.



MP1-AR is compact, lightweight and has excellent ergonomics. Handles have pebble-like texturing that provide a good grip.



All blades and tools lock securely in place and are outside-accessible for one-handed employment.

ters don't employ replaceable cutter inserts, they have proven to be quite tough and up to any reasonable task this type of multi-tool may be expected to perform. The spring loading reduces hand fatigue by eliminating the need to adjust and readjust your grip during use.

Although the MP1-AR lacks a castle nut wrench, a screwdriver bit and hammering device could be employed in a pinch. That being said, I have never had a properly staked castle nut loosen.

The blades and tools lock into place and are outside accessible for one-handed employment. The MP1-AR features Gerber's patented Saf-T-Lock® slide-locking mechanism that locks the tools securely in place when they are fully opened. The spring-loaded locking system has proven to be exceptionally strong and secure, despite my abuse.

The MP1-AR is of stainless steel construction. Both the fine-edge blade and the serrated blade are made from heat-treated 420HC stainless steel. 420HC alloy is different than 420. The HC stands for "high carbon." The higher carbon means it can be brought to a higher hardness than 420. Tools made from 420HC are tough and durable. 420HC also has good corrosion resistance.

The pliers' jaws are made from forged steel for maximum strength, instead of weaker, cost-saving investment castings.

The punches, scrapers, and blades have a powder-based black oxide coating that reduces glare and enhances corrosion resistance and lubrication of the blades and accessories.

The handle material on the MP1-AR is 33% Glass Fiber Reinforced Nylon Type 6. This material offers excellent strength, stiffness, creep resistance, and dimensional stability, as well as low thermal conductivity. The handles have a pebble-like texturing that provides good traction and enhances grip. The ergonomics are excellent.

Considerable effort was clearly put into the design, quality, and craftsmanship of the MP1-AR. It's tough, lightweight, user-friendly, and very practical. Closed length of the MP1-AR is 4.3 inches, with an overall length of 7.3 inches when opened. Blade length

is 2.75 inches. Weight with sheath is 9.7 ounces.

The MP1-AR comes with a MOLLE/PALS-compatible coyote heavy-duty nylon sheath with Velcro® flap closure. The sheath has a separate internal compartment for the bit kit.

Another option is Gerber's new patent-pending adjustable heavy-duty black nylon CustomFit™ Dual Sheath. Sold separately, it's designed to hold two items plus a pen. It features new Velcro Quiet Deploy™ Tech and vertical and horizontal belt carry. It's also PALS/MOLLE-compatible. A quick-access back panel allows the user to customize it to perfectly fit a variety of tools, including folding knives, multi-tools, and flashlights. Gerber also offers a CustomFit Quad Sheath. Berry-compliant versions are available.

A good multi-tool is an indispensable part of everyday kit. Selecting the right multi-tool is about finding the set-up that best fits your individual needs. The MP1-AR is an excellent choice for any shooter or armed professional. The MP1-AR has a suggested retail price of \$176 and comes with a limited lifetime warranty. ©



MP1-AR comes with coyote MOLLE/PALS-compatible sheath with separate internal compartments for MP1-AR and bit kit.

SOURCES

GERBER GEAR

(800) 950-6161
www.gerbergear.com

OTIS TECHNOLOGY

(800) OTISGUN (684-7486)
www.otistec.com

SFD Responder

If you carry a gun, you should carry a blowout kit. I know, in Hollywood the good guy puts the bad guy down with one shot, no one else is hurt, and our hero gets the girl.

The real world, however, can be messy. You, your loved ones, or an innocent bystander may be injured during a critical incident. You should have the tools at your disposal to save a life.

The most common reason I hear why someone has not added a blowout kit to their everyday carry (EDC) is they don't have room for one. If you confine your thinking to carrying on your belt or in a pocket, this is absolutely correct.

I have carried a tourniquet and an Israeli bandage in an ankle holster designed for a J-Frame revolver, but it was bulky and the bare minimum, to say the least.

At the 2017 SHOT Show, Alessandro Padovani of Safer Faster Defense showed me an ankle rig he designed to carry emergency items. I was impressed with the design and purchased it on the spot.

Called the SFD Responder, it is 19.5 inches long x 4 inches wide—long enough to fit over most boots, be they duty, tactical or hiking.

The ankle rig has three pockets made of two layers of tough elastic cloth. It conforms to the contents, allowing for secure and discreet carry of the equipment when walking, running, or jumping. The bottom of each pocket is reinforced with MIL-

The ankle rig conforms to the contents, allowing for secure and discreet carry of the equipment when walking, running, or jumping.



SFD Responder with items author carries every day, including C-A-T tourniquet, QuikClot Combat gauze, Celox Rapid hemostatic ribbon, HyFin® Chest Seal twin-pack, and flat folded trauma bandage.

W-17337 Class II nylon webbing. It won't fray from rubbing on shoes or boots like the elastic cloth would.

The female Velcro cloth is 7.5 inches long and sewn on 3D Air Mesh to facilitate comfort, fit, and breathability.

At the other end, the new Velcro Ultra-Mate® is used for the closing tab. This wide Velcro tab is more rigid and has smaller "teeth" than regular Velcro, helping it adhere better. It stays put even when saturated with sweat or water.

On the flip side of the Velcro tab are two PALS/MOLLE slots laser cut in the LAHYCO® (a proprietary blend of Hypalon® and Cordura® 500D), to offer more storage options if you decide to add something.

I load my SFD Responder with the following:

- C-A-T tourniquet
- package of QuikClot Combat gauze
- Celox Rapid hemostatic gauze ribbon
- chest seal twin-pack
- flat folded trauma bandage
- Sharpie marker (to mark "TQ" on the victim's forehead to notify emergency room personnel)

Loaded up, it is just under an inch thick.

I have worn the SFD Responder every day for several months. I put on my boots and then the ankle rig. It is thin enough to fit under my Wranglers and I don't even realize I have it on. I could not be happier with it.

Just like carrying a handgun for personal protection, wearing the SFD Responder has become a habit. My everyday routine as I get dressed is to check the readiness condition of my pistols, extra magazines, and flashlight. After I put on my boots, the Responder gets strapped on around my ankle. I get my first cup of coffee only after this ritual has been completed.

And if, God forbid, I ever need my med kit, I won't spend the rest of my life thinking, "If only I'd had the right items with me, I could have done something...."

Suggested retail price of the SFD Responder is \$58.95. ©

SOURCE

SAFER FASTER DEFENSE

(702) 506-1890

www.saferfasterdefense.com



ABOVE: Tab end has two PALS/MOLLE slots laser cut in LAHYCO to offer more storage options if desired.



RIGHT: SFD Responder is secured with Velcro Ultra-Mate for the closing tab. This wide Velcro tab is more rigid and has smaller "teeth" than regular Velcro, which helps it adhere better.

BELOW: Female Velcro cloth is 7.5 inches long. With an overall length of 19.5 inches, SFD Responder will comfortably fit over most boots.



GEAR LOCKER

NEW PRODUCTS & ACCESSORIES

Propper Kinetic Pant

The next generation of go-anywhere, do-anything tactical pants for men and women is here in the modern and comfortable Propper Kinetic™ Pant. Built with revolutionary NEXstretch™ two-way mechanical stretch fabric, the Kinetic Pant is

designed to keep you moving forward, ahead, and in pursuit of your goals.

Features include unique durable and rugged ripstop nylon, gusseted crotch for ease of movement, internal gripper waistband to keep a shirt tucked in, ambidextrous pocket configuration, durable water repellent, and wider belt loops with badge/sunglasses holder. The women's version is not just a modified men's pant. It offers all the same great features but is specifically tailored to a woman's shape.



PROPPER
www.propper.com

Vickers Tactical Grip Plug/Take Down Tool

TangoDown has released the Gen 4 Glock™ Grip Plug/ Take Down Tool (GGT-O2), which offers all the same functions as its predecessor for Glock Gen 3 models. It's carefully designed to accommodate factory backstraps, or not, depending on shooter preference. Just select the appropriate tool and go. The package includes two tools and one plug. Installation is quick and simple, snap fit for easy tool access. Suggested retail price is \$17.95.



TANGODOWN INC.
(520) 888-3376
www.tangodown.com



Tulster Profile IWB Holster

Tulster has added the Smith & Wesson Shield .45 to its Profile IWB Holster lineup. From the ground up, the Profile holster was designed to be an ultra-concealable, minimalist appendix-carry holster without the drawbacks. Distinct features such as the matte edge finish and minimal material used facilitate a comfortable fit and provide maximum concealment for concealed carry.

From the injection-molded belt clip to the soft loop option, the cant settings are easily adjustable from 0 to 15 degrees to allow a perfect grip.

The Shield .45 IWB Profile Holster can be ordered in many different colors and patterns for either right- or left-handed shooters.

TULSTER
www.tulster.com

Black Hills Gold ELD-M and ELD-X

Black Hills Ammunition is never satisfied, but always striving to improve and on the lookout for new technology. Black Hills doesn't make their own bullets, cases, powder, or primers, but chooses the best components available and carefully crafts them into Black Hills Ammunition. When Hornady discovered ways to make already excellent bullets better with their new ELD-M® (Extreme Low Drag-Match) and ELD-X® (Extreme Low Drag-eXpanding) bullets, Black Hills upgraded their Gold rifle lineup with the highest ballistic coefficient bullets available in myriad calibers.

BLACK HILLS AMMUNITION

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www.black-hills.com



Viridian LCP II Laser Sights

Viridian® is now shipping the company's new product line of laser/light accessories specifically engineered for the new Ruger® LCP® II handgun.

The initial three models are part of the company's highly successful Reactor® product family. Each new Ruger® LCP® II laser and/or taclight model includes a free pocket holster that features the company's proprietary INSTANT-ON® activation. The green laser model has a suggested retail price of \$239, the red laser \$149, and the white-light model \$119.

LASER AIMING SYSTEMS CORPORATION

(800) 990-9390
www.viridiangreenlaser.com

Spyderco Karahawk

The original Spyderco Karahawk was a unique synthesis of the salient features of the classic Southeast Asian karambit and state-of-the-art modern folding knife design. Now this dynamic design is available in a stealthy all-black version ideal for use in environments where light discipline is a concern.

Its saber-ground VG-10 blade provides an exceptional balance of strength, edge geometry, and corrosion resistance. The hawkbill blade ensures cutting leverage and instinctively centers the blade's point in the user's grip. The compact handle has textured black G-10 scales and is constructed with twin skeletonized stainless steel liners that extend to form the structure of a reinforced karambit ring at the butt end. Suggested retail price is \$329.95.

SPYDERCO

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Second Amendment in Action

Living Room Intrusion

An Orlando, Florida homeowner was awakened early in the morning by the sound of his dogs barking. Donning a pair of trousers with a pistol in the pocket, he went to investigate the source of the disturbance. Arriving in his living room, he found a strange man standing in the enclosed sunroom facing his back yard. He told the man to leave, but instead the stranger pushed his way past him and into the living room.

When the intruder responded to a second command to leave the premises by running at the homeowner, he feared for his safety and produced the pistol. Firing once, he struck the intruder in the hip. Police arrested the home invader and charged him with Burglary With Assault or Battery. The 65-year-old homeowner was not charged.

SOURCE: WFTV, Orlando, Florida, 3/28/17

Rifle Repulsion

A young woman convinced three acquaintances that the large house set well away from its neighbors on a quiet street in Broken Arrow, Oklahoma would be a good place to burglarize during the day. She'd made a delivery there and knew it was a big house. They went one morning and broke into the detached garage, stealing alcohol. Perhaps it was under its influence that they decided to return later to burglarize the main residence.

Breaking a window and forcing entry, the three invaders were confronted by the homeowner's son, who had slept through the garage burglary but was now awake and had armed himself with an AR-15. The young man opened fire on the trio and saw two go down and one flee. Barricading himself in his bedroom, the young man called 911. Police arrived and found one dead robber in the driveway and two more in the house. The woman getaway driver had fled but later turned herself in.

SOURCE: *Tulsa World*, Tulsa, Oklahoma, 3/29/17

Subway Shooter

On a Monday morning in early March, a man entered a Subway restaurant in Acworth, Georgia and vaulted the counter, brandishing a gun and demanding money. There were no customers in the dining room, and one of the two employees in the store defended himself by drawing a handgun of his own.

He fired one shot at the robber, who was hit in the chest and staggered back out the doorway and into a waiting vehicle. Police were called and later apprehended the robber when a local medical center reported a white sedan had pulled up and unceremoniously dropped off the wounded suspect, who was treated and arrested.

Police were still looking for accomplices at the time of this writing. The Subway employee was not charged. Local media interviewed several Subway customers, and all interviewees commended the employee.

SOURCE: WAGA-TV, Atlanta, Georgia, 3/14/17

Bad Timing

Working the evening shift at an Arlington, Texas convenience store, the clerk looked up as a pair of men walked through the front door. One of the two was wearing a mask and produced a weapon, and the clerk realized he was being held up. He was alone in the front of the store, as his only coworker had barricaded herself in the cooler.

Drawing his own handgun, the clerk fired on the masked robber, hitting him. The robber fell to the floor, fatally wounded, and when the police arrived, the would-be robber's gun was found near his body. The second man who had walked in at the same time turned out not to be an accomplice, but rather a customer who had walked in during the stickup due to pure bad luck.

According to police, the clerk's version of events was corroborated by surveillance video.

SOURCE: *The Dallas Morning News*, Dallas, Texas, 3/6/17 ©



Multiple-suspect home invasions are rare, but do sometimes happen.

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COMING NEXT ISSUE

SWAT

**AUGUST ISSUE
ON SALE JULY 5th**



CARBINE WEIGHT, RIFLE POWER
POF-USA Revolution

Welcome to the Jungle

Survival means different things to different people. It may mean winning a gunfight, destroying a rapist, wending your way back home during a natural or manmade urban disaster, or even deciding who's the chef and who's on the menu at a Donner party campground—commonly called dessert survival.

But whether it's necrophagia or trading bullets, the most prized material possessions at any given moment are the personal items that—coupled with a game plan—will enable you to still be drawing breath at the conclusion of the proceedings.

Most people envision their doomsday package as consisting of firearms and ammunition, food and water, medical supplies, and shelter from both the elements and predators. Which is all well and good, as long as you're living in a mountaintop retreat and haven't just had your teeth rattled by an earthquake. Otherwise you need to be able to travel light with as few—but essential—possessions as possible. And even if you live in your version of a safe retreat, if it's man-made and designed, it can be penetrated by a lone bandit. Your so-called impregnable castle now becomes a breachable prison.

Both the good and bad news about a doomsday scenario is that the law of the land becomes the law of the jungle a nanosecond after the game begins. Witness the circus during the Los Angeles riots and the aftermath of Hurricane Katrina in New Orleans, and it becomes evident that when societal order breaks down, the guns come out—legal or illegal. And you won't have to worry about illegally carrying a firearm. Your primary concern will be staying alive.

In a recent conversation with a California resident, I was told that if there were a Katrina-like occurrence in San Francisco, "We wouldn't behave like that." Yeah, right. Talk to me when the next big 'quake hits—and it's going to. And no, I don't have any guns to lend you, since you decided to be a ballistically challenged meliorist ten years

ago. Reap what you sow.

So what do you carry if there is a short-notice calamity?

The first order of the day is probably a firearm. Better yet, more than one, complemented with plenty of ammunition. Most people last a couple of hours maximum before the warm cocoon of society becomes a memory.

What type of firearm do you pack? It depends on the circumstances. If it's going to be only a couple of days, and you're ensconced in your domicile, shotguns and/or rifles are probably the order of the day. On the other hand, if you're going to be moving for a protracted period of time—be it through an urban or rural jungle—something

riverbed and carry it in a stoppered ostrich egg, upend your piehole when it's raining—there are always options.

Like everything else, it depends on where you are and what's available—but have a plan, however rudimentary in outline, if something does go down unexpectedly. As long as it comes as a surprise, and not as a shock, you can make do. The human spirit has an amazing capacity for survival, but that capacity is based on how strong-willed you are, how motivated you are, and the degree to which you are prepared to dirty your hands. In other words, do you want to survive so much that you're prepared to Donnerize your brother-in-law on a desert island

Traffic will be snarled within 15 minutes and there will be no emergency response units available to solve your little problems.

in .22 Long Rifle and plenty of ammunition will suffice. They are lightweight in nature, allow the portage of a plethora of spare ammunition, and are useful for head-shot kills—for food, defense, or knocking off enemies, whose equipment you can then appropriate.

This is probably not the time to be carrying your \$3,000 eight-round Pimp My Pistol and two spare magazines, none of which work reliably except on a sanitized shooting range. You're in a jungle for an indeterminate period of time and fighting to stay alive, not playing games at the local wannabe gun range. Once you've been in a mob of 2,000 rioters armed with only a Star PD and one spare magazine, you stop listening to the ex-spurts who weren't there.

You also need liquid to remain hydrated, or your firearms become a non sequitur. You can't fight when you're dizzy, delirious, or dead. While you can go without food for a relatively long period, this is not the case with water, especially in hot weather. Where do you find water, and how do you carry it? Suck it out of your neighbor's garden hose, dig for it in a dry Sahara

when there's no other food, and you're willing to be the chef?

If not, regard everybody who makes minor preparations as paranoid, and ignore the buildings crumbling around you, because it can't really be another earthquake and—famous last words—surely this can't be happening to me?

Since Man started walking on his hind paws, he has been on a never-ending quest to invent and/or manufacture tools and machinery to make life less labor-intensive. And since shelter and clothing are necessities in most climates, the tools to fabricate these—and for that matter, firestarters—become essential items that most males carry and use on a daily basis, whether it's for mundane chores or in times of emergency. Let's face it—if you can't find a "survival tool" that fits your potential needs from the innumerable models currently available, you're not human, don't have the male penchant for toys, or didn't really want one in the first place.

Manufactured in a variety of sizes and configurations, these tools are

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* 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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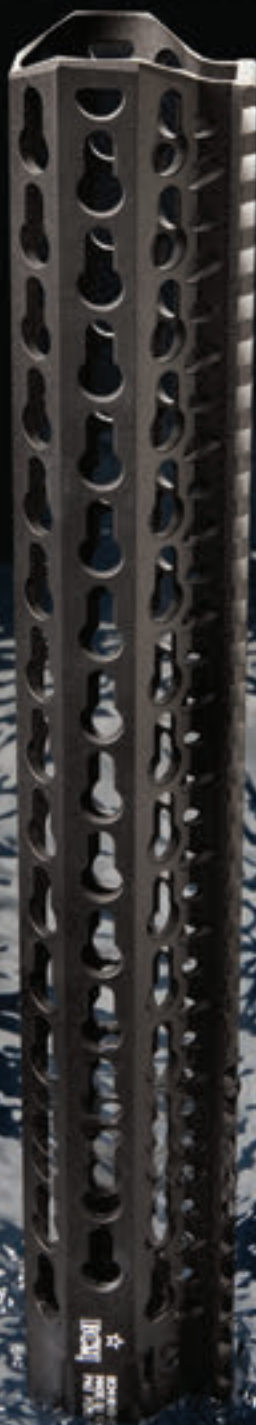




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