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SWAT.

SURVIVAL WEAPONS AND TACTICS



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Multi-Purpose
Survival Blades

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BROWNING'S FIRST PUMP SHOTGUN

Winchester Model 97

One of the greatest shotguns of its day, the 97 has appealing features that make it viable for modern shooters.

BY ROBERT CAMPBELL



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HARD-HITTING PRECISION

SIG Sauer 716

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A precision rifle eminently adaptable to modern tactical situations, with utility for law enforcement, military, or citizens who need a precision rifle that still offers firepower potential.

BY TODD BURGREN

Cover photo: Ron Eldridge, SIG Sauer

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IDF-Style Training for U.S. Agencies

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PUBLISHER

Richard J. Lucibella

EDITOR-IN-CHIEF

Denny Hansen

PRODUCTION DIRECTOR

Kathleen Allard

DESIGN DIRECTION

B. Bigler | WestPub Inc.

OPERATIONS MANAGER

Grit Salewski

TACTICAL CONSULTANT

Louis Awerbuck | *In Memoriam*

TRAINING CONSULTANT

Patrick A. Rogers | *In Memoriam*

LAW ENFORCEMENT CONSULTANT

Brent Wheat

FIREARMS DESIGN AND

TESTING CONSULTANT

Ashley Emerson, MN

STAFF PHOTOGRAPHERS

Robbie Barrkman

Straight 8 Photography

CONTRIBUTING STAFF

Reuben Bolieu, Todd Burgreen, Jeff Hall,
Flint Hansen, Kurt Hofmann, Ethan Johns,
Seth Nadel, Eugene Nielsen, Bob Pilgrim,
Rob Pincus, Scott Reitz, Clint Smith,
Leroy Thompson

CIRCULATION DIRECTOR



ONLINE INFORMATION TECHNOLOGY

Justin Guyett

SOCIAL MEDIA COORDINATOR

Tamara Keel

ADVERTISING SALES REPRESENTATIVES

Billy Rogers

360-244-9185 | billy@swatmag.com

Brent Wheat

317-370-3442 | brent@swatmag.com

BRIEFING ROOM

BY DENNY HANSEN

We Are Diminished

WITH deep sorrow, we learned that one of the most respected trainers in the industry, Pat Rogers, passed on May 4.

Pat was a retired Marine and retired as a detective sergeant from the NYPD. He served as a Rangemaster at Gunsite for a dozen years and ran his own training company, EAG, since 1989.

Pat's enthusiasm and energy on the range—often laced with humor and profanity—were contagious, inspiring his students to perform at the highest possible level. Everything he taught was based on experience and facts instead of theories and conjecture. His training has saved many lives.

On a personal level, I will miss his genuine love of life and his friendship. Looking through my file of certificates, I found that I had the privilege of attending at least nine courses with Pat over the years—and I learned something new in each of them.



If a student made a careless error like not lock a magazine in place or run a weapon dry, Pat would magically appear by their side and say, "I must be a bad instructor. Didn't we cover that?" The student would then have the dubious honor of earning one of Pat's "Moosecock" awards. Yet I have seen them proudly displayed on students' load-bearing gear in many classes other than Pat's and spotted them on officers' plate carriers on the national news—a testament to Pat's teaching.

Pat was, however, the first to praise good performance.

My daughter Ashleigh and I attended one of Pat's carbine courses in Casa Grande, Arizona in 2007. While Ashley was shooting in the squat position, Pat saw her take not one but two hot 5.56mm cases down the back of her pants. Instead of jumping up and down and doing the hot-brass cucaracha, she finished the drill, put her carbine on safe and grounded it before picking out the burning metal.

Pat immediately changed her name from "Ashleigh" to "Awesome Ashleigh" and referred to her that way from then on.

Pat's contributions to S.W.A.T. Magazine are limitless. He will remain on the masthead as Training Consultant, and we will be reprinting some of his best articles. We have received many requests for a special issue containing all of Pat's articles. We are considering this in digital format and will keep readers updated on it.

After Louis Awerbuck passed, I read many Facebook posts to the effect of, "I heard a lot about him but never trained with him." I'm seeing the same comments about Pat Rogers now.

It's much better to look back and say "I remember" than "I wish."

If you have an instructor on your bucket list, make the time and go. The best of the best won't be around forever.

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

Denny Hansen

SWAT

EDITORIAL INFORMATION

For editorial submissions,
press releases or questions,
contact the editor at:

denny@swatmag.com

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LE APPROVED

VARIETY VARSITY

I wanted to let you know that, when it comes to variety, you guys are the "A" team. For example, in the May issue, you featured the Beretta ARX, Rifle Dynamics 5.56mm AK, and how to update the Mosin-Nagant. Other publications on the stands are mundane in comparison to S.W.A.T.

I do have one request: is it possible to have more articles on custom Kalashnikov rifles? I'm especially interested in precision AK rifles.

H. Bell, Washington

Thank you for the kind words. While we realize we can't always please everyone, we try to maintain a good mix of firearm, gear and knife evaluations, as well as articles on tactics, training, survival, reloading, Second Amendment issues ... there are a lot of topics we feel S.W.A.T. readers want to know about.

Using "AK" and "precision" together is usually an oxymoron. With that said,

we are currently working up an article on the Rifle Dynamics DMR, which will change a lot of minds about the precision available from an AK-type platform.



ACCESSORY ABOMINATION?

I have never written to any magazine, but felt the need to comment about the article accessorizing the Mosin-Nagant (*RELIC RESURRECTION: M44 Mosin-Nagant Archangel Scout Rifle*, May 2016 S.W.A.T.)

While I know many people enjoy

accessorizing their firearms—and I do too—I feel military firearms that are rich with history should be left alone and appreciated for what they are. If someone really has the need for a Scout rifle, they should buy one rather than cobbling together a rifle that now has no collector value and is not as usable as a purpose-built rifle.

B. Jones, Tennessee

Thank you for your comments, and we're sure many purists agree with you. But a rifle such as the Mosin-Nagant was manufactured in great numbers and, except for the occasional exceptional example, is in no danger of becoming rare.

SURVIVAL FIREARMS

I found the article on guns for survival (*TWO GUNS IN THE DESERT: Choosing Survival Firearms*, June 2016 S.W.A.T.) interesting as it went into what different people chose and why. As Denny Hansen stated, survival situ-



A Ranger buddy sent me home with a couple boxes of your ammo. As you can tell by the picture it worked great!!! Good hunting and Godspeed.

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ations have different meanings for different people, and what they anticipate using may differ greatly.

I was somewhat surprised that no one chose to use a .22 rifle. I know many people think the cartridge is limited to target practice and plinking, but with careful shot placement, it can serve well in a defensive role. Ammunition is universally available and a lot more of it can be carried, with 500 rounds taking up only about as much space as a couple AR-15 magazines.

The .22 LR is an excellent small-game cartridge. As a former wildlife

officer, I can attest that poachers have taken a lot of big game with it as well. I think a .22 should be included in any survival battery.

M. Strode, Oklahoma

I'm in complete agreement that a good .22 rifle is hard to beat for many situations. I routinely keep a Ruger 10/22 Takedown rifle in my truck. I decided that for the "survival" event, my scenario would be based on circumstances that would require firearms better suited for defensive purposes.

Denny Hansen

SHOOTING DRILLS

I have been an avid reader of S.W.A.T. Magazine for the last five years. Some of my favorite articles are the practical shooting drills written by Ethan Johns.

I found the story on using .22 guns for training for larger caliber/service pistols particularly interesting (*DOUBLE DEUCE DRILLS: Real-Deal Firearms Training*, June 2016 S.W.A.T.). I recently bought both a Smith & Wesson M&P15-22 rifle and M&P22 pistol for training alongside my M&P15 .223 and M&P 9mm duty guns. Thanks to S.W.A.T., I now also have very useful drills for them.

J. Murray, Ohio

Thank you for your support and comments. While you have made sensible choices for subcaliber training, practicing with any rimfire will pay big dividends in the long run.

WILD GEESE

I'm an avid firearms collector and enjoy the historical stories you publish like the recent one on the Wild Geese (*MERCENARY FIREPOWER: Guns of the Wild Geese*, June 2016 S.W.A.T.) in Africa.

S.W.A.T. is the only magazine I can remember that not only has useful reports on guns, but also has the history that goes along with them. Please keep them coming and consider adding a regular historical column.

T. Long, Connecticut

Thank you for the feedback. While we don't foresee a regular column, we do have other historical articles planned for future issues.

SWEEPS SADNESS

I think your publication has the best sweepstakes/giveaways of any magazine. But I'm often sad, because I refuse to put personal information such as my name, address, phone number, and email address on a postcard for potential hackers to see.

B. Wilson

While the rules of our sweepstakes do specify that entries be sent in on a postcard, there is no rule against putting the postcard inside an envelope, thereby concealing any information you write on it. Another option, and even easier, is to enter online at our website, www.swatmagazinegiveaways.com. ©



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Adder Self-Defense System

Berne Apparel, maker of rugged work clothing since 1915, adopted the Death Adder as its mascot for its new Adder System CCW line of self-defense clothing. It is claimed that this reptile is speed incarnate as the fastest-striking snake in the world.

Weapons concealment, access and deployment speed from the Adder ensemble of vests and coats are quite impressive. Currently, the Echo One Zero Concealed Carry vest and Echo One One Concealed Carry jacket are on the market, with additional versions planned for future distribution.



Top Shot: All Stars' William Bethards models Adder System hooded jacket. Outer flap pockets contain MOLLE webbing for holsters attached to MOLLE mounts. Full-size service pistols are readily accommodated. Large slash pockets behind weapons pockets permit easy hand-warming.

COVERT AND FAST

Both garments feature innocent-looking large exterior cargo-type double layered and lined port and starboard pockets above the hem of the coat and vest. The outside pocket's area consists of a flap secured by snaps that covers a generously sized lined pocket followed by MOLLE-lined port and starboard gun and holster pockets, with said flaps secured by tearaway Velcro.

These two pockets are backed by port and starboard muff-like hand-warming slash pockets. Additional external and internal pockets are available for other items of gear or smaller backup guns. All containers look and function like standard pockets, but can contain a series of nasty surprises. The Adder System is designed for rapid and uninhibited access to your blade or blaster.

The garment's flexibility lets you select from a number of serious weapons systems to provide the appropriate level of response to force or deadly force within the threat environment that you may find yourself in on any given day.

A complete inventory of primary and secondary weapons, flashlight, OC spray, and more can be carried in the support-side pocket, removing annoying weight from the belt line and balancing the garment.

The internal MOLLE Grid securely accepts your holster, so you can return your gun to the same location every time it is deployed. Security-level holsters are unnecessary, because the pocket and flap provide all you need.

CONCEALED CARRY VEST

Both the vest and coat items are oriented to fall or winter wear and are heavy compared to the lightweight down and fleece clothing available today.

A tan vest will eventually partner with the black sample sent to me. Dark colors conceal gun print better than lighter hues, but project martial intentions.

As mentioned above, the heart of the system consists of port and starboard padded cargo-style compact pistol pockets with an integrated MOLLE/Velcro retention backed system that locks your holster in, so your firearm is always where you expect it to be, with pocket flaps snapped down.

The draw is initiated by a vigorous flap pull out and down. When the Velcro gives way, the entire pocket and contents are exposed for action. With a little practice, sub two-second draws to target can be accomplished.

Above the gun and gear pockets are dual zippered front chest pockets, which safely house wallets and cell phones. Inside chest pockets with elastic MOLLE webbing welcome additional personal gear. Snap side vents enable access to belt-mounted gear without opening the vest.

Premium insulation quilted to flannel lining provides warmth and comfort under harsh conditions. The outer shell is 100% heavy-duty cotton canvas for rugged durability and use. It weighs two pounds clean. Weight with a loaded Glock 17 and two 19-round magazines is about 5.5 pounds.

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CONCEALED CARRY JACKET

Berne's Adder System Echo One One Concealed Carry jacket is a mirror image of the vest, except for sleeves with pleated elbow, pleated action back, and quilted to flannel lined hood. When not protecting the head, it acts as a collar. Both garments are cinched closed with a rugged antique nickel-plated zipper. More substantial than the vest, the jacket weighs six pounds clean and increases to almost 9.5 pounds with a hot G17 and two extra loaded magazines.

DISCOVERIES

No training manual comes with the clothing, so some trial and error are involved. With this method, we determined the following:

Pocket draw works best with garments zippered closed.

Non-friction fit or holsters with retention devices should be used. Pocket and flap provide sufficient security. Kydex scabbards work best.



Pocket on vest and jacket must be ripped open and flap "thrown" down, so it does not follow the hand back to the pocket, which can delay the draw.

Depending on the holster, you may not be able to drive your gun hand thumb down between pistol and holster to establish a firing grip. Instead, the thumb touches the pistol's recoil plate or hammer and grip is completed as the gun clears the holster.

Slim and lightweight handguns are preferred to reduce printing and pocket sag.

To avoid muzzling support hand or arm, gun hand should perform all tasks associated with strong-side draw. Do not open flap with support hand unless gun hand is injured.

FIELD TRIALS

After a short training period, *Top Shot: All Stars* finalist William Bethards and I got to work. A Glock 23 .40 caliber with 180-grain Winchester Bonded round was selected for one- and two-shot draws at five yards.

We did not have MOLLE holster mounts, so William dismantled a Safariland ALS holster and removed its belt mount and retention system, making the holster and double-stack pistol as slim as possible. We were able to slip the holster's shirt guard under the webbing, and it was locked in. A bulge was still evident, but the gun did not telegraph its presence. Berne executive Seth Richardson informed me that an optional pocket shield, which reduces potential attention-getting pocket bulge, is available.

The draw requires a snatch technique. The hand grasps



Bethards presents full-size service pistol from holster concealed within pocket of Adder System hooded jacket.

the flap and throws the flap down rather than ripping it open. We found that if the flap is ripped open, prolonged hand contact had a tendency to return the flap to the pocket when hand motion was reversed to liberate the pistol. It did not foil the presentation, but slowed it down.

William's best one- and two-handed point shoulder draw times at five yards were 1.44 seconds for one hand and 1.38 seconds for two.

Average one-handed draw times were 2.00 seconds. Two-handed efforts produced an average of 1.78 seconds. William is convinced that with practice, one-second presentations are achievable. When trouble is expected and cannot be avoided, the gun hand holds the flap in a non-threatening manner.

CONCLUSIONS

When it turned cold here in the East, I bundled up in the Berne Parka. My RO-BAR Custom .40-caliber P229 was now nestled in a Safariland holster fixed to a Safariland MOLLE mount in my strong-side coat pocket. Balancing out the pistol were two 12-round magazines and a Hutton's Edge folding knife. The load had a slight forward weight bias but carried well. It was very comforting to know I had non-telegraphing access to a substantial pistol in seconds.

I have a goodly number of light-weight instructor, VIP protection, concealed carry, and security agent vests, with most designed to secrete or contain martial gear, but none as efficient as the Berne fashions for deception and rapid response to trouble. For more versatility, tropical lighter weight versions with the same capabilities would be desirable.

The Echo One One Concealed Carry jacket will set you back \$129.99, and the Echo One Zero Concealed Carry vest goes for \$99.99. Both are covered by a full one-year warranty from manufacturer's defects. ©

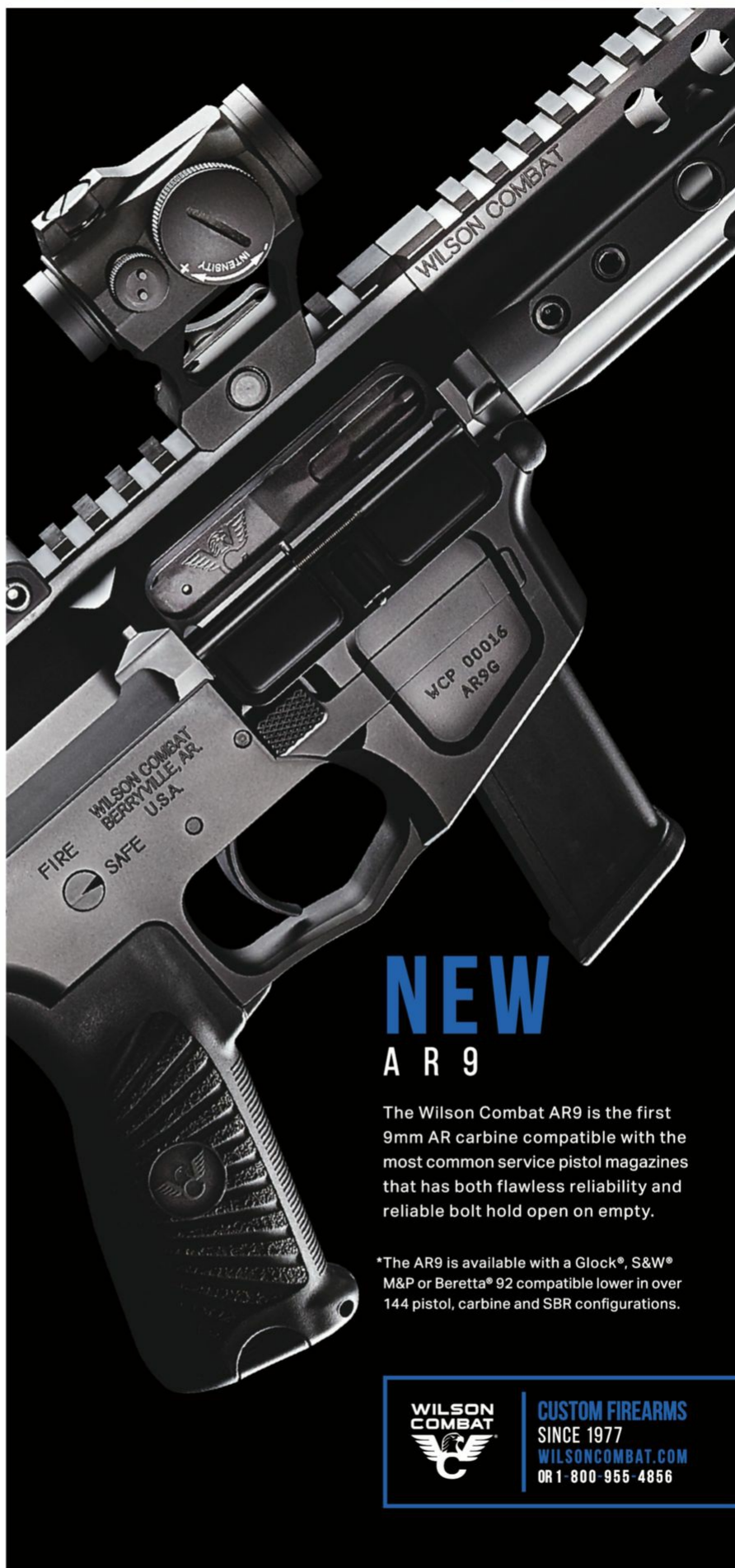
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LET'S talk about one of the most dangerous things in the entire world: relationships, specifically those of a romantic or marital nature.

Wait! I know you're disappointed that we're not going to talk about 50 ways to incapacitate an attacker using only an index card, but trudge along and hopefully you'll find some useful grains of truth among the dramaturgical chaff.

Cops learn from Day One that "domestics" are one of the most dangerous parts of the job. Speaking as someone who was once attacked by a bleeding, battered wife as we wrestled her drunken husband, all rules of normal human behavior go out the window when people are under the influence of love/hate.

In that incident, it was fortunate

I glanced up at the last second and blocked the coffee mug she swung at my tender skull as we were rolling on the kitchen floor. The whole thing ended up with him going to jail for misdemeanor battery and her for attempted felony assault on an officer.

Relationships cause all sorts of incredibly irrational behavior in humans. When you have an array of exceptionally strong emotions, frequently coupled with the ingestion of various recreational chemicals, a serious relationship conflict is a sure-fire recipe for disaster.

Of course, nearly every reader is saying, "Yeah, but that won't happen to me."

Right. And you'll probably never get old, overweight or cynical, either.

As we all experience relationship problems to some degree, keep these

few things in mind when it seems the world is completely falling apart as your "ideal mate" is threatening to walk out the door.

First of all, you can't control other people. We know this intellectually, but facing domestic strife, we usually focus much more on how the other person is acting, or should act, rather than our own self-control or working to keep emotions in check.

Therefore, you must manage yourself before you can attempt to manage the situation. Perhaps the biggest key is to keep some semblance of perspective and realize that no matter how terrible the circumstances seem, it's not the end of the world. No matter what happens, the sun will come up tomorrow.

That sounds like a trite song from a popular musical, but if you truly consider and reflect on this idea, it will help



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UNCLE SAM MEETS MOTHER RUSSIA



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you maintain perspective in all areas of your life. Regardless of how well or badly things go, the world keeps turning and doesn't really give a rat's ass about you, your problems, hopes, fears, or concerns. Quite frankly, if you are wiped off the face of the earth, the fish are still biting somewhere.

Therefore, make every effort to quit focusing on the moment, vow to keep yourself under control, then do whatever needs to be done to fix the problem constructively and move on with life, with or without your partner. Treat a relationship problem as a tactical mission: resolve the issue as best you can, as soon as you can, and then keep going forward.

This means mood-altering chemical usage, loud verbal tirades, and allowing rage to build to the point of explosion are counterproductive to your "mission." Stay in control and fix or step past the problem. My well-worn advice to people in many types of interpersonal conflicts comes to mind: "Somebody needs to be an adult; it might as well be you."

Your Significant Other is probably under no such restrictions, so the safety of everyone becomes important. If things are getting seriously heated, remove any easily accessible weapons from the area. Such advice seems silly considering your self-disciplined and mature self, but prisons are full of people who are likewise rational but did something exceptionally stupid during three seconds of rage.

One good safety strategy is temporary retreat. Going for a walk or long drive allows greater perspective and a cooling of tempers. Don't just storm out, but calmly (as possible) state you are going out for a set period of time and will then return for further discussion.

If there is violence, leave immediately. Extract yourself and call law enforcement. Both statistics and experience have shown that an arrest decreases, rather than increases, future violence by the perpetrator.

Getting involved in the domestic spat of other parties is always a bad idea. If friends or relatives are arguing, stay out. Never get lured into the discussion as a

mediator or witness. If you find yourself in this situation, try to discreetly distract or remove one party to gain the all-important "cooling off" period.

If you can't do that, just leave. As demonstrated by my coffee-cup incident, arguing partners possess a strange, twisted amalgam of love, loyalty, and anger that can turn on you without notice.

Above all, be careful even with people you've known or loved for years. The history of mankind has demonstrated that, blinded by five seconds of rage and fear, any human can behave much lower on the evolutionary scale.

The biggest takeaway from this column should be that the advice applies to you—the guy or gal sitting there on the toilet reading quietly. Relationship problems impact all our lives, and during those times it's normal to experience a range of counterproductive emotions. The key to both short-term safety and long-term happiness depends on your own self-control in spite of seemingly dire circumstances.

Someone has to be an adult ©



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Backcountry and Bug-Out Cooking, Part I

THE expression “simple is best” works for many situations in life. When it comes to refueling the body in an emergency situation such as bugging out or a fast-moving backcountry expedition, it should be as simple as possible.

When time is of the essence, it’s best to stick with foods that are either non-cook or only require water for rehydration. This article deals mostly with food requiring only a metal container for boiling water to add to packaged dehydrated foods such as rice, pasta, mashed potatoes, soups, and hot drinks.

NON-COOK

In my years of backcountry travel, I have always been on the lookout for not only the lightest equipment I can find, but also for the easiest way to eat on the go without having to bring a lot of kitchenware. Although many food products have been made for the military (MREs) and backpackers, none of them are especially cheap—or great!

Among the foods associated with backcountry travel that do not require cooking are: bread, cheese, salami, nuts, energy bars, cooked ham, cooked sausage, packaged tuna, and a variety of canned meats. Raw vegetables are also an option.

As for canned meat, a variety of brands come to mind, but they are all similar. I remember a scene from the 1995 movie *Waterworld* where a type of canned meat called smeat was

thrown out to crowds of people. This type of meat is usually referred to as luncheon meat, and is a combination of pork and other byproducts. This is the kind of food that almost everybody ate at one time in their lives, yet denies ever liking. But it is fully cooked and easy to buy at any grocery store. I prefer to fry or broil it over a campfire. Everything tastes better over an open fire—especially in the backcountry!

JUST ADD WATER

As a cheaper alternative to the dehydrated foods marketed for the backpacking community, I found some simpler, better-tasting foods that are a fraction of the cost. While brand names vary, I like to bring some kind of rice and mashed potatoes with me into the backcountry. Although the package calls for hot water and margarine or butter, I’ve found that hot water alone is good enough.

The package can normally be used as the apparatus to rehydrate the food in, as well as the container to eat from. This is an added benefit because it does not require any mess to



Above: Instant food can be made inside small plastic container, so main pot or kettle can remain clean and be used to boil more water for a hot drink. Food requiring only water is a simple way to eat in the backcountry.

Author has made a combination of broccoli and cheddar flavored rice, pasta, and sausages. All ingredients except the sausages were rehydrated with hot water and left to sit.

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Luncheon meat comes in a variety of flavors and brands. Author recommends frying it rather than eating it raw.



Author makes small wooden clamps to keep heat sealed inside for best results when rehydrating food. Green sticks are split and fitted over folded package.



Instant rice, packaged meat, energy bars, and coffee are easy to find and even easier to make with hot water and a small fire. Simple is better in a backcountry bug-out situation.

deal with or water to clean pots with. Each package provides enough food for three to four people and usually costs less than \$2.

The rice or mashed potatoes can also be put into a pot or separate container as a communal dish by adding water and letting others dish-up from there.

One trick I like to do when eating from the package involves two or three finger-length green sticks. With a knife, I split the sticks about two inches down the middle, making an improvised clothespin. This helps keep the hot water inside the package, thus sealing in the heat. About seven to ten minutes is usually required for rehydration.

Boiling in the package also lends itself well to adding either vegetables or some kind of meat to the contents, then clamping it closed to let it all heat up together.

Soups are also a good choice for quick on-the-go meals or snacks. There are many types of soups to choose from, ranging from the kind that require utensils to be eaten to the type that are easy to drink from their own container.

I've tried them all, but lately I've been taking instant Japanese miso soup with me on trips because it's easy to drink without needing a fork or spoon. As for utensils, using chopsticks is my favorite way to eat food when I'm outdoors. They weigh almost nothing and can be used to pick food up as well as to poke food, much like a fork.

The beauty of this type of cooking is that it only requires hot water. I don't use a conventional backpacker's stove, so I need a small fire to boil my water. Most any metal container can be put straight into a fire or hot embers in order to bring



Super Cat alcohol stove is lightest weight stove author has ever heard of. It is made of a cat food can with holes punched around its rim.



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water to a rolling boil. Small wood-burning stoves are also an option, but not always suitable.

SUPER CAT STOVE

Although small backpacking stoves are considered lightweight, another option is even lighter and more compact: an alcohol stove. It is ideal for situations when a campfire is not possible or in a bug-out or stealth camping scenario.

Alcohol stoves are very simple and efficient. They are usually made from aluminum cans, but my favorite is made from a small 69-cent cat food can. This type of stove is commonly referred to in the backpacker's community as a Super Cat stove. It's easy to make and a perfect piece of equipment for any outdoor adventure.

The fuel required for this type of stove can be found in just about any paint or hardware store or at selected gas stations. I use denatured alcohol as my fuel source, though pure methanol, pure ethanol (Everclear), antifreeze, and rubbing alcohol can also be used.

The Super Cat stove is made of a small cat food can, which serves as the holder for the cook pot as well as the burner and reservoir for the fuel, which is poured directly into the small can and lit with a match, lighter or spark from a ferrocerium rod.

Making a Super Cat stove is easy. Clean out the can, remove the label, and use a paper hole puncher to make a total of 16 holes around the top of the can, in two rows. It is important to keep the two rows of holes as high up toward the rim as possible, to allow the largest volume of fuel in the stove—usually about one ounce. Burn time is approximately seven minutes, which seems to be about the time it takes to boil two cups of water. When the fuel burns out, it doesn't leave any residue or mess.

Next issue, I'll cover preparing and cooking food using only natural materials like rocks for frying and moss for steaming vegetables, and how to make a few useful utensils in the backcountry. ©

Reuben Bolieu is an adventurer, writer, photographer, and survival instructor for Randall's Adventure & Training. He has spent most of his life hiking and backpacking through the wildernesses of the world. A lifetime student of survival, he has studied primitive survival techniques from all over the world.

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Overall handling of Winchester Model 97 cannot be faulted. Extraction and ejection are positive.

BROWNING'S FIRST PUMP SHOTGUN

Winchester Model 97

BY ROBERT CAMPBELL

THE Winchester Model 1897 was designed by John Moses Browning. Though all Browning designs were not successful, the majority were, and the 97 is no exception. This shotgun has all the earmarks of a classic firearm and is not only a war dog, but a long-serving law dog as well.

Here at S.W.A.T., the peace officers among us are interested in public defense, and other readers are primarily interested in personal and home defense.

While the Model 97 has been out of production for over 50 years, clones or copies of the Winchester shotgun are available today. I cannot comment on their quality, but the operation and ca-

pability of the shotguns are similar to the original.

The Winchester 97 has appealing features that make it viable for modern shooters. It was among the greatest shotguns of its day and a popular improvement over the less-than-perfect Winchester 93.

OPERATION OF THE MODEL 97

The 97 was a necessary improvement to handle smokeless powder. It featured a smooth and reliable pump action—even today, tie ups and short

cycles are rare—and it was made of the best material of the day.

When operating the Winchester, once the shotgun is cocked, a slight forward movement of the forend is required before the action may be rocked to the rear. Usually recoil is all that is needed.

The magazine holds five 12-gauge 2¾-inch shells. A difference between the Winchester action and modern shotguns with their disconnect is that the 97 may be “slam fired” by simply keeping the trigger pressed as the ac-

tion is worked. There is no disconnect or manual safety. I wanted to see how this worked out in practice.

Once the Winchester 97 shotgun is loaded, the hammer may be carefully lowered. Then the hammer is pulled back slightly until it clicks. This is the safe position, in which the hammer does not touch the firing pin, although it should not be relied on.

The Winchester 97 shotgun has earned an enviable reputation for reliability. Maintenance is simple, but takedown is slightly more complicated than the modern pump-action shotgun. Still, pressing a button to release the magazine and twisting the barrel out of alignment to remove it aren't difficult.

HISTORY OF THE MODEL 97

The Winchester 97 was offered in "riot gun" configuration with a 20-inch barrel for most of its production life. Many were used by law enforcement and prison guards, and all were marked cylinder bore.

The most famous was doubtless the World War I Trench Gun with ventilated barrel cover and integral bayonet lug. There are reports that the shotgun was used to shoot hand-thrown German grenades from the air. I don't doubt it—it certainly was possible with the fast-handling Winchester.

The 97 made a name for itself long before WWI. During the harsh battles against the Moro in the Philippines, it was among the most valued weapons used by U.S. troops. Period literature indicates the Springfield .45-70 was a trusted stopper and the Winchester 97 the superior short-range weapon. All other shoulder-fired arms, including the .30-40 Krag, were problematic.

The Winchester Model 12 and other shotguns were ordered and used during World War II, but the 97 continued in use at least until Vietnam.

The Winchester 97 is a popular shotgun in Cowboy Action shooting, particularly Wild Bunch matches. By all reports, the originals hold up well to this use. I wanted a riot gun variant simply for personal use. Originals are pretty pricy, nearing \$1000 or even more if it's a bona-fide Trench Gun.

HOW DOES IT MEASURE UP TODAY?

I was able to find a good-condition sporting model manufactured in 1952 for less than the price of a modern clone, all good save for the long barrel. But I had a plan. I took the Winchester to my local gunsmith. Jim said, "Are you sure you want to do this?"



Loading Winchester 97 is as fast as any other shotgun.



Buckshot blast to the face of an OPSGEAR target.

This is a nice original full-choke Winchester." My wife was with me and said, "Live the dream." Why not? I am not a duck hunter.

The barrel was cut at 18.5 inches—a little shorter than a real riot gun—and the bead reinstalled. I oiled the shotgun and practiced quite a bit in dry fire. Acclimation took time. The lockup is different, and in dry fire you have to press forward on the forend to unlock the action. (A small button on the right side of the receiver also unlocks the action.)

During live fire, this was not a problem. The action has a single operating bar. The Winchester 97 was much lauded in its day, but in the final analysis isn't as smooth as the twin-bar modern Remington 870—no surprises there. But that isn't the whole story.

I took the Winchester to the range with a good mix of 12-gauge shells. I loaded Fiocchi 12-gauge reduced-recoil buckshot for heavy load use.

I began with Fiocchi's birdshot loads. Sure enough, the old gun points well and is balanced well. The stock and trigger guard have a different feel than modern shotguns, but work well in practice. The shotgun was unloaded at tactical targets and gave a good accounting of itself.

LAW ENFORCEMENT FLASHBACK

Next I tested the "slam fire" feature. I have seen shotguns fired pretty quickly and remember once seeing a shotgun



Above: Author put two shells in the air at the same time while shucking the action with the trigger held down.

Right: Fiocchi reduced-recoil buckshot gave excellent results.

Below: Winchester 97, here in full recoil, has a good natural point.





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that sounded like a machine gun.

When a number of officers answered a call to a domestic dispute, the victim had been kicked out of the home and escaped. The suspect was armed with a Mauser rifle and began firing out the window. This was a savvy individual who had hung wet towels in the home's hallway in anticipation of tear-gas grenades. He fired at least 20 shots during the standoff and never drew blood. He fired into a dirt berm, a utility pole and the road, but did not strike a patrol car.

First responders ducked for cover at the first crack of a high-powered rifle. The subject fired from at least two different firing positions. A sergeant ran across the line of fire and emptied a shotgun into two window frames and the front door for good measure. Six shots were fired in the space of a few seconds, and the subject ducked—as well he should.

(I know, no visible target, but we were being fired at by an 8mm rifle that would have cut through any of the 1970s Detroit steel in the parking lot, and we knew that no one save the perpetrator was in the house.)

The sergeant then took cover and reloaded. The agency fired perhaps 100 rounds into the house (with .38s and .357s) and did not connect, firing each time we were fired upon, while no one in the Thin Blue Line was injured. The subject surrendered. I think he ran out of ammunition and got tired of the tear gas.

As such things often do, that display of competence with the shotgun impressed me. This remains the only example of covering fire in my experience.

BACK AT THE RANGE

I tried first with birdshot, and kept the butt of the Model 97 in my shoulder and leaned into the stock in the proven fash-

ion. Keeping my finger on the trigger, I found I could keep most of the birdshot on the target at seven yards. But moving the 97 to just under the arm, firing results were interesting.

Beginning with the bead on the front center of the target, I could fill the target with shot at seven yards and sometimes have two shells in the air at the same time. That is working that trombone action!

After this acclimatization period with birdshot, I loaded the Focchi buckshot loads. Results were much the same. The Winchester 97 doesn't kick more or less than any other shotgun and is a tad heavier than some. While conservation of ammunition is good, the 97 will lay down buckshot like no other shotgun in my experience.

One note: the Winchester 97 doesn't have a butt pad. I fired three full-power buckshot loads from the shoulder, and the experience was not pleasant. Despite the way-cool look of the original buttplate, the shotgun needs a recoil pad for practical use with standard loads.

More advanced shotguns with rifle sights and AR-15 stocks exist. For home defense and as a truck gun, the Winchester 97 will do what it once did. This shotgun has a good natural point, handles quickly, and there is little to go wrong. And if you really need a double tap with a shotgun, nothing delivers like the Winchester Model 97. ◎

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

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GSV00

“Enforce Existing Gun Laws” — Hell No!

FOR years, the NRA and some other pro-rights advocates have argued against the enactment of new gun laws by asserting instead that all that is needed is to “enforce the laws on the books.” NRA Executive Vice President Wayne LaPierre has claimed that, “Under the existing federal gun laws, [President Obama] could take every felon with a gun, drug dealer with a gun and criminal gangbanger with a gun off the streets tomorrow and lock them up for five years or more. But he won’t do it, his Justice Department won’t do it, and the media never asks why.”

And sure, I can hear the siren song in the idea of dramatically reduced “gun crime,” without any more gun laws. But that approach has serious problems, one of which is that such arguments so smoothly pave the way for the claim that in order to “enforce the laws on the books,” the Bureau of Alcohol, Tobacco, Firearms and Explosives must be allowed to operate even *more* heavy-handedly, with even *less* oversight, than is the case now.

United States Representative Donald S. Beyer, Jr. (D-VA), like other gun-hating Democrats in Congress, knows that very well. This led him to introduce in Congress the “ATF Enforcement Act” in April. Calling it “hypocrisy” on the part of gun-rights advocacy organizations and pro-rights lawmakers to call for “enforcing existing gun laws” while simultaneously (according to Beyer and other gun-ban zealots) hobbling the BATFE’s ability to do so effectively, Beyer wants to “call their bluff,” as he puts it.

His bill would repeal a measure, in place since 2004, blocking frivolous use of gun trace data for such purposes as revoking state licenses for gun dealers (in states that require licensing above and beyond the federal license) and for predatory lawsuits against the gun industry.

This has been a favorite target of the forcible citizen disarmament lobby for a long time, despite the fact that the BATFE itself, along with the Fraternal Order of Police, have advocated keeping that measure in place, because releasing that data to the public could endanger active investigations.

Beyer’s bill would also repeal the requirement for Senate confirmation of the BATFE’s director, thus allowing the executive branch to unilaterally place the enforcement of federal gun law in whomever’s hands it pleases.

And the problems with the “enforce existing gun laws” mantra go deeper than that. For example, what about the “existing gun laws” that are draconian in their restrictiveness, laughably ineffective for their ostensible purpose of reducing “gun violence,” and blatantly unconstitutional (and when the right of the people to keep and bear arms is one that, according to the highest law of the land, *shall not be infringed*, what gun law is *not* blatantly unconstitutional)?

Those who advocate “enforcing existing gun laws” are, whether they are willing to admit it or not, actively rejecting

the Second Amendment’s “shall not be infringed.” They are tacitly allowing that yes, *some* infringement is not only acceptable, but also desirable.

They might ask, “Who could object to keeping guns from violent felons?” Well, for starters, anyone who believes that no one deemed so untrustworthy as to be too dangerous to own a gun can responsibly be permitted to run free in society, able to acquire guns illegally or wreak his carnage by some means other than a firearm. As gun-rights advocate David Codrea has long contended, “Anyone who can’t be trusted with a gun can’t be trusted without a custodian.”

But the problem with the “enforce existing gun laws” approach is even deeper and more fundamental than that. Gun-rights advocates own the moral, intellectual, and Constitutional high ground in this debate. We surrender that high ground when we argue that the “existing gun laws” are acceptable, but any new ones are anathema.

How does that even work? Is the test of a gun law’s acceptability based not on how the law interacts with the Constitution and the rights of the people, or even on how effectively it serves the stated purpose of reducing criminal violence, but on *when* it was enacted? If the law was “on the books” at the time the NRA and others demand that we enforce all such laws, the enactment date would certainly *seem* to be the determining factor.

So the outright ban on private ownership of fully automatic firearms manufactured or imported after 1986 is acceptable? Must be. It was, after all, “on the books” in American federal law when the NRA demanded the vigorous enforcement of such laws.

How about the draconian regulation of sound suppressors for firearms—*safety equipment*, to protect the hearing of shooters and others nearby? I guess we’re supposed to believe that’s fine too. Not a bad strategy for those who wish to defend “existing gun laws.” If I were making such arguments, I’d want gun owners to be too hard of hearing to catch it too.

Well, sorry, I’m not getting on board that train.

What is needed is not the enforcement of every infringement of that which shall not be infringed, as long as said infringement is old enough to have been “grandfathered in” by the NRA, but the *repeal* of these abominations.

We don’t need to empower the BATFE to trample our rights even more roughshod than that agency does already. We need to leave it with no laws to enforce. ☺

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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Even the most above-board, clean shootings can be subjected to the court system. There is, of course, the possibility of criminal action if the application of force is found to be of a criminal nature. There is the more pervasive reality of a wrongful death/use of force lawsuit, which does not entail criminal action but rather the wrongful and negligent application of force.

Many of these are adjudicated within the Federal Courts, and they are far from an insignificant matter. They can literally be life-altering events if attention to detail is not carried out.

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Above: A coalition special operations service member fires his sniper rifle from a hilltop during a firefight near Nawa Garay village in the Kajran district of Afghanistan's Daykundi province, April 3, 2012. U.S. Navy photo by Petty Officer 2nd Class Jacob Dillon.



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tial treatment when brought before the bench. Those who might bring such actions against you are skilled, knowledgeable, and very adept at exploiting weaknesses and failures to pay attention to detail when the dust has settled. They will employ individuals who have worked in the same profession as you and they will be more than familiar with the protocols and systems in place when the issue of accountability is brought up.

Shootings can be traumatic. Forces brought into play may never have been experienced before, especially the elevated levels that are involved in life-and-death situations. Visual and auditory perceptions and accurate timelines can be distorted.

This is not necessarily nefarious on behalf of the participants, but rather reflects the manner in which the human body processes information when subjected to adrenaline and rapid time compressions in conjunction with sensory distortions and misperceptions.

As trained professionals, one will be expected to have sufficient training and knowledge to accurately relate the events involved. Individuals not so well trained will also be held to answer but perhaps, just perhaps, not to the degree of accuracy expected of trained law enforcement officials.

A very good ground rule is not to disturb evidence on scene unless absolutely necessary. In one case I worked on, the subject had expired and the weapon was removed and placed in a secure location.

The opposition seized on this opportunity to plant the seed in the jury's mind that the evidence had been planted by the officers and in fact that the subject was never armed in the first place and therefore the shooting was entirely unjustified. Allowing the evidence to remain in place on scene would have entirely disallowed this tactic from the outset.

Keep a clear head after a shooting, secure the scene, and give an honest and thorough account of your actions. ☺

Scott Reitz is a 30-year veteran of the Los Angeles Police Department and 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 itts@gte.net.

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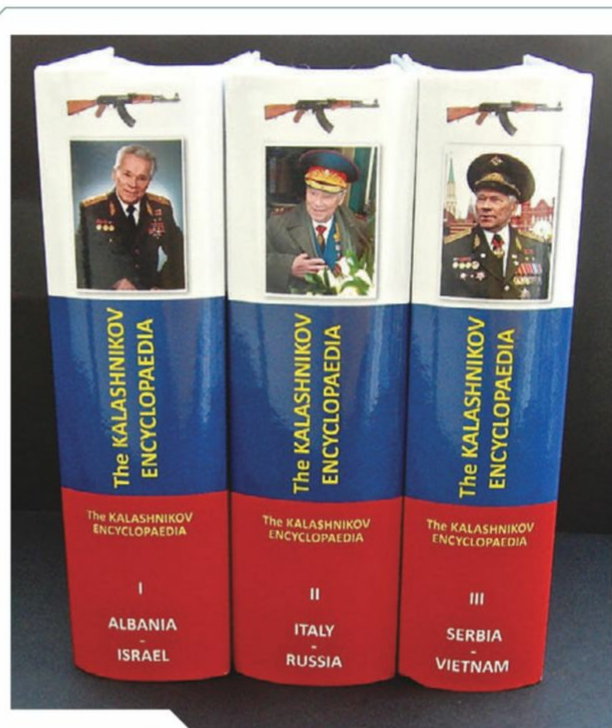
The Kalashnikov Encyclopaedia

I try to maintain a good reference library related to firearms, both because I find the history and technology interesting and because I write articles and books on firearms. I have a couple of good books on the AK-47 and its brethren, but they are nowhere near as definitive as *The Kalashnikov Encyclopaedia*.

Compiled by Cor Roodhorst, it covers everything you might want to know about Kalashnikov firearms. I found numerous things I didn't know before I read it. Its 3,860 pages contain detailed information, development history, excellent exploded views, about 5,700 photos, appendices, and more. The three-volume set is very user friendly. It is organized by country, which allows the reader to quickly go to models of special interest.

For example, I went first to Russia and read about the AKSU, as this is a special favorite of mine. I've shot the AKSU quite a bit, but this work has now whetted my appetite for the PP-19-01 "Vityaz" SMG, which looks like an AKSU but is chambered for the 9x19mm round. The various suppressed SMGs and rifles designed for Russian special ops troops get coverage as well.

It also has an extensive section on the Dragunov—



The Kalashnikov Encyclopaedia is a three-volume set covering all aspects of Kalashnikov weapons.



A section on the various parts kits that have been built into semi-auto rifles using U.S. receivers is included in the encyclopedia.

another weapon in which I am quite interested. The latest version of the SVD and their latest optics are well illustrated and described. Included are some I didn't know exist.

I've also spent time in the Finnish section reading about the Valmetts that owe so much to the AK. I've had my copy for almost four weeks and each time I open it to glance at it, I lose track of time, as I keep perusing "just one more section."

This morning was a perfect example of how engrossing this work is. I went out into the backyard to play with my Airedale. I also took along Vol. III of the *Encyclopaedia* and drifted into the Swiss section. There was great info about the 550/Stgw 90, my favorite assault rifle, which owes a lot to the Kalashnikov design. My dog got mad because I kept turning the pages rather than throwing the ball.

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I haven't turned to the Chinese section yet, as that alone will kill quite a few hours. A lot of aspects of the Kalashnikov that don't normally receive extensive coverage get it here. For example, there is a really good section on Saiga shotguns, which are quite popular in the U.S. And speaking of the U.S., one section covers the various parts kits that have been built into semi-auto rifles using U.S. receivers.

Another section I look forward to reading is about the various AK-based sporting rifles. One of my Russian contacts regaled me with stories of hunting bear in Siberia with a Kalashnikov sporting rifle chambered in 7.62x54R. I've been interested in them ever since, though I still don't know much about them. In a year or two, I may make it to that section of the *Encyclopaedia*.

If I count correctly, 51 countries are covered as they relate to Kalashnikov weapons and their derivatives. Former Warsaw Pact/ComBloc countries are of course covered in detail, but so are many countries that never basked in the light of the red star. A real boon in reading about the diverse weapons is that the work is well cross-referenced, an aid to following Kalashnikov evolution.

For those who want Kalashnikov history, it is there in abundance, including a section on the development of the early prototypes and their evolution into the early production models. There are also sections on the 5.45x39mm AK-based weapons.

There is so much information that you have to choose whether to dip in at random as something strikes your interest, or to start at the beginning of the *Encyclopaedia* and read it through.

I've been dipping and will follow my normal procedure with firearms reference books, reading sections when they apply to something about which I'm writing. I'd like to start at the beginning and read all 3,860 pages, but I have a book deadline and quite a few articles on assignment. As soon as deadlines permit, I'll start at the beginning and work my way through the *Encyclopaedia*. It certainly will not bore me.

If I sound enthusiastic about this work, I am. I have already talked it up to friends in the special ops community, weapons development, and ordinance intelligence and analysis. Now I'm talking it up to *S.W.A.T.* readers, whom I consider among the more so-

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About 5,700 photos complement the text.

phisticated readers of gun magazines.

Although *The Kalashnikov Encyclopaedia* is published in Europe, it is in idiomatic English. We have no problem reading it here. Depending on the exchange rate of the Euro on the day you order, with shipping it will probably run around \$275 to \$290 total for the three volumes.

I honestly think that's a very fair price—actually a bargain—given the quality of the book. When I say quality, I don't mean just the information. This is a well-printed book on quality paper with excellent photos.

For more information, go to www.kalashnikov-encyclopaedia.com ©

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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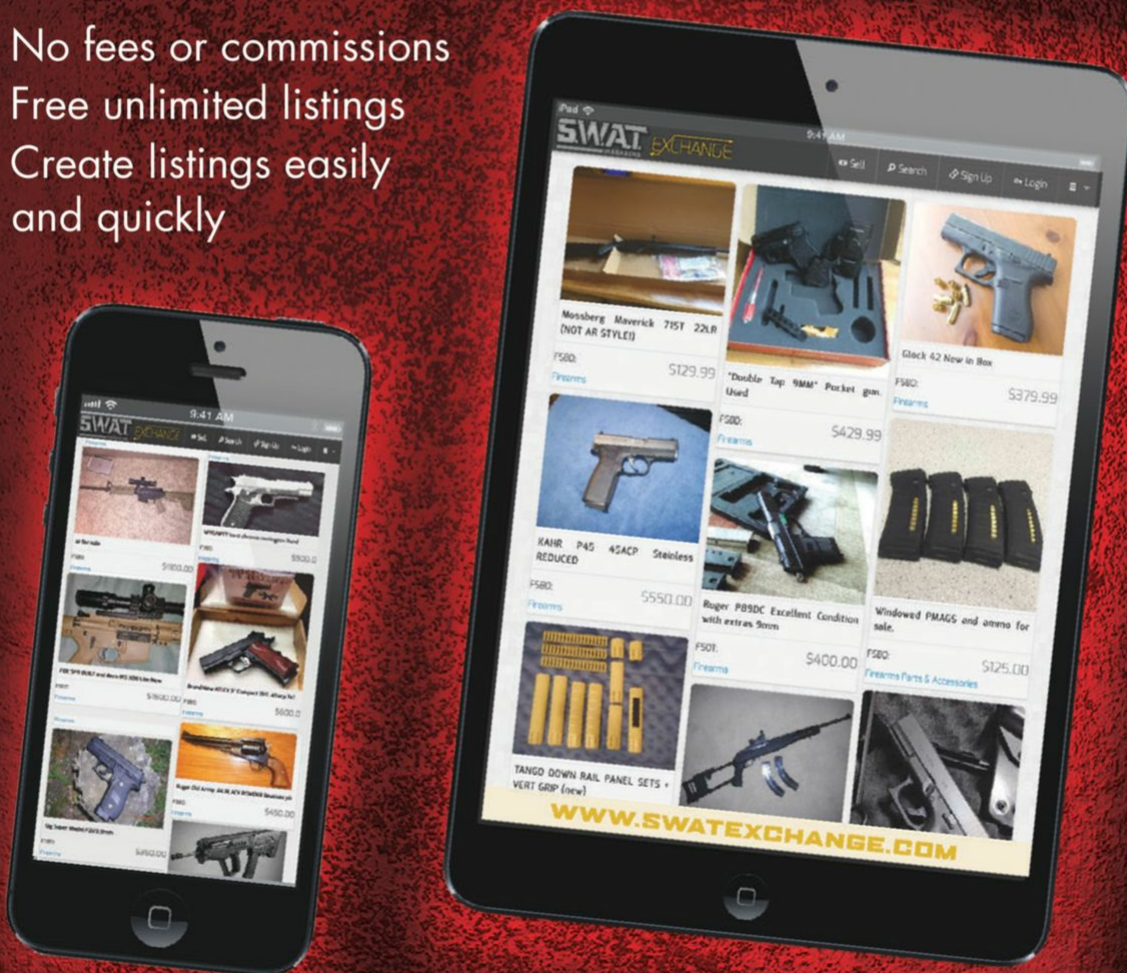


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HARD-HITTING

PRECISION



SIG Sauer 716 Designated Marksman Rifle

BY TODD BURGREN

PHOTOS BY RON ELDRIDGE, SIG SAUER

Labels are important in setting our expectations for a firearm. In U.S. military parlance, DMR stands for Designated Marksman Rifle. We will confine our discussion of DMR concepts and patterns to the U.S. experience.

The default chambering of the DMR is .308 Winchester/7.62x51mm NATO. The DMR originated to fill the effectiveness gap between infantry assault rifles and sniper/precision rifles. This middle ground is roughly between 270 to 550 yards. The DMR is closer to a precision rifle in terms of terminal ballistics, adjustable buttstock, match trigger, match barrel, accuracy standard, magnified optics, and accessories to facilitate long-range shot placement.



SIG Sauer 716

HARD-HITTING [PRECISION]



Above: SIG 716 DMR was also evaluated with Yankee Hill Machine Phantom suppressor.

Below: In addition to prone, SIG 716 DMR was tested in various field-expedient positions at Echo Valley Training Center.





Compared to the traditional bolt-action sniper rifle, the DMR is typically semiautomatic with detachable magazine capacity of 20 rounds or more. The M14 was the initial military DMR due to it already being in the logistic system and thus easy to adapt.

Most would concede that an AR-10-type platform is a better candidate in the DMR role thanks to inherent accuracy potential and other factors. This is borne out by the appearance of the M110 in the U.S. military arsenal.

Frankly, accuracy potential of a quality AR-10-type weapon is often on par with a bolt action, meaning each is limited only by the capability of the cartridge, not by the platform used. The fact that accuracy is not sacrificed means decision-making is even simpler when choosing a precision .308 AR.

The DMR has come into its own within the military and expanded rapidly into law enforcement use, due to a variety of reasons such as

DMR accuracy, situations more suited to higher capacity magazines, and need for better penetration than typical 5.56mm rifles.

Not to be discounted is the ability to have the power of the .308 in a high-capacity AR platform if unsuspectingly engaged in a close melee with a need for multiple rounds sent downrange quickly. In terms of ballistics and terminal effect, the potency of the .308 makes it a favorite among our troops, law enforcement personnel, and security-conscious private citizens.

The case can be made that DMR rifles have expanded beyond their originally envisioned supporting role and become a prime weapon of choice in their own right. The SIG Sauer (SIG) 716 DMR is a case in point of how far DMR rifles have evolved.

SIG 716 DMR

The SIG 716 DMR spawned out of the earlier introduced SIG 716 Patrol and includes several changes from the 716 Patrol, as would be expected in a rifle designed more with accuracy in mind.

For example, no muzzle device is included. Instead, the muzzle has 5/8x24 threads and is supplied with a protective screw-on knurled collar. The idea behind this is to make the gun ready for whatever muzzle device the owner wants to install. The 18-inch 1:10 twist, free-floated cold-hammer-forged match-grade heavy barrel is made of chrome-moly vanadium steel. All these are proven recipe ingredients for an accurate barrel.

The SIG 716 DMR has a top Picatinny rail running from the front of the handguard to the rear of the upper receiver. Front and rear flip-up sights are included. The handguard has rails at the three, six and nine o'clock positions along with quick-detach (QD) sling swivel sockets on the left and right sides of the rail. QD sling swivel sockets are also at the rear of the lower receiver.

The SIG 716 DMR weighs in at 12 pounds before adding optics and ammunition. Overall length is just under 39 inches.

Its upper and lower receivers are made of 7075-T6 aluminum that has been hard-coat anodized black. To keep the interface between the upper and lower receivers nice and snug in order to enhance

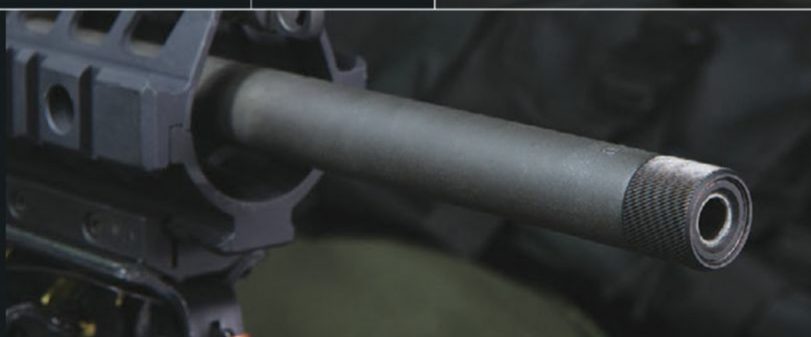
HARD-HITTING [PRECISION]



Left: Left side of 716 DMR shows ambidextrous magazine release and sockets for stud-type sling swivels on lower receiver and handguard.

Below: Extension running under full-length top rail allows easy access to gas valve.

Below, inset: Barrel is threaded to allow muzzle device or suppressor chosen by the owner, and comes with cap to protect threads.



Right side of rifle has sockets for stud-type sling swivels for right- or left-handed users.



accuracy, SIG uses a spring-loaded plunger at the rear of the lower receiver. This plunger imparts pressure on the upper when the gun is assembled.

The upper receiver has a forward assist. The charging handle is enlarged to facilitate easier manual cycling, which is stout with the .308 AR rifles.

The rifle features an ambidextrous magazine release, and the magazine well is beveled to aid in smooth magazine insertions. Two Magpul PMAG 20 LR/SR magazines arrive with the SIG 716 DMR. The Magpul PMAG 20 has become the industry standard for AR-10 type rifles.

Other Magpul support is found on the 716 DMR in the form of a MIAD pistol grip. It features three interchangeable back straps and two different front straps that let the shooter customize it to suit their hand size and preference for finger grooves. A Magpul PRS buttstock provides adjustable shooter interface with the SIG 716 DMR, allowing length of pull and cheek height to be customized.

SIG Sauer fully understands the importance of an excellent trigger for accuracy results. A Geissele SSA match trigger is installed in the 716 DMR. This is a two-stage style trigger breaking at six pounds.

(UNFOUNDED) ACCURACY CONCERNS

The 716 DMR is a short-stroke piston-driven AR platform, an important distinction separating it from many other precision AR-10-type rifles that are direct impingement.

Being piston driven, the SIG 716 DMR may raise the eyebrows of readers who mistakenly subscribe to the mantra that direct impingement AR rifles are more accurate than piston designs. The potential loss of accuracy associated with piston-driven ARs versus direct impingement would be a concern for any rifle intended for long-range precision work.

But on the plus side, piston-driven rifles are thought by some to be more reliable, especially with suppressor use. Rest assured that SIG solved the accuracy riddle with the 716 DMR after over three years of development.

Understandably, SIG Sauer is not eager to share full details of its proprietary hard work figuring out the details enabling such a high degree of accuracy



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HARD-HITTING [PRECISION]

with the 716 DMR. A factory test target arrived with the SIG 716 DMR showing a .6-inch five-round group at 100 meters. Test targets showing similar or even better accuracy have been reported involving other SIG 716 DMR rifles.

OPERATING SYSTEM

The short-stroke push-rod operating system with adjustable gas valve is the heart of the SIG 716 DMR. The SIG 716's four-position gas setting ensures a user can adjust to changing environmental conditions, not to mention better employing a suppressor. Settings are:

- #1 normal: gas valve straight vertically
- #2 adverse: right of vertical viewing the rifle from the front
- #3 suppressor use: left of vertical
- #4 gas off: horizontal by turning farther to the left

The #4 setting totally cuts off gas from the action and maximizes suppressor efficiency by not allowing the action to cycle.

The SIG 716 DMR has an extension running under the rail out to the front to enable access to the gas valve. I am sure placement of the gas port was a key part of the accuracy equation that SIG worked on during development of the 716 DMR, with SIG not wanting to sacrifice usable rail length to accommodate valve placement.

OPTICS

In an effort to fully evaluate the SIG 716 DMR, the recently introduced SIG TANGO6 3-18x44mm optic was mounted. The TANGO6 offers a 3X power setting for quick target acquisition at closer range, and 18X for shots at long range.

The SIG Sauer TANGO6 is loaded with high-end features such as adjustable illuminated MOA reticle, extra-low dispersion glass combined with high transmittance glass for outstanding light transmission and clarity, along with reset-

table lockable and zero stop turrets. SIG Sauer offers various power ranges and options in the TANGO6 model lineup, such as different reticle styles, MRAD or MOA turret adjustments, first or second focal plane, and more.

While certainly not svelte handling at 14-plus pounds with optic mounted and loaded 20-round magazine, the SIG 716 DMR was more than manageable in terms of handling.

RANGE EVALUATION

The evaluation at Echo Valley Training Center (EVTC) commenced with sighting in, then moving to 100-yard accuracy tests with Winchester 168-grain Match, Hornady 168-grain TAP, Federal 168-grain Match, Black Hills Ammunition 168- and 175-grain Match, and Black Hills 180-grain Nosler Accubond.

No ammunition tested produced greater than one-inch groups at 100 yards—an impressive feat in its own right. But Federal Match produced 5/8-inch accuracy and Hornady TAP surpassed that with a couple sub 1/2-inch groups! Many custom precision bolt-action rifles do not have this type of accuracy, let alone a factory-produced semiautomatic AR.

After the strong 100-yard accuracy performance, the 300- and 550-yard tests were eagerly anticipated. In conjunction with individual training bays, EVTC features a multi-stepped target berm strewn with reactive steel targets and fluid-drained cars at ranges from 150 out to 350 yards. EVTC is further enhanced by the existence of prepared firing positions. This allows for realistic prone and “dug-in” trench-style firing points.

Firing the SIG 716 DMR from the prone position produced consistent hits at 300 yards on TacStrike 1/4-scale steel targets. Firing at paper targets produced 2.25- to 3.5-inch groups at 300 yards depending on the load used.

EVTC Range #5 permits up to 550-yard target engagements. The sub-MOA accuracy exhibited at 100 yards proved inval-



To fully evaluate SIG 716 DMR, SIG TANGO6 3-18x44mm optic was mounted. TANGO6 offers 3X power setting for quick target acquisition at closer range, and 18X for precision shots at long range.



Stock is fully adjustable, allowing a good fit for shooters of all statures.



SIG 716 DMR set up as evaluated, with SIG TANGO6 3-18x44mm optic and Harris bipod.

able at extended ranges. As long as I did my job reading wind conditions, the SIG 716 DMR produced solid strikes on the steel targets. At times I'm sure I was the weak link in the rifle, ammunition, optic, shooter performance equation.

The SIG 716 DMR supported by the Harris bipod that comes as part of the package proved more than capable of engaging small steel poppers located inside the EVTC range vehicles located on the 220-yard berm. Some scenarios involved firing through the front wind-shield.

An interesting side note is that Black Hills Ammunition 180-grain Nosler Accubond load is a top consideration for this type of engagement. Thanks to its bonded construction, it is a more reliable performer for barrier penetration compared to Match bullet types.

The SIG 716 DMR proved reliable throughout this evaluation, with over 450 assorted rounds sent downrange. The SIG 716 DMR's 18-inch barrel combined with 168-grain bullets produced velocity in the mid 2,500 feet-per-second (fps) range when tested over an RCBS chronograph.

The 18-inch barrel sacrifices approximately 100 to 120 fps compared to 24-inch tubes. In my opinion, the handiness gained from the shorter barrel outweighs the velocity lost.

TACTICAL PRECISION RIFLE

With the 716 DMR, SIG Sauer has created a precision rifle that is eminently adaptable to modern tactical situations. It's a simple matter to install an ATN PS22 night-vision device on the forend rail in front of the SIG TANGO6 optic. The entire PS22 concept is based on wanting to give the user the convenience of using their day optic at night without having to switch out aiming devices or dedicating a weapon solely for use at night.

As mentioned earlier, the SIG 716 DMR is tailor-made for suppressor use. A Yankee Hill Machine Phantom suppressor is right at home on the Phantom flash hider. The combination of night vision with suppressor is extremely effective on such an accurate rifle as the SIG 716 DMR.

Use of EBR or Corbon subsonic ammunition, as appropriate to the situation, would only heighten its capability of nearly silent engagements within 100 yards.

The SIG Sauer 716 DMR is hard to argue against in terms of utility for law enforcement, military personnel, or security-conscious citizens needing a precision rifle while still offering firepower potential due to detachable high-capacity magazines stuffed with .308 Winchester. ◎

SOURCES

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TACTICAL TAILOR COVERT CARRY CASE

To carry the MVP LR, we are including a Covert Carry Case from Tactical Tailor. Designed to be more discreet than conventional weapons cases, the CCC helps you keep a lower profile when transporting your firearms. Constructed of 1000-denier Cordura nylon inside and out, it includes a four-point adjustable retention system that keeps your weapon secure while 3/8 closed cell foam helps protect it. The case also features dual carry handles, a removable shoulder strap, heavy-duty coil zippers, and external pockets with elastic loops to secure four standard magazines.



FROM THE TUNNELS OF GAZA TO THE DESERTS OF NEVADA

IDF-Style Training for U.S. Agencies

BY RICHARD VENOLA

PHOTOS BY TIM YAN

Everyone in law enforcement knows that active-shooter tactics changed dramatically after the Columbine High School shootings of 1999. Less well known is how lessons learned during 2009's tunnel fighting under Gaza forced Israelis to adapt. A special unit was established to study fighting in the sprawling labyrinth of newly constructed tunnels under the notorious Gaza Strip.

As Jihadis continue to build and fight from literally thousands of smuggling and tactical tunnels, these operations continue, with Operation Pillar of Defense and Protective Edge in 2014 and frequent small, unreported fights even as this is written.

Fighting in confined darkness against an enemy of unknown numbers and skill levels—on their turf—demanded a complete re-evaluation of all existing techniques. The specter of hidden panels concealing squads hoping to be bypassed, the physical effects of fighting underground, the difficulty of engaging the





Instruction was given on how to shoot safely while moving through fleeing civilians.

enemy with fleeing civilians blocking fields of fire, and the absolute necessity for violently aggressive action were all addressed.

One member of this Desert Commando subunit, Ivgi (last name deleted for publication), has come to the U.S. and teamed up with a Marine, Riley Hunt, who had taken his course in Israel. Both men are now reservists, and together they have formed Agoge Corporate Services, named after the warrior school of ancient Sparta.

AGOGE CORPORATE SERVICES

Agoge offers training to American law enforcement agencies and civilian contractors. It's small, the classes are easily digestible, and the instruction is devoid of formal presentation. Agoge accepts classes of six to 12 students only. This maximizes teacher-student time, and Ivgi's fast-moving, hands-on approach is especially tailored to smaller agencies—those that don't have the facilities or budgets for more set-piece school scenarios but want first-rate training in state-of-the-art techniques.

Ivgi is quick to point out that Agoge training is not lifted straight out of the Israeli textbook, but rather is a blend of

U.S. and Israeli techniques tailored to law enforcement as well as military requirements.

TRAINING DAY

Late fall 2015. I arrived just after dawn at the Silver State Range across from the ghost town of Rhyolite and west of the remote town of Beatty, Nevada. It was Saturday and snowing with an inch on the ground.

Riley Hunt and Ivgi were already there, assembling barriers, doors and targets. "We can't put them up the day before, as it's a public range. Local shooters will use the targets or local tweekers will take everything standing," Hunt said.

Gun-writing photographer Tim Yan, a former Devil Dog, combat vet of Somalia, and our nation's foremost authority on Chinese small arms, showed up to help with his camera.

The sky cleared and the sun quickly melted the snow as a convoy of assorted Sheriff's Department vehicles, including a classic vintage SWAT vehicle, pulled in. Uniformed deputies dismounted and suited up.

Team Leader Sgt. James McRae conferred with Ivgi and Hunt, and the range safety officer, "Hollywood" Fancher, was identified. Following Fancher's safety brief, a line was formed for position drills. Keeping balance is extremely important when fighting in complete

Agoge lead instructor Ivgi was part of study group that improved tunnel-fighting tactics. He also worked in Tanzania training park rangers to fight poachers. Ivgi now lives in the U.S. but remains in IDF reserves.



Deputy is walked through dry drill. Agoge accepts classes of between six and a dozen for optimal student/instructor ratio.

darkness. If a comrade stumbles into you when you're engaged, you have to shuffle-step to stay upright—without coming out of battery. A distant explosion can knock you over if you're not constantly alert and able to shuffle backward.

Ivgi demonstrated a technique for pivoting in the kneeling position that had everyone scratching their heads, thinking, "Damn, that makes sense. Why didn't I think of that?" Then he showed how one assaulter in the kneeling could pivot around another in the off-hand position so they effectively cover each other's backs. In this manner, two men can occupy almost as little corridor space as one, and pivot to cover a passageway junction.

Ivgi rapidly drove the deputies using the classic military "explanation, demonstration, application" system, but with heavy emphasis on demonstration and application. The burly Israeli's speed of instruction kept all deputies

focused and enthusiastic. Riley answered questions for deputies when Ivgi's English, although excellent, hit an obstacle.

DRILLS

Drills focused on shooting five-shot series. "The first shot is aimed, the other four are fired using your body rhythm." Several deputies were visibly skeptical. Ivgi quickly selected a deputy and went one-on-one instructor mode to prove that shooting at exact intervals between shots produces very impressive groups but maintains enough practical dispersal to share hate throughout the variety meat section of the perp's torso.

Deputies conducted dry-fire drills, with Ivgi occasionally slapping muzzles to remind shooters to keep the rifle firmly in the shoulder. Then deputies went live on ten-yard targets.

During the sustained four-hour class, no break time was declared. The

class members were fully engaged in the half-day training evolution and made head calls in between drills and loading magazines.

Instruction was given on how to move through fleeing civilians and how to shoot safely while doing so. Then officers did dry drills. There is no litigation-proof safe way to practice this with live ammo.

The final drills were of entering and clearing rooms occupied by obstacles and bad guys. Everything centered on speed of action. Cursory checks and lightning reflexes, moving through as quickly as possible so as not to allow the fleeing enemy a chance to collect their wits or take up a concealed or protected firing position.

In the tunnels of Gaza, Israeli infantry often found out the hard way that downed combatants would lie there until the assaulting unit had passed over them, then attack from the rear or disappear into a concealed side tunnel

WHO IS AGOGE?

This young company has existed since early 2014, the creation of two veterans who met by chance in 2007. Riley Hunt, 30, grew up in tiny Beatty, Nevada. Joining the Marine Corps Reserve right out of high school, he deployed overseas several times, including Iraq in 2009. He met Ivgi when he attended an Israeli school. Hunt is currently a Staff Sergeant with Fox 2/23.

On the civilian side, Hunt continues to serve his community as a Nevada State trooper, being sworn in in 2008. Among his yearly challenges is monitoring the sometimes-alarming driving habits of the large community of foreign automotive technicians, as a score or more car companies populate the town of Beatty for summer hot-weather testing. Agoge is a sideline for Hunt. He functions as the front man and ombudsman.

Ivgi, 30, immigrated to Las Vegas and is working full-time to make Agoge into a go-to tactical training outfit for lawmen and civilian contractors, offering aggressive training for active-shooter situations and other tactical specialties.

Ivgi was conscripted into the Israel Defense Forces at 18 and later commissioned as a Desert Commando. He completed numerous schools, trained with international elite units, and has seen action in every conflict since 2004, including Operation Protective Edge in 2014.

This was Israel's campaign to destroy the elaborate tunnel network used by Jihadis who were launching rockets into Israel, and it successfully resulted in the destruction of 34 tunnels. Ivgi remains in the IDF reserves with the billet of platoon commander.



Agoge lead instructor Ivgi was part of an Israeli unit that analyzed tunnel fighting under Gaza and made significant improvements. He demonstrates a technique for rotating while remaining in kneeling position.



Balance and weapon retention are key ingredients in maintaining combat advantage in confined fighting quarters. Deputy's rifle stock location is adjusted during dry drills.



to escape and fight another day.

One big subject not taught is the use of anchoring shots. It's simply not done in America. You only yell "Clear!" when the threat is down and secured away from weapons. After the subject is secured, EMTs can be brought up or the secured perp transported to medical care. This may be a weak point when involved in an active-shooter situation and may at some future time be remedied by less-lethal technology.

PERSONAL INSTRUCTION

Throughout the training day, Ivgi would connect with individual deputies, coaching them on small techniques to decrease reaction time. Israelis practice using a stutter-step in all movements, to avoid tripping on uncertain footing. Ivgi explained, "One foot chases the other."

One issue discussed was the importance of speed and fire over precision and position. As Ivgi put it, "You can face a new direction and position your feet."

» Continued on page 89

Left: Agoge teaches aggressive tactics in dealing with uncertain enemies in uncertain terrain. Violent, continuous action is key. Team leader Sgt. James McRae goes into action with vintage MP5 sporting a J.R. Custom can.

Variety of ARs was impressive, with different barrel lengths, weights and twists. This one includes an Aimpoint CompM4 and SureFire light.



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Hit the Bullseye with **BULLSEYE**

Classic Loads from a Classic Powder

BY ETHAN JOHNS

Bullseye is one of the oldest smokeless pistol powders and still one of the most popular. Since it hit the market 103 years ago, it has been a staple for most handloaders and the backbone of most “accuracy” loads in the popular calibers. In my area, Bullseye is one of the first powders to disappear from shelves, lasting about a heartbeat longer than an econo bulk box of .22 Long Rifle ammunition.

When I finally took the plunge and started handloading (*FIRST SHOTS WITH HANDLOADING: How Hard Can It Be?* September 2015 S.W.A.T.), I very much wanted to start with some tried-and-true Bullseye loads, but it took an epic scavenger hunt across many months to find a canister of the elusive classic.

As I researched loads in the meantime, I kept seeing the same several popping up again and again in sources from as recent as yesterday to long out of print books from when air travel was a newfangled wonder.



Bullseye is the classic pistol powder and the backbone of many pet loads. We look at three classics: one each in .45 ACP, .38 Special, and 9mm.



Classics go well together: circa 1909 S&W .38 Special and traditional 148-grain wadcutter load of 2.7 grains of Bullseye.

When I finally got my hands on a pound of Bullseye, I naturally started with some of these loads. Three in particular proved as good as their long-standing reputations would indicate. These were one each in .45 ACP, .38 Special, and 9mm.

THE WADCUTTER LOAD

No matter where you look, the first mention in classic loads for the .38 Special is a 148-grain wadcutter over 2.7 grains of Bullseye. Through the heyday of bullseye shooting over the various match courses of fire, there was probably a Mount Rushmore-sized mountain of powder loaded and combusted 2.7 grains at a time.

This load tends to clock about 670 feet-per-second (fps) give or take 20, depending on the exact brand of wad-

cutter and the revolver it's fired in. Recoil is mild enough that for many years it was the golden choice for the next introductory step for young or new shooters after rimfire.

As a young man, I came into a couple of cases of hand-me-down factory mid-range wadcutters. Initially I shot them out of my Dad's prized Smith & Wesson 686 and learned a great deal about double-action shooting and what a truly accurate handgun can do with a wadcutter.

I soon traded off a Colt Frontier Scout .22 LR for an S&W Model 15 and happily chased all manner of small game and landfill targets with my stash of wadcutters. That blunt-ended bullet cut a clean hole all the way through whatever its modest velocity allowed it to penetrate. It is also one of the most pleasurable

loads a shooter can touch off.

When I finally nabbed my own canisters of Bullseye, the first load I spun up was 2.7 grains under Hornady's hollow-base wadcutters. In half a dozen different sixguns, it ranged from accurate to spectacular.

In a 1909 vintage Smith & Wesson target .38, the 2.7-grain load cut a nearly one-inch cluster, showing that classics go well together. In several of the guns, the old standby couldn't quite duplicate the level of precision they exhibit with current production wadcutters from Black Hills or Winchester, but in each case, the load shot close to or right on the sights and nearly held the X ring.

My best group was .9 inch out of a Model 15. It's worth mentioning that loaders do all kinds of obsessive rituals to squeeze the groups down. I simply

took mixed brass and ran 'em through the Hornady Lock-N-Load® AP press with the bare minimum preparation.

The mild recoil of the mid-range load is a perfect mate to the .38s that most shooters own these days—the air-weight J-Frame or equivalent. Where many shooters quickly tire of even standard-pressure .38 in the little five-shooters, the wadcutter invites cylinder after cylinder of practice. This is good, because the snub takes a lot of practice to have a consistent capability.

.45 "SOFTBALL"

To many shooters, .45 ACP means 230-grain "hardball" at 830 fps. That's what the Cavalry Board asked for over a century ago, and that's what we've got. But one classic target load is not far behind the .38 wadcutter in its own reputation with target shooters: a 200-grain semiwadcutter bottling up 4.6 grains of Bullseye. This load chugs downrange at 750 feet each second and functions standard recoil springs with no issue.



Above: This 1911 halved its normal so-so accuracy with 200-grain Hornady C/T SWC, shooting this nice two-inch group.

Below: 148-grain wadcutter brings accuracy that begs the shooter to test their limits. Load cut these cards at five yards out of this Model 15.



Coming in 30 grains lighter and 80 fps slower than hardball, as well as being lead rather than jacketed, the 200/4.6 SWC is amazingly soft. Recoil is the “good” kind that reminds the shooter handguns are serious tools but without eliciting a flinch. It’s the kind of load that will make you fall in love with the 1911 all over again!

After making a healthy pile of brass with this load, I am unlikely to ever be without a few boxes of it on standby. The load is a great learning tool in .45 for beginner and experienced alike. I wish I’d had a commercial version of this load in my ammo allocation when we were tasked with getting classes of students up to special operations standards with the issue custom 1911s.

Many of these men had no real experience with the handgun, and we had but a few weeks to get them up to very high standards that most shooters will never reach. The jump straight to relatively hot GI hardball challenged many students, and failure to meet standards meant being dropped from the course.

The instructors worked magic in many cases, but having a load like this to gradually work shooters onto full-strength loads would have been a great tool.

I have experimented with both of Hornady’s 200-grain semiwadcutters in this load: the more button-nosed SWC and the longer Combat/Target (C/T) version. I favor the appearance of the C/T load and find it slightly easier to grab and orient in the loading process. Both have fed 100% in a variety of pistols and have shot very well.

A circa 1918 Colt gobbled them up, as did several other 1911s that can be particular about bullet profile. Groups with these loads ranged from 1.25 inches to just under two inches at 25 yards across a handful of pistols.

What I have found most remarkable is how well some pistols that typically fling wide groups have clustered the semiwadcutters.

A GI surplus 1911 that puts most loads into dinner-plate sized groups cut 3.8 inches with the classic recipe—which is probably the only time

I’ve gotten excited about an almost four-inch group! The Bullseye powder pushed five into two inches flat for another 1911 that is typically a four-inch gun. An early Les Baer .45 knotted a group of the lead SWCs into a tight 1.3-inch group, while an M&P .45 did 1.25 inches.

I can shoot this load at speeds I can’t normally reach with .45. Times across steel plate racks and many of my standard drills with the 200-grain SWCs rival my best “easy-shooting” 9mm results. Similarly on drills with set times such as firing five shots in five seconds onto a bull at ten yards, the Bullseye load allows a little more time per shot to take advantage of a great 1911 trigger and lets the shooter nearly push shots into the same hole.

This is an easy-shooting load that can cause some power-philes to tusk and comment. True enough that it doesn’t make power factor for Custom Defensive Pistol in IDPA or “major” in USPSA competition. But it’s also worth considering that it’s pushing the same

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Classic loads are economical. Components add up to far less than even generic grade factory ammo.

size and weight projectile at the same velocity as the standard Army revolver load during the Civil War.

I'm not recommending that you carry the Bullseye load, but don't feel as if you are going to tactical purgatory for enjoying this load, either.

9mm

Bullseye is primarily associated with .38 and .45—after all, it says right on the bottle: "Great for .38 Special and .45 Auto target loads." But it is equally at home in high-velocity auto loads.

I've played with several that I like, but the classic in 9mm is 4.4 grains driving a 115-grain jacketed bullet. This load is in the general velocity bracket with most generic or bulk box 115-grain

loads and zings over my chronograph at 1,125 to 1,140 fps from a Glock 17, depending on bullet style. I've tried full metal jacket and the Hornady Action Pistol (HAP) match hollow point in this load, and both ranged from good to great in my nines.

Interestingly, I had pistols that would shoot one well and the other impressively, but have not yet had one pistol do magic with both. For example, a Glock 17 shot the HAP into 1.35 inches and the FMJ into 2.2 inches at 25 yards. I've not had a handgun entirely reject either load, so the recipe seems to be a worthy third alongside the previous .38 and .45.

The 9mm Bullseye load is a good stand-in for either training or match

ammo, with the velocity putting the power factor comfortably over the minimum for action sports without too much extra oomph. I found it to be a nice blend of accuracy, soft recoil, and sure functioning, with enough spice behind it to reliably topple steel targets.

Each of the classic loads is also economical. I estimate that the price for each of the three loads runs between \$7 and \$8 per box of 50. A little shopping around might do better, as would casting the lead bullets. The quality of the loads equals a bargain.

DOWNSIDERS OF BULLSEYE

Any discussion of Bullseye is incomplete without mentioning a few of the downsides. Bullseye is a little smoky, a

CLASSIC BULLSEYE LOADS

CALIBER	BULLET	GRAINS OF BULLSEYE	PRIMER	VELOCITY (fps)	BEST GROUP @ 25 YARDS (inches)	HANDGUN
.38 Special	148-gr. Hornady HBWC	2.7	WSP	670	.9	S&W Model 15
.45 ACP	200-gr. Hornady C/T SWC	4.6	CCI 300	750	1.25	S&W M&P45
9mm	115-gr. Hornady FMJ/HAP	4.4	WSP	1140	1.35	Glock 17 Gen3

lot sooty, and has a distinct odor. I don't mind it at all, though others do and look to similar performing powders that address these things.

I like the smell of Bullseye, don't mind wiping the handguns down after a range day, and the dark soot that accumulates on my support hand when shooting wheelguns in particular just reminds me to wash up.

The more serious concern for some loaders is that the small charges of fast-burning powder take up little room in the case, making it possible to double charge a cartridge and exceed safe pressure. That isn't unique to Bullseye, but is certainly more pronounced with the relatively small charges required. It is less of an issue on a progressive press, but still requires attention.

The upside of the grainage is that the small charges mean more loaded rounds per pound of powder—helpful since Bullseye can take a while to reacquire once the container is empty.

I could knock out a pretty substantial chunk of my shooting needs with only these three loads. They are true classics, and I hope you get as much use out of them! ☺

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



Hornady 115-grain HAPs over 4.4 grains of Bullseye alongside 25-yard timed-fire target. Load shot well out of a variety of service handguns.



Depending on the drill, 200-grain .45s let shooter push faster or use available time to shoot better, with significantly less recoil than hardball.



Wadcutter bullets are tailor made for lightweight snubie practice, allowing shooters to enjoy shooting the pocket guns.

Evaluate your needs and then buy quality blades that meet your requirements.



A CUT ABOVE

Multi-Purpose Survival Blades | BY RICHARD DUARTE

No single piece of gear is more closely associated with survival than the knife. Even under the most difficult circumstances, a good cutting edge serves many purposes and can help accomplish a multitude of necessary life-saving tasks.

While there's no such thing as a perfect blade for all occasions, it's important to fully appreciate that your survival may one day depend on your knife's ability to perform well. When the stakes are this high, the knife you choose to carry must be up to the challenge. In survival situations, there usually are no second chances. Let's take a look at multi-purpose survival blades, and how the choices you make today may affect the outcome of your tomorrow.

MULTI-PURPOSE SURVIVAL BLADE BASICS

While survival knowledge and skills are paramount in just about any situation, there's no denying that having the right tools is a huge advantage. For example, an effective blade is an absolute necessity in a wilderness scenario. But even in an urban environment, a cutting edge can often shift the odds in your favor.

Depending on the circumstances, your survival knife may need to perform a wide range of roles. In those situations, you want a rugged, multi-purpose knife with proven durability and no-nonsense functionality. Here are some of the tasks

you should expect to perform with your survival blade:

- Cutting/slicing
- Chopping
- Batoning
- Prying
- Breaking glass
- Self-defense
- Starting a fire
- Hammering (using pommel end)
- Hunting and field dressing game
- Tool making

While there are many excellent survival blade options, price and quality usually go hand-in-hand. In other words, expect to pay for quality. But yet, paying a lot of money is no guarantee your chosen blade will be well suited for the task at hand, so choose quality blades with multi-purpose capabilities that are designed for the wide spectrum of survival scenarios.

These are some of my favorite multi-purpose blades. For everything from everyday carry (EDC) to full-on survival mode, these blades are all on point. Although their quality, functionality and reliability are all high, the prices are still what many of us would consider reasonable. These are also tools you can expect will endure many years of use and abuse and still continue to perform.

The Brite-Blade TLSK-100 can be considered the multi-tool of survival knives. It combines a number of very useful features in one attractive package.

It starts with a razor-sharp 3.5-inch hand-finished 440 stainless steel, spring-assisted hollow-ground blade. Add two (waterproof) 45-lumen mini-LED lights in white and red. The lights attach to the knife handle with a magnetic base for hands-free illumination and can be removed and used independently. The body of the knife also contains a ferrocium fire starter, seatbelt/cord cutter, wire stripper, line cutter, and carbide-tip window punch.

The Brite-Blade is well suited for use in an urban environment and makes a very good EDC option.

It carries easily and clips securely to the pocket for quick access and deployment.

The Brite-Blade weighs in at 5.35 ounces and measures 5.1 inches closed and 8.6 inches overall. This may seem a bit heavy for an EDC, but with all the features and milspec 6061 aluminum body, it's actually not bad. Considering all the functionality built into this knife, it may save weight over separately carrying a knife, flashlight, fire starter, and more.

The Brite-Blade is available in straight edge or a straight/serrated combo. This is a unique knife/tool packed with useful features in a durable package. This bad boy makes a perfect addition to a bug-out bag, EDC, or get-home bag.

BRITE-STRIKE TACTICAL LIGHTED SURVIVAL KNIFE



Heavy-duty Brite-Blade metal body holds a multitude of accessories, including fire starter, cord/seatbelt cutter, and mini LED light. Plus it has a wickedly sharp blade. Brite-Blade comes with two mini LED lights (one red, one white) and extra pocket clip.

ESEE-6 SURVIVAL KNIFE

The 11.75-inch ESEE-6 survival knife is a serious piece of gear. It's a full-tang fixed-blade beast that is sturdy enough to chop through wood or bone and sharp enough to do more subtle and intricate cutting. The 1095 high-carbon steel holds an edge even after heavy use. The 6.50-inch blade (5.75-inch cutting edge) is 1.56 inches wide and 0.19 inch thick, with a full flat grind.

The removable linen Micarta handles are extremely durable and provide an

iron-clad grip even when wet. The ESEE-6 weighs in at 11.30 ounces and is primarily intended as a wilderness survival knife, but also lends itself nicely to heavy-duty use in an urban environment.

ESEE Knives has a no-questions-asked lifetime transferable warranty that is among the best in the industry. According to ESEE, if you break it, they will replace it. I would not hesitate to bring this knife with me into any survival situation.



ESEE-6 is not only a substantial and practical knife, but it's also well-made and attractive. This model features a plain cutting edge and false upper edge.



ESEE Izula-II is a lot of knife in a small package. It can be used as a neck knife or attached to a belt or pack with the available clip. When wearing a neck knife, always use a breakaway chain, quick-detach closure, or slip-knotted cord to reduce the possibility of an assailant using it to choke you.

ESEE IZULA-II

Weighing in at just 3.2 ounces, the ESEE Izula-II is a small knife with tremendous attitude. It has a 2.63-inch blade and measures 6.75 inches overall. Because of its compact size, it's often used as a neck knife or back-up blade. But don't let that fool you into underestimating its capabilities. Although small, the blade is extremely sharp and all business.

Made of 1095 carbon steel and measuring .156-inch thick, this knife is a serious survival tool. The main advantage is its small size. But in your hand, it doesn't feel small. The canvas Micarta handles feel rock solid and

provide an excellent grip in all conditions. This is a great knife for finer work, including skinning, field dressing game, and stripping wires.

This knife is named after the meanest, nastiest ant in the Peruvian jungle—the Isula, or what we call the Bullet Ant. This knife was designed to be used for concealed carry, EDC, or as part of a lightweight survival bag. You can also get the knife with the sheath or with the complete ESEE survival kit that includes paracord, cord lock, large and small split rings, Ferro fire rod, whistle, and plastic snap hook and clip plate kit—very nice.



FREMONT KNIVES FARSON BLADE



Fremont Knives Farson Blade Survival Tool is a handsome piece of gear that comes with a protective nylon sheath and eight feet of 550 paracord. Inset: Makeshift handle on the Fremont Knives Farson Blade Survival Tool and tight wrap with approximately five feet of 550 paracord create improvised hatchet for light chopping.

Sometimes you need a compact cutting-edged tool but not necessarily a conventional knife. The Farson Blade Survival Tool is an interesting modern-day design inspired by an ancient stone tool believed to have been used by prehistoric inhabitants of the area in and around the Great Red Desert in Wyoming.

The Farson Tool is designed and manufactured by Fremont Knives, which is based in Wyoming. It's compact and extremely lightweight, weighing in at only 6.7 ounces (including the protective nylon sheath). The cutting edge measures a full 7.75 inches and is .140-inch thick and made of high-

carbon stainless steel. It sports an attractive glass-bead non-reflective finish.

This is a tool that's all about multi-purpose: use it for cutting, slicing, skinning, or chopping. Use the eight feet of 550 paracord that comes wrapped around the grip to attach a makeshift handle to the Farson to create a light-duty hatchet.

With its minimal weight and compact size, the Farson Blade can be easily carried or thrown in your bag as an excellent back-up or secondary cutting edge. Use it in addition to your primary knife or cutting tool as a low-weight option to help save the edge on your EDC knife.

TOPS KNIVES CUMA TAK-RI 3.5



TOPS Knives CUMA Tak-Ri comes with durable full-sized sheath, length of 550 paracord, and emergency whistle. Full tang on CUMA balances the knife, and Micarta grips provide a comfortable and solid grip even when wet.



The full-tang TOPS CUMA Tak-Ri 3.5 looks mean from every angle. Although reminiscent of the famed curved Kukri blade used by the Nepalese Army and many others, the made in the USA CUMA Tak-Ri is much more than a curved blade—it's a wicked beast. Designed by Waysun Johnny Tsai, the 7-inch long, 0.190-inch thick blade is made from 1095 high carbon steel and is protected by a Coyote Tan powder coating.

The green canvas Micarta handles offer two grip options: the "long grip" for full machete-type swings and maximum impact, and a "choked-up grip" for more controlled precision cuts. Either way, the user is always in control. With an overall length of 13.5 inches, the CUMA Tak-Ri weighs in at 16.3 ounces

and comes with a functional and handsome black ballistic nylon sheath.

The pry tip on the back of the full tang comes in very handy and can also be used as a pommel/glass breaker, flat-head screwdriver, scraper, and of course as a pry bar.

For just about any other survival task, this is a robust and reliable piece of gear that could easily perform a multitude of functions for which you would normally need a number of different tools: survival knife, hatchet, machete, or pry bar. If I could bring only one knife into a survival situation, the CUMA Tak-Ri 3.5 would be a top choice. It's become one of my "go-to" survival knives.

WRAP-UP

When is a knife more than just a cutting edge? When it's designed and built to provide a wide range of practical functionality. Good quality multi-purpose gear is an investment that will pay huge dividends when your life depends on it.

While there are many viable options on the market, take the time to evaluate your anticipated needs and the gear that addresses those requirements. Don't be afraid to spend a few extra bucks to get superior equipment that you can rely on when you need it. ☺

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

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BRITE-STRIKE TECHNOLOGIES, INC.

(508) 746-8701
www.brite-strike.com

ESEE KNIVES

(256) 613-0372
www.esseeknives.com

FREMONT KNIVES

(970) 297-8957
www.fremontknives.com

TOPS KNIVES

(208) 542-0113
www.topknives.com

.300 AAC BLACKOUT PDW PISTOL

Completed San Tan Tactical .300 BLK PDW Pistol build, with VTAC Double Sided Cardboard Target by Viking Tactics and Adjustable Operator Cap by Notch Gear.



San Tan Tactical STT-15 PILLAR Billet Receiver Combo

BY EUGENE NIELSEN

I have become a big fan of the .300 AAC Blackout (.300 BLK/7.62x35mm), which was designed to achieve improved ballistics from the AR platform without a reduction in magazine capacity, and to be compatible with the standard bolt. Its design parameters make it an ideal round for use in shorter barrels and for suppressed applications.

Full-power 110- to 125-grain .300 BLK ammunition matches the ballistics of the 7.62x39mm cartridge. Subsonic projectiles provide optimal performance with a suppressor. The .300 BLK ammunition with 220-grain Sierra OTM (open-tip match) bullet vastly outperforms the 9mm HK MP5-SD.

In July 2015, the Netherlands Maritime Special Operations



San Tan Tactical STT-15 PILLAR Billet Receiver Combo served as foundation for author's .300 BLK PDW Pistol build. Author believes it's ideal for his needs.

Force (NL-MARSOFF) became the first military organization to formally adopt the non-NATO standard 7.62x35mm.

AR PDW PISTOL BUILD

The .300 BLK was the logical choice for my AR PDW pistol build. A .300 BLK AR pistol offers a number of advantages as a Personal Defense Weapon (PDW). It is light, compact, easily manipulated and, when assembled from quality parts, surprisingly accurate and reliable. And not being an NFA-controlled firearm, it can be taken practically anywhere a pistol is legal without paperwork.

Although there are a number of quality AR pistols on the market, none truly met my requirements. I wanted a no-compromise PDW pistol assembled from the very best available parts. The answer was to build my own.

The receiver is the foundation of any AR build. Choosing the right receiver is akin to building a house on a solid foundation. After examining all available options, I decided on the STT-15® PILLAR Billet Receiver Combo from San Tan Tactical.

STT-15® PILLAR BILLET RECEIVER COMBO

Billet receivers allow manufacturers to think outside the box. Dennis Harless of San Tan Tactical took full advantage of this capability to design one of the most advanced, feature-rich AR receivers ever made. It's a truly ambidextrous AR-15/M4 platform that accommodates all shooters without the need for costly add-ons.

Each STT-15 receiver is machined directly from a billet of 7075-T651 aerospace-grade American aluminum on Haas CNC machinery. This allows ultra-tight tolerances and consistency. The receiver is then finished in milspec MIL-A-8625 Type III hard anodizing.

The STT-15 lower works with any milspec or commercial buffer tube and stock. It has a large 1.38-inch integrally machined magazine well flare. Integrally machined QD sling swivel points are also in both the left and right hands of the receiver, with anti-rotation stops at every 45 degrees.

The STT-15 lower has an ambidextrous bolt release and ambidextrous

magazine release. The controls are machined from billets of A2 tool steel and feature San Tan Tactical's "ultra grip" texture. The lower will also accommodate an ambidextrous safety lever and has bullet pictogram safety selector markings on both sides.

Other features include a set screw to remove trigger creep, set screw upper take-down tension adjustment, milled shooter-ready finger rest, oversized winter trigger guard, and dowel screw assembly.

The STT-15 is 100% compatible with any milspec lower parts kit, with the exception of the proprietary left-hand magazine and bolt release. The STT-15 lower comes fully assembled with the bolt catch and magazine release installed. A California compliant version is available.

When San Tan Tactical designed the STT-15 receiver set, they sought to overcome the shortcomings they saw in other current offerings. According to San Tan Tactical, it needed to be lighter, stronger, and faster than other receivers currently on the market, all

while looking good doing it.

The STT-15 upper features truss pockets that distribute the stress across the entire platform versus putting all the stress on the material right behind the threads of the receiver. The extra strength gained from this design not only helps relieve stress on the receiver, but also helps improve inherent accuracy.

Most billet receivers are a blocky, heavy, thick design. This is not the case with the STT-15. Through the use of 3D CAD modeling software, San Tan Tactical was able to achieve a significant weight savings in places where extra material didn't have a purpose, such as the forward assist block and shell deflector.

The STT-15 PILLAR billet upper and STT-15 billet lower are available sepa-

ately or as a matched set. All San Tan Tactical STT-15 receivers and small parts are machined in house in Chandler, Arizona. In my opinion, you won't find a better AR receiver than the San Tan Tactical STT-15.

ADD-ONS

I went with Geissele Automatics Super Dynamic 3 Gun (SD-3G®) trigger and four-pound duty spring. The SD-3G trigger is the flat trigger bow version of Geissele's Super 3 Gun (S3G®) trigger.

The SD-3G trigger has a very short, light pull and reset for use when rapid target engagement with quick follow-up shots is required. The SD-3G was developed to combine the Super Select Fire SOPMOD (SSF®) combat trigger's match-grade semiautomatic perfor-

mance with its smooth single-stage full-automatic feel.

For the charging handle, bolt carrier group (BCG), and safety selector, I went with AXTS Weapon Systems Raptor™ ambidextrous charging handle, Black Nitride BCG, and Talon™ 45/90 Ambi Safety.

The AXTS Raptor™ ambidextrous charging handle is built for performance out of 7075 aluminum and mil-spec hard anodized. It features reciprocating levers that make rapid palm "blading" or finger and thumb charges of the weapon fast and effortless from either strong or support side. The off-side lever is slightly longer to clear the bolt assist, and both sides feature jimping for added control.

The Raptor has been tested at over



San Tan Tactical lower receiver shows Talon 45/90 ambidextrous safety that changes a 90-degree throw to a shorter 45-degree throw.

one million cycles without failure. AXTS offers the Raptor with milspec MIL-A-8625 Type III hard anodizing or Cerakote® finish.

The AXTS bolt carrier is manufactured from case-hardened 8620 steel and has a properly staked 4130 steel gas key. The bolt is case hardened 9310 steel, shot peened, HPT and MPI tested. It is finished in a self-lubricating polished black nitride. The bolt lugs are CNC ground following heat treatment to guarantee the greatest accuracy and reliability.

The Talon 45/90 ambidextrous safety is made from 7075 aluminum and allows the shooter to easily switch from a 90-degree throw to a shorter 45-degree throw without removing the safety from the lower. It features a screw-less design that eliminates any worries about the levers coming loose or falling off. It is available in a two-lever set (long and short) or a four-lever set (long, medium, medium tapered, and short). AXTS offers the Talon AXTS in milspec Type III hard anodizing or Cerakote finish.

I had Black Hole Weaponry make a custom eight-inch barrel in .300 BLK with 1:7 twist and standard profile (.750 gas block) and custom black oxide finish.

Black Hole Weaponry barrels are made from 416R stainless steel and feature a unique three polygon rifling that offers a number of advantages over traditional rifling. These include providing a better gas seal around the projectile, less bullet deformation (thus greater accuracy), reduced fouling, less sensitivity to stress concentration induced barrel failure, and prolonged barrel life.

After profiling and finishing, each barrel is marked with their name, lot number, chambering, twist, and inspector's stamp. All barrels undergo MPI and other non-destructive testing, and random samples are pulled for destructive testing. Black Hole Weaponry



.300 BLK (7.62x35mm) 125-grain polymer tipped (left), .300 BLK 125-grain match, .300 BLK 220-grain subsonic, 5.56x45mm NATO, and 7.62x39mm. The .300 BLK uses standard 5.56mm magazines and bolt carrier. Photo: Silencertalk via Wikipedia

barrels are available with a variety of profiles, fluting, and finishes.

I went with the SLR Rifleworks Sentry 6 Set Screw Premium Adjustable Gas Block. Made of Grade 5 titanium with a bead-blast finish, the patent-pending low-profile gas block weighs only 0.77 ounce and uses a standard gas tube. It features a proprietary alloy flat spring with 1400 degree temper and a Melonite finish 4140 detent plunger. Unlike competing designs, there are no tiny springs to corrode, break or seize, and no tiny ball to seize or get lost. Complete disassembly takes less than ten seconds.

The Sentry uses a single tool click

to adjust gas metering. The metering screw and screw bore design allow repeatability and reliability. 100% gas seal allows full cut-off and prevents gas from fouling the metering screw. The Sentry works with all SLR handguards and most others.

There are significant differences between supersonic and subsonic .300 BLK ammo from manufacturer to manufacturer and when running suppressed and unsuppressed. SLR Rifleworks recommends position seven as a starting point when firing supersonic ammo with a pistol-length gas tube, and position 15 (fully open) when running subsonic with or without a can. I

**Is it the perfect .300 BLK PDW pistol?
Well, at least for my needs, it's nearly ideal.**



Jason Brendon, Sales Manager of C2 Tactical, examines San Tan Tactical .300 BLK PDW Pistol. Photo: Lawrence Schindler

recommend sticking with supersonic if running unsuppressed and with one brand and bullet weight if possible.

I chose SLR Rifleworks Gen 4 seven-inch Solo Series free-float handguard. The Solo is the most popular handguard in the SLR lineup. It's made from 7075 aluminum and milspec MIL-A-8625 Type III hard anodizing. The seven-inch Solo has a 7.25-inch milspec top rail and two QD points at the rear. It is also equipped with short bottom and top rails.

The Solo has a 7075 aluminum barrel nut with hard-coat anodized Melonite finish hardware. The Solo features a slip-fit locking mount and billet anti-rotation insert. The barrel nut uses standard wrenches or an SLR Billet wrench.

I added an Impact Weapons Components Weapon Control MOUNT-N-SLOT™ (1913) Hand Stop. The low-profile Weapons Components Weapon Control MOUNT-N-SLOT occupies only one rail slot and takes up 65% less rail space than competing designs. It is made from 6061-T6 aluminum and hard anodized.

Phase 5 Weapon Systems™ was the logical choice for the pistol's receiver extension (buffer tube). It's made from 7075 T65 hard anodized aluminum, has a durable nitrile rubber foam pad, plus milspec end plate and castle nut. The buffer tube is compatible with a milspec carbine buffer and spring.

Instead of going with a standard carbine buffer spring and H2 buffer, I opted for JP Enterprises Silent Captured Spring (JPSCS™) Heavy Mass Version for my build. The JPSCS is a patented combination buffer/spring assembly that eliminates the friction of standard buffer components, resulting in superior smoothness and sound abatement. It eliminates the "spoon over a cheese grater" sound emitted by standard buffer components. The spring is removable from the assembly for custom tuning.

FINISHING TOUCHES

I finished the build off with a Magpul® MIAD® GEN 1.1 Grip Kit, MBUS® Pro front and rear backup sights, and MS4® Dual QD Sling GEN 2. I also added an EOTech XPS2-300 HWS and SureFire M300 Scout Light®.

The Magpul MIAD grip features in-



San Tan Tactical machines STT-15 directly from a billet of 7075-T651 aerospace-grade American aluminum on state-of-the-art Haas CNC machinery. Photo: San Tan Tactical

terchangeable front and back straps for a custom fit. In addition, the MIAD has an internal cavity that can be paired with optional grip core inserts. The all-steel MBUS Pro sights offer a load of features that make them outstanding BUIS. The MS4® Dual QD Sling GEN 2 is a theory-based product that allows the operator to instantly switch to either a one- or two-point configuration.

The EOTech XPS2-300 offers a two-dot ballistic drop reticle designed for the .300 BLK round. It allows the shooter to zero either subsonic or supersonic rounds in the same reticle pattern.

The ultra-compact SureFire M300 Mini Scout Light is a great choice for a PDW pistol or SBR. It takes up little rail space, increases weapon maneuverability, and minimizes added weight. Powered by a single CR123 battery, the LED produces 300 lumens and is focused by a proprietary TIR lens, providing plenty of reach for mid-range applications and enough surround light for close quarters.

I also installed a LaserMax Uni-Max LMS-UNI-G Green Rail Mounted Laser. Smaller than a matchbox, it's an outstanding choice for PDW applications. The LMS-UNI-G has a Native Green™

laser diode that takes less power than DPSS green lasers and has a greater operational temperature range.

RESULTS

To date I have put over 500 rounds through the pistol, including ammo from Black Hills, Federal, American Eagle, Hornady, and HPR Ammunition. The pistol has been 100% reliable. Magpul PMAG 20 Gen M3 and 30 Gen M3 magazines were employed during the range sessions. Accuracy has also been excellent. Fired from a rest, it's capable of sub-MOA accuracy.

The perfect .300 BLK PDW pistol? Well, at least for my needs, it's nearly ideal.

The author would like to thank C2 Tactical, located in Tempe, Arizona, for providing the use of its ranges. C2 Tactical was named Best Indoor Range in Arizona. ©

Eugene Nielsen's background includes protective intelligence/investigations and threat management, as well as red teaming/security consulting. He is a Licensed Private Investigator in both California and Arizona. He has written almost 1,000 articles.

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(480) 204-0082
www.santantactical.com

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(503) 893-2987
www.axtsweapons.com

BLACK HOLE WEAPONRY

(503) 410-5583
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BLACK HILLS AMMUNITION

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

C2 TACTICAL

(480) 588-8802
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FEDERAL PREMIUM AMMUNITION

(800) 322-2342
www.federalpremium.com

GEISSELE AUTOMATICS

(610) 272-2060
http://geissele.com

EOTECH INC.

(734) 741-8868
www.eotech-inc.com

HORNADY MANUFACTURING

(800) 338-3220
www.hornady.com

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www.hprammo.com

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(970) 980-8378
www.impactweaponscomponents.com

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www.lasermx.com

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(877) 462-4785
www.magpul.com

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www.notchgear.com

PHASE 5 WEAPON SYSTEMS INC

(916) 787-4273
http://phase5wsi.com

SLR RIFLEWORKS

(855) 757-7435
http://slrrifleworks.com

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(800) 828-8809
www.surefire.com

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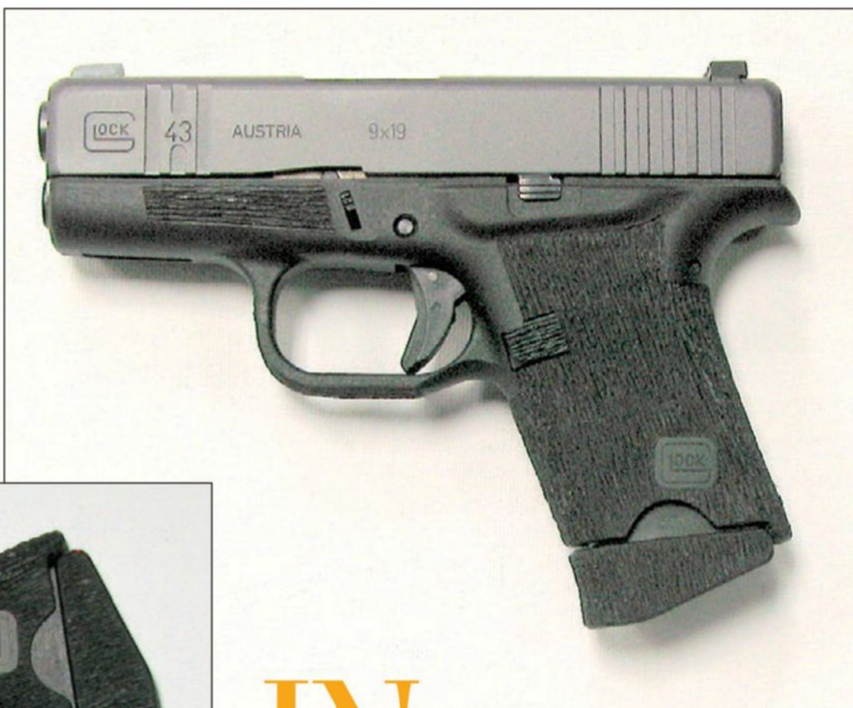
(910) 987-5913
www.vikingtactics.com

REFINING PERFECTION

Bowie Tactical Concepts Glock 43 ■ BY BOB PILGRIM

Right: Port side of Bowie G43. Grip angle has been reduced to 1911 grip angle and received 360-degree hand stippling. Sights are AmeriGlo and slide has been finished in gray Cerakote. Slide's edges have been melted and forward cocking serrations added. Trigger guard has been rounded and stippled. Forward frame stippling serves as trigger finger rest when at the ready.

Below: Bowie G43 parked in very slick Blackhawk ARC IWB holster, showing grip reduction and stippling and Bowie medallion. Grip angle is approximately same as 1911.



IN my evaluation of the stock Glock 43 (*SLIMMED DOWN CARRY PISTOL: Glock 43 Compact*, January 2016 S.W.A.T.), I declared it "good to go out of the box." It had traditional Glock reliability and was plenty accurate within its envelope of intended use. Considered to be "perfection" by Glock's progenitor, it came close, but at a minimum needed some trigger work and better sights.

DAVID BOWIE

As most gun enthusiasts are aware, a cottage custom gun industry has sprung up around the part-plastic phenoms. Literally dozens of Glock Meisters specialize in upgrading and improving these very popular pieces. Much of the work is practical, while some is cosmetic.

I wanted the latest Glock iteration to remain above all a fighting pistol in a serious caliber, albeit a small one. Therefore, I turned to former police SWAT commander and current SWAT operator David Bowie.





Bowie custom G43 (left) and stock G43. Custom G43 has grip reduction and stippling, rounded trigger guard, magazine removal cutouts, and slide treatment.

Bowie has become one of the country's go-to guys for practical and cosmetic custom work on polymer-based pistols. And yes, he is a distant cousin of the famous fighting man, Jim Bowie. Dave is super busy, and after a several-week wait, the little nine arrived.

DETAILED WORK

The custom package was both attractive and practical. Most noticeable on the slim-line series pistol was the painstaking 360-degree hand stippling on the grip—which has been slimmed and cut to a natural-pointing 1911 grip angle—and on the rounded and undercut trigger guard, magazine release, and forward port and starboard trigger finger rests.

The stippling resembles lizard skin and reduces grip slippage and gun twist in the hand. This is important, because there is not much to hold onto when grasping the gun. Stippling also includes the pinky rest magazine base pad. Besides all that attention to detail, Bowie goes even further.

Uniquely, Bowie cuts away the dominant hand pinky rest

base pad and reduces the gun's butt printing when worn under a garment. At its base are bilateral magazine well cutouts for manual extraction of defiant magazines.

The slide stop is radiused to reduce the chance of inadvertent engagement by the thumb during recoil and locking back the slide on a live round.

Its slide has been refinished in a subdued gray Cerakote, all edges rounded and melted, with forward cocking serrations that match the rear set. With the plastic and metal trimming, the piece was logically lightened, and sans magazine now weighs exactly one pound—two ounces less than the original. If this is a concern because it may translate into more recoil, a Glockstore tungsten guide rod/recoil spring will make up the difference.

AmeriGlo's bright and long-lasting luminous steel Tri-tium sights were installed, with the rear sight appropriately shaped for emergency and one-handed cycling.

The barrel's feed ramp is polished to a jewel-like finish. Trigger work added a Ghost connector with overtravel reduction and reduced weight to 4.5 to 5 pounds. The trigger has some take-up before it hits the sear's wall. Continued pressure passes through a bit of creep before it suddenly breaks. Reset is very short.

For this type of handgun and the threat envelope it was designed to operate in, this trigger is fine and a great improvement over the stock gun's heavy 6.5- to 7-pound trigger pull.

GLOCK TRIGGERS

I prefer triggers with reduced take-up and an extremely crisp break so I can extend the combat range of most firearms. I wanted to make head shots at 25 yards with the G43. To help me realize this goal, Jeff Wilson of Glock Triggers came to my assistance and sent me his new G43 Carry Trigger System.



Top Shot William Bethards fires Bowie G43 one-handed. G43 shoots like a larger pistol and is thus more comfortable to handle and fire one-handed.

The triggers are available in two configurations: stock travel and reduced pre-travel. The new GTX connector has a reduced shoulder angle and is electrolysis nickel-plated for a much smoother and lighter pull than OEM trigger. I received the trigger with reduced take-up with a five-pound pull.

Applying pressure, there is just a scintilla of movement before you encounter resistance. It breaks cleanly and without warning and has a short and positive reset. All springs are OEM for reliable ignition and proper functioning. I have been using Glock Triggers for years and they not only make the pistol more shootable, they have never failed me.

SNAGMAG

To complete customization, a pocket Snagmag was included to discreetly carry a spare magazine, which consists of Glockstore's eight-round base pad and magazine.

With return shipping, the above customization on your pistol costs \$851.63.

GLOCKSTORE PLUS TWO BASE PADS

One of the biggest drawbacks that small guns have is limited capacity, and the G43 is no exception. Many criminals and especially terrorists act in groups, and a six- to seven-shot pistol may require fast reloading more than once to stay in the fight. Citizens carrying these guns must make each shot count, and do not have a suppressive or hosing fire capability.

But Lenny Magill, CEO of The Glockstore, has increased the G43's firepower from sextet to octet by offering plus-two rounds black and stainless aluminum base pads. This nine-round potential is equivalent to typical 9x19mm 1911s.

HOLSTERS

This pistol was specifically designed as a concealment piece, so I only looked at IWB scabbards. DARA Holsters and Gear offers hand-crafted scabbards made of .093-inch Boltaron/Kydex that provide mirror-image friction gun fit. A rust-resistant Melonite-finished hardened-steel tension screw that reaches a very high Rockwell hardness of 70 is adjustable for holster tension.

Cant angle for the AIWB (Appendix Inside the Waistband carry) is fixed, and the holster's interior is smoothly finished to facilitate a glitch-free draw. A grease guard protects the shirt from staining but can interfere with the thumb's depth of penetration behind the gun, slowing the establishment of a full firing grip even with the butt situated high above the belt's top. It carries a lifetime warranty.

Blackhawk introduced the ARC (Appendix Reversible Carry) IWB at the 2014 SHOT Show and it became popular immediately. The polymer injection-molded rig is adjustable for right- or left-handed draw and includes two cant and ride height-adjustable belt clips for 1.5- to 1.75-inch belts.

Friction fit, it also has a passive retention detent and tension screw. Both exterior and interior finishes are smooth (smooth is fast) for drama-free operation. *Top Shot: All Stars* finalist William Bethards liked the ARC. It was so comfortable, he forgot he had it on. Its muzzle end is well rounded and almost closed. It does not dig into the leg or lower stomach in the kidney draw position. The gun's butt hovers just at belt top, but a quick firing grip can be had with the thumb penetrating deep behind the Glock.

Although it is concealable and very quick, I am not 100% sold on the one o'clock or kidney draw position. It was very popular with some USPA/IPSC Unlimited competitors and offers good economy of motion. But any muzzling of your precious anatomy is not good and violates all safety principles. Its acceptance appears to hinge on who is advocating it.

A similar crotch concealed carry was employed sans holster by the Filipino terrorist Sparrow assassination units. With a totally concealed cocked and unlocked 1911 (grip safeties were taped down), terrorists could make head shots from seven yards in one second or less.

SHOOTS LIKE A LARGER PISTOL

Regardless of how you carry the piece, it is a challenge to shoot well and is not an appropriate firearm for beginning shooters. Get trained. That said, the more I shot the gun, the more its recoil became less distracting. The G43 is all Glock and shoots like a larger pistol.

To determine if the improved trigger and better sights had anything to do with the G43's accuracy, we shot three different loads at 10 and 25 yards, standing off hand. Atlantic Marksmen MEN 74-grain ARX Polycase round punched out a 0.85-inch ten-yard group, which eclipsed Winchester 147-grain JHP's cluster of 0.89-inch from the first article. At 25 yards, the lightweight round delivered a very acceptable 3.24-inch pattern.

The new FBI load, Speer GDHP 147-grain G2 JHP, produced an excellent 1.71-inch group at the extended range. Also, at 75 feet SIG Sauer 125-grain JHP dropped into a 2.49-inch triangle. It was a cold and windy day, but Bethards delivered excellent performance with the short sight radius G43 even with limited familiarity with it.

BOWIE TACTICAL MODIFICATIONS

- AmeriGlo sights
- Enhanced concealment cut on magazine finger extension floor plate
- Forward cocking serrations
- Front and rear of slide contoured
- Grip size reduction
- Grip extension concealment cut
- Magazine well cutouts
- Rear trigger guard radius
- Reliability check
- Round trigger guard
- Radius slide stop
- Slide refinished
- Stippled grip, trigger guard and thumb rest
- Glock connector/trigger job.



William Bethards engages targets for accuracy at ten yards. The more you shoot the little Glock, the more you will like it.

CONCLUSIONS

This is the pistol for deep cover. You get Glock's reliability in a serious caliber in a very small package. It is indeed good to go out of the box, but can be improved upon.

The more I shoot the G43, the less consequential its recoil has become. Going to the degree that I did was simply motivated by my desire to have a superior shooting example of the breed, as well as owning a highly personalized firearm. ©

Bob Pilgrim holds an MS degree, was a Marine Infantry officer during the Vietnam conflict, and retired as a special agent from the FBI, where he was the field SWAT program manager. His Special Operations and Research Unit created and trained the FBI's Hostage Rescue Team. After retirement, he was an adjunct instructor at the Smith & Wesson and SIG Sauer Academies and a subject-matter expert for the USDOS's Anti-Terrorism Assistance Program.



Unique Bowie cut to pinky rest magazine base pad to reduce strong-side printing. Grip cut outs for emergency magazine extraction, grip stippling, and undercut trigger guard are visible.



Bowie G43 fieldstripped, with reduced grip angle, 360-degree stippling, two six-round magazines, and dual recoil spring/guide rod. Dual recoil spring greatly tames recoil.

SOURCES

BOWIE TACTICAL CONCEPTS

(937) 544-4606
www.bowietacticalconcepts.com

ATLANTIC MARKSMEN

(228) 669-7253
www.atlantic-marksmen.com

BLACKHAWK

(800) 694-5263
www.blackhawk.com

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Slings, AKs, Wire Loops, and the ULoop

Blue Force Gear Sling Attachment Solutions

BY PATRICK A. ROGERS

A sling is to a long gun as a holster is to a pistol—a means to carry the long gun when you are not actually using it. Originally made as a simple carry strap, several subsets have developed. The loop sling, best illustrated by the U.S. Military M1907 sling, was a carry strap first but was also a shooting aid. When properly adjusted, the sling steadied the shooter while in sitting, kneeling or prone. While heavy, complicated and requiring some training for use, it is still in use by High Power Rifle competitors.

Another type is the tactical sling, which may be a single-, two- or three-point sling, with the two point being the most common—and the most useful. The width of a military sling in the U.S. has been 1.25 inches pretty much since slings were standardized, though there are exceptions.

While the first sub-caliber machine guns in the U.S. inventory had 1.25-inch slings, the third and longest-serving submachine gun, the M3/M3A1, utilized the same one-inch sling as the U.S. Carbine Cal. 30 M1.

And for U.S. designed/made weapons, a 1.25-inch sling loop is used fore and aft. The rest of the world's militaries see things somewhat differently, and the acceptance of foreign or foreign-designed weapons in our military means some compromises have to be made. They seem to like having the forward (and in some cases, the rear as well) sling attachment point as a small loop—some HK and FN products, for example.

These require a snap hook with a slot in the rear for the sling, and the hook to fit into the loop. Generally this is not a major issue, as long as you have the proper sling and hardware for the system. But it is a sloppy arrangement and not as secure as I would like.

AK WEAPONS AND SLINGS

Which leads to the reason for this article—the AK family of weapons. The AK has been around for a long time and is easily the most prolific firearm ever made. The

Universal Wire Loop
with Push Button
Socket attached to
left side of AKM.



popularity of the AK has nothing to do with its usefulness as much as it has to do with the desire of the former Soviet Union to foster revolution throughout the world. To enhance the overthrow of the Free World, they gave away loads of these guns to the Third through Sixth World locations that pass loosely as countries.

The AK has been in service in one form or another since 1949 and, while exact numbers are elusive, guesstimates indicate that somewhere between 75 and 100 million have been manufactured in a great number of countries—including the United States.

Be that as it may, the AK was designed at the end of World War II, and the design reflected both that time frame as well as the doctrine of the former Soviet Union. The purpose of the sling at that time was simply to carry the weapon, and the AK had a rear sling loop in the heel of the buttstock (with some exceptions), and the forward attachment was a .375-inch slot at the lower handguard retainer or on the gas block.



Above: ULoop is a smaller, cleaner, and more efficient attachment solution for AKs.



Left: For use by left-hand-dominant folks, thread the wire loop through the sling slot and pass the body between the barrel and gas tube.

Below: ULoop with bottom socket unlocked.

The Soviets, Non-Soviet Warsaw Pact Nations, and their satellites used a 1.25-inch cotton sling attached to the rear with an appropriate sling loop, and at the front a metal snap hook of one type or another. This fits their doctrine and has worked sufficiently well for them until relatively recently, when they gravitated to a lot of what the U.S. was using. There is some major-league irony at work here....

With the end of the Cold War, AKs went from being the gun of only the bad guys to the gun of some NATO partners and later of coalition allies. The AK was also used by several of the professional military companies, whose assistance in the ongoing war was and continues to be indispensable.

As a result, an AK metamorphosis has occurred over the years, where some countries, some companies (Rifle Dynamics and Krebs, for two), and many individuals have changed the lackluster ergonomics and poor sights into a more functional gun. This is considered by some to be an exercise in futility, but most others see the validity of it.



BATTLEFIELD PICK UP

My company, EAG Tactical, teaches Battlefield Pick Up courses utilizing the AK. The rationale for this class is that one may at some point be in possession of a terrorist's weapon—which, worldwide, is the iconic AK-47. It may be that the good guy is unarmed and is able to access a downed bad guy's gun, or perhaps because he is seeking a more capable weapon than the pistol he carries daily.

If this is the case, we strongly believe that everyone should at least have sufficient knowledge to run the gun, keep it running, and make the gun safe. We provide AKs for this class, and to that end we keep our student guns pretty much stock. This is historically what we have seen in terrorist incidents in the past, and probably what we will see for many more decades.

Our school guns are stock with two exceptions—magazines and slings. The first, magazines, is simply a logistical issue. Magazines are wear items that become damaged and fail over time. When milsurp AK mags were plentiful and cheap, you could be choosy as to what you used. Today that market is drying up, and all surplus magazines are not the same, just as all AKs are not the same.

Magazines are not forever items, and we don't fall in love with them. Because of that, we run aftermarket polymer magazines in class—primarily Magpul, but also some U.S. PALM and other makers as we get them.

Slings are a bit different. While the issue AK sling is basically a carry strap, for safety reasons we prefer having a carry strap that can be used to both safely carry the gun administratively as well as run it when necessary. And because safety is paramount, we wanted to use a sling that can carry the gun efficiently but also allow the gun to be brought into action without removing it from the shooter's shoulder.

"AMERICAN" AND "AFRICAN" CARRY

Years ago, I worked at a school that taught a system of "American" and "African" carry for rifles. While quaint and viable for some hunting endeavors, moving from carry to use was often accompanied by a lot of unnecessary movement and

muzzle flagging. It became enough of an issue that at EAG we have forbidden the use of carry straps and both American and African carry.

We are not running a secondary gun—a pistol—in these BFPU classes, so we aren't worried about conflicting with the blaster. Therefore we prefer to run the AK in this class with the sling over the head and the strong-side arm through the sling, just the opposite of how we run it in a carbine class.

This puts the carbine out of the way and lessens the potential for flagging when bending over and performing administrative tasks. But we also prefer that they be able to bring the gun up on target without taking the sling off the shoulder. Herein lies the rub. We are all physically different. Because of our different body configurations, height, weight, girth, BMI and injuries, one sling does not fit all.

Issue AK slings are not exceptionally standard in length (or anything else). Looking at 25 issued AK slings from various countries, they are from 31 to 45 inches in maximum length, with most around 36 inches long. The one common trait is they are all difficult to adjust. What you have when you sling up is what you're stuck with.

We also prefer a sling that is easily adjustable, so shooters can manipulate their weapons safely and efficiently—pretty much what is used for the M4 family of weapons.

BLUE FORCE GEAR STANDARD AK SLING

Understanding that terrorist weapons are more likely to have a garbage sling, I did not want to compromise on safety, so I replaced the issued mil sling with the Blue Force Gear (BFG) Standard AK sling (K-SP-0046). I chose it for use on our school guns for a number of reasons.

BFG is and has been an industry leader for many years. They are well known for their top-shelf designs as well as their quality control. What comes out the door is very much good to go, and they have been in the sling business for a long time.

In 2006, Ashley Burnsed designed the Vickers Combat Application Sling (VCAS), which in the military version (NSN: 1005-01-604-0627) the Marine Corps adopted in 2011 for



Left: John Mattera tapes his target. He is carrying the AK as preferred in EAG courses.

Below: Field-expedient sling attachment using 550 cord to tie sling to the gun. This is why author uses Blue Force Gear slings on all his AKs.



the M27 Squad Automatic Rifle and authorized as the sole marksmanship/combat sling for the M16/M4 family of weapons. With a different attachment system, it has been selected for use by the USAF Security Forces. Over 200,000 of these slings are in use on military guns.

The BFG Standard AK sling is similar to the VCAS sling and can be adjusted from approximately 31 to 65 inches. That adjustment can be accomplished rapidly with a contrasting fabric tab on the front of the sling. Pull the tab toward you to tighten the sling, and away from you to loosen it. The substantial range of adjustment permits it to be used by folks of different size, using armor, or going slick. This eliminates both having to “make do” with the hard-to-adjust issue sling as well as the antics that occur when bringing the gun into play.

The Blue Force Gear Standard AK sling has two Tri Glides at the rear, giving the shooter the option of how they will attach the sling at the rear. You can thread the sling through the metal sling loop in the buttstock, but you can also loop the sling around the small of the stock or the back of the stock.

The front attachment point on the AK has been an aggravating issue for some, to include me. The small aperture means you have to use a narrow strap (in some cases, leather) and/or a snaplink/hook. The hook can be a weak link, and we have seen enough failures with them to understand that in this day and age, we should be able to do better.

UNIVERSAL WIRE LOOP

To rectify this, BFG came out with a Universal Wire Loop (UWL) (NSN-1005-01-613-5784) as a multi-purpose sling attachment point. It consists of the 6061 T6 aluminum body, which the sling is looped through, and a nylon-coated stainless steel aircraft-grade cable that is installed with ball-shank ends. It comes in two lengths: 3.25 and 6.25 inches.

The UWL can be attached almost anyplace on the gun by inserting the loop through the attachment point and then inserting the body through the open loop. Attach the sling of your choice to the body and you're good to go.

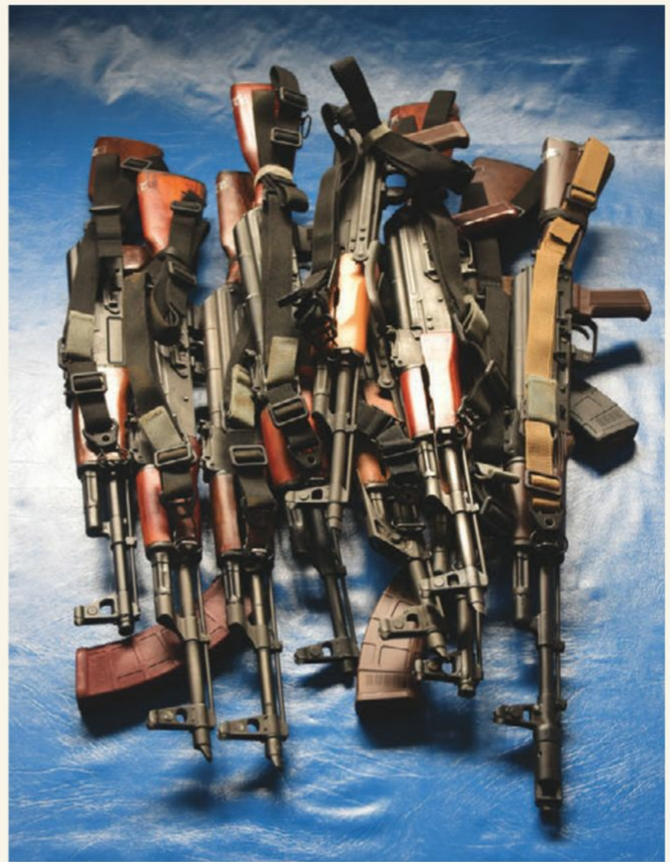
The Standard AK Sling comes with the similar Molded Universal Wire Loop with Push Button Socket (UWL-PB-P-275). This unit is like the Universal Wire Loop, but as the name says, a push-button socket is milled into it. This socket accepts the push-button quick-release studs, and since many slings utilize push-button sling studs, it makes life easier for them.

The UWL can attach to the host gun in a variety of ways, including the sling attachment point, around the barrel, or through slots in the rail interface system. We have used scores of these UWLs to backfit the guns of students who arrive at our carbine classes with sub-par slings and attachments. The UWL may be one of the most useful items we bring to class, and bonus points for the fact that it is ambidextrous.

It's hard to believe that something as simple as the UWL can be improved, but it has been. A follow-on wire loop is the newly released Blue Force Gear Uber Loop, or ULoop (UWL-UL1).

BFG UBER LOOP

The ULoop is a much smaller, sleeker, and easier to attach UWL. Instead of having the cable molded into the loop as in the UWL, the ULoop has one side that is releasable, enabling you to place it rapidly where it is needed. The ballshank is then replaced into its slot and pressed down to lock it in. One big benefit is that the sling does not have to be removed from



Some EAG AKs—all with Blue Force Gear Standard AK sling with ULoop.

the ULoop in order to attach it to the host. While it may not be a major issue for one person attaching one sling, consider when you have to do a platoon's worth.

The Universal Wire Loop was a step forward. The Uber Loop is a major step forward, and it will eventually replace the UWL on these slings. Blue Force Gear is nothing if not forward thinking.

With the exception of exigent circumstances, we don't acquire anything unless we either have a lot of hands-on time with it, or we have seen large numbers in the hands of students over the long term. Our decision to use the Standard AK sling was based on a lot of these inputs, and we are extremely satisfied with it. ©

This is Pat Rogers' last feature. In future issues, we will be reprinting some of his best articles.

SOURCES

BLUE FORCE GEAR, INC.

(877) 430-2583
www.blueforcegear.com

KREBS CUSTOM

(847) 487-7776
www.krebscustom.com

RIFLE DYNAMICS

(702) 860-7774
www.rifledynamics.com

80% LOWERS

Worth the Trouble?

BY DAVE MORELLI

With all the media reports about the government trying to take away our Second Amendment rights, interest in 80% lower (EPL) receivers has increased. The common thought behind the idea is if it is delivered without any Gun Control Act (GCA) paperwork, then no one knows you have it and it would not be subject to confiscation.

While this is in theory correct, who would want to live that way? Better we as citizens fight to keep our Second Amendment Rights, but that's another story.

WHAT THE ATF SAYS

As far as buying an EPL, here is a paragraph from the ATF's website on the matter: *Receiver blanks that do not meet the definition of a "firearm" are not subject to regulation under the GCA. The ATF has long held that items such as receiver blanks, "castings" or "machined bodies" in which the fire-control cavity area is completely solid and un-machined have not reached the "stage of manufacture" which would result in the classification of a firearm per the GCA.*

A picture on the site says the fire control is solid and there are no dimples on the side where the trigger pins would be bored, as this would not be classified as a firearm by GCA rules and could be purchased without paperwork. They also emphasize completely solid and un-machined when describing the fire-control cavity. Some out there have a slit machined in the trigger cavity and would not be subject to the definition "receiver blank" even though much more machining would be necessary to accommodate the trigger group. These are classified a firearm!

I'd think anyone who produces EPLs in this fashion would be required to engrave a name and serial number, as it seems it would be classified as a firearm. If you have the blank delivered to your door without paperwork, is it legal to turn it into an operational receiver?

There was some controversy over a manufacturer making blanks that the ATF did not consider blanks. They were composite material that was a different color in the trigger group category than the rest of the receiver. This would make it easier for the person to remove the trigger cavity area to fit the



EPL with trigger group cavity yet to be machined in.

trigger group. The ATF's position was the trigger cavity was manufactured but just filled in, so it was manufactured with a cavity and therefore it was a firearm. This is also where the dimpling of the trigger pin holes on the side of the receiver goes past the definition of a blank.

As a manufacturer, I like the 80% lower (EPL) to manufacture a firearm for a customer. Being blank, I can label it with my company information and a serial number. As a private citizen building a gun for his own use, I don't see any rules that would require it to be marked as manufacturers must do. But once the cavity is machined out, it is considered a firearm. Any transfer from that point on would be subject to GCA regulation.

This is the regulation imposed on manufacturers: *Receivers that meet the definition of a "firearm" must have markings, including a serial number. See 27 CFR § 478.92 (Firearm manufacturers marking requirements).*

As with all ATF regulations, a thorough investigation of the rules pertaining to your particular purpose for the part is definitely something to consider. Hell, they could change their minds on this and interpret the whole thing differently someday. A person should also check their state and local regulations to make sure the finished firearm is legal there.

The downside is that restricted individuals with some machining skills could gain access to and build a firearm. The ATF has some documentation of altered EPLs found in possession of restricted individuals. There is already a law against this—collar them and throw away the key!

HOW HARD IS IT TO MAKE A RECEIVER FROM AN EPL?

The real question is, how hard is it to make a functioning receiver out of one of these EPLs? It really isn't that difficult with some simple tools. The next question is, is it worth the time and aggravation in relation to cost for what you get? If you are not a restricted person, you can get one to add parts to build your own version of an AR.

The .223 versions are relatively cheap, but if you decide to use a jig to help with precise placement of the pin holes and cavity, it will add up to \$150 to the cost of the receiver. Also consider that the finished receiver is already anodized and finished with either black or some other color from the manufacturer. EPLs come in white and need a finish.

YouTube videos of what I call pipe wrench and hammer gunsmiths show it can be done with few tools—and I imagine it can—but the more sophisticated the tooling, the better the job will turn out. Some of the videos are done well, so select a good one to follow. Remember if you make a mistake, you will most likely be buying another blank, and the first try will become a memento on your desk.

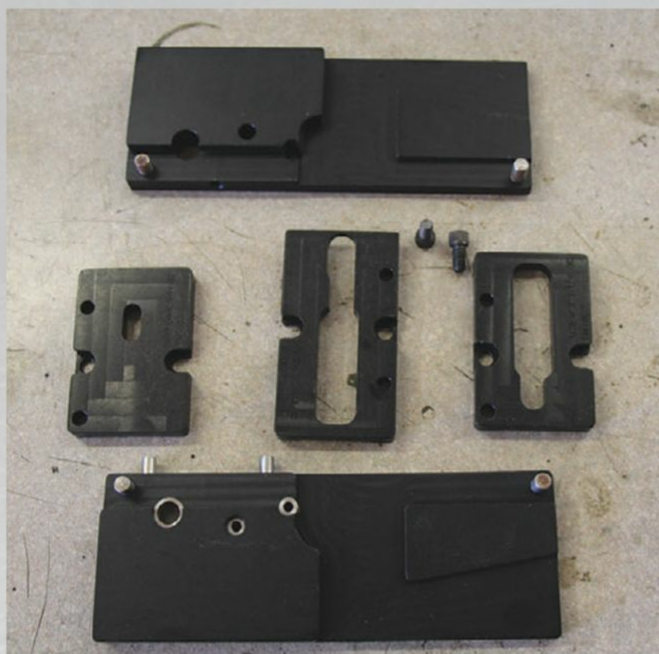
If you're looking to build a .308 base AR, you will find that they are a little prouder of them than the .223 versions and can cost up to \$200. The EPL has no selector markings on it. You have to stamp them in yourself.

Some EPLs are very well thought-out for the non-machinist, and some require you to have some machining background. A drill press is my bare minimum, so the part can be held more precisely. The cavity can be cleaned out with a

**Whatever your reason for doing an EPL,
you'll find it a fun project and not so difficult
as to require extensive machining skills.**



Side view shows no dents where trigger pins should go.



Above: Set up in the press for trigger pin holes and selector. Make sure workpiece is level so holes go through straight.

Left: Full set of jigs from Tactical Machining. Side plates fit their EPL and three tops for different cuts in the cavity.



Above: Morelli makes one last check that everything is right. A mistake making the cut is seldom fixable.

Below: Trigger pin holes are in and lower is ready to machine out the cavity. Even without further machining, it is now considered a firearm by the ATF.



drill bit, but I'd prefer drilling pilot holes with the drill bit and finishing up with an end mill.

I wanted to machine one out just for the experience. I started with a .308. I got the blank and jig from Brownells. The EPL and jig were made by Tactical Machining and work with DPMS magazines. They also carry the other tools you need to complete the lower.

STUDY TWICE, CUT ONCE

One thing I recommend is to study the parts, blank, and tooling carefully before making any cuts and between cuts. If you cut too far or in the wrong place, it is seldom fixable. I downloaded schematics for the receivers with dimensions for the .308 receiver, as they are mostly the same as a .223, but some differences exist.

This is an example of what I mean by studying things. Most of the time in machining is setting up for the cut. The time to make the cut is very short, but once it's made, it's forever.

Among the tools required are a 3/8-inch end mill for the fire control pocket, 5/16-inch end mill for the trigger slot, 3/8-inch end mill for the selector hole, and 5/32-inch drill bit for the trigger and hammer holes.

The schematics I downloaded specify the depth of the fire control group be 1.250 inches—the same as a .223 lower, but the shelf behind the safety was to be .525 inch for the .308. This is the depth the upper will fit into. It's a good idea to have the upper when machining this, to make for a tight fit.

STEP BY STEP

I started by drilling out the trigger group pin holes. Then turning the jig upright, I drilled some rough holes in the trigger cavity, keeping inside the jig. With the 3/8-inch



Above: First part of cavity finished, with jig for shelf in place. Depth for shelf is .525 inch.

Left: Roughing out bulk of material with a drill makes milling with end mill easier.

drill bit, I drilled several holes close together to rough out as much material as possible. I figured I could bring it to the precise depth on the mill. This roughing out the cavity makes the milling easier and, when the holes are at depth, you can touch up the sides with the end mill. I stayed away from the edge of the jig until the last cut.

The next step is to replace the trigger cavity jig top with the rear shelf jig. I cut it the same, staying away from the edges until the last cut. The non-cutting edge of the mill will run along the jig without cutting it and, when making the final bottom cut, I ran it along the jig for a smooth wall at the correct size. The last cut is the trigger slot. It's started with a 5/16-inch drill bit and cleaned up with an end mill.

The trigger group can then be assembled as normal. If everything fits well, you're ready to go. It's a good idea to fit all the other parts into their respective spots and make sure they function before putting the finish on the lower. Some of these may require final fitting. There is modification for the detent that holds the rear takedown pin from falling out, but it was already machined into the Tactical Machining lower and came with the parts.

Basically the detent pin was the same as regular AR construction except instead of the spring being held in the tunnel by the stock system, subject to orbital evacuation from its home, it has a small hex-head threaded plug that holds the whole detent system in the tunnel.

The other small difference is the bolt release. It is basic AR design except the lower has been formed differently in the way the pin secures it. Instead of having two bumps in the receiver, so a pin can be inserted and removed by tapping it out with a punch, a small pin is inserted in a one-sided threaded tunnel for the release to swivel on. The pin is held in by another tiny threaded hex screw. These two changes are nice because the ten-



Above: Bolt release is held in a bit differently than .223 AR: pin is held in by a tiny screw. This allows operator to adjust tension.

Below: Rear takedown pin detent is held in by a tiny screw instead of the stock plate, and is adjustable for tension.





Trigger group installed, lower is ready for engraving and finish.

sion is adjustable with the screw. My lower needed some light fitting so the bolt release would move freely.

One very inexpensive but useful tool was a magazine block that holds the lower in a vise. I was able to hold the lower in any position necessary, which came in handy for putting in some of the tiny screws and springs. The block fits into the magazine well and clicks in place just like a magazine, so it won't fall out when taking it out of the vise. Have Brownells throw one in when ordering your parts. It's not absolutely necessary, but it makes the job much easier. I also use mine when I'm cleaning or working on ARs.

FINISHING TOUCHES

The lower is now ready to finish up. With the EPL containing a working trigger group, it is now a firearm by ATF standards, so I will stamp my company name and a serial number on it. I will also cut in some indicators for the selector, and it

THE COMPLETED RIFLE



Once the 80% lower is complete, it can be finished into a rifle like any store-bought lower. I went with a DPMS upper because the Tactical Machining lower would marry up to it with a 16-inch barrel also from DPMS.

The handguard is a Midwest Industries DPMS rifle-sized handguard. What I really like about this handguard is the diameter is less than two inches. It is comfortable to hold and does not have those pesky sharp rails all over it. If a rail is needed, it has threaded holes and a short rail can be attached right where it's needed.

For sights, I wanted something that would cover close-quarter situations but also be adequate to capitalize on the reach of the caliber, so I chose the Vortex Strike Eagle 1-6X scope. It has an illuminated reticle but the glass is crystal clear. The 1X is just like using red dot types with both eyes open, with the 6X for longer aimed shots.

There is a circle with the top open and crosshair aiming point in the center, along with some drop compensation lines. The unit comes with instructions to get the shooter close at various ranges and calibers. For my taste, the crosshairs are a bit thick for longer range, but it's acceptable as a dual-purpose device.

About putting a scope on an AR-platform rifle: they were not designed to be scoped, and the standard charging handle will take some skin off your knuckles when charging the rifle. I went with the Bravo Company Mfg GUNFIGHTER charging handle, the large size because it's longer and I want to be able to access the charger without a miss.

I put a Magpul sling attachment between the lower and the adjustable stock. With a one-point sling, it hangs just right for a close-quarter rifle.

The completed rifle shoots as well as any AR in my collection. I only had to do some of the machining, and it was a fun project.



Completed rifle shoots as well as any AR in author's collection.

will be ready for whatever kind of finish I want to put on it.

I like to finish with GunKote because it has a variety of colors to choose from. I have to bead blast it after all the engraving is done. GunKote requires a bead-blast finish to give the coating something to purchase to and keep the coating adhered to the metal. GunKote is a baked-on coating and must be treated in an oven at 300 degrees for one hour. Brownells carries GunKote in spray cans for the do-it-yourselfer, and it comes with instructions. A bead blast also gives a flat matte-type finish, which I prefer.

The EPL was easy enough to finish with common tools, but the mill made for more precise cuts and a cleaner finish. Whatever your reason for doing an EPL, you'll find it a fun project and not so difficult as to require extensive machining skills. Take your time and be as precise as you can, and the result will be a finished gun you can hand down in the family with a special history.

I don't think I saved much if any money doing the work, but I like having a gun with my name on it and knowing I was a little more involved in its construction. ☺

Dave Morelli is retired from the Las Vegas Metropolitan Police Department. His duties there included being a Patrol and Field Training Officer as well as an operator and sniper with the LVMPD SWAT team.

SOURCES

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(877) 272-8626
www.bravocompanymfg.com

BROWNELLS INC.

(800) 741-0015
www.brownells.com

DPMS-PANTHER ARMS

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www.vortex.com

Agoge

Continued from page 56

But you lose one second in positioning your feet. In that one second, you could fire five more shots. Maybe not perfect shots, but good-enough shots."

An odd emphasis caught my attention. After every five-shot semiautomatic series (Israelis avoid full-auto bursts like pork), Ivgi called out for making a quick visual check of the bolt, to make sure it had fully closed and locked before moving. Nothing louder than a "Click!" when you need a "Bang!" Agoge teaches continuing to fire in series until the threat is hit or you can't see the target any more.

NYE COUNTY SWAT

"The Kingdom of Nye" is the nation's third-largest county and, at 18,000 square miles, this rugged desert is substantially larger than Switzerland. There are no incorporated areas, so the Nye County Sheriff's office is the sole law enforcement agency. And with a tax base of less than 50,000 population, it's severely under-funded.

To add a unique difficulty, the county seat, Tonopah, is over 200 miles from the population center, Pahrump. Yes, Pahrump—right out of *Mars Attacks*.

Nye's SWAT team is an all-volunteer "Special Response" squad. Without compensation, they buy 90% of their own gear. The mishmash of long guns suggests they may be issued drug-seizure weapons. This forces the department to use lighter 5.56mm projectiles, as some of the SWAT ARs still have 1:12 twists. A variety of optics and lights were attached to the rifles in the usual positions.

The office just transitioned from 9mm handguns to .357 SIG and everyone is happy with it.

Most of these working patrolmen's web gear is ordered online and suited to their individual tastes. I was impressed with their professionalism and élan. These are clearly Western lawmen of the classic mold. They are used to working alone—often remotely—and of being authority in their own right. No backup but their wits, weapons and training.

"We were impressed with Agoge's course outline. Israelis tend to adapt and improvise. We're underfunded and we have to adapt and improvise as well, so it's a good fit," said Sgt. McRae, gesturing to the hastily crafted barriers, walls and doors.

The size of the unit varies between one and two dozen deputies and standards are high, with an emphasis on ability to maintain fine motor skills while recovering from cardio exertion.

DEPUTIES' QUALIFICATIONS

When I noted the agility of the deputies, Sgt. McRae explained part of the selection process and annual qualifications. "They have to be able to run and then disassemble and reassemble their service pistol in a prescribed time, then run another lap and shoot accurately with a revolver." But there's a twist: The barrel must be held inside a four-inch steel ring, and the barrel can't touch the ring during firing.

Other requirements involve using flights of stairs. It was apparent that morale among these far-flung protectors was first-rate. Their banter was the same as you'd witness in any gathering of young, well-trained warriors.

It was explained to me that one deputy's nickname was "Low Jack" because nobody could keep track of his location, and that Corporal "Hollywood" Fancher was called such because he'd once been a performing "knight" in Las Vegas—at the Excalibur Hotel's Tournament of Kings.

Of the team as it was on that cold day, eight men were military veterans and two had seen combat. Most will probably see action in the course of their duties in Nye County.

The county has many remote dwellings just several hours from Reno and Las Vegas, all perfectly situated for the cooking of methamphetamine. Criminal tweekers are everywhere. Plus, Highway 95 runs right through the length of their jurisdiction, a conduit for the drug trade between the state's two pleasure domes.

Nye County deputies need to be highly trained and mentally and physically tough to work in this unforgiving environment. Agoge's training is fast and furious. The two were a good match, and I was honored to be an observer at this class and share the experience with S.W.A.T. readers. Would your department benefit from training with Agoge? ☺

SOURCE

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Bud Nealy Shrike

THE Shrike is an exciting new covert-carry fixed-blade knife designed for personal protection. It's the result of a collaboration between custom knifemaker Bud Nealy and a veteran Federal agent.

Bud needs no introduction. He's a former professional musician who has become one of the world's top knifemakers. He's best known for his patented MCS (Multi-Concealment Sheath) System Knives, widely regarded as the state-of-the-art in hideout blades by knowledgeable operators around the globe.

The Federal agent who collaborated with Bud in the design currently works Violent Crimes as an inner-city investigator. He has 17 years of service as an agent and is a 14-year SWAT team veteran.

Bud's duties also include instructing firearms, tactics, and defensive tactics. He has been involved in various martial arts for 30 years, including knife training under the tutelage of an Associate Dog Brother.

He's the recipient of multiple agency awards. He has also been recognized by outside law enforcement and civic groups for his investigative work, as well as for his participation on the SWAT team, and has been awarded a medal for valor by a national civic organization.

The Shrike was designed in direct response to the violent inner-city environment the agent works in on a daily basis. Bud states that, "While working with gangs and drugs in the inner city, the agent realized the need for a weapon that he could deploy in close quarters. He was interested in a collaboration with me incorporating some of his ideas. This led to several meetings, a prototype, and several tweakings to satisfy each of our requirements. More time was spent on

developing a Kydex sheath to accommodate a comfortable horizontal appendix carry and to find just the right material for the belt straps."

In the agent's own words, "When interviewing subjects at conversational distances or trying to obtain information, I needed something that would be faster than a gun to get on target. This knife design allows for the maximum blade length for comfortable horizontal appendix carry. The knife is designed to ride close to the body where one's hand can go unnoticed while it rests on the handle of the knife during conversation. This is not an all-purpose knife. It's designed solely for personal protection. The knife can be deployed with either hand and the sheath reversed for left-handers. The design was created around a reverse-grip, edge-out draw that allows for quick deployment and superior retention. It can also be positioned for forward-grip work with generous jimping and an aggressive ramp. There is no pommel, as I wanted to maximize the blade length with a comfortable easy-on, easy-off system. The polyurethane straps can accommodate different belt widths. The knife fits into a simple integrated and layered system."

The Shrike is available in two sizes: 7¼ inches overall and 7¾ inches overall. The size differential is in the handle. A person with a larger frame (6'2" or more) could easily conceal the larger version, while the smaller version would most likely be the best choice for a person under 6'2". I went with the larger version.

The Shrike is of full-tang design and has a four-inch satin-finished CPM® 154 stainless steel blade, hardened to RC 59-60. It has a distinctive blade profile that is wickedly appealing and highly effective in its intended role.



Shrike is the result of collaboration between a veteran Federal agent and custom knifemaker Bud Nealy. It's designed for personal protection.



Shrike's design employs maximum blade length for comfortable horizontal appendix carry. It's designed to ride close to the body where one's hand can go unnoticed while it rests on the knife's handle during conversation.



Shrike was created around a reverse-grip, edge-out draw, which permits quick deployment and superior retention. It can also be positioned for forward-grip work.

Designed primarily for stabbing and penetration, the Shrike features a hollow-ground blade with a sharply tapered point and slightly swaged two-thirds false edge. The blade has a slight belly to increase slicing and slashing capabilities. The hollow grind yields an exceptionally sharp edge.

CPM 154 stainless steel is the Crucible Particle Metallurgy (CPM) version of 154 CM. Although the composition of CPM 154 is the same as 154 CM, the proprietary CPM process greatly enhances the attributes of the steel. It produces a fine-grained uniform distribution of the carbides that provides improved wear resistance and better toughness than 154 CM, while retaining a similar heat treatment response. CPM 154 can be honed to a very fine edge.

Bud utilizes black Grip-Guard™ G10 (glass reinforced epoxy laminate) handle slabs on his "workhorse" knives. The handle slabs are secured to the tang using black-finished stainless steel button-head Torx® machine screws and threaded inserts. This permits easy disassembly should cleaning and decontamination be required.

Bud can customize any knife to the customer's request.

If you want exotic woods, mother of pearl, bone or animal horn for your handle, he can accommodate you. If you want a pattern-welded Damascus steel blade, no problem.

The Shrike has excellent ergonomics. Although the handle on the Shrike has been kept smaller than typical on knives this size for optimal concealability, the aggressive deep waffle-pattern texture of the Grip-Guard G10, coupled with finger cutouts and jimping the top and bottom of the handle, provide a very secure grip and precise control. The knife is well balanced and fast into action.

Each sheath is thermally molded to each individual knife to ensure a secure fit and has a safety welt in the tip. The Shrike sheath/strap system is designed for horizontal belt carry at the midline. The straps fit belts up to 1¾ inches wide and have snaps for easy on/easy off. The sheath comes with two Chicago screws and is compatible with aftermarket Blade-Tech® and Spyderco® mounts.

Bud's MCS System is available for the Shrike as an option. Now in its second generation, the MCS System has five different attachments (including the optional boot strap), allowing for ten different basic carry positions. It comes with a breast pocket flap, "barbed" belt clip, neck chain, and small-of-the-back carry attachment.

I am very impressed with the Shrike. It's an outstanding low-profile fixed-blade knife and a worthy companion for when things get up close and personal. A lot of thought and real-world experience went into the design, and it shows.

The Shrike with Grip-Guard G10 handle slabs is priced at \$275.00, quite reasonable considering you are getting a custom handmade knife from a top knifemaker. Each knife is stamped with the maker's mark and individually serial numbered.

Custom orders typically take about 90 days to fill, but are definitely worth the wait. ©



Shrike has generous jimping and an aggressive ramp. In order to maximize the blade length without compromising concealment, there is no pommel.

SOURCE

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Modifying the Glock 19

Being a hopeless romantic, I bought my wife, Chris, a Glock 19 Gen3 for her birthday. She has carried a full-size 1911 for years, and she shoots it well. But due to the way she must dress for work, she is usually limited to carrying in a purse and wanted something lighter, a bit more compact, but still using a serious cartridge.

A fully loaded 1911 with eight 230-grain cartridges weighs 40.9 ounces. The Glock 19 with 16 115-grain JHP loads tips my scales at 31.1 ounces—a difference of almost ten ounces but carrying double the on-board ammo.

Glocks are known for their reliability with only limited maintenance, but I wanted to add a few things that would make it work better for Chris.

In my opinion, the factory sights on Glocks are less than optimal (a polite way of saying they suck) and therefore were the first things I replaced. I acquired a set of Meprolight R4E Optimized Duty Sights. The front sight has a tritium dot with a vertical tritium bar underneath it.

The rear sight has a horizontal bar on either side of the

rear notch and a vertical bar below the notch, all with tritium inserts. I prefer the bar-dot system to three dots, as I believe it is less confusing to the eye. The leading edge of the rear sight is notched to allow one-handed manipulations.

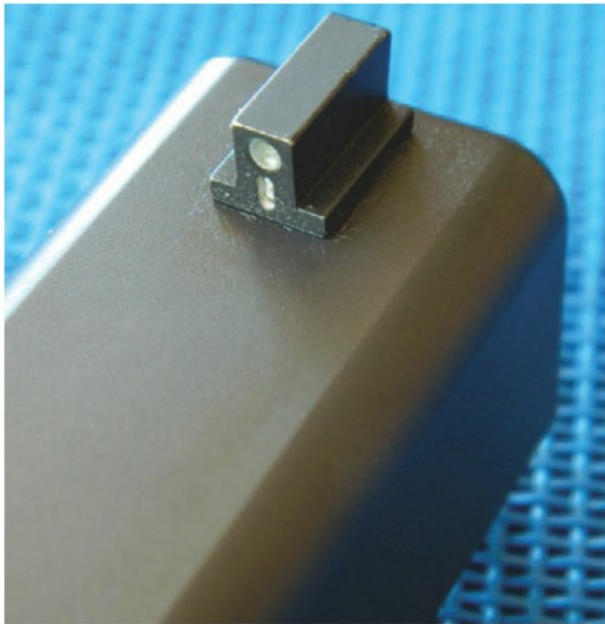
In daylight, the sights are aligned in the conventional manner with the top of the front sight aligned with the top of the rear with equal space on either side in the notch of the rear sight. In low light, the horizontal bars on the rear sight are aligned with the dot on the front sight and the two vertical bars lined up, resulting in a crosshair-type sight picture.

There is nothing wrong with the factory barrel, but Glock recommends using only jacketed ammo. For economy, we shoot a lot of my reloads using lead bullets, so the OEM barrel was replaced with a Lone Wolf Distributors Alpha Wolf barrel.

Made from 417 stainless steel, the Lone Wolf Distributors Alpha Wolf barrel is button rifled, has a three-stage honed bore with SBN premium coating and six flutes around the circumference that allow a path for heat and debris to escape.



Glock 19 with modifications installed.



Meprolight front R4E Optimized Duty Sight with tritium dot and vertical bar.



Meprolight rear R4E Optimized Duty Sight has two horizontal tritium bars with vertical bar under the rear sight's notch.

This makes the already reliable Glock design even more reliable. The Lone Wolf barrel is a drop-in part and requires no gunsmithing.

The last thing I added to the G19 was the recently introduced Freya mag well from Raven Concealment Systems. This is not a "must have," but more of a "nice to have" item. The Freya includes a plug that fills the gap on the bottom of the Glock's grip frame, the enlarged mag well itself, two screws with pre-applied thread locker, and two Allen wrenches.

To install, insert the plug and line up the hole for the screw with the lanyard hole in the grip and insert the screw. Next, slip the front of the Freya mag well over the lip on the front of the grip and screw the mag well into the corresponding hole in the bottom of the plug. The result makes speed loads much surer and faster, while only adding .24 inch to the overall width of the grip.

For range work and when Chris' manner of dress allows, I acquired a Phantom Modular Holster and Double Modular Pistol Mag Carrier, also from Raven Concealment Systems.

I finished the gift off with half-a-dozen PMAG® 15 GL9™ from Magpul.

A friend questioned my choice of a handgun instead of flowers or candy for a birthday gift. First, I didn't marry a girl I could take care of, but rather a woman who would fight beside me. And I can think of no better way to show my love than to make sure she is adequately armed.

Like I said, I'm a hopeless romantic ... ☺



Lone Wolf Distributors Alpha Wolf barrel allows practice with economical lead bullets. Flutes around barrel's circumference allow heat and debris to escape.



Raven Concealment Systems Freya mag well includes plug that fills gap on bottom of Glock's grip frame, enlarged mag well, screws with pre-applied thread locker, and Allen wrenches.

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TOPS KNIVES MICRO HAWK

The new TOPS Micro Hawk was designed by Shawn Owens, who is a pilot, Filipino martial artist, and hand-to-hand/edged-weapons instructor. He pulled from each of these areas of expertise for his design, which has the characteristics of a tomahawk, karambit, and straight knife all in one. It's a serious everyday defense tool that can also get it done in survival situations. It's lightweight and small, making it ideal for pilots of small planes, where weight is especially important. Suggested retail price is \$180.00.



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The CGS Rifles Hypnos Tactical Rifle combines the finest parts on the market to deliver a product capable of astounding performance for the end user. The rifle starts with the CGS Rifles Hypnos X action, which is specifically designed to mate perfectly with the Accuracy International AX Chassis with included five-round Accuracy International detachable magazine.

The Hypnos features a multi-flat design profile with integral 20 MOA full-length Picatinny scope rail. A Proof Research carbon fiber wrapped 1:8 twist .264 barrel is expertly CNC chambered for the 6.5 Creedmoor cartridge. The assembled barreled action is coated in Magpul Flat Dark Earth Cerakote. The muzzle is threaded 5/8x24, and a Sure-Fire SOCOM muzzle brake/suppressor mount is installed and properly timed.



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INTELISCOPE INTEGRATES SEEK THERMAL

Inteliscope introduces the Inteliscope PRO+ with Seek Mounting Kit for the Seek CompactXR Thermal Imaging Camera and is integrating the Seek software with the free Inteliscope app for an economical smartphone night-scope functionality.

Using the Seek Thermal Software Development Kit, Inteliscope is integrating their software to allow the shooter to quickly switch from daytime to nighttime use, still have the rifle sighted in, and have full use of the Inteliscope reticles and heads-up information. The application is relevant to varmint hunting, personal protection, law enforcement, and military use, providing quality commercial-off-the-shelf night-scope capability to any rifle for a fraction of the cost of stand-alone units.

This bundle of products will allow any shooter in possession of a smartphone to have a night-vision-capable firearm for less than \$500, making thermal night scopes affordable for more shooters.



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Cyclops®, an innovator in personal and field lighting solutions, continues to light the way for outdoor professionals and weekend warriors who demand reliability and performance in lighting equipment. Entering a completely new category, Cyclops is now producing a large range of both single- and dual-row LED bar lights for any outdoorsman's needs.

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Uninvited Stranger

In the wee hours of a March Saturday morning, two people in Las Vegas, Nevada were surprised when an armed stranger forced his way into their apartment. One of the residents was armed and opened fire with his own handgun. In the exchange of shots that followed, one of the men in the apartment was wounded and the attacker was killed.

Police later revealed the identity of the deceased attacker, and it was discovered that he had an extensive criminal record, including multiple convictions for armed robbery and attempted armed robbery.

SOURCE: *Las Vegas Review-Journal*, Las Vegas, Nevada 3/26/16

Can't Have the Car

Late one night in an uptown neighborhood on Chicago's north side, two men in their early 20s were unloading items from a parked car when a third man walked up and demanded their possessions. One of the men handed over his cell phone and wallet, but as the robber announced he'd be taking their vehicle, the second intended victim pulled out a pistol and opened fire.

The robber was hit multiple times and transported to a hospital, where he died of his injuries. Police reports of the incident stated that the deceased assailant had been out on parole for a previous armed robbery conviction.

SOURCE: *Chicago Sun-Times*, Chicago, Illinois, 4/1/16

Deli Beef

A deli owner in Cleveland, Ohio was talking with a friend when two armed robbers entered the shop and demanded money. The store owner emptied the register and handed over about \$300. Meanwhile, a passerby outside the deli noticed what was going on and called 911. When a police car rolled up at the entrance, the robbers headed for the rear of the shop, intending to escape via the back door.

At that point, the deli owner's friend retrieved a handgun and chased after them, taking them at gunpoint. Handing the gun to the owner, the friend then pruned out the robbers and relieved them of their weapons before making them crawl out the front door to be arrested by waiting police officers.

SOURCE: *Cleveland.com*, Cleveland, Ohio, 3/31/16

Never Get Between a Mama Bear and Her Cub

Shortly after noon on a weekday, a woman on the southwest side of Indianapolis heard the unmistakable sound of an intruder forcing entry through the window of her baby's room. At the sound of glass shattering, she called her husband to let him know someone was breaking into their home. She then grabbed her handgun and left her bedroom to check out the noise.

She encountered the intruder just exiting the door of the baby's room. The intruder, also armed, fired at her but without effect. Her return fire, on the other hand, was devastatingly effective, dropping the home invader with multiple hits. On transporting the badly wounded attacker to the hospital, it was discovered that he was carrying flex ties and a walkie-talkie.

SOURCE: *WTTV-TV*, Indianapolis, Indiana, 3/24/16 ©



If the First Rule is "Have a Gun," then the Zero-th Rule is "Refuse To Be a Victim."

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Colonel Cooper's Timeless Lessons

MY first mistake was utilizing a parking bay at the local post office. This is never a sensible practice, since every North American post-office parking lot appears to have been laid out by the same maniac who designs the blueprints for amusement-park roller coasters. What with all the narrow driving lanes, mysteriously angled parking bays, and more one-way arrows than a William Tell convention, it's usually all one can do to survive a Pony Express Headquarters visitation with one's vehicle intact.

The above having been stated should explain to the reader why yours truly never parks within a country mile of a U.S. Mail building—except for the day of The Incident.

On said day I cruised in through the main parking area entrance, and blow me down if my eyeballs didn't behold an almost empty parking lot. Elated with my good fortune, I maneuvered my pickup truck into a vacant bay, making sure there was an empty bay on either side of the pickup, just in case. Can't be too careful, you know—or so I thought.

My passenger alighted and I settled back to enjoy the sunny day during her absence, listening to the strains of Meat Loaf emanating from the truck radio. Another day in paradise—and then It Happened.

The Jeep that had been parked two bays to my left started to back out. Okay, so he was leaving—nothing unusual about that—except that the driver seemed to be making a sharper-than-necessary K-turn, in reverse, at about one mile per hour, and the vehicle's acute-angled turn was getting sharper and sharper by the second, as his right rear was heading toward my pickup.

Since his Jeep was piled to the gills with packages, I figured the driver couldn't see my truck, so I gave the horn a quick advisory tap. And he inexorably carried on heading toward me at a snail's pace. After a couple of yards of this misdirectional motion, I managed to get a visual on his rear-view mirror, trying to ascertain if the driver was drunk, an idiot, or somebody looking for trouble.

Surprise, surprise—there was no driver behind the wheel.

At that stage I realized there was no alternative but to attempt to get my vehicle out of there with alacrity. The motor fired up, I slammed the shift lever into reverse, took one quick glance over my shoulder, and of course there was a car blithely cruising down the lane behind me. No escape route.

So Meat Loaf and I were obligated to observe The Jeepster back up into my truck in slow motion. Naturally the owner of the self-propelling vehicle had seen fit to replace the factory rear bumper with twin open-ended steel pipes fit only for gouging gashes in other peoples' vehicles in a post-office parking lot. So now my Chevy was cosmetically challenged because some moron had left a stick-shift vehicle parked in neutral without applying the emergency brake.

Trying to keep my normally intemperate disposition one degree below Rage Flash Point, I waited for The Jeepman to appear on the scene. To his credit, on his arrival, he took one look at the situation and produced an insurance card from

his wallet. I suggested to him in vitriolic terms that it might be advisable to remove his vehicle from the scene—preferably without attempting to engage me in conversation in my volatile state—which he did.

And that was the end of the story.

Several hours later I mentally rehashed the situation, trying to figure out if there was a way I could have handled the situation differently and avoided vehicular contact. Short, of course, of having parked eleventy-seven miles from the area, as is my wont. And as is so often the case when incidents occur in my life, I retrospectively analyzed the occurrence from the perspective of Colonel Cooper's seven *Principles of Personal Defense*.

1) *Alertness*: Yes, I'd been alert. Unfortunately I'd been scanning for hobgoblins and the dregs of society, not for a riderless horseless carriage.

2) *Decisiveness*: My actions had been decisive, but under the circumstances, too little too late—and my escape route was blocked by a passing car.

3) *Aggressiveness*: Aggression, in this case, wasn't required. But I shudder to think what would have happened to Jeepman ten years earlier with my more youthful, less mature lack of restraint.

4) *Speed*: The alacrity was there, but because of the missing observational elements in the Alertness phase, I ran out of time.

5) *Coolness*: Pretty proud of myself on that one. The good Colonel's teachings probably saved Jeepman a beating—and me a prison sentence for assault.

6) *Ruthlessness*: Again, like Aggression, it was better left unused in this specific instance, but it was available on tap. And it would have surfaced immediately if Jeepman hadn't made a wise choice and not escalated an already potentially volatile situation.

7) *Surprise*: The Surprise element wasn't quite what Mister Cooper meant in his treatise. Mea culpa.

So what's the big deal? This was merely a fender bender, not a gunfight. Why all the preceding melodrama about a simple, non-life-threatening incident? Because the gist of this article is to point out that one should always expect the unexpected—especially if, like yours truly, you were apparently born with an implanted poo-poo magnet.

And if you stay with Colonel Cooper's primary principle of Alertness, the ensuing principles will pretty much take care of themselves, irrespective of whether it's a fender bender or a fight. Yes, the next time I stop off at the Pony Express station, I'll park where I normally park, even if the area looks like Desolation Row. And yes, next time I'll leave the motor running—and have an escape route.

Thanks, Jeff. Even in death, my indebtedness to you keeps on mounting. ☺

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

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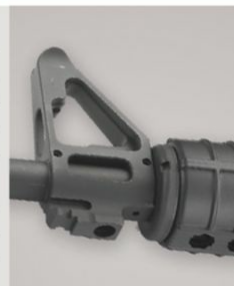
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