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SURVIVAL WEAPONS AND TACTICS



BETTER THAN THE ORIGINAL?
STEYR AUG A3 M1

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LINEUP

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AIR POWER!

Umarex T4E Trainer and Marker

Umarex has introduced its Training for Engagement carbine to provide a viable tool for force-on-force training and solo practice.

BY R.K. CAMPBELL



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COVER STORY

FLIGHT OF THE RAVEN

LRK Mechanical Corvid 30



A precision rifle from a true custom rifle shop. How did this one measure up during our typical tough *S.W.A.T.* T&E?

BY DENNY HANSEN

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SWAT SWEEPSTAKES



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For police missions, the size, length and weight of a standard M249 can be problematic. Lighter, shorter, and suppressed are the ticket.

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Magnum Research
Magnum Lite Rifles

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Community Policing

Since the riots in Ferguson, Missouri and Baltimore, Maryland, an unending stream of “experts” has appeared on television with “the answer.” Many of these talking heads pontificate that law enforcement agencies need to take a kinder, gentler approach when dealing with the public. Public meetings between the community and officers are quite often cited as one way to “open the lines of communication.”

Guess what? Neighborhood watch programs have been doing that for over three decades. So why are there still confrontations between officers and the public? The point that escapes the professional bloviators is that the criminal element, especially those who are predisposed to violent behavior, have no inclination to have a “meaningful conversation” with law enforcement with coffee and cookies served after the meeting.

In Ferguson, police were criticized because they responded in force. The term “militarization of police” could be heard on most any broadcast as reporters sat in the comfort and safety of their booths and disparaged officers for being well equipped.

Paraphrasing, in Baltimore, officers were criticized for *not* taking aggressive action. Part of this was because the mayor of Baltimore, Stephanie C. Rawlings-Blake, gave a stand-down order to police. Many commentators who condemned the officers in Ferguson for being well armed could be heard saying things like, “Why are these heavily armed police officers not doing anything?” Hard to win.

Some groups have called for the murder of police officers, and there have already been more police officers killed this year than in any year in recent memory. My solution to “police violence” is simple. Don’t want to get arrested? Don’t commit a crime. Don’t want to have force used against you? Don’t use force against an officer. Don’t want to get shot? Don’t get into an armed confrontation with police.

This is the last issue that long-time *S.W.A.T.* Contributor Claire Wolfe will be writing the *Enemy at the Gate* column. While sometimes controversial, her writing always got people to think. Conspiracy theorists, take note: nothing to see here. Claire simply felt it was time to hand the reins to another activist. We thank her for her years of hard work and wish her luck in the future. Starting next month, *Enemy at the Gate* will be written by Kurt Hofmann, and we expect great things from him.

A former paratrooper, Kurt 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.

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

Denny Hansen

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MALFUNCTION MISTAKE?

The May issue reviewed the Wilson Combat Hackathorn Special (*MATCH MADE IN GUN HEAVEN*). At the end, it said there were only two malfunctions, but reading the article disclosed many more. What gives?

G. Gowen, email

I am the author of this article. The first line of the paragraph under the Summary heading on page 83 states: "While testing the gun, we fired well over a thousand rounds of mixed ammo and encountered only two malfunctions under normal shooting conditions."

The key phrase in the above sentence is "normal shooting conditions," meaning fired with the magazine in the gun. While the diagnostic test we performed by chambering a round and then removing the magazine is excellent for isolating extraction issues that may pop up erratically, I do not consider it a normal shooting condition. In fact, some mod-

ern designs have problems passing this function test.

As I wrote in the article, after we returned the gun to Wilson Combat and got it back, it functioned fine in this manner.

Thanks for your question and for being a reader of S.W.A.T. Magazine.

Ed Lawrence

FRANKENGUN FAILURES

First off, thank you for your great publication. Since first subscribing several years ago, S.W.A.T. has become the only firearms associated magazine I can really take seriously. Always straight talk from those who have "been there."

Regarding a couple of recent letters complaining of too many articles on the latest AR variations: I first caught "black rifle disease" in the early 1980s. I have been a very active competitor, hunter, and basement gunsmith with the platform ever since.

My first AR was a 20-inch Colt 6600

HBAR. I remember being advised at the time of purchase that the HBAR represented the zenith of AR design and in all likelihood no further innovations could possibly be made. Wrong! Although the Colt still resides in my safe, modern SPRs from reputable manufacturers with equally good optics are now my go-to guns. I cannot imagine what improvements the future holds for these rifles.

As for the guy claiming his Frankengun AR built with gun-show parts is the equal of the higher-end rifles that grace your pages: I rarely see such a gun make it through a match or class without some sort of stoppage or failure. I could not imagine trusting such a gun should a critical application occur.

Keep up the great work!

R. Brown, Texas

Thanks for the comments. Most Frankenguns are put together with the lowest possible cost being the most important



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consideration. We recently had an article about assembling an AR with quality parts (QUALITY AR-15 BUILD: Raise Your Standards, August 2015 S.W.A.T.) that can be depended on and run hard.

TRIGGER TIME

Bob Pilgrim's *TRIGGER CONTROL* article (June 2015 S.W.A.T.) was flat-out awesome. I think way too many shooters get caught up in shooting to reset, which is only an intermediate technique along the path to learning good trigger control, and one that should be discarded if a shooter ever wants to move past amateur status.

If S.W.A.T. had more skill-based articles like this and fewer stories about guns and gear, I would be a lot more likely to renew my subscription.

C. Scott, Florida

Thanks for taking the time to contact us. Some folks like more features on guns and some, like you, prefer stories about how best to put them to use. While we try to have a good balance among firearms, gear, training, and tactics/skill articles in every issue, it goes without saying that not everyone will thoroughly enjoy every article—but we'll keep trying.

Denny Hansen



EAR PRO

I'm interested in the electronic earmuffs that Command Sergeant Major Hood is wearing on page 86 of your April 2015 edition (*MIGHTY MINATURE: Browning Black Label 1911-22*).

Thank you in advance.

J. Ronnau, email

Those are Peltor Tactical with a behind-the-neck band for helmet wear. They are available almost everywhere. I got mine through Amazon.

Jeff Hall

NICE PUPPY!

I enjoyed the June issue, which had two articles on bullpups (*SHORT AND SEXY: K&M Arms M17S556 Bullpup* and *LONG GUNS: Rise of the Bullpup Rifle*) and a great feature by Patrick Rogers (*FLAWED OR FLAWLESS: Internet Facts and Fallacies*) on Internet forums. Rogers is spot-on with his criticism of opinionated shooters and his satire of forums.

I'd like to see some T&E of the leading bullpups in AR classes, particularly the IWI Tavor which has found a niche here in the U.S., and maybe a comparison between two different bullpups, including a Tavor. Most of the evaluations I see are from people inexperienced with the platform, which tends to produce uninformed opinions. I am impressed by most of your writers. Maybe a task for Ethan Johns?

J. Winchester, Colorado

Thank you for the feedback. Since you like bullpups, you'll probably enjoy the article about the Steyr AUG A3 M1 in our Long Guns column that begins on page 38 of this issue. Finding out how a bullpup would fare in a class made up mostly of ARs would be interesting and we'll try to make it happen. The problem with a head-to-head comparison is that it is only a sample of one gun each, and may or may not be representative of the line as a whole. ☺

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Hill People Gear Ute Pack

THE preparedness community is littered with a code-like language of acronyms to cover everything from gear to methods to the various situations they are used in. This article will introduce a new acronym, TM-CPEW—The Most Comfortable Pack Ever Worn—that will change the way we look at the BOB, GOOD, EDC, GO, or 72-hour bags.

Most people getting out of Dodge, bugging out, or having to survive for 72 hours or more probably need some “feet don’t fail me now.” Covering mile after mile on foot sounds easy, maybe even romantic to some, but for those who haven’t done it, your pack can make or break you.

Over the years, I’ve used multiple different packs for 24+ hour movements of 30 or more miles. Through these experiences, I was never fully satisfied with the packs I’d used until I



Above: Even a bolt gun can be carried in the Hill People Gear Ute pack thanks to Ute’s compression system.

Left: Various items are easily attached due to system’s modularity.



found the Hill People Gear (HPG) Ute.

The Ute consists of a main top-loading cell with just over 3,200 cubic inches of volume. Inside the lid is a small zippered slot pouch for smaller items that need to be isolated from the main load. PALS covers the inside of the pocket for additional accessories if needed. The main cell is designed to hold items that don’t need to be accessed immediately: extra clothing, a water bladder, extra ammunition, food, and tools.

Items that do need to be accessed quickly can be housed in pouches added to PALS webbing located on the Prai-

rie Belt (waist belt) and to the unique load-compression straps located across the pack.

Many packs have multiple access points to the main load cell, and pockets on top of pockets. Although this adds many organizational options, each zipper and stitch added creates a potential weak point in the material. The Ute is simple in this regard, which results in a system with fewer possible failure points.

I have loaded this pack with 80 pounds of gear, have had all kinds of things strapped to it including rifles,

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Large and deep main load cell is accessed via heavy-duty zippered top lid.



HPG PALS pocket has been added to Ute for extra volume of quick-access items, which can be attached by a 6x7 Velcro PALS grid.



Accessory pocket and MOLLE webbing are located on inside of lid for organization.

have been soaked from rain, and dragged it in mud, gravel, through brush, and over rocks. After washing it off when I was done, it was still ready for more.

One of the most unique and adaptable features of the pack is its compression system. The Ute utilizes a pulley system that gives a 2 to 1 advantage on compression. This allows the main load cell to be compressed to near-flat thicknesses depending on the load. Primarily, this positions the weight of the load close to the body's center of gravity, but it also allows odd items to be strapped to the pack without working loose.

Normal compression straps are a 1

to 1 ratio and can be difficult to get tight enough to secure objects to the outside of the pack. "G" hooks are used on one end of the Ute's compression straps so they can be attached to any other loop or strap on the pack. This eliminates the issue of only being able to attach straps where compatible buckles are located.

The Ute pack is designed with the premise that a point such as a plastic buckle or zipper could fail, which doesn't mean a pack is poorly constructed, but HPG understands that Murphy's Law can show up at the worst of times.

The Ute ships with a bag of extra buckles, straps, and "G" hooks so you can attach the Prairie Belt to a harness. The bag also functions as a standing repair kit to appease the redundancy god of "two are one and one is none." But it does not include an extra main Prairie Belt buckle (ITW Cobra Buckle), because HPG has not been able to break it despite their most destructive efforts.

The compression straps themselves can also be used to supplement a possible failure point in a pinch. With high-quality materials used and sewing done by First Spear, nothing should go wrong, but if it does, the pack can be mended in the field.

Can the pack be adjusted to the individual's size? This question is answered

by the design of the yoke, stays, and waist belt. The Ute has a completely unique yoke design that gives the user infinite height adjustment of the shoulder straps. The user can position the pack perfectly into the lumbar area of the back to transfer weight properly. The aluminum stays are the perfect balance between being bendable to match the user's back but rigid enough to hold their shape under pack compression.

The adjustment of the stays to the user's back is slightly different than many other packs. The bottom 2/3 of the stays should match perfectly with the user's back contour, especially the lumbar area. Above this, the stay should be bent away from the back slightly. This slight loading of the stays presses the weight into the lumbar and keeps it there throughout movement.

The Prairie Belt is available in three different sizes to accommodate different waist sizes. Two different thicknesses of foam provide padding and can be removed and added to accommodate the individual. The Prairie Belt can be easily removed and used as a standalone battle belt or in conjunction with a shoulder harness. The modularity of adjustment in the Ute guarantees it will fit big, small, and everything in between.

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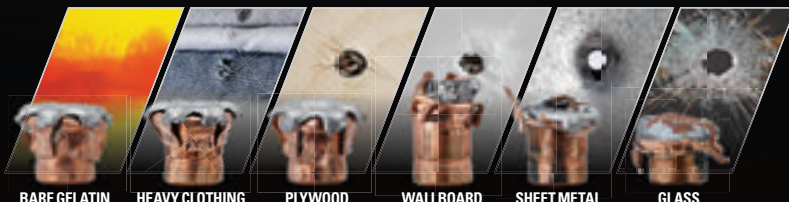
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comfortable pack I have ever worn, "yes" is the short answer.

The Ute will carry 60 pounds like most other packs I've used will carry 30. Here is why: The yoke of the Ute is attached to the pack in three places. The main attachment point is in the center and is attached by a heavy-duty piece of webbing that is run through a set of two buckles, once again for redundancy. The other points are attached to each shoulder strap and connected to the top of the pack at the stays.

Commonly known as the load lifters, these two, in combination with the center attachment point, allow the yoke to articulate independently of the pack, or they can be pulled tight to prevent movement. This is a life saver when moving on uneven terrain such as mountains or urban environments where climbing might be necessary. The articulation lets the pack move with your center of gravity instead of pulling it one way or another.

The waist belt is critical in keeping the weight riding in your lumbar area and transferring it to your hips. If the waist belt loosens over time, the weight of the load shifts to the shoulders and will start driving hot nails in between your shoulder blades.

The waist belt of the Ute fixes this problem by using a reversed strap routing to tighten. Instead of grabbing the strap tails and pulling outward to tighten the waist belt, the Ute straps are routed to be pushed inward to tighten. This is a naturally stronger motion for body mechanics and results in a snug fit that will not loosen through use.

I have nine different types of backpacks hanging in my basement. I will not be purchasing number ten because of the Ute. It is my go-to pack for anything from light day loads to 60+ pound long-distance movements.

Being that it is an internal frame design, the Ute is not meant to carry extremely heavy loads like an external frame pack, but it comfortably carries more weight than it should.

If you're making a long trek—whether for leisure or out of necessity—a Hill People Gear Ute pack will make that trek a lot easier and more comfortable. ©

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Open Season on Cops

Welcome to 2015: now go spit on the nearest cop.

That is what a certain segment within America would apparently love to see happen. The mass media won't explicitly support you, but they'll certainly feature your story on the front page. If the cop then happens to arrest you and you get scuffed up in the process, you'll need a squad of parking personnel around your house to coordinate all the arriving network satellite trucks, professional protesters, and grandstanding political leaders.

Ahh, 2015 is a great time to be a police officer. In case you are ragingly oblivious, I'm being sarcastic.

The current state of police-community relations is horrible and only seems to be getting worse. Cops have recently been killed because of all the blather and sadly, I'm sure between these words being written and pub-

lished, more will die. It's insane, and one major reason for this state of affairs is good people in this country standing idly by and allowing it to happen.

First and foremost, nothing infuriates a good cop more than a bad cop. But, as has been bitterly noted by police officers for generations, it only takes one bad cop to overshadow hundreds of instances of sacrifice and good deeds by professional officers. You'll get no excuses from me on real instances of misconduct.

Yet, while there are certainly bad cops and bad police departments, their numbers are much fewer and farther between than some people believe and our "friends" in the national media seem to think.

Sadly it seems apparent that a goodly portion of the national media will not feel complete and satisfied until members of the public treat law enforcement

officers like the returning military veterans in 1969.

Speaking as a long-time writer who has hung around newsrooms for literally decades and is probably less biased against the media than most police officers, I've never seen such an apparent intentional effort to demonize one of our civilization's most important social control mechanisms.

When I say "social control," I'm not talking about keeping the proletariat under the thumb of bourgeois capitalists and all that other crap your dope-smoking professor shoveled into your head during PolySci class back in college. When I say social control, I refer to the scumbags in your own community who are right now figuring out a way to rob, cheat, and steal from you. If the stakes are sufficient, they'll slip in a little rape and murder along the way too.

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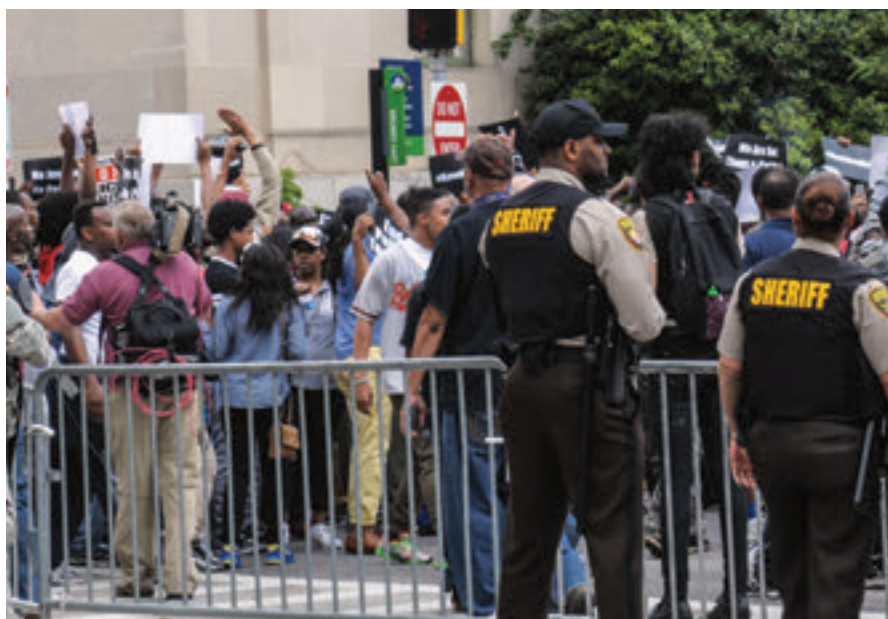


Photo: U.S. Army National Guard Sgt. Margaret Taylor

Many factors are involved in our equation, but it is apparent that today's generalized dissatisfaction and distrust of government is being co-opted by an opportunistic media populated by young and inexperienced (i.e., inexpensive to hire) reporters straight out of college being led by former flower children who have survived enough rounds of downsizing to become management. It is an environment where personal agenda and bias, usually liberal, will flourish.

Without such a bias, how else can you explain CNN continually referring to felons who are shot by police officers as "victims"? Granted, such usage is technically correct, but the words drip with innuendo that appears wholly intentional.

Take biased media, spice with pressure to present news more as "infotainment," add in the normal hatred that some members of society have for law and order, mix with pandering by leaders (elected and otherwise), then stir in online platforms that let anti-social kooks grandstand alongside legitimate news organizations, and you have the recipe for our current situation.

Look, folks: law enforcement is a dirty business conducted by tough men and women who deal with the most idiotic, chemically altered and anti-social members of our human tribe, ones who occasionally will comply only by application of force. Sometimes it's a wristlock, sometimes it's a hail of bullets. Fortunately, I do believe the average citizen understands these facts even if they are completely foreign to report-

ers, pundits and leaders.

That's not to say cops aren't human. Sometimes either personal bias or outright criminal impulses are acted upon under the "color of the law." But based on my experience knowing, training and working alongside literally thousands of cops from across the country, those cases are far, far fewer than television would suggest or social media gossip would have you believe.

Above all, the whole idea that police officers intentionally shoot non-whites is just about the stupidest thing that has been foisted upon the American public since the hula hoop. Internal moral compass aside, unless a cop is certifiably psychopathic, he or she isn't going to risk career, family, financial future, and probable jail time by killing someone from an "oppressed" group either on a whim or intentionally.

The whole thing is stupid, very and utterly stupid.

To my fellow officers: remember your oath and continue to perform to the best of your abilities. You also need to be really careful out there.

To the rest of America: please stop standing quietly on the sidelines while media and so-called leaders completely gut the part of government that will personally come to your house and lay down its life to protect you and yours.

Cops aren't the enemy of society—uninformed, biased, ignorant, and/or just plain stupid people emboldened by communications savvy are.

If you disagree, please call CNN or Al Sharpton if somebody tries to harm your kids. ☹

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Traditional Skills for the Modern Outdoorsman: Part 1

MY first memory is of being pulled by my arm through deep snow by my grandfather. I remember clearly, I was scared but he wasn't. We were just out for a hike from our base camp in Big Bear, California. This started my life-long relationship with the forest. I was four years old.

This was the first of many outdoor trips over the course of 25 years with my grandfather to the "big mountains," as we called them. During this time, there weren't as many established car camps. He would just find a dirt road in his International pick-up truck and set camp in a remote area. He had a list of 81 things he needed for us to have a successful camp. We had a big canvas tent, cast-iron cookware, hatchet, saw, kitchen knives, ice chest, canned goods, ammo, extra this, double that, and about 70 other necessities.

But when we left camp for our hikes into mountain lion and bear country, only a rifle, pocketknife, first-aid kit, binoculars, slingshot, and canteens made their way with us into the forest. Years later, when I began to acquire my own outdoor equipment, I remembered the list of 81 things my grandfather used, and decided I would go in the opposite direction with my gear selection.

CLASSIC RUSTIC CAMPING

The writings of Horace Kephart, Daniel Beard and George W. Sears had the biggest influence on me. I consider these men some of the greatest forefathers of rustic camping. This style of camp living includes various fire-lays, crafting cooking implements, rigging up open-face shelters, and using open fires for warmth and cooking. Using minimal yet effective tools like the axe and knife is all regarded as woodcraft. Horace Kephart put it best in his masterful book *Camping and Woodcraft*:

"Woodcraft may be defined as the art of finding one's way in the wilderness and getting along well by utilizing Nature's storehouse."



Author with long-fire and cooking fixtures, set for the night in Alabama. Long-fire is about six feet long in order to provide head-to-toe warmth and sufficient area for a large cook party.

The woodcraft way is not a list of hard and fast rules, but more a set of woods-worthy principles regarding our choice of gear and techniques.

THE 4 Ws

Selecting a place to camp is a woodsman's skill. When we visit an established camp or car camp, all the thinking has been done for us. When setting out on an outdoors trip off the beaten path, we must consider more seriously what we are looking for in a camp.

Water

An old woodsman said that all man needs to survive in the wilderness are water and tools. Quite a big statement, as it doesn't quite encompass all the skills needed to wield tools, select qualities of wood, understand weather, make proper fires, cook over coals, and treat water to make it safe to drink. But it is true. Water is the most important element in wilderness living for obvious reasons. Being relatively close to a

creek, river, stream, or brook is a must in a woodsman's camp.

Wood

In a rustic Indian camp, all cooking over coals or fire requires wood, so it is important to choose a campsite with a ready supply of wood that doesn't require traveling too far to procure. One must also consider the type of wood, but often we are at the mercy of our surroundings and must make do with whatever materials are available—that is true woodcraft!

Wind

Of the four Ws, wind is the hardest to consider when selecting a campsite. Generally, wind travels up the canyon in the day and down the canyon at night. This is great information if you are camping in a canyon, but other terrain leaves much more up to Mother Nature than we think.

Obviously, if we are sleeping in front of an open fire, we set up our camp with

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the fire parallel to the wind in order to avoid the eddying effect of the smoke.

Widow Makers

Most campers are content with finding a campsite that meets three of the four Ws, but neglecting this one can be a matter of life and death. A widow maker is a dead tree or large branch that has the potential of falling down on our camp from wind or decomposition. So look up!

FIRECRAFT

“One glance at a camper’s fire tells what kind of a woodsman he is.”—Horace Kephart, *Camping and Woodcraft*

There is much truth to this adage. Horace Kephart explains that if a man wants to be comfortable in the woods, he must learn how to produce at will a quick, hot fire that will boil water in



Author uses long-fire for warmth when sleeping without a blanket or sleeping bag. Many hardwood logs are needed for this.



Above: During training weekend in Alabama, author made this long-fire first to cook over, then for a good night’s sleep. Long-fire allows a large campfire wherever wood is plentiful.

Right: During training trip with fellow Randall’s Adventure & Training instructors Hugh Coffee and Patrick Rollins, author (right) utilizes long-fire for cooking before putting on night logs.



a jiffy, will soon burn down to embers for frying or a solid bed of coals that will keep up a steady glowing smokeless heat for baking, roasting, or slow boiling.

One must also be able to make a big log fire that will throw its heat forward on the ground and into a lean-to, and will last several hours without replenishing.

George Washington Sears, who wrote under the pen name Nessmuk, often wrote of the cheerful light and warmth of a campfire. I feel that Daniel Beard said it best in *The Book of Camp-Lore and Woodcraft*: “There is no use talking about it, there is no use arguing about it, there is witchcraft in the smell



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of the open fire, and all the mysteries and magic of the Arabian Nights dwell in the odor of frying bacon."

I am from the school of thought that a campfire and cooking set-up are the heart of a happy, successful camp. The following is my most used woodcraft fire set-up for both cooking and warmth. Nessmuk considered this type of cooking set-up a Cooking Range, while Horace Kephart called it a Hunter's Fire. Kephart noted that this type of fire first affords a cooking fire with proper supports for utensils, and later a good long-fire for the night.

I like to use this style of long-fire that is five to six feet long using logs about eight inches thick. I place the logs parallel to the wind with two ends nearly touching and the other end open (V shaped) to catch the natural draft that will supply air for the fire. The logs can support cooking utensils and cookware, as well as be used as a cutting board.

Next I procure a green wrist-thick sapling or branch that has a natural Y joint about six feet long. I cut it in half and end up with a Y joint and a straight, flat top piece, each about three feet long. I stick these pieces at the ends of my bed-logs. I sharpen the ends to a blunt point for hammering into the ground but use the straight piece without the Y joint for my initial hammering in order to get the hole started. Once I make a decent hole in the ground with the straight piece, I remove it and place the Y joint in its place.

At the other end of the logs, I then hammer the flat piece into the ground, then take my knife and lightly baton the flat top to create a small split that must be parallel to the Y joint at the other end. Next, I find a long, straight green pole about broomstick thickness to lie across the Y joint and into the split.

Daniel Beard called this green support pole a waugan stick. One end of the waugan stick rests in the crotch of the Y joint while the other end is carved to a flat-head screwdriver shape and wedged into the split.

Cordage lashing can be added right under the split to prevent further splitting down the length. This method takes less work than finding and possibly wasting more green wood than needed to procure the second Y joint. Whether you call it a Hunter's Fire or a Cooking Range, it isn't complete without cooking fixtures. We'll cover those in the next issue. ☺

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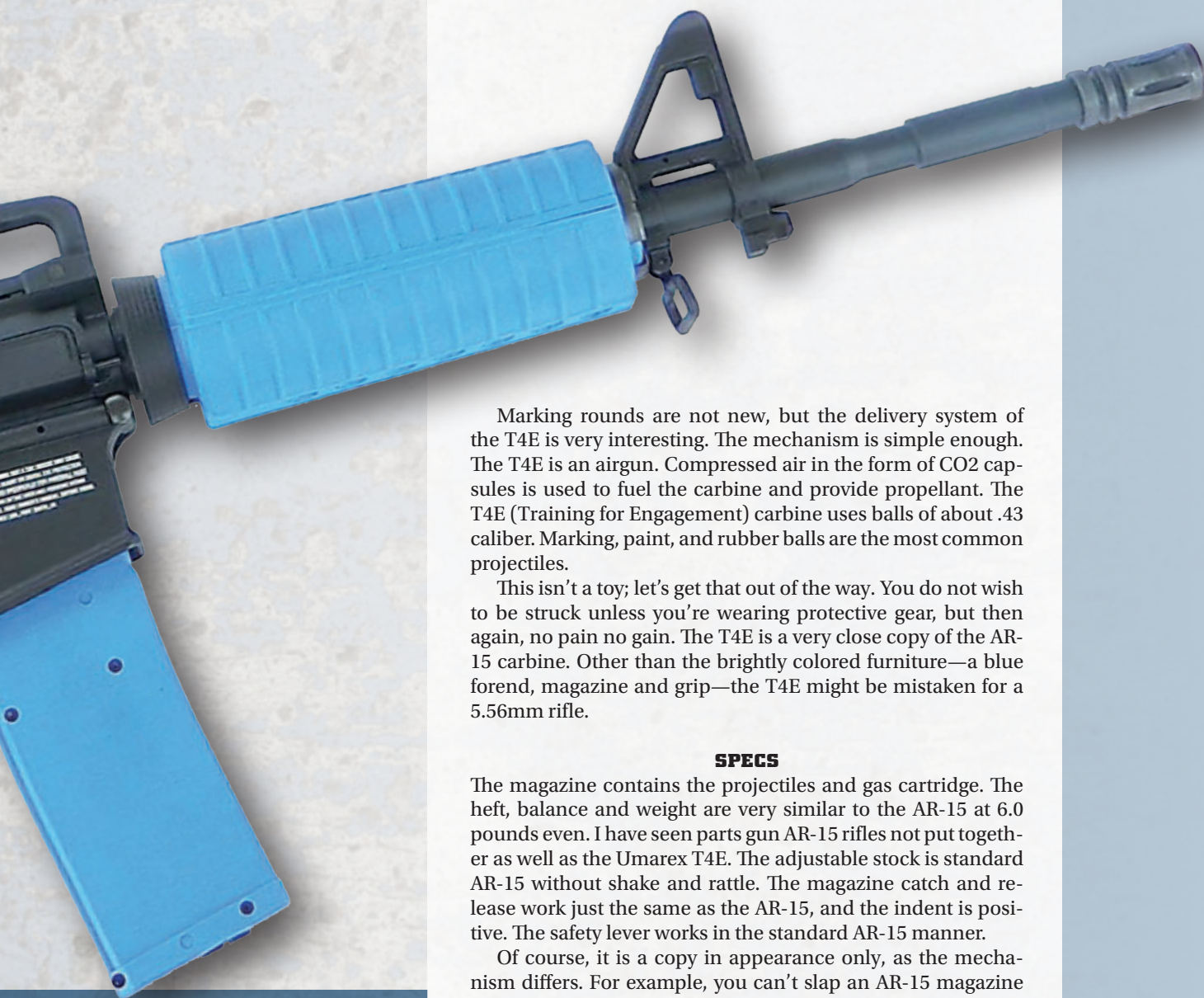


Not only does the T4E look like the real deal, it is also made of quality material.

Umarex T4E Trainer and Marker

BY R.K. CAMPBELL

When it comes to force-on-force training, budgets are sometimes the limiting factor. Expense is always a consideration, and suitability for the task at hand can be a problem. Umarex has introduced its T4E carbine to deal with training issues and provide a viable tool for force-on-force training and solo practice.



Marking rounds are not new, but the delivery system of the T4E is very interesting. The mechanism is simple enough. The T4E is an airgun. Compressed air in the form of CO2 capsules is used to fuel the carbine and provide propellant. The T4E (Training for Engagement) carbine uses balls of about .43 caliber. Marking, paint, and rubber balls are the most common projectiles.

This isn't a toy; let's get that out of the way. You do not wish to be struck unless you're wearing protective gear, but then again, no pain no gain. The T4E is a very close copy of the AR-15 carbine. Other than the brightly colored furniture—a blue forend, magazine and grip—the T4E might be mistaken for a 5.56mm rifle.

SPECS

The magazine contains the projectiles and gas cartridge. The heft, balance and weight are very similar to the AR-15 at 6.0 pounds even. I have seen parts gun AR-15 rifles not put together as well as the Umarex T4E. The adjustable stock is standard AR-15 without shake and rattle. The magazine catch and release work just the same as the AR-15, and the indent is positive. The safety lever works in the standard AR-15 manner.

Of course, it is a copy in appearance only, as the mechanism differs. For example, you can't slap an AR-15 magazine in place for training. It will not lock in place and you may even damage the internal mechanism.

Trigger compression is crisp and clean. I wish my AR-15s were delivered with a 4.2-pound trigger this nice. A self-loading rifle must have some take up, and reset needs to be positive for safety. This has the nicest trigger I've ever felt on an air rifle.



T4E's markings give it away—.43-caliber marker.



Top Picatinny rail is "T" marked to allow repeatable zero of optics.



Rear sight is fully adjustable. T4E is accurate enough for this adjustment to be handy.

Sights are standard M4 types located in the carrying handle. They are the real thing and may be adjusted. The rear sight features both short and long range apertures. The carrying handle may be removed to mount an optical sight. Rails are marked in the modern fashion to allow repeatability of mount with optical sights. The front post, like other AR-15 rifles, may be adjusted with a .223 FMJ bullet nose. There is a non-functioning forward assist. If you wish, the rifle may be equipped with a sling.

READ THE MANUAL

Even if you are very experienced with the AR-15 rifle, study the operator's manual. This isn't an AR you can pick up and start using without a bit of study. First, load the magazine with a CO2 cartridge. Loosen the piercing screw to do this, and after the first load you will be unloading spent CO2 cartridges. Do not leave cartridges in the T4E during storage, as this may cause wear on the seals.

Place a tiny drop of oil on the neck of the CO2 cartridge and insert it in the magazine, then tighten the screw with a large screwdriver. Next, pull the tab at the top of the magazine to the rear and load 14 balls. Insert the magazine until it locks home. Actuate the cocking lever—the throw is much shorter than that on an AR-15—and you are ready to fire.

FIRE IT UP

I found that the T4E would fire about 40 balls at full power with a single CO2 cartridge, which means you can reload at least twice. Forty-five shots are possible, but the balls will not have much power.

Also, if you rapid fire as quickly as possible, the rounds lose power more quickly—this is simply the nature of gas. Firing no more than two to three rounds quickly or one round per second seems to preserve power. Just the same, I emptied the magazine on several occasions without a problem.

The projectile clocks at an average of 300 feet-per-second (fps). This means that rubber ball accuracy is good to 100 feet, although man-sized targets may be engaged at up to 150 feet. The marking balls have their best accuracy at about 30 feet. This is ideal for close quarters combat training. The impact is noticeable and protective clothing should be worn, but the rubber balls or markers will not penetrate skin or clothing.

Every test and evaluation has many fac-



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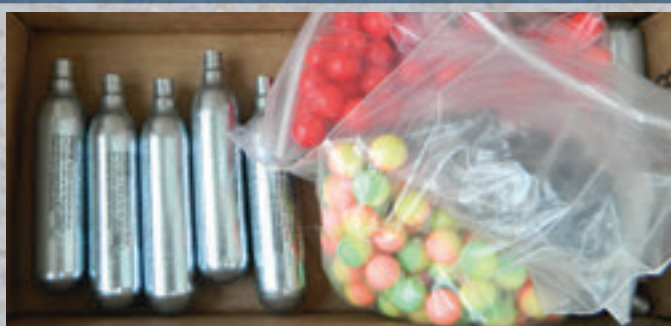




Safety operates in the standard manner.



Above: Supplied magazine offers good feed reliability, with no malfunctions experienced. Below: Box of gas cartridges and balls is inexpensive and represents a good bit of training time.



T4E comes complete with a quality hard case.

ets. The viability for training and the use the marker will be put to I leave up to the agency or individual. Since force-on-force is a viable and good form of training, there is no debate the market exists. Within that context, I find the T4E an excellent tool.

DOLLARS AND SENSE

Next, we must look at the viability of the T4E for economics. Let's face it, ammunition choice and affordability affect service weapons, and the training marker is no different. This device is affordable and may be used anywhere, from inside buildings to parking lots. While the value of non-firearms training may be debated, most switched-on agencies use Simunition or some type of force-on-force gear. The Umarex trainer certainly has its place.

Among the advantages is that this is a complete device, not a conversion, with no FFL requirements. The rubber balls may even be reused if properly trapped. There are also dust markers and paintball rounds in .43 caliber. The T4E is compatible with AR-15 accessories.

The company states that the only high wear part is the bolt assembly. It is recommended that the bolt be changed every 3,000 to 3,500 rounds. An additional bolt assembly is supplied with the T4E.

Replacement bolt assemblies are a reasonable \$32. Research indicates that a dozen CO2 capsules average \$6.50, while 430 rubber balls or powder markers are around \$30. At about one cent per shot, the T4E isn't expensive to run. As for maintenance, the seals need to be oiled with every 200 rubber balls loaded. When the time comes, changing the bolt is simple. The magazine should not be dropped but, since things happen, the magazine is drop resistant. The feed components would be damaged if the magazine fell at the correct angle.

I cannot comment on long-range durability at this time. During weeks of testing, the T4E has performed well. There is no reason to think the device will not perform well in the long term.

Suggested retail price of the T4E is \$550, reasonable for the quality involved. It includes a heavy-duty storage case. Spare magazines are in the \$60 range. ☺

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GRW00

Effective Activism

You've just sat down to a relaxing cold bottle of something. You're ready for an hour's R&R when—*wham!*—it hits you. And totally wrecks your peace of mind. The "it" I'm talking about is the weight of the world.

Maybe this sort of thing never happens to you. If so, good for you and go enjoy the rest of *S.W.A.T.* with my blessing. But if you're a regular reader of this column, or a political activist, or even just a person who stays informed about the world, I'll bet it *does* happen to you occasionally: you get overwhelmed by the evils in the world and your own inability to solve huge problems. Specifically, perhaps, you're burdened by the loss of American liberty or new threats to gun rights. But it could be anything. Terrorism. Economic doom. Corruption. The lies of poly-ticks. The rise of the surveillance state.

We are activists because we aim to *fix* things. We are informed citizens because we believe information is a tool

selves (gun rights activist Mike Vanderboegh and Oath Keepers founder Stewart Rhodes come to mind). Some strive for balance according to the serenity prayer, accepting the things they cannot change and facing those they *can* change with courage.

But if we care, if we're aware, we're sometimes overwhelmed. (Even for followers of the serenity prayer, the really hard part is "the wisdom to know the difference"—which implies knowing our own limitations.)

When we reach that point, it may seem as if the only courses of action are to throw our hands in the air and quit or redouble our only semi-successful efforts and work until we drop. That's a false dichotomy, though. Quitting accomplishes nothing, and redoubling efforts that aren't working is just dumb. As security expert Bruce Schneier observes, *"It's an attitude I've seen before: 'Something must be done. This is something. Therefore, we must do it.' Never*

to find the time and impetus for deep re-evaluation. It's a way that's proven effective for centuries. Many religious and political leaders (not to mention writers and dissidents) have tried it over the years and often done their best work and reached their greatest heights in the aftermath. You won't like their method, though: go to jail.

A few former jailbirds who spring to mind: Solzhenitsyn, Gandhi, Nelson Mandela, non-violence crusader Gene Sharp, Martin Luther King, Roger Baldwin (co-founder of the ACLU), Aung San Suu Kyi, Emma Goldman, Malcolm X, Vaclav Havel, and Voltaire. Never mind their particular politics. They were all transformed—and became more effective—by spending time in *durance vile*. Thousands of others have done the same.

Activist types aren't good at idleness. Being forcibly locked up gives a body no choice. You have to be still. If you're a thinker, you think. If you're a writer,

In short, sometimes the best thing an activist can do is ... nothing. Until we're rested and our minds let us know they've got something effective for us to do.

to be used. We believe in freedom and individual rights, and with those come weighty things like duty and personal responsibility. We hear (and perhaps even speak) admonitions like Edmund Burke's ubiquitous "The only thing necessary for the triumph of evil is for good men to do nothing." And being good men (and women), we feel driven to get up off our butts and *do something*.

Trouble is, of course, that the world's supply of trouble is vast beyond our ability to conquer.

We respond to insurmountable evil in different ways. Some activists throw themselves into one cause after another, burning out when they discover they can't do it all. Others devote themselves relentlessly to one cause where they think they can make a difference and work until they darned near kill them-

mind if the something makes any sense or not."

There's another, more sensible way: change tactics.

But changing tactics isn't as easy as changing our socks. It may require a top-to-bottom re-evaluation of the problem. It may require a look deep within ourselves to discover what strengths we bring to a situation, what we've been doing right and, more importantly, what we haven't gotten right. It may take time. It may be a brutal process. Honesty is painful.

This kind of reflection is hard in the best of times and more difficult than ever in a world so filled with distractions. (Why hurt your brain with thinking when you can binge-watch *House of Cards*?)

There's a traditional way for activists

you write (or get new ideas for writing). If you're an agitator, you probably think about agitating—and how you can do it more effectively.

But nobody in his right mind wants to go that route!

Fact is, though, when we feel the vast weight of the world on our shoulders and think that either burnout or "doing something, anything" are our only options, it's time to *stop*. Time for a spell of enforced isolation from the fray. Time to quit what isn't working or what's wearing us down, but not to rush into anything else.

If jail isn't a desirable option and if sitting still drives you crazy, you can create necessary inner stillness while working with your hands. For some, the more mindless the work, the better (digging ditches, painting the house).

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Others find that work requiring careful craftsmanship (gunsmithing, landscaping, or building an inlaid table) is better. I've found over the years that almost any job in which I handle earthy materials (brick, stone, wood, clay) puts me in the proper state of mind.

Immersing yourself in reading or writing can do it. Watching TV can't. Growing and cooking food can enhance contemplation. Shoving chips into our maws, nope. Computers and smart-phones can be informative, but they're as anti-reflective as can be. Hikes and bike rides, good. Video games, nope. Plinking, excellent. Getting into arguments over which is the "best" caliber of ammo, nope.

When we're overwhelmed, the key is to make time for our minds to work in the background. Once we allow them to, minds have an amazing way of figuring things out without a lot of conscious effort on our part. Physical activity helps the process along (which puts us way ahead of those folks thinking in their prison cells).

In short, sometimes the best thing an activist can do is ... nothing. Until we're rested and our minds let us know they've got something *effective* for us to do.

On gun rights, our side has been winning for 20 years and momentum is still with us—thanks to your hard, smart efforts. In no way am I saying or implying that gun-rights people are doing anything wrong. Far from it. I'm just saying we all need to be fit and focused—re-focused, if necessary—for a battle that will last a lifetime.

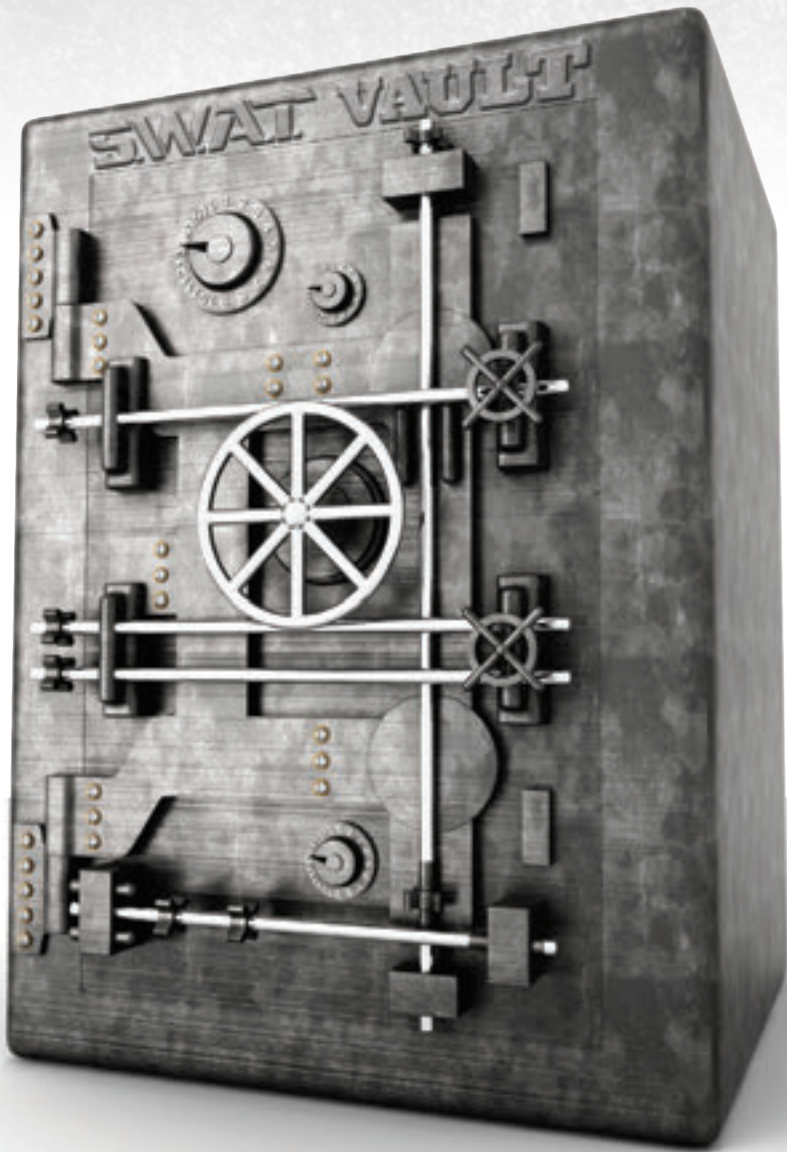
Sure as shootin', though, somebody's going to say, "That Claire Wolfe person wants us all to quit so the other side can win." On the contrary. Think about this: The enemies of gun rights are changing their tactics. They've switched from "gun safety" to universal background checks, from big pushes at the federal level to state-level initiatives. Who knows what else they have in store?

As I write this, Seattle billionaire Nick Hanauer, fresh from having helped foist universal background checks on the people of his state, has announced a new initiative to achieve national results through (so far unspecified, but you know it won't be good) local action. Soon we may need to be nimbler than ever, more ready to counter new threats.

And for that, we need refreshed minds and spirits. ☉

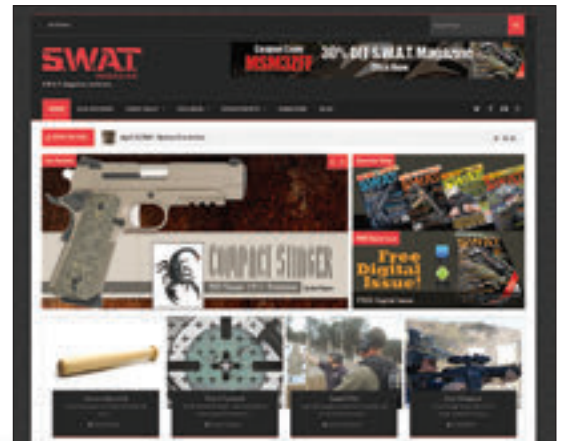
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Cheap Gear Failures

I have a dozen or more pieces of ill-fated equipment that have failed students in the past. These include scopes, reloading devices, firearms and supposedly “magical” items of equipment (read: bells and whistles) guaranteed to make you a better shooter, along with firearms sights of various and dubious origins.

The latest was (as the slick marketer told our student at a gun show) a scope just as good as those famous Leica lenses for the bargain price of just \$350! It looked good. It had the ubiquitous “tactical” black matte finish. It felt the right weight. How could he go wrong? It went completely south when all of two raindrops hit it just 30 minutes into the class, and it now resides on the shelf forever waterlogged and as useless as breasts on a cookstove.

I went through the same phase many years ago. In order to save money, I’d purchase an item that was “sort of” as good as the real thing. Ten minutes after purchase, I decried my decision and sure enough, several weeks or months down the road, I had to either live with it or get rid of it and upgrade to the item I should have purchased in the first place. Do this enough times and it sinks into your head that cheap is cheap, quality is quality, and the right item is probably going to cost you in one form or fashion. Don’t just compare something to a top-shelf item—buy the top-shelf item.

Off-brand weapons are a real doozy. When I observe a pistol with deep gouge

and tool marks, crooked sights and pot metal stocks, I start to worry. It may be a deal in Pakistan, but it is not a deal for you if you intend to fire more than one round from it. Quality looks like quality and feels like quality. The machining is quality, as are the materials and components. Quality will simply jump out at you, whereas junk will not.

Now the subject of funds arises. Take it from me that it is far better to temporarily do without. Save and then buy the right thing. This of course is largely predicated on your domestic status. A handbag for \$3,000 may seem reasonable to a woman, whereas a handgun for \$3,000 seems simply ludicrous and might be met with a severe reprimand, fisticuffs, and a cut-off of certain social activities.

Here the wise man will steer his course with trepidation and great circumspection lest he incur the wrath of the one he least wishes to offend. But with innovation, a clear thought process and total deniability, one may be able to secure such funds in a manner soundly befitting that of a CIA operative.

I do not have this problem, as my wife, Brett, is very understanding and I know what to ask for and what not to ask for. I have explained quality to her and she agreed, which is precisely why she now only orders custom diamonds direct from Harry Winston himself. See how that works? Never initiate a discussion with someone smarter than yourself. But I digress

When I first observe the beaming face of a newer student proudly displaying an item I know will shortly fail, I must make a decision. Tell him the truth (which is what I usually do) or allow the item to fail such that the student realizes firsthand the folly of his choice. Either way, the outcome is the same. The item fails, the shooter is dismayed and now has to unload the shoddy item and start all over again. It is far better to acquire the right item the first time out of the gate.

In the 1960s and 70s, you could find bargains all over the place. Such is no longer the case. Ebay has seen to that. Now most individuals can discover in a nano-second the true value of any particular item they wish to unload, which means that true bargains are somewhat rare and, in all probability, you’ll have to pay a hefty price for quality regardless of the item.

On the bright side, a quality item will last a very long time if you take care of it. Rather than acquiring three or four slipshod pieces of gear, purchase one high-quality item and care for it accordingly. This will prove to be more beneficial and rewarding in the long run than rushing into something you might regret.

“If only I’d known ...” is a phrase I hear all too often. Perhaps it is better to take a class and learn firsthand from those with credibility what works and what doesn’t. This will help you discern the difference between slick marketing and truly workable pieces of gear.

The male model in gear that is starched and pressed with nary a blemish to be found is just a model—not a real operator. Talk to those in the know and you’ll probably be steered in the right direction. ☉

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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Steyr AUG A3 M1

I'VE liked the Steyr AUG ever since I first fired one about 35 years ago. It made me a believer in bullpup designs because I find it comfortable to shoot, easy to store in a vehicle, and fast-handling.

The AUG was the first military rifle I fired a lot with an optical sight. A few years after this, I fired the British SA80 with its SUSET sight. That convinced me optical sights were very useful, as it was a 4X with a reticle useful for aiming and rangefinding. The AUG only had 1.5 magnification and used a donut, which could be placed around the target. It was fast but not especially precise at longer ranges.

I did a lot of shooting with one of the semi-auto black AUGs that were imported for LE sales with 16-inch barrels, as opposed to the 20-inch barreled green ones. I got very fast and accurate with it at ranges between 25 and 100

yards. My only objection, other than the rudimentary optical sight, was the AUG trigger pull, the result of plastic parts on plastic parts.

But awhile back, I read about the Steyr AUG A3 M1, the semi-auto version of the AUG A3 SF developed for the Austrian *Jagdkommandos*. Among the features that make it especially appealing are MIL-STD-1913 rails, an external bolt release, and the option of a 1.5X or 3X optical sight. Other sights, such as an ACOG, EOTech, or Aimpoint may be attached via the rails.

The AUG A3 M1 offers three choices of color: Green, Black, or Mud. Since the first AUG I shot was Green, nostalgia caused me to order one in that color with the 3X optic. Among the other features I liked when I first shot the AUG that are still there are the folding vertical foregrip and synthetic transparent magazines.

I've used the AUG with both 30- and 42-round magazines and have concluded that the 30-rounders are preferable for going prone. The synthetic stock on the AUG is not especially noteworthy these days, but I still find it very comfortable. I especially like the oversized trigger guard, which allows the use of heavy gloves, not surprising for a weapon originally designed for fighting in the Alps.

The AUG's controls are ergonomic and easily operated. The magazine release lever may be operated with either hand. For me, it works best when the support hand grasps the magazine while depressing the lever to remove the magazine.

The square cross-bolt safety is easy to locate and sure to operate. The cocking handle is of reasonable size and has a slight hook to help in grasping it. But I have to admit, my hand has slipped off it occasionally, especially when wearing tactical gloves. Catching it with the edge of the palm on the support hand works best.

The bolt release on the A3 M1 is useful but quite flat and, with the ridge on the stock above it, I cannot slap it with my palm as I am used to doing on an AR-type rifle. But overall, the AUG A3 M1 is very user friendly.

The AUG is gas operated with a two-position gas regulator. The ability to regulate the amount of gas is helpful primarily when the rifle is dirty or in cold, icy conditions. I don't remember having to use the regulator to increase reliability on an AUG, but I have on other rifles and found it useful.

I don't fire corrosive ammunition in 5.56x45mm rifles, but I still like the fact that the AUG's chamber and bore are chrome lined. And the AUG A3 M1 has a 1:9 twist that allows accurate firing with M193 or M855 loads.

My primary reason (or excuse) for acquiring the AUG A3 M1 was to try the 3X optical sight, so let's discuss it. The new reticle retains the circle for fast acquisition at close ranges but combines it with a crosshair for more precise aiming at longer ranges. As the crosshair is within the circle, the eye is



Thompson fires AUG on hanging plates at 35 and 50 yards. AUG is a very handy rifle for quick follow-up shots. It is also very ergonomic once the shooter gets used to its features.

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Steyr AUG A3 M1 with vertical foregrip folded. Thompson likes to use AUG with grip folded when shooting from a rest or at longer ranges.

led to it quickly for fast acquisition. The 3X magnification made it a lot easier for me to aim precisely at 200 yards and reasonably well at 300 yards.

At both those ranges, you need to do some shooting to determine where you have to hold to allow for bullet drop. Also note that my comments are based

on a 100-yard zero. Actually, with M855 (SS109) at 200 yards, drop is less than two inches, so for center-mass shots, aiming point may not need to be adjusted, but it will for headshots.

At 300 yards, drop will be around five inches, so the aiming point will need to be adjusted. Many ballistic charts are based on a 250- or 300-yard zero and show different figures.

An interesting aspect of the 3X optic is that it incorporates small Picatinny rails, so a mini-red dot for CQC can be mounted if so desired. A rail on the right side of the receiver also permits mounting a compact illuminator or pointer.

The A3 M1 is designed so that other rail options are available. For those familiar with the older AUGs, it is no longer necessary to use the special adjustment tool for the optical sight. You can use a screwdriver.

I fired groups at 100 and 200 yards and at plates out to 300 yards. I used M855 for most of my shooting but also used some surplus M193 and Black Hills MK 262 77-grain rounds. Those who have done much shooting with military M193 and M855 probably won't be surprised that my groups were better with M193 than with M855. My best five-shot group with M193 was 2.62 inches, while with M855 it was 3.25 inches.



AUG's cross-bolt safety, bolt release lever, and magazine release button/lever, plus very durable 30-round polymer magazine.

Black Hills MK 262 77-grain grouped into 2.87 inches, but the fact that the barrel has a 1:9 twist may have degraded accuracy with the heavier bullet a bit. Firing at the terrorist on a hostage target, I easily kept three shots of M193 in the center of mass or head of the terrorist.

As always when shooting the AUG, the trigger pull was not much of an aid to accurate shooting.

I did most of my shooting with the vertical foregrip folded. I generally use the foregrip extended for quick shooting at closer ranges, but fold it for 100 yards or more. For me, the AUG's foregrip has always been very comfortable to use. I have fired full-auto AUGs, and the foregrip does help with control when firing bursts.

My A3 M1 came with three 30-round polymer magazines. That's enough to get started, and spare AUG mags are reasonably inexpensive if you watch for deals. Since I've owned AUGs for some years, I've accumulated quite a few mags. They are very durable so will probably outlast me. For those who prefer STANAG magazines, the A3 M1 is available with the capability of using M16/AR15 magazines.

I tested the AUG A3 M1 on the assumption that I would like it, since I like the AUG a lot. I was right—I do like it—so much in fact that I will relegate my older AUG to the back of my safe.

The A3 M1 retains all the features of the AUG that I like and has fixed most of the ones I didn't like. The exception is the trigger pull, which is still heavy and gritty. I can live with that, though, as I've shot AUGs enough that I'm used to it.

As always, I appreciate how compact the AUG is. It carries readily in a compact, low-profile case and easily stows in a vehicle. I learned from working with the AUG as a weapon for security details that it deploys quickly within a vehicle or when exiting the vehicle during a counter-ambush drill.

Thirty-five years down the road from when I first handled and fired the AUG, I remain impressed. ©

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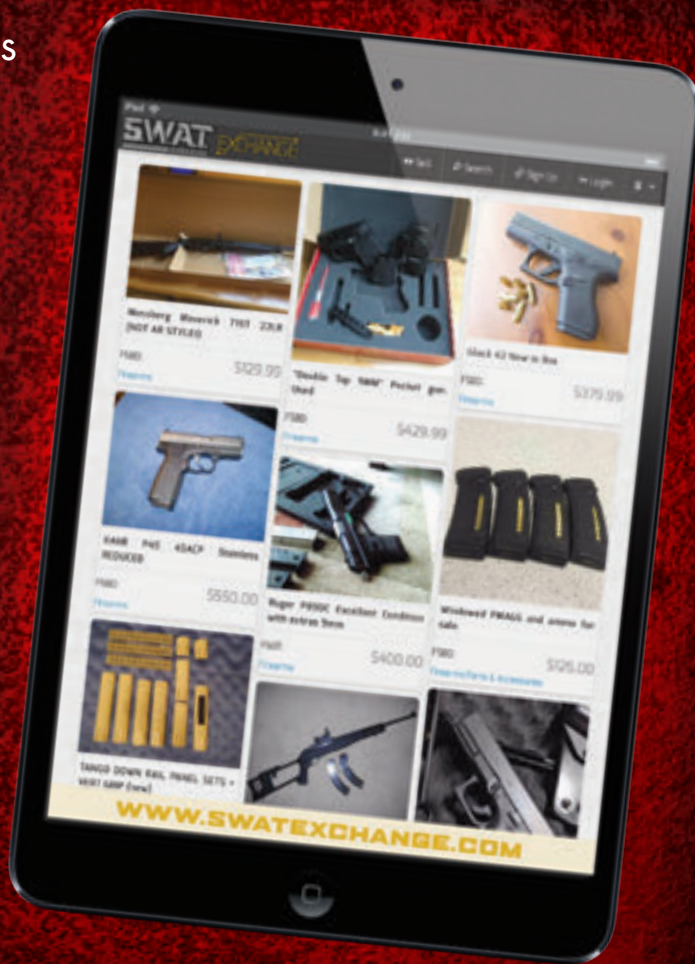
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FLIGHT OF THE RAVEN

LRK Mechanical Corvid 30

BY DENNY HANSEN



Gunsite instructor Gary Smith takes aim with Corvid 30.

Throughout history, the Corvid family of birds, which includes ravens and crows, has been the subject of many legends—probably more than any other species of birds. In Norse mythology, Odin kept two ravens, Huginn and Muninn, who would fly out daily and bring him information from the world of mortal men. Many Native American tribes perceived the raven as a trickster, much like a coyote. In other legends, the raven is a shape-shifter.

Recently I had the opportunity to evaluate what may be a legend in the making—the Corvid 30 from LRK Mechanical.

CORVID SERIES RIFLES

LRK Mechanical's Corvid rifles begin life with Remington 700 series receivers. Then the receiver and bolt are trued and blueprinted. A premium barrel—with LRK's proprietary minimum headspace chamber—is chosen and chambered according to what caliber the customer wants, and installed on the receiver. The barreled action is mounted in the stock/chassis system chosen by the customer, and the trigger tuned to the customer's specifications.

Corvid series rifles are available in .308, .300 WM, and .338 Lapua Magnum. Other calibers are available upon request. The test rifle, a Corvid 30 chambered in .308, is LRK's "full boat" model. It features a 20-inch Krieger stainless steel barrel that has the standard 5/8x24 threads for attaching a muzzle device or suppressor. A steel knurled cap to protect the threads is included. A 20 MOA Picatinny rail sits atop the receiver.

The rifle uses an Accuracy International single-stack five-round magazine. It feeds rounds directly into the chamber, so there is less chance of a bullet tip being nicked than with a staggered stack magazine. The teardrop-shaped bolt handle is smooth and of ample size. The bottom of the handle is engraved with the Corvid logo.

A barreled action is fitted in an Accuracy International AX AICS chassis with folding stock that is adjustable for length of pull and height at the cheek piece. The toe of the stock protrudes downward and is large enough for the weak hand to hold onto. The stock folds to the left, where a socket on the stock matches to a stud on the receiver portion of the chassis. When deployed, the stock is rock solid, with no play in any direction.

The barrel is covered with a KeyMod handguard from the end of the receiver to 4.75 inches from the muzzle. Three, three-inch Picatinny rail sections sit at three, six and nine o'clock at the muzzle end of the handguard. The rail section at six o'clock has a stud for attaching a bipod.

Finish on the test rifle was Flat Dark Earth Cerakote™. Overall length with all adjustment spacers in place was 39 inches, and weight approximately 12 pounds.

BURRIS XTR II

For the optic, I chose the Burris XTR II 4-20X50 with G2B mil-dot reticle. Click values were in 1/10 mils. Using a Wheeler "Fat Wrench" torque wrench, the bases were attached to the rail with 40 inch-pounds of torque.

The XTR II is a front focal plane reticle design, and trajectory compensation is always correct and proportional for the selected power setting. This high-performance optic offers Hi-Lume® multi-coated lenses, which optimize target resolution, contrast, and low-light performance.

The side-mounted parallax adjustment can be set from 50 yards to infinity. The XTR II has an illuminated reticle with 11 brightness settings. Weighing 30.90 ounces, this is a heavy-duty scope.

BUILDING THE HOUSE

"Build your house" is a term I picked up at FTW Ranch in southwest Texas. It means to establish a solid firing position using bone support, muscular relaxation, and establishing a natural point of aim. I used several products to create a stable platform and minimize movement of the rifle while firing.

The first was a Tac Shield bipod. This particular model al-



Corvid starts out as a Remington 700. A 20-MOA Picatinny rail sits atop the receiver.

lowed the rifle to be pivoted or canted to compensate for uneven terrain. The legs on the bipod can be adjusted from six to nine inches in length.

The next two products were from Triad Tactical. The Triad Padded Shooting Mat is long enough to keep the shooter's body out of contact with the ground and wide enough—via a 19-inch section of durable non-slip material—that your elbows don't hang off. With two layers of Cordura (top/bottom) and 1/8-inch foam padding center, the Triad Padded Shooting Mat offers protection and portability.

The Tapered Rear Bag (aka Wedgie) applies a little geometry to an age-old tool. By moving the Wedgie front to rear under your rifle's buttstock, you can quickly change gross elevation, and a little squeezing makes fine adjustments.



Above: Accuracy International AX AICS chassis with stock extended. Visible above the trigger is the stud that secures the stock when folded.

Right: AI stock folded.





Right side of Corvid 30 as tested on Triad Tactical Padded Shooting Mat with Burris XTR II scope, Tac Shield bipod, and Hornady and Black Hills ammunition.

Loaded, with scope and bipod attached, the Corvid 30 tips the scales at a tad over 15 pounds, or roughly the weight of two M4 carbines. With that said, the bipod and Tapered Rear Bag are valuable tools that let me use bone support—not muscles—to steady the rifle.

RANGE TIME

Given the minimum headspace in the rifle's chamber, I chose two match-quality loads with proven track records: Hornady 168-grain Super Performance SST and Black Hills Ammunition 175-grain boat-tail hollow-point.

Hits at 600 to 800 yards should be very doable, and anything less is gravy.

Using the correct data for each load—bullet weight, velocity, and ballistic coefficient—I input that, along with information for the scope, into the iStrelok ballistic calculator on my iPad and used a Kestrel 4000 to determine other factors such as wind, elevation, and temperature. iStrelok is probably the most useful (and most used) app I have ever downloaded. I have even built a data card for my Ruger 10/22 using it.

The rifle has a very, very good trigger for a precision gun. I would estimate it at about two pounds. I began by establishing zero on my home range at 100 yards. I fired a five-round group and, holding on the bullseye, used the mil-dot reticle to make corrections from where the group impacted, so adjustments were quick and easy.

The next five-round group was slightly high and right, and measured right at $\frac{1}{4}$ inch (.25 MOA), with four of the five going into one hole and a “flyer” opening the group to just under $\frac{3}{8}$ inch (.37 MOA). One click left and two clicks down had the Corvid shooting exactly to point of aim.

While the Corvid showed a lot of potential, a 100-yard shot does not always tell the whole story. I met with Gary Smith, a Gunsite rifle instructor, at the Woodfill range on the 300-yard line. A quick check with the Kestrel 4000 and iStrelok ballistic calculator revealed that an increase of about 1.3 mils in elevation would be

Stock's length of pull is adjustable by inserting or removing spacers.



needed to hit to point of aim at 300.

Behind the rifle, Gary prepared to fire a five-round group. With the cold, clean bore, Gary called the first shot about an inch high. When we went downrange, we found the other four shots had gone into a tight cluster and measured right at an inch. That works out to approximately .35 MOA—if anything, slightly better than the 100-yard group!

CONCLUSIONS

While I did not get the opportunity to evaluate the Corvid at what can truly be called long distance, based on the shooting we did at 300 yards, I would be willing to bet a paycheck it will not exceed .5 MOA if the rifleman does his part and quality ammunition is used.

Hits at 600 to 800 yards should be very doable, and anything less is gravy. Suggested retail price of the Corvid 30 is \$5,500. But LRK can also build an ac-



One rail section has a QD sling socket, while another has a stud for attaching a bipod.

curate rifle that fits most budgets.

LRK Mechanical, LLC is a true custom rifle shop and can apply Cerakote and gunsmithing for NFA firearms. They can configure a rifle to your individual needs. Most caliber, stock and barrel configurations can be accommo-

dated. If you are in the market for a precision rifle built to your specifications, give LRK Mechanical a hard look.

And if you see a couple of ravens hanging around listening to what's going on, tell them to say hello to Odin for me. ©



Burris XTR II proved an excellent optic to mate with Corvid 30 rifle.



LRK Mechanical's Corvid logo on bottom of large teardrop-shaped bolt handle (left) and on right side of receiver.



Main screen of iStrelok ballistic calculator.



"Flyer" in this five-round group opened it up to just under 3/8 inch. Ammo: Hornady 168-grain SST.

SOURCES

LRK MECHANICAL, LLC

(928) 776-6483
www.lrkmechanical.com

BLACK HILLS AMMUNITION

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

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SWAT

SWEEPSTAKES

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SMITH & WESSON M&P 15-22 MOE



**TOTAL
VALUE
OVER
\$1,500!**



This month's sweepstakes features a Smith & Wesson M&P15-22 MOE rifle and is brought to you courtesy of Davidson's Gallery of Guns.com. Davidson's unique website, GalleryofGuns.com, allows consumers instant access to tens of thousands of firearms in Davidson's huge inventory. All gun purchases are backed up by Davidson's exclusive GuaranteeD® Lifetime Replacement Program.

DAVIDSON'S
GALLERY OF GUNS

Chambered in .22 LR, the M&P15-22 rifle is built with high-strength polymer upper and lower receivers with metal inserts to make them even stronger. This creates a rifle that only weighs 5.5 pounds while retaining both the looks and operating features of the standard M&P rifle.

The rifle features a Magpul MOE six-position collapsible stock. Front and rear sights are Magpul MBUS folding sights. A lightweight quad handguard made from high-strength polymer is included. The 16-inch barrel is capped with an A1 flash suppressor. The rifle comes with one 25-round magazine.

This is a great rifle for a beginner to learn fundamentals or an experienced shooter to keep his skill sets honed while saving money on ammo.

EOTECH 518

While conventional sights should be on every long gun, the usefulness of red dot sights cannot be denied. This sweepstakes features the brand-new EOTech 518 Holographic Weapon Sight (HWS). EOTech took all the best features of its HWS products and combined them into this highly functional, easy-to-use new sight. The 518 models both feature the highly sought-after quick-release base and side-button functionality of the EXPS series and run on AA batteries (lithium or alkaline), the most common batteries in the world.

The 518 is compatible with the G33 Magnifier and the recently released EOTech Laser Battery Caps (LBCs), doubling the aiming capability. Simply remove the standard cap and replace it with the drop-in LBC visible laser or the LBC2 with both visible and infrared lasers.



WALKER'S ULTIMATE POWER MUFF QUADS

Smart shooters wear ear protection regardless of what is being fired. The Ultimate series by Walker's Game Ear features a proprietary blend of sound dampening composite material. Walker's has effectively increased their noise reduction rating up to 27dB, making them the highest electronic hearing protection on the market, while maintaining their slim "shooter" profile.

The Ultimate Power Muffs feature a compact folding design, have low-profile ear cups, and incorporate a new comfort headband with metal frame. They are very comfortable and durable muffs that operate on two included AAA batteries.



SAWFLY EYEWEAR SYSTEM

God only gave you two eyes, and to protect them this sweepstakes includes the Swiss Sawfly eyewear kit from Revision Military, a world leader in protective soldier solutions. Specifically designed for the military, Sawfly Eyewear meets stringent global military standards for ballistic eyewear. Sawfly glasses provide optimum high-impact protection with flawless optics and feature a lightweight frame and ultra-thin arms for perfect hearing protection compatibility.



SOURCES

DAVIDSON'S INC.
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www.galleryofguns.com

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Or even easier, click the September Sweepstakes tab on the S.W.A.T. Magazine Facebook page at www.facebook.com/swatmag.



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Since I have over two decades of street time, you won't be surprised to hear that talking heads, experts, or gurus with inflated or non-existent police experience raise my blood pressure.

With the media, common sense, real street experience, and tactical knowledge get passed over for politicians, charlatans, and college professors—a plague on police work.

It's worse with social media making every paranoid anti-government nut job an expert. In the news of late are the media-constructed, politically driven "militarization of police" narrative, as well as "all law enforcement is the same." Politically expedient, masterfully marketed, both are complete nonsense.

That's what happens when your "expert" is a chief, college professor, or retired federal agent who worked the "street" in 1970. Couple that with throngs of anti-government nut jobs and you get today's environment. Unfortunately it has a real-world effect, severely limiting police effectiveness and their ability to survive actual gunfights.

Following 9/11, the police community, especially the SWAT world, scrambled to catch up to a new threat—one motivated by ideology, not drugs, money, or a mental disorder.

Many of us beat our heads against the wall trying to convince administrators there was a difference. The response was often, "We'll just call FBI HRT." Yep, if you have a couple days. In the meantime, people are dying. Money or politics driving the mission is never good, and neither is fantasy. Lately reality has reared its ugly head. Guess what? It's *your* problem, and you get to deal with it, like it or not.



OVERWHELMING A WELL-ARMED THREAT

U.S. Machine Gun Armory
MGA SAW K

BY DAVID BAHDE



Fired from off-hand, MGA SAW K was easy to control with very little muzzle rise or recoil. Using subsonic ammunition all rounds cut one large hole at 15 yards.



With GPS Grip Pod in place, you have a grip for unsupported shooting, yet dropping to prone you can get stable very quickly.

MGA SAW K



Clockwise from left:
Feeding on MGA SAW K was flawless and simple, with no light primer strikes or broken links. It can use either 100-round soft or 200-round hard magazines.

While many parts are proprietary and improved for use in this configuration, the receiver is backwards compatible with a standard M249.

Mounting DBAL-A3 laser lets you stay on target at night. Forend covers can be swapped out for rail versions that allow mounting of NV when necessary.

Even with the short handguard, there was plenty of room for a light, while maintaining solid control under longer bursts.



The attack outside a Prophet Mohammed cartoon contest in Garland, Texas may be the perfect example. Luckily, police there were prepared. Change venues and the result may have been quite different.

Fighting multiple targets that are well armed, trained, and expecting to die may occur. Getting grenades and homemade bombs thrown at you changes the dynamic a tiny bit. Your handy-dandy “high-capacity” polymer wonder pistol or evil “assault rifle” may not cut it. Sometimes you need more, and that might just mean a belt-fed machine gun. Yep, even more evil military hardware.

There is just nothing like that kind of firepower to hold at bay or overwhelm a well-armed threat—that is, if the mission drives the equipment.

BELT-FEDS FOR COPS

Having had this conversation numerous times with administrators, I can assure you it’s a hard sell for many agencies—as it should be. Three-man departments in rural America don’t need a belt-fed machine gun. Agencies fighting real terrorists or well-armed threats may need one. Nothing expressed in the news, on social media, or in meeting rooms changes that.

Missions and threats drive needs—they always have and always will. Ignoring this gets the wrong people killed.

The most common tool is the SAW (Squad Automatic Weapon) or M249 and its variants. Coupled with proper training, it does the job well. For police missions, its size, length and weight can be problematic. Plopping military hardware into a cop’s hand is a waste when not meeting the police mission.

Controlled firepower delivered across the street, not at 300 meters, makes standard variants cumbersome. Lighter, shorter, and suppressed are the ticket, and it looks like U.S. Machine Gun Armory has done just that.

U.S. MACHINE GUN ARMORY MGA SAW K

U.S. Machine Gun Armory (MGA) specializes in M249 belt-fed machine gun variants. Improving on original designs, they have strengthened receivers, improved stock options, and provided better barrels, sighting options, and caliber choices.

Testing several over the years—including their latest in 6.8 SPC—they are always looking to meet the needs of




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MGA SAW K



Trijicon SRS proved a perfect match for the SAW K. Rugged with a clear field of view and no tunnel effect, it provides fast and accurate sighting.

Below: U.S. Machine Gun Armory's stock adapter allows use of any AR stock, including folding mechanisms. This keeps things very handy.

customers, both military and civilian LE. With numerous requests for lighter versions, they decided to comply.

They shortened the barrel to ten inches. A proprietary piston design facilitates AR stocks, placing it straight back from the action, no typical drop or heavy buffer. Altering the gas system makes it work in 5.56mm, .300 BLK, 6.8 SPC, and 7.62x39mm. They are working on a 7.62x51mm (.308) version.

Cutting weight by as much as four plus pounds is a noticeable difference. Spending the day with one chambered in .300 BLK allowed me to feel the difference.

My test gun used a 9.75-inch (breach to muzzle) 1:8 twist .300 BLK barrel capped with a SureFire SOCOM Muzzle Brake and SOCOM mini 7.62 suppressor. Overall length was similar to an M4 with a nice balance.

The railed handguard housed a DBAL-A3 laser and Battle Light MK4



» SPECIFICATIONS

MGA SAW K

MANUFACTURER	U.S. Machine Gun Armory
MODEL	SAW K
ACTION	open bolt, full automatic only
CALIBERS	5.56mm, .300 BLK, 6.8 SPC, 7.62x39mm
BARREL LENGTH	9.75 inches
CYCLIC RATE	800 rpm (depending on ammunition)
OVERALL LENGTH	32 inches collapsed, 35 inches extended
WEIGHT (empty)	10 pounds
FINISH	Cerakote or coating of choice
CAPACITY	100-round soft magazine or 200-round hard magazine
SUGGESTED RETAIL	\$15,000.00 (post-ban government or dealer sample only)



Using SureFire SOCOM Mini-762, SAW K remains compact. It weighs in at almost four pounds less than a standard MK 46.



Perfectly suited to carry, 100-round soft magazine keeps things light, while Trijicon SRS provides fast and accurate sighting.

light. A Grip Pod Systems Grip Pod with a quick release provided control both from off-hand and prone.

The improved receiver houses a proprietary buffer system that allows mounting an AR stock straight back from the receiver. An ARK Defense SOPMOD Buttstock slid over the carbine buffer tube mounted to a USMGA mount. Sights are standard fixed front

and adjustable rear. I added a Trijicon SRS red dot for testing and a Magpul MS3 Gen 2 sling for carry.

Belts were housed in a 100-round soft magazine. Belts were provided loaded with Gemtech 187-grain Predator subsonic and 125-grain Nosler supersonic ammunition. Standard 5.56mm links are used with the .300 BLK, while custom links are used for 6.8 SPC and 7.62x39mm.

TESTING

Police and military missions differ, more than those selling training would like you to believe. Setting up a machine gun emplacement is probably not in the cards. Police encounters with terrorists or similar threats are going to be mobile and immediate. You may end up in prone, maybe not. More likely you'll be shooting around cars, walls or other urban debris.

A few rounds were fired from prone to test overall accuracy, but everything

else was from off-hand, moving and in the shoot house. The advantage with this system is immediate deployment by a single officer in a quickly developing event. Testing was done in full kit using my Survival Armor vest, which includes a pistol and spare magazines. I fired it around barricades, my truck, walls, window openings, and similar—it was tested the way I would use it as a cop.

ON THE RANGE

The size difference is immediately clear, as the MGA SAW K fits in a standard rifle bag, suppressor and all. Nothing to add, just grab it and go. Remove the suppressor and it fits in less obvious bags and cases. SureFire's SOCOM attaches quickly with little to no impact shift, making it ideal.

Performing a couple runs to the back of the truck, donning the vest, then gun, then helmet was as fast as deploying with an M4.

Shouldering the MGA SAW K is as easy as it gets with a belt-fed machine gun. Short of using M4 magazine adapters—more trouble than they are worth—you must work around the box magazine. Hard magazines are a pain and not for those who do not frequent the weight room. The 100-round soft magazine is preferable.

Your tacticool fast-action grip and stance won't work, and some strength is required, but nothing like a standard M249. After testing, my preference for a sling is an attachment up front that lets me switch from single to dual point. Working in and out of the truck and in the shoot house, the single point was excellent. It also facilitated dropping straight to prone with no change to the sling.

But carrying it around and moving from points of cover would be more efficient with that second point of con-

» Continued on page 88



SAVING LIVES



Providing 360-degree security during treatment prior to victim being loaded onto Sked.

UNDER FIRE

Tactical Combat Casualty Care

*Learning is the only pleasure
of which there is no surfeit.*

—Col. John Dean “Jeff” Cooper

If you're a shooter, a gunshot wound is as real a possibility as a negligent discharge. One hopes it never happens, but it can. Now what?

How can we help? How can we avoid doing further harm? It was time for me to expand my training beyond making effective hits.

I attended a course in Tactical Combat Casualty Care given by the fine people at Tactical Support Institute of Mesa, Arizona. I am now able to do a great many things to preserve a life in the critical first minutes after a serious injury. I recommend this training to everyone who regularly carries a weapon or goes into harm's way. Today, TCCC is taught to every soldier.

After registering, I was told to obtain the textbook, *PreHospital Trauma Life Support* (ISBN 978-1-284-06156-7) and take a pre-test based on the course work. TSI is serious. They want you to prepare for this class.

Tactical medicine has existed since the first rock was thrown in anger: Treat the casualty, prevent additional casualties, and complete the mission.

In 2001 the U.S. Special Operations Command created the Committee on Tactical Combat Casualty Care. All

BY ROBERT W. SHIMIZU



Above: Students apply a tourniquet during Tactical Field Care phase.

Left: Moving a casualty while providing security.

Below: Two-man team treats injured woman for a traumatic eye injury and provides security before moving her.



CoTCCC members are medical professionals with at least one deployment. CoTCCC developed a series of protocols that are easy to understand and administer and can be effectively deployed by the average trooper and unit medic.

The Committee first analyzed casualty figures from the Vietnam War. The vast majority of deaths occurred due to hemorrhage, tension pneumothorax (sucking chest wound), and airway problems. Using TCCC protocols, combat deaths today are 9.7% of what they were in the Vietnam War. That is a *huge* improvement in survivability.

TACTICAL SUPPORT INSTITUTE

Mark Warren, the leader of Tactical Support Institute, and his staff members Tim Freund and Chris Shivley offer TCCC training in the southwest. Mark is a former police officer who decided to cross-train as an EMT. Chris helps Mark administer the business, while Tim (a SWAT medic) and others serve TSI as the training cadre. Active-duty U.S. military medics, SWAT medics, and other

emergency services people serve as adjunct instructors.

TSI's people are extremely well qualified. So were our students. Among them were firefighters, Army nurses, combat medics, LE personnel, and a helicopter medic. All of them had taken this training before. I was the only "newbie" in the crowd.

The days of unarmed medics wearing a red cross are over. Today, a medic fights with his unit, and over the two days I saw excellent tactics and strategy superimposed over effective life-saving skills.

Instructor Tim Freund distributed red training guns and training tourniquets to all students. We evaluated various designs, but the Combat Application Tourniquet was favored because it can easily be applied using one hand.

Once considered the treatment of last resort, early and aggressive use of tourniquets is saving lives on today's battlefields. They are safe for up to six hours. Tim had us apply our tourniquets to a leg, stand up and walk around. Tourniquets hurt but are vastly

preferable to the alternative.

Nowadays, each trooper has a tourniquet on his gear, as well as an IFAK (Individual First Aid Kit). In a dialed-in unit, that gear is in the same place on every teammate.

TCCC has three phases:

- Care Under Fire
- Tactical Field Care
- Tactical Evacuation Care

In the Care Under Fire phase, we are under effective hostile fire. If at all possible, the injured must remain in the fight. They should seek cover and apply self-aid, then return fire and help the team overcome the enemy. After the fight, we enter the Tactical Field Care phase, when we can do much more to help the wounded.

The bulk of the class was spent on Care Under Fire and Tactical Field Care. We did cover the ongoing medicines and techniques we can use in Tactical Evacuation Care, but the chopper or ambulance has better trained personnel and superior equipment. Our job is to deliver the casualty into their care.



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LIVE FIRE VIDEO


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TACTICAL FIELD CARE

An unconscious trooper can wake up imagining he's still in the fight. So if the wounded exhibits any altered mental state, he must be disarmed (including comms gear).

Treatment for pain and infection should be given as soon as possible. Today every trooper carries a Combat Pill Pack consisting of Mobic (meloxicam) and Extra-Strength Tylenol (acetaminophen) for pain control. Unlike aspirin or ibuprofen, these two drugs do *not* inhibit the coagulation process. A single dose of moxifloxacin is also included for early antibiotic treatment. When the Combat Pill Pack is taken immediately (and treatment is continued), there is almost no chance of infection.

Follow these procedures during Tactical Field Care, using the MARCH acronym:

M - Massive Hemorrhage. Seek out and control all bleeding. Apply tourniquet if necessary. If the wound is not amenable to a tourniquet, apply Quik-Clot Combat Gauze onto or into the wound with three minutes of direct pressure.

A - Airway. Ensure proper airflow. This can be as simple as placing the wounded in a sitting position so he or she can breathe, or the introduction of a nasopharyngeal tube (nose tube). In critical cases, we may have to establish a surgical airway (cricothyroidotomy).

R - Respiration. Recognize and aggressively treat tension pneumothorax. In this condition, air enters the chest through the wound but is not expelled. This collapses the lung and puts pressure on the heart. Apply chest seal(s) and perform a needle decompression, inserting a 3.5-inch, 14-gauge needle into the chest cavity between the second and third ribs directly rearward. When the needle is retracted, a flexible catheter is left to expel air and allow the patient to breathe.

C - Circulation. If necessary, start an IV. Hextend (the hetastarch molecule) has an advantage over Ringer's Lactate because it is retained in the vascular system longer and is lighter to carry. TCCC teaches a special IV methodology that protects the injection site and allows

a quick disconnect if you must move the casualty. If you can't start a normal IV, consider IO (intraosseous—into the breast bone or leg) using a special spring-loaded device, the Pyng FAST-1, that puts a set of needles into the bone to deliver fluids via bone marrow.

H - Hypothermia. This and shock both inhibit wound coagulation, so early treatment is important. Replace wet clothing and apply blankets and headwear. Replace Personal Protection Equipment if possible.

TCCC teaches a "golden hour" in which a life can be saved if the MARCH principles are applied ASAP. Tim expanded this to a "platinum ten minutes," the most important period during which we must deliver effective care.

Communicate with the wounded. Get on a first-name basis and tell him what's going on and how you are going to help him. Keeping up a simple conversation is the best way to monitor the patient's state of consciousness.

We also covered various methods of moving the wounded, ranging from a single-person drag to two-person carries, use of stretchers and the Sked®—a rolled-up plastic litter that's easy to carry and deploy.

Throughout the class, Instructor Tim Freund admonished us not to become casualties ourselves. "Good medicine isn't always good tactics. In a battlefield assessment of a wounded comrade,



Combat Application Tourniquet can easily be applied using one hand.



Attempting to communicate with victim prior to reaching aid.

keep your body profile low! The command element, the comms element, and the medic are primary targets for your enemy. One casualty can easily become two.”

Sadly, not everyone can be saved. We learned the grim process of triage. Battlefield CPR is not normally performed—because it doesn’t work. An unresponsive casualty with a traumatic brain injury should be bypassed. Instead, care must be given to those who can benefit.

TCCC EXERCISES

TSI doesn’t just offer classroom instruction. The course also included a simulation phase. The last part of each day we performed exercises that gradually increased in complexity.

We were issued IFAKs, comms gear, and red guns. After Mark gave us a simulated radio call, we moved out as a team. We encountered “downed officers” or “civilian casualties.” Our challenges were to neutralize any threats as well as diagnose and treat injuries.

We learned not to rush up on a casualty, because we may not have neutralized all threats. Thereafter, we split our forces into tactical and medical elements. TSI kept the challenges coming, testing us to a greater degree each time. As the threats evolved, so did our teamwork.

I was very impressed with the war-fighting skills of these medical professionals. Tactics were first-rate. Communication was excellent. Orders given were crisply carried out. The team maintained 360-degree security during treatment and transport to a casualty collection point. Treatment was continued there until Mark or Tim gave the “end-ex” command. Then we returned to the classroom for debriefing, where everyone’s input was considered.

Throughout the class, TSI personnel assessed each of us closely. If we attempted to “slack-tie” our tourniquets, we were corrected, and the instructors checked until our radial pulse was gone. They answered our questions concisely. TSI’s real-world competence challenged us to step up and master the skills.

At the end of class, we took a written test that was graded on the spot and was similar, but not identical to, the



Student rushes ahead of his security element and is hit.

Below: Casualty collection point.



pre-test. Those who passed were issued a TCCC card from the National Association of Emergency Medical Technicians. I proudly carry this card.

TAKEAWAYS

By virtue of this training, I have changed my outlook and my load-out. I now carry a tourniquet and an IFAK on my gear at all times. If you go down, we will both keep fighting. Then I can stop the bleeding, introduce an airway, or perform a surgical airway.

If you suffer hemorrhagic shock, I can start an IV and push fluids. If you have a tension pneumothorax, I can perform a needle decompression. You won’t like any of this, but I’m commit-

ted to saving your life. Complain all you want, but *hold still*. Later, and for a long time afterward, you’ll buy the beer.

TSI’s staff, teaching techniques, and demonstration of what works and doesn’t work in the tactical medical environment are absolutely excellent. I strongly recommend TCCC training. During the class, I met a new category of person: war-fighters who can heal. Best of all, I became one. ☺

SOURCE

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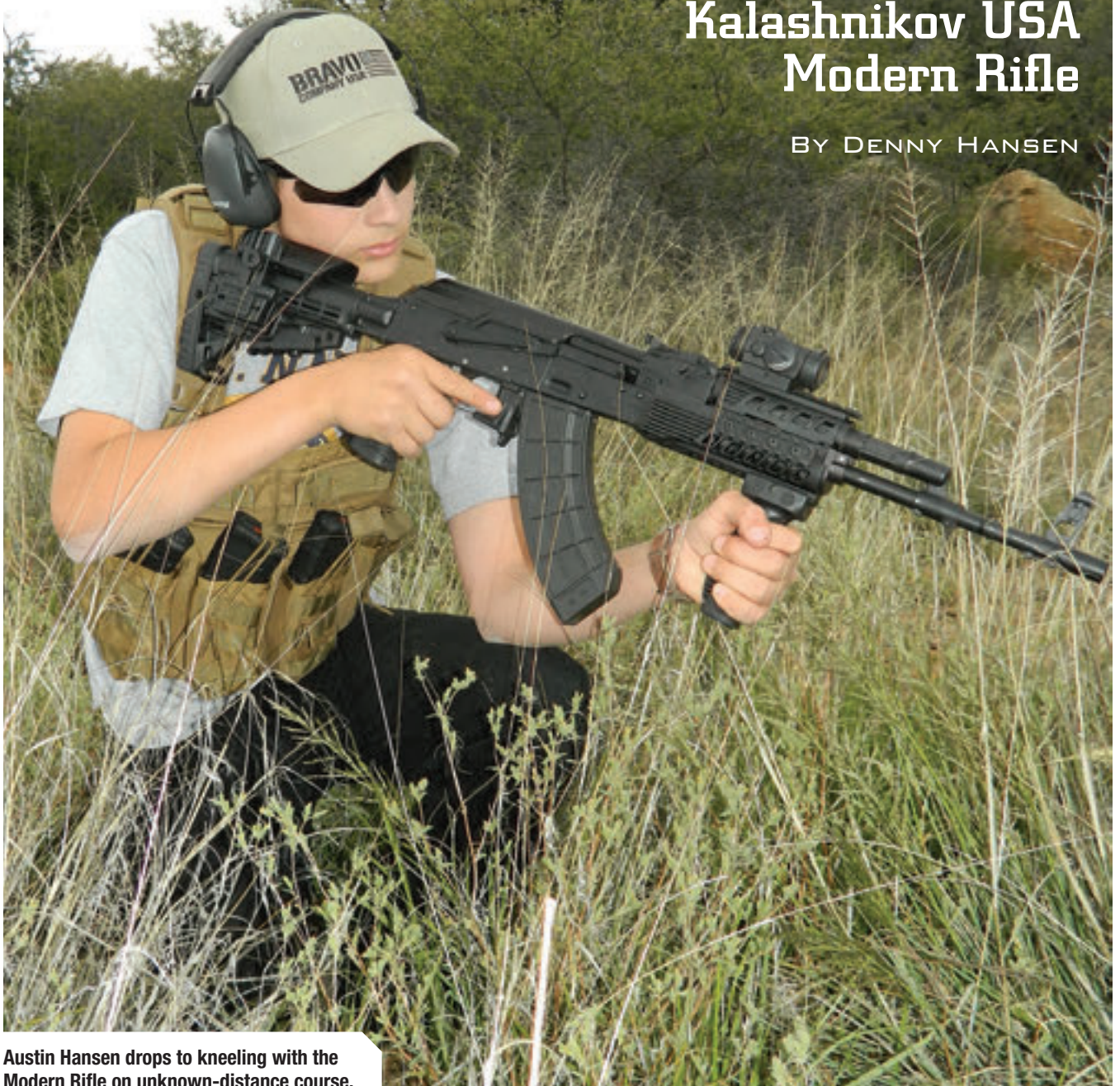
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MADE IN ... AMERICA?

Kalashnikov USA Modern Rifle

BY DENNY HANSEN



Austin Hansen drops to kneeling with the Modern Rifle on unknown-distance course.



“If the mountain won’t come to Muhammad, then Muhammad must go to the mountain.”

IN the case of Kalashnikov USA, the phrase could be, “If we can’t import rifles, we will import the factory.”

During the crisis between Russia and Ukraine, the Obama Administration placed sanctions against some sectors of the Russian economy. This included Concern Kalashnikov, the marketing brand umbrella that includes the Izhmash and Baikal product lines. As of 16 July 2014, no further imports of the Saiga line were allowed.

So the company redefined its business model and went from being an importer to a manufacturer in the United States under the moniker Kalashnikov USA.

As this is written, there are still a few of the last Izhmash products imported before the sanctions went into effect. The test rifle here, in fact, is marked “Made in Russia by Izhmash.” These rifles are 922[r] compliant. The U.S. manufactured rifles became available in the second quarter of 2015.

THE MODERN RIFLE

Kalashnikov USA has several versions of the AK-type rifle available. The one tested here is the Modern Rifle (MR), model number US132Z. While the working parts are still AK, the cosmetics have changed. The familiar wooden stock, forend, upper handguard, and pistol grip have been replaced with Command Arms Accessories (CAA) synthetic furniture.



Test rifle was one of last 922[r] compliant rifles to be imported.



Right side of Kalashnikov USA Modern Rifle as tested with Aimpoint Micro T-2 on upper handguard.

These parts include a six-position collapsible stock with adjustable cheek piece and rubber butt pad, forend with rail sections at three, six and nine o'clock, gas tube handguard with rail at 12 o'clock, polymer vertical foregrip, extended magazine release, and pistol grip.

Taking a cue from some pistol manufacturers, the pistol grip has three interchangeable finger groove front and back straps—small, medium and large. Storage space for small items is

in the pistol grip, vertical foregrip, and a compartment on the left side of the stock. The rifle comes with one polymer magazine—the one supplied made by US PALM—but will also accept Magpul and any standard AK magazine.

A manual bolt hold open is on the right side of the rifle at the rear of the trigger guard. To operate it, while holding the bolt all the way to the rear, push it up and release the bolt. To deactivate it, simply pull the bolt all the way back and allow it to go forward.

There are four locations to attach a sling on the stock of the rifle, but none at the front. Barrel length is 16¼ inches and it is without a flash hider or compensator, and the barrel is not threaded for a muzzle device. The bayonet lug and forward lug for the cleaning rod have been milled off.

Sights are typical AK, with a front post and a rear with a very small notch that is adjustable for elevation. Although small sights can be accurate (think shoot small, hit small), they are difficult to acquire at speed. A red dot sight can do both.

ADDITIONS

One of my favorite red dot sights is the Aimpoint Micro T-2. At only 2.7 inches long and weighing a mere 4.8 ounces with the mount, it is light enough to mount forward on a rifle without it becoming muzzle heavy. The Micro T-2 uses a CR2032 lithium battery and has a life of over five years of constant on at setting 8 of 12. The two MOA dot allows good accuracy out to 300 or more yards. I removed the mount's spacer that I use on ARs from my Aimpoint Micro T-2 and used the Micro LRP QD mount to attach it to the upper handguard of the MR.

For ammo management, I wore a US PALM AK Attack Rack V2, which is constructed of 500d Cordura nylon and utilizes made in the USA hardware and materials. The Attack Rack has four rifle pouches on the front. Above these are two adjustable flap magazine/util-



Manual bolt-hold open and extended magazine release.



Above: MR has no muzzle device and barrel is not threaded for one.

Right: Pistol grip has three interchangeable finger groove front and back straps—small, medium, and large.





Cheek piece is easily adjustable with thumb wheel screw. There are multiple sling mounting positions on the rifle's stock, but none at the front.

Inset: Storage for small items is available within a compartment on the stock, and inside the pistol grip and vertical foregrip.



ity pouches. MOLLE attachment points are on either side of the rifle pouches. The large zippered main pocket can accommodate extra magazines or other larger pieces of gear. I used it as an improvised dump pouch. Access to the armor pocket is at the bottom of the carrier, which accommodates US PALM's custom level IIIA soft armor panel (sold separately, \$100).

RANGE TIME

To feed the Modern Rifle, I used Silver Bear 123-grain FMJ 7.62x39mm ammo from DKG Trading Inc. I zeroed the rifle at 50 yards, which would basically let me engage targets out to 300 yards with very little correction, hitting about an inch high at 100, and 2.5 inches low at 300. Up close, the Aimpoint had almost three inches of mechanical offset.

I used both US PALM AK30 and

Magpul PMAG 30 AK/AKM MOE magazines. Both brands work great, and in my opinion either is better than the common steel mag.

My grandson Austin accompanied me to the range on one day that I was evaluating the Modern Rifle. At age 14, Austin has fired everything from .22 bolt-action single-shot rifles to belt-feds and .50-caliber rifles, but this was his first experience with an AK. I must be a bad grandpa....

Austin engaged targets from seven yards out to 50 on the square range—firing on the move and shooting box drills and “roadhouse rules” (one center hit on the first target, two center hits on a second target, and back to the first target with another center hit).

Group sizes at 50 yards were in the two- to three-inch range. Some may consider this level of accuracy objec-

tionable, but the Modern Rifle is not a precision rifle. For what it is, I find the accuracy acceptable.

We also went off the square range for some positional shooting at unknown-distance targets. As could be surmised with an AK, reliability was boringly predictable. No malfunctions of any type were experienced with about 500 rounds fired.

COMMENTS

The Modern Rifle's collapsible stock is worth commenting on. Most people can shoot with a stock that is on the short side, but it becomes challenging with a stock that is too long. Totally collapsed, the stock is about right for me. At position one, it is usable, especially from prone. At position two, it is becoming quite a stretch. Anything past position two could probably only be used



comfortably by someone named Mongo who can carry his horse on his back when it becomes tired. Still, the adjustability is there for anyone who needs it.

I like the adjustable cheek piece and fully appreciated its usefulness with the Aimpoint T-2, as I could position my head without having to raise or lower my eye to see the red dot.

The CAA extended magazine release fits over the standard mag release tab

and secures with a single grub screw. It is easy to operate with either the trigger finger or the thumb of the weak hand for casually removing a magazine, e.g. administratively unloading the rifle.

The technique I was taught long ago for a speed reload with an AK is first to obtain a fresh magazine, then in one swift motion use that magazine to operate the magazine release, swipe the expended magazine out of the mag well,

and insert the fresh mag.

Using this technique, the extended magazine release went flying down-range when struck with the replacement mag on the very first speed reload. Additionally, because the extended release came off, the reload mag slipped off and did not allow the expended magazine to be released.

After finding the extended release, I replaced it and tightened the grub screw to what was probably near the point of stripping the screw, and no further problems were encountered while speed loading. Still, I may opt to remove the extended release and stick with the standard magazine release.

It seems like I'm rarely happy with anything "off the rack." I replaced the CAA stock with a Magpul Zhukov-S folding stock. For carrying in a vehicle or storage, when folded the Modern Rifle becomes a full nine inches shorter. Magpul has three different cheek risers



Rails at 3, 6, 9, and 12 o'clock allow mounting optics, lights, and other accessories.



» SPECIFICATIONS

KALASHNIKOV USA MODERN RIFLE

MODEL	Modern Rifle, US132Z
CALIBER	7.62x39mm
CAPACITY	30 rounds
BARREL LENGTH	16.25 inches
MUZZLE DEVICE	None, not threaded
OVERALL LENGTH (collapsed)	29 inches
WEIGHT	8.42 pounds
STOCK and FOREND	CAA, polymer

Author replaced Command Arms Accessories stock and handguard with Magpul Zhukov-S folding stock.

for this stock for use with optics. I also replaced the handguard with a Magpul AKM handguard, as I don't need all the rails on the CAA handguard, and it reduces bulk.

I can't decide if I want to stay with a red dot, go to a Scout scope, or return to iron sights. Until I decide, the CAA gas tube handguard will stay in place. If I go with iron sights, I'll choose something like the Williams fully adjustable peep sight available from Brownells. The Wil-

liams replaces the issue sight with no gunsmithing. If I go that route, I'll likely replace the gas tube handguard with the lower profile Magpul that came with the AKM handguard.

CONCLUSIONS

The Kalashnikov USA Modern Rifle certainly does not represent détente between its country of origin and the U.S., but it may be a step in the right direction. American author Horace Greeley

said, "Go West, young man." And while the AK is anything but a youngster, Kalashnikov USA has indeed come west.

Despite the cosmetic changes, the Modern Rifle is still rugged, reliable and acceptably accurate. I'm fairly certain I can find room in my safe for one. ☺

SOURCES

KALASHNIKOV USA

(215) 949-9944
www.kalashnikov-usa.com

AIMPOINT INC.

(703) 263-9795
www.aimpoint.com

BROWNELLS INC.

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Above: Author mounted Aimpoint Micro T-2 to upper handguard. Right: Magazines used were US PALM (left) and Magpul with Silver Bear FMJ ammo. Chest rig is the excellent US PALM AK Attack Rack V2.

PRONE



2.0

Shadow-Tech Saddles

BY ETHAN JOHNS



Precision shooters always seek the warm embrace of Mother Earth for the long shot. But the shot very often precludes lying down on the job.

For every textbook ideal belly shot on a rooftop set-up, there are probably half a dozen that require some other positional approach. I have been in and around a number of observation posts and sniper positions where a prone set-up that allows the shooter to employ a rest or bipod was the exception. The shooters improvised as much support as the position and situation allowed, from hasty sandbags or packs built up the required height to (no kidding) office-type desks carried up to rooftops to build a benchrest-inspired setup.

The tripods that snipers used for their spotting scopes often figured into improvised positions, so much so that guys started experimenting with the tripod in earnest. A recent product invented by a Marine Scout Sniper takes that to the next level and has largely replaced the angst and jury rig-athon shenanigans of trying to get enough support for the shot.

MARSOC Sniper using Saddle with Mk 13 .300 Win Mag at Advanced Sniper Course. Saddle has been eagerly adopted by snipers and put to use worldwide. Photo: MARSOC



Shadow-Tech PIG Saddle is a purpose-built rifle vise that attaches to a tripod.

SHADOW-TECH HOG SADDLE

The Shadow-Tech HOG Saddle is a machined aluminum vise that attaches to standard tripod threads (either 1/4x20 or 3/8x16). The jaws of the vise are covered in a firm 1/4-inch thick urethane waffle that clamps tightly to the weapon and dampens vibration transmitted to the weapon as well as helps tame the bounce transmitted into the system from recoil.

The saddle is overbuilt, tightening around a monster screw that is built to withstand the abuse of being torqued onto rifles hard mission after mission. A remarkably simple device, the HOG Saddle swept the sniping community in record time. Now standard issue with the USMC M40A5 sniper rifle, the ShadowTech saddle went from prototypes sent out to Scout Sniper buddies to a game-changing, must-have tech in less than three deployment cycles.

The HOG Saddle clamps the rifle firmly into its jaws, allowing the shooter to adjust the position almost infinitely with the better tripods in wide use. The Manfrotto brand is the clear frontrunner in tripods, its carbon-fiber versions being issued to most of the special reconnaissance community for good reason. As training techniques and employment tips catch up to the potential, the saddle/tripod combo brings shooters far outranging previous first-round hits from positions other than prone.

THE PIG

I saw an early prototype in testing and thought I'd experiment with one of the production models. I chose the PIG Saddle, different from the HOG in that it is a less expensive stamped steel rather than machined aluminum model with a polymer torque knob. The PIG is slightly heavier at 1.4 pounds weight to the HOG's 15 ounces.

As a simple test to quantify potential, I shot a SCAR 17S with the saddle over the space of a few weeks. The .308 SCAR is a battle rifle, not a sniper rifle,



USMC Scout Sniper uses HOG Saddle with M40 to clear line of sight to target.

Photo: USMC

A remarkably simple device, the HOG Saddle swept the sniping community in record time.

but I was already working with it and thought that any potential it showed would translate very well to all users.

Many of the SCAR "Heavies" in service have been employed as a hybrid battle/designated marksman rifle. All that I am familiar with have ranged from acceptably to impressively accurate. The results with the SCAR would suggest even more performance available to a true sniper or special-purpose rifle.

The FNH rifle was wearing a Trijicon VCOG 1-6X scope with the segmented circle reticle, a very good match to the rifle. Ammunition was predominantly Black Hills 155-grain loaded with Hornady A-MAX bullets. The load covers both battle rifle and open-air precision scenarios very well with match accuracy, a flat trajectory within the weapon's normal envelope, and explosive expansion.

BELLY UP TO THE LINE

I first set a baseline from prone with the SCAR using a LaRue LT706 bipod and rear bag. I am no stranger to prone, and the rifle locked down into a very secure position. The SCAR had a crisp but frustratingly heavy 7.5-pound trigger to work through, requiring a lot of effort to let the rifle "be" while I pressed as smoothly through as possible.

Over several range sessions, I fired numerous three-round groups at 100 yards. The best I could manage from the ground was a 1.07-inch cluster for one group. The worst was a 1.7-inch spread, with the average and the most common result being a 1.3-inch triangle.

SITTING DOWN WITH THE PIG

I dropped the SCAR into the PIG Saddle, tightened the nut until the pads grabbed onto the Picatinny rails, and adjusted my tripod to a comfortable height. The Manfrotto 322 RC2 ball head allowed simple final adjustments to get the rifle onto target.

I was sitting in an umbrella-type camping/tailgate chair while leaning into the rifle with my elbows resting on my knees. My support hand was nested under the toe of the buttstock. There was a tiny bit of sway in the position, but the VCOG's center crosshair gently

and consistently hovered near the two-inch aiming point I was using.

The first three shots from the PIG Saddle stacked into 1.28 inches. I made a slight correction in the VCOG's turrets to walk the group into the center of the target and fired another three. The three Black Hills whistled into the target, cutting a pretty cluster within the

saddle and tripod took the recoil well, allowing the SCAR to get back on target quickly. Over several sessions, the SCAR averaged a scant .97-inch for all groups from sitting. The largest was one 1.7-inch triple, and one sequence of four successive groups each went sub-minute of angle.

I don't think I could have squeezed



one-inch center of the spot and .8-inch center to center. Hmmm...

Feeling pretty good, I broke out the timer for the third group. I was shooting for the three shots in ten seconds sniper standard from a previous unit. The heavy trigger dragged my time out to 14.2 seconds for a .76-inch group. But even from a casual sitting position, the

SCAR 17S with 1-6X VCOG used to test PIG Saddle using Hornady and Black Hills loads.



Prone is often not available to the shooter. Shadow-Tech saddle and tripod provide options for a precision shot off the ground. Photo: Shadow-Tech

PIG Saddle nearly turned a lawnchair into a benchrest: two consecutive sub-MOA groups fired from sitting with PIG Saddle and 155-grain Hornady Steel Match.



.88-inch 100-yard group for three Black Hills 155 A-MAX using PIG Saddle fired from sitting.

much more out of that SCAR from a concrete bench. Probably some, but I suspect the difference would have been hidden in the group-to-group variation for perhaps a slightly better average or maybe the largest group might have shrunk somewhat.

Regardless, being able to beat MOA from a lawnchair with a battle rifle benighted with a poor trigger indicates what the fuss is all about with the Shadow-Tech saddles.

STAND-UP HITTING

I next extended the tripod out and played around with the leg positioning to make a go at standing groups. The rifle was stable but very sensitive to my position. I had a two-point adjust-

able Magpul MS1 sling on the rifle and flipped it over to the off side to run from the butt around my shooting side tricep and back around to the support side of the rifle. This helped stabilize the position a little further.

I was glad for the range of adjustments on my tripod and its rock-solid stability. It took a little set-up to get to the perfect height where I had maximum bone support to put behind the rifle. It looked like there is significant room for technique and little tweaks to lock the rifle down as much as possible, but after a few dry snaps, I chambered an A-MAX and launched a group to see what I had.

The first attempt put three holes in 1.58 inches, all three within the two-inch target and to the same point of aim as sitting. The reticle movement was very noticeable at six power on the VCOG but the tripod-mounted rifle launched good groups. The worst was a 1.8-inch trio that was similar to the outliers from prone and sitting. The best was a see-it-to-believe-it .49-inch cloverleaf. The SCAR followed that one with a .57-inch cluster. Average for all standing groups was 1.1 inches.

I will readily admit that, while the shots broke well and felt good, I was much less confident from standing than I had been from sitting. But as a first attempt, the results speak to the considerable promise the system has.

NUMBERS

The data virtually jumps off the page to embrace the tripod-mounted PIG

Saddle. Standing or sitting to basically MOA groups from a battle rifle with a trigger that weighs more than the base rifle? Shadow-Tech may be onto something here....

I am still trying to reconcile the fact that the groups from the saddle undercut my best prone efforts. My theory is that I was able to get a more natural head position behind the scope in the saddle-supported positions, since the VCOG has a pretty tight eyebox at six power. However, it may just as easily be the dice roll that is comparing three-shot groups.

The prone groups were more consistent, but the strange thing in this case was that the consistency only prevented the sub-minute groups the other two positions saw while still allowing one outlier group at 1.7 similar to the saddle's from both positions. Things like this drive riflemen crazy.

It is worth noting that this is a sample of one. Even though the shooting occurred on multiple similar days, with the same rifle and shooter using the same lot of proven consistent Black Hills ammo, it speaks to potential.

UTILITY

That potential is pretty obvious in the tactical arena, when line of sight to the target may dictate the height of the shooting position. As sniper schools adopt training segments incorporating the saddle, I expect we will see first-round hit potential soar from positions that used to give shooters cause for concern. I can't think of any recent piece of commercial off-the-shelf shooting gear that has so quickly gone from individually conceived solution to widespread adoption. Individual shooters as well as units have rushed to use the device.

I have since used the saddle to replace my rifle rests and bags for zeroing and grouping other rifles, and have been very happy with it. I can picture the saddle having a real place in a hunting blind or stand overlooking a potentially long shot.

And, although not what it was designed for, I can just as easily see the saddle being pressed into service in the field as a vise to hold an upper or lower receiver for maintenance or repairs. ©

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MATCH-GRADE RIMFIRE

Magnum Research Magnum Lite Rifles

BY BOB PILGRIM

Minnesota's Magnum Research (MR), best known for its humongous semiautomatic large-caliber pistols and Israel's Jericho handguns, has dramatically downsized with its made-in-America super-accurate high-tech Magnum Lite® (ML) .22 Long Rifle caliber rifle. In fact, among a considerable number of handguns and centerfire rifles, MR offers 11 different versions of its ML rimfires in both Long Rifle and Magnum versions. The rifle tested here is the MLR22ATUT.

Although the MLR22ATUT is similar to MR's other exotic-looking small bores, its muzzle features 1/2x28 threads to accept a suppressor and when not in use is protected by a stainless steel end cap. Its duckbill-shaped forend and thumbhole stock reduce weight and free float the 18.5-inch bull barrel.

Its synthetic stock and overall profile give the firearm a very distinctive streamlined, space-age look.

Made by Glacier Ridge, the ambidextrous 10/22 stock is constructed of fiber additive reinforced polypropylene for maximum strength. It might even survive a Marine butt stroke or two. The stock's comb height is purposely high enough to comfortably shoot with optics. Iron sights are not an option with this rifle, which is set up for red dots or scopes.

The thumbhole pistol grip is checkered with low-profile

Members of USMC rifle team shoot Magnum Lite rifle for groups at 50 yards. Lucid Cross Over scope, Leupold spotting scope, and removable muzzle cap are visible.

palm swells and finished with a molded rubber buttplate. The pistol grip eliminates wrist tension, and the rubber plate anchors the rifle to the shoulder. The stock and barrel can be colored or camouflaged with Duracote or similar finishes.

TECHNOLOGICALLY ADVANCED

A number of technological advances are engineered into the ML system, the most prominent being the patented graphite bull barrel. It is modular in construction and similar to common "tensioned" barrels in current circulation, but lighter.

Modular translates to a barrel composed of a very high-quality stainless steel barrel that is attached to a stainless steel breech and muzzle cap inside a thin-walled aluminum construction. Clothed in patented unidirectional graphite fibers laid parallel to the bore's axis results in a tube with six times the stiffness of the equivalent weight of steel. This method of construction also eliminates barrel harmonics.

Depending on barrel length, barrel weights range from 13 to 16 ounces. These lightweight barrels are easier to manipulate and therefore reduce fatigue and facilitate the tracking of moving targets. Unlike steel, graphite dissipates heat up to 43% faster, so point of impact remains constant and rimfire accuracy is superior to the norm.

[Note: Reportedly, despite its toughness, the barrel can be scratched. While this will not affect its function, it may be cosmetically distracting.]

Complementing the barrel's 1:16 rifling twist is the noted Bentz Target chamber designed specifically for semiautomatics. The Bentz chamber is tighter and exhibits a shorter throat—or lead-in to the rifling—so the round is perfectly centered in the rifling for superior accuracy. It requires good ammunition and its selection should be based on what you intend to use the rifle for. Trial and error will determine what works best for a shooter's purposes. High-velocity cartridges will cycle the action more positively than low-velocity or subsonic fodder.

However, MR warns that CCI Stingers are *not* designed to be used in the Bentz chamber, because their cases are too long. Do *not* shoot them. Semiautomatic .22s are generally pickier than bolt guns in regard to ammunition.

Finally, the barrel's muzzle has an 11-degree crown to further ensure the rifle's accuracy.

The French Gray finished receivers are CNC machined from 6061-T6 aircraft aluminum forgings, which include an integral Weaver-type rail for optics. To further cut weight, the rail is fully perforated. These detailed efforts to lighten the

weapon resulted in a 4.25-pound package with an overall length of 35.5 inches.

This is a handy, fast-handling firearm that can be carried all day without undue fatigue. Fit and finish are superb. If I were a biathlete, I would consider an ML rifle if it were properly set up with iron sights and proved to be as accurate as the typical competitive winter sport rifle.

INNOVATIVE

I was taught that it is best to clean a barrel in the same direction as the bullet travels. Without a bore snake, many guns have to be cleaned from the muzzle end. The ML's receiver makes it impossible to reach the rifle's chamber with a cleaning rod.

To eliminate this problem, MR has conveniently drilled a hole in the rear of the receiver to accommodate the rod and brush or patch. It acts as a channel for the rod and centers its tip in the middle of the chamber.

RUGER 10/22 HERITAGE

The Ruger 10/22 carbine is a much-sought-after basic battery firearm. Its popularity is underlined by the plethora of custom shops and aftermarket components that are available to customize the firearm, which often ends up in both practical and more exotic formats. Some of them are so good it's difficult to tell if the hybrid firearm has a Ruger pedigree.

MR is no exception to this phenomenon: the ML has adopted the 10/22's trigger group. Advertised trigger weight is 4 to 5 pounds. My sample was 3.5 crisp pounds with no take-up or slack. Ruger 10/22s are rated at 6.0 pounds, but the Ruger BX-Trigger is available that reduces pull weight to 2.75 pounds. This trigger may also fit the ML rifles.

MR bolts are machined from heat treated and hardened 4140 steel with minimum headspace to tighten things up. The large hollowed-out charging handle and bolt are precisely tuned to the energy developed by the Long Rifle round. The bolt can be locked to the rear by holding in a tab located

Magnum Research Magnum Lite rifle with Lucid variable Cross Over scope attached. Action is enhanced Ruger with graphite-wrapped stainless steel barrel augmented by Bentz chamber and heat sink. Thumbhole stock is fiber additive reinforced polypropylene. Enlarged bolt and bolt handle are perfectly balanced to handle Long Rifle loads. Safety is cross bolt, and bolt lock is located in front of trigger.



just behind the magazine release and easing the bolt forward. To release the bolt from its locked status, the tab has to be pressed down and the bolt pulled fully to the rear and released.

LUCID GLASS

Lucid's 4X-16X44 scope with L5 reticle was overkill for the MLR, but it afforded me the utmost precision. The 18-ounce system has a 44mm objective lens and 34mm ocular lens. The 30mm matte black aluminum tube is 13.25 inches in length and has a turret click value of 1/8-inch MOA. Windage and elevation adjustable ranges are 50 MOA.

The light transmission of the FBMC Multi Coated lens is 92%. It is submersible, nitrogen purged and unperturbed by .338 Lapua Magnum recoil. The L5 reticle is a "measuring tape" for the operator. Bullet drop compensation marks are 2 MOA apart and windage dots 4 MOA apart. These MOA measurements are most relevant when the scope is at its highest level of magnification, where shots are being taken beyond the zero distance of the rifle.

SEE ALL OPEN SIGHT

For hunting and plinking, *Top Shot All Stars'* William Bethards experimented with the new See All Open Sight and Silencerco's Sparrow .22-caliber suppressor.

The sight is a simple but neat affair, an open sight with an optic that magnifies the reticle, a black triangle, and top horizontal edge. This is not a see-through optic, but the triangle represents a front sight that is leveled with the horizontal edge of the glass and simply superimposed on the target.

The view of the target is gained by looking over the top of the optic much like you would with open sights. With both eyes open, the sight is quickly acquired and precise enough to terminate propped-up spent shotgun hulls at 25 yards. The sight rides on either a Picatinny or Weaver rail and is adjustable for elevation and windage.

The Sparrow is 5.08 inches long and weighs 6.5 ounces. Full-auto rated, it was very efficient with standard and subsonic ammunition, but hypersonic loads produced an attention-getting ballistic crack that canceled out any muted muzzle report from the shooter's perspective. But downrange it would be difficult to trace the round's origin without any muzzle signature.

MAGNETOSPEED

For unsuppressed chronographing, we used Magneto-Speed's V3 Ballistic Chronograph. This revolutionary device consists of a Blast Beam and compact electronically powered Display Unit.

The Blast Beam, with a concave Blast Zone, straps to the



Top Shot All Stars' William Bethards picks off shotgun shell hulls at 25 yards with See All Open Sight, Ruger BX 25-round magazine, and Silencerco Sparrow silencer.



Two of the better groups—one sub MOA—fired with Magnum Lite rifle.

» AMMUNITION PERFORMANCE

ROUND	VELOCITY (fps)	GROUP (inches)
CCI AR Tactical	1,207	.828
Mini Mag, 40-gr.	1,181	.661
Select, 40-gr. RN	1,204	.966
Suppressor, 45-gr.	984	.675
Remington Yellow Jacket HP	1,351	.638
Eley Tenex	1,067	.390
Target RN	1,140	.596
Winchester Super Match MK IV RN	1,176	.852



USMC rifle team member snap shoots MR rifle with See All Open Sight.

Below: Team member's three-year-old son evaluates MR rifle with See All Open Sight. He uses two fingers to squeeze trigger.

end of the firearm's barrel proximate to its muzzle. When the bullet exits the barrel, it passes over the Blast Zone, followed by sensor one and two in sequence. This short span reads the bullet's velocity and transmits it to the battery-powered display unit. Three to five rounds will record and archive each shot and display "Max" velocity, "Min" velocity, "Avg" velocity and "S-D" standard deviation. Set up is quick and easy, and accuracy has been compared to Oehler chronographs with excellent results.

FIELD FIRING

The ML is a blowback weapon and needs at least standard-velocity Long Rifle ammunition to function. CCI 40-grain Quiet-22 Segmented HP at 710 feet-per-second (fps) would not cycle, and its spent case had to be punched out with a cleaning rod. It's quiet and I was able to shoot it sans protective ears.

Conversely, CCI 45-grain Suppressed at 970 fps works fine. Ejection is perpendicular to the port, and right flank personnel will get showered. Along with modest muzzle re-



Chronographing unsuppressed rounds with MagnetoSpeed V3 Ballistic Chronograph and See All Open Sight.

port, there's enough palpable recoil to let you know the gun has been fired, but that's mostly bolt mass reaching the end of its rearward travel. Pay attention to the muzzle end cap. There is enough barrel vibration that, after a dozen rounds or so, the cap loosens and must be retightened periodically.

I was extremely fortunate to enlist two members of the U.S. Marine Corps Rifle Team to shoot and observe groups at 50 yards. Sergeant Scott Peterson also coaches the team and is soon to be a civilian, while Staff Sergeant Mark Windmassinger is a current competitor. It was an enjoyable day watching them handle the weapon and Leupold spotting scope and listen to their stories about growing up with firearms and the influence their fathers, both hunters, had on them.

Of the 18 different brands, weights and configurations of ammunition fired, ten proved very accurate. On a cold March

» Continued on page 88

OFF-ROAD TO RECOVERY

Gear for Vehicle Self-Rescue

BY RICHARD DUARTE

AN urban disaster or public emergency that forces an evacuation is about as real as it gets. With little or no warning, you may find yourself in the middle of a very ugly situation. If you read *S.W.A.T. Magazine* on a regular basis, you are most likely very well prepared—your vehicle is ready, supplies are staged for quick deployment, and you have a viable get-out-of-Dodge plan.

But even with a high level of preparation, getting yourself out of a heavily congested urban area won't be easy. You should expect that all the major routes out of town will be quickly overwhelmed with nightmarish traffic, emergency vehicles, and panicked hordes trying to get out by any means necessary. Unless you have somehow managed to get a head start on everybody else (unlikely), or you have your own private aircraft (even more unlikely), you'll face a formidable task.

To get away from the madness, your plan should include an off-road component, but going off-road is not without significant challenges. When the moment comes to hit the road, or no road at all, you'll need to have—and know how to use—the tools and gear to keep you rolling toward safety, no matter what the journey throws your way.

EMERGENCY EVACUATION AND SELF-RESCUE

Having a road-ready vehicle, preferably one with four-wheel drive, is a great start (See *Road-Ready Survival*, October 2014 *S.W.A.T.*). But being road-ready may only get you so far. During a crisis, you're on your own. There will be no roadside service during the apocalypse. You must become your very own roadside service on steroids. Luckily, a number of viable options exist. We've compiled a list of the top five must-have self-rescue tools/gear.



THE SELF-RESCUE KIT

Since we never really know what we'll need, or when we'll need it, most of us prefer to have as much gear as possible. What we actually end up bringing to the party will always be a compromise among space, weight and utility. As such, compiling our list was not easy, but we were committed to keeping it manageable and realistic. We wanted the essential gear and nothing more—after all, we need to leave room for food, water, medical/first aid, security/self-defense, extra gasoline, and other essentials.

Our kit had to be portable, lightweight, practical, effective, preferably containing multipurpose items, relatively inexpensive, and capable of being used without modifications to our vehicle. After much deliberation, we came up with the five must-have items for self-rescue:

1 MAXTRAX VEHICLE RECOVERY DEVICE: During an emergency evacuation, having your vehicle stuck in a remote location, far from assistance, can quickly bring an end to your journey, or worse yet, become a life-threatening situation. MaxTrax is a safe, lightweight, simple multi-purpose vehicle recovery system that works alone or in combination with other gear to provide amazing traction and stability in sand, mud, snow or on any other terrain where loss of traction is an issue.

MaxTrax is designed and engineered to safely provide the necessary traction to help extract a stranded vehicle. It can be carried, deployed and used even if you're riding solo. When not in use, MaxTrax can be stored inside your vehicle or strapped to a roof rack or an external mounting bracket. Gone are the days of trying to find improvised (often dangerous) objects to wedge under your tires for traction.

2 VEHICLE RECOVERY KIT: Many people incorrectly believe that a 4X4 vehicle is all they need to get through tough terrain. The reality is that even the best 4X4 can get stuck or seriously dug in. Not having the appropriate gear, or us-

ing it incorrectly, can turn a routine recovery into a medical emergency. The ARB Essentials Recovery Kit (RK11) is a pre-assembled boxed kit that contains all the gear you need for a simple snatch recovery, or a more serious winch rescue, in one rugged, easy-to-store bag. The ARB (RK11) kit is recommended for vehicles weighing 5,600 pounds and under.

3 SHOVEL AND AXE: Have to dig yourself out of a jam? The Cold Steel Special Forces Shovel is compact, durable, and multipurpose. It can be used to move dirt, sand and rocks out of your way, but it can also be used to chop wood or for self-defense. For more demanding jobs, consider carrying a small hatchet and a full-size axe.

4 BOLT CUTTERS: A high-quality set of bolt cutters will help you make quick work of illegal fences and chained gates. Unfortunately, sometimes people overstep their bounds and take it upon themselves to fence in or gate-down public access roads and lands, especially during a disaster when they may be fearful of outsiders or looters. When you need a heavy-duty cutting tool, you can't beat bolt cutters (minimum 30 inch) to get the job done. Look for a solid tool with plenty of leverage and cutting power. With tools you usually get what you pay for, so avoid inexpensive, cheaply made imitations.

5 HAND TOOLS AND EMERGENCY LIGHTING: Have an assortment of the most commonly used hand tools, along with some serious lighting options. Some of this gear should already be in your vehicle emergency kit, but becomes even more important in this scenario. Pack a small heavy-duty bag with headlamps, LED flashlights, and a selection of quality hand tools, including gloves and duct/electrical tape. For heavy-duty lighting, the Brite-Strike Tactical Touch flashlight is waterproof, rechargeable, requires only one hand to operate in all modes, throws out a blinding 800 lumens, and runs for up to eight hours on low mode and two hours on high mode.



Whether it's sand, snow, loose gravel or mud, loss of traction will test your vehicle's ability to keep rolling forward. Having a safe, simple, and reliable vehicle extraction and recovery device is key. Each individual MaxTrax weighs just 7.9 pounds and can be easily manipulated by one person.



Professional vehicle recovery kit will be worth its weight in gold during an evacuation. When properly used with a winch or the assistance of another vehicle, this gear can help save your backside. All-in-one ARB Essentials Recovery Kit (RK11) is a good option.



Small, lightweight shovel can help you maneuver around tires and under the chassis of your vehicle. A good 550 paracord wrap can help provide a more secure grip.



Expect obstacles when you leave the road system. High-quality bolt-cutters can make quick work of many chains, padlocks, cables or heavy wire.



Axes have been used for millennia. A good axe can make quick work of a fallen branch or dead tree that's blocking your way. An axe is lightweight, effective, doesn't require fuel, and has no moving parts.

VEHICLE SELF-RESCUE



Assortment of emergency lighting options is essential to any recovery kit.



Flashlight, knives, and gloves round out your kit.



Use a compact, heavy-duty bag to store and organize your vehicle's emergency gear and supplies.

SURVIVAL ESSENTIALS

Those are the Big Five for self-rescue, but no kit is complete without the survival essentials. Here is an abbreviated list of supplies to round out your preparations:

- **First-aid kit:** Compact kit with a small supply of everything you'll need, including the medication you or anyone in your group takes on a regular basis.
- **High-output LED lights:** Brite-Strike All Purpose Adhesive Light Strips (APALS) represent the next generation of emergency lighting. APALS are waterproof, shockproof, and have a runtime of 80+ hours. The disposable APALS are low cost, reliable, and long lasting. The solar-powered APALS feature a 40-lumen LED and use hybrid self-contained solar panels to capture any available light to charge the lithium cells.
- **Portable radio** (hand crank or solar) with extra batteries.
- **Hard copies of important documents:** passport, driver's license, social security card, and concealed weapons permit. During an emergency evacuation, you may encounter law enforcement roadblocks and/or check points. To avoid delays, be prepared to ID yourself and other vehicle occupants.
- **Contact information:** list of important and emergency contact phone numbers and addresses. We all have our contacts programmed into our cell phones, but the phone may die or be lost.
- **Pre-paid calling card.** Pay phones are an uncommon sight nowadays, but some still exist. After a disaster, cell service may be compromised or your phone may be lost or damaged, but some landlines may be working. Having a pre-paid calling card can come in very handy.
- **Extra gasoline** in approved containers.
- **In colder climates,** add weather-appropriate clothing and accessories, gloves, hats, boots, hand warmers, and insulated sleeping bag.

WRAP-UP

While getting off the beaten path may seem like a viable option, you must be prepared for the unique challenges you will face. Have a plan and the appropriate gear, and know how to use it safely and effectively. Plan for the unexpected and make sure to test your plans, gear and equipment before your life actually depends on it. ☺

Richard Duarte is a practicing attorney and teaches and consults in the areas of urban survival planning and preparation. He is the author of Surviving Doomsday: A Guide for Surviving an Urban Disaster. For the latest news and updates, connect with Richard on www.survivingdoomsdaythebook.com.

SOURCES

ARB 4X4 ACCESSORIES

(866) 293-9078
www.arbusa.com

BRITE-STRIKE

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

COLD STEEL

(800) 255-4716
www.coldsteel.com

MAXTRAX

(316) 213-2482
www.maxtraxamerica.com



EMERGENCY VEHICLE KIT

Hitting the road doesn't mean you need to leave the essentials behind—always keep an emergency kit in your vehicle. Pack lighter and smarter, and make every ounce count. Use the following list to get started:

- **Flashlight, lantern, and a generous supply of extra batteries.** Consider solar powered and rechargeable options.
- **Basic hand tools:** screwdrivers, pliers, wrenches, socket set, etc.
- **Battery jumper cables** at least eight to 12 feet long.
- **Impact-resistant eye protection** and heavy-duty gloves.
- **Folding knife** and multi-tool.
- **Electrical/duct tape** and tie wraps: these tapes can repair just about anything. Tie wraps can rig or secure a temporary fix.
- **Space blankets:** especially in cold climates, but even in temperate zones, these blankets have many survival uses.
- **Map of expected travel area, compass, notepad, and pen:** in case you get lost. Also keep an extra pair of reading glasses in your kit, as a map is of little use if you can't see it.
- **Water and non-perishable emergency food:** lightweight open-and-eat, calorie-dense food is best. Rotate often and store enough for at least two people for 72 hours.
- **Empty five-gallon gas can and siphon:** during a crisis, gas may be difficult to find and a container to carry that gas may be even more difficult to secure.
- **Extra cash:** about \$450 in small bills and some coins.
- **550 paracord:** at least 100 feet.
- **Fire extinguisher:** Have at least one in an easily accessible location.
- **Extra set of warm clothing, hat and gloves:** store in a waterproof re-sealable bag.
- **Extra pair of well-worn, comfortable walking shoes and socks:** you never know when you'll need to change shoes.
- **Towels:** multiple uses.
- **Self-defense tools:** to help protect against threats, human or other.
- **Whistle, fire starter, and signal mirror:** especially if you travel in rural areas.

First Shots with Handloading



Author was surprised at how much satisfaction he felt in his “custom built” ammo.

How Hard Can It Be?

BY ETHAN JOHNS

I have studied ballistics for a while, my middle-school science fair project on bullet weight and trajectory during the Reagan Administration as an example. But until a few months ago I had never reloaded a single cartridge.

I’ve been on the taxpayer subsidized skills development and ammo program for a long time, and it was just simpler to buy any personal ammo in bulk than to reload. I recently decided to take on the challenge and learn the “assembly” side of the ammo. I figured that some readers who are similarly dithering on whether to begin reloading or not might be interested in hearing how my experiment went.

SETTING UP

Right off I defined my objectives to help guide my effort and measure progress. After kicking it around at length, I determined I had three goals:

- Gain flexibility in the event of the all-too-frequent retail shortage of loaded ammunition. Being able to load my own on demand would offer uninterrupted sustenance. This would require reliability and accuracy in line with generic loads.
- Gain the ability to tailor loads to my requirements, whether accuracy or a desired level of velocity and/or recoil.
- Cut the cost per round of more expensive calibers.



Soon I had a Hornady Lock-N-Load AP progressive press in hand and all the necessary accessories to make ammo. Assembling and mounting the press were simple chores that should challenge no one with the mental acuity to be handling firearms.

The press came with a helpful DVD that patiently and thoroughly walked the reloader-to-be through the whole process. Full disclosure requires I admit that the dies themselves, while pretty straightforward, had me a little intimidated. I double-checked my work setting them up with a couple of YouTube videos that helped get me over the hump. The very first setting up of the dies took me about an hour as I carefully read directions and triple checked everything.

Now every stroke of the handle would in turn resize and knock out the spent primer in the first die, seat a new primer, slightly bell the case mouth in the second die, activate the powder drop in the next station, and both seat and crimp in the bullet in the third die. The press then kicked out the loaded round into a hopper.

I had been apprehensive about the powder drop and bullet seating stations, but both were very simple to adjust. Need more powder? Back out the threads on the powder measure an eighth or quarter turn and check the powder weight. Repeat as necessary. Change a light bulb simple. Similarly on the seating die, slowly “walk in” the seating depth by tightening the die a



Progressive press easily puts the four pieces together.

little at a time and rechecking until the bullet is at the desired depth.

My initial learning curve was about 150 rounds. To begin with, I slipped a single piece of brass into the shellplate and cycled it through each station individually to gain a better understanding and “feel” for the cycle of operations. Doing this for the first 50 or so rounds was helpful to get the hang of how the press worked. I then slowly started increasing the number of cases in the press each time.

My first 100 rounds were challenging. Because I had not quite set the resizing/

depriming die correctly, operation was not smooth and required constant re-adjustment. This was borderline anger management therapy and entirely operator error. Once I set the depth of the die correctly (as indicated in the directions ... “Oh, that’s what they meant!”) and tightened down the locking rings and decapping rod, the clouds rolled back, the sun shone onto the press, and the angels’ chorus could be heard softly in the distance.

In those first few boxes of ammo, I made a number of mistakes, all preventable and part of the learning process. Rounds without primers, crushed case mouths, etc. My failure rate would have gotten me fired from any respectable business.

But by the time I was at 250 rounds, I had a solid sense of the process and my errors decreased to the occasional hiccup as my production speed increased. By my seventh loading session, I could feel each stage simultaneously through the press and had smoothed out the little movements: this hand grabs empty case and slips it into shellplate, that hand grabs bullet and places it while standing precisely *there*, gives best reach to the components and leverage to smoothly cycle the handle.

OFF TO THE RACES

By 500 rounds I was very confident in the whole process and was able to move some parts of the operation away from conscious effort. I was cranking out a box of 50 rounds with no errors in about



Several handloads excelled in the Glock 34. Author was nearly able to duplicate American Gunner 124-gr. +P with an XTP load and outperform generic ball with a 115-gr. FMJ.

15 minutes, or 200 rounds an hour.

I was swapping back and forth between 9mm and .38 Special, and at this point—with the dies all well adjusted—the outstanding Hornady Lock-N-Load bushing system let me swap between calibers in four minutes or less. The dies slip into the press with a simple quarter turn to lock, much like an AR bolt locking into the barrel extension, requiring only the correct shellplate to be bolted in and the length of the powder drop adjusted for the caliber.

As I crossed 1,000 rounds, I had swapped back and forth between the calibers regularly and easily and set each die for a variety of bullets and charge weights. I next timed myself at about 1,200 rounds and was putting a box of 50 together in right at 10 minutes. Of course, accessories exist to speed production even further, but this rate exceeded my initial expectations and is working out well for me so far.

GOING HOT

I tested the loads primarily in a Glock 34 and a Ruger GP 100 Match Champion that I had on hand. As a baseline, I shot each with Hornady's American Gunner loads. The American Gunner line uses the XTP hollow point, which has a well-deserved reputation for accuracy. That



Author battled resizing die for the first 100 rounds until getting it set correctly. Lesson learned: if it's not working smoothly, it isn't set correctly.

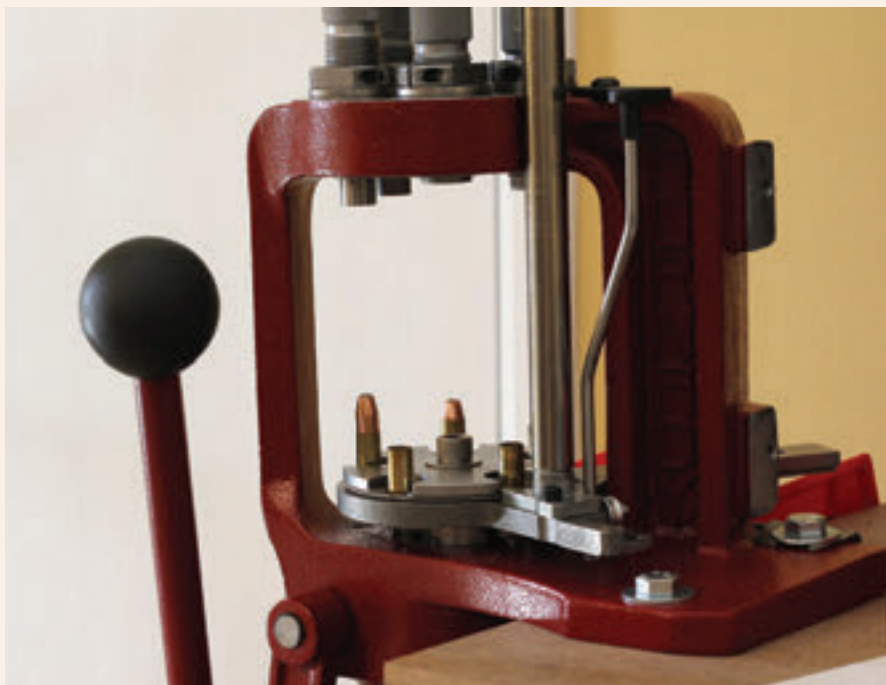
proved out here as well. The Glock put the 124-grain 9mm +Ps into 1.65 inches at 25 yards. The .38 Special American Gunner XTPs did 1.48 inches at 25 yards from the new Ruger.

My first box of 9mm reloads were

124-grain XTPs that stepped out at 1,150 feet-per-second (fps) from 5.2 grains of Alliant's BE86 powder with Winchester Primers. A composite of three groups had the best nine shots in 1.4 inches at 25 yards. Five-shot inclusive groups hovered around 1.75 inches. It definitely inspired confidence to have the first load attempted do so well, since many pistols will never see a 1.75-inch group with any load, let alone a newbie's homebrew.

The Match Champion grouped up to its name, with handloads of 125-grain XTPs at 825 fps doing about 1.6 inches at 25 yards. One 20-yard group had four shots in a ragged .65-inch hole. Another score for beginner's luck! This was a pleasant-shooting load that happened to shoot directly to point of aim in my Airweight J frame and produced one of the best standing 25-yard strings I've ever laid down with the pocket gun.

The Ruger is a consistently accurate revolver, grouping 1.8 inches with Winchester FMJ loads and 1.75 with Winchester 148-grain wadcutters at 25 yards. My attempts at wadcutters are still ongoing, with no standout results yet, just acceptable practice accuracy of 2.5 inches plus. Challenge accepted. My try at a standard-pressure 158-grain semi-wadcutter has been more successful, with the Ruger throwing those out at 735



Each cycle of the handle simultaneously deals with each step of assembly and advances the shellplate of the Lock-N-Load AP press. With a little practice, production rate was a box of 50 loaded cartridges every 10 minutes.

» HANDLOADED AMMO PERFORMANCE

GLOCK 34

BULLET / LOAD	VELOCITY (fps)	BEST ACCURACY five shots at 25 yards
Hornady American Gunner 124-gr. +P XTP	1,213	1.65"
Hornady 124-gr. XTP/5.2 gr. BE86	1,150	1.70"
Hornady 115-gr. FMJ/5.2 gr. BE86	1,172	1.80"
Hornady 147-gr. XTP/4.0 gr. BE86	950	1.30"



Ruger GP100 Match Champion was a tack driver with a variety of loads. Handloaded XTPs came very close to factory American Gunner's accuracy.

RUGER GP100 Match Champion

BULLET / LOAD	VELOCITY (fps)	BEST ACCURACY five shots at 25 yards
Hornady American Gunner 125-gr. XTP	954	1.48"
Hornady 125-gr. XTP/5.2 gr. BE86	825	1.60"
Hornady 158-gr. SWC/4.0 gr. BE86	734	1.65"

fps into as little as 1.65 inches at 25 yards, with average groups about 2.2 inches.

In 9mm I put together a load to duplicate generic bulk ammo with 115-grain ball at 1,172 fps. It is averaging about 2.5 inches at 25 yards, with best groups down to 1.8 inches. That is right on par with what Magtech, Winchester USA, or Federal does in that Glock 34. The handloaded 115s enjoy the distinction of being the load used for my current personal record on the 10-Shot Assault drill, so I am pretty satisfied.

Next, wanting to try a heavy bullet load in the 9mm, I tried the 147-grain XTP loaded to 950 fps, which is really soft shooting for the performance it brings. It is boringly consistent at two inches or less, with the best group a remarkable 1.3 inches at 25 yards.

As I have gotten more proficient and consistent in working the Hornady press, the loads are reflecting that. My current loads are each showing an extreme spread in velocity of 20-something feet per second, showing a level of consistency on par with most quality factory loads. Feeding and ejection have been 100% in 9mm.

PENNIES

Many are attracted to reloading for cost savings. A wise friend shared that you don't save money, you just shoot more. I can see the point, but it does feel good

to calculate the price per round and compare. Figuring the set-up cost as a sunk cost, I estimate my savings in .38 Special to be as much as 27 cents per round. Even shooting the laser accurate XTPs, cost per shot is 10 to 15 cents less than generic .38 factory loads.

Supply, demand, and economies of scale make 9mm less dramatic in the savings department. I estimate I am saving 3 to 5 cents a round in ball ammo, but can handload the target-quality hollow points for nearly identical cost to buying bulk ammo.

The savings is greatest in the less-common calibers. I estimate that the break-even point from buying the dies, shellplates, and bullets is as little as 150 rounds for some larger calibers as compared to buying factory.

WAITING?

My three objectives were each handily met. I am now able to choose between making or buying ammo. I wasn't looking for a hobby, but now I feel the pull of tinkering with a load, chasing better performance for a certain application or a specific gun.

What I wasn't expecting was the satisfaction I feel when looking at a cartridge I've made. Even more so when they pile into tiny groups or lead to personal bests. Personal pride is a funny thing, popping up in unexpected places.

I work with some of the nation's finest, and it regularly humors me how men can shrug off noteworthy accomplishments and feats but be tickled over the smallest thing. Shooters who are on the fence about reloading may give it a hard look—you too can be grinning down at a handloaded round as it is ejected from the press. I wish I had taken the plunge at least 15 years ago.

Next challenge: Rifle ammo. ☺

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.



Caveat: Since S.W.A.T. has no control over reloading practices or equipment used, this article should be used for information purposes only. S.W.A.T. assumes no liability for accidents or injuries that may occur by using loads in this article.

SOURCE

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www.hornady.com

Overwhelming A Threat

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tact. Overall, running it on the range it was as deployable as many carbines. The change in weight and balance is noticeable and turns this weapon into a practical close-quarters system.

While the SAW K can be shouldered, it is best on solid support. Grip Pod Systems Grip Pod made that easy. Move into a position, push the button and the legs extend, then place the SAW K on the hood of a truck or on a barricade, or drop to prone. The Grip Pod was pretty handy as I performed a few runs between the truck and barricades. Not a real fan of it on a carbine nor for most police work, but for this gun and its mission, it was excellent.

Being able to extend the stock as needed was also huge because it let me set up in just about any position—plates and all. With the Trijicon SRS, I could get on target quickly from any position.

Accuracy is important, but getting tiny little groups with your belt-fed is an exercise in futility. There is no single-action mode—this is an open-bolt machine gun, not a precision instrument. Still, contrary to popular mythology, cops don't get to shoot over your head, at your feet, or in the "vicinity" in an attempt to "scare" you. Practical accuracy is critical. Unless they enjoy court, prison, or spending their life paying off a judgment, cops must hit where they aim and know what the target is.

AMMUNITION

Using Gemtech 187-grain subsonic at 25 yards, it was possible to keep ten-shot bursts inside an eight-inch circle. Moving up to 15 yards shrunk that in half. Keeping two-, three-, and even five-round bursts inside six inches on the move was possible. Subsonic ammunition was insanely quiet with all but zero barrel rise. Mostly useless terminal ballistics aside, subsonic was fast, accurate and quiet—and a ton of fun!

Moving to supersonic ammunition, not much changed. Gemtech 125-grain Nosler was equally controllable, just faster. Cyclic rates are ammunition dependent on these, and the supersonic was faster but not that much. Both loads were in the 800 rpm range.

Cyclic rates in 5.56mm approach that of an MG42 (1,100 rpm) with the same control, so it is truly usable firepower in an environment where missing (on purpose at least) is not in the

cards. Moving back to 100 yards, several three-shot strings stayed on man-sized steel with the 125-grain Nosler. I needed to stay locked in, but it was doable, making accuracy perfectly acceptable.

FINAL THOUGHTS

Every previous test of any M249 variant resulted in feeding issues. Talking to Soldiers, Marines, and SMU members, I heard mixed reviews. Many hated them, a few loved them, and most were somewhere in the middle. Never having used one in combat or during war, I cannot offer an opinion based on personal experience.

Previous tests in calibers other than 5.56mm were more problematic. Not so with this gun. It is the first M249 variant tested that just ran. Not a single malfunction occurred, nor did a link break or round fail to fire. It's only one gun, with limited ammo, but it's better than anything tested prior. I would not hesitate to take this weapon to work.

If your mission as an agency or team needs a belt-fed machine gun, consider the MGA SAW K. No belt-fed to date has been as practical for police use as this weapon. My guess is it will fit even more military missions.

Given caliber choices ranging from 5.56mm to 7.62mm, it is pretty versatile. As a growing convert to .300 BLK, that would be my preferred caliber.

One thing's for sure: I didn't want to put this one down or give it back. And that's something I don't say about many weapons tests these days! ☺

Dave Bahde is a retired police lieutenant with over 20 years police experience and over ten years SWAT experience as a police sniper, team leader, and commander. Attending hundreds of hours of firearms and tactical training from world-renowned instructors keeps him current.

SOURCES

U.S. MACHINE GUN ARMORY

(801) 839-4683
www.machinegunarmory.com

GEMTECH

(208) 939-7222
www.gem-tech.com

SUREFIRE, LLC

(800) 828-8809
www.surefire.com

TRIJICON

(703) 445-1600
www.trijicon.com

Match-Grade Rimfire

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day, the best five-round cluster of 0.390 inch was delivered by Eley TENEX fodder, while Remington Target and CCI Mini Mag were not far behind.

Peterson judged its trigger essentially a "lightened Ruger 10/22 trigger." He felt it was a little heavy for a precision shooting rifle and prefers a rounded trigger for match work, but "the MLR is an excellent rifle for the nine- to 15-year-old who's getting into target shooting." The stock is "adequate, but a little complex, and its comb needs to be larger and wider for comfort." He added that "this rifle needs lots of shooting to break it in, and with increasing round count will run better and become more accurate."

In most but not all cases, the rifle preferred standard-velocity rounds to higher velocity, with the exception of Remington Yellow Jacket at a high individual velocity of 1,395 fps. Overall, the rifle ran well, but had several failures to extract that resulted in some double feeds.

CONCLUSIONS

The MLR22ATUT is a lightweight, highly accurate semiautomatic rimfire rifle. With the right ammunition, reliability is quite high and owes that to its Ruger 10/22 heritage. Its retail price of \$625 is quite reasonable considering what the rifle offers.

For the beginning bullseye competitor or small-game hunter, the MLR is an excellent choice if semiautomatics in .22 LR calibers are your preference. ☺

SOURCES

MAGNUM RESEARCH, INC.

(508) 635-4273
www.magnumresearch.com

LUCID

(307) 840-2160
www.mylucidgear.com

MAGNETOSPEED

(512) 284-8161
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Gerber Mark II: Classic Combat Knife Turns 50

THE Gerber® Mark II™ was the iconic combat knife of the Vietnam War, just as the Fairbairn-Sykes (F-S) Fighting Knife (commonly known as the British Commando Knife) was the iconic combat knife of World War II. Like the F-S, the Mark II is a timeless classic. It is one of the best-selling knives of all time and continues to see action around the globe.

The Mark II was designed by retired U.S. Army Captain Clarence A. "Bud" Holzman, who served with the 101st Airborne Division ("Screaming Eagles") in the European theater during WWII. Prototypes of the Mark II were field tested and evaluated at Fort Lewis, Washington by members of the Army's Fourth Infantry Division.

Although Captain Holzman reportedly based the blade profile of the Mark

II on the Roman Mainz Gladius in the British Museum's collection, the similarities to the F-S Fighting Knife are unmistakable. Like the F-S, the Mark II has a slender double-edged spear-point blade and a distinctive foil-like handle.

Regarded as the father of modern hand-to-hand combat, Captain (later Lieutenant Colonel) W.E. Fairbairn's rationale for the design of the F-S is laid out in his seminal book *Get Tough!* (1942):

"In close-quarters fighting, there is no more deadly weapon than the knife.... In choosing a knife, there are two important factors to bear in mind: balance and keenness. The hilt should fit easily in your hand, and the blade should not be so heavy that it tends to drag the hilt from your fingers in a loose grip. It is essential that the blade have a sharp stabbing point and good cutting

edges, because an artery torn through (as against a clean cut) tends to contract and stop the bleeding. If a main artery is cleanly severed, the wounded man will quickly lose consciousness and die."

The Mark II went into commercial production in late 1966. Production continued until 2000, with an additional limited production run of 1,500 knives in 2002. Full production resumed in 2008.

There have been many variations in the Mark II throughout the years of its production: changes in blade steel, blade profile, blade serration, handle material, and handle coating material and color. Fortunately for collectors, all Mark II knives are individually serialized, which makes dating easy.

The first production run of the Mark II was wasp-waisted and had a five-de-



Current production 2008 series Gerber Mark II. Introduced in 1966, Gerber Mark II has developed a mystique second only to the Fairbairn-Sykes Fighting Knife. Photo: Gerber

gree offset between the blade and the grip. The offset design was done so the knife could be kept closer to the body when sheathed and to compensate for the natural bend of the wrist when the knife is held in the "fencing foil grip."

The canted blade led to a number of knives being returned for having "bent blades." Gerber discontinued the cant in subsequent production runs. The wasp-waist was also later discontinued.

Serrations were added to the Mark II in the 1970s. Al Mar, who was working for Gerber at the time, added two inches of scalloped saw-tooth double serrations toward the hilt. According to some sources, this was done to make the knife more politically correct, while others say they were added due to suggestions from the field.

A serrated edge essentially cuts by tearing rather than slicing. This makes it much more efficient when cutting through fibrous or flexible materials such as rope. It also cuts better than a plain edge when dull. A major disadvantage of most serrated blades is that they are difficult to sharpen, requiring a special sharpening tool.

When Gerber reintroduced the Mark II in 2008, the serrations were changed from the scalloped saw teeth to flat chisel-shaped teeth ground on the same plane as the blade edge. This lets them be sharpened at the same time as the blade and makes sharpening a breeze.

The 2008 version has a die-cast aluminum handle with a textured black powder-coat finish and a 420HC stainless steel double-edge, straight-waist blade that is black oxide coated. The blade has a zero-degree cant. Blade length is 6.5 inches, thickness is .235



First Gerber Mark II Combat Knife. Photographed exclusively for S.W.A.T. by Gerber.

inch and width is .875 inch. Overall length is 12.75 inches and weight is 8.0 ounces.

Commercial knife makers like 420HC, and it's a good choice when ease of sharpening and toughness are important. It can be sharpened to a very fine cutting edge and has excellent corrosion resistance.

Although a variety of handle materials have been employed for the Mark II, the majority are die-cast aluminum. The handle on the 2008 version is a one-piece solid aluminum alloy A380 casting that includes the guard, grip and pommel as a single piece.

The handle on the Mark II is 5.25 inches long and has a flattened oval cross-section and tapered palm-swell design. Other handle features are an angled-forward double guard and tapered pommel with lanyard hole. The pommel was designed to be an effective "Judo Stick." The handle ergonomics of the Mark II are generally considered superior to those of the F-S Fighting Knife.

The Mark II has outstanding balance and is lively in the hand, important characteristics for a knife of this type. As is the case with the F-S, the Mark II is a purpose-built combat dagger with excellent penetration and reach.

A surprising variety of sheaths have been associated with the Mark II. The first sheaths were leather. Black Cordura® ballistic nylon sheaths were introduced around 1985. The 2008 version Cordura sheath is fully jumpable and has a black polymer injection-molded liner and two nylon straps with snap closure for primary and secondary retention to secure the handle. Designed for maximum versatility, the sheath features a multi-mount system with belt loop, nylon webbing leg strap with side-release buckle, belt loops, and is MOLLE/PALS compatible.

The Gerber Mark II (Item #22-01874) has a suggested retail price of \$133. It is made in Portland, Oregon and comes with a full lifetime warranty in North America and a 25-year warranty anywhere else.

The Mark II is a true classic that belongs in every knife collection. ☺

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.



Current Gerber Mark II sheath. Variety of sheaths have been associated with the Mark II: first leather and later Black Cordura ballistic nylon.



Double serrations were added to Gerber Mark II in the 1970s. When Gerber reintroduced Mark II in 2008, serrations were changed from scalloped saw teeth to flat chisel shaped.

SOURCE

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Mec-Gar Magazines

IF there is a weak link in semiautomatic firearms, it is the magazine.

I have at least ten magazines for almost every type of semi-auto I own. This gives me a cushion if one or more becomes unreliable.

I usually preload numerous mags before going to the range. This lets me maximize my time there, and I jam mags during breaks as needed.

The best bet for reliability is factory magazines, but they are costly and expenses can add up quickly. And in some instances, you may be paying for the manufacturer's logo.

Some people are surprised that the manufacturer of their pistol does not make their "factory" magazine. Actually, most companies subcontract this part. And so it is notable that Mec-Gar is an OEM supplier for many firearm manufacturers, running the gamut alphabetically from A to W. Chances are good that your pistol uses a Mec-Gar magazine.

The 1911 can be more finicky than other models when it comes to what magazine it likes. Eight-round magazines are often problematic. If there is very little space in the magazine's body

after being loaded, you may need to "spank" it in place. This places an undue amount of pressure on the interior of the slide and is often accountable for malfunctions.

I recently received four eight-round 1911 magazines from Mec-Gar—three in stainless steel and one blue—for evaluation. Mec-Gar is celebrating their 50th year in business, and that alone says a lot. Manufacturers come and go. Word gets around quickly if their products are sub-standard, and they don't stay in business for long.

The finish on the Mec-Gar magazines was impressive. The stainless steel mags were polished to the point where they almost felt like they had oil on them—very smooth. The blue mag finish was also very smooth.

The magazines have witness holes numbered two through eight on both sides. The follower and baseplate are made from injection-molded plastic. The follower is designed so a portion of it stays in the body of the magazine to minimize the chance of the last round tipping up or down. The magazine springs are fabricated from high tensile strength spring wire.

For cleaning, the baseplate is easy to remove by pushing a release button on the bottom of the baseplate and sliding it forward to remove the spring and follower.

An evaluation with a single pistol is representative of, well, a single pistol and offers no meaningful conclusions. For the evaluation, I took out eight different 1911 pistols: a Colt Lightweight Commander, three full-size Kimbers, a Les Baer Thunder Ranch Special, a Ruger Commander-style, a Smith & Wesson Commander-style, and a



Author evaluated blue and stainless steel magazines. Mags have numbered witness holes.

Even unloaded, they shot out of the mag wells like they were rocket propelled.

Springfield Mil-Spec to evaluate the magazines.

To make things a bit more interesting, I took a variety of hollow-point ammo, full metal jacket, round-nose lead and jacketed and lead semiwadcutters to check function. Before loading the mags, I checked to make sure they would drop free. Even unloaded, they shot out of the mag wells like they were rocket propelled.

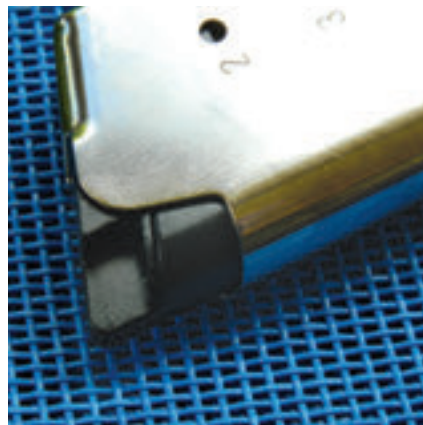
Fully loaded, the mags were a very tight fit in all the pistols with the slide closed, but none required them to be slapped on the bottom. They locked into place with a firm push.

Out of 400 rounds, the only malfunctions I experienced were in the Colt Commander. The 185-grain jacketed semiwadcutter was handloaded fairly hot, and the Commander had a recoil spring that needed to be replaced. This resulted in a few instances of the pistol failing to chamber due to the slide running so fast. The problem has since been remedied.

If you require replacement magazines or just want a few more, my conclusion is that Mec-Gar magazines are very much good-to-go. ©



Above: Cleaning is made easy by depressing button on bottom of baseplate.



Design of follower reduces chance for a round to be tipped out of position.



Eight different 1911 pistols were used in the evaluation. Left to right, top to bottom: Les Baer Thunder Ranch Special, Springfield Mil-Spec, Kimber Custom, Colt Lightweight Commander, Kimber Warrior, Kimber TLE/RL, Smith & Wesson Commander-style, and Ruger Commander-style.

Ammo consisted of (left to right) full metal jacket, hollow point, jacketed semiwadcutter, round-nose lead, and lead semiwadcutters.



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Walker's® Game Ear®, the shooting and hunting industries' pioneer in hearing protection, is now shipping all models of their new Ultimate Power Muff Quads Series with 9X hearing enhancement.

The new Ultimate series by Walker's Game Ear features a proprietary blend of sound dampening composite material. Walker's has effectively increased their noise reduction rating up to 27dB, making them the highest electronic hearing protection on the market, while maintaining their slim "shooter" profile. Whether you're an elite 3-gun competition shooter or heading to the range for the first time, the Ultimate Power Muffs by Walker's are designed to fulfill all your needs.

The Ultimate Power Muffs feature a compact folding design, have low-profile ear cups, and incorporate a new comfort headband with metal frame, making them a very comfortable and durable muff. They are available in Black, Realtree® Xtra, and Mossy Oak® Break-up Country, and operate on two included AAA batteries. Suggested retail price for the Black model is \$199.95, and \$229.95 for Realtree and Mossy Oak.

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TOPS Knives Cuma

TOPS Knives announces the latest version of the Cuma: the Tak-Ri 3.5, which swaps out the Black Traction powder coat with a Coyote Tan powder coat. If you own a TOPS Knife, you know the powder coating will hold up to many hours of hard use. The Black Linen Micarta scales are also swapped out for Green Canvas Micarta scales and are upgraded with TOPS' Rocky Mountain Tread to give better purchase on the knife. This new version also comes with some updates to the blade itself. The top edge was standard on prior Tak-Ris, but since many people live in areas where a double-edged knife is illegal, it will not come sharp on this version (it is still available upon request). The serrations are also removed but again, can be added by request. Suggested retail price is \$192.00.



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Elzetta Mini-CQB

Elzetta Design, LLC is pleased to announce that the new Mini-CQB Modular Weaponlights are now shipping, and production models are even better than promised. The Mini-CQB delivers 375 lumens (60 more lumens than previously revealed) of neutral-tint white light from a single CR123A battery. As the name implies, this new weaponlight is designed specifically for close quarters battle engagements and home defense applications. With its high-lumen/low-candela output, the Mini-CQB produces an effective wall of light to optimize threat assessment and situational awareness.



The Mini-CQB is available with any of six Tailcaps (Rotary, Click, Alpha, High/Low, High/Strobe, or Tape Switch with five- or 12-inch cable). It is also available with three ambidextrous attachment mechanisms; M-1913 Picatinny, KeyMod/M-LOK™, and MOE™ handguards. The KeyMod/M-LOK system fits both mounting systems by utilizing patent-pending reversible nuts. Mini-CQB Weaponlights weigh less than five ounces and start at just \$210 MSRP.

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SIG Sauer Inc., designer and manufacturer of reliable firearms, accessories, and ammunition, now offers new bullet grain weights in its .40 S&W and .45 Auto Elite Performance Ammunition. A 180-grain SIG V-Crown bullet is now available in .40 S&W, in addition to the introductory 165-grain bullet. New for the .45 ACP is a 230-grain and a 185-grain, both of which are SIG V-Crown bullets. The .45 Auto is also available in a 200-grain bullet weight.

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Welcome to the Future

Streamwood is a suburb of Chicago located within Cook County, Illinois. One May afternoon, a backyard gathering in the neighborhood was disrupted by two men who barged into the yard uninvited. One, with his shirt over his face as a mask, accosted the homeowner and demanded money and cigarettes, yelling, "I have a Glock!"

Unfortunately for the would-be robber, the homeowner had a pistol of his own, and produced it promptly. The masked bandit fled, but the homeowner and his guests subdued his accomplice and held him for the police. When taken into custody, he identified his masked companion, who was also arrested and charged with robbery. Cook County prosecutors said the homeowner had a valid Illinois Concealed Carry Permit.

SOURCE: Arlington Heights *Daily Herald*, 5/4/15

Anti-Carjacking Device

A Houston man was sitting in his parked pickup truck near Minute Maid Park one night in April when two men approached his vehicle and asked for a ride. He refused, and the two men left, only to return a short time later. This time they produced a gun and ordered him out of his vehicle.

He complied, and they marched him to the back of the truck and ordered him to kneel by the tailgate as first one, then the other went back and got in the cab. At that point, the intended victim produced his own handgun from his waistband and stood up, opening fire on the thieves. The robbers bailed out of the truck's cab and fled, but one collapsed after a short distance from fatal injuries. The second suspect remains at large.

SOURCE: KPRC-TV, Houston, Texas, 4/30/15

Rob Here, Get Smoked

When two men walked into a smoke shop in DeKalb County, Georgia, one of them asked to see an item on a high shelf behind the clerk. When the employee turned around and reached up to get the item in question, he felt a shotgun barrel being pressed against the back of his head. Turning slowly back around, he grabbed the muzzle of the shotgun, ducked away from it, and drew his own pistol.

Holding the shotgun barrel away from his head, the clerk fired multiple shots at his attackers. In the short fight that followed, one robber was fatally shot, while the other fled in a white SUV but turned himself in to police after they identified and contacted him.

SOURCE: *The Atlanta Journal-Constitution*, 5/7/15

"Leaving Was Before You Hopped In"

When a man pulled into a parking place at a Family Dollar store in northwest Atlanta, Georgia, he was caught off guard by a man who opened the passenger door of his car when it unlocked automatically. Hopping into the passenger seat, the intruder told the driver, "You know what this is." That's when the driver pulled his pistol and ordered the intruder out of his car and facedown in the parking lot to await police.

"I told him no, there's no leaving, leaving was before you hopped into my car ... at this point there is no leaving," the driver told reporters later. Police arrived and took the suspect into custody, shaking the driver's hand and thanking him. The suspect, a 61-year-old man, was charged with attempted robbery and entering an automobile.

SOURCE: WSB-TV, Atlanta, Georgia, 5/22/15 ©



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Two Pieces of Silver

It was a plain brown envelope.

The only clue that its contents might have been something out of the ordinary was the legend “On Her Majesty’s Service” emblazoned across the top.

With a child’s curiosity, I watched as my father opened the envelope, which had arrived with the day’s mail. Two metallic coin-shaped objects fell out and rolled onto the floor. That was it—no cover letter or explanation was included. After picking them up, my father gave them a perfunctory glance and tossed them onto the sideboard in the dining-room, accompanied by a short “That’s nice” comment. When I asked what they were, he replied with a terse “It’s nothing.”

And that was the end of the conversation. I didn’t see the “coins” again until 35 years later, when I was sorting out my father’s effects after his passing. The objects turned out to be two silver Africa Service Medals, incused with his full name and Service Number stamped into the edge. They had been lying in a drawer full of socks, obviously casually pitched in many years earlier, still in the buff-colored envelope.

Two pieces of silver for five-and-a-half years of battle service in World War II. (Yes, for some people the war started in 1939, not at the end of 1941.) Half-a-dozen years out of a man’s life—and two coins from Her Majesty without even a thank-you cover letter. In 2006, it’s almost ironic to see people receiving medals and commendations for one 20-second gunfight, or being called a hero for climbing a tree and retrieving the neighbor’s cat.

To me—and I’m entitled to my pathetic, inconsequential opinion the same as anybody else—it’s a sad reflection on society when people hang on every word of the current rash of shallow Hollywood sycophants, while Audie Murphy lies forgotten in his grave and 20-year-old soldiers are risking life and limb on their behalf with class and decorum.

Like most of his generation, my father never discussed any of his personal experiences in the second War To End All Wars. The only incident of which I ever heard—and that was from being surreptitiously ensconced behind my bedroom door and “snooping” on the adults’ conversation—concerned a non-present mutual wartime buddy of my father and a visiting friend. Apparently the person in question, irate at a Messerschmitt pilot’s repeated low-level strafing runs, hauled out a Webley service revolver and cranked off a round in the general vicinity of the kite.

You guessed it. He killed the pilot. Since this was such a wondrous and inconceivable story, I put it down to just that—a “war story.” Imagine my chagrin years later when cleaning out the Old Man’s possessions: buried under a pile of junk in his homemade garage grease bay was an ME109 cockpit window.

Yes, people bring home many different souvenirs from battlefields, but nobody humps back an aircraft window unless there’s a pretty serious story behind it. And that’s when

I started to realize how extraordinary apparently ordinary people can be. This was at about the same time I realized that the “old man who farmed pigs” 15 miles out of town was flying ace Sailor Malan. Like they say, youth is wasted on the young. It’s also when I started reflecting on long-forgotten incidents that had occurred during my youth.

Like when we went on a family camping trip. In those days you could park on the side of the road and not worry about being traumatized by the dregs of society. Getting up to answer nature’s call in the morning, I was about to step down onto Mother Earth when I heard a stentorian “Don’t move!” from behind me. There was a loud bang, I looked down and, occupying the space into which I was about to step, lay a puff adder that wasn’t going to be doing any more puffing or adding. A remarkable shot fired between my legs from a snubnie Colt Python. I was about ten years old, and didn’t even know this humble man carried a gun.

Years later, in the infancy of IPSC competition, I worked graveyard shifts, which allowed me to go to the local pistol range every weekday to practice. Apparently intrigued by my evening gun-cleaning rituals and the mounds of reloading equipment taking up space in his workshop, my father asked me, “What the hell do you do at the range every day?”

Seizing on the opportunity to dazzle the old lion with my youthful brilliance and marksmanship prowess, I suggested he accompany me to the range. After I’d completed my magnificent exhibition, he asked if he could try it. As I was about to hand over my Colt, a Star PD appeared from nowhere, and my father proceeded to nail the targets at a quick, accurate pace. A spare magazine appeared from Lord knows where, he reloaded and strolled off to his car without a word. I was left to sit on my motorcycle, humbled and sulking.

I still hadn’t known he was packing a gun.

In 1982, he called me to say my brother had taken a bullet in the head. I asked if he was dead, and the simple answer was “Yes—the funeral is tomorrow.” We never spoke about my brother ever again.

All of these things were packed into a quiet man’s long life. Never a bad word about anybody, he walked extremely softly and carried a huge stick. And I’ll never be half the man he was.

So in this day and age, when anybody named Al who chews on a Tic Tac is called Tactic Al or is hailed as a hero after a two-second skirmish with a Rottweiler, it may be time to take stock of what is and isn’t important. Signing on to do your bit for King and Country isn’t heroism, it’s a moral obligation—it’s the *not* signing on that’s cowardice.

In this time of buzzwords like “assault weapons,” “tactical,” and “expert,” don’t even think of saying to me “Who’s your Daddy?” I know damn well who mine was, and it’ll never be you. ☺

[This column first appeared in the September 2006 issue of S.W.A.T.]



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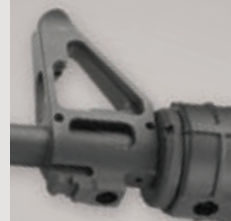
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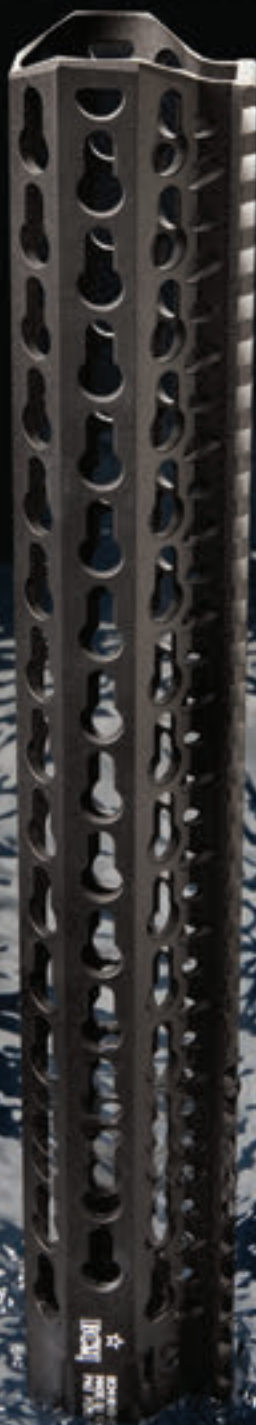




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