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COVER STORY

The second secon How Temperature Affects Ballistic Performance Does burning the powder at different temperatures cause bullet trajectory to change? BY DAVE MORELLI





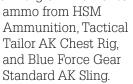
UPDATING THE MODERN RIFLE CZ-USA 805 Bren S1 Carbine

The CZ 805 is recognized as an excellent example of modern rifle design, and is why some U.S. firearms enthusiasts wanted access to it. Finally it's arriving on dealer shelves in quantity.

> BY TODD BURGREEN Cover photo by Straight 8 Photography

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One lucky winner gets all this: a custom AK from one of the most renowned builders—Jim Fuller's Rifle Dynamics, a case of Sierra 125-grain Pro Hunter



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BRIEFING ROOM

BY DENNY HANSEN

Murder in Dallas

ON July 7, the entire nation was shocked when five Dallas police officers were killed and seven others wounded by a coordinated sniper attack. Two private citizens were also wounded.

In what may be the epitome of irony, news crews were on the scene covering a Black Lives Matter march protesting against the police. When the first shots rang out, people were seen fleeing the area in fear for their lives.

Police officers, doing what police officers do, were seen getting people to safety while other officers ran toward the sound of gunfire. My heart is simultaneously filled with pride and sadness. I pray for the families of the fallen and the wounded.

Obama, doing what he does—and never letting a crisis go to waste danced in the blood of the fallen officers while calling for more gun control.

Let's be clear: guns did not commit this atrocity. Criminals with hate in their hearts did.

I realize I'm preaching to the choir, but there may be a few members in the congregation who have not gotten the message. Evil exists and it is among us.

It doesn't matter if you live in Mayberry, RFD or a major metropolitan area. It is incumbent upon you to take responsibility for your life, the lives of your loved ones, and the lives of your fellow citizens. That means getting training, practicing your skill sets, and being armed.

As I write this, three suspects are in custody and one died in a shootout with police. The mainstream media has reported their names, but our policy is not to repeat the names of murderers. It is much more important to remember the victims.

END OF WATCH

Sr. Cpl. Lorne Ahrens, Dallas Police Department Officer Michael Krol, Dallas Police Department Officer Michael Smith, Dallas Police Department Officer Brent Thompson, Dallas Area Rapid Transit Officer Patrick Zamarripa, Dallas Police Department

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

Denny Hansen



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MAIL ROOM

LETTERS FROM OUR READERS

BRAVO COMPANY RECCE-14

The cover with the Bravo Company rifle was outstanding (*FROM SEA TO SHIN-ING SEA: Bravo Company Mfg Recce-14 KMR-LW*, June 2016 *S.W.A.T.*). I also enjoyed the article about the rifle.

I do have one small bone to pick with the cover photo—the dust cover is open. Standard protocol after firing is to look at and feel the bolt carrier to make sure there is no malfunction and that the bolt is fully forward, and then close the dust cover.

K. Duskin, Indiana

Good eye and we agree with your assessment. However, for the purpose of the cover photo, the dust cover was left open to show the BCM bolt carrier.

RECYCLED .22 CASES

I save all my issues of *S.W.A.T.* for reference. I've searched several years back but can't locate one particular article. It was written by Denny Hansen and was

about recycling .22 Long Rifle cases and turning them into .223 bullets.

With the recent talk of new anti-gun laws on the horizon, I'm afraid there will be another big rush on guns and ammo. Not wanting to be caught with no ammo for my rifles or paying exorbitant prices, I think this may be something I should look into. Excluding the cost of the equipment, roughly how much would it cost per round to load?

Finally, my main concern is accuracy. What kinds of groups should I expect from an AR-type rifle?

L. Adams, Kansas

Thank you for your continued support. Time gets away from us, and you may not have looked far enough back.

That article appeared eight years ago (FREE BULLETS: From .22 to .223, December 2008 S.W.A.T.). It is available for \$6.95 in print and \$4.95 in PDF format on the S.W.A.T. website at www.swatmag.com. As for cost, expended .22 LR cases are free for the picking. I use the lead from jacketed bullets (about 95% pure lead) picked up from my range, so that is free as well. Figuring roughly five cents per powder charge and three cents per primer brings the cost per round to about eight cents, not counting your time.

Accuracy depends on many things, including the barrel/intrinsic accuracy of the rifle; whether fired offhand or from a bench; optics/sights used; and of course, the shooter himself. I typically get one- to 1.5-inch groups fired from prone at 50 yards using a red dot sight. Denny Hansen

SOFTWARE OR HARDWARE?

I thoroughly enjoy reading reviews of new guns and gear in *S.W.A.T.*, but the article on how to judge someone's body language before a fight was simply fantastic (*PRE-EMPTIVE SELF-DEFENSE: Indicators of Aggressive Escalation*, June 2016 *S.W.A.T.*). By reading the signs, you

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can possibly tell if someone is about to attack you, and formulate a proper response.

Going a step further, by paying attention to those same signs, you could recognize that a terrorist is preparing to attack. As Steinbeck said, "the mind is a great weapon and nothing else matters." G. Falk, California

Thank you for taking the time to contact us. We're in full agreement that situational awareness is of paramount importance.

Just to clarify, the actual quote from

John Steinbeck's The Acts of King Arthur and His Noble Knights is: "The purpose of fighting is to win. There is no possible victory in defense. The sword is more important than the shield and skill is more important than either. The final weapon is the brain. All else is supplemental."

HIGH MARKS FOR HI-POWER

With the threats of terrorism and gang violence, I switched from a 1911 .45 to various 9mm pistols a few years back—mostly for magazine capacity. I must admit I miss shooting a firearm with a good trigger.

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The recent article on the Hi-Power (*AMERICAN GENIUS: Nighthawk Custom Hi-Power*, July 2016 *S.W.A.T.*) made me realize I can have the best of both worlds—magazine capacity in the teens and a good trigger.

I must admit I got carried away looking at the photos of that beautiful Nighthawk Custom Hi-Power and it took me a minute to realize an article accompanied it. Good call on using that goodlooking custom leather holster instead of Kydex or nylon.

Keep up the good work.

B. Barns, Texas

Thank you for the kind comments and sharing your thoughts. The long service record of the Hi-Power speaks for itself, but the Nighthawk Custom rendition transforms a great pistol into a shootable work of art.

PEPPER SPRAY INADEQUATE

Please write an article exposing the foolishness of relying on pepper spray to stop a dangerous animal. I'm a 73-year-old lifelong outdoorsman and know from experience that when facing possible death, you don't think to check the wind direction. The spray may come back into your face, making a bad situation worse. The benefits of using a firearm are that a threat can be stopped before it gets dangerously close, and it can't hurt someone else.

It's stupid to even mention pepper spray in the big-game hunting regulations—even a bow hunter can carry a Magnum pistol.

The most recent threat I faced was a rutting bull moose, running around and shaking his head. The slugs in my shotgun were a great comfort.

C. Aherns, Montana

Thank you for contacting us. While we have no input to a particular state's hunting regulations, and S.W.A.T. Magazine is much more concerned with two-legged threats than four, we fully agree that a firearm may be the ultimate decider in an attack by a dangerous animal. (5)

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PHOTO: John Stryker "Tilt" Meyer, MACV-SOG Vietnam.

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LAWFUL CARRY

BY FLINT HANSEN Photos Courtesy 5.11 Tactical

5.11 Havoc 30 Pack

IVE been an outdoorsman all my life. As a boy, I loved being outside. On the ranch, the day started a couple hours before daylight and we often rode back by moonlight. When I was 18 years old, I joined the local search-andrescue unit. That was when I learned how little foresight people have when it comes to planning their outings.

Calls about overdue hikers usually came in at least a couple hours after dark. Furthermore, we inevitably found out that they should have been back at noon and no one called us until 10pm because "we thought they would be back by now."

The reporting party would go on to say the overdue party only took one small bottle of water for three or four people, had no flashlight and no matches, and wasn't wearing proper clothing or footwear to be out hiking in the country. It made me wonder what was on their mind in the first place!

> It's great to have fun and enjoy the outdoors, but you should take with you a flashlight, matches, basic first-aid kit, snacks, enough water, and a charged cell phone. These items should be carried in every car in America every day anyhow. Put them in a good-quality pack and you will be set for most things. You can add to your pack depending on your skill sets and needs.

One pack I have been reviewing is the Havoc 30 from 5.11 Tactical. It's an ideal size to either keep in your vehicle with supplies or take with you hunting or on a day hike.

The first thing I noticed was the pack's overall construction. The Havoc 30 is made of 500D/1050D nylon. The shoulder straps are padded and fully ad-



5.11 Tactical Havoc 30 is an ideal size pack to keep loaded and ready to go for emergencies.

Padded eyeglass case on top of pack is a nice feature.

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justable, with an adjustable sternum strap and quick-release buckles. A waist belt may either be deployed or tucked into the pack. Overall dimensions are 21Hx11.75Lx9W. Approximate volume is 1,680 cubic inches/27.5 liters.

Each side of the pack has a long pocket with zipper closure. Inside, an elastic strap can hold AR mags or can be used to carry a bottle of water on each side. At the very top of the pack is a carrying or drag handle.

The main compartment of the pack is very large, with a half pocket inside to help keep gear separate. This half pocket can be used for a hydration pack or armor plate. The top of the pack has PALS webbing if you choose to add any gear to the pack. To reduce bulk, attached straps can compress the pack as items are used.

A padded zipper pocket on the top of the pack protects your eyewear. Inside the main compartment is a mesh pocket with zipper closure that is great for car keys, wallets or a cell phone.

A zipper runs down the length of the back, enclosing the outside pocket.



Havoc 30 pack has a mesh zippered admin pocket on the interior of the main compartment.

MICRO HAWK

MICRO HAWK

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The Micro Hawk was designed to be an EDC defensive tool, small enough to carry daily, and can also be very versatile. Shawn Owens has effectively combined the traits of a karambit, tomahawk, and a traditional knife into one piece.

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Easily accessible, this would be my goto pocket for extra ammunition and first-aid gear. The top and bottom of the Havoc 30 pack have hook-and-loop fasteners for name tags or patches. The inside back of the pack, which rests against the user, is padded so it can be worn over a long period of time without discomfort.



Havoc 30 pack has adjustable padded shoulder straps and waist belt with QD buckle. If desired, waist belt can be tucked inside the pack. Adjustable sternum strap also has QD buckle.

I found this Havoc 30 pack to be very well made, as I have come to expect from 5.11.

While the first rule to packing is "Thou shalt not overload a pack," this pack can carry everything you might need plus a little extra. The Havoc 30 is available in Black, Double Tap (dark gray with black trim), Sandstone (kha-ki), and Storm (light gray). Suggested retail price is \$139.99. (5)





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STREET SMARTS

Calling 911

You'll need help some day. I've needed help. Heck, even John Wayne had to call in the cavalry once in a while.

Though one of the touchstones of *S.W.A.T.* Magazine is to promote the self-reliant lifestyle, there are times in your life when you need assistance. If you've captured a burglar, your house is on fire, or your neighbor is having a heart attack, it's nice to know a whole bunch of professionals are willing to assist you at a moment's notice.

Odds are that we will all need to summon law enforcement, the fire department, and/or emergency medical services at some critical moment in our lives. But after 30 years in the business, trust me when I say it isn't as simple as picking up the phone and screaming "HELP!"

The telephone is, obviously, the primary medium through which to

summon emergency services. Though there are varying layers of complexity depending on the location, in theory the system is very simple: you place a call and speak to a dispatcher who ascertains your needs and then sends the appropriate equipment and people to solve your problem. Shortly thereafter, the fire department shows up to get the cat out of the tree, and everybody is happy!

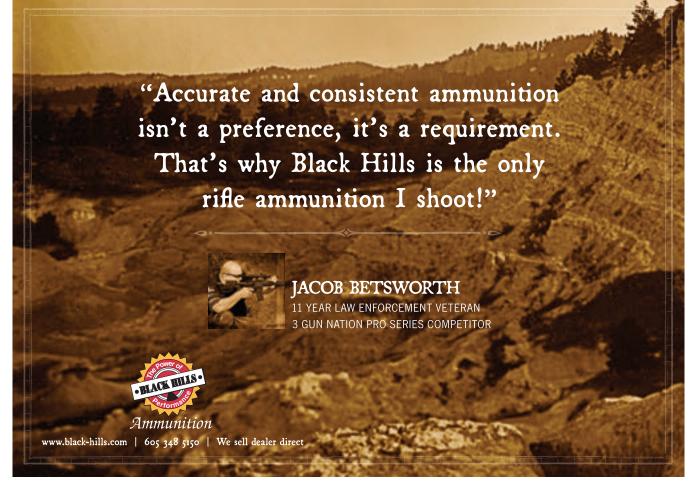
Unfortunately, the bugaboo in this simple system is the notoriously unreliable process of interpersonal communication. If the dispatcher doesn't ask or receive good information, or passes it along poorly, the folks coming to your aid might be unprepared, show up too late, or not show up at all. If you are clutching your chest, witnessing a robbery, or watching someone hang from the ledge of a burning building, this is a less-than-optimal state of affairs.

The key to the entire process of activating the emergency response system lies with the person who makes the call for help. The dispatcher certainly plays a critical role, but like a computer, "garbage in, garbage out" means that bad information thrown into the front of the system results in bigger problems on the receiving end where you are standing, bleeding.

When calling for help, first and foremost: remain calm. Take a deep breath and make sure you can speak slowly and clearly. "Check. Got it. Piece of cake," you are now saying to yourself.

Wrong.

Even punching the numbers 911 on a phone can be a challenge. Fingers are shaking, your voice is cracking, and things like names and numbers



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are suddenly AWOL. Speaking from personal experience during a medical emergency, it happens.

It is very common for 911 callers to either not know or be unable to explain where they are located. It is critical to know your home and work addresses and, more importantly, exactly how to get there. It's not a bad idea to write the information down someplace prominent, like on a paper stuck to the refrigerator, so you can glance at it in an emergency.

Certainly don't rely on Enhanced 911 locator technology. E-911 is a great thing and when working properly, should pinpoint your location within a few feet. But due to computer problems or simply old technology in many locations, the dispatcher might only guess you're standing somewhere on the North American continent based on your usage of English. That's not an exaggeration.

This is doubly important when using a cellular phone, because you might be surprised where an emergency call ends up being routed. Calls might be handed off four or five times to different dispatch centers throughout a region as everyone works to determine where the caller is located. Narrowing it down to a particular state sometimes takes a fair bit of question-and-answer detective work! When someone is choking, it's not the best time to be playing "20 Questions."

Aside from location, it is critical to share good, useful, actionable information even if the dispatcher doesn't ask. Mention things like hazards to responders in the immediate area, other people who are involved, or relevant reasons why something happened. It's also important to identify and describe yourself in cases where medical personnel or law enforcement need to know who called in the first place.

Don't get angry at the dispatcher for asking questions. Getting mad only adds to the stress of the situation, and those "silly" questions are being asked for some important reasons.

Furthermore, don't get impatient. It will seem like help takes hours to arrive, but in reality, actual response times are typically measured in minutes in most locations. Even in the most rural areas, help will often arrive within 15 to 20 minutes. Use that time wisely to calm yourself, help someone else in need, or provide additional information to the dispatcher.

Don't be too quick to hang up. Even if you are doing something that requires both hands, leave the phone off the hook and put it in speaker mode if possible. You might be able to hear useful information from the dispatcher, but regardless, the dispatch center is likely making a recording of the call. This could prove valuable to your defense if the incident involves use of force.

Though the 911 process is often dismissed as simple and straightforward, give at least a passing thought to how you would call for help in an emergency.

Don't be like the citizen who called 911 and reported that his house was on fire. When asked, "How do we get there?" by the fire dispatcher, he replied incredulously, "Don't you still have those big red trucks?" (5)



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BY REUBEN BOLIEU

AGAINST ALL ODDS

Backcountry and Bug-Out Cooking, Part II

IN the August issue, we covered simple food suitable for backcountry adventures that were non-cook items as well as food requiring just hot water. This issue we'll discuss how to cook simple food over an open fire without the use of conventional cookware.

A couple of years ago, I was on a backcountry camping trip and met a few other campers who were not fond of my style of cooking. They asked me why I wanted to "behave like a caveman," cooking on rocks and sticks. They had the latest high-tech cookware and portable stoves—nice gear, but it weighed a lot more than carrying just the food and using a campfire plus natural materials provided by the wilderness to do my cooking.

Granted, using an open fire is not always practical or legal in every state. This is one reason for backpacking stoves. But the big picture is knowing and practicing the skills used on a daily basis by early settlers and our ancestors.



Simple bacon fryer made out of rocks. This style allows wood to be fed from the front and keeps heat confined to a small area, generating a lot of heat.



Bell peppers cooking on top of coals. It's best to burrow peppers and potatoes into coals, if there are enough coals to cover them.

BACON FRYER

My favorite way to cook bacon in the backcountry is frying it. Taking a skillet or actual frying pan is ideal for an established camp, yet not always practical. Besides, its weight and bulk are too cumbersome for bugging out or backcountry traveling afoot.

In many parts of the world, a relatively flat, wide rock can be located and serve as a frying pan. The best way I have used this method of cooking is by creating an oven-like shape with the rocks, raising the frying rock up and having it supported by two other small rocks. Sometimes the whole set-up is backed by another flat rock or larger boulder.

Make a fire under the frying rock, warming it up slowly. Wood can be fed from the front, allowing some control of the flame. All types of meat can be cooked like this, as well as vegetables.

COAL COOKING

Cooking directly on hot coals is a way to cook meat, eggs, potatoes, corn on

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the cob (still in the husk), and peppers without a pan or grill. A pair of tongs or a good forked poking-stick is a must to move food safely without burning one's hand.

The best way to get a solid bed of cook coals is to first make a fire with whatever wood is available, then put hardwood on the fire and let that burn for a long time to produce the hottest coals to cook over. Softer wood only gets you ashy coals that won't get hot enough for cooking, while hardwood produces hotter, harder coals that won't crumple under the weight of a steak or piece of chicken. I've cooked chicken and pork chops directly on hot coals with great results. A little ash on meat adds to the flavor and won't hurt you at all. Simply treat the bed of coals as you would a pan.

Cooking eggs is a little tricky. First poke a small hole into the shell at the top, then carefully push the egg into the coals and leave it for about 15 to 20 minutes, though cook time always varies depending on the quality of the coals and many other factors. Again, tongs are needed to retrieve the eggs, as they will be very hot.

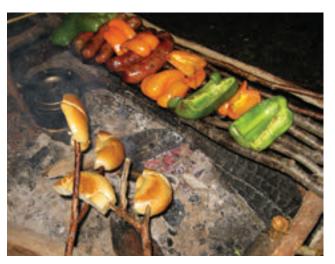
Potatoes are simple. They can be pushed into the coals or just laid on

top of the coals and then rotated. Corn on the cob is best with the husk still attached. Soak it in water so it retains some moisture and put it on top of the coals. The water turns into steam and cooks the corn with both heat from the coals and the steam.

Bell peppers are fun to cook over a bed of coals. I like to remove the top of the pepper, clean out the seed core, and stuff it with rice (precooked), mushrooms, onions, and cut-up sausage. I then put the top back on and place the pepper on the coals, burrowed in a bit. The best things about this way of preparing peppers are that the insides can



Eggs must have a small hole in order to cook correctly in the coals of a fire. About 20 minutes are enough, but be careful: the egg will be hot!



Author learned this method in South America, where snake, fish, yucca, and wild game are cooked on a similar set-up. Cooking rack grill can be varied to suit all types of cooking.



Author uses hand grill for cooking over coals, not an open flame. It can roast meat and warm bread from a distance. Green wood is necessary for these types of cooking grills.



Green sphagnum moss was used to steam these carrots and mushrooms over an open fire. Cook time varies, but the reward is worth the wait.

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be eaten with any utensil and the pepper serves as the cooking apparatus, bowl and food.

MOSS STEAMING

Steaming is my favorite way to cook vegetables in the backcountry. Reindeer moss and sphagnum moss work well for this type of cooking. I have steamed carrots and mushrooms with great success over an open fire.

I usually have a fire going and wait for it to die down low before putting a bundle of green moss on top of the flame. Then I add veggies on top of the moss and cover it with another thick bundle of moss to keep the moisture in. Even if the flames go out, the heat from the coals keeps the steaming action going. When the moss dries out, it can catch on fire, so attention is required.

COOKING RACK GRILL

This is a decades-old technique that I learned in the Peruvian Rainforest. It requires a little ingenuity and some green sticks. Making a cooking rack or grill is much like making a raised bed (swamp bed) to sleep in the jungle. Four Y-shaped (forked) sticks are stuck into the ground and act as corners of a rectangle. Cross-sticks are laid across the forked sticks. The last step is to procure green sticks about the thickness of your thumb and lay as many of them as needed on the support sticks (lengthwise). This forms the grill.

The size of the grill has everything to do with the size of the campfire and the amount of food that needs to be cooked. With this kind of grill, eventually a piece of meat, pepper or bread will be lost to the fire, especially if there aren't enough sticks initially laid down when building the grill. The best thing to do when using a grill like this is to make a pair of tongs to help move the food around more efficiently and to retrieve food that may have been sacrificed to the fire gods.

Who needs pots and pans when nature provides? Try these techniques the next time chance allows, and see what dishes you can muster up. If it fails, there's always SPAM!

Reuben Bolieu is an adventurer, writer, photographer, and survival instructor for Randall's Adventure & Training. He has spent most of his life hiking and backpacking through the wildernesses of the world.

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FEEL BURN!

How Temperature Affects Ballistic Performance

BY DAVE MORELLI | PHOTOS BY SARA NORMAN

ecently I have heard long-range shooters talking about powder temperature affecting external ballistic performance of their favorite cartridge. We all know that the temperature of the air, along with other atmospheric conditions, causes the trajectory to change because of increased or decreased friction in the atmosphere, but what about the burning of the powder at different temperatures?

Varget was developed and boasted that it was unaffected by temperature, and now Hodgdon Powders has the Enduron Series of powders that are unaffected by temperature.

I have even heard some benchers talk about accounting for the temperature of the cartridge as it warms up in the chamber as it is fired. This is not something I worry about. Most of my shooting, whether hunting or professional, will most likely be done from a cold bore.

TEMPERATURE OF RESTING POWDER

But I am curious if the temperature of the resting powder is anything to worry about in long-range shooting. As the temperature changes at different times of the year, I routinely check and adjust my zero, especially for hunting coyotes, because they are small targets at long range.

This is a zero at 100 yards, and the reason I do it is because the air temperature changes point of impact. So what about ammo that is zeroed in cold temperatures, but the ammo



came out of a box in the truck, like what might happen when zeroing the rifle? After the ammo has been in the gun for a while on a coyote stand in zerodegree weather, will the colder powder burn differently?

I decided to test several powders to see if there is anything I needed to adjust for when the temperature of the powder changed.

POWDERS TESTED

The first powder I tested was IMR 4064. I have been using this powder for my .308 Winchester loadings for 30 years. I have no reason to change to Varget, although many people I shoot with speak highly of it, so I decided to test Varget also with the 4064. I tested the Enduron 4166 also, because it is recommended for the .308 and many other calibers. The Enduron also has CFE (Copper Fouling Eliminator) added to reduce copper fouling.

I also load IMR 7828 in a .300 Winchester Magnum and planned on comparing it with the Enduron Powder recommended for the .300. I was interested to see if there would be a difference that needed to be figured in for long-range groups. I think the difference would be negligible at closer ranges. I'd measure the velocity at the muzzle of each load and record the changes in five-shot averages so the correction, if any, would most likely change elevation.

The first step was to load up some rounds with my pet .308 load: 43 grains of



Five powders were used to work up loads for the evaluation. Inset: Author used Nosler Brass and bullets in his precision rifle and for this test.

IMR 4064 under a Nosler 175-grain HPBT bullet. I decided to use Nosler brass for this test because it is extremely uniform and is sorted out by weight.

CONSISTENCY

When I buy 100 pieces, it is within a couple grains of the same weight for all the pieces. I don't have to buy 200 pieces to get 100 all the same weight. The case mouth is chamfered and the flash hole has been reamed. All I should have to do is uniform the primer pocket because I want everything other than the powder temperature to be consistent.

I have been shooting Nosler bullets



for some time now. I started shooting Sierra Match BTHP bullets as they were readily available and reasonable back in the day, but I have found the Nosler to be a comparable backup to my pet Sierras. These days a guy needs to have backup in the event the favored bullet is unavailable when needed. I have no preference, Nosler or Sierra, since they both perform for me and the Nosler bullets were available for this test.

All loads for this test were loaded



Temperature of rounds rose just a few degrees from author's freezer before shooting.



Not quite ready. Author raised temperature of powder to 101 degrees with round in front of defroster vent.

Results of each shot were carefully recorded. Inset: Pro Chrono was used to record velocity of each shot.

with the anal consistency I always use when loading precision rifle ammo. Case weight and consistency, primer pocket, flash hole reaming and consistency, case neck thickness, and precise measurement of powder charge are some of the things I consider important.

All bullets were seated the same length and distance from the rifling. My rifle and I like setback just back about .010 to .015 inch from the lands for the Nosler 175 grains. (Setback is the distance the ogive of the bullet is from touching the lands of the rifling when the cartridge is chambered.)

TEMPERATURE VARIATIONS

I wanted to isolate the temperature to the powder only. I figured I couldn't control the air temperature to be the same each time I shot, so I used the change in muzzle velocity to record any difference due to the temperature of the powder. I worked with temperature changes from 0 to 5 degrees to 80 to 90.

Powder that was recorded as the coldest spent time in my freezer with the temperature at about 0 degrees, and the warmer powder sat on the dashboard of my truck on a sunny day, which recorded out at over 90 degrees. All temperatures were verified with an infrared thermometer. The rifle was at whatever the ambient temperature was at the time of shooting.

The temperature on the day I picked for the test was about 60 degrees. I wanted a day that was either super cold or very warm so one end of the spectrum would be easy to achieve. Right! Depending on getting the weather you want in the Idaho mountains is futile.

I used my freezer to cool the ammo to zero degrees and the temperature right before the shot for five shots. I brought three magazines loaded with three different powders from the freezer to the rifle and checked the temperature as I put them in. They warmed a few degrees but not much.

The same with the hot rounds: they were on the dashboard of the truck and with the defroster on, I could get them near 100 degrees. They were still 98 or



so upon firing. It was tedious getting the ammo in the same temperature range, because firing the rifle would warm up the other cold rounds and the warm ammo would cool quickly and needed to be warmed back up again before firing another shot. Each shot was within a few degrees of the others.

With the chronograph several feet in front of the muzzle, the only atmospheric conditions affecting the bullet were the short distance from the chamber to the chronograph. I took a five-shot average of each powder and temperature tested. If the temperature affects the velocity, it might be something to consider when sighting in a cold-weather coyote rifle.

In close, I don't think any of it matters enough for the five-inch kill area of a coyote, but at distance that five-inch kill area becomes small. Sufficient change in muzzle velocity could be a miss.

Conditions on the day I tested these loads were cloudy and very hu-



All powders performed extremely well at all temperatures.

mid. It had rained the last several days and was going to again. Humidity was 78%. Altitude here is 5,700 feet, the barometric pressure was 28.10 inches, and the temperature was 60 degrees.

TEST RESULTS

The first try was IMR 4064. As I said, this is the powder I settled on and have been using for many years. It works for me and, at my altitude, I get 2,700 feetper-second (fps) plus in velocity out of my 26-inch rifle.

The average velocity of the rounds that were heated to 98 to 100 degrees was 2,735 fps. The really impressive number was the maximum deviation between shots: eight fps. A single-digit deviation is very consistent ammo. The 0 to 10 degree ammo averaged 2,695 fps—a difference of 40 fps. Big whoop!

The Varget also did well, with a load of 43 grains of Varget under the 175-grain Nosler. The high temperature stuff averaged 2,703 fps. It turned out to be a good load to tweak, as maximum deviation was 17 fps.

The cold ammo averaged 2,615 fps, a difference of 53 fps. Not much different than the IMR 4064. I shot these loads through the chronograph at 25 yards. As the accompanying photo shows, the target printed ragged holes for all powders tested. This was an accurate powder to work up in the .308.

The Enduron 4166 proved to be a disappointment to me in the .308. First, I was loading by the seat of my pants, as there is not a lot of data on it yet, but by using the load info on the Hodgdon website, I came up with something that worked well with the 175 Nosler. I loaded a 40-grain load and came up with velocities in the 2,600 range. The



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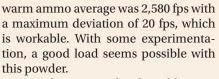
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I was disappointed in the cold ammo difference, with average velocity at 2,488 fps, a difference of 92 fps. Groups were ragged holes, also indicating the powder could be worked into a nice .308 load. The powder performed well, but I would want to figure in extreme changes in temperature for long-range shooting.

In .300 Winchester Magnum, I have settled on IMR 7828 and get velocities in the 2,950 range with a 200-grain HPBT Sierra Bullet. The Enduron product I chose to compare is Enduron 4451. It also has the CFE (Copper Fouling Eliminator), which is helpful because my .300 is a heavy copper fouler. IMR 7828 produced the velocities I expected, not much different than the .308. It's a great load with 9 fps as maximum deviation.

The Enduron 4451 performed well, its numbers close to the IMR 7828. The CFE in the Enduron powders really did cut down on copper fouling in both rifles.

WORTH WORRYING ABOUT?

Whether the differences are something to worry about or not, a rifleman should consider the temperature of the powder they are using when calculating a precise long shot.

I will be more diligent with where my ammo is sitting when doing my winter zeroing. I have a habit of pulling it out of the truck or my shop and shooting it at the outside temperature. Even when it is -5 degrees, ammo sitting on the dash will be much warmer and, as I learned doing the test, it takes a while for the powder temperature to change up or down in the rifle.

Nothing will change the effect of the cold air between the rifle and the target except good dope, but knowing how temperature affects the internal ballistics of your rifle will make one less excuse for a missed shot. (5)

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

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ENEMY AT THE GATE

Smart-Gun Guinea Pigs

IN April, the Obama Administration announced plans to accelerate the development of so-called "smart gun" (a term proponents use with a straight face and apparently no sense of irony) technology, which promises to make us safer by rendering our life- and liberty-preserving firepower less likely to function.

As for specifics, first, of course, more taxpayer money will be needed for the pursuit of the elusive magic gun that only shoots bad guys (preferably government-designated bad guys).

The Department of Justice and the Department of Homeland Security are hard at work developing a list of criteria for gun manufacturers to consult when attempting to design a "smart gun" that will be acceptable for use by federal, state, and local law enforcement agencies.

Yes, you read that right—the federal government has put itself in charge of determining the needs of state and local law enforcement officers.

As the *New York Times* put it, there are also plans to make it "cheaper for gun manufacturers to bring smart guns to the market and by using the federal government's enormous purchasing power to encourage development."

For the federal government to exercise "enormous purchasing power" in the small arms market, it would seem the idea here must be for the military to buy these guns. However, we have seen some pretty surprising federal agencies (Department of Education and National Weather Service, for example) buying some pretty surprising amounts of firepower. Still, the truly "enormous" money for the federal small arms budget goes to the military.

And now it appears that "gun control" advocates are in danger of painting themselves into a rather amusing corner. They tell us that so-called "assault weapons" are inappropriate for private citizens, because the "military features" of these semi-automatic, detachable magazine-fed rifles make them "weapons of war," to be wielded only by America's fighting men and women on the battlefield. Well, now it appears that "smart gun" technology is to become a "military feature," too. For the battlefield only, right, gun-ban zealots?

That, of course, is the direct opposite of the direction the forcible citizen disarmament advocates undoubtedly really want to go. Obama presumably chose the military and law enforcement as the first to be stuck with "smart guns" simply because he and his minions have far more ability to control their firearm purchases than is the case with private citizens (and oh, how that must rankle).

Granted, the Administration has taken pains to claim they are not proposing a mandate for the new gadgetry. The sincerity of that claim is wide open to questioning, though. The Obama Presidency, after all, is in its last year.

Any decision as large as replacing the entire military's small arms arsenal will take much longer than that (offand-on efforts to find replacements for the M16/M4 rifles and M9 pistols have dragged on for years). Therefore, any such decision will be made by an Administration in no way beholden to Obama's "no mandate" promise.

And let's be clear: *no* sane fighting man or woman will choose to carry a "smart gun" into battle unless given no choice in the matter. Battlefield weapons are subject to brutal conditions and abuses, and need to be absolutely dead-reliable regardless.

That's impossible, yet vast amounts of money and effort are endlessly put into coming as close as possible to that unattainable goal.

So-called "smart guns," on the other hand, put enormous amounts of effort, at enormous expense, into moving in *exactly* the wrong direction with regard to reliability. The "advantage" of such guns, remember, is an *increased* tendency to fail to fire when the trigger is pulled—that's when the technology works perfectly.

And of course, the technology often will *not* work perfectly. Any additional complexity in the design and construction of any machine introduces new ways for the machine to malfunction.

When you add active electronics to

the mix—and all the "smart gun" proposals I've seen rely on electronics you introduce an entire new set of possible failures, from dead batteries to wet circuitry to wires jarred loose by recoil.

There is also the fact that anything electronic is subject to hacking. Anything electronic that can communicate with the outside world—and most proposed "smart gun" technology would can be hacked *remotely*. Potential future enemies such as the Russians, Chinese, North Koreans, Iranians, and a whole host of others, many with a very advanced understanding of cyber-shenanigans, are undoubtedly watching these developments with keen interest and probably some gleeful anticipation.

All that should be enough to convince anyone with our troops' best interests (not to mention our national security) at heart to categorically reject "smart guns," but really, it shouldn't even take that much. Several years ago, the Colorado Springs Police Department traded their Smith & Wesson 9mm duty pistols in for a new model. Still Smith & Wesson, still 9mm, but the new model came without a certain "safety feature" that the previous model had.

Nothing nearly so complex, delicate, or failure-prone as "smart gun" technology, just a magazine disconnect safety. Such a mechanism does undoubtedly reduce the risk of a distracted or otherwise inattentive gun owner or officer forgetting that removing the magazine does nothing to unload the chamber, and then firing a round unintentionally, with potentially disastrous results.

But it also makes for a heavier trigger pull, and thus a gun more difficult to fire accurately. The department apparently concluded that officers trained to *never* think a gun is unloaded, and equipped to shoot accurately under enormous stress, are safer than officers whose negligence can be compensated for mechanically—at the cost of being less capable of prevailing in a gunfight.

Law enforcement officers and service personnel are the first intended victims of Obama's "smart gun" push but, if this gambit succeeds, will not be the last. It must not be allowed to succeed. (())

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FRONTLINE DEBRIEFS

The Minefield of Social Media Sharing

IN the beginning, there was word of mouth, which gave way to clay tablets, which in turn progressed into papyrus, which then led to pen and ink, and finally culminated in binary numbers floating about the ethernet zone of space.

Discovery within the judicial system applies to anything evidentiary in value that may be argued to build a case either for or against an individual. If a past history or the perception of preconceived notions relative to an individual's actions can be used to discredit him, you may rest assured that such will be the case.

I would never nor have I ever defended a corrupt or dishonest officer. They should not have been there in the first place, and their actions simply make the honest officer's duties more challenging. I would apply the same theory to blatantly stupid actions taken by those who should never have been allowed to wear the badge.

It seems to have become commonplace for people to share everything about their lives on the Internet. Twitter, Facebook, personal websites, and the like have become virtual dumping grounds for some fairly brain-dead actions and comments.

I am aware of officers who have taken some rather risqué photos of other officers and then shared them with a "select few." These few in turn shared them with others, and the sharing exploded exponentially. Lawsuits ensued and departments paid substantial sums resulting in some being fired while others were transferred or demoted, and careers were halted.

In simple terms, nothing good came from this. Pure stupidity at its best.

Deadly force is treated very seriously within the judicial system. Comments that are negative in nature, derogatory, prejudicial, hateful, or display deepseated personal animus toward others and are digitally imprinted for eternity clearly illustrate that you should not be in law enforcement.

They can also severely degrade a case that otherwise might be viewed as reasonable and justified as such. If there are multiple defendants (officers) in a wrongful death/use of force lawsuit, one rotten apple will fell the tree. Were I to apply force in a reasonable fashion and you as my partner had very questionable material on your website or had posted questionable items relative to the incident, you can bet this will be one of the first things to surface in deposition and most certainly in trial.

What you might view as funny or shareable at the moment can have devastating consequences down the road. Personal Facebook pages that state, "It's a good day to kill someone," have pictures of skulls, or any material glorifying killing will be displayed throughout the trial to a jury. Aside from being blatantly myopic, stupid and immature (again, LE is not the profession for you), rehabilitating your image in the eyes of the jury and courts is a very difficult task.

One of the first questions I am asked in depositions defending those who have applied deadly force is whether or not I have Facebook or Twitter accounts. Anything I have ever written, including this article, is discoverable anything. Skilled attorneys can readily turn what you perceived at the moment to be a harmless comment or post and use it against you with devastating consequences.

Officers are sometimes amazed at what surfaces during the long process of resolving lawsuits. Since these affairs often span several years, more than ample time exists for computer experts to discover what you erroneously perceived as non-recoverable information you posted.

Aside from gross immaturity, it is clear this individual did not anticipate the damage one singular comment might have relative to a future case. The same can be applied to photos of an offensive nature. Juries are susceptible to perception. As a point of fact, it is their very perception of a case that formulates their decision. If you are viewed as less than professional, I can guarantee you that your case will not go well.

With the advent of smartphones and integrated cameras, anything you record is also discoverable. If you were to attempt to hide this fact, a case might be made against you for obstruction of justice. Any and all evidence relative to a case is admissible. Incriminating or exculpatory or otherwise, it is all evidence brought forth that ensures a fair judicial process.

A hidden danger lies in feeling that your every thought and action need to be shared instantly with the world. Those shared thoughts and actions are discoverable and ultimately useable against you. I have heard, "I didn't think this would ever come up." Well, it has and we have to deal with it.

Once the "cloud" receives this information (I'm not sure exactly how that works), it is held in perpetuity for all to discover. Part of being professional is using a clear thought process when deciding what to share and what not to share with the world.

In my day—on day one of the Academy—they told us that three things are guaranteed to destroy a career: whiskey, women, and your mouth. We should probably now add digital information.

Another often overlooked factor is the subject of logos, emblems, tattoos, and the like that depict images or phrases that can be used against you. Plenty of these are out there. It is not uncommon (I had a recent case involving this) for officers to be photographed without their shirts to display tattoos and/or injuries sustained.

The images were not exactly beneficial to this individual's case. I am wary of such images, and you should be too. The old adage, "There are no mistakes on a blank piece of paper" is a rather insightful phrase.

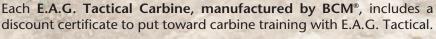
Use discretion and professionalism when deciding what to share with the world. The digital world is replete with landmines that can detonate when least expected. ()

Scott Reitz is a 30-year veteran of the Los Angeles Police Department and the director of the highly acclaimed International Tactical Training Seminars. Course information and schedules are available at their website at www.internationaltactical.com.

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LONG GUNS

Folding Stocks

A rifle is a very effective combat weapon, but it is not the most portable option. Likewise, at close quarters, shotguns are deadly, but they also are not the most portable weapons. Handguns are portable, but in general not as effective as rifles, carbines, or shotguns.

To make the rifle or carbine more readily transportable, various methods for shortening overall length by folding or collapsing the stock have been developed. Likewise, folding or collapsing stocks have been developed for some shotguns. I will discuss the four main types of collapsible stocks and what I see as their advantages and disadvantages.

COLLAPSIBLE STOCKS

Most *S.W.A.T.* readers are familiar with the collapsible stock on the M4 version of the AR-15 and perhaps on the HK91 or 93 and a few other rifles or carbines. The collapsible stock is normally very quick to deploy or collapse and simple to operate by depressing a conveniently located lever. In the case of the M4 stock, it offers multiple positions to fit shooter size and wearing body armor or heavy clothing. The M4 collapsible stock is acceptable for shooting comfort, though it is not great.

It is much better on a 5.56x45mm platform than a 7.62x51mm one, where

its butt pad is often too narrow. Some M4-type stocks are available with a padded butt pad, a useful feature for a 7.62x51mm rifle. An exceptionally good collapsible stock is the one SIG Sauer puts on the 7.62x51mm 716. Because M4 stocks are frequently made of polymer, they are also less expensive if switching from a fixed stock to a collapsible one.

Another "M4" worth noting that uses a collapsible stock is the Benelli M4 shotgun, used by the USMC as the M1014. This collapsible stock is more comfortable than many and works well when firing multiple rounds quickly from the self-loading M4/M1014.

For shooting comfort, the standard HK 91 and HK 93 collapsible stock is terrible. It stows well and looks "high speed" when deployed, but it's hard to get it seated well against the shoulder

and it tends to slide when shooting fast. When shooting a G3 on full auto with the collapsible stock, it is necessary to hold on very tight and muscle the rifle to stay on target.

The similar collapsible stock used on the HK MP5 is nowhere near as good as the MP5 fixed stock, but it isn't terrible on a 9x19mm weapon.

UNDER-FOLDING STOCKS

The under-folding stock is most commonly encountered on variations of the AK-47. I am a fan of AK-47 underfolders for compactness and ease of carry. I like them a lot less for shooting. They also have a tendency to loosen with use, meaning they will be less stable when shooting and more likely to rattle in movement—not good for a combat weapon.

The AK-47 under-folder was designed





Above: FN SCAR has one of the bestdesigned collapsible stocks. It both telescopes and side folds.

Left: Since he first encountered the SIG 550 more than 25 years ago, Thompson has considered its side-folding stock one of the best available. Here it is folded on a SIG Sauer 551A1.

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LONG GUNS





Benelli M3 shotgun with military-type collapsible stock is quite good.

Some shotguns use the top-folding stock. SPAS-12 is an ungainly shotgun at best, but with the hook in place, it is guaranteed to catch on something.

so it could be fired with the stock folded and carried with a magazine in place. With the stock folded, overall length is about 25.5 inches, which means the carbine will fit in a pack or readily in a vehicle. While it can be fired with the stock folded, accuracy is not good past 10 or 15 yards. But with practice, the stock can be deployed fairly quickly.

I've trained close-protection teams armed with folding-stock AKs and got them competent at debussing and bringing the weapon into action quickly in counter-ambush drills.

As a trail car usually contains three or four shooters, I normally train them to concentrate on getting out of the vehicle and finding cover before worrying too much about engagement, but I also train them to deploy the stocks and bring the AK into action immediately if crisis engagement is necessary.

Now, for the negative part: I've seen

really good shooters who could use the folding-stock AK well at 200 yards or more. I'm not one of them. I have trouble getting the stock positioned comfortably and can only get an acceptable cheek weld rather than a good one.

Fortunately, the 7.62x39mm round does not have that much recoil, so the butt plate of the folding stock doesn't cause great discomfort when shooting. It is noticeable when firing full-auto but not intolerable. In full-auto, the butt plate slips on my shoulder if I don't grip the carbine really tightly.

When training troops in tropical countries, I have also noticed that the button release and pivot points on the folding-stock AK need to be kept welloiled to prevent rust.

TOP-FOLDING STOCKS

The top-folding stock is most often encountered on shotguns. In many cases, this is so the pump action may be operated with the stock folded.

Like some of you older readers, I've used Remington 870s with the factory steel top-folding stock. The pistol grip was a useful feature, and the stock did allow the 870 to conceal fairly well under a topcoat or raincoat.

With practice, the stock could be deployed quickly, or the shotgun tightened against the sling and fired from the hip after clearing the coat. A lot of police street-corner-buy teams used this type of 870.

I have a Benelli M3, one of my favorite combat shotguns, with the factory top-folding stock. The problem is that the butt plate does not fold down, resulting in a protrusion that catches when exiting a vehicle or otherwise moving. You don't see that version of the M3 very often—for good reason!

Then there's the top-folding Fran-



Sako TRG 42, a widely used .338 Lapua sniping rifle, has an excellent side-folding stock.



As telescoping stocks go, this one on SIG Sauer 716 is among the best.

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chi SPAS-12. This is a heavy shotgun and fairly ungainly. But for some reason, it is beloved by filmmakers. I've worked with some high-speed police and military units in Europe that like it. It is definitely handier to transport with the stock folded, as it only weighs 8.75 pounds, though it always feels like more to me.

The rather odd hook on the stock was designed to hook over the forearm so the shotgun could be fired one-handed from a vehicle, while carrying out a ship boarding, etc. I have fired one from a vehicle using that technique and it does work. At least the hook can be removed so it does not stick up when the stock is folded along the top of the SPAS-12's receiver.

SIDE-FOLDING STOCKS

I became a fan of the side-folding stock on the M1A1 carbine. I still like M1A1 carbines, though in retrospect the stock leaves something to be desired. Still, it unfolded and made a usable, if not optimal, stock for shooting.

What really convinced me of the advantages of the side-folding stock was when I first shot the SIG 550, an excellent rifle made even better by the design of its stock. Its side-folder is stable and very comfortable to shoot. As the 550 is a 5.56x45mm rifle, the ability of the stock to handle recoil is not an issue. It is just a great stock for shooting.

For use with some optical sights, the SIG 550 series of rifles is best used with a cheek piece made by SIG to allow a solid cheek weld. I use an ACOG on the 551 and find it works best with the cheek piece. On my 551A1, the standard stock lets me acquire a scope just fine.

I think the best example of how well the folding stock can work for precision shooting is the number of long-range sniping rifles that are equipped with folders. To name just a few, the Sako TRG 42, Steyr SSG 08, and Accuracy International AWM rifles in .338 Lapua use a side-folding stock and are still capable of ½ MOA accuracy at long range. The stocks are fully adjustable and comfortable to shoot as well.

I also chose a side-folding stock when I had ROBAR build me a compact counter-sniping rifle built on the Remington 700. Designed to offer countersniper capability in a rifle that can easily be carried in a pack or case, my ROBAR QR-2F has a 16.25-inch barrel and folding stock, yet still shoots sub-MOA groups at 300 yards.

Other weapons I've used that have really good side-folding stocks include the FN SCAR and Poly Tech side-folding version of the AK-47, though the latter still uses a skeleton stock, but a better one than a standard AK folder. The Magpul Zhukov-S Stock is a great folding stock for the modern AK. The Zhukov-S Stock offers a folding collapsible stock with QD sling mounts, modular cheek risers, and shock-absorbing rubber butt pad.

I use a simple system for evaluating a folding or collapsible stock on a rifle or carbine. First, I want it to make the weapon more compact when I'm carrying it. But second, and equally important, I want the stock to allow me to shoot the rifle, carbine, SMG, or shotgun as effectively as possible.

Sometimes there's a tradeoff and I accept that, but the stock must allow you to be able to quickly engage your target and hit. ⁽⁽⁾)



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UPDATING

THE MODERN RIFIE

CZ-USA 805 Bren S1 Carbine

BY TODD BURGREEN

PHOTOS BY Straight 8 Photography inally arriving on dealer shelves in quantity is the CZ-USA 805 Bren S1 (CZ 805) rifle. Numerous appearances at trade shows of the CZ 805, adopted by the Czech Army in 2010 after an extensive evaluation, had consumers obsessing over when the CZ-USA subsidiary would finally introduce it. But complying with import regulations associated with anything firearms related is no easy task.

The CZ 805 originated in response to the Czech military wanting to replace their aging Vz58 rifles. The Czechs are rightfully proud of their indigenous capability to produce their own military firearms. They even resisted the Soviet Empire by fielding a non-AK rifle in the Warsaw Pact alliance.



CZ 805 weighs eight pounds without optics and measures 39 inches with folding stock deployed and 28.5 inches folded. Rifle features 16.2-inch cold-hammer-forged barrel with 1:7 twist.



know how to build effective weapons.

The CZ 805 can be viewed as an amalgamation of some of the better improvements made in rifle design since the field became dominated by the AK and AR designs. The CZ 805 operates via the short-stroke gas piston system. As the bullet passes the gas port in the barrel, a portion of propellant gases is routed through the gas regulator to the gas piston. The gas pushes rearward against the piston, which drives the bolt group assembly rearward to eject the fired case and load a new cartridge from the magazine.

The short-stroke gas piston's advantage is that heat, soot and carbon from propellant combustion are not routed into the bolt or chamber, keeping these critical areas cooler and cleaner for greater reliability—

INFLUENCES

The CZ 805 is recognized as the current epitome of modern rifle designs, which is why knowledgeable U.S. firearms enthusiasts wanted access to it. But the rifle did not erupt fresh off the CZ engineers' design computers. To a certain extent, all firearms pay homage to their predecessors and select contemporaries.

The FN SCAR is often pointed to as an influence on the CZ 805. While

comparisons between the FN SCAR and CZ 805 are hard to avoid when viewing the rifles' external aesthetics, field stripped, and timing of their respective appearances, closer examination reveals important differences that distinguish each as their own distinct designs. The CZ 805 is a refined rifle including its own unique blend of features, especially in terms of modularity, ergonomics, and reliability. The Czechs especially with the increasing use of suppressors. Several manufacturers are making piston-driven ARs in lieu of Stoner's original directimpingement design in an effort to make the AR platform more robust. CZ chose to go with a more complete approach with the CZ 805 versus just taking an AR-based platform and making it piston driven.

UPDATING THE MODERN RIFLE

OPERATION

The CZ 805 features an adjustable gas regulator, with the first position for normal operation and the second position for when using a sound suppressor. The CZ 805 was designed from the beginning to accommodate suppressors, an obvious reflection of its adaptation to current trends in fighting rifles.

The CZ 805 operates with a reciprocating charging handle that can be moved to either side. The mechanical advantage of the charging handle is that it helps ensure its multi-lug bolt seats consistently into battery. The charging handle can be used as a forward assist if the rifle fails to go into battery for some reason. Because of the reciprocating charging handle, a user must mind his hand placement on the forend. This is a self-correcting problem in that it usually only happens once, with the user quickly finding another method. The charging handle's location is not as far forward as that on other rifles, leaving plenty of space on the forend to accommodate hand placement.

Anecdotally, my young son had no issue operating the CZ 805's charging handle with either hand; something that, given his age, cannot be said of numerous other designs. This is a credit to the location of the charging handle and overall smoothness of the rifle.

COMPONENTS

The CZ 805 S1 breaks down into four major components: upper receiver, moving parts assembly (gas piston, bolt, and bolt carrier), lower receiver, and buttstock module.

The lower receiver is divided into two parts: trigger mechanism housing with pistol grip, and the magazine well. Both are made of polymer and connected by a T-rail and corresponding pinned slot.

The upper receiver is aircraft-grade aluminum billet and is the serialized part of the firearm. It houses the complete barrel assembly and features a MIL-STD-1913 (Picatinny) rail on the top and bottom of its free-floated forend. The top section of rail is unin-

The CZ-USA 805 offers users a chance to own and use a rifle different than the prototypical AR- or AK-pattern rifles so common today.







Above left: Regulator with first position is for normal operation. Second position is for use with a suppressor.

Above: Rifle comes equipped with flip-up front and rear sights.

Left: CZ 805 is equipped with two-port muzzle device using standard ½x28 threads.



terrupted the entire length of the upper receiver for maximum flexibility in mounting optics. The lower rail extends back to the magazine well.

Included on the CZ 805's upper rail is a set of removable folding iron sights. The front sight is adjustable for elevation. The rear sight is adjustable for windage and elevation, with two aperture options.

The trigger module is manufactured from composite polymer. It features a removable pistol grip.

The rifle's folding/collapsing buttstock is also of composite polymer and features four adjustment positions for length of pull, with a total range of three inches. This buttstock is well executed. The rifle will operate with the stock folded. All adjustments are positive, stable, and relatively noise free. The CZ 805 has ambidextrous sling attachment points.

The CZ 805 weighs in at eight pounds and measures 39 inches with the folding stock deployed and 28.5 inches folded. The 16.2-inch coldhammer-forged barrel features a 1:7 twist. The CZ 805 has a 5.56mm chamber, enabling it to fire both 5.56mm and .223 Rem loads.

The rifle is equipped with a two-

Above: CZ 805 operates with a reciprocating charging handle that can be moved to either side.

Left: Rifle features ambidextrous safety and magazine releases.

port muzzle device using ½"x28 threads. The CZ 805 utilizes AR magazines, greatly adding to its viability in the U.S. market.

GEAR FOR TESTING

I tested the CZ 805 with a variety of magazines, including the 3rd Generation Magpul PMAG AR-15 magazine. The PMAG 30 GEN M3 Window is a 30-round 5.56mm polymer magazine for AR-15/M4-compatible weapons. It features transparent windows to allow rapid visual identification of the approximate number of rounds remaining.

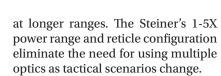
A Steiner M5Xi 1-5X with illuminated reticle was used with the CZ 805. The M5Xi is designed for both instinctive close-range/low-magnification situations with variable intensity red illuminated reticle, yet thanks to the 5X capability, it still allows shooters to engage targets with greater precision

UPDATING THE MODERN RIFLE



Left: Composite polymer stock features four adjustment positions for length of pull. Total range is three inches.

Below: CZ 805's stock can be folded for storage, but rifle can still operate with it folded.



The Steiner M5Xi 1-5X is ideal for modern rifle platforms, with true eyes-open 1X illuminated dot capability and 5X zoom to locate targets at longer distances. The 30mm tube has a Rapid Dot reticle calibrated to 5.56mm.

Ammunition used in the evaluation was a combination of multiple 5.56mm/.223 Rem loads from Black Hills Ammunition, Hornady and Federal.

The rifle's trigger was superior to all other milspec triggers I have experienced. It is a two-stage affair with a clean break once first-stage slack is taken up. My RCBS trigger scale had it breaking at five pounds.

No load tested produced greater than two-inch groups at 100 yards. With that said, groups did not shrink much below 1.5 inches, no matter if



Top button on left side of receiver is a bolt hold open device, not a release.

CZ 805 used in field-expedient firing position at EVTC. Rifle can be viewed as an amalgamation of some of the better improvements made in rifle design.

premium load or FMJ. The CZ 805 is a fighting rifle—not a match target rifle affair. Several magazines' worth of ammunition was spent engaging plate racks and man-sized steel targets with the CZ 805. Drills quickly moved past stand-and-deliver drills to more dynamic drills involving movement, magazine reloads, and firing from behind cover.

IDIOSYNCRASIES

The CZ 805 has some idiosyncrasies in terms of manipulation, especially to shooters used to the AR platform. The bolt locks open after the last round is fired. There is no bolt release, necessitating the charging handle to be slightly retracted and released. It takes longer to read the description given than it takes to do this. The button found on the left side of the receiver is a bolt hold open device, not a release.

Also discovered during range time



was that the bolt cannot be operated if the trigger is pulled and the rifle put on safe. Why this would be done in the first place makes this a non-issue, in my opinion.

Ambidextrous safety and magazine releases are used with the CZ 805. The safety is easily flicked off with the shooting-hand thumb. Re-engaging the safety is not as intuitive, often necessitating the shooter to move his hand off the pistol grip and use the index finger on the safety lever on the right side of the frame. This does not concern me, as releasing the safety is more important than getting it back on during a critical situation.

DRILLS

We concentrated on using the CZ 805 S1 in training scenarios involving team tactics and patrolling to contact through Echo Valley Training Center's (EVTC) 360 and Jungle Walk ranges. This allowed the rifle to shine in terms of firepower, handling and combat accuracy.

>> Continued on page 88



RIFE DYNAMICS RD703

Like the AR-15, there are different tiers of quality with AKtype rifles, running from poor to mediocre to excellent. This Sweepstakes features a custom AK from one of the most renowned builders—Jim Fuller's Rifle Dynamics.

All 700 series Rifle Dynamics models feature custom front-end work using the Generation 3 Bolton Gas Block, UltiMAK scope rail, and PWS FSC 47 muzzle brake. Rifle Dynamics removes almost a pound off the front of the rifle, moving the center of gravity about four inches closer to the body and making this non-SBR length AK the lightest and fastesthandling rifle on the market.

The specifications for the RD703 in this Sweepstakes include:

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HSM AMMUNITION

The winner receives a full case (500 rounds) of a brand-new category of HSM Ammunition loaded with the Sierra GameKing bullet. This case of 7.62x39mm cartridges will surprise and delight. Why? Because this is a premium factory-produced true hunting round. It's a highest quality brass case filled with clean-burning, temperature-stable powder, matched with the best primer for this cartridge and powder to ignite it. And it's topped by a superb 125-grain Sierra Pro-Hunter bullet, which has earned a superb reputation as one of the best hunting bullets in decades.



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To carry extra magazines, the winner receives a Tactical Tailor AK Chest Rig in Coyote Brown. Constructed from 1000-denier Cordura nylon and milspec webbing, the AK Chest Rig combines the simplicity of traditional AK rigs with the durability and reliability that Tactical Tailor is known for. This chest rig features four single mag pouches that hold one 30-round AK magazine each and two single universal pistol magazines on either side. All pouches close with high-quality hook-and-loop fasteners. Shoulder and back straps are fully adjustable.

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SOURCES

RIFLE DYNAMICS (702) 860-7774 www.rifledynamics.com

BLUE FORCE GEAR, INC. (877) 430-2583 www.blueforcegear.com **THE HUNTING SHACK** (800) 856-2857 www.thehuntingshack.com

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QUALITY INSTRUCTION HAVE A Primer on Effective Teaching

BY CHRIS PENNISI

uality instruction demands significant time, discipline, preparation, practice, and dedication on the part of the instructor. Every bit of training requires planning to maximize its value and time efficiency. If you cannot commit the time and effort required to prepare, don't allow yourself to be placed into a teaching role. If you are willing to commit the time and resources to properly prepare to teach, instructors should be familiar with a number of concepts prior to developing training for adult students.

This article generally focuses on the development of a police instructor (based on the author's experience in law enforcement), but most of it applies to anyone in a teaching role. It presumes the reader is preparing to teach individual classes rather than working from or creating curriculum for longer, more involved courses.

PREPARATION

When conveying job-related information to law enforcement officers, you are more likely to gain their

Most students absorb physical skills, like prisoner searching, more effectively through demonstration than lecture or multimedia presentation. Photo: courtesy Pat Rogers, EAG Tactical trust if you have two things: 1) depth of knowledge in the subject matter being taught and 2) sufficient qualifications to command their respect. Having one without the other is not enough.

For example, people would be rightly suspicious of a tactics instructor who only learned to shoot in the academy three years prior and had made few felony arrests before becoming part of the training cadre. On the other hand, a 20-year homicide detective known for courtroom success would fill a classroom if he were teaching the basics of investigation.

Qualifications to teach are developed over time as one gains experience in a particular discipline. Law enforcement students typically assess the teaching qualifications of an instructor based on his or her practical experience with the subject, time on the job, prior assignments, involvement in critical incidents, reputation, and, lastly, teaching experience.

KNOWLEDGE BASE

The knowledge base of an instructor, especially one who teaches on a recurring basis, cannot be deep enough. At the very least, it is the responsibility of any instructor to be familiar enough with the subject matter that they can answer reasonable questions about it. But it is not enough to know the how or what of a subject. What separates a true subject matter expert (SME) from an ordinary instructor is knowing the whys behind what should be done in a given situation.

Understanding and being able to relate the legal, scientific, ethical, policy, safety, historical, and cultural reasons why things must be done certain ways is tremendously helpful in engaging students and convincing them that the way being taught demands respect, if not compliance.

Being able to explain *why* applying handcuffs to hands in the small of a suspect's back with the single strand toward the floor is a desirable method is what separates the SME from the run-of-the-mill instructor.

If you lack the time or resources to become an SME, all is not lost. You can always consult with one and develop your lessons in conjunction with him. If you cannot find an SME in your agency, ample experts are available in others. In my experience, larger agencies with full-time training staff are usually amenable to assisting other instructors.

No law enforcement discipline remains static, therefore the road toward becoming an SME is endless. As a result, quality instructors have a responsibility to their students to constantly expand their own knowledge. Law enforcement conferences, trade shows, outside research bodies (e.g., Force Science Institute), and discipline-specific commercial training courses are all good sources of information about subject matter relevant to law enforcement.

Self-study options to achieve awareness of



Combined with realistic scenarios, anatomical dummies make first-aid courses more effective at developing life-saving skills.

trends in law enforcement include consultation with training staff from nearby agencies and review of websites and publications relevant to one's discipline.

INITIAL PLANNING

Once you have a sufficient base of knowledge and experience, or are in contact with someone who does, you can begin planning your training session. The first and most important aspect of this is identifying the specific things that must be taught over one or more training sessions. No one likes an instructor who ignores the needs of his students and only teaches what is most convenient or easy for him.

Police training often has a definable end point. If your students must leave training with particular knowledge or skills, it is important to craft the training around those goals. Failing to properly tailor training is one of the biggest problems with ineffectual teachers, who may only have a vague idea what they should be showing students, and spend the majority of training time meandering around the subject without truly transferring knowledge.

Once you know what should be taught, dissect the subject matter by asking yourself the following questions:

- What are the major topics to be covered?
- What information must be conveyed?
- What skills must be taught?
- What are the components of each skill?
- Can each component be broken down into smaller concepts?
- How can you measure whether the

concepts or skills are being mastered by the students?

Are there supplemental materials that will help reinforce the lessons, such as videos, pictures, charts, slides, or handouts?

The next part of the planning stage includes familiarizing yourself with the background and experience of your students so you can tailor your lessons to them. This is a simple process but must be done far enough ahead of time so you can capitalize on the information.

Veteran instructors sometimes appear to be altering lessons on the fly after polling students about their experience level in class. But they can only accomplish this because they have repeatedly taught the same lesson to students at various performance levels. So what appears to be improvisation is typically just recitation of another lesson that has already been delivered successfully.

RESOURCES AND TRAINING AIDS

Once you know your subject and students, take an account of the resources available for instruction, including the facility, durable equipment, and consumable supplies. Make inquiries as to whether a traditional classroom will be available, how big it is, what furniture it contains, and whether it has sufficient creature comforts. All of these impact the type and duration of the lessons you are developing.

If you are teaching firearms at an unfamiliar range in the middle of the summer, you need to know not only how many shooting bays are available, but also whether restroom and hydration accommodations are in place. Visiting the facility



Modern wound simulators are useful in first-aid courses.



Firearms familiarization doesn't always have to be on a range, especially when a lifelike simulator is available and the students are children.

during the planning phase conveys far more information than consulting pictures on a website or asking someone about it.

After you have secured a sufficient location to teach, ascertain what physical training aids you may need (e.g., targets, training tourniquets, patrol guides, red man suits) and whether you must bring them or if they will be made available to you. If you are responsible for bringing them, take into account transportation and storage of the items before and after class.

LESSON PLANNING

Failure to plan is the hallmark of a weak instructor. Lesson planning is a critical part of successful training. Expect to spend at least twice as much time preparing a lesson as it will take to deliver. Once a plan has been created, it may be used over and over with only minor updates and improvements.

Your goal in lesson planning is to make your lessons practical and usable in the intended environment. Reinforce the most important concepts without being redundant.

Begin by sketching out a reverse timeline for your entire lesson. Identify the last, most complicated information or technique you wish to teach or measure, the one that integrates all the others, and work backward, laying out all the component skills or information required to succeed at the final test, whatever that may be.

STEP BY STEP

The next phase is the core of lesson planning: selecting smaller teachable elements or drills that present the information necessary or reinforce the skills needed to achieve the training goal. If you are training novice students in clearing houses, your goal would be conveying all the component skills required to conduct safe clears.

Obviously, you cannot take students from noth-

ing to close-quarters battle in one simple step. There are a number of component skills that must be mastered to complete the main task. These include how to:

- Approach a house tactically.
- Breach doors.
- Make entry into various room configurations.
- Identify and process danger areas.
- Move from room to room.
- Confront threats.
- Communicate progress with teammates.

Once the individual components of your training goal are identified, you can design lessons around teaching them sequentially. As the students absorb those lessons, consider conducting drills that integrate the component skills one by one until the overall training goal is met.

As you are working your way through the planning process, develop handouts or slides to work in conjunction with the information being presented. The internet is rich in readily available multimedia with respect to most police topics. Relevant news articles, pictures, and videos delivered at the right time during a presentation underscore the points you are trying to make while holding your students' attention longer than lecturing alone.

INCORPORATING TESTS

Don't feel compelled to reinvent the wheel for every training you are tasked with delivering. Seek out lesson plans used by others in similar circumstances to make sure you: 1) don't waste time doing unnecessary work and 2) include the major points of the subject matter being taught.

Incorporate realistic tests to assess students' grasp of the lessons. For example, in firearms instruction where the objective is to improve accuracy, beginning and ending with a course of fire that measures accuracy, such as bullseye shooting, is a valid means to judge students' progress.

In a more information-centric lesson, a quiz administered toward the end of class provides useful feedback on whether your students are absorbing that information.

Once your draft lesson plan is complete, practice presenting the information to identify problems with your delivery and cement the lesson in your own brain. Rehearsal also helps avoid

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overscheduling training time. Presenting information in front of an audience always takes more time than it might seem on paper.

EXECUTION

Prior to class, ensure you have sufficient time to set up your classroom and teaching aids, as well as briefing any assistant instructors. Assistants must be aware of the material being taught and the manner in which you will teach it.

Once class begins, if necessary, briefly introduce yourself to students you are unfamiliar with. Presenting your name, title (or rank), agency, and experience in the field you are teaching is enough background information for most police training.

Follow your personal introduction with an introduction to the subject matter being taught. Try to relate the material to the students as soon as possible. People will be more engaged in the subject matter if they understand how the skills or information to be conveyed will affect their everyday lives.

VISUAL AIDS

If there is a substantial amount of information that must be presented to students, you have to conduct a formal lecture session. It is far better to lecture in conjunction with PowerPoint slides or less technical presentation aids (such as a dry-erase board or easel and poster board) to highlight core concepts of your teaching. PowerPoint also makes it possible to integrate pictures and videos to make your lessons more dynamic and keep your students entertained as they learn.

As you lecture, avoid excessive theory, jargon, acronyms, and war stories. These tend to bore students or break their attention from the main subject matter. If you are telling stories, they should relate



Brian Bastianelli and Rich Blendea of the Fortis Group LLC deliver a presentation on surveillance techniques using both high tech (PowerPoint) and low tech (whiteboard). Effective use of multimedia holds students' attention longer than lecture alone.

to the topic at hand and not be tangents, however funny they might be. Going off on tangents wastes everyone's precious training time.

Lecture, PowerPoint slides and videos will take you only so far. Most people learn best by watching someone else do what they are being asked to do, with the opportunity to ask questions along the way. Therefore, demonstrate the skills you wish your students to learn.

While conducting demonstrations, provide examples of both correct and incorrect application of the skills taught, as well as the reasoning behind why one method is correct and the other less desirable.

TEACH-BACKS AND MISTAKES

In the case of repeat and more advanced classes, it can be beneficial to involve the students in their own learning. Students can be asked to conduct "teach backs" of practical skills already presented to the group by an instructor. That is, students instruct one another on the application of a particular skill after having learned it themselves. This is sometimes referred to as "see one, do one, teach one."

If you are demonstrating difficult skills, such as firearms drills, don't be afraid to make mistakes in front of your students. It will convey that you are human, and that perfection is not required for success. In contrast, teachers who maintain a "do as I say, not as I do" attitude or refuse to conduct demonstrations out of fear of public failure breed doubt in their students.

Correct mistakes, whether yours or students, as soon as reasonably practical. Memory is fleeting, especially when it involves acknowledging one's own mistakes, so providing correction long after the fact doesn't help anyone. Correspondingly, complement good decision-making or skills demonstration as they occur. Positive reinforcement builds confidence and motivates students to perform longer and under greater stress.

If your class is a review, or students are otherwise close to achieving mastery of the subject matter, consider incorporating friendly competitions.



Brian Bastianelli of the Fortis Group LLC conducts after-action of a surveillance exercise. Review of participants' success in assigned roles is crucial to improving performance in skill-based instruction.

Bragging rights are a decent prize, but a small token usually inspires better performance. If your agency doesn't have desirable "swag," I find that those in charge of purchasing frequently end up with a lot of freebies from police supply companies that they are willing to part with, such as key chains, flashlights, patches, knives, etc.

COMPETITION AND WHAT NOT TO DO

In the case of firearms training, I find that announcing an impending friendly competition and the prize at stake approximately halfway through class can refocus those students whose attention is starting to wander.

As you proceed through your training day, don't forget to incorporate regular water and bathroom breaks. Likewise, solicit student questions frequently. I find that having students hold questions until the end of a lesson is only convenient for the instructor. It is better for students to have regular opportunities to satisfy curiosities as they arise.

While the following teaching "don'ts" should be obvious, their prevalence in typical instruction bears mention as things to avoid:

- Swearing.
- Insulting students' performance.
- Rushing through material to finish on time.
- Providing more information than students can process.
- Disappearing physically or mentally during periods of independent study.
- Answering phone calls, emails or text messages outside of designated break times.

AFTER ACTION

If possible toward the end of a class, solicit student opinions on whether the information presented and its delivery were helpful.

The "gold standard" method for class evaluations is anonymous written assessments. But simply taking the time to ask your students (after class) whether the session was beneficial, and how it could be improved, allows you to learn from your students as they did from you. This is especially valuable if you teach on a regular basis.

If you do have time for written evaluations, avoid asking students to rank aspects of the class on a numerical scale. This is pointless, as it is too easy for the evaluators to circle numbers without explaining their reasoning.

It is far more helpful to ask students to answer specific questions, like "What was the most/least important part of class?" and "How could the class be improved?" That way, you only solicit feedback containing useful information.

Be aware that the tone of student evaluations can directly correlate with the popularity of the subject matter being taught and whether attendance at the class was voluntary. Instructors



Inspired firearms instructors resemble good sports coaches, balancing the refinement of existing skills, development of new skills, and safety concerns in all their lessons.

shouldn't be surprised to receive positive reviews from classes full of students who independently chose to learn about a topic they like.

Similarly, those who teach classes containing captive students hostile to its subject matter should be prepared for reviews that don't necessarily reflect the quality of their instruction. In such cases, it may be preferable to have another capable instructor peer evaluate your performance.

As a final step in instruction, teachers should self-evaluate. If possible, do this shortly after class completion, when its positives and negatives are still fresh in the mind.

Make notes on the permanent copy of your original lesson plan (for later review) on topics that should be added or deleted, the pace of the class, improvements to teaching aids, answers to commonly asked questions, and any other pertinent observations. Review your student evaluations and incorporate their comments in your notes to refine your lesson content and teaching style.

CONCLUSION

Teaching is part academic discipline and part craft. While background in the subject matter and preparation are certainly important components of success as an educator, there is a human element that can make an otherwise dull class entertaining.

While you grow as a subject matter expert, dedicate some effort toward getting more comfortable delivering lessons in front of a group of critical adults. As you develop a classroom personality, your students will be more engaged and you will be able to communicate more effectively. (5)

Chris Pennisi is an FBI agent assigned to a Safe Streets Task Force and SWAT. Since 2007, he has taught firearms, chemical agent usage, and defensive tactics to police officers and other federal agents.

RFPORTNG

Springfield Armory M1A SOCOM 16 CQB

BY STEVE SIEBERTS

my Top Ten favorite rifles that I've shot and worked on in my life, the M1A has to be at the top of the list. I first used the

M1A when I was assigned to the U.S. Army Marksmanship Unit #1 in Fort Meade, Maryland. The unit had three sections: a competitive pistol section, of which I was a member; a competitive rifle section; and a countersniper (CS) training section.

Two senior NCOs, who had extensive experience in sniper and countersniper operations in Vietnam and ran a very popular course primarily for local law enforcement, staffed the CS section. Since I was a member of the Unit's Pistol Team, I was able to attend the course during the off-season.

The course of fire was very well set up and ranges were fairly short, around 175 yards, since this course was primarily for law enforcement. The course lasted a week and included night firing with what was then state of the art in night vision—the AN/PVS-2. The M1As we used were all Match-grade M21s, with Match barrels, excellent triggers and glass-bedded wood stocks. Accuracy of these guns went sub-MOA for five shots at 100 yards with good ammo.

The next time I got the opportunity to see what a great rifle the M1A/M14 is, I was attending the Army National Match Gunsmithing Course at Rock Island Arsenal. Here, we were able to get into the mechanical functioning and design of the gun and how to turn the plain vanilla M14 into an extremely accurate match-grade rifle.

Earlier this year, I was fortunate enough to review the Loaded M1A (*LOCK & LOAD: Springfield Armory Loaded M1A*, February 2016 S.W.A.T.), so I was anxious to see how the SOCOM 16 CQB configuration compared.

When the package arrived, I was pleasantly surprised to see Springfield had sent me the rifle with two stocks. The rifle was shipped wearing the MultiCam[®] stock, but another stock in Flat Dark Earth was included in the box. Other stock colors are OD Green and Black.

FEATURES

On first glance, the SOCOM 16 CQB's most noticeable feature is its 16-inch barrel. The shorter barrel causes a slight loss of velocity from the .308 cartridges, but the trade-off to that shorter barrel is a gun that is lighter, more maneuverable and portable, and just as accurate. Chronograph results from my Oehler 35P were that the velocity loss is only about 60 fps from the normal length 22-inch M1A barrel.

Many shooters may think the lighter weight of the SOCOM 16 CQB rifle will cause an increase in recoil, and that would be true if it weren't for the very effective muzzle brake installed at the factory. Combined with the gentler shooting characteristics of the system's gas operation, the muzzle brake creates one of the softest-shooting rifles I've shot in some time.

The other great effect of the muzzle brake is recoil control. I shot the rifle offhand at 100 yards on a B17 silhouette target, and follow-up shots with the rifle were fast and easy. The muzzle brake does increase the muzzle blast,

FOR DUITY



especially with the shorter barrel, so any shooters standing next to the rifle when it goes off will definitely know it.

The carbon steel barrel has a 1:11 right-hand twist, with the proprietary muzzle brake adding another 1½ inches or so. The overall length is a very compact 37 inches, and the weight of the rifle is 8.8 pounds unloaded.

Below: Firing off the bench with Aimpoint Micro T-2 and Hornady Steel Match ammo. The muzzle brake is a great addition to the rifle, but the iron sights are enhanced as well. The front sight is a .125-inch wide blade post with tritium insert. The rear sight is an enlarged military aperture sight, with a .135-inch opening that makes target acquisition fast for open-sight matches, where speed is a requirement.

Adjustment graduations on the rear sight drum are 1 MOA for both windage and elevation. The trigger on the rifle is a traditional two-stage, service-grade Above: Right side of Springfield Armory SOCOM 16 CQB wearing Flat Dark Earth stock. Stocks are also available in Black, OD Green and MultiCam[®].

trigger, but still broke very cleanly at a shade over four pounds.

OPTICS

As great and functional as the iron sights are on the rifle, many shooters will want to install some type of optics.







Above: Leupold VX-III 2.5x8x36mm scope is a great choice for shooting rifle at extended ranges. Leupold QR rings make mounting LER scope a snap.

Left: Muzzle brake on SOCOM 16 CQB is very effective, and shorter barrel makes for some serious muzzle blast. Front sight has a tritium insert in a .135-inch wide blade.

Below: SOCOM 16 CQB has MOA adjustments for windage and elevation, along with oversized rear-sight aperture.



The rifle includes a short section of barrel-mounted Picatinny rail.

For testing, I was able to obtain a Leupold VX-III 2.5x8x36mm LER (long eye relief) scope in matte black finish with duplex reticle and an Aimpoint Micro T-2. Mounting the Leupold on the SOCOM 16's rail was accomplished with the excellent Leupold QR rings. This lets the shooter go from scope to iron sights very quickly if needed.

The Leupold scope features a oneinch tube made from 6061-T6 aluminum, with ¹/₄ MOA finger click adjustments, fast-focus eyepiece, and 15 inches of eye relief. The scope performed flawlessly and would be a great addition for precision long-range operations with the rifle.

The Aimpoint Micro T-2 features front and rear flip-up covers. Multiple intensity settings include off, four nightvision compatible settings and eight daylight settings, one of which is for extra-bright sunlight conditions. The 1X, non-magnifying optic has a dot size at a very useful 2 MOA, and battery life is an incredible 50,000 hours. The optic has a hard anodized finished body and the unit is submersible to 80 feet.

With the iron sights, I can get a very good cheek weld shooting off the bench or offhand, but with either the Aimpoint or the Leupold optic, my head was positioned a little higher in order to see through the optics, so an additional riser on the comb would need to be installed. Since I didn't have one handy, I shot the rifle as is.

Having a little space between the stock and my cheek didn't seem to affect accuracy, but if I were entering a Heavy Metal category of a 3-Gun match, for example, it would definitely slow me down. I would have to find the reticle or dot, depending on the optic I was using.

RANGE TIME

Taking a rifle to the range is always the fun part, and this rifle didn't disappoint. I ran the SOCOM 16 CQB through its paces with a variety of ammunition, including 155-grain Hornady Steel Match, Black Hills 168-grain, and 175-grain ABM tactical ammunition.

Since this rifle/scope combination is not designed for match shooting, I decided to use a Q target for 100 yards and a B17 silhouette for 300-yard duty. With both the Leupold and the Aimpoint, firing off the bench produced pretty good groups of 3½ to four inches with the Black Hills and Hornady ammo. The ABM came in a little tighter, producing five-shot groups of about 2½ inches at 100 yards.

I didn't get a chance to shoot the rifle at 300 with the Leupold, but groups at 100 were excellent: under two inches. Not bad for a gas rifle with a servicegrade barrel and the Leupold scope set at 2X.

Switching out targets from the Q target to the B17 and moving out to 300 yards was also fun. The Aimpoint was still effective engaging the target at that extended range. The SOCOM 16 put three shots into about two inches, with

Custom Weapons, Firearms Finishes, and Gunsmithing



the other two shots opening the group up to about ten inches using the Hornady Steel Match ammo.

Firing the rifle off the bench was pleasant with all ammo, despite the additional blast of the muzzle brake and not having the assist of a cheek rest. The excellent Nightforce Optics 60x scope spotted all the shots. I've been using this spotting scope for some time, and it really helps locate those small holes at extended ranges.

CARRYING CASE

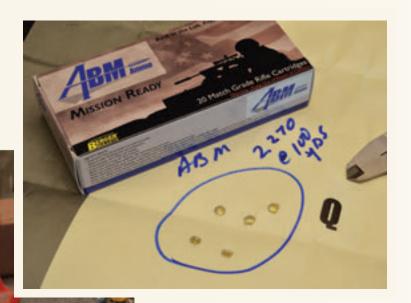
The last items for this range session were a drag bag and carrying case. I secured two units for this evaluation one from Blackhawk and one from Voodoo Tactical.

The Blackhawk case is a sniper drag bag, long-gun shooting mat, and carrying case all in one. This multi-function case features multiple pouches for range books, ammo, cleaning kits, spotting scope, and other gear. Shoulder straps allow for using the case as a backpack. The bag comes in Black, Tan or OD Green.

Voodoo Tactical makes a variety of outstanding tactical gear, includ-



Accessories and optics can be mounted on barrel's Picatinny rail.



Above: ABM ammo shot best groups of the day at 100 yards with Aimpoint installed. Even with no magnification, author shot groups of about two inches.

Left: Test rifle's trigger pull was a shade over four pounds as measured on Lyman trigger pull scale.

SOCOM 16 COB

ing an excellent backpack/range bag/ drag bag. The case holds two long guns and two handguns, and has two long pockets for shooting sticks, bipods, or a spotting scope. Internal pockets hold ammo, cleaning gear, log books, and more ammo. Shoulder straps and a plethora of handles make this a versatile drag bag capable of carrying factory-length rifles, shotguns or a combination of rifles, shotguns and handguns with ease. It comes in Black, Coyote Tan or Woodland Camo.

The Springfield Armory M1A SOCOM 16 CQB, paired with excellent optics like the Leupold or Aimpoint, some quality ammo and a durable drag bag, makes for a combination that's hard to beat. (5)

Steve Sieberts has over 40 years in the firearms field. He's a former paratrooper/small arms tech with the 82nd Airborne Division and former member of the U.S. Army Marksmanship Unit. He earned the Distinguished Pistol Shot Badge, NRA 2600 Club, and President's Hundred tab. He has attended numerous armorer and gunsmithing courses.

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SOURCES

AIMPOINT INC. (703) 263-9795 www.aimpoint.com

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Editor's Note: After the untimely passing of Pat Rogers earlier this year, readers asked us to reprint some of his best articles. Pat would be the first to say that tactics, techniques and procedures evolve over time, so what was current in October 2010 when this article was first published may not be so today. But high quality is high quality in any year. Here's one of Pat's most popular articles.



Bravo Company Carbine Goes 31,165 Rounds

BY PATRICK A. ROGERS



M16 was first promoted as a gun that needed no maintenance. While that statement proved false, a number of factors, including propellant powder and a lack of cleaning supplies and training, led to failures on the battlefield that are still being ballyhooed by muckrakers and the unknowing. They ignore the fact that the M16 is the most accurate and efficient rifle ever used by the military.

However, it is no more a perfect weapon system than the Glock, 1911, M1 rifle or any other rifle, airframe, ship or person.

Much of the noise related to this comes from unrealistic expectations such as the "one shot, one kill" nonsense that used to permeate military training, as well as poor discipline and tactics. Expending six magazines at the cyclic rate when the enemy is 400 meters away and then complaining that your carbine overheated may make headlines, but is also a sign of poor training and leadership.

Ed Mosquera fires Filthy 14 at the Quinn Ranch, Brady, Texas. Ed shot round number 30,000 into a paper bad guy in March 2010.

Additionally, not all ARs are the same. Military weapons are held to a standard, and factory Quality Control and outside Quality Assurance mean that problems are minimized.

Aftermarket makers may hold themselves to that same standard or even exceed it ... or they can ignore it and substitute below-standard parts.

The latter means that some parts may not meet the mil specification for a number of reasons. This may mean Magnetic Particle Inspection and pressure testing of the bolt and barrel have not been performed, or the type of steel used for the barrel and bolt carrier group (BCG) is not up to spec.

For the average shooter, this may not be an issue. In fact, it may be smart marketing for some makers, as the average AR owner shoots their guns little, if at all.

From my perspective, I don't aspire to mediocrity. I shoot a lot and stand behind students who are also shooting all day. I prefer to have weapons built



to or exceeding the standard, but also understand that not all users have the same needs or requirements.

But neither do I—not for one New York minute—believe that all ARs are the same.

At my company, E.A.G. Tactical, we are fortunate in that manufacturers regularly provide us with guns in order to see how they perform after a reasonable period of evaluation by students at our classes. While we have written about some for *S.W.A.T.* Magazine (LMT, S&W M&P, LWRCI, and Colt 6940), others have never seen the pages of this magazine.

Caveat. As we are not carrying these guns for real, we spend little time doing any preventive maintenance. We know that a properly maintained AR will function well. Our purpose here is to see how well the guns will function when left dirty but well lubed. I don't suggest that you try this at home, especially if you are carrying these guns professionally.





While we used to see a wide variety of guns at class, the quality control of some makes is lacking. Apparently students have been reading the afteraction reports on Lightfighter.net and Alumni.net, as we have started to see a swing toward those guns built to (or exceeding) the spec. The net results have been fewer busted guns and more time to better conduct training.

BRAVO COMPANY

Bravo Company USA is a relative newcomer, having entered the market in 2003. Bravo Company MFG was born in 2005 and started producing complete uppers at that time. Bravo Company USA produced a very small number of lowers in 2007, and Bravo Company MFG has been producing lowers since 2008. At this time, Bravo Company does not sell complete guns, but several of their dealers do.

Paul Buffoni, the owner of Bravo Company, has built an extremely successful business based on providing quality products with excellent customer service.

We have run a number of Bravo Company guns over the past five years. While most were unremarkable in their boring reliability, one has stood out, both for the longevity of the evaluation period as well as the number of rounds put downrange. Above: Looking in the ejection port. Rogers has been in organizations where people would become apoplectic after seeing this. However, gun still ran with 5,000 rounds of evil carbon and other detritus on the bolt, in the barrel extension, and elsewhere. Using Slip 2000 EWL kept gun running and made it easier to clean.

Below: Bolt carrier group at 31,175 rounds. Although bolt carrier has gunk caked on, bolt itself is relatively clean.

FILTHY 14

As of this writing, EAG students have 31,165 rounds downrange through Filthy 14. During this evaluation period, it was cleaned once (as in one time), at 28,905 rounds. The end result is that Rack #14 was—and remains—filthy. It is filthy because it has been shot at class. Only at class. Every round that has gone down that barrel has been fired at class, with an average of approximately 1,300 rounds every three days. It has been lubed generously with Slip 2000 Enhanced Weapons Lube (EWL).

The combination of carbon and lube create (wait for it) ... filth. It is so dirty that, while sitting in the rifle rack, it is almost a biohazard. The filth oozes out and contaminates other carbines adjacent to it.

But it is still shooting—and shooting well.

Rack #14 is a 16-inch Bravo Company Mid Length Carbine—mid length meaning that the gas system is two inches longer than the standard carbine gas system. This permits the use of a nine-inch rail with the standard front sight base. Use of a clamp on the front sight permits a longer rail to be used.

The longer rail is necessary to accommodate some shooting styles, and to provide additional rail estate for the various white lights and IR lasers required to kill bad guys at night.

Subjectively, the mid-length system

has a softer recoil impulse.

The lower receiver is a Bravo Company USA M4A1, one of very few in circulation. It has a TangoDown BG-16 Pistol Grip. An LMT Sloping Cheekweld Stock (aka the Crane Stock) rides on the milspec receiver extension, as does a TangoDown PR-4 Sling Mount.

The upper is a BCM item, with a milspec 16.1-inch, 1:7 twist barrel. The barrel steel is chrome moly vanadium (CMV) and certified under milspec Mil-B-11595E.

The BCM bolt is machined from mil-

At the last class in Casa Grande, Arizona at approximately 30,000 rounds, we had several failures to extract. We replaced the extractor spring and wiped down the BCG.

spec Carpenter 158[®] gun quality steel, heat-treated per milspec and then shot peened per Mil-S-13165. Once completed, each bolt is fired with a highpressure test (HPT) cartridge and then magnetic particle inspected (MPI) in accordance with ASTM E1444.

The handguard is a LaRue 15-9, the nine-inch model to allow full use of the available rail estate.

We have a TangoDown BGV-MK46K Stubby Vertical Foregrip and use TangoDown BP-4 Rail Panels.

The primary sight is an Aimpoint T-1 in a LaRue 660 Mount. The T-1 is still on the same set of batteries, and it has never been shut off. The back-up sight is the Magpul MBUS and the sling is the Viking Tactics VTAC.

This is a normal configuration for our guns, although stocks (Magpul CTR, Vltor I-Mod), BUIS (Troy), and day optic (Aimpoint M4s) may be substituted.

IN SERVICE

We received the carbine in late 2008 and put #14 into service shortly there-

after. At Brady, Texas in March 2009, it suffered a malfunction, which was reduced with Immediate Action. The bolt was wiped down at 6,450 rounds.

At Prairie du Chien, Wisconsin in May 2009, it had several failures to extract, and the extractor spring was replaced at 13,010 rounds. This is far beyond the normal extractor spring life under these conditions.

At Wamego, Kansas in June 2009, two bolt lugs broke at 16,400 rounds. We replaced the BCG. Considering the firing schedule, this is within normal parameters.

At Columbus, Ohio in November 2009, we had several failures to extract at 24,450 rounds. The shooter gave it a field cleaning and replaced the extractor and extractor spring.

At 28,905 rounds, we finally cleaned Filthy 14. As part of our year-end maintenance schedule, we inspect and replace parts as necessary. Filthy 14 looked like the inside of the crankcase of Uncle Ed's '49 Packard. It was disgusting to look at and contaminated everything near it, somewhat like the toner cartridges for old printers.

I plopped it into a parts washer filled with Slip 725 parts cleaner, and 20 minutes later it was clean. Mostly clean, anyway.

We have never used a bore brush in the barrel of this gun. We did run a patch down the barrel twice, but that was all. At 50 yards, it still shoots two-inch groups, and we understand that it might not at 100 yards and beyond, but we are happy with the fact that, even at 50 yards, the gun is capable of tighter groups than most of the people running it.

We have never used a chamber brush in this gun either. We were often told that this was an absolute must.

Sure....

At the last class in Casa Grande, Arizona at approximately 30,000 rounds, we had several failures to extract. We replaced the extractor spring and wiped down the BCG.

By the time you read this, we'll likely have another 3,000 to 4,000 rounds





through Filthy 14. At that point, we'll probably retire it. We'll reuse the LaRue rail, the sights and, after rebuilding the lower, replace that old and well-worn mid length upper with something else. Fourteen will continue, just not as Filthy 14.

WHY WE DID IT

What was the point of this 15-month exercise? We know that an AR built to the spec will run more reliably for a longer period of time than a hobby gun. We have run a number of guns to over 15,000 rounds without cleaningor malfunctions-as long as they were kept well lubricated. And because we have over 20 Bravo Company guns in the armory, we also understand that the quality of one is not an accident.

My background of belonging to a tribe where weapons cleaning approached Jesuit-like fanaticism caused me to once believe that the AR must be spotlessly, white-glove clean in order for it to run.

We know that is patently false, and in fact the overzealous cleaning regimen-clean for three days in a row, use of scrapers on the BCG, attaching chamber and bore brushes to drills, etc-is harmful to the guns.

We know that not all ARs are the same, and only a fool believes that "parts are parts."

If you want something that is visually similar to what the military uses, buy just about anything and you'll be satisfied. But if you are going to use it for real, buy something that is made to the spec.

Have realistic expectations. No gun-or car, plane, hibachi, or person-lasts forever. Recently a customer sent an upper back to Bravo Company complaining that the gas tube was bent.

It sure was. It was bent because the owner apparently fired 600 rounds downrange in full auto, causing the gas tube to melt to the barrel. If you want to be stupid, buy a lesser quality gun and save yourself some money.

Again, let me repeat the caveat. If you are carrying a gun for real, you need to look at it every 5,000 rounds or so. But if your cleaning takes more than 10 to 15 minutes, you are wasting your time on nonsense.

At a carbine class in Colorado last year, one-third of the carbines used (eight of 24) were Bravo Company guns. The fact that the Pueblo West classes are populated in large part by professionals means this may be a clue.

CONCLUSIONS

The fact that Filthy 14 ran so long and

Buffoni knows what he is doing.

Third is the fact that we used Slip 2000 EWL, which, based on past evaluations, keeps guns running long after other lubes have rolled craps. It kept the gun lubricated and made it easier for those rare times when we did clean it. Greg Conner knows what he is doing.

Finally we had a great group of volunteers who took the time to aid us in this evaluation. Bravo Zulu, guys! (

nlidres

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SIG Sauer P320 and P320 Compact Pistols

BY LEROY THOMPSON



usually doesn't take much to get me interested in a new SIG Sauer pistol, as I have liked SIGs since I first shot a P210 many years ago. I would have been interested in the P320 in any case.

When I read through the FBI's October 2015 Request for Proposal for a new 9x19mm pistol, I was intrigued by how closely the P320 seemed to fit the FBI's list of criteria. I've been testing the P320 and P320 Compact for the last several weeks and have found they combine SIG's usual reliability and accuracy with contemporary design.

The impetus for a 9x19mm weapon to replace the FBI .40 S&W Glock 22s and Glock 23s is based on a study using Glocks in .40 S&W and 9x19mm. Most participants in the study shot faster and more accurately with the 9x19mm Glocks.

The study also points out that the 9x19mm pistols have a higher magazine capacity and, with current premium law enforcement ammunition, terminal effect of the 9x19mm round is comparable to that of the .40 S&W cartridge.

FBI BID SPECS

The FBI bid specs indicate that they will be looking for four types of pistol as part of the contract: Compact Pistol, Full Size Pistol, Inert Training Pistol (Red Gun), and Simunition Gun (Blue Gun).

In establishing criteria for the Compact Pistol, it is specified that it should have a barrel between 3.75 and 4.25 inches, minimum magazine capacity of 14 rounds, and night sights. The Full Size Pistol should have a barrel length between 4.26 and 5.2 inches, minimum magazine capacity of 16 rounds, and night sights.

The P320 can check off those boxes easily. Barrel length of the P320 Compact is 3.9 inches and magazine capacity is 15 rounds. Barrel length of the Full Size P320 is 4.7 inches with a magazine capacity of 17 rounds. These days, SIG service pistols come standard with night sights.

Among the myriad other specs set forth by the FBI, the P320 seems to conform to virtually every one. Both the full-size and compact versions of the pistol are to have the same operating system, and the compact version should take the magazine of the full-sized version.

Magazines should have witness holes that permit checking fullness at five-round intervals. Magazines must have a floor plate removable without tools and that aids in seating the magazine, but also has a small ledge that allows grasping to extract the magazine if needed.

The P320 meets all of these criteria.

Other criteria apply to the magazine well and release. There cannot be a magazine safety. The magazine well should have a bevel to enhance reloading capability. The magazine release/catch is to be located on the frame near the juncture of the trigger guard and grip. The catch should be ambidextrous or readily capable of being moved from one side to the other. The P320's may be switched. This catch should *not* be activated by downward pressure from the finger.

Bid specs also express preference-but not re-



quirement—for availability of standard and extended magazine release buttons. Once again, the P320 meets these specs, but I'm not sure if an extended magazine release is currently available.

TRIGGER AND SLIDE-STOP LEVER

Trigger specs are straightforward. The pistol should be firing pin/striker only, with no method to manually cock the pistol other than by pulling the trigger. If there is a trigger safety, it is preferred that it matches the contour of the trigger.

The trigger pull should be consistent for the first and subsequent shots, with weight of no less than four and a half, nor more than six pounds. The trigger may not be manually adjustable. The P320 meets these specs, but SIG Sauer lists the trigger pull of the P320 as between five and a half and seven pounds. Presumably, the seven pounds could be adjusted to six pounds.

Specs for the slide-stop lever state that it should be easily engaged or disengaged by the shooter while retaining positive control of the pistol. It should be designed so the stop is unlikely to be inadvertently engaged during normal firing. The slide-stop lever should be readily operated by both right- and lefthanded shooters. An ambidextrous slide-stop lever is acceptable but not required, but standard and extended slide-stop levers are required. SIG Sauer did not offer two sizes at the time the FBI bid specs were written, but could readily do so to meet the contract if awarded.

Next, the bid specs address safeties. No manual external safety, de-cocking lever or grip safety is allowed. The pistol is to have a firing pin/striker disconnector that prevents the pistol from firing when out of battery if the trigger remains held to the rear after firing.

Also required is a firing pin/striker block that requires the trigger to be pulled before the firing pin/ striker moves forward. The P320 is good on all these requirements.

For the buyer, a nice bonus is that both P320s come with a polymer paddle holster and one spare magazine.



SIGHT REQUIREMENTS

Specs of the sights of the adopted pistol are extensive, so I will summarize them. They should be steel and capable of withstanding a 20,000-round endurance test. These sights should allow one-handed immediate action drills using the front edge of the rear sight to cock the pistol. Sights should be black and nonreflective.

Low-profile sights are preferred to allow ease of draw from concealment. The rear sight should have a square notch. Rear sights to be adjustable with an adjustment tool and front sight through switching out the sight. Night sights are required, green in color and with a minimum service life of ten years. The luminous portion of the sights should not be visible from the muzzle end. The specs note a preference for Trijicon HD night sights. The P320 meets these specs but uses SIGLITE night sights.

FRAME AND RECEIVER SPECS

Specs for the frame and receiver go into some detail. Finger grooves are not allowed on the frame. Frames that may be contoured to different hand sizes are also required. Area of hand contact should be non-slip for right- or left-handed shooters.

The pistol's frame should incorporate a rail, with Picatinny preferred but not required. Grasping grooves are required on the rear of the slide and may also be on the front of the slide but are not required. The slide must fully cover the barrel, with not more than 0.25 inch of the muzzle to be exposed. A maximum of 21 pounds of force should be necessary to pull the slide all the way to the rear.

External finish should be matte black, non-reflective, and rust and salt-water corrosion resistant. Interestingly, the specs also state that Flat Dark Earth and Ranger Green versions of the pistol should be available as options. Presumably, this would be for FBI agents deployed on foreign operations.

Internal parts should be polished for minimal friction and wear and should be rust and salt-water corrosion resistant. The P320 meets all these requirements.

I've gone into some detail to show how carefully the FBI specs have been written, but also to show many of the characteristics that I would cover in reviewing the P320 and P320 Compact. Here are my actual impressions from shooting and handling the pistols.

MY EVALUATION

The P320 incorporates the modular grip originally seen on the SIG P250. Three grip sizes are available to tailor the pistol to the individual: small, medium, and large. Unless ordered otherwise, each P320 or P320 Compact ships with the medium grip. The interchangeable grips meet the FBI specs, though the FBI has one strange requirement. Two alternate sizes are to be supplied with each pistol if the pistol uses interchangeable grip modules.

What would seem to make more sense for any agency or military unit adopting the P320 would be for armorers to have all three sizes available and to



Rain-spattered rail on full-sized P320.



Ambidextrous slide release lever is quite flat and difficult to operate, indicating that pulling back the slide and releasing after a mag change will be faster.



Slight beavertail positions the hand very comfortably.

install the one that fits the shooter. For agencies with personnel of varying sizes, the ability to switch grip modules is a strong selling point.

The grips on the P320 and P320 Compact I tested are well designed. The grip panels, plus front and back straps, are roughened for a sure grip. Recesses on either side of the grip allow the thumb and trigger finger to rest comfortably, with the recesses also helping guide the trigger finger to the rest position alongside the receiver when not engaging.

Beneath the trigger guard where it meets the grip is a slight recess to position the middle finger more securely. A slight upswept beavertail helps position the hand. Although the magazine drops free both loaded and empty, recesses on either side of the grip just above the magazine floor plate allow the magazine to be grasped to pull it free in case of a malfunction.

I carried a SIG P226 for years and, though I liked the pistol, I did find the grip a little fat. The grip of the P320 feels slimmer. Overall, the grip module is very well designed.

A key element in the modular design is the removable fire control module. A very positive feature of this module is that all parts are captive, so there is no worry they will drop out during disassembly for maintenance or when switching grip modules. Disassembly is easy using a lever on the side of the grip module, much as on the SIG P226.

But unlike the SIG P226, which uses an external hammer striking the firing pin, the P320 is striker fired. Internal safeties reset as soon as the trigger is released. The firing cycle resets the striker to fire, meaning if there is a misfire, a second pull of the trigger will not fire the pistol. The malfunction drill has to include withdrawing the slide to the rear to reset the striker.

There is no magazine safety, thus allowing the pistol to be fired during a magazine change if a round is in the chamber. For an agency desiring an external safety, the P320 can be supplied with a thumb safety.





One-inch 25-yard group firing Corbon 115-grain JHP from full-sized P320.

A couple of points about ergonomics are worth noting. The location of the magazine release button is convenient enough that I can drop the magazine without shifting my shooting grip. I can't do this on many other pistols. Also there are ambidextrous slide release levers, but they are very low profile and somewhat hard to operate with the thumb.

I expect that agencies or individuals using the P320 will train to pull back and release the slide after a magazine change. This is fairly standard training, in any case. The slide stop/release lever will be used primarily to lock the slide back for disassembly or during a malfunction drill.

RANGE TESTING

I'll summarize my shooting tests by saying both P320 versions I tested performed like SIGs. For me, that means they were reliable and accurate. The trigger pull takes some getting used to, as there is relatively heavy take-up initially, but is smooth just before the pistol fires. After firing a couple of magazines through the P320, I got used to the pull.

Reliability with various types of 9x19mm ammo was absolute. I had no malfunctions and even fired a full magazine through each pistol holding it upside down. I also fired one weak-hand with no problems.

I shot each of the two pistols with three different loads: Federal 147-grain indoor match, Corbon 115-grain JHP, and Black Hills 124-grain JHP. All proved accurate. About half of my shooting was done on paper at 25 yards.

With the Federal 147-grain rounds, my best group for five shots was 3 7/8 inches. A friend who was shooting with me did quite well with the Corbon 115-grain JHP, putting five rounds into 2 5/8 inches. We had some three-shot groups at 25 yards that were substantially better: ³/₄ inch with the P320 Compact with Black Hills 124-grain, and an inch with the P320 full-size and Corbon 115-grain. I also fired about 50 rounds from each pistol at plates and pepper poppers between 15 and 35 yards. This helped me get used to the trigger pull and sights.

I was shooting in daylight so didn't shoot with a light mounted, but I did mount the SIG STL-900 on the Compact Model and got the sights aligned with the laser at 15 yards. I'll tweak the zero when I shoot with the laser.

DECISIONS, **DECISIONS**

I like the P320 quite a bit, but as I pointed out, I'm predisposed to like SIG pistols. Both my friend and I liked the Compact Model better. I definitely would prefer it for carry. For the buyer, a nice bonus is that both P320s come with a polymer paddle holster and one spare magazine.

As far as I know, the FBI has not made a decision about their new pistol. The P320 and P320 Compact meet almost all the specs and are accurate and reliable.

The basic P320 and P320 Compact are available in other calibers as well, including 9mm, .357 SIG, .40 S&W, and .45 ACP.

Whether the FBI chooses the P320 or not, I think a lot of agencies and citizen shooters will. I certainly intend to purchase the P320 Compact. ()

Editor's Note: At press time, the FBI awarded a ten-year, \$85 million contract for their new 9mm duty pistols to Glock.



Thompson fires SIG P320 Compact with weak hand with no problems.



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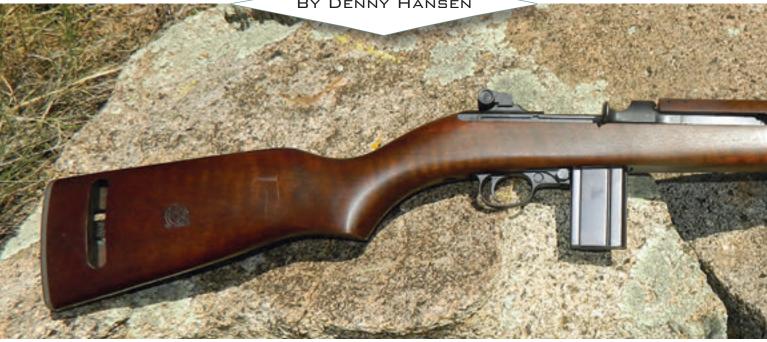
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NNIVERS/

Inland Manufacturing M1 Carbine

BY DENNY HANSEN



U.S. Carbine, Caliber .30 M1usually referred to as the M1 Carbine or simply .30 Carbine-was adopted by the United States in September 1941. Recognizing the 75th anniversary, Inland Manufacturing is offering several versions of this iconic firearm.

The first ten carbines were made in November 1941 as tool room models. Serial numbers 1-5 were manufactured by Inland and numbers 6-10 were made by Winchester. The carbine was the most produced American small arm of World War II. It remained in service in the United States from 1942 to 1973-a service length only exceeded by the M16 family of weapons.

Originally a division of General Motors, Inland Manufacturing made more M1 Carbines than any other manufacturer. Out of approximately 6.5 million M1s, Inland produced 3.5 million. The current Inland Manufacturing facility is located just two miles away from the original plant in Dayton, Ohio.

TEST CARBINE

I received an Inland Manufacturing

Model 1945 for evaluation. This was the last model produced and has several improvements over previous models, including:

- Adjustable rear sight instead of the earlier "L" flip sight
- Type 3 barrel band that incorporates a bayonet lug
- Round bolt vice the earlier flat bolt

A push-button safety is on the test carbine, although on the later versions, a lever replaced the button. The change was made because of reports that soldiers were accidentally hitting the push-button mag release when taking off the safety in preparation to fire—not a good thing. I have both types on personal carbines and have no real preference for either type. Push to the left for "fire" and to the right for "safe."

The test gun had one of the bestlooking walnut stocks I have seen on a service-grade carbine, with a dark zebra-stripe pattern. The stock is of the low wood type that does not cover the operating slide. The stock was complemented by a dark gray Parkerized finish. The stock was authentic right down to the stamped ordnance wheel with crossed cannons cartouche and "I" cutout for an oiler, which attaches the sling at the rear.

By contemporary standards, the sights are hard to pick up quickly. But the small aperture on the rear sight offers a very fine sight picture and is ca-





Above: Inland Model 1945 (top) uses buttontype safety. A lever safety replaced the button on later versions. Both are shown in "safe" position.

Left: Inland Manufacturing M1 Carbine is as tough as this granite rock. Robust, reliable and sufficiently accurate, it's a piece of American history.

Below: Inland carbine (top) has M2 mag catch for use with 30-round magazines. It will hold bolt back after last shot is fired if magazine is equipped with an M2 follower.

pable of good accuracy. The rear sight is adjustable for windage via a knob on the right side. Elevation gradations are set nominally for 100, 200, 250, and 300 yards. The front sight is not adjustable and consists of an .086-inch wide blade. Both sights are protected by wings.

The feed ramp on the 18-inch barrel had a mirror polish for sure feeding.

The magazine supplied with the carbine had a blued finish and is the type most commonly encountered—a 15-rounder that does not lock the bolt to the rear when the last shot is fired. But the test carbine had an M2 mag



catch for use with 30-round magazines. It will hold the bolt back after the last shot is fired if the magazine is equipped with an M2 follower.

A button on the charging handle manually accomplishes locking the bolt to the rear for administrative purposes. When the charging handle is pulled to the rear, push the button and it will lock into a corresponding slot on the receiver. To release, simply pull back on the charging handle and let it go home under spring pressure.

[Note: Inland Manufacturing offers



Inland M1 Carbine uses round bolt.



Test carbine came with a barrel band with integral bayonet lug. Inland Manufacturing also offers a model without this "evil" feature for states that disallow them.

a similar carbine (Model 1944) with a standard barrel band without the bayonet lug. It ships with a ten-round magazine for states that do not allow standard-capacity magazines or bayonet lugs. I suppose this is because there was a rash of drive-by bayonetings that I somehow missed...]

The Model 1945 comes in a sturdy cardboard box. It is lined with closedcell foam that is cut to exactly fit the carbine and with a convoluted foam lid. The carbine comes with one magazine and a cable lock.

FIELD STRIPPING

Disassembly of the carbine is easily accomplished. First, loosen the screw on the barrel band, depress the band spring attached to the stock, slide the barrel band forward, and lift off the upper handguard. Lift the barreled action out of the stock.

Push out the pin at the front of the trigger guard from left to right and slide the trigger group rearward off the frame. Remove the recoil spring and guide by pulling it back and lift it out of the receiver. To remove the operating slide, line up the slide with the two notches on the barrel and receiver and rotate it out. The bolt can now be removed. No further disassembly is normally needed or recommended.

Like most firearms of the era, the barrel must be cleaned from the muzzle. Take care not to damage the rifling at the front of the barrel.

Reassemble in reverse order. It actually takes more time to read this than it takes to field strip the carbine.

» SPECIFICATIONS

INLAND M1 CARBINE, MODEL 1945

MANUFACTURER	Inland Manufacturing
MODEL	M1 Carbine, 1945
CALIBER	.30 Carbine
FEED DEVICE	15-round box magazine
OVERALL LENGTH	35.75 inches
BARREL LENGTH	18 inches
BARREL SPECS	4 groove, 1:20 twist
WEIGHT (unloaded)	5 pounds, 3 ounces
BARREL BAND	Type 3 with bayonet lug
SIGHTS	Fixed front, adjustable rear
STOCK	Walnut
FINISH	Dark gray Parkerized
SUGGESTED RETAIL	\$1,079.00



Stock is authentic right down to the stamped ordnance wheel with crossed cannons cartouche and "I" cutout for an oiler, which attaches the sling at the rear.



Elevation gradations on rear sight are set nominally for 100, 200, 250, and 300 yards. Windage is adjusted with knob on right side.

CAL. .30 CARBINE, BALL M1

Texas Armament & Technology/Aguila Ammunition has teamed up with Inland Manufacturing and relaunched a specialty .30 Carbine round commemorating the 75th anniversary. The load will be available in 300-round bulk quantity and packaged in a plastic MTM .30-caliber ammo can co-branded by Aguila and Inland. The ammo will be available at Sportsman's Warehouse, Academy Sports, Cabela's, Big 5, and selected local dealers. For a limited time, special offers will be available with the purchase of Inland M1 Carbines.

Like the original, the load will have a 110-grain full metal jacket. Published ballistics show a muzzle velocity of 1,990 feet-per-second with 965 footpounds of muzzle energy.

The .30 Carbine has a general reputation for being a poor fight stopper, but I have often wondered if this may in part be due to the enemies it faced fanatical Japanese in World War II and Chinese wearing heavy clothing and often chemically altered in Korea. On the other hand, real-deal gunfighters like the late Jim Cirillo were fond of it.

Consider for a moment that the .30 Carbine has roughly twice the muzzle velocity and almost three times as much muzzle energy as a 124-grain 9mm Luger. Modern ammunition such as Hornady's 110-grain FTX Critical Defense breathes new life into the 75-yearold round.

RANGE EVALUATION

There was a time when .30 Carbine magazines were dirt cheap. Years ago, I bought 100 original GI mags that were



Front sight is not adjustable and consists of .086-inch wide post. Both sights are protected by wings.



Button on charging handle holds bolt to the rear for administrative purposes.

lightly pitted for \$50. They were like new again after the bodies received a light sand blasting and were refinished. Today, just one of those mags may fetch \$30.

Aftermarket magazines may not be appealing to the purist collector, but they are attractive to those who actually get out and shoot. In order to shoot more and reload less, I procured six 15-round and two 30-round mags from ProMag Industries to be used with the issued Inland magazine along with a couple of original GI mags.

The lion's share of the ammo used was the 300-round can of Aguila/Inland ammo, but I also used 100 rounds of PMC ball I had on hand and 40 rounds of Federal 110-grain Hydra-Shok soft points just to see if the carbine would feed them reliably. Starting with the soft points, the carbine digested them with no problem.

When most of the PMC had been expended, a malfunction occurred. A round would feed, but the bolt stayed slightly out of battery and wouldn't allow the carbine to fire. The round was manually ejected, and the same thing happened. This went on for three more rounds.

No problem was obvious, so I field stripped the carbine and finally found a small piece of brass that had been ripped off the rim of one of the PMC's *Continued on page 88*



Aguila Ammunition teamed up with Inland Manufacturing to relaunch a specialty .30 Carbine round commemorating M1 Carbine's 75th anniversary. Load will be available in 300-round bulk quantity and packaged in .30-caliber ammo can. Photo: Aquila Ammunition

Zenith Z-5 and SIG MPX are two very different solutions to the same problem.

submachine gun was birthed in the blood and filth of World War I as a compact combat tool optimized for trench clearing. Typical infantry rifles were cumbersome bolt-action monsters that could reach out past a kilometer and serve double duty as a proper pike with a bayonet attached. But when the engagement distance was close enough to smell what your opponent had for breakfast that morning, something handier and faster was needed.

The Italian Villar Perosa was technically the first, but the German MP18 really defined the genre. Short, handy, and feeding from a complex 32-round snail drum magazine, the 9mm MP18 fired about 500 rounds per minute and gave WWI German Stormtroopers a decisive tactical advantage. Suddenly everybody on the planet had to have submachine guns.

By World War II, submachine guns were in their ascendancy. American forces were saddled with the badly obsolete Thompson, a design that is iconic and effective, but nonetheless as heavy as a boat anchor. The subsequent M3 Grease Gun and the British Sten were cheap, fairly reliable, and easily mass produced. The German MP40 personified these same attributes with a bit more refinement. But the German StG44 Sturmgewehr assault rifle portended the eventual demise of pistol-caliber subguns.

Here our tale takes an interesting turn. Despite the widespread adoption of smaller-caliber combat rifles, the Israelis introduced the 9mm Uzi in 1954 and with it helped secure a new Jewish nation. The Uzi was built like a farm implement and, while heavy, was nigh indestructible.

In 1964, the German firm Heckler & Koch adapted the roller-delayed action from the wartime MG42 belt-fed machine gun to a pistol-caliber platform and devised the seminal MP5. This magnificent piece of engineering was as smooth as a sewing machine while setting new standards for accuracy in the platform.

SIG MPX vs. Zenith Z-5 MP5

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

NOT SO FAST

Thanks to Operation Nimrod in 1980, wherein the British SAS, armed with MP5 submachine guns, took down an embassy full of terrorists on live international television, everybody with a badge suddenly had to have a set of black fatigues hanging in his closet and an MP5 in the trunk of his squad car.

About a zillion MP5s later, somebody decried the 9mm as inadequately powerful, and the entire Free World divested itself of their submachine guns in favor of rifle-caliber carbines. Some might think the humble submachine gun would at this point die a natural and dignified death.

Carbines chambered for 5.56mm can



Bolt release, magazine catch and safety (not shown) are as readily accessed on the right side of the SIG MPX as the left.





Revolutionary SIG Pistol Stabilizing Brace catapults MPX into totally uncharted territory. Mounted on a side-folding strut, PSB brings carbine-grade controllability and accuracy to a platform that still transfers like a conventional handgun.

SIG MPX charging handle functions identically to that of an M4 but comes standard with bilateral latches.

now indeed be had in briefcase-sized packages, but the resulting noise is indescribable and the muzzle flash in dim light is adequate to burn your retinas. Touch one of these things off for real in an enclosed space and you won't be doing any communicating for a while.

Combine this with quantum advances in bullet design that make the humble 9mm markedly more effective than was once the case, and you have a recipe for a subgun resurgence.

SUPERLATIVE SIG

Nobody does it like SIG Sauer. They study American firearms law and meticulously craft guns to fit within it. Nothing exemplifies this adage better than the MPX. The SIG MPX is what would



Accessory rails on KeyMod forearm of MPX allow attachment of any standard lights or lasers. SureFire X400 incorporates brilliantly bright white light and easy-to-acquire green laser designator.





Produced in Turkey on licensed HK machinery, Zenith Z-5 is a perfect semiautomatic rendition of the original MP5. Installation of a sliding stock requires BATF registration as a Short-Barreled Rifle, but resulting gun is fast, maneuverable, and has a high "cool factor." SIG MPX pistol equipped with their Pistol Stabilizing Brace brings all that is awesome about the submachine gun to American consumers without the burden of a transfer tax.

happen if you purpose-designed an M4style firearm around the 9mm cartridge and added all the bells and whistles.

The MPX is a gas-operated, pistondriven design not altogether unlike your grandfather's M1 Carbine. The bolt release, safety, and magazine catch are perfectly mirrored on both sides of the weapon, and a flip-open polymer dust cover is over the ejection port.

Barrels are readily replaceable, and caliber changes in .40 S&W as well as .357 SIG are currently pending.

The KeyMod forearm accepts all manner of tactical bling, and the fulllength top rail will mount up any proper combat glass. The translucent polymer magazines incorporate steel feed lips and are just a wee bit too big to fit in standard MP5 pouches. The addition of one of those delightful SIG Pistol Stabilizing Braces on a folding strut lets you own a short-barreled semiautomatic submachine gun without any extraneous NFA (National Firearms Act) registration baggage.

BATF has been fairly schizophrenic regarding the legality of firing a pistol equipped with a Pistol Stabilizing Brace from the shoulder. At the present time, using a PSB from the shoulder makes the MPX a short-barreled rifle and illegal unless the proper paperwork has been completed and registered with BATF. While the MPX is legitimately revolutionary, the gun everybody's comparing it to is the HK MP5.



Gemtech GM-9 G-Core sound suppressor runs comparably well on Zenith Z-5 as it does on SIG MPX, though MPX requires an adapter to fit device to its left-hand European threads.

MP5: ZENITH OF THE SUBMACHINE GUN

The Zenith MP5 is called the Z-5 and is manufactured on licensed HK machinery in Turkey by the MKE company, a weapons production firm with more than 500 years' experience producing ordnance. Their guns are faithful renditions of the German originals in 9mm, .223, and .308.

Their 9mm offerings can be had with standard 8.9-inch barrels, long 16-inch tubes, or stubby MP5K configurations replete with factory accurate receiver reinforcing plates.

The Zenith Z-5 is the most faithful rendition of the MP5 ever offered on the American market, as the fire control group mounts with a pair of pushpins just like the originals. There is also a steel lip that precludes unmodified full-auto trigger packs, and a steel block that excludes factory full-auto bolt carriers to satisfy import restrictions ... but none of that shows from the outside.

Where once HK accessories such as lights, stocks, and magazines were prohibitively expensive, nowadays such items are pleasantly plentiful and available at decent prices. I landed both a sliding stock and the surplus SureFire lighted forend for less than \$100 each after some patient Googling.

I did the paperwork to register my Zenith Z-5 as a short-barreled rifle and dropped in the sliding stock without a fuss. The registration costs \$200 and is indeed administratively onerous, but by the time you read these words, the Chief Law Enforcement Officer signoff will no longer be required, so the process is not as painful as it once was. The



SIG MPX offers carbine performance in a handgun package. Sporting familiar M4 controls and superb ergonomics, this nifty new gun from SIG breaks new ground in the American tactical firearms market.



SIG Sauer makes its own line of electronic sighting devices.

BATF Form 1 required to undertake this adventure is available, along with instructions for its submission, on the ATF website.

CLASH OF THE TITANS

Both guns are comparably smooth on the range. The operating systems are entirely dissimilar, but the recoil impulse for each is negligible. Neither trigger lends itself to pinpoint accuracy at long ranges, but if your targets are lurking out at half a kilometer, you need a different tool. Double taps are dreamy through both weapons, and either gun runs circles around a comparable riflecaliber platform indoors.

Additionally, my Gemtech GM9 suppressor is comparably effective on either platform, though the MPX muzzle is threaded to a left-hand European standard and requires an adapter and a bit of thread locker to accommodate the can.

Magazine changes on the MPX are the same as those on a top-end ambidextrous M4, only faster. Mags drop free easily, and the translucent nature lets you keep track of rounds remaining at a glance. When the gun is empty, stroke the magazine catch, slam in another magazine, hit the bolt release, and go.

Magazine changes on the MP5 are slower but cooler. Lock the bolt to the rear, replace the magazine with a fresh box, and slap the charging handle down to drop the bolt, like Bruce Willis in *Die Hard*. The process is incrementally more cumbersome than that of the MPX, but not by much. Like most things, it just takes a bit of practice.

MP5 magazines are steel with chromed followers and are widely available at reasonable prices. MPX mags are more expensive and in current production.

Both guns were comparably accurate and reliable with both ball ammo and high-tech hollow points. The MPX comes with a nice set of flip-up iron sights, while the MP5 runs off the standard fixed post front and rotating diopter rear sight common to all HK long guns. Adjustment of the HK rear sight requires an inexpensive tool. The Zenith MP5 comes standard with a removable optics rail that is rigid and easy to use.

Given their long magazines, neither gun runs well from the prone, but weight is about the same for each, and both ride very comfortably on a sling. The MPX comes with a single-point bungee and the MP5 with the standard ludicrously complicated, but undeniably versatile and effective, HK sling system.

>> Continued on page 88



When Short-Barreled Rifle paperwork comes back approved, just drop a sliding stock on to tail end of Zenith Z-5 and you're ready to rumble. Blackhawk's line of MP5 pouches is functional and effective.

» AMMUNITION PERFORMANCE

LOAD	VELOCITY (fps)	GROUP SIZE (inches)
Armscor 124-gr. FMJ	1,162/1,159	.70/.80
American Eagle subsonic 124-gr. FMJ	1,090/1,096	.55/.50
Sellier & Bellot 124-gr. FMJ	1,198/1,200	.75/.80
Hornady Critical Defense 115-gr. FTX	1,216/1,246	.60/.90
SIG 124-gr. JHP	1,244/1,254	.75/.80
Winchester Defend 147-gr. JHP	1,036/1,034	.75/.80
Winchester Train 247-gr. FMJ	1,065/1,089	1.4/.80

Caldwell Ballistic Precision Chronograph set ten feet from muzzle. Accuracy is average of best three of four shots at 20 yards.

Wonder Round or Passing Fad?

The .380 for Self-Defense

BY SETH R. NADEL



Visually comparing the .380 to the 9mm, it's obvious which round is more effective.

he U.S. is a (mostly) free country, everyone gets to choose for themselves what car to buy, where to live and work, what caliber handgun to carry for personal protection.

In the last few years, a lot of people have accepted that the police, no matter how good, are really historians. When they arrive, they ask, "What happened here?" in the past tense. When an attack is happening *here*, the police are usually *way over there*. That makes you your own first responder.

Americans always want things to be extreme: faster, smaller and lighter, or bigger and heavier. Many of those new to personal protection want the smallest, lightest handgun possible.

THE OLDEN DAYS

I felt the same way when I started carrying concealed over half a century ago. Back in those dim (we had almost made it out of the dark) ages, everyone carried revolvers, and my two-inch, five-shot Smith & Wesson Chief's Special was far more compact than a fourinch, six-shot Model 10. So I carried my Chief's, loaded at first with the standard 158-grain round-nose lead ammo. At the time, it was state of the art!

Experience led gunners of the day to rename the RNL ammo the "Stop or I'll wrinkle your suit!" load, as it was rarely effective.

Officers took to carrying multiple revolvers, that being faster than the dump pouch, which lived down to its name, dumping your ammo all over the floor at the worst possible time! There's nothing like scattering six rounds of ammo through a busy donut shop at 5AM, just before going on a raid. Yes, I'm speaking from experience....

In the early 1970s, when I first carried a badge, jacketed hollow point was the ammunition of choice. "One hit, and the bad guy would do a back flip before hitting the ground! It's like hitting them with a brick!"

Well, not so much. They were more effective than the RNL, but sometimes they expanded, and sometimes they did not.

After the 1986 FBI Miami shootout, science was applied to ammunition design. The "FBI Ammunition Protocol" created a standard to measure bullet performance. For better or worse, it became the yardstick—it turns out for the better. After decades of experience, it does seem to measure protective ammunition performance in a way that lets us compare which rounds to carry.

In the late 1990s, more and more states allowed some form of concealed carry for citizens, ranging from "Constitutional Carry" (no government permission required) to "may issue" (to celebrities, big money donors, and the like).

REVIVAL OF THE .380

As more people decided to exercise their right to protect themselves, some wanted bigger and faster, while others wanted smaller and lighter. Enter the mini-guns and the revival of the .380 round.

I firmly believe in your right to choose, and I really don't care what handgun becomes your everyday carry. Have people been successful protecting themselves with .380? Absolutely! Successes have happened with .22 Shorts.

Have there been failures? Failures have occurred with all calibers, including 12-gauge slugs. I am sure there have been more failures with .380s than with larger calibers, but I want to think you are making an *informed* decision. All you are betting is your life.

Let's take an objective look at the .380 round and the guns that fire it. I'm going to contrast the .380 to its nearest comparable round, the 9mm Luger (9mm Parabellum, 9x19mm NATO).

I'll not rehash how bullets stop attackers, but we need to start with the bullet. It must have a certain amount of mass to penetrate through clothing, skin and layers of fat to the important stuff.

What is the typical bullet weight of a .380 round? The weight is limited by the pressure the round can generate before it starts to blow guns up.

Here come the first two limitations for all ammunition. You can have a relatively heavy bullet moving slowly, or a light bullet moving fast, but not a heavy bullet moving fast (excluding Magnum loads). Considering the liability facing ammo makers of all the inexpensive guns made in this caliber since its introduction in 1908—particularly the World War I-era guns made in France and Spain—pressures must be kept low.

The second limiting factor is the guns' method of operation. With rare exceptions, they are all straight blowback guns, with no locking mechanism. These depend on the strength of the spring and the weight of the slide to keep the gun operating. But in the smallest guns of the type, the slide cannot be too heavy, so the spring must compensate. This makes the guns hard to operate, particularly with cold, wet, or arthritic hands.

There is no free lunch—small guns with light weight must use heavy springs.



Ruger .380 LCP (top) and 9mm LC9s. Size difference is insignificant, but cartridges they fire are not. Photo: Sierra Blanca Shooting Sports, Pinetop, Arizona

Similarly sized guns: 9mm Nova (top) and .380 Glock 42. Photo: Sierra Blanca Shooting Sports, Pinetop, Arizona



NUMBER CRUNCHING

A quick perusal of a reloading manual, in this case the Speer #14, shows a .380 JHP bullet at 90 grains and a Total Metal Jacket round at 95 grains. Maximum velocities in a 3.8-inch barrel (Walther PPK) run to 1,056 feet-per-second (fps) for the 90 grain and 1,027 fps for the 95 grain.

For comparison purposes, a 9mm 115-grain JHP bullet (21% heavier) can be loaded to 1,258 fps in a fourinch barrel (19% faster). Or you could choose a 147-grain JHP bullet (55% heavier) at 1,001 fps (6% slower). Since all modern 9mm handguns are of the locked breech type, there is more pressure to work with.

In the real world, with factory ammunition, the numbers change. I found chronograph results from two very similar pistols, both made by Ruger. The 9mm LC9s (3.12-inch barrel) is the slightly larger brother of the LCP in .380 (2.75-inch barrel). The LCP could create 851 fps with a 90-grain bullet or 803 fps with a 100-grain bullet. With non-+P ammunition, the LC9s generated up to 1,038 fps with a 115-grain bullet. The LCP weighs 9.75 ounces and the LC9s weighs 17.2 ounces. Thus in the 9mm, we have a 15% heavier bullet moving 29% faster-a significant difference. The 7¹/₂-ounce weight difference is almost nothing.

With the response of gun makers to



In unscientific water jug test, .380 barely split the jug.

our "smaller, lighter" demand, some very tiny .380s came onto the market. They were shortly followed by almost equally small and light 9mms, and these two Rugers, both quality pistols, offer a close comparison. Many other tiny pocket pistols are in this range, with varying size, quality, and price points. Some of them can be *too* small.



State-of-the-art CCW in 1970.

9MM AND .380 TESTING

I decided to do some testing of my own, so I borrowed a Colt Government Model .380, which sports a 3¼-inch barrel. From the back of the vault, I dug out my Star Firestar 9mm with 3½-inch barrel—as close as I could get in production guns.

For the .380, I got some Remington Ultimate Defense Compact Handgun ammo, with a 102-grain bullet. The Firestar was fed some very old Winchester 115-grain Silvertips. Over my PACT timer, the .380 90-grain bullets clocked 821 fps, while the 115-grain 9mm rounds were at 1,069 fps. Here are the numbers: a 28% heavier bullet moving 30% faster. Which would you choose to save your life?

Water jugs are a convenient method of comparing the energy of different rounds. To my knowledge, no one has ever been attacked by a water jug, but like gelatin, they do offer some comparison. The jug hit from five yards (fighting distance) with the .380 split almost all the way down one side, and the slug did make a .355-caliber hole in the second jug, in and out.

The 9mm Silvertip blew the first jug in half, wrecked the second jug, and knocked a backup two-liter soda bottle full of water four feet from the stand. No matter how you measure it, there was a lot more energy delivered. Neither bullet could be recovered.

Several folks have told me lately that they don't practice with their pocket pistol because it is so small it hurts to shoot it. Since bullet placement is critical in all handgun calibers, lack of practice can equal a lack of precise shot placement, meaning even less effectiveness.

Ballistics don't matter if you miss or fail to fire at all because of lack of practice with your chosen defensive tool. But a poorly placed shot with a more powerful round is still more effective than the same shot with a less powerful round.

MY POCKET PISTOL OF CHOICE

I have been carrying a pocket pistol since the late 1970s, on duty as a plainclothes investigator for the government, and off duty as well. Since there were no production pocket pistols in 9mm at that time, I carried a custommade LaFrance Nova 9mm (now long out of print).

It is about the same size as a Walther PPK, although I fitted it with widerthan-usual grips to spread the recoil in my hand. It remains my usual carry gun to this day. Fortunately, I have never had to employ it defensively, but I can still ace my agency qualification course which goes to 25 yards—with it.

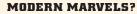
Some of the very small pistols hurt my hand with their sharp recoil, others were slow to reload with their heel magazine releases. Even the vaunted PPK came up short when I tested the ammo available at the time against various media.

Compared to the Nova, well, there was no comparison. In every case, the 9mm rounds had greater effect on my primitive test media—one-gallon jugs of water and water-soaked newspaper—than any .380 round.

At a recent visit to a local dealer I found the latest iteration of a small 9mm—the Glock 43. To my amazement, it is almost exactly the same size and weight as my 40-year-old Nova, except for the larger grips that I prefer. Of course, being a Glock, it is striker fired vs. the single action of the Nova. But my old trusty companion has a thumb safety (which has never failed me), while the Glock relies on its trigger safety. But the improvement in ballistics over a .380 should be justification for the purchase of a 9mm.

The only reliable report of field use of a .380 I have is from a friend. In the 1970s, he had to defend himself from a large bad guy who was wearing a heavy winter coat. The bad guy was seated, and as things went down, my friend drew his .380 and fired six shots at the other guy's chest.

The bad guy stood up, and all six bullets fell out of the coat and onto the ground. What happened next showed that my friend gained better judgment instantly. He ran "as fast as light" and was gone before the bad guy could retaliate. After this incident, my friend carried a .45 and two spare magazines!



Various manufacturers' advertising departments have touted the newest .380 rounds as "modern marvels." Yet for some reason, they shy away from any direct comparison to the 9mm or even the .38 Special.

Many new to carrying a handgun every day are not yet ready to consider the effectiveness of their chosen gun. When you first start, every handgun feels like you're trying to hide a brick, no matter the size, weight or caliber. Small and light are great, but the downsides are these tiny guns are harder to shoot and the rounds are undeniably less effective than the 9mm or .38 Special.

Ammunition advances that have been applied to the .380 round have also been applied to the 9mm, .38 Special, .45 ACP, and more. For me, there is neither enough weight in the .380 bullets nor enough velocity to move them to satisfy me.

USE ENOUGH GUN

No police department in this country allows officers to carry a .380 as their primary defensive firearm. Why do you think that is? A few undercover officers may carry a .380 because a) they think a larger gun is too cop-ish and b) it's cool to show the other cops how different their job is.

I have always believed that anyone attacking me will be bigger, stronger, younger, tougher and faster than I, and will be "drug armored." In other words, I train for the worst-case scenario, not the best case. So I follow the hunter's advice to "use enough gun."

You get to choose, but choose wisely. You do not get to pick who your attacker will be, or how many there may be. In pocket pistols, there is little difference in size and weight but a significant difference in effectiveness.

My life and the lives of my family are important enough to me that I will not trust them to the .380. Of course, your results may vary, and I wish you well. May you never need to find out if your choice of handgun caliber is enough gun!

Seth Nadel retired after serving 27 years as a Senior Special Agent with U.S. Customs. He was a firearms instructor for 25 years, including nine years as the lead firearms instructor at the Tucson Customs Academy.



Velocity measurement results from Colt .380.

CZ-USA 805

Firing from unorthodox positions while working around obstacles and range vehicles showed the CZ 805's potential in tight dynamic settings. The reciprocating charging handle was not a hindrance. The CZ 805's brass ejection pattern allowed for seamless shoulder transitions when working around barricades.

While recoil and 5.56mm in the same sentence are oxymoronic, after years of firing AR-pattern rifles, I found the CZ 805's impulse decidedly different in a positive way. Smoother and more subtle are two descriptions that come to mind.

CONCLUSIONS

CZ's decision to design the CZ 805 around an improved short gas-piston operating system, along with other tweaks including a sleeker rail system and folding adjustable rear stock, is sound. While unlikely to unseat the ARpattern rifle here in the U.S., it's nice to experience another take on how best to send 5.56mm rounds downrange.

Law enforcement agencies should consider using this rifle, as well as private contractors and defense-minded citizens. This is a positive reflection on the rifle's reliability, handling and ergonomics.

The CZ-USA 805 offers users a chance to own and use a rifle different than the prototypical AR- or AK-pattern rifles so common today.

A certain satisfaction will be gained by knowing the CZ heritage in arms development that stands behind the CZ-USA 805 Bren S1. ⁽)



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Diamond Anniversary Continued from page 79

cases and stuck under the extractor. Bolt cleaned. Carbine reassembled. Problem solved.

Though the M1 was never intended to be a precision long gun, I shot it for groups with the Aguila ammo standing from 50 yards. Fifteen-round groups averaged right at six inches. Not bad for a 15-round group fired in as many seconds. I fired the entire 300 rounds of Aguila ammo from the issued and Pro-Mag magazines without a single malfunction of any type.

The M1 Carbine was my generation's equivalent of the ubiquitous Ruger 10/22 and I had a blast (no pun intended) putting the Inland M1 through its paces.

CONCLUSIONS

In addition to the test carbine and the aforementioned Model 1944, Inland offers an M1A1 with folding "paratrooper" stock that Inland also manufactured during the war; a pistol version called the Advisor; the "Jungle" with threaded muzzle and conical-shaped flash hider; and the M1 "Scout" with conical-shaped flash hider, black textured stock, and aluminum handguard with Picatinny rail for mounting optics.

Inland is also offering three versions of the 1911 pistol and an M37 trench gun made exclusively for them by Ithaca Gun Company. I look forward to reviewing these historic firearms in future issues.

Whether for a collector or shooter, the Inland Manufacturing M1 Carbine is as close as you can get to the one manufactured during World War II. It's a light, fast-handling gun that's great for re-enactments and general plinking. It can also put meat on the table or be used for self-defense with equal aplomb.

Above all, it's a genuine piece of American history. ()



PROMAG INDUSTRIES (562) 861-9554 www.promagindustries.com

Subgun Smackdown

I could reliably ring steel a football field away with both guns using their iron sights and could manage headshots at the same distance with some decent optics. For operators inured to the muzzle blast, recoil, and flash of short-barreled rifle-caliber guns, these two 9mm rigs are refreshing, effective, and fun.

MUSINGS

The two guns cost about the same. The Z-5 requires a transfer tax to install a stock legally, but in return you remove all the legal ambiguity out of running the gun from the shoulder. It's hard to believe, but MP5 magazines and accessories are cheaper, though the MPX gear is indeed state of the art in materials and engineering.

Pick your poison. The MPX is the new kid, transfers as a simple handgun, and oozes sex appeal as a result. But the Z-5 has the street cred and is an indisputably successful real-world combat veteran. I couldn't decide, so I resolved to eat Ramen noodles for a couple months and kept them both.

For any proper gun nerd, the MPX and the Z-5 are both pure refined awesomonium. ()

Will Dabbs grew up in the Mississippi Delta and has a degree in Mechanical Engineering from the University of Mississippi. He is Airborne qualified and accumulated 1,100 hours flying UH-1H, OH-58A/C, CH-47D, and AH-1S helicopters. He currently works in his own medical clinic and maintains a licensed 07/02 firearms manufacturing business building sound suppressors. He has written on the subjects of firearms, medicine, and survival for more than 20 years.



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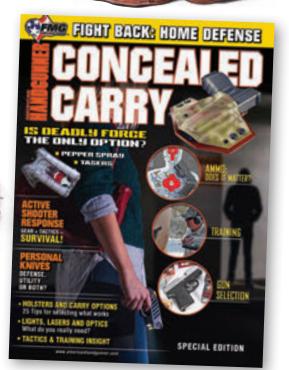


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THE CUTTING EDGE

TOPS Knives C.U.T. 4.0

IN 1998, a new American knife company burst onto the scene with black-coated heavy-duty knives with saw backs. I had to have one.

The company was TOPS Knives from Idaho Falls and, 18 years later, they're still going strong. In recent years, TOPS has been retaining the expertise of professionals in various fields to put their experience and vision to work designing knives for TOPS.

The roster of designers includes firefighters, martial artists, military, search-and-rescue personnel, hunters, law enforcement, survival practitioners, trackers, and a variety of professional outdoorsmen.

THE DESIGN

The newest offering from TOPS Knives comes from *S.W.A.T.* Magazine contributor Joshua Swanagon, who is also no stranger to TOPS. A few years ago, he designed for TOPS the Backwoods Skinner, which was influenced by the Alaskan Ulu knife. His latest design is the C.U.T. 4.0, considered a dual-purpose knife suitable for self-defense and urban survival. C.U.T. is an acronym for Combat Utility Tool.

The C.U.T. 4.0 has a total length of $8\frac{1}{2}$ inches, with a $4\frac{1}{6}$ -inch long blade, full tang, and 3/16-inch thick stock. The actual cutting edge is right at four inches long, hence the 4.0 name. Joshua went with a sabre grind, which gives the knife some nice lines, and a V cutting grind for the actual edge.

The knife features black tractioncoated 1095 carbon steel with a Rockwell hardness between 56 and 58. The scales (handles) are tan Micarta with a unique pattern. I've heard Joshua call it a sunburst pattern, but it's officially called a dragonfly pattern.

The curved handle and ring of a karambit design are used on the C.U.T. 4.0 to provide superior comfort during combative use. These elements were taken from Joshua's extensive martial-

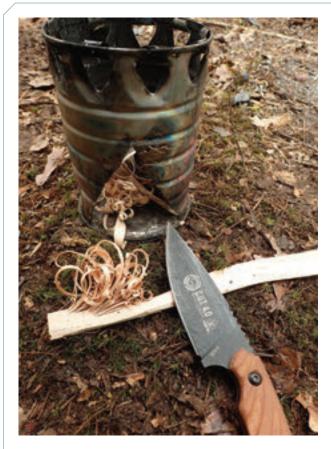
arts background. Known as kerambit in its native Indonesia, it is called the karambit in the Philippines and most Western countries.

The karambit-style knife is held with the blade pointing downward from the bottom of the fist, usually curving forward but occasionally backward. While it is primarily used in a slashing or hooking motion, the karambit's finger ring is also used in a punching motion to hit the opponent with it. The C.U.T. 4.0 is very useful in self-defense situations due to this flexibility of striking methods.

The finger guard makes it difficult to disarm and allows the knife to be maneuvered in the fingers without losing one's grip. The ring is large enough to accommodate a thick work glove or cold-weather gloves. The oversized ring also makes a good hammering surface, both to hammer with and to strike this area with a mallet or chunk of wood to hammer the blade into something.



Above: TOPS C.U.T. 4.0 has drop-point blade shape with karambit-style handle. This combat utility knife is ready for self-defense, urban survival, or whatever life throws at you. Inset: Author pounded C.U.T. 4.0 into a metal ammo can with help of a wooden baton. Knife pierced deep into the canister with minimal edge damage.





Above: Even after being punished cutting through metal, C.U.T. 4.0 was able to carve a point on this hard maple stick.

Left: For urban survival, Bolieu made a hobo-stove with the C.U.T. 4.0. It pierced through a metal coffee can and cut an opening, plus made kindling after slashing through the light metal.

The sheath features Pull-The-Dot one-way directional snaps. From the factory, the Kydex[®] sheath is set up for scout carry (horizontally), where it can be deployed in a reverse grip or crossdraw position. However, the sheath system allows for many different styles of carry. Total weight is 9 ounces with sheath and 6.3 ounces for the knife only.

COMBAT & URBAN SURVIVAL TESTING

One feature that really stood out to me was the knife's sharp point. It screams "penetration." Toward the tip is a nice taper that aids in penetration as the 3/16-inch thick steel gradually gets thinner, resulting in a sharp point. It was designed to pierce through heavy clothing and body armor.

I took a metal ammo can and stabbed through it with the C.U.T. 4.0 as hard as I could, then used a piece of wood to baton the back of the knife on the ring to really drive it in.

The next test was more in the realm of urban survival, as I got a metal coffee can and made a woodburning hobostove out of it. I proceeded to cut a triangular section out of it using the C.U.T. 4.0. This was harsh and grueling, more on me than the knife. I had to use many different grips just to get through and cut the correct angles. All were pretty secure in my hand due to the dragonfly handle pattern and the more aggressive than usual jimping, which I normally don't care for on a knife.

After quite the undertaking, I wanted to see how the edge would fare on a few more urban survival tasks, like making kindling for the hobo-stove and carving a simple point on a hardwood stick—especially after the amount of abuse the edge had already taken.

As I figured, the initial sharpness of the edge was gone, mainly due to the metal I had pounded the blade through, but the edge geometry made the work possible. I made a few fuzz sticks out of dry maple because the woods were saturated from heavy rain. The knife performed this task adequately, as well as putting a point on a piece of maple.

I left the knife out for a few days in a nearby camp I'd built, and the black coating did a great job protecting the blade from the elements.

At the end of the testing phase, the knife had lost a very small amount of the tip from the metal ammo can, and the edge had a few places where it had rolled and suffered some micro-chipping, as could be expected from this type of abuse.

But this is what it is designed to do, and the medium Rockwell hardness helps when it comes to touching up these minor wounds. After light sharpening with a Smith's fine diamond steel, you'd be hard pressed to find any traces of it being pounded or cutting through metal, except for the scratches and wear marks on the coating, which I personally like. They say, "I was used ... hard!" This is a hard-use tool and it acted accordingly.

The TOPS C.U.T. 4.0 is a good choice for martial arts enthusiasts, law enforcement, military, outdoorsmen, and practitioners of survival or escape & evasion.

Joshua put a lot of time and detail into his design, and TOPS Knives did a great job executing it! ()



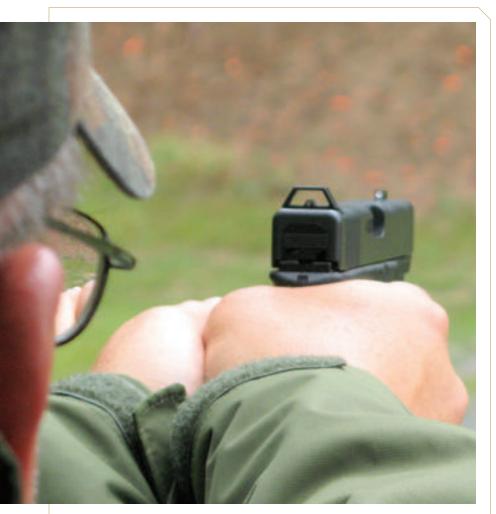
OFFBEAT

21st Century Iron Sights

JUST when you thought iron sight advances had reached their apogee and miniature reflex handgun sights were the wave of the future, there's a new version of the traditional fixed rear and front sights. A dedicated federal agent has realized what he considers a better closecombat system and calls it the Close Quarters Battle-Skeletonized Rear Sight (COB-SRS).

His motivation was simple: To shoot and negotiate his agency's Pistol Qualification Course (PQC) faster and more accurately than required. As he increased his rate of target acquisition, his shots had a tendency to group high as he identified his front blade and its alignment at the same tempo.

Analyzing his body mechanics, he determined he was canting the front sight upward to establish a higher and faster identifiable lead sight for the shot. Many shooters experience this high sight phenomenon by looking over the sights or with sights that have a centered white dot or a Tritium dot and shooting it instead of using the



Rangemaster found CQB-SRS sights, which are designed for close engagements, quite accurate at 25 yards. Trapezoid-shaped hood houses rear Tritium-enhanced pip. Front sight is conventional. Pip lets you see more of target.

top of the blade.

But in typical CQB confrontations, this error does not cause one to miss a close and large target but normally results in looser groups rather than the tighter impacts this shooter desires. One of his stage goals was to surpass his current performance of drawing from a concealed holster and breaking three shots in 1.5 seconds from five yards.

He tried a miniature reflex sight but that didn't work out for him. Then he envisioned a different way to look through the rear sight to capture the front sight when pushing out to the target. It took some time, but he finally found the solution with the CQB-SRS, and it changed his shooting for the better.

Constructed of steel with a Tritiumenhanced traditional front sight blade, its rear sight departs familiar territory and features a trapezoid-shaped hood (pip) encompassing a smaller trapezoid with Tritium insert that replaces the usual square blade and aperture. The hood frames the threat and draws your focus to the two vertical reference points that are waiting to be aligned.

He can now put all rounds center mass (CM) while shooting extremely fast. Elevated hits have been mitigated. From seven to ten yards, quick and effective CM hits can be achieved as long as the rear sight trapezoid is superimposed over the target's center and the front sight is somewhere near the center of this frame.

As the range extends or available target diminishes, the closer to the rear sight pip (which houses a Tritium vial) the front sight needs to be.

Beyond 30 feet, a dot-over-dot sight picture similar to Heinie's "Straight Eight" pattern is desired. A two-dot Tritium pattern was selected for alignment during marginal light conditions. If only one dot is seen, the front sight is too low and must be elevated. If dot over dot appears, you're in.

When I lift the Glock 17 to eye level, the pip is quickly identified and informs me of the location of the front post in relation to the rear. If not aligned, I move the sight until the rear pip is bur-



William Bethards takes his turn with CQB-SRS system. He wears Black Water Oakley SI Tactical FR gloves to protect abraded trigger finger caused by another firearm. System lets you see more downrange activities and encourages shooting with two eyes open.

ied into the post's center and I break the shot. Sight tracking during recoil is not inhibited by the hood. Sounds complicated, but in reality it is intuitive. The rear hood also provides the pip with a degree of protection and can function as an aid in one-handed operation.

It does not mask downrange objects, but is not accurate enough to hammer nails or open bottle caps.

When compared to traditional sights, *Top Shot: All Stars'* William Bethards and I determined that the CQB-SRS system is neither faster nor

slower for either of us, and it came down to a draw between the traditional sights and the CQB-SRS. But the CQB-SRS is a valid alternative sight system.

Shooting is an individual matter and people may see sights differently, so a visual preference may be the determining factor. A definite learning curve is involved and perhaps the sight's efficacy was demonstrated when we rivaled our speed and accuracy with standard irons in the short time we had with the system.

If you are an ardent gun professional



After two sight-in shots at target box's line, six-round cluster was fired by author with two hands. CQB-SRS can handle longer-range threats as well as those it was primarily designed for.

and have hit a wall in your downrange capabilities, this system may help you break through that barrier. If you are still on the fence after reading this, the ultimate dealmaker is that they look pretty cool as well.

Suggested retail price is \$180.00 per front and rear set, with tritium in both. (•)

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

CQB–SRS ADVANTAGES

The inventor/agent advised that his sights have the following advantages:

- Faster front blade acquisition, because front sight cannot be obscured by rear sight.
- Aiming concept is more easily understood than traditional system by all levels of shooters.
- More of the target can be seen through the rear aperture. The standard system can mask the target's extremities.
- Encourages sighting with both eyes.
- Rear trapezoid can be used as a hook for emergency one-handed refunctioning. This feature is a must-have on any fighting handgun.
- Facilitates sight acquisition when employing gas masks and ballistic shields.
- Facilitates tactical use of flashlight.
- Low profile for use with Level III retention holsters.







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The .300 Whisper (Blackout) is here to stay, and Black Hills Ammunition has added yet another accurate and top-performing projectile to its lineup in this caliber. The Sierra TMK (Tipped MatchKing) has a polymer tip to improve the ballistic coefficient (.332 at Whisper velocity of 2,200 fps) and a bullet profile that helps assure smooth feeding from standard AR magazines. The polymer tip also improves reliability of expansion to aid in hunting, law enforcement, and self-defense applications.

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MasterPiece Arms MPA BA SF Chassis

MasterPiece Arms (MPA), manufacturers of the MPA BA Rifles, Chassis Systems, Defender Pistols and Carbines, Suppressors and MPAR Rifles, announces the addition of its new MPA BA SF Chassis–Side Folder to the MPA Bolt Action Chassis Systems product line. This unique chassis system provides a super precision platform for the Remington 700, Savage, Howa, and a variety of custom actions. The MPA BA SF Chassis–Side Folder provides a worldclass chassis and V-bedding system that aids in increasing accuracy capabilities while adding tactical features to a rifle.

The MPA BA SF Chassis–Side Folder is machined on MPA's CNC Horizontal Machining Centers to exacting tolerances. The buttstock includes an adjustable length of pull, recoil pad with height and cant adjustment, adjustable cheek riser, and adjustable monopod.

Suggested retail price is \$1,025.00.



Nightforce SHV[™] 4-14X50 F1

Nightforce has announced their first SHV[™] riflescope built with first focal plane reticle technology, the SHV[™] 4-14X50 F1.

The new riflescope features intelligent reticles with illumination that turns off between each of 11 brightness settings, allowing the user to pre-select an illumination level

appropriate for lighting conditions, turn it off to preserve battery power, then restore it instantly with a one-click rotation of the dial. This prevents having to cycle through multiple brightness settings. The proprietary Nightforce $MOAR^{TM}$ and $MIL-R^{TM}$ reticles are offered.

The SHV[™] 4-14X50 includes side parallax adjustment and offers windage/elevation adjustments in .25 MOA or .1 Mil-Radian increments. The exposed elevation turret with Night-

force ZeroSet[™] provides the user with a positive return to their zero point regardless of how many elevation adjustments have been made. The scope allows 90 MOA of elevation adjustment and 70 MOA windage within its 30mm tube.

Suggested retail price of the SHV[™] 4-14X50 F1 is \$1,290.



NIGHTFORCE USA, INC. | (208) 476-9814 | www.nightforceoptics.com

Spyderco Street Beat Lightweight

Designed by acclaimed French custom knifemaker and martial artist Fred Perrin, Spyderco's Street Beat Lightweight is a long-overdue fusion of Perrin's time-tested Street Beat design and state-of-the-art manufacturing efficiencies. The result is a remarkably lightweight, extremely concealable expression of the classic Street Beat design featuring an injection-molded, fiberglass-reinforced nylon handle. True to the original, it includes Perrin's distinctive index-finger groove that locks the user's hand to the handle. Optimized for use in tactical environments, the PlainEdge[™] blade is cloaked in a low-profile black ceramic coating that eliminates its reflective signature.

To ensure ease of carry and instant access, the Street Beat Lightweight comes equipped with an injection-molded polymer sheath and a reversible, angle-adjustable G-ClipTM attachment. The G-Clip can be attached to either side of the sheath and configured to support dozens of different carry positions. Suggested retail price is \$159.95.



Pachmayr Renegade Laminate Revolver Grips



Pachmayr, a leader in handgun grips, recoil reduction, and gunsmithing, introduces the new Renegade[™] Laminate Revolver grips. These are the ultimate in style and function. The highly polished wood laminate panels are offered in either checkered or smooth styles and are available in Rosewood and Charcoal Silvertone. Both offer classic good looks, and perfectly accent stainless steel and blued frames. The smooth finish is often preferred for concealed carry. The precision CNC cut checkering patterns provide a secure grip while maintaining the grip's attractive appearance. Available for Smith & Wesson round butt, J, K, L, and N frames.

LYMAN PRODUCTS CORP. (800) 225-9626 www.lymanproducts.com

GOOD GUYS WIN!

Alleyway Entry

A man standing behind a convenience store in Riverview, Florida was startled by the approach of a bandana-wearing armed robber at high noon. The robber demanded money and, when the man told him he didn't have any, the robber forced him through a back entrance into the convenience store.

Once inside, the robber barged into an office where the business owner and his son were working. When confronted by the assailant, one of the men pulled out his own handgun and opened fire, hitting the stickup man several times. The intruder was transported to the hospital, where he was pronounced dead. State records showed the deceased had multiple convictions for grand theft and burglary.

SOURCE: *Tampa Bay Times*, Tampa Bay, Florida, 5/10/16

Dead-End Drive Thru

Just after lunchtime in League City, Texas, a man and his son sitting in the drive-thru of a McDonald's restaurant were approached in their pickup truck by a gun-wielding attacker. A struggle ensued and, fearing for his own safety and that of his four-year-old son in the back seat, the driver pulled his own pistol, which he was licensed to carry.

Called by McDonald's employees, police arrived to find the would-be carjacker shot three times. He was taken to a local emergency room, where he later died of his injuries.

"Never would have dreamed in a million years that a McDonald's drive thru, like blocks from the police station in broad daylight, at two or three o'clock in the afternoon, something like this would happen," the truck driver's attorney stated to reporters.

SOURCE: KTRK-TV, Houston, Texas, 5/7/16

Garage Banned

A family in West Mobile, Alabama was startled by unexpected noises coming from their garage on a Sunday night in early May. Grabbing a revolver, the homeowner headed to the garage to investigate the source of the commotion. Opening the door, he found all his lawn equipment moved into a pile and a would-be thief rummaging through the garage for more.

Commanding the intruder to put his hands in the air, the homeowner held the man at gunpoint until the police arrived to take him into custody. "He kept saying he didn't move anything, and I probably would have let him go if he'd just stop lying," the homeowner later told reporters. The intruder faces charges for burglary.

SOURCE: WKRG-TV, Mobile, Alabama, 5/2/16

Not Your Typical Granny

An 80-year-old woman in Sultan, Washington heard a disturbance in the kitchen of her home on a Thursday night in May. Going to investigate, she found her husband lying on the kitchen floor bleeding. He'd been attacked with a crowbar and a knife. "I've been stabbed!" he told her, and she ran down the hall to their bedroom to retrieve the .38 he'd gifted her for Christmas a few years prior.

She waited behind the bedroom door, hoping to ambush the intruder, but when he didn't come, she stepped into the hall. The intruder was in the hallway and blurted "Gun!" as she fired at him four times, connecting with three shots. The intruder was pronounced dead at the scene. The woman's husband was airlifted to a hospital, where he faced a recovery after a week in intensive care.

SOURCE: KOMO-TV, Seattle, Washington, 5/5/16 (



The more recoil or muzzle flip your weapon has, the more frequently you need to practice to maintain proficiency.

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OCTOBER ISSUE ON SALE SEPTEMBER 6th

Unsafe at the Range

IT is said there is safety in numbers. While this often holds true for mathematicians, numerologists and in the field of personal defense, there is always the exception to the rule. And paradoxically, the exception in this case often rears its ugly head on a firearms training range.

This, because the antithesis of "the more the merrier" is "too many cooks spoil the broth." In other words, the number of eyes you need in the back of your head is directly proportionate to the number of bodies you have on a firing range at any given time—and that includes those who are not on the actual firing line.

Unfortunately, many is the time that a firearms safety lecture is received with sighs, disdainful looks, and body language indicating that, "I came here to shoot, not listen to this spiel for the umpteenth time." So let's try it one more time, just for laughs: ANYTHING THAT TRANSPIRES ON A TRAINING RANGE IS SECONDARY TO SAFETY. PERIOD.

And perversely, while many shootists have had accidental discharges when alone, most firearms-related accidents occur when the perpetrator is in the company of others. Which means you don't have to be perspicacious to realize that the problem lies predominantly with mental attitude and behavior when in view and hearing distance of fellow shooters.

This usually occurs during irresponsible gun handling by a nervous neophyte, by someone with a lackadaisical attitude, a momentary lapse in mental concentration by a dedicated shooter, or last—but certainly not least—by the range guru who insists on dazzling all and sundry with his imagined omniscience.

This last specimen—and we've all seen him—apparently resides with Zeus on top of Mount Olympus and feels that basic safety rules are designed for us mere mortals and don't apply to him. If it's a night-shooting training session, not only will he have three Boeing landing lights bolted to his shotgun, but a pair of turn signals as well—just so we peons know which way his lordship is stepping during his twinkletoed display of footwork.

Well, Fluffy, here's some earth-shattering information for you: safety rules *do* apply to you the same as the rest of us, and you *will* conduct yourself with decorum, the same as the rest of us. And nobody has moved the entrance gate to the range since your arrival—it's still in the same place. You can easily locate it and use it as an egress on your way out.

And yes, we're all aware of your father's vast accumulation of wealth—nobody cares. Because you're the one who usually negligently blows somebody up while demonstrating your imagined prowess, and then blames everything and everybody else for your own stupidity.

Here's the bottom line: Teach your kids to handle firearms safely and responsibly at an early age, or either they'll become one of the horrifying child-shooting statistics that have occurred during the last 20 years, or you'll end up being the proud parent of The Fluffster.

The nervous beginner is a completely different kettle of fish to the mudflap mentioned above, but can be just as ballistically dangerous. Again, this is more mental attitude than anything else, but this person needs formative training either one-on-one or with a group of inexperienced gunhandlers. While some people don't care what others think of them, most beginning pistoleros are—to a greater or lesser degree—somewhat overawed by their initial experience with firearms. If you're the trainer, treat them with courtesy and respect, but *don't* "baby" them, and above all else, be firm with safety instruction—or you're not helping them.

Don't forget to put yourself into "beginner" mental mode. It's not productive to tell someone to "run the bolt" when the last time they heard the word "bolt," it referred to startled horses, lightning or something that threads onto a nut. Where this one goes is, they won't speak up but will look at the adjacent trainee to see what he's doing and then mimic his actions, which may be screwed up. It's a potential safety problem.

The subject of the person with an indifferent attitude can be covered in two words: "See ya." Ask for Fluffy—he'll show you where the exit is.

The trainee who has a momentary mental concentration lapse is the most potentially dangerous of all—because he is all of us. There is only one solution to this problem: *maximum concentration* every time you touch a firearm. As Scott Reitz—a multiple gunfight winner and trainer of thousands—says, "stay switched on." Simple words, but they say it all. (And yes, he has literally trained thousands, unlike some who claim they have—and Reitz has *never* had a range accident on his watch.)

There is a reason pistols are potentially more hazardous than other firearms when within reach of humans. Assuming one practices all the other firearms-handling safety rules (such as keeping your finger away from the trigger until the sights are aligned with the intended target), pistols are shorter in barrel length than other firearms. This means that geometrically, the muzzle will sweep a much wider area than a long gun will with the same amount of torso/hand motion—which also means most people are more cognizant of muzzle direction when deploying a shoulder-fired weapon than when their paws are wrapped around a handgun. Here's a brilliant observation: Even if all other safety rules have been violated, if the gun muzzle is pointed in a safe direction, *nobody gets hurt*!

But since more handguns than long guns are in use in law enforcement and private citizen circles, more unnecessary accidents happen. The operative word is "unnecessary." Translation: negligence. Firearms safety shouldn't be just a habit, or something you practice. It should be instilled into your synapses as an automatic way of life before you load your first cartridge into a firearm.

Just my personal opinion. Then again, nobody calls me "Sir," "Mister" or "Fluffy" either.

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





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