

A rear-mounted operating handle was fine when iron sights ruled, but is hard to reach under big scopes. ASA moved it to the side of the receiver for better clearance.

AMERICAN SPIRIT ARMS

Side Charger AR-15

Text and photos by Peter G. Kokalis

Find it hard to reach the operating handle under that big scope? It's easier to reach when it's on the side, and one Arizona manufacturer offers ARs made just that way.

You might think with a service life rapidly approaching a half-century, there wouldn't be a lot more to say about the M16 series, but there are still those who attack the black rifle. The system's detractors usually focus on the supposed ineffectiveness of its 5.56x45mm NATO cartridge and its gas system. In fact, the wound ballistics performance can be improved, especially at longer ranges, by the use of heavier projectiles.

Those who rant about the gas system favor a short-stroke gas piston method of operation. While this is indeed a reliable means of operating the M16 system, the original method of operation also works well if maintained properly, as do all small arms systems.

There is, however, a legitimate area of concern, in my opinion. As originally fielded, the M16A1 had an integral carrying handle on its upper receiver, since it was intended that the rifle would be fielded using the iron sights only. It wasn't very long when the troops began to clamor for a telescopic sight. Colt introduced a 3X scope that was attached through a hole in the carrying handle. It was popular and widely used during the Vietnam War.

However, it was positioned so high above the bore's axis that it was next to impossible for the operator to obtain a proper cheek weld. The M16A2 was introduced to coincide with the new M855 ammunition with a 62-grain projectile and at

first it was issued with a fixed carrying handle. Very shortly thereafter a series of M16A2 variants were introduced with so-called "Flat Top Upper Receivers" and removable carrying handles.

The new flat top receivers were equipped with integral MIL-STD-1913 rail interfaces (almost always mistakenly called "Picatinny Rails" by the popular gun press). A series of optical sights were soon developed for mounting on the integral MIL-STD-1913 rail interface. In some instances the objective lenses of the scopes were so large that they prevented installation without mounts and rings that raised them somewhat higher above the bore's axis.



The groove in the left side of the receiver and the HK-style handle make the ASA Side Charger immediately distinguishable from the run-of-the-mill M16 variant.

Furthermore, many of these optical sights were designed to be mounted very close to the operator's eye. This seriously compromised the operator's ability to access the M16's retracting handle, which is at the top rear of the upper receiver. It became difficult to cock the rifle, especially in high stress environments.

The rather obvious solution would be to relocate the retracting handle, and American Spirit Arms (Dept. SGN, 15651 North 83rd Way, Suite #2, Scottsdale, Ariz. 85260; phone: 480-367-9540; E-mail: rifles@americanspiritarms.net; website: www.americanspiritarms.net) has done just that. The location of the M16 retracting handle was derived from the caliber 7.62x51mm NATO AR-10 rifle, which featured a bolt retracting system on top of the upper receiver and directly under the carrying handle.

Most modern infantry rifles have retracting handles on either the right (the entire Kalashnikov series) or the left (the FN FAL series) side of the receiver body. The American Spirit Arms Side Charger rifle has a non-reciprocating retracting system on the left side of the receiver. In most other regards it is an M16/AR-15 type system.



The ASA's bolt and bolt retracting components are quite different. A stepped, aluminum block plugs the upper receiver's top charging handle slot normally found on the M16.



The left-side side charging handle interfaces with a U-shaped notch machined into the left side of the bolt carrier and permits the bolt group to be retracted.

American Spirit Arms (ASA) has a somewhat checkered past, but 2½ years ago it was taken over by a young and aggressive entrepreneur, Joseph P. Sirochman, who has put the company on a highly accelerated, but well orchestrated and now respected, path. In addition to American Spirit Arms, Sirochman owns JPS Manufacturing and JPS Motorsports.

With recent ISO9001/AS9100 certification, JPS Manufacturing is poised for growth with Tier One aerospace companies. Sirochman has a professional-level background in aerospace machining and as a machine shop owner. These skills are of overriding importance, as American Spirit Arms fabricates all major components for their rifles, with the exception of the hard-chromed bolt group.

Shotgun News recently received an ASA Side Charger AR-15 for test and evaluation with a retractable stock and a stepped, 4140 chrome-moly, heat-treated, 16.25-inch, crowned M4-configuration barrel. This six-groove barrel has a 1:9 right-hand twist and was given a black manganese phosphate finish. ASA manufactures their own barrels and two other configurations are available: a 20-inch barrel in the standard M16A2 configuration with the same rate of twist and a 24-inch, target-type bull barrel with a 1:8 right-hand twist.

An M16A2 flash suppressor was attached to the muzzle of the barrel. It's similar to the original M16A1 birdcage, except that

the sixth port on the bottom was deleted to slightly reduce muzzle climb during burst-fire and diminish position disclosure when firing from the prone position in dusty, arid region environments. The flash signature remains the same.

Two different buttstocks are available: a standard M16A2-type fixed stock and an M4-type retractable stock. To match the M4 barrel, we chose the retractable stock as we were interested in assembling a tactical rather than a target system. The pistol grip, an M16A2-type and the retractable stock were both furnished in desert tan, as were the "ladders" covering the left and right side forearm MIL-STD-1913 rail interfaces. The stock was equipped with a slip-on, black rubber buttpad. The stock can be securely locked in three positions: fully open, closed and a midpoint position for operators wearing ballistic vests.

Both the ASA Side Charger upper and lower receivers were made from 7075-T6 aircraft grade aluminum alloy. The upper receiver is machined from a billet, while the lower receiver is a machine-finished forging. The fact that most M16/AR-15 type rifles make use of 7075-T6 aluminum alloy is generally well known. The question most often ignored is why? What are the properties of 7075-T6 aluminum that make it suitable for the manufacture of the M16/AR-15 series?

7075 is an aluminum alloy with zinc as the alloying element. It's strong, with excellent fatigue strength and good machinabil-



The ASA Side Charger with the Counter Sniper scope produced exceptional accuracy with a wide range of ammunition featuring bullet weights ranging from 55 to 77 grains.

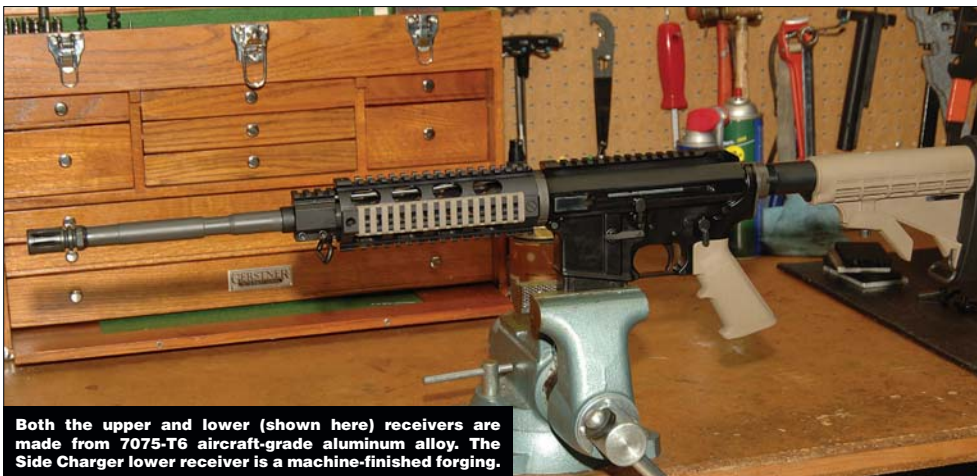


Joseph P. Sirochman, President and CEO of American Spirit Arms, has a professional-level background in aerospace machining and as a machine shop owner.



ASA is one of relatively few manufacturers that has barrel-making capability. Mikael Neal heads up the assembly section and also is in charge of barrel manufacture.

ity, but is not weldable. Its T6 temper grade has an ultimate tensile strength of 74,000 to 78,000 psi, which is stronger than the other available temper grades. At 63,000 to 69,000 psi, its yield strength is also greater than the other temper grades. Its elonga-



Both the upper and lower (shown here) receivers are made from 7075-T6 aircraft-grade aluminum alloy. The Side Charger lower receiver is a machine-finished forging.

tion (stretch before ultimate failure) is at 5-8%, which places it in the mid-range with regard to this criterion. Both the upper and lower ASA receivers are black hard-coat anodized. Anodizing is an electrolytic passivation process used to increase the thickness of the natural oxide layer on the aluminum surface of the part and that increases corrosion resistance and wear resistance and inhibits galling of reciprocating components.

The weight, empty, of the ASA Side Charger AR-15 as delivered to Shotgun News is only 5 pounds, 15 ounces. The overall length, with the stock fully extended is 35.75 inches. When fully collapsed, the length reduces to 32.5 inches. Add another half-inch to those dimensions if the rubber buttpad is installed. In the configuration delivered to us, the manufacturer's suggested retail price is \$1,229, including one 30-round magazine and a plastic hard case. It's important to note

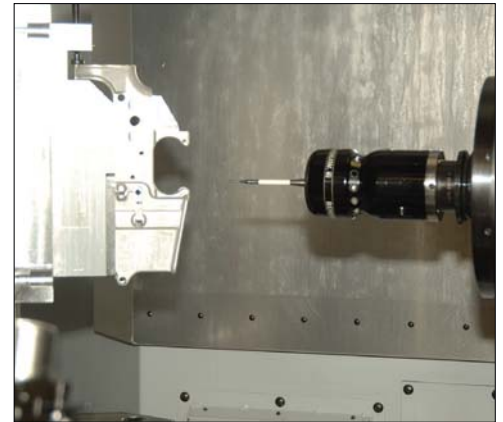
that all ASA rifles carry a lifetime warranty in the areas of both function and accuracy.

The M16/AR-15 20- or 30-round magazines as originally fielded left much to be desired. Their anodized aluminum alloy bodies had floorplates that were difficult to remove, follower springs that needed to be stretched occasionally to maintain the correct tension and a number of follower designs, some of which proved to be defective. While many of these problems were corrected over the years, the M16 magazine never came up to the level of the glass-reinforced, rust-colored, polyethylene plastic magazines found on Kalashnikov-type magazines.

That situation has changed dramatically, as the polymer M16/AR-15 magazines manufactured by Magpul Industries Corporation (Dept. SGN, P.O. Box 17697, Boulder, CO 80308-0697; phone, toll free: (877) 462-4785; fax: 303-828-3469; website: www.magpul.com) are every bit as rugged and reliable as those of the Kalashnikov series and maybe even more so.

Available in either black or flat dark earth in 30-round capacity, with a 20-rounder soon to be introduced, Magpul magazines, as well as their highly regarded collapsible stocks, are currently being fielded by special operations personnel in both Iraq and Afghanistan. Their features include a four-way, anti-tilt follower that enhances feeding reliability, a constant internal curve for consistent round stack regardless of round count, a true 30-round capacity that eliminates the need to download, and a floorplate design that aids in magazine extraction from pouches and eases disassembly.

The standard 30-round Magpul magazine sells for \$14.95. Available as an optional feature is a magazine with ambidextrous round indicator windows. This model costs \$17.95 and it's the version I prefer. One feature I do not care for is the snap-on dust cover that also protects the feed lips. During the Korean War, U.S. troops ripped their fingernails off trying to tear away the protective translucent covers on their M3A1 "Grease Gun" .45



The ASA Side Charger rifle Kokalis used in SGN's test and evaluation is seen here at the final assembly station. The upper receiver shape easily identifies it.

ACP magazines in high stress battlefield environments. Just discard the Magpul dust cover and you still end up with the best M16/AR-15 magazine ever fielded. I can no longer recommend any other magazine for the M16 series.

The ASA Side Charger AR-15 flat top upper receiver has an integral 5.5-inch MIL-STD-1913 rail interface. The top of the gas plug also carries an integral 1.5-inch MIL-STD-1913 rail interface (or "dovetail") for installation of a folding emergency front sight. The rifle was equipped at our request with a YHM (Yankee Hill Machine Company, Inc., Dept. SGN, 20 Ladd Avenue, Florence, Mass. 01062; phone: toll free (877) 892-6533; fax: 413-586-1326; E-mail: info@yhm.net; website: www.yankeehillmachine.com) Light Weight Free Float 4 Rail Forearm with MIL-STD-1913 rails at 12, 3, 6 and 9 o'clock.

We used the Carbine Length (catalog #YHM-9631) forearm, which weighs 10.6 ounces, has an overall length of 7.2 inches and retails for \$122. These YHM forearms use anti-rotation screws in insure that the unit stays rock solid even under the most strenuous battlefield environments. The rail interfaces at 3 and 9 o'clock were fitted with low-profile rail covers, often referred to by grunts in the Middle East as "ladders." Made of a tough plastic composite and available in black or Coyote Brown, they're used to provide a more comfortable gripping surface for the support hand.

To this forearm we attached a number of products from GG&G (Dept. SGN, 3602 East Stravenue, Tucson, Ariz. 85713, phone: (800) 380-2540; fax: (520) 748-7583; E-mail: gggaz@aol.com; website: www.gggaz.com). Designers and manufacturers of cutting edge optical mounting systems and tactical accessories, GG&G are suppliers to law enforcement agencies throughout the United States and U.S. military units of all branches. Simply put, their product line is often incredibly innovative and always outstanding in quality. By the time we were through we had assembled a truly "hot ticket" tactical AR-15.

While either red dot or telescopic sights, the latter usually of relatively low magnification, prevail with the M16A2 rifles and M4 carbines being fielded in both Iraq and Afghanistan, they can fail—almost always at the wrong time—and emergency iron sights are absolutely essential. From the wide array of rear sights available from GG&G, we selected the very popular MAD (Multiple Aperture Device) Back Up Iron Sight (BUIS) (#GGG-1006).

A very low profile folding rear sight, it clears most optics—an important feature as we mounted several scopes on the Side Charger, one of which was exceptionally long. Its salient feature is four apertures of two different diameters on the same plane, which means they are zeroed to the same point of impact. Thus, rotating the knurled aperture disc in either direction will bring the next size in view.

The small aperture is .073" in diameter and the large aperture is .199" in diameter. The standard military windage knob and screw are used. One click of the windage knob provides approximately .48 moa of adjustment when mounted on the M16A2E4 rifle and about .65 moa on the M4 carbine. The MAD mount body is CNC-manufactured from billet 6061 T6 aluminum alloy and Type III hard-coat black anodized.

The black manganese-phosphated stem and aperture disc are made from billet 4140 ordnance steel and have hardened wear points for long service life. Once in the up position, a spring-lock prevents the sight from accidentally lowering. Developed to fulfill a request from Naval Surface Warfare and used extensively by Coalition Forces in the Middle East, the MAD BUIS sells for \$140.

We mated this with the GG&G Spring-Actuated Flip-Up Front Sight for dovetail gas blocks (#GGG-1281). Pushing the actuator button releases this square-post front sight and it pops up to a locked position for instant deployment. Push the actuator once more to fold down the sight.

When mounted on the Side Charger's dovetailed gas block, it has the same command height as the original M16/AR-15 front sight. Both this flip-up-type front sight with sturdy protective ears and the MAD BUIS can be co-witnessed to most red dot sights. Manufactured from 6061-T6 aluminum alloy and Type III hard-coat anodized, the Spring-Actuated, Flip-Up Front Sight for gas blocks with a rail interface costs \$156.

Vertical foregrips have become very popular on so-called "tactical" (a vastly overused word) M16/AR-15 series weapons. There are now literally dozens of designs available and they differ widely in both configuration and quality. They are in almost universal use in the Middle East. Why?

Many believe because they control muzzle rise during full-auto bursts. Any operator who consistently fires a caliber 5.56x45mm NATO assault rifle in the full-auto mode is severely lowering his hit probability, increasing the possibility of striking

innocent bystanders and wasting his precious ammunition load. The fact is that vertical foregrips provide a more stable firing platform and thus greater accuracy potential when firing aimed, semiautomatic shots.

I especially like the GG&G Vertical Foregrip (#GGG-1169) as it has several valuable ancillary features. CNC-machined from solid black Acetal cold polymer for durability and low heat absorption, it has a waterproof compartment that will hold either two AA or CR123 batteries or an M16 spare bolt assembly. O-ring-sealed, it can also be used to store three N-type batteries, firing pins, ejectors, extractors or other small components. No tools are required to open the tri-grip waterproof cap. With an overall length of 4.5 inches and a comfortable 1.25 inches in diameter, it costs \$54.60. It was easily attached to the bottom MIL-STD-1913 rail on the ASA Side Charger.

On the 3 o'clock rail interface and just forward of the vertical foregrip's location on the 6 o'clock rail we attached one of the new SureFire X300 LED Weaponlights. I personally believe that rail-mounted flashlights are more tactically useful on shoulder-mounted weapons than they are on handguns. Since they introduced their first flashlight in 1987, SureFire (Dept. SGN, 18300 Mount Baldy Circle, Fountain Valley, Calif. 92708-6122; phone: (800) 828-8809; fax: (714) 545-9537; website: www.surefire.com) has come to dominate the field of combat flashlights.

SureFire's X300 LED Handgun WeaponLight provides a one-hand-operable ambidextrous switch plus an entirely new beam pattern. The X300 has a mirror-image toggle switch at the rear end. Rotate either the left or right toggle up or down for constant-on and push either toggle forward for momentary-on (in this instance you would use the thumb of the hand wrapped around the vertical foregrip).

The X300 LED Weaponlight has no filament to burn out or break from the effects of recoil. When introduced several years ago, the X200 Weaponlight series offered two versions: one with a tightly focused beam for extended reach and one with a wider-angle beam more suitable for CQB (close quarter battle) scenarios. Both concepts have now been combined into one weaponlight. The new X300 Weaponlight's solid-state light-emitting diode produces a beam that's tight enough to penetrate the night, but with enough surround beam to prevent any surprises in closer-range tactical applications. It's bright enough to both illuminate a threat and temporarily overwhelm his night-adapted vision.

Because an LED flashlight emits light from only one bandwidth of the visible color spectrum, it appears to project a somewhat bluish light that is softer and less harsh than that generated by a xenon bulb. Coating a blue LED with a yellow phosphor creates the illusion of white light but with a distinctive bluish cast.

In addition, LED flashlights provide longer battery life than incandescent light sources because they are more efficient with regard to lumens per watt. Thus, equivalent amounts of light are produced with less energy. Further, a number of SureFire's LED flashlights are run at lower than maximum levels and that also decreases the energy consumption.

The X300 LED Weaponlight features an anodized aluminum construction with a body length of 3.53 inches and a weight of only 3.7 ounces with batteries. It uses two 123A lithium batteries and provides a maximum output of 110 lumens (five times the light of a two-D-cell flashlight) with a maximum useful runtime of 2.4 hours of tactical-level light (60 lumens or higher). The price of the X300 LED Weaponlight is \$225.

Owning weapon lights like these requires only an expenditure of money, using them correctly requires diligent training and frequent practice. In actu-



The GG&G Accucam Quick Detach scope mounting base has an exceptionally long throw lever that makes removal and replacement of the scope unit easy and painless.

al tactical scenarios you must be careful never to set patterns of search with either movement or the flashlight. Use the momentary off/on switch to identify the target, fire, turn off the light immediately and quickly move away from the weapon's flash signature after firing. Crouching lower can help to back light the threat. In addition, you must stay away from windows or anything that would silhouette you.

In addition to the SureFire X300 LED Weaponlight we attached a SureFire HL1-C-TN Helmet Light to the Modular Integrated Communications Helmet (MICH) that was part of our



The M4-type retractable buttstock can be securely locked in three positions: fully open, closed and a midpoint position for operators wearing ballistic vests.



Kokalis thinks Magpul M16/AR-15 magazines are as rugged and reliable as AK mags; maybe even more so. One version comes with ambidextrous round indicator windows.



GG&G's Vertical Foregrip is CNC-machined from durable solid black Acetal cold polymer and has a waterproof compartment that will hold either two AA or CR123 batteries.



GG&G's MAD (Multiple Aperture Device) Back Up Iron Sight (BUIS) has four apertures of two different diameters on the same plane, zeroed to one impact point.



Pushing the actuator button of the GG&G Spring-Actuated Flip-Up Front Sight releases this square-post sight and it pops up to a locked position for instant deployment.



The Vickers Combat Application Sling is a two-point design that permits a variety of carry and shooting positions. It's properly sized for use over body armor.



Kokalis chose the GG&G Sling Thing for Dovetails to mount the Vickers sling on the left side 1913 rail interface of the YHM Light Weight Free Float 4 Rail Forearm.

test and evaluation of the ASA Side Charger AR-15. This compact, multiple-output helmet light in tan has seen wide use in the Middle East and features three white LEDs, two red LEDs and one blinking infrared LED that serves as a personal Identity Friend or Foe (IFF) beacon.

The white primary LEDs are perfect for general-purpose, close-work illumination, especially in dimly lit interiors; the red secondary LEDs serve the same purpose in a low-signature, night-vision-compatible color. The HL1-C-TN attaches to a special mount that clamps semi-permanently usually to the left side of the rim of any MICH—the current U.S. military combat helmet. Made of durable glass-filled nylon polymer and neoprene o-ring-sealed, watertight body, the light has two toggle switches and a pressure switch for maximum light control. It uses a single 123A battery, is easily removable and costs only \$132.

A properly designed combat carry sling is an absolutely essential piece of equipment for a tactical rifle that will be used by armed professionals. Blue Force Gear, Inc. (Dept. SGN, P.O. Box 853, Pooler, Ga. 31322; phone: (877) 430-2583; fax: (912) 964-7701; website www.blueforcegear.com) markets an interesting line of slings for my friend, Larry Vickers.

The Vickers Combat Application Sling is a two-point design that permits a variety of carry and shooting positions. An ambidextrous design, it's sized for use over body armor. Fabricated from the highest quality materials and stitching, its quick-adjustment capability enables the operator to swiftly adjust the sling's length without excess webbing hanging loose.

Various methods of attachment are available, and the sling is available in black, coyote brown, olive or foliage green (U.S. Army ACU pattern). It costs \$54.95. Better yet, however, is the new padded version of the Vickers Sling, which features a 2x22-inch closed-cell foam pad and we attached one of these excellent slings to the ASA Side Charger. The Vickers Padded Sling costs \$59.95 and I recommend it highly as it's without doubt the most comfortable combat carry sling I have ever slung around my shoulders. A Cobra version of this sling has a Cobra quick-release buckle and all metal hardware. The Cobra buckle is usually fielded in life-support scenarios and will not open under load. This version of the Vickers Combat Application Sling sells for \$89.95.

If you attach a combat-carry-type sling to a tactical rifle using the sling mounting points directly under the rifle, the rifle will invariably roll outward, inhibiting the operator's ability to deploy the weapon quickly from the slung position. Further, slings of this type are essential when the operator needs to transition to his handgun and the sling must retain the rifle as close as possible to the torso.

As a consequence, we removed the front and rear sling swivels on the ASA Side Charger and replaced them with a GG&G Sling Thing Rear (GGG-1010—\$36.95) and Sling Thing for Dovetails (GGG-1203—\$35) in order to mount the Vickers Padded Sling on the left side. The Sling Thing Rear was attached to the collapsible stock's sling slot and the Sling Thing for Dovetails was easily attached to the front end of the 9 o'clock MIL-STD-1913 rail interface. This completely eliminated the so-called "rifle roll" encountered when tactical slings are attached to the underside of the rifle.

CounterSniper Combat Scopes

We used two different optical sights during our test and evaluation of the ASA Side Charger AR-15 M4-type rifle. Both were manufactured by CounterSniper Military Optical Gunsights Corp. in Rochester, N.Y. (website: www.countersniperoptics.com). These scopes are distributed exclusively by Dark Ops Holdings (Dept. SGN, 2231 West Sunset, Springfield, Mo. 65807; phone: (417) 893-9444; fax: (417) 893-8636; website: www.darkopsholdings.com). Their line of scopes are in service with elite military and law enforcement units throughout the world.

CounterSniper Military Optical Gunsights have either titanium or T6061 aircraft-grade aluminum alloy bodies. Both scopes sent to Shotgun News had aluminum bodies with a diameter of 30mm. A 30mm tube with its thicker walls has considerably more cross-sectional area inside the tube than most 1-inch tubes with their thinner walls.

Once this additional area is available, the erector tube inside the scope body (which carries all lenses except the ocular and objective lenses) and its lenses can be increased in size to transmit more light and thus yield greater resolution and a brighter image. Furthermore, a heavy 30mm housing is more shock-resistant than any 1-inch tube.

The lenses are made of utterly flawless transmissivity, composed from aspheric lens elements to eliminate chromatic aberrations and with the apochromatic lens elements ground from extra low dispersion glass. A 24-step vacuum multicoating raises the light transmission coefficients to beyond anything achieved to date. Looking through these scopes are the brightest, crispest and sharpest images I have ever seen.

Both scopes provide the operator with his choice of either black, red or green reticles. The lens caps supplied with the scopes are a see-through, hinged-type. I prefer opaque lens caps as they force the operator to pop them open. See-through lens covers optically degrade the scope's image to the same level of poor quality, clear plastic used in their fabrication.

For tactical applications we selected the CounterSniper 1-4x24mm Crusader scope. Its 1-4X magnification range provides a field of view at 100 yards from 95.22 to 24.11 feet, which is ideal for tracking fast-moving targets on the flanks. The eye relief is 4.97 inches to 3.55 inches. The reticle pattern, mounted

in the front focal plane, consists of pointed bars at the left, right, top and bottom positions with a thinner crosshair in the center.

The center reticle color is changed from black, green or red and adjusted for intensity by a knob on the left side of the turret control center. The windage and elevation can be adjusted through 240 moa by knobs on the right and top, respectively with $\frac{1}{2}$ -moa click values. The overall length with the lens caps provided is about 10.5 inches. The ocular tube diameter is 44mm and the objective lens diameter is 24mm. This scope sells for \$1,099.

We interfaced this scope to the ASA Side Charger AR-15 using GG&G 30mm aluminum Sniper Grade scope rings (GGG-1067—\$99.50) and their Accucam Quick Detach MIL-STD-1913 standard rail mounting base (GGG-1197—\$155). I think the Accucam locking lever is one of the best, principally because it's the longest I have encountered. From the principle of leverage derived from Newton's laws of motion and modern statics, it can be easily demonstrated that levers can be used to exert a large force over a small distance at one end of the fulcrum by exerting only a small force over a greater distance at the other end of the fulcrum.

The rail, which adds only 1/2" to the height of the mounting platform, is 5 inches in length and to this we attached the rings, which weigh only 4.8 ounces and are machined from a single piece of exceptionally strong 7075 T6 billet aluminum alloy (the same alloy used to fabricate the ASA Side Charger's upper and lower receivers).

Testing a rifle and ammunition for accuracy at 100 meters is best accomplished by use of an optical sight with relatively high magnification. For that reason, we attached a CounterSniper 4-16x50mm scope to the ASA Side Charger. Although this massive scope, with 50mm objective and 44mm ocular diameters, has an overall length of more than 16 inches, it remained easy to operate the rifle because of its side charging system.

The field of view at 100 yards is 2.21 feet at 4X and 6.31 feet at 16X. With a total of 11 optical lenses made of high-fluorite leaded 99.997% pure optical glass, this is an impressive piece of optics. It has a front focal plane, engraved glass MilDot reticle pattern. The windage and elevation can be adjusted through 70



Four knobs are even better: the CounterSniper 4-16x50mm scope sports controls for windage, elevation, distance focusing and tricolor reticle illumination adjustment.



The CounterSniper 4-16x50mm scope has a 44mm ocular diameter with an overall length of more than 16 inches and a front focal plane, engraved glass MilDot reticle.

The CounterSniper 4-16x50mm is exactly the sort of scope for which the ASA Side Charger is intended. You don't need to hunt for the handle under the rear of the scope.



The CounterSniper Crusader provides an ideal field of view for tracking targets on the flanks. The center reticle color can be changed from black, green or red.

moa by knobs on the right and top, respectively with .125 moa click values. The optical specifications match those of the CounterSniper 1-4x24mm Crusader scope. This scope costs \$1,849.

We attached this optical sight to the integral MIL-STD-1913 rail interface on the ASA Side Charger's upper receiver with a GG&G AC-30 Accucam QD Mounting Base (GG-1238—\$210). The base is tall enough to clear the 50mm objective lens. It also features Ω moa repeatability upon reinstallation. It has the same excellent Accucam locking lever as all of GG&G's quick-detach scope bases.



The color (black, red or green) and intensity of the center reticle on the 1-4x24mm CounterSniper tactical scope is easily adjusted by the large knob on the left.

Accuracy Results

Gun writers all too often promote the false idea that rifle/scope/ammunition combinations that are capable of .5 moa are relatively common. This just isn't so, and so-called "rack grade" rifles such as the ASA Side Charger and most all others in the caliber 5.56x45mm NATO M16/AR-15 series are generating exceptionally accurate results when they shoot 2.0 moa off the bench at 100 meters using a scope of fairly high magnification.

Keeping that in mind, the results we obtained using the ASA Side Charger, which has only a 16.25-inch barrel; the Counter Sniper 4-16x50mm scope and eight different caliber 5.56x45mm loads, were truly phenomenal. The ASA barrel has a 1:9 twist. This is an excellent choice if you desire to shoot a wide range of projectile weights ranging from 55 up to 77 grains, which is exactly what we did.

Hornady Mfg. Co. (Dept. SGN, P.O. Box 1848, Grand Island, Nebr. 68802-1848; phone: (800) 338-3220; website: www.hornady.com) provided three types of their highly regarded TAP (Tactical Application Police) ammunition with 55-grain, 60-grain and 75-grain bullets. Overall, these loads were the most accurate and consistent, producing group sizes of 1.0, 1.1, and 1.0 moa respectively. In addition, the point of aim and point of impact were almost identical with all three loads. I prefer the 75-grain TAP load as it works well with short barrels and demonstrates deeper penetration in soft tissue than the 55- and 60-grain TAP bullets.

Black Hills Ammunition (Dept. SGN, P.O. Box 3090, Rapid City, S. Dak. 57709-3090; phone: (800) 568-6625; fax: (605)348-9827; website: www.black-hills.com) was used to test the 1:9 twist's ability to handle the heaviest 5.56x45mm bullets. Black Hills 68-grain Match Hollow Point shot 6 inches to the left of our original zero point and spread out to 2.8 moa—still quite acceptable for the battlefield. A Black Hills prototype load, developed for the USMC, and using a 73-grain Jacketed Hollow Point projectile produced the best accuracy of the eight loads we tested with an amazing 0.6 moa. Unfortunately, this ammunition is not in series production. Black Hills 77-grain Boattail Hollow Point (BTHP) Special Match, currently in use in Iraq and Afghanistan by special operations personnel, shot to an excellent 1.6 moa.

We fired two different loads from Wolf Performance Ammunition (Dept. SGN, P.O. Box 757, Placentia, Calif. 92871; phone: 888-757-WOLF; fax: 714-632-9232; e-mail: info@wolfammo.com; website: www.wolfammo.com) that produced wildly divergent results. Wolf's 62-grain Full Metal Jacket (FMJ) ball ammunition is their version of the M855 cartridge currently used by the U.S. Armed Forces.

Made in Russia at the Tula facility, it has the usual lacquered steel case, although in this instance it is Boxer-primed. This ammunition never produced any group dispersion smaller than 7 moa. This is unacceptable and only confirms the dreadful accuracy reputation Russian small arms ammunition has earned for itself over a period of many years.

Can the Russians produce accurate ammunition? You bet they can. Russian 7N14 caliber 7.62x54R sniper ball ammunition is match-grade and made at a factory located in Novosibirsk. Their headstamp code during the Cold War was "188". The new headstamp is "LVE", which stands for the name of the factory, "Low Voltage Equipment Plant."

Under their premium "GOLD" label, Wolf markets a caliber 5.56x45mm NATO cartridge in a brass, Boxer-primed case that features a 75-grain BTHP bullet. Manufactured in Serbia, probably at the Prvi Partizan arsenal in Titovo Uzice, this round consistently gave us 1.8 moa accuracy.

The bottom line is that using a scope of sufficient magnification and ammunition of high quality, the ASA Side Charger AR-15 with only a 16.25-inch barrel is capable of exceptional accuracy, this in spite of a rather creepy 5.0-pound trigger pull weight. Further, it's obvious that barrels with a 1:9 twist rate can successfully handle the full range of caliber 5.56x45mm bullet weights.

There were a lot of bits and pieces that had to be toted around during our test and evaluation of the ASA Side Charger and all of the many ancillary products attached to it and used in conjunction with it. This provided me with the opportunity to make use of a unique ambidextrous single-shoulder-sling pack manufactured by Maxpedition Hard-Use Gear (Dept. SGN, P.O. Box 5008, Palos Verdes, Calif. 90274; phone (877) 629-5556—toll free; fax: (310) 515-5950; E-mail: info@maxpedition.com; website: www.maxpedition.com) called the Lunada Gearslinger.

Maxpedition was established in 1988 as a small workshop fabricating hard-use milspec nylon gear. Today, they have 190 employees, in-house R&D and production facilities and offices in North America and Europe. I have used their gear extensively in both El Salvador and here in the Southwest desert and have no complaints. Made of 1000-Denier, water and abrasion resistant, lightweight ballistic nylon fabric, their designs are among the most innovative to found in the arena of nylon gear.

Maxpedition's Gearslinger packs have a single padded, diagonal shoulder strap. The Lunada model has a main compartment which measures 12x8x3 inches and that is slightly tapered towards the top and has a front and back divider. There is also a small front upper pocket and a larger pocket below it. A rear pocket designed for stowing a handgun has a button closure and substantial foam padding. In addition to the main shoulder strap, there is an additional cross strap, a carrying handle at the top of the pack and modular webbing on the front and both sides. Available colors include black, OD green, khaki and digital foliage (ACU) camouflage. The versatile Lunada Gearslinger costs \$99.99.

Method of Operation

The M16/AR-15 rifle series operates as follows. After firing a round, the projectile passes the gas port permitting gas to flow



Kokalis attached SureFire's X300 LED Handgun Weapon Light, which provides a one-hand-operable ambidextrous switch plus an entirely new beam pattern to the ASA rifle.



The SureFire HL1-C-TN Helmet Light, attached here to a MICH Helmet, has seen use in the Middle East and has three white LEDs, two red LEDs and one blinking infrared LED.

back through a stainless steel tube and a so-called bolt carrier key into the hollow interior of the bolt carrier. As the carrier moves rearward, a cam slot cut into the carrier turns the bolt's cam pin, which causes the bolt to rotate clockwise, freeing the eight locking lugs from their abutments in the barrel extension.



Maxpedition's Gearslinger packs have a single padded, diagonal shoulder strap. The Lunada model has a large main compartment and a rear pocket designed for handguns.

The carrier's momentum draws the bolt rearward at a slightly reduced velocity.

There is no primary extraction and the extractor withdraws the empty cartridge case from the chamber. The spring-loaded, bump-type ejector emerges from the left side of the breech face and rotates the empty case, after it has cleared the chamber, around the extractor claw and out the ejection port of the upper receiver body. The bolt carrier assembly continues rearward, compressing the recoil spring and rotating the hammer back to the cocked position.

The buffer and recoil spring return the carrier and a fresh round is stripped from the magazine. All forward bolt motion, except for an almost imperceptible amount of "bolt bounce" stops after the round has been chambered. The carrier continues forward to contact the rear face of the barrel extension and its cam slot turns the cam pin, which rotates the bolt and its lugs anticlockwise into the locked position.

Direct gas action without a piston was used on the Swedish Ljungman AG42 rifle and subsequently on the French M49 and M49/56 rifles. It worked then and it continues to work now after more than 10 million M16s. ©

Caliber 5.56x45mm NATO cartridge accuracy performance—ASA Side Charger AR-15 rifle with 16.25-inch barrel, six-groove rifling, right-hand twist of one turn in 9 inches; Counter Sniper 4-1.6x50mm optical sight:

Ammunition	Muzzle velocity (fps)	Point of Impact	MOA (100 meters)
Hornady 55-grain TAP	2910	POA	1.0
Hornady 60-grain TAP	2818	.5" low	.1
Wolf 62-grain FMJ	3015	N/A	7.0
Black Hills 68-grain Match HP	2850	6 inches left of POA	2.8
Black Hills 73-grain USMC HP—prototype	2700	POA	0.6
Wolf GOLD 75-grain BTHP	2750	1-inch low	1.8
Hornady 75-grain TAP BTHP	2616	POA	1.0
Black Hills 77-grain BTHP Special Match	2750	POA	1.6

ASA Side Charger specifications

Caliber: 5.56x45mm NATO.

Method of operation: Direct gas, no piston; eight-lug rotary bolt; fires from the closed-bolt position; bolt retraction on the left side; semiautomatic-only.

Feed: 20- and 30-round staggered-column, two-position-feed, detachable box-type magazines.

Weight, without magazine: 5 pounds, 15 ounces (2.7 kg).

Length, overall: 35.75 inches (908 mm) with stock fully extended; 32.5 inches (825.5 mm) with the stock fully collapsed.

Barrel length: 16.25 inches (412.75 mm).

Barrel: Six grooves with a 1:9 right-hand twist.

Finish: Black hard-coat anodized upper and lower receivers; hard-chrome bolt carrier.

Manufacturer's suggested retail price: \$1,229, including one 30-round magazine and a plastic hard case, but without sights or other accessories described, complete with a lifetime warranty in the areas of both function and accuracy.

Manufacturer: American Spirit Arms, Dept. SGN, 15651 North 83rd Way, Suite #2, Scottsdale, Arizona 85260; phone: (480) 367-9540; E-mail: rifles@americanspiritarms.net; website: www.americanspiritarms.net.

Optical Sights: Manufactured by CounterSniper Military Optical Gunsights Corp. in Rochester, New York (website: www.countersniperoptics.com); distributed exclusively by Dark Ops Holdings, Dept. SGN, 2231 West Sunset, Springfield, Mo. 65807; phone: (417) 893-9444; fax: (417) 893-8636; website: www.darkopsholdings.com.

Emergency iron sights and other tactical accessories: GG&G, Dept. SGN, 3602 East Stravenue, Tucson, Ariz. 85713, phone: (800) 380-2540; fax: (520) 748-7583; E-mail: gggaz@aol.com; website: www.gggaz.com.

Magazines: Magpul Industries Corporation, Dept. SGN, P.O. Box 17697, Boulder, Colo. 80308-0697; phone, toll free: (877) 462-4785; fax: 303-828-3469; website: www.magpul.com.

Combat Carry Sling: Blue Force Gear, Inc., Dept. SGN, P.O. Box 853, Pooler, Georgia 31322; phone: (877) 430-2583; fax: 912-964-7701; website www.blueforcegear.com.

Weapon and helmet lights: SureFire, Dept. SGN, 18300 Mount Baldy Circle, Fountain Valley, CA 92708-6122; phone: (800) 828-8809; fax: (714) 545-9537; website: www.surefire.com.

Tactical forearm: Yankee Hill Machine Company, Inc., Dept. SGN, 20 Ladd Avenue, Florence, MA 01062; phone: toll free (877) 892-6533; fax: (413) 586-1326; E-mail: info@yhm.net; website: www.yankeehillmachine.com.

Ammunition

Hornady Mfg. Co., Dept. SGN, P.O. Box 1848, Grand Island, NE 68802-1848; phone: (800) 338-3220; website: www.hornady.com.

Black Hills Ammunition, Dept. SGN, P.O. Box 3090, Rapid City, SD 57709-3090; phone: (800) 568-6625; fax: (605) 348-9827; website: www.black-hills.com.

Wolf Performance Ammunition, Dept. SGN, P.O. Box 757, Placentia, CA 92871; phone: (888) 757-WOLF; fax: (714) 632-9232; e-mail: info@wolfammo.com; website: www.wolfammo.com.

Tactical gear: Maxpedition Hard-Use Gear, Dept. SGN, P.O. Box 5008, Palos Verdes, CA 90274; phone (877) 629-5556—toll free; fax: (310) 515-5950; E-mail: info@maxpedition.com; website: www.maxpedition.com.

T&E summary: Unique left-side bolt retracting system permits use of almost any optical sight. Reliable with exceptional accuracy. Highly recommended.