

KGR. 228

MODULAR CARBINE

Boasting the best of AR-15 and AK47—
it's the ULTIMATE TACTICAL RIFLE!

By Charlie Cutshaw

Photos by Chris Rohling

obinson Armament has a well-deserved reputation as a manufacturer of high-quality firearms, most notably the company's Stoner 63 derived M96 Expeditionary Rifle, a modular firearms system that can be adapted to any one of several configurations, including rifle, carbine or upside down in "Bren Gun" configuration. Because of its quick-change barrel, the M96 could also be adapted to other calibers, although as far as we know it never was. If there was one downside to the M96, it was the rifle's cost, driven by the fact that the M96 was difficult and expensive to manufacture.

Robinson set out to design a new rifle that would not replace

the M96, but supplement it with the same high quality at a lower cost. When the Special

Robinson Arms XCR Modular carbine with tools of the trade that highlight its versatility for law enforcement.

Operations Command (SOCOM) put out its requirement for a Special Operations Combat Assault Rifle (SCAR), Robinson Armament submitted its new rifle and although the final contract was awarded to another manufacturer, Robinson Armament de-

RA's XCR .223 CARBINE

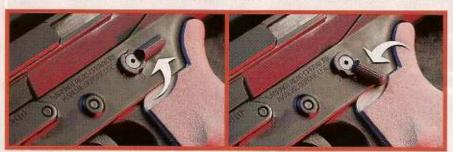
cided to market its candidate for law enforcement, military and civilian use. The result was the Xchangable Caliber Rifle. a modular rifle with multi-caliber capability. One cost cutting measure is the upper receiver, which is an aluminum extrusion. Since the upper receiver is an unstressed component, an extrusion is ideal for its purpose. The XCR is capable of accepting any cartridge that will fit within the 5.56mm NATO envelope, such as the 6.5 Grendel, 6.8mm SPC and others that are compatible with the AR-15/M16 magazine well configuration. The XCR breaks new ground in many ways and owes little to previous designs, although some features are similar to earlier rifles. There is little in the area of small arms design that hasn't been tried at



one time or another, so a completely different rifle or handgun is a rarity. In the XCR's case, the gas system is similar to the AK, but slightly different. The gas system can be adjusted for compatibility with various types of ammunition and since it's a piston design, gases are vented outside, rather than back into the receiver. The gas piston and operating rod are unitary as with the AK, but the bolt carrier is separate.

The XCR has been engineered for optimal reliability and durability. Virtually nothing has been carried over from the AR-15 except the magazine. Reliability is a function of a rifle's capability to operate within

XCR selector moves through only 60 degrees, half the throw of an AR-type rifle, enabling faster and easier movement between settings.







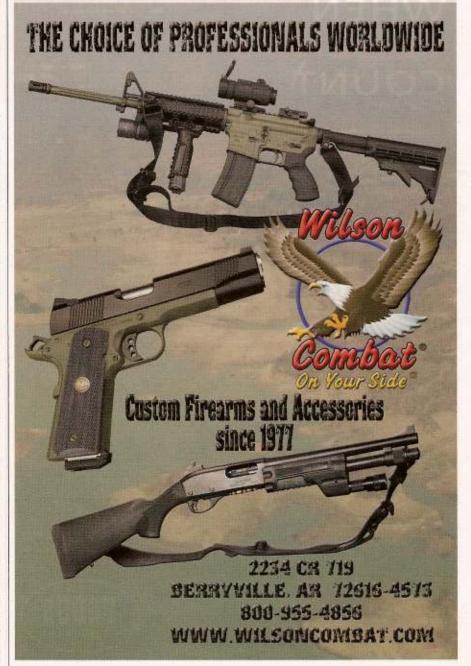
(Left) XCR bolt release is ambidextrous and is within easy reach of shooter's trigger finger. (Below) XCR gas system is adjustable to accommodate all types of ammunition and suppressors.



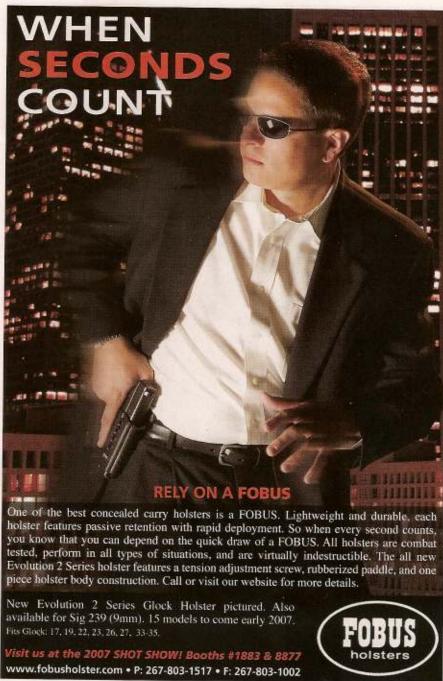
the four steps of the small arms operating cycle, i.e. feeding, firing, extracting and ejecting. The XCR has enhanced feeding by positioning the cartridges higher in the magazine relative to the barrel extension feed ramp so cartridges are almost in a straight line with the chamber. Lockup and firing are optimized by the XCR's large three lug locking system that spreads recoil forces equally and are much stronger than required for any 5.56mm cartridge or other potential cartridge that might be fired from the XCR. Extracting is enhanced by the XCR's large Sako type extractor that's larger with a stronger spring than the AR-15. Ejecting is via an AK-type fixed ejector, which is positioned just ahead of the magazine rear and slightly above it for positive and reliable ejection. The XCR gas system is adjustable for compatibility with any cartridge that might be fired from the rifle, not only other calibers, but suppressors as well. The adjustment for standard ammo is simple and easy to accomplish. The optimum balance of recoil and reliability is reached when spent casings are thrown 8 to 15 feet from the rifle at about two o'clock. Anymore than that, results in excess recoil, and a shorter distance results in possible malfunctions. A polymer buffer at the rear of the ejection port keeps brass out of left-handed shooter's faces.

The XCR's ergonomics are generally carried over from the excellent M96. The charging handle is on the left, where righthanded shooters can manipulate it without dismounting the rifle from the shooting position. Of course, left-handed shooters will find this less ergonomic than their righthanded colleagues, but we must add that









RA's XCR .223 CARBINE



(Bottom) XCR stock folds flat making the carbine ideal for cruiser carry. (Top) Padded top provides comfortable cheek rest. Detent positively locks stock in position when extended.

very few rifles are fully ambidextrous. On the other hand, the bolt stop is operable by either right or left-handed shooters without removing the hand from the pistol grip. Like the M96, it consists of two small tabs that extend to the rear of the magazine well. The index finger reaches either easily by simply taking it from the triggerguard and pressing it down. The safety/selector switch is designed for right-handed shooters, but could easily be reversed. One major improvement over earlier designs is that



PERFORMANCE

ROBINSON ARMAMENT XCR MODULAR CARBINE .223

Load	VELOCITY					
	High	Low	Average	ES	SD	Accuracy
Black Hills 77 HBPT	2755	2707	2732	48	13	1.20
Hornady 60 TAP	2922	2856	2891	66	25	1.00
Remington 69 HPBT	2920	2858	2890	62	20	1.25

Bullet weight measured in grains, velocity, ES (extreme spread), and SD (standard deviation) in feet per second (fps) by Oehler 35 chronograph, accuracy in inches for two 5-shot groups from 50 yards. Temperature: 85 degrees.

the switch requires only a 60-degree throw to move between safe and fire, unlike the AR-15 that must be moved 90 degrees. The XCR requires much less effort to manipulate. The grip is identical to the AR-15 so that any accessory grip can be fitted.

The stock is another departure from earlier designs. Since the XCR's recoil mechanism is not in the stock, the stock can be made narrower so the rifle may be brought from the low ready to shooting position without the shooter having to rotate his head to acquire the sights. Although this may seem to be a relatively minor point, rotating one's head to acquire the sights takes time and in while combat, time is everything. When Alex Robinson first advised us of this feature, we were doubtful, but a quick check of our personal M4 type carbine revealed that he was correct, it really does take a split second longer to acquire the sights with the M4 carbine. For those

who must have the M4 collapsible stock, an adapter is available. The XCR stock folds to the right and locks firmly into either folded or fixed positions. Robinson also added an M4 Stock adapter, which accepts the M4 Collapsing Stock and also folds.

We previously mentioned that the XCR's barrel is a quick-change type, but it is different from the earlier M96. Where the M96 has a button at the forward end of the receiver, the XCR has an Allen headed bolt that positively locks the barrel in place. The design is such that headspace is not an issue and although the XCR barrel change is



Author fires XCR for accuracy, XCR proved accurate and reliable with all types of ammo tested.



SPORTS DEPEND

ity spring metal... offered with sef-adjusting bridge for providing ultimate visual acuity where required. gh or low and away from the face to face eliminate f. tures prescription or non-prescription interchangeable colors and thris for superor target contrast, and I and anti-reflective coating is available.

DON'T SETTLE FOR ANYTHING LESS

RA's XCR .223 CARBINE



DROP THE WEAPON! Florence, AL PD SWAT officer prepares to engage armed suspect.

not as rapid as the M96, it is more positive. The process is simple. The bolt is drawn to the rear and locked in place using the bolt stop. The retaining bolt is removed using a quarter-inch Allen wrench. Once the retaining bolt has been removed, the barrel can be withdrawn to the front of the rifle. The replacement barrel just slides into place and is automatically indexed. The Allen bolt is replaced and tightened to a nominal 200 inch-pounds. If an inch-pound torque wrench isn't available, snugging the bolt firmly in place should be adequate. The threads in the aluminum receiver are protected with a Heli-Coil steel insert that also helps prevent the retaining bolt from loosening. Barrels are available in 12, 14.5, 16 and 18.5 inches. The shortest barrels are sold only to military and law enforcement organizations on select fire rifles. Caliber conversion barrels and bolt heads will soon be available.

The extruded aluminum upper receiver has integral MIL-STD-1913 rails at top, bottom and sides. The top rail is full

length for mounting not only optics, but accessories such as the current military standard AN/PVS-22 night vision optic and high-intensity white lights such as SureFire's M900 Combat Light and laser aimer/pointers like Laser Devices' new DBAL-A², recently adopted by the

XCR disassembled and reduced to its least common denominator.

US military. The optical sight we chose for the XCR was Horus Vision's 1-4x Talon close quarters battle (CQB) to mid-range scope. Horus Vision scopes are widely used by Special Forces and military precision tactical marksmen in Afghanistan and Iraq, where they have proven both rugged and reliable. One Special Forces officer who used the Talon in combat in Afghanistan stated that his M4 carbine had been dropped, mortared and slammed into the ground repeatedly, but the Talon never lost its zero and remained fully functional throughout his entire tour. The Talon is an extremely effective optic for close to midrange engagements from CQB distances to approximately 400 meters. The Talon reticle consists of a one minute of angle (1 MOA) central dot surrounded by an approximately 60 MOA "ghost ring" with a modified Horus Vision reticle within it. The Talon reticle is in the first focal plane like all Horus Vision scopes, so the milliradian based reticle can be used for ranging at any magnification. (Please turn to page 84)



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Continued from page 24

The Talon's eye relief is such that the shooter can quickly sight with both eyes open and with alignment onto the target virtually instantaneous. At CQB distances, the Talon is used at 1x and targeting is within the ghost ring. The central dot is almost invisible at 1x. At ranges out to 300 meters, magnification is increased to either 3 or 4x and the ghost ring instantly draws the shooter's eye to the central aiming dot. The Talon features numbered "lead markers" on the horizontal crosshair that indicate a fast walk, running man, sprinting man, and the 20 MPH cross country speed of a tracked vehicle. The reticle is illuminated for low light use and the Talon is fully compatible with all night vision devices, such as the AN/PVS-22 Universal Night Sight.

The AN/PVS-22 is the latest in military Image Intensification (I2) night vision technology and has the distinct advantage over all other such devices because it mounts ahead of the day optic without adapters, eliminating the need for illuminated reticles and ocular adapters that cause eye-relief issues. The AN/PVS-22 not only alleviates eye-relief issues, but eliminates the need



for illuminated reticles. The clarity of the AN/PVS-22's image has to be seen to fully appreciate what an improvement the device is over earlier night vision optics. We have used night vision optics of all generations, beginning with Gen I during our days in Vietnam up to the AN/PVS-14 and AN/ PVS-17. The AN/PVS-22 is not only smaller and lighter than the AN/PVS-17, but delivers a crystal clear image and works in conjunction with the rifle's day optic. The

AN/PVS-22 is only slightly larger than the AN/PVS-14, can also be used as a handheld night vision device and is a marked improvement over the earlier device both in terms of image quality and light gathering capability. The AN/PVS-22 retains boresight throughout its focus range, has no beam splitters to go out of alignment and has no parallax issues, even if mounted slightly off axis in relation to the day optic. It's a small wonder that the manufacturer



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has difficulty keeping up with demand. The AN/PVS-22 is not available for civilian sale, but can be purchased by law enforcement and military agencies. With a high intensity light such as SureFire's M900 Combat Light mounted on the weapon as shown with an infrared filter in place, the operator can sweep an area with light that is invisible to the naked eye, but visible through the AN/PVS-22.

We also installed one of Laser Devices latest Dual Beam Aiming Laser-Advanced² (DBAL-A2), designated by the Army "Multi-Functioning Aiming Laser System" (MFAL) (NSN: 5855-01-535-6166). Whether it is designated DBAL-A2 or MFAL, this device is the military's most recent laser aiming and illuminating device. The DBAL-A2 provides an IR pointer, IR Illuminator and red visible laser pointer. A rotary switch is used to select between the visible laser and the various IR modes, including IR pointer only. IR illuminator only or both. A low power engagement mode reduces the IR output for indoor use and CQB. Standard configuration is low range. A small removable screw blocks the high intensity modes, as these are not eye-safe. Optical glass generators project different illumination patterns that include circle, square, triangle, plus sign or "T" for target designation. When used with the AN/PVS-22, the DBAL-A2 enables the shooter to illuminate his target with a laser that is invisible to the naked eye, a major advantage in night operations. Windage and elevation are adjustable in 0.4 milliradian increments. The DBAL-A2 is provided with an ARMS throw lever mount. The DBAL-A2 is constructed

For more information:

Robinson Armament

PO Box 16776, Dept GW/LE Salt Lake City, UT 84116 801-355-0401 www.robarm.com

Horas Vision

659 Huntington Ave. Dept GW/LE San Bruno, CA 94066; 650-583-5471 www.horusvision.com

Laser Devices

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of 6061-T6 aircraft aluminum, 3.4 inches in length, 2.9 inches wide and weighs only 8 ounces. A single 3-volt, 123A lithium battery powers the unit. Like the AN/PVS-22, the DBAL-A2 is available only to military and law enforcement agencies.

Finally, we added one of Sound Technologies' recently introduced "Imp" suppressors. The Imp was developed in response to special military requests for a small, short, tough and relatively lightweight suppressor that reduces sound, recoil and flash, and that's intended to be carried on the rifle full time. According to the manufacturer, sound reduction is approximately 31-decibels (dB) with standard military ammunition. The Imp is designed in such a way that accuracy isn't affected. There is also a special gas valve with a setting for use with suppressors, which almost completely eliminates recoil while allowing perfect functioning.

SHOOTING IMPRESSIONS

We test fired our XCR at 50 yards, about the maximum distance at which law enforcement personnel will engage targets. The XCR was accurate with all brands of ammo tested, but the best group came from Hornady 60-grain TAP round at almost exactly an inch. Black Hills and Remington groups were only slightly larger. The XCR trigger was on the heavy side at 6.5 pounds with a take-up that can best be described as semi-two stage with a very short take-up and crisp release. Because of the gas system, the XCR's receiver and bolt were remarkably clean and free of carbon and fouling. Functioning was 100% without a single stoppage. Brass fell in about a 3 foot circular area some 10 yards from the firing point at two o'clock, in other words, just forward and to the right of the rifle.

FINAL NOTES

For law enforcement work, Robinson's XCR is about as good as it gets with features that are to be found on few other rifles - quick change barrel, modularity, folding stock, ergonomic design and reliability. The fact that the XCR's receiver doesn't fill with carbon fouling and other detritus is a major advantage over AR-15 type direct gas operating systems. Whether the XCR will replace the ubiquitous AR is open to question, but the fact is that the XCR represents a definite step forward in rifle design and deserves a close look by anyone considering a lightweight carbine for military, law enforcement or personal defense use. The excellence of the XCR design is demonstrated by the fact that Robinson recently received its first overseas military order after successfully competing against several AR-type designs.

