ROY F. CHANDLER

United States Marine Corps snipers in Iraq are now using the finest sniper rifle in the world – bar none. *Iron Brigade Armory* creates the rifles, and *Precision Shooting* is the premier journal that concerns itself with accurate weapons and their use – a good match for this "first to be printed" report on the XM3 rifle its capabilities, its procurement, and its use. A use long overdue.

For some years, *IBA* had been unable to interest the Marine Crops or the US Army in the rifle that *Soldier of Fortune* magazine's Peter Kokalis describes as "the best." An organization titled DARPA stepped up and provided funding for the production of sixty-two of the superior sniper rifles that are now in USMC hands.

Photo 1. Shows an XM3 rifle from left and right sides.

Most will not be familiar with DARPA (Defense Advance Research Project Agency), but in laymen's terms, DARPA is a department answerable directly to the Secretary of Defense that was organized during the Eisenhower Administration to get needed things (whether rifles or small ships) to the troops quickly without suffering the arthritic obstructionism of often glacially-ponderous development and supply channels that are notorious for providing appropriate weaponry almost as the fighting ends.

DARPA chooses projects their experts deem urgent and worthy and provides expertise at levels of competence unavailable to most military research and development. **DARPA gets things done**, but toes are

sometimes stepped upon and knee jerk self-interest turf-protectionism can surface. The XM3 rifle was one of those projects.

Our descriptions and our captioned photos of the XM3 will detail the rifle, but long time readers of *Precision Shooting* and former sister publications may recall articles explaining how *Iron Brigade* rifles were built to such high standards – standards that make them tougher than "British Oak," and more durable than any other rifles we have encountered. Those who do not recall can review our bedding methods in *The Accurate Rifle*, January 2004, pages 7-14. That article explains a lot. The December 1999 and the August 2000 editions of *Tactical Shooter* offer more useful descriptions and opinions.

It will also be revealing to discover how superbly the rifles are doing in actual combat. Snipers using these rifles routinely e-mail *Iron Brigade* to report their activities. We cherish their commentaries and repeat a few of them here.

Photo 2. Shows an XM3 rifle from left and right sides.

The first XM3 rifle used in combat has recorded over one hundred confirmed by its first two snipers. That was months ago, the gun is still going strong, but we hesitate to include repetitive kill reports lest the detailing be resented or inflation of body counts be suspected. We will include one more, however. Gun number two accounted for ten confirmed with its first seventeen shots.

Those statistics are impressive, but the best is yet to come – and here it is. All of those shots were at night at ranges up to eight hundred yards – hits that would be highly improbable with any other rifle. There was no aimed return fire.

This is the story of one of those firefights. Three men armed with Kalashnikovs were detected setting a roadside bomb in the dark of night at about four hundred yards. The sniper fired and dropped number one. Numbers two and three saw nothing except their companion's collapse and could have heard nothing more than the directionless snap of a bullet's supersonic passage or the flat smack of the bullet's strike. They chose to flee. Unfortunately for them, they ran directly toward the sniper, who shot each one time.

Every XM3 is capable of shooting sub-minute of angle (three shot groups) at 1000 yard. These days, that may not seem exceptional, *but the XM3 has only an **18 ½-inch long barrel** and wears a Sure Fire© sound suppressor.*

"Wait a minute," you say. "Only an 18 ½-inch barrel – and it shoots sub-minute at 1000 yards?" That is correct. Now how could that be?

We have been at this game for many years, decades, in fact, so we never have to start from scratch, but it was not a matter of getting one rifle to shoot to that sub-minute standard. Every rifle we produced had to perform that well (repeatability), and they had to retain that accuracy through every test we could contrive. Getting the XM3 to shoot as it does required intense testing, modifying, and re-testing by many different shooters for many months.

We did a lot of our experimentation during our marksmanship and sniper-training classes at Blackwater Training Center where we could, at will, shoot out to 1200 yards. Those conditions allowed many shooters behind the guns, and that accumulated experience gave depth to our development and testing.

We began attaining 1000-yard accuracy from an 18 ½-inch long barrel by going to a six-groove barrel with a 1 in 10 twist. We use Hart barrels, and Hart makes no bad barrels. Start from there, and you might approach 1000-yard capabilities, but you would be unlikely to match an XM3 without the rest of our accuracy story.

The US Army has attempted to modify its M24 sniper rifles by similarly shortening their barrels, and they liked their result, but they only tested under 20-inch barrels to three hundred yards. The M24 has a 5-groove barrel, and its twist is 11.25. Beyond 600 yards, the accuracy of their shortened barrel is gone. We call that failure.

The M40 series Marine Corps rifles are in the same boat. The M40A3 boat anchors have 1 in 12 twist, and if seriously shortened, they cannot be accurate beyond six hundred yards. To retain accuracy in a barrel less than 20 inches long in .308 Winchester, you absolutely must go to a 1 in 10 twist barrel. The services should purchase new barrels in that twist.

If a suppressor is crewed onto the muzzle of a conventional 24-inch barrel, a suppressed rifle is an ugly thing to behold, and it is awkward to maneuver in tight places – actually in any places. A suppressed rifle must have a short barrel.

Photo 3. Shows an XM3 with the UNS positioned close to the scope's objective lens. The UNS's versatility in mounting is astonishing. Either position or anywhere between works well.

A suppressor is not exactly a silencer, but using the Sure Fire model we retained accuracy (most XM3 rifles shoot to the same point with or without the suppressor), and the XM3 sound signature is so subdued and diffused that its source, if heard, is difficult to locate. Not also that a suppressor is an effective flash hider – a feature important for night firing. Unless you are looking into the muzzle of an XM3, you are unlikely to detect the rifle's position.

In testing, *Iron Brigade* uses Match grade, 175-grain Black Hills ammunition. Using M40A1, M40A3, and M24 sniper rifles as standards to test against, the XM3 shot straighter under every condition. When being tested for safety and accuracy beyond 1000 yards, by Crane Naval Weapons Station, the XM3 out-shot all of the .308 (7.62 NATO) rifles, including those listed above, and at those extreme ranges, the XM3 rifles equaled the accuracy performance of the .300 Winchester Magnums being used as standard test weapons.

At this point we must inject that all of the Marine Corps world does not approve of the XM3, and the US Army has not yet bought any of the new rifles. Unfortunately, both services suffer from the "not invented here" syndrome, and the XM3 was developed, paid for, and adopted by DARPA, which is a power unto itself.

Clearly put, snipers who tested the XM3 loved the gun. They cast

verbal (and sometimes written) aspersions on the Corps' M40A3 and the Army's M24, listing those rifles' weaknesses along with the XM3's advantages. After months in the field, the reports from combat are almost exactly those of the user-testers' comments. Conventional Marine and Army development and supply systems rarely enjoy those meaty, often graphic, firsthand reports. Of course, those authorities seldom receive them. Candid comments are too often not appreciated by military R&D authorities, so neither requested nor given.

Beyond inherent superior accuracy and toughness, the XM3 is five pounds lighter than its competitors. Instead of 18 to 19 pounds, the weight of the M40A3, the new sniper rifle weighs about 13 pounds.

Our intent was to segue into the rifle's night vision, but we must include a suddenly remembered incident that occurred while displaying and demonstration-firing the XM3 to a skeptical audience at Quantico Marine Base – where the M40 sniper rifles were developed and are produced. A locally assigned overweight Gunnery Sergeant, tobacco spit-cup in hand, sidled close to the rifle, looked with a jaundiced eye, and exclaimed, "There ain't nothing new there." He wandered away and was not seen again.

Gunny big-belly had a point in that none of us involved claim any new inventions or unique discoveries. No new copyrights will be awarded from development of the XM3. The efficiency of the rifle results from selecting or manufacturing the best of everything, fitting everything together as masterfully as it can be done, and creating a package that performs at a much higher level than anything previously offered. The XM3 looks like a rifle should, it feels like a rifle should feel, and it shoots like no other sniper rifle before it.

Complaints and recommendations? We prefer Nightforce NXS scopes and that is what we mounted on the XM3s. At least one of the Marine Crops snipers familiarization-firing the rifle felt that the Crops' Schmidt and Bender scope was better because the reticle was in the first focal plane.

Obviously, the old fixed-power 10X Unertl sight used on USMC rifles for forty years needed replacing, and a mil-dot reticle in a first focal plane scope (like the S & B variable power) had the advantage of the mil-dot remaining accurate at any power setting.

We accept that the sniper learned his trade on the S & B and was not versed in "Normal" American scope use. We cannot agree with the adoption of any first focal plane, variable power scope for a sniper rifle. We believe that acceptance of the S & B was yet another Marine Corps ill-advised decision.

Photo 4. If examined closely it can be seen that the UNS mount base is inletted into the stock. To remove the barreled action, the top half of the mount is unscrewed.

Any warrior who has ever cranked up a first focal plane scope to a high power to discover his hugely enlarged reticle covering most of his target has wondered if that condition was really satisfactory. When it gets dark, and the scope must be used on lowest power, the reticle almost disappears. That too is lousy. A telescopic sight reticle should always look exactly the same regardless of the scope's magnification. That

means a second plane reticle as supplied in most American scopes – including the Nightforce.

But what about that use of the mil-dot range-determining feature at any power? The current answer is that if range needs to be determined, either the sniper, or preferably his spotter, whips out his range finder and reads the distance. These days the mil-dot is almost an obsolete feature, and the modern military sniper need not have his field of view cluttered by aligned baseballs or footballs.

One other recommendation/complaint by snipers testing the XM3 has been noted. The XM3 requires each round to be fed singly through the top of the receiver into a bolt action's typical well magazine. A few testers believed that not having a detachable magazine was a deficiency. We answer as follows.

Photo 5. A closer look at the UNS in place.

If desired, the rifle could be readily modified to box magazine feed. Those systems have been perfected and are available, but the XM3 is a sniping rifle. Snipers shoot one or two shots and move. They must NOT engage in infantry-type firefights. If a fight requires volume fire, the battle should be carried out by infantry using fast-firing weapons – especially by Squad Designated Marksmen. That is what SDMs are for. They provide heavy and accurate rifle fire at ordinary infantry ranges and out to 700+ yards. Snipers are not designated marksmen. DMs shoot a lot. Snipers shoot seldom and should rarely miss.

Too often (far too often) snipers are employed as line infantry, and that misuse fosters a concept of snipers shooting many times. That error of utilization happens so often that many snipers never learn their vulnerability. They think, "Boy, if I could just shoot faster, I could..." Then they wish they had semi-automatic sniper rifles (or fast reloading magazines).

Snipers are hungrily sought targets by all enemies. Therefore, snipers shoot at select targets and employ stealth, not volume of fire. They should never be engaged – risked if you will – as if they were infantry.

Finally, we come to night firing capability. Believe us that those with night vision married to their rifles rule the night. Although it is expensive, and our military too often squeezes its rifle-oriented dollars, the genie is out of the bottle. Night vision is now essential, and those without it are easy targets. Until recently, night sights have been huge and ungainly things. Fortunately, we can forget those under-developed systems because a really good unit has arrived.

We believe that the Universal Night Sight (UNS) is the best out there. That is the sight you see in our photos, and that is the night vision device, plus telescopic sight, that is creating the long range, after dark kills our snipers are reporting. A UNS lights the world. On an ordinary night, when an enemy without night vision is fortunate to be able to see more than 75 yards, it is common for our snipers armed with XM3 rifles to clearly see their enemies at 800 or more yards, aim accurately, and kill them – each with a single undetected shot.

Important attributes of the UNS are its easy mounting and non-exacting positioning. We mean that the mounting and remounting of the UNS sight is not a critical measurement that must be within minor fractions of an inch to be able to fully function. That capability is important because the UNS unit would not be mounted during daylight sniping. For a weapon used in combat, that will be battered around during routine use and that must provide almost 100% of its rifle's potential accuracy under blackout conditions, the most casual positioning feature of the night sight has huge value.

Photo 6. A sniper rifle is unlikely to be used off hand, but this very experienced shooter held the night vision equipped XM3 as solidly as if on the range. We often notice the almost boxer-like stance combat shooters assume as compared to the erect, elbow-in, standing position of a target shooter.

We include examples of UNS mountings at two different positions. In photo 3 you can see the night sight almost touching the scope's objective lens, while in other photos, the UNS is nearly two inches ahead of the scope. Either mounting works correctly.

You may also note that the UNS is not aligned with the telescopic sight (it appears to be too high). The variations are acceptable and may be useful if using huge diameter objective lens telescopic sights, which would mount higher and so be more in line with the UNS.

Strangely, even securing the UNS to the rifle has created arguments – not discussions – arguments. Accompanying photographs show that the XM3's stock has been inletted and the mount is epoxied solidly in place. It cannot move. The short Picatinny rail to which the sight attaches becomes an integral stock component.

A less solid method, that is used by the USMC, bridges the UNS mount over the stock and fastens to the outside of the fore-stock. We consider that mount bulky, heavy, and not as secure.

The third, and we hope a soon-to-be-abandoned method of mounting, is to use a Mears mount, which is attached to the receiver via the standard telescopic-sight screw holes. The Mears mount is a Picatinny rail lengthened to support not only the telescopic sight but also the UNS (or other models) by cantilevering a much longer rail above the barrel. That we believe is about the most unstable rig one could devise. That systems invites (guarantees?) bending. There should be a rule, "Never cantilever anything."

Of course, the XM3, as it now exists, will not be the final word. Testing and experimentation continues. Better components will be developed, and as we always do, if something better is created, we adopt it.

Our fondest hope is that the Marine Corps will completely accept the XM3, or develop a similar rifle, produce it, and field it – without delay. There are snipers out there still struggling with the old stuff.

Then there is the US Army. The XM3 has been demonstrated at Fort Bragg and Fort Benning. The army shooters who fired the XM3s loved the

rifles and asked for them. BUT? What can we say? Maybe for the next war?

All XM3s do not go to the military. The law enforcement community has seen the rifle, and a few departments have girded their loins and bought a rifle.

Girded loins? Sort of applicable. XM3s cost serious money. About all that we need add is that the ability to see and successfully shoot on every one after-dark operation will more than justify the cost.

It could be good to close on a light note. A police department bought an XM3 and soon called IBA with a complaint. With the suppressor removed, the rifle's one hundred yard zero moved one half an inch. Although replacement of the suppressor returned the rifle to its original zero, the department was incensed.

IBA worked over that rifle in every way imaginable. But the one half-inch change remained constant. Who knows? There are still mysteries in gun making.

We repeatedly suggested that the sniper should simply know that his zero moved one half of an inch, always to the same point, and adjust for it. Eventually the complaining ceased, but we fear the purchaser remained dissatisfied.

We marvel of an age when a half-minute adjustment creates discontent. Perfection must loom nearby.

XM3 Specifications	
Action:	*IBA modified Remington M700, bolt action*
Barrel:	*18.5" Hart, Stainless 1:10 RH rifling, six grooves*
Stock:	*McMillan, A-6 Adjustable LOP*
Magazine:	*Internal, 5 rd. capacity*
Trigger Guard:	*Badger DM*
Scope:	*Nightforce, NXS 3.5-15x50*
Night Vision:	*AN/PVS-22 UNS*
Scope mount:	*Titanium Picatinny rail, 20MOA*
UNS mount:	*BCM22H 6061 Aluminum IBA Inc.*
Fire control:	*Rem. 700, rebuilt by IBA & Rem. Arms*
Recoil lug:	*Badger/Chandler, titanium*