

AA-12 Fully Automatic Shotgun

Designed for military use, the Auto Assault-12 fully automatic shotgun (AA-12) can spit out 300 rounds per minute, and has a range of projectiles, including the Frag-12, which is more of a miniature missile than a bullet: it has a range of up to 175 meters (575 feet).

First developed in 1972 by Maxwell Atchisson, the Atchisson Assault Shotgun utilizes the “Constant-Recoil” principle, a recoil attenuation/mitigation system that was first invented and patented in the late 1970’s by legendary small arms designer L. James Sullivan developed for the Ultimax 100 LMG (Light Machine Gun).

In 1987, Max Atchisson sold the rights of Atchisson Assault Shotgun to Jerry Baber of Military Police Systems, Inc. The company in turn developed the successor simply known as Auto Assault-12, which was redesigned over a period of 18 years with 188 changes and improvements to the original blueprint.

Manufactured from “corrosion resistant, high impact, heat-treated stainless steels and high-impact plastics,” the Auto Assault-12 (AA-12) can survive below zero temperatures, can be fired upside down or dunked in salt water.

Rounds are fed from an 8-round box magazine, 20-round drum mag, or 32-round drum mag. The AA-12 Automatic Shotgun also features a quick-change barrel system. Barrel lengths are from 13” to 18”.

Atchisson Assault Shotgun

| AA-12/Atchisson Assault Shotgun | |
|---------------------------------|---|
| Type | Combat shotgun |
| Place of origin | United States |
| Production history | |
| Designer | Maxwell Atchisson, further developed by Military Police Systems, Inc. |
| Designed | original 1972 2005 MPS version |
| Manufacturer | GWA ^l |
| Produced | soon to be confirmed ^l |
| Specifications | |
| Weight | 5.2 kg less magazine. 7.3 kg with loaded 32-round drum (original version) |
| Length | 991 mm |

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|------------------------|---|
| Barrel length | 457 mm |
| Cartridge | 12 Gauge |
| Action | Selective fire, forced gas blowback operated |
| Rate of fire | 300 rounds per minute |
| Muzzle velocity | 350 m/s (1,100 ft/s) |
| Effective range | 100 m |
| Feed system | 8 rounds in box magazine, 20 or 32 rounds in drum magazines |
| Sights | Iron sight, 2x zoom optical scope |

The **Auto Assault-12 (AA-12)** (originally designed and known as the **Atchisson Assault Shotgun**) is a shotgun developed in 1972 by Maxwell Atchisson. The current 2005 version has been developed over 18 years since the patent was sold to Military Police Systems, Inc. The original design was the basis of several later weapons, including the USAS-12 combat shotgun. The weapon is selective fire, operating as a semi-automatic, or in fully automatic mode at 300 rounds per minute. It is fed from either an 8-shell box magazine, or a 20 or 32-shell drum magazine.

History

In 1987, Max Atchisson sold the rights of AA-12 to Jerry Baber of Military Police Systems, Inc., Piney Flats, Tennessee. MPS in turn developed the successor simply known as Auto Assault-12, which was redesigned over a period of 18 years with 188 changes and improvements to the original blueprint. MPS also teamed up with Action Manufacturing Company, and Special Cartridge Company to combine the gun with FRAG-12 High-Explosive ammunition into a multifunction weapon system.

The weapon was lightened to 4.76 kg and shortened to 966 mm but retained the same barrel length. The CQB model has a 13-inch barrel, and is half a pound lighter than the regular model. Uncommon in other automatic shotguns, the AA-12 fires from an open bolt, a feature more commonly found in submachine guns and heavy and squad level machine guns. It uses 8-round box, 20-round drum, or 32-round drum magazines, as opposed to the original 5-round box magazine. It is designed to fire three different types of 3" 12 gauge shells: Buckshot, slug, or Frag-12 rounds. Due to the abundant use of stainless steel and the designed clearance for fouling, MPS has claimed that the weapon requires zero cleaning or lubrication. The designer states that cleaning is required after 10,000 rounds.

Cartridges

The AA-12 uses many different types of cartridges such as 00 buck shot, #4 bird shot, 12 gauge lead slugs, or less-than-lethal rubber stun batons. It can also fire flares or special Frag-12 19 mm fin-stabilized HE, HEAP, and sensor fused HEAB "air-burst" fragmentation shells that can detonate in mid-air.

THE AUTO ASSAULT-12: A Killer Shotgun for the War on Terror

Soldier of Fortune Magazine ^ | June, 2005 | Gary Paul Johnston

It is a well-known fact that terrorists killing our troops in Iraq are not afraid of the M4 and its 5.56mm bullet -- but they are terrified of shotguns. Enter the AA-12. No felt recoil, high explosive rounds, gas-forged and heat-treated, this shotgun may give terrorists a run for their money.

Destructive device: The AA-12 and AA-12 CQB could very well have a dramatic effect on the Global War On Terrorism

Throughout the history of firearms, those firing multiple projectiles have always proven enormously effective at close-to-medium ranges out to 50 yards and beyond. This was especially true where cannons fired musket-size shot instead of cannon balls, although the latter was also deadly against enemy forces in formation.



Because of the advantages of the shotgun in close-quarter battles and the great fear it instilled in those who came up against it, this family of weapons continued to evolve through the centuries. Double-barrel shotguns were used with great success during the 19th Century and the slide action (or pump) repeating shotgun began its legendary career with the U.S. Military during the Philippine Insurrection against Moro terrorists. Its reputation was reinstated in the “trench warfare” of World War I, with the 12-gauge Model 97 Winchester.

Continuing its service during World War II, the Model 97 was joined by the more modern pump-action Winchester Model 12 and the semi-automatic Browning, this time in the jungles of the Pacific Theater. During the Vietnam War, a number of pump and semi-automatic shotguns were pressed into service by the U.S. military, many of which remain in inventory.

Law-enforcement agencies throughout America have adopted and issued even more shotguns than the military. Often referred to as “riot” guns, these many models have closely paralleled their military counterparts, usually having barrels 18 inches or so in length. The shotgun is equally popular with America’s prison system, not to mention millions of Americans who want

an utterly capable weapon for home defense.

While relatively few pump-action shotguns are issued by the military today, semi-automatic models still are, such as the Binneli Model 10-14. Like virtually all other shotguns used by the military over the years, this was one based on a civilian shotgun used for hunting and competition shooting. However, it was equipped with a retractable butt stock and a pistolgrip especially for the United States Marine Corps.

The Atchisson Assault-12

More than a quarter of a century ago the late Max Atchisson developed a unique combat shotgun called the Atchisson Assault-12 (AA-12). A selective-fire weapon, the AA-12 fired from an open bolt and used either an 8-round box magazine or a 20-round drum. Atchisson also developed a prototype 40-round drum that was housed in a box to conceal exactly what it looked like.

Using a revolutionary design, the AA-12 had a straight-line synthetic stock with an integral pistol grip consisting of right and left sides that mated together when assembled. Being gas operated, the gun used a long-stroke piston, and locked with a single vertical lug reminiscent of some sporting semiautomatic shotguns. On its exterior, the AA-12 somewhat resembled the AR-15 rifle, which obviously influenced it. The AA-12 fired at the rate of about 300 rounds per minute (RPM).

Max Atchisson demonstrated his AA-12 for several years, but the project didn't go anywhere, except in the hands of a con-artist who bilked several hundred people out of deposits on guns that were never produced. A few years later the AA-12 influenced the design of the Universal Sporting Automatic Shotgun-12 (USAS-12). Produced by DAEWOO, of South Korea, the USAS-12 used a 2-piece stock and fired from a closed bolt using a trigger system similar to that of the M16. When such guns were declared "destructive devices" no longer available to the public, production of them all but ceased.

Finally in 1987, Max Atchisson, broke and in danger of losing everything, sold the rights to the AA-12 to Mr. Jerry Baber, of MPS, Inc., in Tennessee. A brilliant engineer with a long history in the firearms business, Baber is also one of the world's foremost experts in high-precision cast steel parts. With the acquisition of the rights and patents came all of Atchisson's drawings of the AA-12, but not his AA-12 prototype.

Name:

Auto Assault-12

Killer Features:

- Almost no felt recoil
- Requires no lubrication
- Maximum temperature measured at 256 degrees Fahrenheit
- Self-cleaning even when contaminated by sand
- Uses FRAG-12 cartridges, which consist of a family of 12 ga. High Explosive projectiles including a HE Blast round, a HE Fragmentation round and a High Explosive Armor Piercing (HEAP) projectile

Along with his partner, Boje Corneal, an equally talented German mechanical engineer, Jerry Baber began production of a small number of pre-production samples of the AA-12 for test purposes using Atchisson's drawings. However, they soon discovered that the drawings were not to specification when the first complete AA-12 would not work, as built to print. Thus began an extensive redesign of the AA-12 that extended over an eighteen-year period with a total of no less than one hundred and eighty-eight (188) changes/improvements having been made to date. These changes have involved every aspect of the gun, except for one, and that is Atchisson's original recoil spring. One of the most important and interesting is the gas port, which is like nothing I have ever seen before. The name of the gun was also changed to the Auto Assault-12.

During the interim, Baber and Corneal had businesses to operate, and Jerry Baber made parts for 39 gun companies at his B&H Precision foundry. Among these companies were Barrett Mfg., Freedom Arms, North American Arms, Shilo, Smith & Wesson, Cobray, Atagua, Charter Arms, and RAMO Corp. Ronnie Barrett describes Jerry Baber as a "master caster."

In spite of their full schedules, Baber and Corneal continued work on the AA-12, finding more problems at each step of the way. After learning about a new state-of-the-art highspeed digital movie camera, Jerry Baber purchased it and a Savage Snail Bullet Trap to study the mechanism fired, in slow motion. This was the key to ironing out the final bugs in the gun and by the fall of 2004, 10 firing models of the AA-12 were produced. Several of these guns were demonstrated to United States Marine Corps officers with extremely favorable results, and tests are also scheduled for the Army with additional interest by the Air Force, Navy and Coast Guard.



The original AA-12 (top) is seen with the shorter CQB version, along with both magazines.

Both guns proved totally easy to control.

How It's Made

In spending three days with Jerry Baber and Boje Corneal I learned more about casting and production technology than almost anyone would want to know, and much of it required my sworn secrecy. What I can tell you is that most major components of the AA-12 are precision cast from exotic aircraft stainless steel, using the lost wax process. However, during this process is a separate and unique operation that insures a part that is about 99.9 percent finished. When I asked Jerry Baber who else in the world uses this method he told me he invented it and it is a closely guarded secret. After being cast, the parts are gas forged to add integrity and strength. They then receive intermediate heat treatment before minor machining, and are then final heat-

treated to an optimum Rockwell C hardness to insure optimum smoothness in operation and maximum wear. Much of the process is the same as that used in jet aircraft turbine technology.

Speaking of heat, the maximum temperature of the AA-12 has been measured at 256 degrees F at the gas port and 150 degrees F to the barrel. The glass-impregnated nylon stock will begin to melt at 450 degrees F to 475 F of heat, with deformation beginning just past 375 degrees F, so heat is not a factor with the gun.

Like Max Atchisson's original design, the new AA-12 uses an 8-round box magazine and a 20-round drum, but are made of the same tough synthetic as the stock. While the new magazines resemble the original prototypes, many subtle improvements have been made to assure 100 percent reliability. In fact, Jerry Baber showed me cases of 400 AA-12 8-shot magazine bodies that were to be scrapped because of a single minor improvement that had been made. The 8-round box and 20-round drum are the only feed devices that will be offered for the gun, although a 32-round drum has been designed. A means of attaching two 8-round magazines side by side is not out of the question.

The magazines are inserted into a channel similar to that used on the Thompson SMG, and the magazine catch/release works like that of the M16 rifle. Pushing the release with the right index finger allows the magazine or drum to fall free. Insertion of fully loaded magazines is easy even with the bolt forward.

Also like the 1928 Thompson SMG, the AA-12 uses a topmounted cocking handle with a long extension that acts as a dust cover. At the front of the extension is a rocking piece that locks it forward until pulled back with the palm of the support hand. This cocking handle does not reciprocate with the bolt and is pushed all the way back forward after cocking the bolt group to the rear. Mounted on the left side of the gun, the selector is moved to the forward position to allow the trigger to be pulled and it is moved to the rear to prevent the trigger from being pulled. An ambidextrous safety/selector is being considered.

Here a SureFire Tactical Light is mounted on the AA-12, using an MSP Light Link with the ASAR 30mm ring.



Constant Recoil System

No, it doesn't kick -- honestly. To all but eliminate felt recoil and movement of the AA-12 when fired, the gun uses what is called the "constant recoil" principal used by Mr. L. James Sullivan who also designed the AR-15 rifle for Eugene Stoner. Sullivan used the "constant recoil" system in the Ultimax LMG he designed for Chartered Industries of Singapore (CIS).

In the constant recoil system, the bolt group never bottoms out (slams into a fixed object) at the end of its rearward travel, but stops gradually against the long recoil spring. While it may be hard to believe without experiencing it, this gentle operation causes the AA-12 to have almost no felt recoil. The open bolt firing also dampens recoil, resulting in 95 percent control of the weapon.

While the basic design of the AA-12 incorporated an 18" barrel, a 16" barrel was also perfected, but a special unit of the Military asked if a 14" barrel were possible. Jerry Baber decided to go even shorter and perfected a 13" barrel for the AA-12 using a redesigned gas port. Called the CQB, this version has overall length that is the same as the M4 Carbine, and the barrel can easily be left at 14" if desired with plenty of dwell time left over. Baber has also designed a system where the butt stock can be shortened by 3" if desired, but this version would have slightly more felt recoil. Since the stock was out being prototyped at the time of my visit, I did not see it.

The sights of the AA-12 are mounted on towers to provide cheek weld, and are quite simple. The front sight is adjustable for elevation by turning it against friction from a nylon bushing, and the rear sight is adjustable for windage via a drum. Two types of rear ghost ring sights have been designed, one in a figure "8" for holdover, but standard ghost-ring aperture will be used.

The AA-12 is seen disassembled with both magazines. The gun rarely requires complete disassembly.



Disassembly

At the front of the gas block is a locking collar for the square tubular recoil spring guide, and on it is an extension to accept a standard M16 bayonet. A collar is also available without the extension. The two halves of the stock are locked together by steel tabs on both sides of the butt, in the middle and behind the gas block, as well as at the rear sight and on the bottom of the pistol grip. Except for those at the gas block, these can either slide or swivel to lock in place.

The stock halves can be removed in seconds. Then with the magazine removed and the bolt allowed to go forward, the butt is pushed forward causing the recoil spring guide to protrude out the front of the gas block. The locking collar can then be removed and the butt, recoil spring guide and spring can then be allowed to exit from the rear under pressure. Once this assembly is removed, the piston/bolt carrier and bolt can be removed by pulling back on the charging handle. The handle can be removed out the front of the receiver and the bolt group can be disassembled if necessary. Using a simple pry tool, the barrel lock can be removed allowing the barrel to be removed and replaced with a different one for special- purpose missions.

Unless damaged, the sear housing, trigger and selector need never be removed. In fact, the same thing holds true for the entire weapon. This is because the special material it is made from requires no lubrication whatsoever. What's more, the mechanism is selfcleaning even when contaminated by sand. In the worst-case scenario, a canteen (or similar) can be used to flush out the ejection port and everything in it. If this sounds too good to be true, you'll just have to take my word for it.

Shots Fired

Having traveled to Tennessee to test the AA-12, I personally fired more than 500 rounds in two AA-12's, and witnessed another 500 or so fired by seven others including two women who work in the B&H Precision foundry. Neither of these ladies had previously fired the AA-12 and they were more than a little nervous. The guns were fired from the hip, shoulder, with one hand, and upside down.

One of the AA-12's we fired was the CQB model, and this little gun had more than 5,000 rounds fired through it and had never been cleaned, much less lubricated. One look at it and it was obvious. The entire mechanism was black with carbon and it was also totally dry. However, neither gun malfunctioned in any way during the shooting, most of which was done using low-brass target rounds, which are always a problem for self-loading shotguns, especially when dirty.



Except for the noise, shooting the target 12 ga. shells in the AA-12 was like shooting a .22 rimfire machinegun. Really! High brass buckshot and slugs produced more noise and a bigger muzzle flash from the CQB model, and also increased the cyclic rate, but the additional recoil generated was barely worth mentioning. It took the two ladies only a couple of short bursts before they were emptying 20-round drums without stopping, and they barely moved.

What was also impressive is that single and double shots could easily be obtained because of the relatively slow cyclic rate of 300 rounds per minute. If two rounds were fired, they both hit in the same place out to 25 yards. Even CTS door-breaching rounds operated the AA-12, but when using less-lethal rounds the bolt must be cocked each time by hand. Hornady Manufacturing Company is looking into the possibility of other specialized 12-gauge ammunition.

It is a well-known fact that the Islamic terrorists killing our troops in Iraq are not afraid of the M4 and its 5.56mm bullet, but they are terrified of shotguns. You can imagine how they would react to the AA-12 with 20 rounds of buckshot, but that's only half the story, as there is something far more effective.

Although there is currently no rail system on the AA-12, we mounted a SureFire X200 on the barrel using a Light Link from Mounting Solutions Plus. A hand-held SureFire light was also

mounted using an E2 C G2 30mm scope mount from Abrams Small Arms Research (ASAR). Other mounting concepts are also being studied.

The FRAG-12

If you thought 12 gauge buckshot was an effective round, consider this: In October 2004 the U.S. Marine Corps began testing a new family of 12 ga. High-explosive rounds. These new rounds were developed by a private company to defeat reinforced, materiel and protected targets, and other targets requiring a high-explosive or armorpiercing warhead.

Called the FRAG-12, the program consists of a family of 12 ga. Highexplosive projectiles including a High Explosive (HE) Blast round, a HE Fragmentation round and a High Explosive Armor Piercing (HEAP) projectile with a shaped-charge penetrator.



The FRAG-12 cartridges are a family of experimental 12- gauge high explosive projectiles including a High Explosive (HE) Blast round, a HE Fragmentation round and a High Explosive Armor Piercing (HEAP) projectile, with a shaped charge penetrator.

Initial testing has confirmed that the HE Blast round will produce about a 1- inch hole in cold rolled steel plate with secondary spalling effects on the downrange side of the plate. The HE Fragmentation warhead is designed to have blast and fragmentation out to a 2-meter casualty radius and the HEAP round is claimed to be able to penetrate 4 inches of aluminum armor and more than ?-inch of steel. All three rounds have a 200m effective range.

Although he's no kid, Jerry Baber loves and respects those who are fighting what far too few understand is truly Global War On Terrorism. He also believes that every day our troops don't have the Auto Assault-12 in their hands, more of them are dying than would otherwise be the case. Plenty of others believe it too. Beyond our military are elements of Homeland Security that have expressed great interest in the AA-12, such as or the guarding of our nuclear facilities. Foreign governments who are allies of the U.S., such as the Philippines, are also very interested, but in addition to them the AA-12 will be available only to the military and agencies of our Federal Government.

| AUTO ASSAULT 12 | |
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| SPECIFICATIONS | |
| Caliber: | 12 ga. (2-3/4"). |
| Operation: | Long-stroke gas piston. |
| Type of Fire: | Open bolt, selective via trigger control. |
| Barrel Length: | 13 inches to 18 inches. |
| Overall Length: | 38 inches with 18 inch barrel. |
| Weight: | 10.5 pounds with 18 inch barrel. |
| Feed Device: | 8-round box or 20-round drum magazine. |
| Safety: | Thumb safety selector blocks trigger. |
| Sights: | (front) Protected post, adj. for elevation. (rear) Protected ring, adj. for W/E. |
| Stock: | Glass filled nylon available in most colors and camouflage patterns. |
| Finish: | Matte stainless steel. |